

Audit Committee Meeting

December 2017



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

**TEACHER RETIREMENT SYSTEM OF TEXAS
BOARD OF TRUSTEES
AND
AUDIT COMMITTEE**

(Mr. Moss, Chairman; Ms. Charleston; Mr. Corpus; Dr. Gibson, Committee Members)

*All or part of the December 15, 2017, meeting of the TRS Audit 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.***

AGENDA

**December 15, 2017 – 8:00 a.m.
TRS East Building, 5th Floor, Boardroom**

1. Call roll of Committee members
2. Approve minutes of September 22, 2017 Audit Committee meeting – Christopher Moss
3. Receive State Auditor’s Office reports – Michael Clayton, Anca Pinchas, Sarah Puerto, Kathy Ann Moe, and Sharon Schneider, State Auditor’s Office (SAO)
 - A. Audit of Comprehensive Annual Financial Report (CAFR) (for fiscal year ending August 31, 2017)
 - B. Audit of Incentive Compensation at Selected Agencies (for TRS plan year ending September 30, 2016)
 - C. Classification compliance audit of information technology positions at selected education agencies
4. Receive Grant Thornton report for financial audit of TRS Investment Company (TRICOT) (for fiscal year ending August 31, 2017) – Bhakti Patel, Grant Thornton
5. Receive review reports for TRS health plan and pharmacy plan administration for TRS-Care and TRS-ActiveCare – Yimei Zhao, Jeff Bain, and Chase Dierschke; Amy Quertermous, John Meka, Keith Gall, and Carol Hamilton, Truven Health Analytics
 - A. Results overview of TRS-Care and TRS-ActiveCare health plan and pharmacy benefit administration review reports for the most recent audit cycle
 - B. Review report of TRS-Care health plan administration by Aetna for September 1, 2015 to August 31, 2016
 - C. Review report of TRS-ActiveCare health plan administration by Aetna for September 1, 2015 to August 31, 2016
 - D. Review report of TRS-Care pharmacy plan administration by ESI for September 1, 2015 to August 31, 2016
 - E. Review report of TRS-Care drug benefit administration of the Employer Group Waiver Plan (EGWP) by ESI for January 1, 2015 to December 31, 2015

NOTE: The Board of Trustees (Board) of the Teacher Retirement System of Texas will not consider or act upon any item before the Audit Committee (Committee) at this meeting of the Committee. This meeting is not a regular meeting of the Board. However, because the full Audit 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.

- F. Review report of TRS-ActiveCare pharmacy plan administration by Caremark Rx for September 1, 2015 to August 31, 2016
- 6. Receive TRS Compliance reports – Heather Traeger
- 7. Receive Internal Audit reports
 - A. Quarterly TRS compliance testing (Agreed-Upon Procedures) – Hugh Ohn and Heather Traeger
 - B. Prior audit and consulting recommendations - Amy Barrett
 - C. Internal Audit Annual Report – Amy Barrett
- 8. Discuss or consider Internal Audit 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 – Christopher Moss and Amy Barrett

NOTE: The Board of Trustees (Board) of the Teacher Retirement System of Texas will not consider or act upon any item before the Audit Committee (Committee) at this meeting of the Committee. This meeting is not a regular meeting of the Board. However, because the full Audit 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.

TAB 2

**TEACHER RETIREMENT SYSTEM OF TEXAS
AUDIT COMMITTEE MEETING MINUTES
SEPTEMBER 22, 2017**

The Audit Committee of the Board of Trustees of the Teacher Retirement System of Texas met on September 22, 2017, in the boardroom located on the fifth floor of the TRS East Building offices at 1000 Red River Street, Austin, Texas.

Committee Members present:

Mr. Chris Moss, Chair
Ms. Karen Charleston
Mr. David Corpus
Dr. Greg Gibson

Other Board Members present:

Mr. Joe Colonna
Mr. John Elliott
Mr. David Kelly
Ms. Dolores Ramirez

Others present:

Brian Guthrie, TRS	Toma Miller, TRS
Ken Welch, TRS	Anandhi Mani, TRS
Carolina de Onis, TRS	Simin Pang, TRS
Amy Barrett, TRS	Art Mata, TRS
Don Green, TRS	Cari Casey, TRS
Barbie Pearson, TRS	Rodrigo Dominguez, TRS
Heather Traeger, TRS	Sylvia Bell, TRS
Katherine Farrell, TRS	Michael Clayton, SAO
Hugh Ohn, TRS	Anca Pinchas, SAO
Jan Engler, TRS	Kelly Ngaide, SAO
Lih-Jen Lan, TRS	Danielle Valkner, PwC
Nick Ballard, TRS	

Audit Committee Chair Mr. Moss 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 July 13, 2017 committee meeting – Committee Chair Mr. Chris Moss.

On a motion by Mr. Corpus, seconded by Dr. Gibson, the proposed minutes for the July 13, 2017 Audit Committee meeting were approved as presented.

3. Receive State Auditor's Office presentations

A. Planned audits of TRS' Comprehensive Annual Financial Report (CAFR) including work on Other Post-Employment Benefits (OPEB) for Fiscal Year 2017 – Michael Clayton and Anca Pinchas, State Auditor's Office

Ms. Anca Pinchas stated the purpose of the audit was to issue an opinion on the Teacher Retirement System for the fiscal year 2017 financial statements. She said there are three deliverables of this audit to be issued in November 2017: an independent auditor's report, the report of internal controls and the report to the Legislative Audit Committee. She reported the Audit began in August 2017.

B. Results of the Audit of TRS' Fiscal Year 2016 Employer Pension Liability Allocation Schedules – Kelley Ngaide, State Auditor's Office

Ms. Kelly Ngaide reported on the 2016 schedule of employers' proportionate shares and schedule of pension amounts by employer. She said an unqualified audit opinion on the pension liability schedules was issued and there were no written findings for management.

Mr. Michael Clayton discussed the new standards, GASB 74 and 75, in the coming years that will look very similar to GASB 67 and GASB 68.

4. Receive Investment Compliance reports – Heather Traeger

Ms. Heather Traeger reported on the ethics and fraud monitoring. Ms. Traeger stated that, during the reporting period, her office had looked into three items, all of which had been resolved. Additionally, the one pending item from last report was resolved as well.

Ms. Traeger noted that there had been three conflict determination requests from contractors. Ms. Traeger said in each of these cases there was a determination of no conflict.

Ms. Traeger reported there were compliance violations in the last quarter pursuant to the ethics policy. In two instances, ethic training was not completed by the required annual basis. She stated one employee had retired prior to training being completed and the other employee was out on medical leave. Ms. Traeger stated they were working with HR to develop new policies related to training.

5. Receive Internal Audit Compliance Testing and Investment Management Division reports

A. Quarterly TRS compliance testing (Agreed-Upon Procedures) – Hugh Ohn and Heather Traeger

Mr. Ohn stated the report title has changed for it now includes more TRS related policies and procedures. Mr. Ohn reported everything was clean except for one item which was considered a minor compliance exception which was the compliance violation Ms. Traeger previously reported on to the Board.

B. Private equity fee pilot project – Hugh Ohn; Danielle Valkner, PwC

Ms. Amy Barrett introduced Ms. Danielle Valkner with PricewaterhouseCoopers, PwC, who had partnered with TRS on the pilot of the private equity fee audits. Mr. Ohn stated the project objectives was to examine private equity fee calculation processes and practices, and based on the examination of those practices, develop standard audit programs to test future private equity fee calculation reviews and audits. Mr. Ohn described the criteria they used in selecting a manager and funds to review. Ms. Valkner provided information on the funds structure and the types of fees that are incurred. She said the deliverables for this project was basic project management tools, the engagement letter, document requests lists and agendas for the meetings.

Mr. Ohn stated for next steps is to expand the fee audits to multiple managers in the future. He recommended starting with more desk types of reviews. Ms. Barrett stated the recommendation was to expand to more private equity funds and more private equity managers but with a des review focus.

C. Commission credits and contractual allowance audit – Hugh Ohn and Sylvia Bell

Mr. Ohn provided background information on soft dollars and commission credits. Mr. Ohn then described the process for how commission credits and commission recapture agreements (CRAs) work. Mr. Ohn stated the audit objective was a standard one, whether controls are working effectively to achieve business objectives and the audit scope included were commission sharing agreements (CSAs), CRAs and State Street Bank contractual allowance. He said the combined amount of these three programs was about \$24.4 million per year. Mr. Ohn stated regarding the audit results, there were no significant control weaknesses. He said opportunities to enhance existing controls were identified and made three recommendations. Ms. Sylvia Bell reported on the management action plan regarding the three recommendations.

6. Receive Internal Audit Benefit Services Division reports – Jan Engler, Nick Ballard, Art Mata and Barbie Pearson

A. Annual benefits testing (Agreed-Upon Procedures)

Ms. Barret reported this is where the large sum of annuity payments are tested to ensure that everything is operating acceptable. She said there was only one exception and that it was a very clean audit.

B. Employer audit reports (Dallas ISD and Pleasanton ISD)

C. Employer audit of pension and TRS-Care surcharges (30 ISDs)

Ms. Jan Engler introduced the team that worked on the employer audit reports. Mr. Nick Ballard provided background on the scope of the different types of audits performed. Mr. Ballard stated the issue around recordkeeping for return-to-work retirees and ensuring that they were correctly reported to TRS was an issue for the Dallas ISD and a common issue for many of the school districts audited this year. He said other common issues identified were TRS retirees working as substitutes, independent contractors or employees working for a third party entity or working for a staffing firm at the school district. For Pleasanton ISD, Mr. Ballard said an issue concerning the calculation of contributions for statutory minimum and no-OASDI was identified. He said for each of the school districts audited they have received a management response. In each case,

management agreed with the findings and committed to working with the benefit reporting team to correct reports where necessary.

Ms. Barbie Pearson and Ms. Jennifer Dujka discussed what TRS has always done and some new items to help provide reporting entities with information and training regarding employment after retirement.

D. Higher education pilot and audit program development

Mr. Ballard stated in 2017 the audit program was tailored to address issues specific to institutions of higher education (higher ed). He said the pilot project worked with University of Texas at San Antonio and University of Texas Health Science Center at San Antonio. Mr. Ballard reported that there is no formal audit report but two outcomes were identified.

Mr. Art Mata discussed the higher ed audit manual, the self-assessment tool and outreach efforts internal audit is conducting. Mr. Mata reported the manual was completed as of August 31, 2017 but with the new TRUST system updates are required and are projecting to have the update by the end of this year.

7. Receive Internal Audit Executive Division reports

A. Trust expense allocation audit – Nick Ballard

Mr. Ballard provided the objective of the trust expense allocation audit as whether that allocation process for the various funds that TRS manages is defined reasonable and implemented accurately. Mr. Ballard reported that management controls are operating effectively to ensure that costs are allocated to each of the funds and the 403(b) certification program appropriately. He said there were no significant findings but they did identify opportunities for management to strengthen controls to ensure allocation of costs continue to be done appropriately going forward. Mr. Ballard said the first recommendation was that management develop a comprehensive cost allocation policy that emphasize the fiduciary duty to ensure equitable allocation of costs to each of the funds that TRS manages. The second recommendation is that management develop procedures to implement the comprehensive cost allocation policy, along with defined rules and procedures for department managers and the determination and approval of rates used for facilities costs.

Mr. Don Green provided a management response that agreed 100 percent with what Mr. Ballard reported. He said CAPPs has functionality built into it that will help automate the cost allocation discussed. Mr. Green said that until CAPPs is implemented though, there does need to be a more formalized process.

B. Executive Performance Incentive Pay calculation testing (Agreed-Upon Procedures) – Toma Miller

Ms. Barrett reported the testing of the calculations for the executive performance incentive pay plan regarding were correct.

C. Internal Audit Quality Assurance and Improvement Program (QAIP) self-assessment – Amy Barrett

Ms. Barrett reported that the self-assessment found they were in compliance with all of the audit standards this year.

D. Status of prior audit and consulting recommendations – Amy Barrett

Ms. Barrett reported adequate progress was being made on all outstanding items. She said two items that are outstanding shall be completed by FY 2018.

8. Consider recommendations to the Board of Trustees for the Proposed Audit Plan for Fiscal Year 2018 – Amy Barrett.

Ms. Barrett presented the Audit plan to the Committee stating it was the roadmap for internal audit. She described the different project internal audit performs ranging from traditional audits to consulting projects. She reviewed the audits proposed for fiscal year 20118.

On a motion by Dr. Gibson, seconded by Mr. Corpus, the Committee unanimously approved to recommend to the Board of Trustees approval of the proposed audit plan for fiscal year 2018, as presented by staff.

9. Discuss or consider Internal Audit 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 – Christopher Moss and Amy Barrett

Without further discussion, the meeting adjourned at 10:11 a.m.

APPROVED BY THE **AUDIT COMMITTEE** OF THE BOARD OF TRUSTEES OF THE
TEACHER RETIREMENT SYSTEM OF TEXAS ON THE 15th DAY OF DECEMBER 2017.

Christopher Moss
Chair, Audit Committee
Board of Trustees
Teacher Retirement Systems of Texas

Date

TAB 3

TAB 3A



A Report on

The Audit of Teacher Retirement System's Fiscal Year 2017 Financial Statements

November 27, 2017

Members of the Legislative Audit Committee:

In our audit report dated November 20, 2017, we concluded that the Teacher Retirement System's (the System) basic financial statements for fiscal year 2017 were materially correct and presented in accordance with accounting principles generally accepted in the United States of America. The System published our audit report as part of its basic financial statements, which it intends to post on its Web site at https://www.trs.texas.gov/Pages/about_publications.aspx.

We also issued a report on internal control over financial reporting and on compliance and other matters as required by auditing standards (that report, including responses from management, is presented in the attachment to this letter). In that report, auditors determined that the System should strengthen controls to help ensure the completeness and accuracy of the active employee census data that employers submit.

Our procedures were not intended to provide an opinion on internal control over financial reporting or to provide an opinion on compliance with laws and regulations. Accordingly, we do not express an opinion on the effectiveness of the System's internal control over financial reporting or on compliance with laws and regulations.

Testing of Plan Member Census Data

Auditors conducted census data testing for fiscal year 2017 (see text box for the key data elements tested) as part of this audit. The completeness and accuracy of employees' census data is important because the System uses that data to calculate the System's liabilities for pensions and other post employment benefits.

Auditors implemented a risk-based approach for selecting employers (including school districts, charter schools, and higher education institutions) for fiscal year 2017 census data testing as required by American Institute of Certified Public Accountants (AICPA) guidance. That resulted in auditors selecting 91 employers for which census data was tested. (A list of the employers selected for testing is presented in the attachment to this letter.) Testing included reviewing documentation to verify that the census data that the employers submitted to the System was accurate.

Active Employee Census Data

Active employee census data is key demographic data that affects the actuarial estimate of the pension liability amount that the System presents in its financial statements.

Key data elements include:

- Name.
- Date of birth.
- Service credits.
- Pensionable earnings.
- Gender.
- Employment Status.

Source: Chapter 13 in *State and Local Governments - Audit and Accounting Guide*, American Institute of Certified Public Accountants.

SAO Report No. 18-005

Based on the testing performed, auditors determined that the underlying census data was materially complete and accurate to support the System's plan's financial statement amounts. That was reflected as part of our unmodified audit opinion on the System's financial statements for fiscal year 2017. For fiscal year 2016, auditors tested the System's census data using the same methodology described above and concluded that the data was materially complete and accurate. The System posted information on census data testing performed on its Web site at <http://trs.texas.gov>.

Additionally, auditors will be issuing an opinion later this fiscal year on the System's fiscal year 2017 pension liability allocation schedules. Those schedules provide employers with the information they need to record their share of the pension liability in their financial statements, in accordance with AICPA requirements. Auditors previously issued an opinion on the System's pension liability allocation schedules for fiscal year 2016. The System published our audit opinion, along with the pension liability allocation schedules, on its Web site at https://www.trs.texas.gov/Pages/re_gasb_67_68.aspx.

Other Issues

Auditors communicated certain issues that were not material or significant to the audit objectives separately in writing to the System's management.

As required by auditing standards, we will also communicate to the System's Board of Trustees certain matters related to the conduct of a financial statement audit.

We appreciate the System's cooperation during this audit. If you have any questions, please contact Michael Owen Clayton, CPA, CISA, CFE, CIDA Audit Manager, or me at (512) 936-9500.

Sincerely,

Lisa R. Collier, CPA, CFE, CIDA
First Assistant State Auditor

Attachment

cc: The Honorable Greg Abbott, Governor
Members of the Teacher Retirement System Board of Trustees
Mr. R. David Kelly, Chairman
Ms. Dolores Ramirez, Vice Chair
Ms. T. Karen Charleston
Mr. Joe Colonna
Mr. David Corpus
Mr. John Elliott
Dr. Greg Gibson
Mr. Christopher Moss
Mr. Brian Guthrie, Executive Director, Teacher Retirement System



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Attachment

Section 1

List of Employers Selected for Census Data Testing

Table 1 lists the 91 employers for which auditors tested the accuracy of census data to determine whether that data was materially complete and accurate to support the Teacher Retirement System’s plan’s financial statement amounts.¹

Table 1

List of Employers Selected for Census Data Testing for Fiscal Year 2017
<ul style="list-style-type: none">▪ Alvarado Independent School District▪ Anahuac Independent School District▪ Argyle Independent School District▪ Bandera Independent School District▪ Bay City Independent School District▪ Bishop Consolidated Independent School District▪ Bonham Independent School District▪ Brady Independent School District▪ Brownfield Independent School District▪ Brownsboro Independent School District▪ Brownsville Independent School District▪ Bushland Independent School District▪ Central Texas College▪ Cisco Independent School District▪ City View Independent School District▪ Coastal Bend College▪ Coldspring-Oakhurst Consolidated Independent School District▪ Commerce Independent School District▪ Conroe Independent School District▪ Crowley Independent School District▪ Cuero Independent School District▪ Dallas Independent School District▪ Dayton Independent School District▪ Deer Park Independent School District▪ East Chambers Independent School District▪ Edcouch-Elsa Independent School District▪ Edinburg Consolidated Independent School District▪ Ferris Independent School District

¹ Auditors followed the American Institute of Certified Public Accountants’ sampling guide methodology and selected a representative population of employees from each employer selected for testing.

**List of Employers Selected for Census Data Testing
for Fiscal Year 2017**

- Fort Worth Independent School District
- Gladewater County Line Independent School District
- Glen Rose Independent School District
- Goose Creek Consolidated Independent School District
- Granbury Independent School District
- Greenville Independent School District
- Groveton Independent School District
- Hillsboro Independent School District
- Houston Independent School District
- Humble Independent School District
- Jacksboro Independent School District
- Jim Hogg County Independent School District
- Joshua Independent School District
- Junction Independent School District
- Kermit Independent School District
- Klein Independent School District
- La Joya Independent School District
- La Porte Independent School District
- Life School
- Livingston Independent School District
- Llano Independent School District
- Mission Consolidated Independent School District
- Montgomery Independent School District
- Muleshoe Independent School District
- Navasota Independent School District
- Northwest Independent School District
- Pharr-San Juan-Alamo Independent School District
- Pine Tree Independent School District
- Plano Independent School District
- Princeton Independent School District
- Promise Community School
- Red Oak Independent School District
- Region 1 Education Service Center
- Region 10 Education Service Center
- Region 16 Education Service Center
- Rio Hondo Independent School District
- Royal Independent School District
- Royse City Independent School District
- San Angelo Independent School District
- San Elizario Independent School District
- Santa Fe Independent School District
- Snyder Independent School District
- Southwest High School
- Southwest Texas Junior College
- Stafford Municipal School District
- Taylor Independent School District

**List of Employers Selected for Census Data Testing
for Fiscal Year 2017**

- Temple College
- Terrell Independent School District
- Texas A&M Transportation Institute
- Texas A&M University System
- Texas City Independent School District
- The University of Texas at Austin
- The University of Texas Health Science Center at San Antonio
- The University of Texas Health Science Center at Tyler
- The University of Texas M.D. Anderson Cancer Center
- The University of Texas Southwestern Medical Center
- Tomball Independent School District
- Trinity Basin Preparatory
- United Independent School District
- West Orange Cove Consolidated Independent School District
- White Settlement Independent School District
- Whitehouse Independent School District
- Winters Independent School District

Report on Internal Control Over Financial Reporting and on Compliance and Other Matters as Required by Auditing Standards



Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards

Independent Auditor's Report

Teacher Retirement System Board of Trustees

Mr. R. David Kelly, Chairman
Ms. Dolores Ramirez, Vice Chair
Ms. T. Karen Charleston
Mr. Joe Colonna
Mr. David Corpus
Mr. John Elliott
Dr. Greg Gibson
Mr. Christopher Moss

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the major enterprise fund and the aggregate remaining funds information, consisting of the fiduciary funds and the non-major enterprise fund, of the Teacher Retirement System (System), a component unit of the State of Texas as of and for the year ended August 31, 2017, and the related notes to the financial statements, which collectively comprise the System's basic financial statements and have issued our report thereon dated November 20, 2017.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the System's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the System's internal control. Accordingly, we do not express an opinion on the effectiveness of the System's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

SAO Report No. 18-306

Robert E. Johnson Building
1501 N. Congress Avenue
Austin, Texas 78701

P.O. Box 12067
Austin, Texas 78711-2067

Phone:
(512) 936-9500

Fax:
(512) 936-9400

Internet:
www.sao.texas.gov

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that have not been identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. We did identify certain deficiencies in internal control described in the accompanying schedule of findings and responses that we consider to be a significant deficiency.

Summary of Findings and Responses
Finding Number
2017-1

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the System's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Auditors communicated certain issues that were not material or significant to the audit objectives separately in writing to the System's management.

System's Response to Findings

The System's response to the finding identified in our audit is described in the accompanying schedule of findings and responses. The System's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control over financial reporting or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control over financial reporting and compliance. Accordingly, this communication is not suitable for any other purpose.

Lisa R. Collier, CPA, CFE, CIDA
First Assistant State Auditor

November 20, 2017

Schedule of Findings and Responses

Section 1

The System Should Strengthen Controls to Help Ensure the Completeness and Accuracy of the Active Employee Census Data That Employers Submit

Reference No. 2017-1

Type of finding: Significant Deficiency

The Teacher Retirement System (System) should strengthen controls over active employee census data to help ensure that data is complete and accurate (see text box for additional information). More than 1,300 school districts, colleges, and universities submit active employee census data regarding the active members who participate in the System's pension plan. The completeness and accuracy of the active employees' census data is important because the System uses that data to calculate member pension benefits and the pension liability amount that the System presents in its financial statements. Auditors previously reported this finding during the audits of the System's fiscal year 2014, 2015, and 2016 financial statements.¹

Active Employee Census Data

Active employee census data is key demographic data that affects the actuarial estimate of the pension liability amount that the System presents in its financial statements.

Key data elements include:

- Name.
- Gender.
- Date of birth.
- Pensionable earnings.
- Service credits.

Source: Chapter 13 in *State and Local Governments - Audit and Accounting Guide*, American Institute of Certified Public Accountants.

Since the initial finding in 2014, the System has begun performing audits on a limited basis of the employer census data information submitted. However, because those audits cover a limited number of plan participants, that audit coverage has not been adequate to serve as the System's controls. Therefore, controls over active employee census data are not sufficient to properly identify data that is incomplete or inaccurate. The absence of effective controls represents a significant deficiency in internal control over financial reporting, as noted in guidance issued by the American Institute of Certified Public Accountants.²

¹ See *A Report on the Audit of the Teacher Retirement System's Fiscal Year 2014 Financial Statements* (State Auditor's Office Report No. 15-010, November 2014); *A Report on the Audit of the Teacher Retirement System's Fiscal Year 2015 Financial Statements* (State Auditor's Office Report No. 16-009, December 2015); and *A Report on the Audit of the Teacher Retirement System's Fiscal Year 2016 Financial Statements* (State Auditor's Office Report No. 17-015, November 2016).

² See Chapter 13 in *State and Local Governments – Audit and Accounting Guide*, American Institute of Certified Public Accountants.

Auditors tested census data at 91 school districts, colleges, and universities. The majority of that data was accurate, and auditors identified no systematic issues.

Recommendation

The System should develop and implement a process to strengthen controls over active employee census data.

Management's Response

TRS agrees there is a need to strengthen the controls related to the accuracy and completeness of census data submitted by reporting entities (REs).

TRS is undertaking a modernization effort of its pension administration system that will, among other things, help strengthen controls over active employee census data to ensure its accuracy and completeness through additional data elements and stronger validations. Phase 1 of the new pension administration system went live on October 2, 2017. Phase 1 includes active membership and employer reporting. TRS strengthened the controls and validations around the data reported to TRS by TRS- Covered Employers. Effective with the September 2017 Employer Reports, TRS is requiring entities to report all employees, including those not eligible for membership. The new requirements have only one exception - student employees, who will not be reported until fiscal year 2019.

During fiscal year 2016, the TRS Benefit Reporting staff conducted 109 training sessions specifically related to the new RE Portal and the full payroll data requirements. In fiscal year 2017, staff conducted 12 training sessions that included the new reporting requirements, in addition to the normal RE training. TRS Benefit Reporting staff will begin spring training for entities in January 2018 through May 2018. This training will touch on TRS Laws & Rules and the new RE Portal. In addition to the training sessions, the Payroll Reporting Procedures have been updated and placed on the Reporting Entity page of the TRS website. The Reporting Entity section on the website also contains information related to the new requirements for employer reporting.

TRS Internal Audit staff will continue testing certain elements of the employer census data reporting process in fiscal year 2018. TRS is testing the following elements of the data: name; gender; dates of birth; dates of hire or years of service; eligible compensation; and termination or retirement dates. TRS internal auditors are also testing eligibility and compensation for accuracy, completeness and compliance with TRS Laws & Rules. Employer self-audit

tools are available on the TRS website. These tools provide specific how-to instructions and guidelines for conducting a self-audit of the data and contributions of various reports submitted to TRS.

All processes described above are ongoing and will continue for the foreseeable future. The TRS Chief Benefit Officer oversees the Benefit Services Division which is ultimately responsible for validating and verifying the data received from the REs.

Required Communication with Those Charged with Governance
Based on the Audit of the Teacher Retirement System’s Fiscal Year 2017 Financial Statements

We have audited the financial statements of the Teacher Retirement System for the year ended August 31, 2017, and have issued our report thereon dated November 20, 2017. Professional standards require that we provide you with the following information related to our audit.

No.	Item	Comments
1	The Auditor’s Responsibilities Under Generally Accepted Auditing Standards	As stated in our engagement letter dated May 10, 2017, our responsibility, as described by professional standards, is to express an opinion about whether the financial statements prepared by management, with your oversight, are prepared, in all material respects, in accordance with generally accepted accounting principles. Our audit of the financial statements does not relieve management or those charged with governance of their responsibilities.
2	Planned Scope and Timing of the Audit	We performed the audit according to the planned scope and timing previously communicated to you in our engagement letter dated May 10, 2017.
3	Corrected and Uncorrected Misstatements	Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those the auditor believes are trivial, and communicate them to the appropriate level of management. Auditors identified no misstatements requiring correction during this audit.
4	Other Information in Documents Containing Audited Financial Statements, Supplementary Information, and/or Required Supplementary Information	Our financial statement audit opinion applies to the basic financial statements, which include the accompanying notes. We also applied certain limited auditing procedures to the Other Supplementary Information and concluded that such information was fairly stated in all material respects in relation to the basic financial statements taken as a whole. We did not opine on Management’s Discussion and Analysis (MD&A) and Required Supplementary Information. However, we performed limited procedures related to this information, which consisted of making inquiries of management regarding the methods of its measurement and presentation, and comparing the information for consistency with management’s responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements.

Required Communication with Those Charged with Governance
Based on the Audit of the Teacher Retirement System's Fiscal Year 2017 Financial Statements

No.	Item	Comments
5	Management Representations	We have requested certain representations from management that are included in the management representation letter dated November 20, 2017. We also requested a representation letter dated November 20, 2017, from the Teacher Retirement System's general counsel regarding the existence of certain contingent liabilities that might require disclosure in the financial statements.
6	Qualitative Aspects of the Entity's Significant Accounting Practices	<p>Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the Teacher Retirement System are described in Note 1 to the financial statements.</p> <p>The implementation of GASB 74 led to changes in the financial statements and disclosures related to other post-employment benefits.</p> <p>We noted no transactions entered into by the Teacher Retirement System during the year for which there is a lack of authoritative guidance or consensus. There are no significant transactions that have been recognized in the financial statements in a period that differs from when the transactions occurred.</p>
7	Significant Difficulties Encountered During the Audit	We did not encounter any restrictions in performing our procedures or gaining access to individuals or records. Management and staff provided us with all of the information and support we requested.
8	Other Audit Findings or Issues	<p>We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year. Those discussions occurred in the normal course of the audit.</p> <p>We identified the following significant deficiency in controls: The System should strengthen controls to help ensure the completeness and accuracy of the active employee census data that employers submit. Auditors identified other less significant matters that were communicated to TRS management during the audit.</p>
9	Disagreements with Management	<p>We did not encounter any disagreements with management during the course of the audit.</p> <p>For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report.</p>

Required Communication with Those Charged with Governance
Based on the Audit of the Teacher Retirement System’s Fiscal Year 2017 Financial Statements

No.	Item	Comments
10	Management’s Consultations with Other Accountants	<p>In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a “second opinion” on certain situations. If a consultation involves application of an accounting principle to the Teacher Retirement System financial statements or a determination of the type of auditor’s opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts.</p> <p>To our knowledge, there were no such consultations with other accountants.</p>
11	Significant Findings or Issues Discussed, or Subject to Correspondence, with Management	<p>Prior to and throughout our audit engagement, we had routine discussions, or engaged in correspondence, with management regarding the Teacher Retirement System and application of accounting principles and auditing standards.</p>
12	Independence	<p>The State Auditor’s Office is independent to conduct the audit of Teacher Retirement System’s fiscal year 2017 financial statements. It is the State Auditor’s Office’s policy to conduct all projects in an environment free of any threats that impair independence.</p>
13	Fraud, Abuse, or Noncompliance with Laws and Regulations, Contracts or Grant Agreements	<p>Auditing standards require auditors to exercise professional skepticism and increased awareness to detect potential violations, fraud, and abuse.</p> <p>We did not find evidence that fraud, abuse, or noncompliance with laws and regulations, contracts or grant agreements, had, or might have, occurred.</p>

This information is intended solely for the use of the Board of Trustees of the Teacher Retirement System of Texas and management of the Teacher Retirement System and is not intended to be and should not be used by anyone other than these specified parties.

TAB 3B



An Audit Report on Incentive Compensation at the Permanent School Fund, General Land Office, Employees Retirement System, and Teacher Retirement System

Background

- Plan year 2016 was the first year that TRS implemented its executive performance incentive pay plan.
- TRS awarded \$5,275,578 to 141 employees.



An Audit Report on Incentive Compensation at the Permanent School Fund, General Land Office, Employees Retirement System, and Teacher Retirement System

Overall Conclusion

- TRS calculated and paid incentive compensation in accordance with their policies and procedures for plan year 2016.
- TRS calculated and paid executive incentive compensation in accordance with its executive performance incentive pay plan (separate from the TRS plan cited above). However, it should strengthen controls over its executive incentive compensation calculation and review process by:
 - TRS did not have formal, detailed policies and procedures that required it to document the calculation and review processes for its executive performance incentive pay plan
 - TRS did not verify source documentation from a third party for one input into its incentive compensation calculation; however, auditors determined that the input TRS used in that calculation was accurate.



An Audit Report on Incentive Compensation at the Permanent School Fund, General Land Office, Employees Retirement System, and Teacher Retirement System

Overall

Summary of Chapters and Related Issue Ratings ^a		
Chapter	Title	Issue Rating
4-A	TRS Calculated and Paid Plan Year 2016 Incentive Compensation in Accordance with Its Policies and Procedures	Low
4-B	TRS Calculated and Paid Plan Year 2016 Executive Performance Incentive Compensation in Accordance with Its Policies and Procedures, But It Should Strengthen Controls Over Its Calculation and Review Process	Low

^a Auditors used professional judgement and rated the audit findings identified in this report. The issue ratings were determined based on the degree of risk or effect of the findings in relation to the audit objective(s). A description of the issue ratings and other factors considered are included in Appendix 2 of the audit report.



An Audit Report on

**Incentive Compensation at the
Permanent School Fund,
General Land Office,
Employees Retirement System,
and Teacher Retirement System**

September 2017

Report No. 18-001



An Audit Report on

Incentive Compensation at the Permanent School Fund, General Land Office, Employees Retirement System, and Teacher Retirement System

SAO Report No. 18-001
September 2017

Overall Conclusion

The Permanent School Fund (PSF) of the Texas Education Agency, the General Land Office (GLO), the Employees Retirement System (ERS), and the Teacher Retirement System (TRS) calculated and paid incentive compensation in accordance with their policies and procedures for plan year 2016.

Plan year 2016 was the first year that TRS implemented its executive performance incentive pay plan.¹ TRS calculated and paid executive incentive compensation in accordance with its executive performance incentive pay plan. However, it should strengthen controls over its executive incentive compensation calculation and review process by (1) developing formal, detailed calculation and review procedures and (2) verifying all source documentation that it uses in its incentive compensation calculation.

Auditors communicated other, less significant issues in writing separately to management of the PSF, GLO, ERS, and TRS.

Incentive Compensation for Plan Year 2016

Through their incentive compensation plans for plan year 2016, the PSF, GLO, ERS, and TRS awarded a total of \$10,607,058 in incentive compensation to 263 employees. Specifically:

- The PSF awarded \$2,385,729 to 49 employees.
- GLO awarded \$289,691 to 4 employees.
- ERS awarded \$2,656,060 to 69 employees.
- TRS awarded \$5,275,578 to 141 employees.

Sources: The PSF, GLO, ERS, and TRS.

¹ TRS's executive performance incentive pay plan is separate from the incentive compensation plan that TRS had already been administering prior to plan year 2016 and continues to administer.

Table 1 presents a summary of the findings in this report and the related issue ratings. (See Appendix 2 for more information about the issue rating classifications and descriptions.)

Table 1

Summary of Chapters/Subchapters and Related Issue Ratings		
Chapter/ Subchapter	Title	Issue Rating ^a
1	The PSF Calculated and Paid Plan Year 2016 Incentive Compensation in Accordance with Its Policies and Procedures	Low
2	GLO Calculated and Paid Plan Year 2016 Incentive Compensation in Accordance with Its Policies and Procedures	Low
3	ERS Calculated and Paid Plan Year 2016 Incentive Compensation in Accordance with Its Policies and Procedures	Low
4-A	TRS Calculated and Paid Plan Year 2016 Incentive Compensation in Accordance with Its Policies and Procedures	Low
4-B	TRS Calculated and Paid Plan Year 2016 Executive Performance Incentive Compensation in Accordance with Its Policies and Procedures, But It Should Strengthen Controls Over Its Calculation and Review Process	Low

^a A chapter/subchapter is rated **Priority** if the issues identified present risks or effects that if not addressed could critically affect the audited entity's ability to effectively administer the program(s)/function(s) audited. Immediate action is required to address the noted concern and reduce risks to the audited entity.

A chapter/subchapter is rated **High** if the issues identified present risks or effects that if not addressed could substantially affect the audited entity's ability to effectively administer the program(s)/function(s) audited. Prompt action is essential to address the noted concern and reduce risks to the audited entity.

A chapter/subchapter is rated **Medium** if the issues identified present risks or effects that if not addressed could moderately affect the audited entity's ability to effectively administer program(s)/function(s) audited. Action is needed to address the noted concern and reduce risks to a more desirable level.

A chapter/subchapter is rated **Low** if the audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

Summary of Management's Response

At the end of the TRS chapter in this report, auditors made recommendations to address the issues identified during this audit. TRS agreed with the recommendations in this report.

Audit Objective and Scope

The objective of this audit was to determine whether the PSF, GLO, ERS, and TRS calculate and pay incentive compensation in accordance with policies and procedures.

The scope of this audit covered incentive compensation plan years ending August 31, 2016, at the PSF and ERS; June 30, 2016, at GLO; and September 30, 2016, and June 30, 2016, at TRS.

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Detailed Results

Chapter 1

The PSF Calculated and Paid Plan Year 2016 Incentive Compensation in Accordance with Its Policies and Procedures

**Chapter 1
Rating:
Low ²**

The Permanent School Fund (PSF) of the Texas Education Agency calculated and paid incentive compensation for its plan year ended August 31, 2016, in accordance with its policies and procedures.

The PSF awarded a total of \$2,385,729 in incentive compensation to 49 employees. The PSF awarded the most incentive compensation to its chief investment officer, who was awarded \$205,849 payable during a 3-year period. That \$205,849 represented 8.6 percent of the \$2,385,729 in total incentive compensation that the PSF awarded.

Gross-of-Fees and Net-of-Fees

The PSF calculates investment returns for its incentive compensation plan on a gross-of-fees-paid-to-external-manager basis.

Gross-of-fees indicates that the effect of fees has not been reflected in a return; net-of-fees indicates that the effect of fees has been reflected in a return.

Sources: The PSF and the CFA Institute Web site at <http://www.cfapubs.org/doi/full/10.2469/ipmn.v2011.n1.1>.

The PSF calculates incentive compensation based on an employee's achievement of goals related to total fund performance and the performance of the employee's assigned asset classes. Except for the performance of certain asset classes that are measured since their inception using an internal rate of return calculation, fund and asset class performance are calculated on a three-year rolling average performance period. The PSF calculates investment returns for its incentive compensation plan on a gross-of-fees-paid-to-external-manager basis (see text box for more information on gross-of-fees and net-of-fees).

The PSF awards incentive compensation if investment performance exceeds selected benchmarks. Total fund investment performance exceeded the target benchmark by 0.45 percent (45 basis points) for the three-year period from September 1, 2013, to August 31, 2016 (see text box for more information on basis points).

Basis Points

One basis point is 0.01 percent or one one-hundredth of a percentage point.

Source: Morningstar, Inc. Web site at http://www.morningstar.com/Invglossary/basis_point_definition_what_is.aspx.

The PSF pays incentive compensation awards in installments over time. Specifically, for most employees, the PSF pays 50 percent of an incentive compensation award for the current plan year, 25 percent of that award in the next year, and 25 percent of that

award in the third year. As a result, payments to employees may consist of partial awards from three years.

² Chapter 1 is rated Low because the audit identified strengths that support the audited entity's ability to administer the program(s)/function(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

Table 2 shows the positions eligible to earn incentive compensation in the PSF incentive compensation plan and the incentive compensation awards for each position for plan year 2016.

Table 2

PSF Incentive Compensation Awards for Plan Year 2016	
Eligible Position	Incentive Compensation Award or Award Range
Chief Investment Officer	\$205,849
Deputy Chief Investment Officer and Director of Fixed Income	\$150,214
Director of Private Markets	\$136,321
Director of Equities	\$138,366
Director of Global Risk Control Strategies	\$115,680
Deputy Executive Administrator	\$114,052
Portfolio Manager I-IV / Risk Manager	\$19,688 to \$105,432
Investment Analyst I - IV / Risk Analyst	\$25,846 to \$47,034
Director of Investment Operations	\$53,003
Director of Operational Due Diligence	\$47,920
Director of Finance	\$41,671
Director of Legal and Compliance	\$46,876
Financial Analyst I - IV	\$4,383 to \$15,876
Accountant I - VII	\$18,175
Attorney I - VI	\$18,400
Director of Investment Technology	\$26,734
Systems Analyst I - VII	\$5,195 to \$9,027
Program Specialist I - VII	\$4,855
Staff Services Officer I - V	\$2,122
Executive Assistant I - III	Position was vacant

Source: The PSF.

GLO Calculated and Paid Plan Year 2016 Incentive Compensation in Accordance with Its Policies and Procedures

**Chapter 2
Rating:
Low ³**

The General Land Office (GLO) calculated and paid incentive compensation for its plan year ended June 30, 2016, in accordance with its policies and procedures.

GLO awarded a total of \$289,691 in incentive compensation to 4 employees. GLO awarded the most incentive compensation to its director of PSF investments, who was awarded \$216,051 payable during a 2-year period. That \$216,051 represented 74.6 percent of the \$289,691 in total incentive compensation that GLO awarded.

The GLO incentive compensation plan compares investment performance of the total fund with a target benchmark on a one-year, three-year, and five-year basis. GLO calculates incentive compensation based on an employee's achievement of an investment performance component (60 percent) and a qualitative performance component (40 percent) that is tied to employee job performance during the performance period.

GLO calculates investment returns for its incentive compensation plan on a gross-of-fees-paid-to-external-manager basis (see text box for more information on gross-of-fees and net-of-fees). Investment portfolio performance exceeded the benchmark, and that triggered the awarding of incentive compensation. Total fund investment performance:

- Exceeded the target benchmark by 5.63 percent (563 basis points) for the five-year period from July 1, 2011, to June 30, 2016.
- Exceeded the target benchmark by 4.03 percent (403 basis points) for the three-year period from July 1, 2013, to June 30, 2016.
- Exceeded the target benchmark by 2.29 percent (229 basis points) for the one-year period from July 1, 2015, to June 30, 2016.

GLO pays incentive compensation awards in installments over time. Specifically, it pays 50 percent of an award on December 1 following the end

Gross-of-Fees and Net-of-Fees

GLO calculates investment returns for its incentive compensation plan on a gross-of-fees-paid-to-external-manager basis.

Gross-of-fees indicates that the effect of fees has not been reflected in a return; net-of-fees indicates that the effect of fees has been reflected in a return.

Sources: The GLO and the CFA Institute Web site at <http://www.cfapubs.org/doi/full/10.2469/ipmn.v2011.n1.1>.

³ Chapter 2 is rated Low because the audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

of the performance period, and it pays the remaining 50 percent on the anniversary of the first payment. As a result, payments to employees may consist of partial awards from two years.

Table 3 shows the positions eligible to earn incentive compensation in the GLO incentive compensation plan and the incentive compensation awards for each position for plan year 2016.

Table 3

GLO Incentive Compensation Awards for Plan Year 2016	
Eligible Position	Incentive Compensation Award
Director of PSF Investments	\$216,051
Real Assets Portfolio Manager	\$59,683
Senior Financial Analyst	Participant forfeited award due to retirement
Program Specialist	\$11,377
Investment Analyst	\$2,580

Source: GLO.

ERS Calculated and Paid Plan Year 2016 Incentive Compensation in Accordance with Its Policies and Procedures

**Chapter 3
Rating:
Low ⁴**

The Employees Retirement System (ERS) calculated and paid incentive compensation for its plan year ended August 31, 2016, in accordance with its policies and procedures.

ERS awarded a total of \$2,656,060 in incentive compensation to 69 employees. ERS awarded the most incentive compensation to an asset class portfolio director, who was awarded \$149,511 payable during a 3-year period. That \$149,511 represented 5.6 percent of the \$2,656,060 in total incentive compensation that ERS awarded. Effective September 1, 2015, the members of the ERS board of trustees gave approval for the executive director (who was appointed on June 1, 2015) to participate in the incentive compensation plan for fiscal year 2016.

ERS awards incentive compensation based on a combination of quantitative (75 percent) and qualitative (25 percent) performance goals. It awards a quantitative performance component based on overall participant goals, with a minimum of 25 percent of overall participant goals to be evaluated based on relative trust fund performance. Of the 69 employees who received incentive compensation, 28 did not achieve any quantitative goals; therefore, their incentive compensation was based solely on the achievement of their qualitative goals.

In managing the trust fund, the Investments Division assigns individual investment professionals responsibility for managing subcategories of asset classes, individual portfolios, and individual research coverage. ERS uses a qualitative performance component in the areas of individual achievement, position-specific performance objectives, and ERS's strategic and operational goals.

⁴ Chapter 3 is rated Low because the audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

Gross-of-Fees and Net-of-Fees

ERS calculates total trust fund performance returns for its incentive compensation plan on a net-of-fees-paid-to-external-managers basis. Gross-of-fees indicates that the effect of fees has not been reflected in a return; net-of-fees indicates that the effect of fees has been reflected in a return.

Sources: The ERS Incentive Compensation Plan for Key Investment Professionals and Leadership Employees and the CFA Institute Web site at <http://www.cfapubs.org/doi/full/10.2469/ipmn.v2011.n1.1>.

ERS calculates the investment performance goals based on (1) an employee's achievement of benchmarks related to the relative trust fund performance and (2) the performance of the employee's individual assigned asset classes for one-year, three-year, and five-year periods, depending on the employee's length of service. ERS calculates total trust fund performance returns for its incentive compensation plan on a net-of-fees-paid-to-external-managers basis (see text box for more information on gross-of-fees and net-of-fees). If the one-year, three-year, or five-year investment performance exceed the target benchmarks, ERS takes that into account in each employee's overall participant goals component.

ERS did not outperform its target benchmarks for plan year 2016 for the one-year and three-year periods; however, it outperformed its target benchmark for the five-year period. In addition, participants received incentive compensation based on other quantitative goals related to subcategories of asset classes, individual portfolios, or individual research coverage, as well as qualitative goals. The total relative trust fund investment performance:

- Exceeded the target benchmark by 0.0005 percent (.05 basis points) for the five-year period from September 1, 2011, to August 31, 2016.
- Was less than the target benchmark by 0.18 percent (18 basis points) for the three-year period from September 1, 2013, to August 31, 2016.
- Was less than the target benchmark by 1.81 percent (181 basis points) for the one-year period from September 1, 2015, to August 31, 2016.

ERS pays incentive compensation awards in installments over time. Specifically, for most employees, ERS pays 50 percent of an incentive compensation award for the current plan year, 25 percent of that award in the next year, and 25 percent of that award in the third year. As a result, payments to employees may consist of partial awards from three years. ERS pays investment operations team members in 2 installments of 50 percent each, and investment administrative support team members in 1 installment.

Table 4 shows the positions eligible to earn incentive compensation in the ERS incentive compensation plan and the incentive compensation awards for each position for plan year 2016.

Table 4

ERS Incentive Compensation Awards for Plan Year 2016	
Eligible Position	Incentive Compensation Award or Award Range
Investment Analyst I - II	\$4,132 to \$21,093
Investment Analyst III - IV	\$10,540 to \$47,581
Portfolio Manager I - V	\$10,978 to \$70,226
Supervising Portfolio Manager	\$32,852 to \$107,259
Trader I - II	\$20,991
Chief Trader I - II	\$39,259 to \$47,662
Asset Class Portfolio Managers/Directors	\$45,330 to \$149,511
Risk Management and Applied Research Portfolio Manager	\$27,149
Financial Analyst I-IV	\$2,735 to \$5,231
Investment Administrative Support	\$233 to \$794
Director of Investment Services	\$32,735
Chief of Staff	Position was vacant
Deputy Chief Investment Officer	\$44,424
Investments and Securities, Paralegal	Position was vacant
Investments and Securities, Attorney	\$65,817 to \$74,071
General Counsel and Chief Compliance Officer	\$88,536
Chief Investment Officer	\$90,645
Executive Director	\$89,636

Source: ERS.

Management's Response

ERS management agrees with the report and would like to thank the State Auditor's Office for its review. We appreciate the opportunity to work with SAO staff and value your expertise.

TRS Calculated and Paid Plan Year 2016 Incentive Compensation Awards in Accordance with Its Policies and Procedures, But It Should Strengthen Controls Over Its Executive Performance Incentive Pay Plan Calculation and Review Process

The Teacher Retirement System (TRS) calculated and paid incentive compensation in accordance with its policies and procedures for plan year 2016. TRS also calculated and paid executive incentive compensation in accordance with its executive performance incentive pay plan. However, it should strengthen controls over its executive incentive compensation calculation and review process by (1) developing formal, detailed calculation and review procedures and (2) verifying all source documentation that it uses in its incentive compensation calculation.

Chapter 4-A

TRS Calculated and Paid Plan Year 2016 Incentive Compensation in Accordance with Its Policies and Procedures

Chapter 4-A
Rating:
Low ⁵

TRS calculated and paid incentive compensation for its plan year ended September 30, 2016, in accordance with its policies and procedures.

TRS awarded a total of \$5,266,028 in incentive compensation to 140 employees (excluding \$9,550 awarded to the executive director as part of the separate executive performance incentive pay plan discussed in Chapter 4-B). TRS awarded the most incentive compensation to its chief investment officer, who was awarded \$237,023 payable during a 2-year period. That \$237,023 represented 4.5 percent of the \$5,266,028 in total incentive compensation that TRS paid.

The TRS incentive compensation plan is based on a combination of investment performance and qualitative performance. The investment performance component compares investment performance with benchmarks (50 percent) and the performance of peer groups (30 percent). The qualitative performance component (20 percent) assesses performance in a variety of areas such as candor, curiosity, accountability, teamwork and leadership, and constructive work environment.

The TRS incentive compensation plan measures investment performance for both benchmark and peer group categories on both a 1-year (33 percent)

⁵ Chapter 4-A is rated Low because the audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

and 3-year (67 percent) basis. If investment performance exceeds the benchmarks or the peer group performance, that triggers the awarding of incentive compensation. TRS calculates investment returns for its incentive compensation plan on a net-of-fees-paid-to-external-managers basis (see text box for more information on gross-of-fees and net-of-fees). In addition, internal public markets portfolio and sector managers are measured by their respective assigned regions and sectors. The total fund investment performance:

Gross-of-Fees and Net-of-Fees

TRS calculates investment returns for its incentive compensation plan on a net-of-fees-paid-to-external-managers basis. Gross-of-fees indicates that the effect of fees has not been reflected in a return; net-of-fees indicates that the effect of fees has been reflected in a return.

Sources: TRS and the CFA Institute Web site at <http://www.cfapubs.org/doi/full/10.2469/ipmn.v2011.n1.1>.

- Exceeded the benchmark by 0.22 percent (22 basis points) for the 3-year period from October 1, 2013, to September 30, 2016.
- Was less than the benchmark by 0.35 percent (35 basis points) for the 1-year period from October 1, 2015, to September 30, 2016.

TRS pays incentive compensation awards in installments over time. Specifically, it pays 50 percent of an award approximately on February 1 following the end of the performance period, and it pays the remaining 50 percent approximately on the anniversary of the first payment. As a result, payments to employees may consist of partial awards from two years.

Table 5 shows the positions eligible to earn incentive compensation in the TRS incentive compensation plan and the incentive compensation awards for each position for plan year 2016.

Table 5

TRS Incentive Compensation Awards for Plan Year 2016	
Eligible Positions	Incentive Compensation Award or Award Range
Chief Investment Officer	\$ 237,023
Deputy Chief Investment Officer	\$153,501
Senior Managing Director	\$86,159 to \$124,856
Managing Director	\$91,811 to \$116,267
Senior Director	\$50,250 to \$109,260
Director	\$54,390 to \$83,751
Senior Investment Manager	\$34,416 to \$69,449
Investment Manager	\$27,106 to \$50,345
Senior Associate	\$2,653 to \$34,521
Associate	\$918 to \$21,787
Senior Analyst	\$6,636 to \$12,194
Analyst	\$2,321 to \$7,279

TRS Incentive Compensation Awards for Plan Year 2016	
Eligible Positions	Incentive Compensation Award or Award Range
Junior Analyst	\$3,597
Administrative Assistants	\$113 to \$1,052

Source: TRS.

Chapter 4-B

TRS Calculated and Paid Plan Year 2016 Executive Performance Incentive Compensation in Accordance with Its Policies and Procedures, But It Should Strengthen Controls Over Its Calculation and Review Process

Chapter 4-B
Rating:
Low ⁶

In November 2015, the TRS board of trustees approved the implementation of an executive performance incentive pay plan (separate from the incentive compensation plan discussed in Chapter 4-A) and approved the executive director to be a participant. Plan year 2016 (specifically, December 1, 2015, through June 30, 2016) was the first year that TRS implemented its executive performance incentive pay plan. The subsequent performance period began on July 1, 2016, and ended on June 30, 2017.

TRS calculated and paid executive incentive compensation for its plan year 2016 in accordance with its executive performance incentive pay plan. However, it did not have formal, detailed policies and procedures for the calculation and review process for its executive performance incentive pay plan that required TRS to document its calculation and review processes. In addition, TRS did not verify source documentation from a third party for one input into its incentive compensation calculation; however, auditors determined that the input TRS used in that calculation was accurate. Those issues increase the risk of making inaccurate award payouts due to undetected mistakes in the inputs, calculations, and review process.

The TRS board of trustees may add to or remove individual positions from participation in the executive performance incentive pay plan at any time. The TRS executive director was the only participant for the 2016 performance period. TRS awarded \$9,550 in incentive pay to its executive director. TRS pays executive incentive compensation in installments over time. Specifically, it pays 50 percent of an award on approximately October 1

⁶ Chapter 4-B is rated Low because the audit identified strengths that support the audited entity’s ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity’s ability to effectively administer the program(s)/function(s) audited.

following the end of the performance period, and it pays the remaining 50 percent on approximately the anniversary of the first payment.

The TRS executive performance incentive pay plan is based on four main qualitative performance categories: member satisfaction (25 percent), leadership effectiveness (25 percent), operational effectiveness (25 percent), and employee satisfaction (25 percent). The executive performance incentive compensation calculation does not include a category for investment performance.

Recommendations

TRS should:

- Develop formal written policies and procedures for its executive performance incentive pay plan compensation calculation and review process.
- Verify all source documentation that it uses in its executive performance incentive compensation calculation.

Management's Response

TRS agrees with both audit recommendations. Management has already taken steps to develop written policies and procedures for its executive performance incentive pay plan compensation calculation and review process, including controls surrounding verification of all source documentation used in the executive performance incentive compensation calculation. An initial draft of the Incentive Compensation Plan's calculation and review procedures have been completed and TRS expects to have a finalized document by December 31, 2017.

Appendices

Appendix 1

Objective, Scope, and Methodology

Objective

The objective of this audit was to determine whether the Permanent School Fund (PSF) of the Texas Education Agency, the General Land Office (GLO), the Employees Retirement System (ERS), and the Teacher Retirement System (TRS) calculate and pay incentive compensation in accordance with their policies and procedures.

Scope

The scope of this audit covered incentive compensation plan years ending August 31, 2016, at the PSF and ERS; June 30, 2016, at GLO; and September 30, 2016, and June 30, 2016, at TRS.

Methodology

The audit methodology included collecting information and documentation from the audited agencies; reviewing incentive compensation plans, policies, procedures, and other guidance related to incentive compensation; and analyzing and evaluating data and the results of tests.

Auditors tested sample items to determine whether selected recipients were eligible to receive incentive compensation payments, payment calculation data inputs were correct, payment calculations were correct based on the terms of the incentive compensation plans, and payment amounts distributed to recipients were properly recorded and matched amounts calculated for each recipient.

Auditors reviewed incentive compensation plans, calculations, personnel files, payroll data, and externally calculated fund performance results to determine whether the audited agencies calculated and paid incentive compensation in accordance with their policies and procedures. Auditors also tested access controls over the spreadsheets and data that the audited agencies used to calculate incentive compensation.

Data Reliability and Completeness

Auditors assessed the reliability of the incentive compensation award data used in this audit by tracing the data to supporting documentation and by reviewing access to the data. Auditors verified the completeness of the incentive compensation award data by comparing pay calculation

information in the incentive compensation award spreadsheets the audited agencies used to calculate payments to payment data in the Uniform Statewide Accounting System and the Uniform Statewide Payroll/Personnel System. Auditors determined that the incentive compensation award data was sufficiently reliable for the purposes of this audit.

Sampling Methodology

Auditors selected risk-based samples of incentive compensation awards for testing for the ERS and TRS incentive compensation plans. Auditors tested the entire population of incentive compensation awards for the PSF incentive compensation plan, the GLO incentive compensation plan, and the TRS executive performance incentive pay plan.

Information collected and reviewed included the following:

- Incentive compensation plan documentation at the PSF, GLO, ERS, and TRS.
- TRS and ERS board of trustees meeting minutes.
- Incentive compensation payment calculation spreadsheets for incentive compensation plan years ending August 31, 2016, at the PSF and ERS; June 30, 2016, at GLO; and September 30, 2016, and June 30, 2016, at TRS.
- Incentive compensation recipients' personnel files.
- Payroll data related to incentive compensation recipients.
- Investment performance reports from custodian banks.

Procedures and tests conducted included the following:

- Interviewed management and key personnel at the PSF, GLO, ERS, and TRS.
- Tested and recalculated incentive compensation awards for recipients of incentive compensation for incentive compensation plan years ending August 31, 2016, at the PSF and ERS; June 30, 2016, at GLO; and September 30, 2016, and June 30, 2016, at TRS.
- Verified that incentive compensation award payments matched award calculations.
- Reviewed and tested compliance with the audited agencies' policies and procedures.

- Reviewed access controls over the spreadsheets and data that the audited agencies used to calculate incentive compensation.

Criteria used included the following:

- *Texas Education Agency Permanent School Fund Division Performance Incentive Pay Plan*, effective September 1, 2015.
- *General Land Office Performance Incentive Pay Plan*, effective July 1, 2015.
- *Employees Retirement System of Texas Incentive Compensation Plan for Key Investment Professionals and Leadership Employees*, effective September 1, 2015.
- *Teacher Retirement System of Texas Performance Incentive Pay Plan*, effective October 1, 2015.
- *Teacher Retirement System of Texas Executive Performance Incentive Pay Plan*, effective December 1, 2015.
- Section 44, Article III, Texas Constitution and related statutes.
- Rider 13, page III-33, and Rider 22, pages III-9 and III-10, General Appropriations Act (84th Legislature).
- Texas attorney general opinions related to incentive compensation.
- Teacher Retirement System of Texas Performance Incentive Calculation and Verification, revised April 23, 2015.
- Employees Retirement System of Texas Incentive Compensation Plan – Procedure Reference.
- Employees Retirement System of Texas Incentive Compensation Plan Calculations Finance Process.

Project Information

Audit fieldwork was conducted from March 2017 through August 2017. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The following members of the State Auditor's staff performed the audit:

- Sarah Jane M. Puerto, CFE (Project Manager)
- Bianca F. Pineda, CGAP (Assistant Project Manager)
- Doug Stearns, CISA
- George D. Eure, CPA (Quality Control Reviewer)
- Michael Owen Clayton, CPA, CISA, CFE, CIDA (Audit Manager)

Issue Rating Classifications and Descriptions

Auditors used professional judgement and rated the audit findings identified in this report. Those issue ratings are summarized in the report chapters/sub-chapters. The issue ratings were determined based on the degree of risk or effect of the findings in relation to the audit objective.

In determining the ratings of audit findings, auditors considered factors such as financial impact; potential failure to meet program/function objectives; noncompliance with state statute(s), rules, regulations, and other requirements or criteria; and the inadequacy of the design and/or operating effectiveness of internal controls. In addition, evidence of potential fraud, waste, or abuse; significant control environment issues; and little to no corrective action for issues previously identified could increase the ratings for audit findings. Auditors also identified and considered other factors when appropriate.

Table 6 provides a description of the issue ratings presented in this report.

Table 6

Summary of Issue Ratings	
Issue Rating	Description of Rating
Low	The audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited <u>or</u> the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.
Medium	Issues identified present risks or effects that if not addressed could <u>moderately affect</u> the audited entity's ability to effectively administer program(s)/function(s) audited. Action is needed to address the noted concern(s) and reduce risks to a more desirable level.
High	Issues identified present risks or effects that if not addressed could <u>substantially affect</u> the audited entity's ability to effectively administer the program(s)/function(s) audited. Prompt action is essential to address the noted concern(s) and reduce risks to the audited entity.
Priority	Issues identified present risks or effects that if not addressed could <u>critically affect</u> the audited entity's ability to effectively administer the program(s)/function(s) audited. Immediate action is required to address the noted concern(s) and reduce risks to the audited entity.

Related State Auditor's Office Work

Related State Auditor's Office Work		
Number	Product Name	Release Date
16-030	An Audit Report on Incentive Compensation at the Permanent School Fund, General Land Office, Employees Retirement System, and Teacher Retirement System	June 2016
15-032	An Audit Report on Incentive Compensation at Selected Agencies	May 2015
14-033	An Audit Report on Incentive Compensation at the Teacher Retirement System, the Permanent School Fund, the General Land Office, and the Employees Retirement System	May 2014
13-033	An Audit Report on Incentive Compensation at the Teacher Retirement System, the Permanent School Fund, and the Employees Retirement System	April 2013

Copies of this report have been distributed to the following:

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The Honorable Dan Patrick, Lieutenant Governor, Joint Chair
The Honorable Joe Straus III, Speaker of the House, Joint Chair
The Honorable Jane Nelson, Senate Finance Committee
The Honorable Robert Nichols, Member, Texas Senate
The Honorable John Zerwas, House Appropriations Committee
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TAB 3C



A Classification Compliance Audit Report on Information Technology Positions at Selected Education Agencies

Background

- The objective of this classification compliance audit was to determine whether the selected education agencies conformed to the State's Position Classification Plan by ensuring proper classification of employees. The agencies self-reported the classification information on which this audit focused.



A Classification Compliance Audit Report on Information Technology Positions at Selected Education Agencies

Overall Conclusion

Auditors rated the audit findings as noted below.

Summary of Chapters and Related Issue Ratings ^a		
Chapter	Title	Issue Rating
1	Information Technology Occupational Category at Selected Education Agencies	Low
2-A	Analysis of Misclassified Employees at the Teacher Retirement System	Low

^a Auditors used professional judgement and rated the audit findings identified in this report. The issue ratings were determined based on the degree of risk or effect of the findings in relation to the audit objective(s). A description of the issue ratings and other factors considered are included in Appendix 2 of the audit report.



A Classification Compliance Audit Report on Information Technology Positions at Selected Education Agencies

Information Technology Occupational Category at Selected Education Agencies

- The Information Technology occupational category includes job classification series such as programmers, systems analysts, network specialists, and data base administrators.
- Those job classification series and other job classification series performing information technology work are among those that may grow faster than other job classification series in the State's Position Classification Plan.



A Classification Compliance Audit Report on Information Technology Positions at Selected Education Agencies

Analysis of Misclassified Employees at TRS

- Of the 97 employees tested at the Teacher Retirement System (TRS), 80 (82.5 percent) were correctly classified.
- TRS took appropriate action to address the 17 misclassified employees and reclassified the employees into different job classification series.
- There was no cost associated with reclassifying the employees.



A Classification Compliance Audit Report on

Information Technology Positions at Selected Education Agencies

October 2017

Report No. 18-701



A Classification Compliance Audit Report on
**Information Technology Positions at
Selected Education Agencies**

SAO Report No. 18-701
October 2017

Overall Conclusion

A total of 279 (86.9 percent) of the 321 employees tested were classified correctly in accordance with the State's Position Classification Plan. Employees tested included those classified within the Information Technology occupational category, as well as others performing similar work, at the following four education agencies:

- Teacher Retirement System (TRS).
- Texas Education Agency (TEA).
- Texas School for the Blind and Visually Impaired (TSBVI).
- Texas School for the Deaf (TSD).

The agencies self-reported the classification information on which this audit focused.

The agencies have taken or reported they will take appropriate action to address the 42 misclassified employees by:

- Reclassifying 37 employees into a different job classification series. For example, TSD reclassified a systems analyst to a program specialist.
- Reclassifying 5 employees within the same job classification series but at a higher salary group.

There was no cost associated with the agencies' addressing the misclassified employees. No employees received a decrease in salary as a result of this audit.

Background Information

Texas Government Code, Sections 654.036 (2) and (3), specify that the State Auditor's Office's State Classification Team "shall advise and assist state agencies in equitably and uniformly applying the [state position classification] plan and conduct classification compliance audits to ensure conformity with the plan."

The audit summarized in this report focused on four agencies in Article III (Education) of the General Appropriations Act.

Definitions

Occupational Category - An occupational category is a broad series of job families characterized by the nature of work performed. Currently, the Position Classification Plan covers 27 occupational categories (for example, Social Services, Medical and Health, and Criminal Justice).

Job Classification - An individual job within a job classification series. Each job classification has a corresponding salary group assignment appropriate for the type and level of work being performed.

Job Classification Series - A hierarchical structure of jobs arranged into job classification titles involving work of the same nature but requiring different levels of responsibility.

Reclassification - The act of changing a position from one job classification to another job classification that better reflects the level or type of work being performed.

Table 1 summarizes the misclassifications identified during this audit.

Table 1

Summary of Employee Tested by Agency				
Agency Number	Agency Name	Number of Employees Tested	Number of Employees Misclassified	Percent of Employees Misclassified
323	Teacher Retirement System	97	17	17.5%
701	Texas Education Agency	201	21	10.4%
771	Texas School for the Blind and Visually Impaired	14	2	14.3%
772	Texas School for the Deaf	9	2	22.2%
Totals		321	42	13.1%

Table 2 presents a summary of the findings in this report and the related issue ratings. (See Appendix 2 for more information about the issue rating classifications and descriptions.)

Table 2

Summary of Chapters/Subchapters and Related Issue Ratings		
Chapter/ Subchapter	Title	Issue Rating ^a
1	Information Technology Occupational Category at Selected Education Agencies	Low
2-A	Analysis of Misclassified Employees at the Teacher Retirement System	Low
2-B	Analysis of Misclassified Employees at the Texas Education Agency	Low
2-C	Analysis of Misclassified Employees at the Texas School for the Blind and Visually Impaired	Low
2-D	Analysis of Misclassified Employees at the Texas School for the Deaf	Low

^a A chapter/subchapter is rated **Priority** if the issues identified present risks or effects that if not addressed could critically affect the audited entity's ability to effectively administer the program(s)/function(s) audited. Immediate action is required to address the noted concern and reduce risks to the audited entity.

A chapter/subchapter is rated **High** if the issues identified present risks or effects that if not addressed could substantially affect the audited entity's ability to effectively administer the program(s)/function(s) audited. Prompt action is essential to address the noted concern and reduce risks to the audited entity.

A chapter/subchapter is rated **Medium** if the issues identified present risks or effects that if not addressed could moderately affect the audited entity's ability to effectively administer program(s)/function(s) audited. Action is needed to address the noted concern and reduce risks to a more desirable level.

A chapter/subchapter is rated **Low** if the audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

Summary of Management's Response

At the end of Chapter 2-B, the State Auditor's Office made a recommendation to TEA management to address the issues identified during this audit. TEA agreed with the recommendation.

Audit Objective and Scope

The objective of this classification compliance audit was to determine whether agencies are conforming to the State's Position Classification Plan by ensuring proper classification of employees.

The scope of this audit included 321 employees within the Information Technology occupational category, as well as others performing similar work, at four agencies in Article III (Education) of the General Appropriations Act as of March 27, 2017. The agencies audited included TRS, TEA, TSBVI, and TSD.

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Detailed Results

Chapter 1

Information Technology Occupational Category at Selected Education Agencies

**Chapter 1
Rating:**
Low ¹

High-growth Jobs

According to the U.S. Bureau of Labor Statistics, employment of information technology occupations is projected to grow 12 percent from 2014 to 2024, faster than the average for all occupations. That high growth is attributed, in part, to a greater emphasis on cloud computing, the collection and storage of big data, and the continued demand for mobile computing.

Source:
<https://www.bls.gov/ooh/computer-and-information-technology/home.htm>

A total of 279 (86.9 percent) of 321 employees classified in the Information Technology occupational category at the Teacher Retirement System (TRS), the Texas Education Agency (TEA), the Texas School for the Blind and Visually Impaired (TSBVI), and the Texas School for the Deaf (TSD), as well as employees identified as performing similar work but classified in other job classification series at those agencies, were classified correctly in accordance with the State's Position Classification Plan.

The Information Technology occupational category includes job classification series such as programmers, systems analysts, network specialists, and data base administrators. Those job classification series and other job classification series performing information technology work are among those that may grow faster than other job classification series in the State's Position Classification Plan (see text box). Table 3 on the next page lists the number of misclassified employees in each job classification series within the Information Technology occupational category, as well as employees performing similar work in another occupational category. The four agencies have taken or reported they will take appropriate action to resolve the 42 misclassified employees (see Chapter 2).

¹ Chapter 1 is rated Low because the audit identified strengths that support the audited entities' ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entities' ability to effectively administer the program(s)/function(s) audited.

Table 3

Job Classification Series Audited		
Job Classification Series	Number of Employees Tested	Number of Employees Misclassified
Business Analyst	10	0
Chief Information Security Officer	1	0
Data Base Administrator	16	1
Director ^a	10	0
Information Technology Auditor	3	0
Information Technology Security Analyst	9	4
Manager ^a	11	1
Network Specialist	21	16
Program Specialist ^a	1	0
Programmer	107	2
Project Manager ^a	6	1
Systems Administrator	1	0
Systems Analyst	104	16
Systems Support Specialist	9	0
Telecommunications Specialist	3	0
Web Administrator	9	1
Totals	321	42
^a The Director, Manager, Program Specialist, and Project Manager job classification series are in the Program Management occupational category.		

Analysis of Employees Classified in the Information Technology Occupational Category at Selected Education Agencies

As discussed in Chapter 1, the State Auditor’s Office identified 42 employees within the Information Technology occupational category, as well as others performing similar work, who were misclassified. The four agencies audited have taken or reported they will take appropriate action to resolve the 42 misclassified employees identified.

Appropriate job classifications are important in determining salary rates that are competitive for the nature of the work performed. Misclassified employees may result in an agency underpaying or overpaying employees for the nature of work being performed.

Table 4 summarizes the number of employees tested and misclassified at each agency.

Table 4

Summary of Employees Tested by Agency				
Agency Number	Agency Name	Number of Employees Tested	Number of Employees Misclassified	Percent of Employees Misclassified
323	Teacher Retirement System	97	17	17.5%
701	Texas Education Agency	201	21	10.4%
771	Texas School for the Blind and Visually Impaired	14	2	14.3%
772	Texas School for the Deaf	9	2	22.2%
Totals		321	42	13.1%

Misclassified Employees

The four agencies have taken or reported that they will take the following actions to address the 42 employees who were misclassified:

- Reclassify 37 employees into a different job classification series. For example, TSD reclassified a systems analyst to a program specialist.
- Reclassify 5 employees within the same job classification series but at a higher salary group.

Of the 42 misclassified employees, 37 (88.1 percent) were misclassified because the agencies did not use a more appropriate job classification series.

The agencies have reclassified or reported that they will reclassify the misclassified employees without changing their salaries. No employees will receive a reduction in salary as a result of the reclassifications.

**Chapter 2-A
Rating:
Low ²**

Chapter 2-A

Analysis of Misclassified Employees at the Teacher Retirement System

Of the 97 employees tested at the Teacher Retirement System (TRS), 80 (82.5 percent) were correctly classified. TRS took appropriate action to address the 17 misclassified employees and reclassified those employees into different job classification series (see Table 5). There was no cost associated with reclassifying the employees. To protect the confidentiality of the employees who were misclassified, each employee was assigned an employee number.

Table 5

Employees Reclassified into a Different Job Classification Series at TRS		
Employee Number	Job Classification Title Before Reclassification	Job Classification Title After Reclassification
1	Network Specialist V	Systems Administrator V
2	Network Specialist III	Systems Administrator III
4	Network Specialist VI	Systems Administrator VI
8	Network Specialist V	Systems Administrator V
11	Network Specialist II	Systems Administrator II
14	Network Specialist II	Systems Administrator II
33	Network Specialist IV	Systems Administrator IV
42	Systems Analyst VI	Information Technology Security Analyst III
46	Network Specialist V	Systems Administrator V
47	Network Specialist V	Systems Administrator V
51	Network Specialist VI	Systems Administrator VI
57	Network Specialist II	Systems Administrator II
63	Network Specialist II	Systems Administrator II
66	Network Specialist V	Systems Administrator V
79	Network Specialist V	Systems Administrator V
83	Network Specialist II	Systems Administrator II
87	Network Specialist II	Systems Administrator II

² Chapter 2-A is rated Low because the audit identified strengths that support the audited entity’s ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity’s ability to effectively administer the program(s)/function(s) audited.

Analysis of Misclassified Employees at the Texas Education Agency

**Chapter 2-B
Rating:**
Low ³

Of the 201 employees tested at the Texas Education Agency (TEA), 180 (89.6 percent) were correctly classified. TEA asserted that it will take appropriate action to address the 21 misclassified employees. Specifically, TEA asserted that it will:

- Reclassify 18 of the 201 employees into a different job classification series (see Table 6).
- Reclassify 3 of the 201 employees into the same job classification series with a higher salary group (see Table 7).

TEA asserted that there will be no cost associated with reclassifying the employees and no employee will receive a reduction in salary as a result of the reclassifications.

Table 6 shows the 18 employees that TEA has asserted that it will reclassify into a different job classification series. To protect the confidentiality of the employees who were misclassified, each employee was assigned an employee number.

Table 6

Employees to Be Reclassified into a Different Job Classification Series at TEA		
Employee Number	Job Classification Title Before Reclassification	Job Classification Title After Reclassification
7	Systems Analyst V	Business Analyst III
13	Information Technology Security Analyst III	Cybersecurity Analyst II
38	Systems Analyst V	Business Analyst III
48	Systems Analyst V	Programmer V
51	Systems Analyst VI	Manager V
52	Systems Analyst V	Programmer V
60	Systems Analyst V	Business Analyst III
63	Information Technology Security Analyst I	Systems Analyst V
74	Information Technology Security Analyst II	Cybersecurity Analyst II
86	Information Technology Security Analyst II	Cybersecurity Analyst II
92	Systems Analyst V	Business Analyst III
102	Systems Analyst V	Business Analyst III
119	Systems Analyst V	Business Analyst III
147	Systems Analyst V	Programmer V

³ Chapter 2-B is rated Low because the audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

Employees to Be Reclassified into a Different Job Classification Series at TEA		
Employee Number	Job Classification Title Before Reclassification	Job Classification Title After Reclassification
160	Systems Analyst V	Programmer V
165	Systems Analyst VI	Manager V
189	Manager V	Information Security Officer
204	Project Manager IV	Director II

Table 7 shows the 3 employees that TEA asserted that it will reclassify within the same job classification series with a higher salary group.

Table 7

Employees to Be Reclassified Within the Same Job Classification Series With a Higher Salary Group at TEA		
Employee Number	Job Classification Title Before Reclassification	Job Classification Title After Reclassification
3	Systems Analyst III	Systems Analyst IV
100	Programmer III	Programmer IV
142	Data Base Administrator V	Data Base Administrator VI

Recommendation

TEA should complete all reclassifications for employees identified as misclassified during this audit and notify the employees.

Management's Response

TEA agrees with the recommendations to complete all reclassifications for employees identified as misclassified during this audit and notify the employees. 18 employees will be reclassified into a different job classification series and 3 employees will be reclassified with the same job classification series but at a higher salary group. No employee will receive a decrease in salary as a result of this audit. The employees affected will be notified of this change.

Person Responsible: *Interim Human Resources Director*

Completion Date: *1/31/2018 or sooner, if applicable.*

Analysis of Misclassified Employees at the Texas School for the Blind and Visually Impaired

**Chapter 2-C
Rating:**

Low ⁴

Of the 14 employees tested at the Texas School for the Blind and Visually Impaired (TSBVI), 12 (85.7 percent) were correctly classified. TSBVI took appropriate action to address the two misclassified employees and reclassified those employees into the same job classification series but in job classifications with a higher salary group (see Table 8). There was no cost associated with reclassifying the employees. To protect the confidentiality of the employees who were misclassified, each employee was assigned an employee number.

Table 8

Employees Reclassified Within the Same Job Classification Series With a Higher Salary Group at TSBVI		
Employee Number	Job Classification Title Before Reclassification	Job Classification Title After Reclassification
1	Web Administrator II	Web Administrator III
12	Programmer III	Programmer IV

⁴ Chapter 2-C is rated Low because the audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.

**Chapter 2-D
Rating:**
Low ⁵

Chapter 2-D

Analysis of Misclassified Employees at the Texas School for the Deaf

Of the 9 employees tested at the Texas School for the Deaf (TSD), 7 (77.8 percent) were correctly classified. TSD took appropriate action to address the 2 misclassified employees and reclassified both employees into a different job classification series (see Table 9). There was no cost associated with reclassifying the employees. To protect the confidentiality of the employees who were misclassified, each employee was assigned an employee number.

Table 9

Employees Reclassified into a Different Job Classification Series at TSD		
Employee Number	Job Classification Title Before Reclassification	Job Classification Title After Reclassification
2	Systems Analyst II	Program Specialist III
5	Systems Analyst VI	Director I

⁵ Chapter 2-D is rated Low because the audit identified strengths that support the audited entity’s ability to administer the program(s)/functions(s) audited or the issues identified do not present significant risks or effects that would negatively affect the audited entity’s ability to effectively administer the program(s)/function(s) audited.

Appendices

Appendix 1

Objective, Scope, and Methodology

Objective

The objective of this classification compliance audit was to determine whether agencies are conforming to the State's Position Classification Plan by ensuring proper classification of employees.

Scope

The scope of this audit covered 321 employees within the Information Technology occupational category, as well as others performing similar work, at four agencies in Article III (Education) of the General Appropriations Act as of March 27, 2017. The agencies audited included the Teacher Retirement System (TRS), the Texas Education Agency (TEA), the Texas School for the Blind and Visually Impaired (TSBVI), and the Texas School for the Deaf (TSD).

Methodology

The audit methodology included collecting information and documentation, reviewing and analyzing surveys completed by employees at the four agencies and verified by their supervisors, and conducting interviews with management at the four agencies.

The State Auditor's Office's State Classification Team evaluates jobs on a "whole job" basis to determine proper job classifications. The determinations are primarily based on a comparison of duties and responsibilities of the majority of work being performed against the state job description.

When determining proper classification, the State Classification Team does not focus on specific differences between one level and the next level in a job classification series (for example, Programmer I versus Programmer II). Instead, the State Classification Team considers whether an employee is appropriately classified within broad responsibility levels, such as Staff Programmer (Programmer I, Programmer II, and Programmer III positions) as compared to Senior Programmer (Programmer IV, Programmer V, and Programmer VI positions).

The State Classification Team used an automated job evaluation process. The State Classification Team populated a database with information regarding the employees whose positions were tested. Employees at the

four agencies verified the information to ensure that all employees within the audit scope were included. Employees at the four agencies were then asked to complete online surveys describing the work they perform and the percentage of time they spend performing their duties. Supervisors were asked to review and verify employees' survey responses.

Completed survey results were entered into an automated job evaluation system, which made an initial determination of whether the employees were appropriately classified. The State Classification Team reviewed all surveys to determine and validate the proper classification of employees. The State Classification Team made follow-up calls or sent clarification emails to gather additional information to determine the proper classification of employees. Each agency then had the opportunity to review and address potential misclassifications.

Data Reliability and Completeness

The State Auditor's Office determined that the data in the Classification Compliance Audit System was reliable for the purposes of this audit.

Information collected and reviewed included the following:

- Surveys completed by employees and verified by their supervisors.
- Correspondence from the human resources offices and supervisors at the four agencies.

Procedures and tests conducted included the following:

- Interviewed management at the four agencies' human resources offices regarding the classification of employees.
- Performed follow-up calls and sent emails to the four agencies to validate proper classification of employees and to gather additional information to resolve discrepancies.

Criteria used included the following:

- Texas Government Code, Chapter 654.
- State job descriptions.

Project Information

Audit fieldwork was conducted from March 2017 through September 2017. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The following members of the State Auditor's staff performed the audit:

- Kathy-Ann Moe, MBA (Project Manager)
- Juan R. Sanchez, MPA, CIA, CGAP (Assistant Project Manager)
- Sharon Schneider, CCP, PHR, SHRM-CP
- Michelle Ann Duncan Feller, CPA, CIA (Quality Control Reviewer)
- John Young, MPAff (Audit Manager)

Issue Rating Classifications and Descriptions

Auditors used professional judgement and rated the audit findings identified in this report. Those issue ratings are summarized in the report chapters/sub-chapters. The issue ratings were determined based on the degree of risk or effect of the findings in relation to the audit objective(s).

In determining the ratings of audit findings, auditors considered factors such as financial impact; potential failure to meet program/function objectives; noncompliance with state statute(s), rules, regulations, and other requirements or criteria; and the inadequacy of the design and/or operating effectiveness of internal controls. In addition, evidence of potential fraud, waste, or abuse; significant control environment issues; and little to no corrective action for issues previously identified could increase the ratings for audit findings. Auditors also identified and considered other factors when appropriate.

Table 10 provides a description of the issue ratings presented in this report.

Table 10

Summary of Issue Ratings	
Issue Rating	Description of Rating
Low	The audit identified strengths that support the audited entity's ability to administer the program(s)/functions(s) audited <u>or</u> the issues identified do not present significant risks or effects that would negatively affect the audited entity's ability to effectively administer the program(s)/function(s) audited.
Medium	Issues identified present risks or effects that if not addressed could <u>moderately affect</u> the audited entity's ability to effectively administer program(s)/function(s) audited. Action is needed to address the noted concern(s) and reduce risks to a more desirable level.
High	Issues identified present risks or effects that if not addressed could <u>substantially affect</u> the audited entity's ability to effectively administer the program(s)/function(s) audited. Prompt action is essential to address the noted concern(s) and reduce risks to the audited entity.
Priority	Issues identified present risks or effects that if not addressed could <u>critically affect</u> the audited entity's ability to effectively administer the program(s)/function(s) audited. Immediate action is required to address the noted concern(s) and reduce risks to the audited entity.

Copies of this report have been distributed to the following:

Legislative Audit Committee

The Honorable Dan Patrick, Lieutenant Governor, Joint Chair
The Honorable Joe Straus III, Speaker of the House, Joint Chair
The Honorable Jane Nelson, Senate Finance Committee
The Honorable Robert Nichols, Member, Texas Senate
The Honorable John Zerwas, House Appropriations Committee
The Honorable Dennis Bonnen, House Ways and Means Committee

Office of the Governor

The Honorable Greg Abbott, Governor

Teacher Retirement System

Members of the Teacher Retirement System Board of Trustees

Mr. R. David Kelly, Chair

Ms. Dolores Ramirez, Vice Chair

Ms. T. Karen Charleston

Mr. Joe Colonna

Mr. David Corpus

Mr. John Elliott

Dr. Greg Gibson

Mr. Christopher Moss

Mr. Brian Guthrie, Executive Director

Texas Education Agency

Members of the State Board of Education

Ms. Donna Bahorich, Chair

Mr. Marty Rowley, Vice Chair

Mr. Ruben Cortez Jr., Secretary

Mr. Lawrence A. Allen Jr.

Ms. Erika Beltran

Mr. David Bradley

Mrs. Barbara Cargill

Dr. Keven Ellis

Ms. Patricia Hardy

Mr. Tom Maynard

Ms. Sue Melton-Malone

Mr. Ken Mercer

Ms. Geraldine Miller

Ms. Georgina C. Perez

Ms. Marisa B. Perez-Diaz

Mr. Mike Morath, Commissioner of Education

Texas School for the Blind and Visually Impaired

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Mr. David Saunders
Ms. Claire Bugen, Superintendent



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TAB 4



Grant Thornton

Presentation to the Board of Trustees for the year
ended August 31, 2017

December 15, 2017

Presented by: Dan Barron and Bhakti Patel



Our Values are CLEARR

To achieve our global vision, we capitalize on our strengths by embracing the following values:

- Unite through global **Collaboration**
- Demonstrate **Leadership** in all we do
- Promote a consistent culture of **Excellence**
- Act with **Agility**
- Ensure deep **Respect** for people
- Take **Responsibility** for our actions

Our values serve as the foundation of each step we take toward achieving our vision. They guide our decision-making and provide a framework for our people to make correct and appropriate choices.



Responsibilities



Our Responsibilities

We are responsible for:

Performing an audit under US GAAS of the financial statements prepared by management, with your oversight

Forming and expressing an opinion about whether the financial statements are presented fairly, in all material respects in accordance with US GAAP

Communicating specific matters to you on a timely basis; we do not design our audit for this purpose.

An audit provides reasonable, not absolute, assurance that the financial statements do not contain material misstatements due to fraud or error. It does not relieve you or management of your responsibilities. Our respective responsibilities are described further in our engagement letter.



Those Charged with Governance and Management Responsibilities

Those Charged with Governance

Those charged with governance are responsible for:

- Overseeing the financial reporting process
- Setting a positive tone at the top and challenging the company's activities in the financial arena
- Discussing significant accounting and internal control matters with management
- Informing us about fraud or suspected fraud, including its views about fraud risks
- Informing us about other matters that are relevant to our audit, such as:
 - Entity strategies and related business risks that may result in heightened risks of material misstatement
 - Matters warranting particular audit attention
 - Significant communications with regulators
 - Matters related to the effectiveness of internal control and your oversight responsibilities
 - Your views regarding our current communications and your actions regarding previous communications

Management

Management is responsible for:

- Preparing and fairly presenting the financial statements in accordance with US GAAP
- Designing, implementing, evaluating, and maintaining effective internal control over financial reporting
- Communicating significant accounting and internal control matters to those charged with governance
- Providing us with unrestricted access to all persons and all information relevant to our audit
- Informing us about fraud, illegal acts, significant deficiencies, and material weaknesses
- Adjusting the financial statements, including disclosures, to correct material misstatements
- Informing us of subsequent events
- Providing us with written representations



Audit Scope & Results



Materiality

Materiality is the magnitude of an omission or misstatement that likely influences a reasonable person's judgment. It is ordinarily evaluated against relevant financial statement benchmark(s).

We believe that total revenue is the relevant benchmark(s) for the company.

Financial statement items greater than materiality are within our audit scope. Other accounts or classes of transactions less than materiality may be in our scope if qualitative risk factors are present (for example, related party relationships or significant unusual transactions).



Areas of Audit Focus

The following provides an overview of the areas of significant audit focus based on our risk assessments.

Areas of focus	Results
<ul style="list-style-type: none">• Expenses• Revenues• Taxes• Tax Liability	All balances were determined to be materially stated based on Grant Thornton's audit procedures.



Other Required Communications

Disagreements with management

We had no disagreements with management, whether or not satisfactorily resolved, about matters that individually or in the aggregate could be significant to TRICOT's financial statements or the auditor's report.

Management's consultations with other accountants

We are not aware of any consultations by management with other accountants regarding accounting or auditing matters.

Significant issues discussed with management

No significant discussions with management outside of the normal course of the audit.



Other Required Communications (continued)

Significant difficulties encountered during the audit

We did not encounter any significant difficulties during the audit.

Related parties and related party transactions

No significant related party transactions noted that were not properly recorded or disclosed.



Other Required Communications (continued)

Other findings or issues

No other findings or issues.

Modifications to the auditor's report

No modifications noted.



Summary of Adjustments

Description	Increase (Decrease) to:			Change in Net Position
	Assets	Liabilities	Net Position	
<u>Recorded adjustments</u>				
1 Secoded Salaries and Wages			50,226	50,226
Transfers In - Secoded Salaries and Wages			(50,226)	(50,226)
To record FY17 incentive compensation expense				
2 Tax Expense			64,566	64,566
Transfers In - Tax Expense			(64,566)	(64,566)
To record Q1 (April - June 2017) UK HMRC tax expense which was not previously recorded.				
Total Adjustments	\$ -	\$ -	\$ -	\$ -
Total Report Balance before AJE's	302,886	69,929	232,957	131,871
Effect of AJE's on Total Report Balance	0%	0%	0%	0%



Summary of Passed Adjustments

Description	Increase (Decrease) to:			Change in Net Position
	Assets	Liabilities	Net Position	
<u>Unrecorded adjustments</u>				
1 NET POSITION			(32,022)	(32,022)
ACCOUNTS PAYABLE		32,022		
DUE FROM TRS OF TEXAS	32,022			
NET POSITION			32,022	32,022
To reverse tax expense booked in current year for July and August 2016.				
Reversing effect of prior year unrecorded adjustment			1,673	1,673
Total Passed Adjustments	\$ 32,022	\$ 32,022	\$ 1,673	\$ 1,673
Total Balance	302,886	69,929	232,957	131,871
Effect of Passed Adjustments on Classifications	11%	46%	1%	1%

Management believes the unrecorded adjustments are immaterial to the financial statements.



Internal Control Matters

Our responsibility

- Obtain reasonable assurance about whether the financial statements are free of material misstatement
- Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control
- We express no opinion on the effectiveness of internal control

Definitions

- A deficiency in internal control ("control deficiency") exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent or detect, misstatements on a timely basis.
- A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis.



Internal Control Matters

A Material weaknesses was communicated to you in our letter dated November 3, 2017.

Material weakness

During the fiscal year 2017 audit, we identified a material weakness in internal control over financial reporting, primarily related to management's failure to properly record and track expense transactions incurred during the fiscal year. Management's failure to properly record and track such expenses could result in incorrect or misstated financial statements.



Quality of Accounting Practices and Alternative Treatments



Quality of Accounting Practices and Alternative Treatments

Accounting policies

- Consistent and appropriate accounting policies and their application
- No changes in accounting policies from prior year

Accounting estimates

- TRS employee salaries allocations
- Intercompany expense allocations
- Depreciation expense

We performed tests to satisfy ourselves that the amounts were free from material misstatement



Quality of Accounting Practices and Alternative Treatments (continued)

Disclosures

- We have assessed the financial statements and disclosures for clarity and completeness.
- Footnote disclosures in the financial statements appear overall to be neutral, consistent, and clear.

Other related matters

None noted



Other Matters



Value for Fees

Deliverables

Report on the financial statements of the Teacher Retirement Investment Company of Texas, Ltd. ("TRICOT") as of and for the year ended August 31, 2017

Issue written communications to management and the Audit Committee describing significant deficiencies and/or material weaknesses, if any, noted during our audit, as applicable



Commitment to Promote Ethical and Professional Excellence

We are committed to promoting ethical and professional excellence. To advance this commitment, we have put in place a phone and Internet-based hotline system.

The Ethics Hotline (1.866.739.4134) provides individuals a means to call and report ethical concerns.

The EthicsPoint URL link

- Can be found on our internal website
- Can be accessed from our external website
(https://secure.ethicspoint.com/domain/en/report_custom.asp?clientid=15191)

Disclaimer: EthicsPoint is not meant to act as a substitute for a company's "whistleblower" obligations.



This communication is intended solely for the information and use of management and the Board of Trustees of the Teacher Retirement System and is not intended to be and should not be used by anyone other than these specified parties.



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November 3, 2017

Management and Board of Trustees
Teacher Retirement Investment Company of Texas, Ltd.
Austin, TX

Grant Thornton LLP
111 Congress Avenue
Suite 2500
Austin, TX 78701
T 512.692.1200
F 512.692.1201
www.GrantThornton.com

Ladies and Gentlemen:

In connection with our audit of Teacher Retirement Investment Company of Texas, Ltd. (the “Company”) financial statements as of August 31, 2017 and for the year then ended, auditing standards generally accepted in the United States of America (“US GAAS”) require that we advise management and the board of trustees (hereinafter referred to as “those charged with governance”) of the following internal control matters identified during our audit.

Our responsibilities

Our responsibility, as prescribed by US GAAS, is to plan and perform our audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to fraud or error. An audit includes consideration of internal control over financial reporting (hereinafter referred to as “internal control”) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control. Accordingly, we express no such opinion on internal control effectiveness.

Identified deficiencies in internal control

We identified the following internal control matters that are of sufficient importance to merit your attention.

Material weaknesses

A deficiency in internal control (“control deficiency”) exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Company’s financial statements will not be prevented, or detected and corrected, on a timely basis.

Our consideration of internal control was not designed to identify all deficiencies in internal control that, individually or in combination, might be material weaknesses; therefore, material weaknesses may exist that were not identified. However, we consider the following identified control deficiency to be a material weakness.

Management of the Company is responsible for the fair presentation of year-end financial statements in accordance with generally accepted accounting principles. This includes the responsibility for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements. During the fiscal year 2017 audit, we identified a material weakness in internal control over financial reporting, primarily related to management's failure to properly record and track expense transactions incurred during the fiscal year. Management's failure to properly record and track such expenses could result in incorrect or misstated financial statements.

We identified two (2) adjusting entries during the audit as a result of management's lack of appropriate controls over the financial reporting process. The details of the adjusting entries (AJEs) are noted below:

- AJE #1 – We identified tax expenses that were incurred and paid during the year that were not included in the general ledger.
- AJE #2 – We identified compensation related amounts that were accrued by the Teacher Retirement System as of August 31, 2017; however the amounts attributable to the Company were not included in its general ledger.

We noted that the entries above were a result of lack of internal controls over financial reporting in order to identify material omissions from the Company's financial statements.

Management corrected the misstatements identified above in the financial statements as of August 31, 2017.

Recommendations to strengthen internal control

We recommend that the Company and those charged with governance consider the following actions.

- Identify the expenses directly and indirectly related to the Company in order for the finance department to ensure all expenses have been accounted for in the Company's general ledger. Document which revenue stream each expense type corresponds with in the Company's policies and procedures.
- Document each revenue stream and revenue recognition methodology in the Company's policies and procedures.
- Perform year end analytics to identify unusual or missing expense and revenue transactions

Company response

The Company's written response to the internal control matters identified herein has not been subjected to our audit procedures and, accordingly, we express no opinion on it.

Material Weakness in internal control over financial reporting – failure to properly record and track expense transactions incurred during the fiscal year.

- AJE #1 – identified tax expenses that were incurred and paid during the year that were not included TRICOT's general ledger.

Response: Management agrees with this finding. The omitted tax payment was for foreign taxes related to seconded employees in the amount of \$64,566 that was paid through the State Treasury by wire to Her Majesty's Revenue and Customs (HMRC) in London. TRS failed to record the payment into the budget and payment (BEVO) system, which is the system the staff relies upon for cost allocations to TRICOT. There are controls in place such as the BEVO to USAS reconciliation which could have detected the unrecorded payment related to TRICOT. Since the payment occurred late in the fiscal year the reconciling item was not recorded or escalated in time for allocations to TRICOT. The Cash in State Treasury reconciliation did detect the unrecorded entry, and an entry was made to TRS' general ledger; however, it was not identified as being related to TRICOT. TRICOT will strengthen controls by reviewing reconciliations to ensure they have been completed in a timely manner prior to preparation of financial statements. In addition, use of the JP Morgan bank account involves fewer manual processes and will help to ensure all records remain in sync. TRS created a prefunding procedure for HMRC payments from the JP Morgan bank account. This change was effective October 2017. Procedure documentation will be updated December 2017.

- AJE #2 – identified compensation related amounts that were accrued by the Teacher Retirement System as of August 21, 2017; however, the amounts attributable to the Company were not included in its general ledger.

Response: Agree - this item is related to Incentive Compensation. The payout for performance incentive compensation is made over a two-year period, and the second amount is paid out in February of the following year. This expense of \$50,226, related to seconded employees of TRS and new to TRICOT this year, was not considered when performing accruals for the current year. Updating expense and revenue procedures on a yearly basis will ensure all expense and revenue items are identified and accounted for in the general ledger. Procedures will be updated December 2017.

This communication is intended solely for the information and use of management, those charged with governance, and others within the Company and is not intended to be and should not be used by anyone other than these specified parties.

Very truly yours,





REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

Grant Thornton LLP
111 Congress Plaza, Suite 2500
Austin, TX 78701

T 512-692-1200
F 512-692-1201
www.GrantThornton.com

Board of Trustees
Teacher Retirement Investment Company of Texas, Ltd.

Report on the financial statements

We have audited the accompanying financial statements of the Teacher Retirement Investment Company of Texas, Ltd. ("TRICOT") as of and for the year ended August 31, 2017 and the related notes to the financial statements, which collectively comprise TRICOT's basic financial statements as listed in the table of contents.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to TRICOT's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of TRICOT's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinions

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, 2017, and the changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other matters***Required supplementary information***

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis be presented to supplement the basic financial statements. Such information, although not a required part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. This required supplementary information is the responsibility of management. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America. These limited procedures consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.



Austin, Texas

November 3, 2017

TAB 5

TAB 5A



PRESENTATION FOR THE AUDIT COMMITTEE BY:
TRS HIB & TRUVEN HEALTH ANALYTICS

DECEMBER 15, 2017



Background of Audited Plans

TRS-ActiveCare

- Total Enrollment – 428,000
- Three self-funded plans:
 - ActiveCare 1-HD (47%)
 - ActiveCare Select (23%)
 - ActiveCare 2 (29%)
- Health Plan Administrator:
Aetna
- Pharmacy Benefits Manager:
CVSHealth/Caremark

TRS-Care

- Total Enrollment – 156,000
- Three self-funded plans:
 - Care 1 (18%)
 - Care 2 (34%)
 - Care 3 (47%)
- Health Plan Administrator:
Aetna
- Pharmacy Benefits Manager:
Express Scripts

Truven Health Analytics – TRS Audits

Audit Time Scope

- Fiscal Year 2016 (09/01/2015 – 08/31/2016) for most plans, with the following exception of Medicare Part D plan
- Calendar Year 2016 for the Medicare Part D plan, also called the Employer Group Waiver Plan (EGWP)

Audit Focus

- Claim accuracy
- Operation review
- Performance guarantee verification

Truven Health Analytics – TRS Audits

Audit Result Summary

- All 3 companies performing above acceptable levels on claim adjudication accuracy
- All 3 companies operates within contractual terms
- All 3 companies are accurately reporting performance guarantees
- Insignificant weaknesses were identified and will be discussed by Truven

Truven Health Analytics – TRS Audits

Audit Methodology – Claims

- Obtain Summary Plan Descriptions (SPDs) and other benefit documentation
- Develop benefit templates based on SPDs
- Obtain claims files from administrators
- Use proprietary software to electronically re-adjudicate 100% of claims
 - Benefit determinations (coinsurance, copayments, deductibles, etc.)
 - Compare to industry standards

Administrator	Claim Count	Paid
Aetna TRS-Care	2,989,702	\$743,104,272
Aetna TRS-ActiveCare	4,209,683	\$1,350,270,312
ESI – Commercial	3,179,107	\$343,690,550
ESI – EGWP	4,729,493	\$492,067,084
Caremark	4,468,702	\$387,888,405

Audit Methodology - Claims (continued)

- Potential exceptions grouped into various categories
- Select claims samples from exception categories
- Test claims samples
 - Medical - on site claims audit and operational review for ActiveCare and Care
 - Rx - remote claims audit and operational review for Care Commercial, EGWP, and ActiveCare
 - Rx - on site audit of mail order claims for Care Commercial and EGWP
- Evaluate administrator sample responses
- Complete 100% claims analysis based on remaining sample exceptions
 - “Agree to”
 - “Agree to disagree”

Truven Health Analytics – TRS Audits

TRS-Care Standard Health Plan Administration by Aetna for September 1, 2015 to August 31, 2016

- Aetna performing above acceptable levels
- Overall claims findings in dollars are below Truven benchmark (1%-2%)
 - TRS-Care 0.21% (FY15 – 0.07%)
- Opportunities to clarify benefit intentions
 - 100% covered services (\$79K), copayment application (\$83K)
- Other opportunities
 - Coordination of benefits (COB) (\$866K), surgery payments (\$276K), duplicate claims (\$207K)
- Recommendations
 - Work with Aetna to clarify intent of benefit design
 - Pursue recoveries where appropriate
 - Review COB system edits with Aetna

Truven Health Analytics – TRS Audits

TRS-ActiveCare Health Plan Administration by Aetna for September 1, 2015 to August 31, 2016

- Aetna performing above acceptable levels
- Overall claims findings in dollars are below Truven benchmark (1%-2%)
 - TRS-ActiveCare 0.04% (FY15 – 0.04%)
- Opportunities to clarify benefit intentions
 - 100% covered services (\$296K), copayment application (\$70K), ineligible services (\$163K)
- Recommendations
 - Work with Aetna to clarify intent of benefit design
 - Pursue recoveries where appropriate

Truven Health Analytics – TRS Audits

TRS-Care Standard Plan Pharmacy Administration by ESI for September 1, 2015 to August 31, 2016

- ESI performing above acceptable levels
- Overall claims findings in dollars are below Truven benchmark (1%-2%)
 - TRS-Care 0.09% (FY14 – 0.96%) (FY15 – 0.65%)
- Opportunities to clarify benefit intentions
 - Duplicate claims (\$19K) and ineligible benefits (\$291K)
- Recommendations
 - Review duplicate claim reimbursement with ESI
 - Clarify intent for ineligible benefits covered without proper protocol review

Truven Health Analytics – TRS Audits

TRS-Care EGWP Plan Pharmacy Administration by ESI for January 1, 2015 to December 31, 2015

- ESI performing above acceptable levels
- Overall claims findings are below Truven benchmark (1%-2%)
 - TRS-Care 0.03% (CY13 – 0.22%) (CY14 – 0.30%)
- Opportunities to clarify benefit intentions
 - Early refill/duplicate therapy claims (\$116K) and ineligible benefits (\$31K)
- Recommendations
 - Review duplicate claims and COB protocol to determine if it aligned with contractual intent
 - Clarify intent for ineligible benefits covered without proper protocol review

Truven Health Analytics – TRS Audits

TRS-ActiveCare Pharmacy Plan Administration by Caremark for September 1, 2015 to August 31, 2016

- Caremark performing above acceptable levels
- Overall claims findings are below Truven benchmark (1%-2%)
 - TRS-ActiveCare 0.03% (FY15 – 1.52%)
- Opportunities to clarify benefit intentions
 - Deductible (\$102K), Affordable Care Act (ACA) covered drugs (\$30K) and early refills (<\$1K)
- Recommendations
 - Ensure Caremark’s ACA copay guidelines align with plan intent
 - Ensure Caremark’s deductible application parameters align with plan intent

Truven Health Analytics – TRS Audits

Vendor Responses

- Vendors agree to some findings but disagree with the others
- Our investigation indicate that most of the findings disagreed by vendors from last year's audit turned out to be false positive

Management Responses

- HIB will research identified potential erroneous claims and seek corrective actions.
- HIB will work with vendors to resolve underlying control deficiencies to reduce errors going forward.

TAB 5B



More Than Data. **Answers.**

Teacher Retirement System of Texas

Review of Health Plan Administration by Aetna for September 1, 2015, to August 31, 2016

TRS-Care Standard Plan

Prepared for:
Teacher Retirement System of Texas

December 15, 2017

Submitted by: Truven Health Analytics



EXECUTIVE SUMMARY

Engagement Overview and Scope

The Teacher Retirement System of Texas (TRS) engaged Truven Health Analytics (Truven) to conduct a health claims review to:

- Assess the administration of TRS’ self-funded employee health plans by Aetna.
- Determine whether Aetna is in compliance with the terms of the Administrative Services Agreement (ASA), Summary Plan Description (SPD), and other applicable documents.

This engagement primarily examined Aetna’s claims adjudication accuracy relative to all claims incurred by TRS’ plan members for TRS-Care Standard plans from September 1, 2015 to August 31, 2016 and paid through November 30, 2016. In addition, Truven was engaged to perform an operational review to assess the policies, procedures, and controls that support the administration of TRS’ health plans and to review the reporting of several performance guarantees in place between TRS and Aetna. The health plans included in the review consist of the following:

- TRS-Care 1
- TRS-Care 2
- TRS-Care 3

From the population of potential exceptions, Truven selected a sample of 150 TRS-Care claims for onsite review. Of the 150 claims reviewed, Truven determined during the onsite review that 124 claims were processed and paid correctly. Of the remaining 26 exceptions, Aetna agreed with Truven’s assessment that there was an exception in processing 24 claims. Based on these 26 exceptions, Truven determined which types of exceptions represented systemic claims processing exceptions. This process resulted in the identification of 8,771 claims and \$1,569,782 in total exceptions with \$1,249,332 in net overpayments.

The following charts compare the total cost of all exceptions that were identified. The analysis is separated into two categories: exceptions identified based on the Summary Plan Description analysis and those identified based on Industry Standard and Best Practices edits. Of the 150 sample claims reviewed onsite 71 represented SPD potential exceptions and 79 represented Industry Standard and Best Practices potential exceptions.

Summary Plan Description Analysis – TRS-Care

Initial 100% Claims Analysis for SPD Exceptions	Claims	Paid	% Total Paid
Total claims analyzed	2,989,702	\$743,104,272	100%
Claims passing Truven edits	2,843,041	\$702,097,804	94.48%
Claims identified for further testing and analysis	146,661	\$41,006,468	5.52%
Total claims selected for onsite review	71	\$223,957	0.03%

Onsite Review Results	Claims	Financial Impact	% of Sample
Total sample claims confirmed as correctly processed	58	\$216,663	96.74%
Exceptions identified from sample	13	\$7,294	3.26%
Exceptions agreed to by Aetna	12	\$6,894	3.08%
“Agree to disagree” exceptions	1	\$400	0.18%
Final 100% Claims Analysis Results	Claims	Financial Impact	% Total Paid
Total exceptions identified in claims population	3,748	\$219,797	0.03%

Industry Standards and Best Practices Analysis – TRS-Care

Initial 100% Claims Analysis for Industry Standards and Best Practices Exceptions	Claims	Paid	% Total Paid
Total claims analyzed	2,989,702	\$743,104,272	100%
Claims passing Truven edits	2,911,816	\$621,657,151	83.66%
Claims identified for further testing and analysis	77,886	\$121,447,121	16.34%
Total claims selected for onsite review	79	\$911,752	0.12%
Onsite Review Results	Claims	Financial Impact	% of Sample
Total sample claims confirmed as correctly processed	66	\$899,291	98.63%
Exceptions identified from sample	13	\$12,461	1.37%
Exceptions agreed to by Aetna	12	\$12,443	1.36%
“Agree to disagree” exceptions	1	\$18	0.01%
Final 100% Claims Analysis Results	Claims	Financial Impact	% Total Paid
Total exceptions identified in claims population	5,023	\$1,349,985	0.18%

Key Findings

The following is a description of the most significant exception categories and includes those categories which represent exceptions which may be systemic within Aetna’s processing system. For further details on the exceptions by category and type, please refer to Section 3, Summary of Findings by Exception Area and Appendix A, Detailed Claims Findings.

Coordination of Benefits	Truven identified 2,302 claims identified across the claims population where coordination of benefits (COB) should have been applied based on indicators in the claims file. Medicare was primary on the majority of the COB claims and Aetna paid them as primary. This resulted in overpayment exceptions totaling \$866,102 and should be examined further.
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<p>Surgery Payments</p>	<p>Truven uses guidelines established by the Centers for Medicare & Medicaid Services (CMS) and the American Medical Association (AMA) to identify situations where appropriate reductions should be made for claims for surgical procedures. When multiple procedures are performed on the same day, by the same individual physician or other healthcare professional, reduction in reimbursement for the secondary and subsequent procedures should occur. Payment at 100% for secondary and subsequent procedures would represent reimbursement for duplicative components of the primary procedure. The analyses found claims for surgical procedures where reductions were not taken.</p> <p>In all, there were 1,545 surgical payment claims where appropriate reductions were not applied resulting in an overpayment of \$276,137. The surgery payment claims were related to assistant surgeon reduction and multiple surgical reduction. The findings for assistant surgeon reduction totaled approximately \$164,000 and the findings for multiple surgical reductions totaled approximately \$112,000. Modification of the claims adjudication system to prevent these exceptions would result in future savings for TRS.</p>
<p>Duplicate Claim Payments</p>	<p>There were 1,171 claims where payments were made for duplicate claims services resulting in an overpayment amount of \$206,919. In the claim sample, hard duplicate facility edits identified two paid institutional claims with matching provider, patient, date of service, revenue code, procedure, and allowed amount. Hard duplicate physician edits identified two paid professional claims with matching provider, patient, date of service, procedure, modifier and allowed amount. Soft duplicate physician edits identified one paid professional claim with the same HCPCS codes for durable medical equipment. A savings opportunity exists with regards to duplicates.</p>
<p>Copayment Application</p>	<p>Truven identified 1,183 claims where either an incorrect copayment amount was applied, or no copayment was taken when one should have been taken. These claims resulted in a total exception amount of \$83,268 of which \$2,248 were overpayments and \$81,020 were underpayments. These results were related to office based services and surgeries in an office. Attention should be focused on ensuring that the correct copayment is taken for these areas.</p>

100-Percent Coverage	There were 1,623 claims identified throughout the claims population where the SPD provides for 100% coverage (no member liability), however, member liabilities were incorrectly applied. These claims totaled \$79,205 in underpayments by TRS but overpayments by members. Based on the sample findings, the claims were related to services provided by Quest Labs and mammograms for members over age 35 which are covered in full for specific benefit plans. Truven recommends that internal claims processing edits be modified to adhere to the SPD benefit provisions for TRS.
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Recommendations

- Request and review financial and claim impact analyses for all “Agreed To” exceptions and other exceptions where Aetna was not properly adjudicating claims according to the SPD language. Where applicable, recoveries should be pursued.
- Work with Aetna to clarify the intent of all the plan design features identified as exceptions.
- Aetna should address the issues identified that are related to the correct application of member liability such as coinsurance and copayment to assure that members are assessed the correct amount and that claims are paid correctly for claims that require coinsurance as well as claims that are covered at 100%.
- Aetna should institute edits in the claims processing system to assure that other party liability is reviewed and payment made based on primacy rules. Truven recommends that this includes additional COB training for processors, if necessary.
- Aetna should review the process for multiple surgical reductions and assistant surgery reductions by instituting edits in the claims system to assure correct reductions are applied. Additional processor training is also recommended.

Exception Categories Compared to Industry Benchmarks

The following chart compares Aetna’s experience for the identified exception categories to that of other Health Plans (Benchmark Exception Rate). The benchmarks are based on the claims counts for the exception category. The exception rate identified on the Aetna claims is below that of other commercial and government health plans audited by Truven with the exception of Duplicate Claim Payment.

Benchmarks – TRS-Care

Exception Category	Benchmark Exception Rate	Aetna Exception Rate FY2016	Aetna Score
100 Percent Coverage	1.70%	0.054%	Below average exception rate
Coinsurance Application	4.14%	0.001%	Below average exception rate
Copayment Application	4.28%	0.040%	Below average exception rate
Duplicate Claims Payment	0.03%	0.039%	Above average exception rate
Ineligible Services	0.35%	0.031%	Below average exception

Other Party Liability	0.12%	0.077%	Below average exception rate
Surgery Payments	0.07%	0.052%	Below average exception rate

TAB 5C



More Than Data. **Answers.**

Teacher Retirement System of Texas

Review of Health Plan Administration by Aetna for September 1, 2015, to August 31, 2016

TRS-ActiveCare

Prepared for:
Teacher Retirement System of Texas

December 15, 2017

Submitted by: Truven Health Analytics, LLC



EXECUTIVE SUMMARY

Engagement Overview and Scope

The Teacher Retirement System of Texas (TRS) engaged Truven Health Analytics (Truven) to conduct a health claims review to:

- Assess the administration of TRS’s self-funded employee health plans by Aetna.
- Determine if Aetna is in compliance with the terms of the Administrative Services Agreement (ASA), Summary Plan Description (SPD), and other applicable documents.

This engagement primarily examined Aetna’s claims adjudication accuracy relative to all claims incurred by TRS’s ActiveCare plan members from September 1, 2015 to August 31, 2016 and paid through November 30, 2016. In addition, Truven was engaged to perform an operational review to assess the policies, procedures, and controls that support the administration of TRS’s health plans and to review the reporting of several performance guarantees in place between TRS and Aetna. The health plans included in the review included the following:

- TRS-ActiveCare 1-HD
- TRS-ActiveCare Select
- TRS- ActiveCare 2

From the population of potential exceptions, Truven selected a sample of 151 claims for onsite review that consisted of 151 claims for TRS-ActiveCare. Of the 151 claims reviewed, we determined during the onsite review that 131 claims were processed and paid correctly. Of the remaining 20 exceptions, Aetna agreed with Truven’s assessment that there was an exception in processing the claim on 18 claims.

Based on these 20 exceptions, Truven determined which types of exceptions represented systemic claims processing exceptions. For these exception categories, 100% of the claims identified are considered exceptions. This process resulted in the identification of 14,213 claims and \$587,974 in total exceptions resulting in (\$57,703) in net underpayments.

The following charts compare the total cost of all exceptions that were identified. The analysis is separated into two categories: exceptions identified based on the SPD analysis and those identified based on Industry Standard and Best Practices edits. Of the 151 sample claims reviewed onsite 85 represented potential SPD exceptions and 66 represented potential Industry Standard and Best Practices exceptions.

SPD Analysis – TRS-ActiveCare

Initial 100% Claims Analysis for SPD Exceptions	Claims	Paid	% Total Paid
Total claims analyzed	4,209,683	\$1,350,270,312	100%
Claims passing Truven edits	3,914,991	\$1,212,282,408	89.78%
Claims identified for further testing and analysis	294,692	\$137,987,904	10.22%
Total claims selected for onsite review	85	\$338,548	0.03%

Onsite Review Results	Claims	Financial Impact	% of Sample
Total sample claims confirmed as correctly processed	69	\$321,437	94.95%
Exceptions identified from sample	16	\$17,111	5.05%
Exceptions agreed to by Aetna	15	\$7,628	2.25%
“Agree to disagree” exceptions	1	\$5	2.80%
Final 100% Claims Analysis Results	Claims	Financial Impact	% Total Paid
Total exceptions identified in claims population	14,209	\$554,216	0.04%

Industry Standards and Best Practices Analysis – TRS-ActiveCare

Initial 100% Claims Analysis for Industry Standards and Best Practices Exceptions	Claims	Paid	% Total Paid
Total claims analyzed	4,209,683	\$1,350,270,312	100%
Claims passing Truven edits	4,084,416	\$1,110,228,561	82.22%
Claims identified for further testing and analysis	125,267	\$240,041,751	17.78%
Total claims selected for onsite review	66	\$1,534,328	0.11%
Onsite Review Results	Claims	Financial Impact	% of Sample
Total sample claims confirmed as correctly processed	62	\$1,500,569	97.80%
Exceptions identified from sample	4	\$33,758	2.20%
Exceptions agreed to by Aetna	3	\$33,758	2.20%
“Agree to disagree” exceptions	1	-	-
Final 100% Claims Analysis Results	Claims	Financial Impact	% Total Paid
Total exceptions identified in claims population	4	\$33,758	0.00%

Key Findings

The following is a description of the most significant exception categories and includes categories representing errors which may be systemic within Aetna’s processing system.

100% Coverage	There were 6,926 claims identified throughout the claims population where the SPD provides for 100% coverage (no member liability) but member liabilities were incorrectly applied. These resulted in \$296,489 in underpayments. Adherence to the SPD benefit provisions will assure member cost is minimized. These services included mammograms, breast cancer screenings, preventive lab tests, routine medical exams, and routine gynecological exams.
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Ineligible Services	There were 535 claims for ineligible services identified as being paid incorrectly during the audit period. This resulted in an overpayment of \$162,969. Claims for ineligible services should be denied. This represents a recovery opportunity for TRS. The majority of the findings from a financial perspective were for removal of wisdom teeth and outpatient private duty nursing.
Copayment Application	There were 3,358 claims where either an incorrect copayment amount was applied, or no copayment was taken when one should have been taken. These claims resulted in an exception amount of \$70,625 of which \$47,447 were overpayments and \$23,178 were underpayments. These results were related to inpatient newborn care and physical therapy.

Recommendations

- Request and review financial and claim impact analyses for all “Agreed To” exceptions and other exceptions where Aetna was not properly adjudicating claims according to the SPD language. Where applicable, recoveries should be pursued.
- Work with Aetna to clarify the intent of all the plan design features identified as exceptions, with focus on services covered at 100% and non-covered (ineligible) services. Further clarifying language in the SPD related to ineligible services may be helpful. For services, which are typically excluded but where approval for payment may be provided on an exception basis, a prior authorization requirement may be appropriate.
- Aetna should address the issues identified that are related to the correct application of member liability such as copayment to assure that members are assessed the correct amount and that claims are paid correctly for claims that require a copayment.

Exception Categories Compared to Industry Benchmarks

The following chart compares Aetna’s results for the identified exception categories to that of other Health Plans (Benchmark Error Rate). The benchmarks are based on the claims count for the exception categories. The exception rate identified on the Aetna claims is well below that of other commercial and government health plans audited by Truven.

Benchmarks – TRS-ActiveCare

Exception Category	Benchmark Exception Rate	Aetna Exception Rate FY2016	Aetna Score
100-Percent Coverage	1.70%	0.165%	Below average exception rate
Coinsurance Application	4.14%	0.089%	Below average exception rate
Copayment Application	4.28%	0.078%	Below average exception rate
Ineligible Services	0.35%	0.007%	Below average exception rate

TAB 5D



More Than Data. **Answers.**

Teacher Retirement System of Texas

Review of Pharmacy Plan Administration by Express
Scripts for September 1, 2015 to August 31, 2016

TRS-Care

Prepared for:
Teacher Retirement System of Texas

December 15, 2017

Submitted by: Truven Health Analytics, LLC



EXECUTIVE SUMMARY

Engagement Overview

The Teacher Retirement System of Texas (TRS) engaged the services of Truven Health Analytics (Truven) to conduct a pharmacy claims review to assess Express Scripts, Inc.'s (ESI's) administration of TRS' self-funded pharmacy plans and determine if ESI complies with the terms of the administrative agreement. This engagement encompassed an audit of ESI to assess the accuracy and appropriateness of its responsibility as the plan's administrative agent, including the prescription adjudication process, compliance with pricing agreements, contract terms, and review of quality control procedures. Truven performed an electronic audit of all claims adjudicated by ESI from September 1, 2015 through August 31, 2016.

The pharmacy drug plans included in this review consist of the following:

- TRS-Care 1
- TRS-Care 2
- TRS-Care 3

Audit Conclusions

The sample claims were reviewed based on ESI's responses, and 14 exceptions were identified. We evaluated all 3,179,107 claims during the audit review period based on ESI's responses and identified \$310,630 in overpayments. The following chart compares the total cost of all exceptions identified by this audit against the total cost of TRS' entire claims population.

Overall Audit Results	Dollars Paid	Claims Paid
Employee/dependent prescription drug claims	\$343,690,550	3,179,107
Claims sampled	\$49,721	155
Errors/exceptions identified in claims sample	\$3,010	14
Total cost of all exceptions identified from the plan design analysis of TRS' entire claims population (based on the attributes and root	\$310,630	729

The financial impact of all exceptions identified through this review is overpayments of \$310,630, representing 0.09% of TRS' total spend. Based on the results of our review, we have several recommendations that we believe, if implemented, would improve the overall claims processing accuracy rate and could result in savings to TRS.

Summary of Key Findings

The following summarizes our key findings identified in the entire TRS claims population.

- **Duplicate claims:** Claims were processed for the same members and the same products on the same day. ESI has noted during the sample review that they determined there was a sorting issue that occurred during claims processing that allowed duplicate claims to pay during the audit scope. ESI's account team agreed to work with TRS on reimbursement for claims that were paid outside of contract terms.

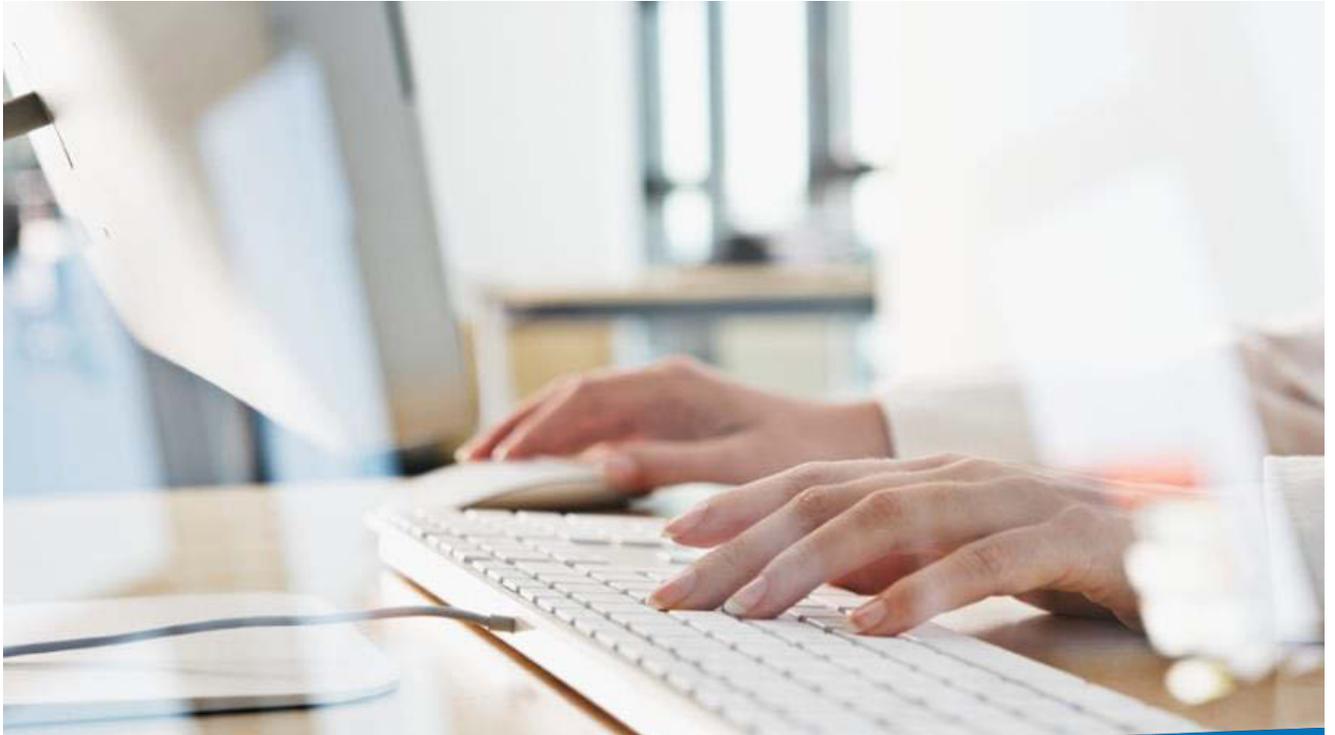
- **Ineligible Services:** Claims were processed for bulk ingredient compound products that were excluded per the contract. The claims did not follow the proper PA protocol.

Recommendations

The following summarizes our recommendations based on findings identified in the entire TRS claims population.

- **Duplicate claims:** We recommend TRS work with ESI's account team regarding reimbursement for duplicate claims that were paid outside of contract terms.
- **Ineligible Services:** We recommend TRS work with ESI to determine why claims were processed for bulk ingredient excluded products not covered by the plan and without the proper protocol review. As these drugs cannot be consumed in the form dispensed the only use is in compound form.

TAB 5E



More Than Data. **Answers.**

Teacher Retirement System of Texas

Review of TRS-Care Medicare Part D Pharmacy Benefits Administration by Express Scripts for January 1, 2015 to December 31, 2015

Prepared for:
Teacher Retirement System of Texas

December 15, 2017

Submitted by: Truven Health Analytics, LLC



EXECUTIVE SUMMARY

Engagement Overview

The Teacher Retirement System of Texas (TRS) engaged the services of Truven Health Analytics (Truven) to conduct a pharmacy claims review to assess Express Scripts, Inc.'s (ESI) Employer Group Waiver Plans (EGWP), also called the Medicare Part D plan administration of TRS' self-funded pharmacy plans and determine if ESI complies with the terms of the administrative agreement. This engagement encompassed an audit of ESI to assess the accuracy and appropriateness of its responsibility as the plan's administrative agent, including the prescription adjudication process, compliance with pricing agreements, contract terms, and review of quality control procedures. Truven performed an electronic audit of all claims adjudicated by ESI from January 1, 2015 through December 31, 2015.

The pharmacy drug plans included in this review consist of the following:

- TRS-Care 2 EGWP
- TRS-Care 3 EGWP

Audit Conclusions

The sample claims were reviewed based on ESI's responses, and 6 exceptions were identified. We evaluated all 4,729,493 claims during the audit review period based on ESI's responses and identified \$146,834 in overpayments. The following chart compares the total cost of all exceptions identified by this audit against the total cost of TRS' entire claims population.

Overall Audit Results	Dollars Paid	Claims Paid
Employee/dependent prescription drug claims	\$492,067,084	4,729,493
Claims sampled	\$13,231	79
Errors/exceptions identified in claims sample	\$832	6
Total cost of all exceptions identified from the plan design analysis of TRS' entire claims population (based on the attributes and root	\$146,834	1,044

The financial impact of all exceptions identified through this review is overpayments of \$146,834, representing 0.03% of TRS' total spend. Based on the results of our review, we have several recommendations that we believe, if implemented, would improve the overall claims processing accuracy rate and could result in savings to TRS.

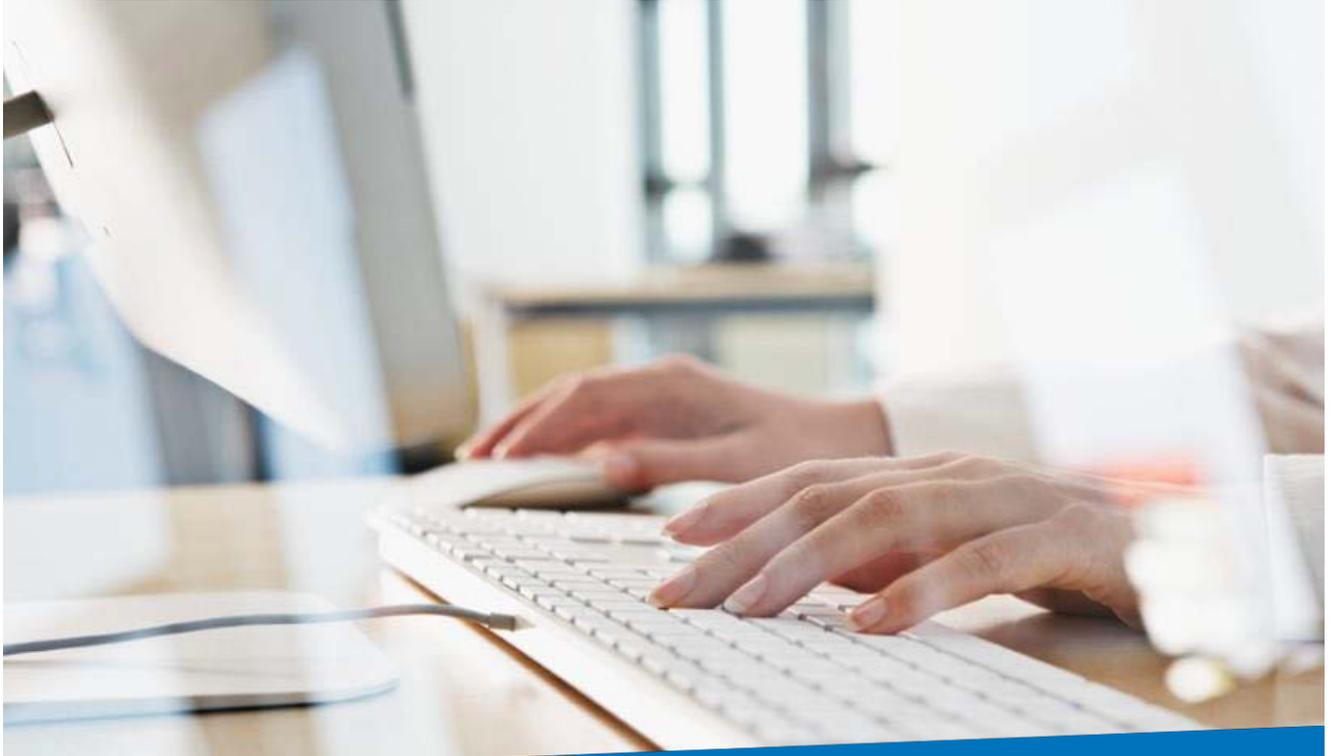
Summary of Key Findings

- **Duplicate Claims:** Claims were processed for the same member, same drug, same strength, same dose, by the same provider, on the same day. ESI noted the sample claims submitted by Truven could bypass the duplicate edit due to the claims being (COB) coordination of benefits.
- **Ineligible Services:** Claims were improperly billed for bulk ingredient drugs used in pain cream compounds. Because they were not billed as compounds the claims by-passed the compound and prior authorization protocols noted in the contract.

Recommendations

- **Duplicate Claims:** We recommend that for true duplicate claims, TRS work with ESI on reimbursement for claims that were paid outside of contractual parameters and intent.
- **Ineligible Services:** We recommend TRS work with ESI to determine why claims were processed for bulk ingredient excluded products not covered by the plan and without the proper protocol review. As these drugs cannot be consumed in the form dispensed the only use is in compound form.

TAB 5F



More Than Data. **Answers.**

Teacher Retirement System of Texas

Review of Pharmacy Plan Administration by
CVS/Caremark for September 1, 2015 to August 31,
2016

TRS-ActiveCare

Prepared for:
Teacher Retirement System of Texas

December 15, 2017

Submitted by: Truven Health Analytics, LLC

EXECUTIVE SUMMARY

Engagement Overview

The Teacher Retirement System of Texas (TRS) engaged the services of Truven Health Analytics (Truven) to conduct a pharmacy claims review to assess CVS/Caremark's (Caremark) administration of TRS' self-funded pharmacy plans and determine if Caremark complies with the terms of the administrative agreement. This engagement encompassed an audit of Caremark to assess the accuracy and appropriateness of its responsibility as the plan's administrative agent, including the prescription adjudication process, compliance with pricing agreements, contract terms, and review of quality control procedures. Truven Health performed an electronic audit of all claims adjudicated by Caremark from September 1, 2015 through August 31, 2016.

The pharmacy drug plans included in this review consisted of the following:

- TRS-ActiveCare 1 HD
- TRS-Active Select
- TRS-ActiveCare 2

Audit Conclusions

The sample claims were reviewed based on Caremark's responses, and 13 exceptions were identified. Truven Health evaluated all 4,468,702 claims during the audit review period based on Caremark's responses and identified \$132,633 in overpayments. The following chart compares the total cost of all exceptions identified by this audit against the total cost of TRS' entire claims population.

Overall Audit Results	Dollars Paid	Claims Paid
Employee/dependent prescription drug claims	\$387,888,405	4,468,702
Claims sampled	\$63,928	150
Errors/exceptions identified in claims sample	\$2,852	13
Total cost of all exceptions identified from the plan design analysis of TRS' entire claims population (based on the attributes and root	\$132,633	775

Summary of Key Findings

The following summarizes our key findings based on findings identified in the entire TRS-ActiveCare claims population.

- **100 Percent coverage:** Members were charged copays on Affordable Care Act covered vaccines due to pharmacies submitting claims incorrectly.
- **Deductible:** Member deductibles were bypassed in the claims file submitted to Truven.

- **Early Refill:** Claims were filled outside of early refill parameters set in the contract. Most of the findings were for retail claims that were filled prior to the plan design utilization of 75%.

Recommendations

The following summarizes our recommendations based on findings identified in the entire TRS-ActiveCare claims population.

- **100 Percent coverage:** Truven Health recommends that Caremark work with TRS to ensure ACA copay guidelines align with their intent. We also recommend that a hard stop edit be put in place to prevent any pharmacies from improperly billing claims for ACA covered products.
- **Early Refills:** A discussion of early refill parameters should be undertaken between Caremark and TRS. Specific parameters should be outlined in detail and agreed upon to ensure early refills occur for valid reasons such as vacation overrides, dosage changes or lost medication. Also, we recommend that hard stop edits be put into place to prevent any claims from being refilled outside of plan utilization parameters. This should be looked at as a cost savings opportunity for TRS.

TAB 6

The information for this agenda item is confidential.

TAB 7

TAB 7A

QUARTERLY TRS COMPLIANCE TESTING
INVESTMENT POLICY STATEMENT (IPS), SECURITIES LENDING POLICY (SLP), PERFORMANCE INCENTIVE PAY (PIP) PLAN, WIRE TRANSFER PROCEDURES, AND ETHICS POLICIES
 CALENDAR QUARTER ENDED SEPTEMBER 30, 2017, EXCEPT AS NOTED

Business Objectives	1. <u>Board Reports</u> All required information is reported to the TRS Board of Trustees	2. <u>Investment Selection and Approval</u> Investments made are within delegated limits and established selection criteria	3. <u>Other (IPS, SLP, PIP, Wire Transfers, Other Reporting)</u> Risk limits are followed for other investment programs and activities	4. <u>Ethics Policies</u> Ethics policy requirements are met
Business Risks	Board is not informed of key investment decisions and critical information	Approvals and fundings exceed delegated limits	Risks exceed Board-established tolerances or management policies and procedures	Ethics policy requirements are not completed
Management Assertions	All required information is reported to the Board	Approvals and fundings are within delegated limits and made for qualified managers	Programs are within risk limits and activities follow established policies and procedures	Ethics policies and requirements are being followed
Agreed-Upon Procedures	<ul style="list-style-type: none"> Compare Board reports to IPS requirements Trace sample information included in Board reports to supporting documentation 	<ul style="list-style-type: none"> Trace investments approved by the Internal Investment Committee (IIC) to supporting documentation Compare approval amounts of new investments with IPS limits Obtain evidence that Placement Agent Questionnaires (PAQs) were received prior to funding approved investments 	<ul style="list-style-type: none"> Obtain evidence of monitoring of the securities lending agent and the program performance Verify wire transfers are authorized and properly supported Recalculate Internal Public Markets staff's PIP alpha for the quarter ended 6/30/2017. Confirm senior managers' awareness of any compliance violations 	<ul style="list-style-type: none"> Obtain evidence that executive director's financial disclosures were made to the Texas Ethics Commission Obtain evidence that financial service providers filed annual disclosure statements on conflicts of interest
Test Results	<ul style="list-style-type: none"> All reporting requirements were met. Documentation provided support for the information tested. 	<ul style="list-style-type: none"> All investments tested were in compliance with statutory and policy approval limits. PAQs were obtained for all investments tested. 	All requirements of the IPS, SLP, PIP, and wire transfer procedures were met.	<ul style="list-style-type: none"> Financial disclosure requirements were met. All 15 contractors tested submitted annual disclosure statements, including four firms which submitted after the due date.
Management Responses	N/A	N/A	N/A	N/A

Legend: **Red** - Significant to TRS **Orange** - Significant to Business Objectives **Yellow** - Other Reportable Exception **Green** - Positive Test Result/ No Exception



Brian K. Guthrie
Executive Director

800.223.8778
512.542.6400
www.trs.texas.gov

1000 Red River Street
Austin, Texas 78701

Amy L. Barrett,
CIA, CISA, CPA
Chief Audit Executive

November 28, 2017

Carolina de Onis, TRS General Counsel

Subject: Report on Independent Testing of TRS Compliance

We have completed the **Quarterly TRS Compliance Testing** for the quarter ended September 30, 2017, as included in the *Fiscal Year 2018 Audit Plan*. The scope of this engagement included the requirements of the Investment Policy Statement (IPS), Securities Lending Policy (SLP), Employee Ethics Policy, Code of Ethics for Contractors, Wire Transfer Procedures, and Performance Incentive Pay (PIP) Plan.

We performed the procedures that were agreed to by the TRS Legal & Compliance division. These procedures include tests that supplement the current compliance monitoring procedures performed by State Street Bank and the Chief Compliance Officer.

This agreed-upon procedures engagement was performed in accordance with generally accepted government auditing standards contained in the *Government Auditing Standards* issued by the Comptroller General of the United States.

The sufficiency of the agreed-upon procedures performed is solely the responsibility of the specified users of the report. Consequently, we make no representations regarding the sufficiency of the procedures described in **Appendix A** either for the purpose for which this report has been requested or for any other purpose.

Our testing procedures and results are included in **Appendix A**.

Internal Control Structure

We were not engaged to and did not perform an examination of the internal controls nor the operating effectiveness pertaining to the subject areas tested. Accordingly, we do not express an opinion on the suitability of the design of internal controls nor the operating effectiveness of the subject areas tested.

Had we performed additional procedures, or had we made an examination of the system of internal control, other matters might have come to our attention that would have been reported to you. This report relates only to the procedures specified below and does not extend to the internal control structure.

This report is intended solely for information and use by TRS management, the Board of Trustees, and oversight agencies, and is not intended to be and should not be used by anyone other than those specified parties. However, this report is a matter of public record and its distribution is not limited.

* * * * *

We express our appreciation to management and key personnel of the Investment Management Division, Investment Accounting, and Legal & Compliance for their cooperation and professionalism shown to us during this quarterly testing.

Amy Barrett, CIA, CPA, CISA
Chief Audit Executive

Hugh Ohn, CIA, CPA, CFA, FRM
Director of Investment Audit Services

Rodrigo Dominguez
Auditor

APPENDIX A
AGREED-UPON PROCEDURES AND RESULTS

STEP #	BUS. OBJ. #	TEST PURPOSE	TEST DESCRIPTION	TEST RESULT	MANAGEMENT RESPONSE
1	1	IPS Article 1.7a - 1.7p – Obtain evidence that all requirements were reported to Board of Trustees. Quarterly reporting requirements include investment performance, asset class exposures, and external investments under consideration. Semi-annual reports include outstanding derivatives, leverage, and liquidity positions, and risk limits.	Obtain all information required to be reported to Board of Trustees and compare to reporting requirements per Investment Policy Statement (IPS)	Information required to be reported to Board of Trustees complied with IPS requirements.	No response required
2	2	IPS Article 2.5 – Obtain evidence that the Investment Management Division (IMD) evaluated hedge fund classification	<ul style="list-style-type: none"> • Select sample of approved investments in hedge funds and external managers • Obtain analysis indicating whether each investment is hedge fund or not. If analysis is unavailable, inconclusive, or erroneous, report that result • For any analysis requiring Board approval of classification, obtain Board minutes to test whether approval was obtained 	Each of approved investments in hedge funds and external managers tested had analysis indicating whether investment was a hedge fund or not. No Board approval was required.	No response required
3	2	IPS Article 2.6a – Obtain existence of Internal Investment Committee (IIC) approval of all private and relevant public markets fund investments.	For the private and public markets funds approved during the quarter, obtain existence of IIC approval	IIC approval existed for all funds we tested during the quarter.	No response required

STEP #	BUS. OBJ. #	TEST PURPOSE	TEST DESCRIPTION	TEST RESULT	MANAGEMENT RESPONSE
4	2	IPS Article 2.6d – Obtain information about the allocation of funds added to previously approved investments for purposes of rebalancing or adjusting risks to ensure that they did not exceed 2% of associated portfolios	<ul style="list-style-type: none"> • Inquire with Investment Operations team whether portfolios were adjusted for the purposes of rebalancing or adjusting risks • Obtain the Quarterly Rebalance Authority tracking spreadsheet and trace amounts to the appropriate Rebalance Authority form to ensure that additional investments or allocations did not exceed 2% of Hedge Fund Portfolio, External Manager Portfolio, or Other Absolute Return Portfolio (as appropriate) per investment on a monthly basis 	Additional funds added to previously approved investments for purposes of rebalancing or adjusting risks did not exceed 2% of associated portfolios.	No response required
5	2	IPS Article 12.4 - Obtain evidence of existence of placement agent questionnaire (PAQ) for each new investment selected for testing and test for inclusion in summary report to the Board.	<ul style="list-style-type: none"> • For each investment selected for testing, obtain copies of the placement agent questionnaire (PAQ) to ensure that IMD obtained responses to the questionnaire • Obtain evidence that responses to the questionnaires were compiled and all results reported to the Board at least semi-annually 	Each investment tested had a completed questionnaire and was included in the summary report to the Board.	No response required
6	2	IPS Appendix B – Obtain evidence that investments approved are within policy limits.	<ul style="list-style-type: none"> • Select sample of approved investments, obtain tear sheet for each, and observe the approved amounts are within authorized limits <ul style="list-style-type: none"> a) Initial allocation – .50% b) Additional or follow-on – 1% c) Total Manager Limits – 3% d) Total limit each manager organization – 6% • Trace tear sheet calculations to the supporting documentation to ensure that the above authorized limits were not exceeded by any manager or partner organization 	For the sample investments tested, no manager or partner organization exceeded the authorized limits and documentation existed for IMD staff calculations of authorized limits. There were no Special Investment Opportunities.	No response required
7	3	Quarterly Compliance Certification – Obtain evidence	Confirm with the Chief Compliance Officer that she has received compliance certification from IMD management, Legal Investment staff, and	Obtained confirmation from the Chief Compliance Officer. No compliance exceptions were	No response required

STEP #	BUS. OBJ. #	TEST PURPOSE	TEST DESCRIPTION	TEST RESULT	MANAGEMENT RESPONSE
		that all known compliance violations have been reported.	CIO regarding any known compliance violations occurred during the testing period	identified as a result of the quarterly compliance certification.	
8	3	Wire Transfers – Obtain evidence that wire transfers are authorized and properly supported	Obtain wire transfer reports for testing period, select a sample of wire transfers, and trace each to supporting documentation to check amount and appropriate manager authorizations	All wire transfers tested were properly authorized and amounts were supported.	No response required
9	3	Securities Lending Policy – Obtain evidence that IMD reviews the securities lending program and performance of lender.	Obtain evidence from the monthly securities lending program performance reviews conducted by the TRS Asset Allocation team and the Securities Lending Agent that investments in the securities lending program comply with the following policy requirements: <ul style="list-style-type: none"> • Sec 3.1. Securities eligible for lending • Sec 3.3. Collateral Received 	Only eligible TRS securities were loaned. All collateral received was cash or government securities.	No response required
10	4	Employee Ethics Policy, Section XIII.A – Obtain evidence that the Executive Director filed a personal financial statement with the Texas Ethics Commission	Verify that the Executive Director filed a personal financial statement with the Texas Ethics Commission for the year ended December, 31, 2016, prior to the April 30 th deadline.	The Executive Director’s 2016 personal financial statement was filed with the Texas Ethics Commission. The document was dated prior to the April 30 th deadline.	No response required
11	4	Code of Ethics for Contractors, Section III.B – Obtain evidence that all TRS brokers, financial advisors, and financial service providers filed annual disclosure statements with TRS General Counsel.	Obtain evidence that all TRS brokers, financial advisors, and financial service providers complied with the Code of Ethics for Contractors by filing annual disclosure statements with the TRS General Counsel. Annual filing deadline is April 15 th .	All 15 contractors we tested submitted annual disclosure statements, including four firms which submitted them after the due date.	No response required
12	3	Performance Incentive Pay Plan (PIP) – Verify that investment performance results used in quarterly Internal Public Markets (IPM) portfolio matches	<ul style="list-style-type: none"> • Trace quarterly IPM individual component calculations to investment performance application data and TRS custodian data. 	There were no data, employee assignment, or formula errors included in the quarterly IPM individual component calculation spreadsheet. Thus, excess return	No response required

STEP #	BUS. OBJ. #	TEST PURPOSE	TEST DESCRIPTION	TEST RESULT	MANAGEMENT RESPONSE
		data from performance applications and custodian bank and that the excess return calculations for individual portfolio managers and sector managers are correct	<ul style="list-style-type: none"> • Test whether employee assignments were approved by Senior Director in IPM prior to quarter start by obtaining approval email from Senior Director to Investment Operations Performance Analyst. If any assignment changes are included in the approval, compare the approved changes to the assignments in the quarterly IPM individual component calculations. • Test whether formulas in the quarterly IPM individual component calculation spreadsheet are correct by recalculating investment return totals by portfolio manager and sector manager, and comparing total investment returns to returns provided by the custodian bank. 	calculations for individual portfolio managers and sector managers for the IPM portfolio were correct for the quarter ended March 31, 2017.	

Note: Testing procedures for the Investment Policy Statement (IPS), Securities Lending Policy (SLP), Employee Ethics Policy, Code of Ethics for Contractors, and Wire Transfer Procedures are for the activities for the quarter ended September 30, 2017. Testing procedures for the Performance Incentive Pay Plan are for the quarter ended June 30, 2017.

TAB 7B

**TRS Internal Audit
Summary of Audit Recommendations Status
As of November 2017**

Project	Recommendation	Status	Issue Type	Estimated Date	Revised / Actual Date
17-601 403(b) Provider Compliance Audit					
	Require Records of Provider's Verification of License and Qualification As Part of Annual Demonstration	Implemented	Other Reportable	8/2017	11/2017
17-305 Commission Credit (soft dollar) Audit					
	Strengthen monitoring of contractual allowance balances to ensure no available amounts are Lost	In Progress	Significant to Business	12/2017	
	Update commission credit guidelines and procedures required by the policy	Implemented	Other Reportable	11/2017	
	Apply consistent processes for access to commission credit payment service	Implemented	Other Reportable	9/2017	
17-306 Funston Evaluation of TRS Real Assets Investment Program					
	Board should consider adopting a stand-alone Compliance Policy in order to place Board emphasis on the importance of compliance and greater clarity to the respective roles and responsibilities throughout TRS respecting this area.	In Progress	Other Reportable	12/2017	4/2018

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
	Satisfactory implementation of management action plan <u>or</u> Acceptance of risk by management
	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
	Satisfactory implementation of management action plan <u>or</u> Acceptance of risk by management

**TRS Internal Audit
Summary of Audit Recommendations Status
As of November 2017**

Project	Recommendation	Status	Issue Type	Estimated Date	Revised / Actual Date
17-306 Funston Evaluation of TRS Real Assets Investment Program (Continue..)					
	TRRS Board should consider several options to improve reporting and coordination of compliance and other oversight activities: A. Consider whether the ability to use and comprehend the various investment information from all sources provided to trustees would be enhanced by developing a map, or guide, to the various sources and their purpose as a part of trustee training or in a manual. B. Although overall reporting is robust, TRRS may benefit by shifting more regular reporting responsibilities to the Chief Compliance Officer and moving the Chief Audit Executive towards the role of assessing the effectiveness of the compliance function.	Implemented	Other Reportable	A - 5/2017	A - 9/2017
		In Progress		B - 5/2017	B - 9/2018
	The PI program, or other approach, should be used as needed to “wrap” managers with multiple investments to replicate aspects of the Strategic Partner Network (SPN) and secure the best possible terms and deal flow (i.e., to gain benefits similar to strategic partners with those managers).	Implemented	Other Reportable	12/2017	9/2017
	Real Assets should undertake a cost/benefit analysis of the potential for active direct real estate investing.	In Progress	Other Reportable	12/2017	6/2018
17-503 Audit of Trust Expenses Allocation					
	Develop and implement a written, comprehensive, and approved cost allocation policy that emphasizes the fiduciary duty in the equitable allocation of fund expenses; and that includes definitions, defined roles and responsibilities, and the basis for each allocated cost	In Progress	Other Reportable	8/2018	
	Develop procedures to implement the new comprehensive cost allocation policy that include documented approvals to be obtained for methodologies used and final year-end calculations	In Progress	Other Reportable	8/2018	
	Develop procedures to implement the new comprehensive cost allocation policy that include materiality thresholds for determining whether a year-end adjusting journal entry is required to ensure equitable fund allocations	In Progress	Other Reportable	8/2018	
	Develop procedures to implement the new comprehensive cost allocation policy that include defined roles and processes for the initial and periodic assessment of new capital projects to determine the appropriate method of finance	In Progress	Other Reportable	8/2018	

**TRS Internal Audit
Summary of Audit Recommendations Status
As of November 2017**

Project	Recommendation	Status	Issue Type	Estimated Date	Revised / Actual Date
	Develop procedures to implement the new comprehensive cost allocation policy that include a routinely reviewed and approved schedule of direct and indirect costs by TRS department	In Progress	Other Reportable	8/2018	
	Develop procedures to implement the new comprehensive cost allocation policy that include defined roles for department managers in the determination and approval of rates used for facilities costs	In Progress	Other Reportable	8/2018	
	Develop procedures to implement the new comprehensive cost allocation policy that include defined roles for department managers in the determination of rates used to allocate indirect costs and in the confirmation that the rates reflect current conditions	In Progress	Other Reportable	8/2018	
SAO Audits of FY 2014 - 2017 Comprehensive Annual Financial Report					
	Strengthen controls over census data	In Progress	Significant	8/2016	03/2018

**TRS Internal Audit
Summary of Audit Recommendations Status
As of November 2017**

Status of Reporting Entity Audit Recommendations

	Audit Project #	Audit Report Date	Reporting Entity (RE)	Status
1	17-401a	6/22/2017	Pleasanton ISD	In Progress
2	17-401b	8/31/2017	Dallas ISD	In Progress

Statuses:

- Under Legal Services Review – TRS Benefits team has requested Legal Services review before taking any further action
- In Progress – TRS Benefits team is working with RE on corrections/adjustments
- Closed – TRS Benefits team has resolved all RE audit findings
- No Audit Findings – the audit resulted in no audit findings

TAB 7C

Internal Audit Annual Report

Fiscal Year 2017

October 2017



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

TEACHER RETIREMENT SYSTEM OF TEXAS

BOARD AUDIT COMMITTEE (As of October 16, 2017)

Christopher Moss, Chair
T. Karen Charleston
David Corpus
Greg Gibson, Ed.D.

BOARD MEMBERS (As of October 16, 2017)

R. David Kelly, Chair
Dolores Ramirez, Vice Chair
T. Karen Charleston
Greg Gibson, Ed.D.
John Elliott
Joe Colonna
David Corpus
Christopher Moss

EXECUTIVE DIRECTOR

Brian Guthrie

INTERNAL AUDIT DEPARTMENT

Amy L. Barrett, CIA, CISA, CPA, Chief Audit Executive
Jan Engler, CIA, CISA, CFE, Director of Benefit Services
Lih-Jen Lan, CIA, CPA, CISA, CISSP, CCSA, Information Technology (IT)
Audit Manager
Hugh Ohn, CFA, CPA, CIA, FRM, Director of Investment Audit Services
Toma Miller, CIA, CGAP, Senior Auditor
Nick Ballard, CFA, CIA, Senior Auditor
Simin Pang, CIA, CISA, Senior IT Auditor
Anandhi Mani, CPA, CIA, Senior Benefits Auditor
Art Mata, CEBS, CPM, Senior Internal Audit Benefit Consultant
Carol Casey, CPM, Internal Audit Benefit Consultant
Rodrigo Dominguez, Investment Auditor



Brian K. Guthrie
Executive Director

800.223.8778
512.542.6400
www.trs.texas.gov

1000 Red River Street
Austin, Texas 78701

Amy L. Barrett,
CIA, CISA, CPA
Chief Audit Executive

October 16, 2017

Honorable Greg Abbott, Governor
Members of the Legislative Budget Board
Members of the Sunset Advisory Commission
Ms. Lisa R. Collier, CPA, First Assistant State Auditor
Mr. R. David Kelly, Chair, TRS Board of Trustees
Mr. Christopher Moss, Chair, TRS Board Audit Committee
Members of the Board of Trustees, Teacher Retirement System of Texas
Mr. Brian Guthrie, Executive Director, TRS

Attached is the annual report of the Internal Audit department of the Teacher Retirement System of Texas (TRS). This report provides information on the audit plan, assurance, consulting, and advisory projects completed, and other Internal Audit activities. It also 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 includes the following State Auditor's Office reporting guidelines:

- 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. Internal Audit Plan for Fiscal Year 2017
- III. Consulting Services and Nonaudit Services Completed
- IV. External Quality Assurance Review (Peer Review)
- V. Internal Audit Plan for Fiscal Year 2018
- VI. External Audit Services Procured in Fiscal Year 2017
- VII. Reporting Suspected Fraud and Abuse

The work performed by TRS Internal Audit contributes toward accountability, integrity, and good management practices within TRS operations. Fiscal year 2017 projects contributed to the improvement of risk management, control, and governance processes. Internal Audit (or those engaged by Internal Audit) issued 12 assurance and 7 agreed-upon procedures reports, followed-up and reported quarterly on the status of all outstanding audit recommendations, and performed advisory services in various areas including TEAM (TRS Enterprise Application Modernization) Program initiatives.

For further information about the contents of this report or to request copies of Internal Audit reports, please contact Amy Barrett at (512) 542-6559.

Sincerely,

Amy L. Barrett, CIA, CISA, CPA
Chief Audit Executive

TEACHER RETIREMENT SYSTEM OF TEXAS
INTERNAL AUDIT ANNUAL REPORT

FISCAL YEAR 2017

October 2017

Teacher Retirement System of Texas
Internal Audit Annual Report for Fiscal Year 2017

**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**

Teacher Retirement System of Texas

Internal Audit Annual Report for Fiscal Year 2017

I. Compliance with Texas Government Code, Section 2102.015: Posting the Internal Audit Plan, Internal Audit Annual Report, and Other Audit information on Internet Web site

Texas Government Code, Section 2102.015 requires state agencies and institutions of higher education, as defined in the statute, to post agency internal audit plans and internal audit annual reports on the agency's internet website within 30 days of approval. The statute also requires entities to update the posting on the Internet to include a.) a detailed summary of the weaknesses, deficiencies, wrongdoings, or other concerns raised by the audit plan or annual report and b.) a summary of the actions taken to address concerns, if any, that are raised by the audit plan or annual report.

TRS Internal Audit follows the following procedures to ensure compliance with the requirements of Texas Government Code, Section 2102.015:

- The **TRS Annual Internal Audit Plan** is approved each fiscal year by the TRS Board of Trustees as recommended by the TRS Audit Committee. The annual audit plan, as approved by the TRS Board of Trustees, is provided by Internal Audit staff to the TRS Website coordinators and posted to the TRS Website within 30 days of approval.
- The **TRS Internal Audit Annual Report** is prepared annually by Internal Audit staff in accordance with the Texas State Auditor's Office guidelines by the required deadline. This report, once approved by the Chief Audit Executive, is submitted to the Governor's Office, the Legislative Budget Board, the Sunset Advisory Commission, the State Auditor's Office and the TRS Board of Trustees by November 1 of each fiscal year. The annual report is provided by Internal Audit staff to the TRS Website coordinators to post to the TRS Website.
- **Summaries of the weaknesses, concerns, and actions** taken to address concerns in the audit plan or annual report are provided by Internal Audit in the quarterly TRS Audit Committee materials. The audit committee materials provide audit reports completed during each quarter, quarterly status reports on management action on outstanding audit recommendations, and the status of the current fiscal year audit plan. The individual audit reports provide the results, recommendations, and management actions taken to address the audit recommendations. The TRS Audit Committee materials are posted to the TRS Website, after dissemination to TRS Board of Trustees, through an administrative process of board and committee materials prior to the scheduled Board meeting.

Teacher Retirement System of Texas
Internal Audit Annual Report for Fiscal Year 2017

II. Internal Audit Plan for Fiscal Year 2017

Fiscal Year 2017 Audit Plan Status As of August 2017

Title and Project #	Type	Status
Executive and Finance		
Records Management Audit Follow-Up (17-410)	Audit	Complete
403(b) Provider Compliance (17-601)	Audit	Complete
Federal Labor Standards Act (FLSA) Compliance (17-605)	Consulting	Complete
Coordination for State Auditor's Office (SAO) Comprehensive Annual Financial Report (CAFR) Audit for Fiscal Year 2016	Advisory	Complete
Teacher Retirement Investment Company of Texas (TRICOT) Financial Audit Coordination (Grant Thornton)	Advisory	Complete
Testing of Executive Performance Incentive Pay Calculations (17-606)	Agreed-Upon Procedures	Complete
The University Of Texas at Austin Student Project (17-608)	Consulting	Complete
Enterprise Risk Management (ERM) Fraud Risk Assessment	Advisory	Complete
Committee and Workgroup Meetings Participation	Advisory	Ongoing
Special Requests and Emerging Issues – Healthcare Legislative Changes (17-203)	Consulting	Ongoing
TEAM Program		
TEAM Independent Program Assessment (IPA) Vendor Support	Advisory	Ongoing
TEAM Committees, Projects and Controls Assessment Participation	Advisory	Ongoing
Pension Benefits		
Annuity Payment Testing for SAO CAFR Audit of FY 2016 (17-100)	Audit	Complete
Annual Benefits Testing (17-101)	Agreed-Upon Procedures	Complete
Reporting Entity Audits (6 to 10 ISDs) (17-401s)	Audit	Completed 2 in FY17
Employer Audit Follow-up (17-402)	Audit	Complete
Employer Audit of Pension and TRS-Care Surcharges (17-403)	Audit	Complete
Higher Education Pilot and Audit Program Development (17-404)	Advisory	Complete
TRS Reporting Entity Website Audit Information and Communication	Advisory	Ongoing

Fiscal Year 2017 Audit Plan Status As of August 2017

Health Care		
Health Insurance Portability and Accountability Act (HIPAA) Gap Assessment and Validation (17-501)	Audit	Complete
Trust Expense Allocation Audit (17-503)	Audit	Complete
TRS-ActiveCare Open Enrollment Readiness Assessment Follow-Up (17-201)	Audit	Complete
TRS-ActiveCare Eligibility Pilot and Audit Program Development	Advisory	Deferred due to higher management priorities
Health Care Vendor Selection Observation	Advisory	Complete
Health Care Vendor Update Meetings	Advisory	Ongoing
Information Technology		
Contractor Onboarding and Off-boarding (17-502)	Audit	Complete
Disaster Recovery, Network Penetration Tests; Security Risk Assessment Review	Advisory	Complete
Investment Management		
Private Equity Fees (17-304)	Audit	Complete
Soft Dollars and Commission Sharing Arrangements (17-305)	Audit	Complete
Quarterly Investment and Ethics Policies Compliance Testing (17-302)	Agreed-Upon Procedures	Complete
Annual Testing of Investment Incentive Pay Plan (17-303)	Agreed-Upon Procedures	Complete
Investment Fiduciary Audit Coordination	Advisory	Complete
Investment Committees Attendance	Advisory	Ongoing
Internal Audit Department		
Annual Internal Audit Report (17-603)	Audit	Complete
Data Analysis Processes	Advisory	Deferred due to healthcare legislative changes project
Quarterly Audit Recommendations Follow-up	Audit	Ongoing
ERS Audit Quality Assurance Review	Audit	Complete
Internal Quality Assurance Review (17-602)	Advisory	Complete
Fiscal Year 2018 Audit Plan	Advisory	Complete
Internal Audit Strategic Plan Update	Advisory	Complete
Audit Committee Meetings Preparation	Advisory	Ongoing

**III. Consulting Services
and Nonaudit Services Completed**

Teacher Retirement System of Texas

Internal Audit Annual Report for Fiscal Year 2017

III. Consulting Services and Nonaudit Service Completed

During fiscal year 2017, Internal Audit conducted (or hired consultants to conduct) the following consulting (nonaudit services) projects resulting in formal recommendations to management.

1. Federal Labor Standards Act (FLSA) Compliance

(Project #17-605, PowerPoint presentation to Deputy Executive Director and Human Resources, June 01, 2017)

Objective: To assess TRS' compliance with the FLSA relating to employee exempt and non-exempt classification and may perform additional related data analysis.

Performed data analysis to assess compliance with FLSA related to employee exempt and non-exempt classification, as a result recommendations were made to continue to perform periodic re-evaluation of employee's FLSA status, obtain and document supervisor/manager's input when performing job duty test; and to document the FLSA status decision making process

2. The University of Texas at Austin Student Project

(Project #17-608, PowerPoint presentation to Human Resources, dated November 21, 2016)

Objective: To research and present to Human Resources best practices for manager training.

This was achieved by conducting interviews of TRS staff, surveying of pension fund peers for best practices and researching methods of manager training. As a result recommendations were made that manager training should be in-house or local third-party, last less than two hours per day on a variety of topics including effective communication, as well as, establishing a one-to-one mentor program.

Internal Audit also performed various advisory (nonaudit services) as listed in section II.

IV. External Quality Assurance Review (Peer Review)

**REPORT ON THE
EXTERNAL QUALITY ASSURANCE REVIEW
OF THE TEACHER RETIREMENT SYSTEM
INTERNAL AUDIT DEPARTMENT**

April 2016



PERFORMED BY

Benito Ybarra, CIA, CISA, CFE
Chief Audit and Compliance Officer
Texas Department of Transportation

Greg Royal, CPA, CIA, CRMA, CGAP
Chief Audit Executive
Texas Department of Insurance

Byron Williams, CPA
Chief Audit Executive
Oregon State Treasury

PERFORMED IN ACCORDANCE WITH THE
STATE AGENCY INTERNAL AUDIT FORUM
PEER REVIEW POLICIES AND PROCEDURES

OVERALL OPINION

Based on the information received and evaluated during this external quality assurance review, it is our opinion that the Teacher Retirement System (TRS) Internal Audit Department receives a rating of “pass” and is in compliance with the Institute of Internal Auditors (IIA) *International Professional Practices Framework* and Code of Ethics, the United States Government Accountability Office (GAO) *Government Auditing Standards*, and the Texas Internal Audit Act (*Texas Government Code*, Chapter 2102). This opinion, which is the highest of the three possible ratings, means that policies, procedures, and practices are in place to implement the standards and requirements necessary for ensuring the independence, objectivity, and proficiency of the internal audit function.

We found that the Internal Audit Department is independent, objective, and able to render objective conclusions on the audit work performed. The staff members are qualified, proficient, and knowledgeable in the areas they audit. Individual audit projects are planned using risk assessment techniques; audit conclusions are supported in the working papers; and findings and recommendations are communicated appropriately.

The Internal Audit Department is well-managed. In addition, the Department has effective relationships with the Board of Trustees and is well-respected and supported by Executive Council management. Surveys and interviews conducted during the quality assurance review indicate that management considers Internal Audit a useful part of the agency and demonstrated a knowledge of the audit team’s mission.

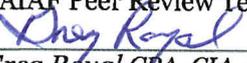
ACKNOWLEDGEMENTS

We appreciate the courtesy and cooperation extended to us by the Chief Audit Executive, Internal Audit staff, the Chairman of the Board of Trustees, the Audit Committee Chair, the Executive Director, and the executive managers who participated in the interview process. We would also like to thank each person who completed surveys for the quality assurance review. The feedback from the surveys and the interviews provided valuable information regarding the operations of the Internal Audit Department and its perceived value to the organization.



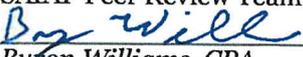
Benito Ybarra, CIA, CISA, CFE
Chief Audit and Compliance Officer
Texas Department of Transportation
SAIAF Peer Review Team Leader

04/15/16
Date



Greg Royal CPA, CIA, CRMA, CGAP
Chief Audit Executive
Texas Department of Insurance
SAIAF Peer Review Team Member

4/13/16
Date



Byron Williams, CPA
Chief Audit Executive
Oregon State Treasury
SAIAF Peer Review Team Member

4/11/16
Date

V. Internal Audit Plan for Fiscal Year 2018



Teacher Retirement System of Texas
Internal Audit Department

Fiscal Year 2018 Audit Plan

September 22, 2017

Amy Barrett, CIA, CISA, CPA
Chief Audit Executive

Christopher S. Moss
Chair, Audit Committee, Board of Trustees

Brian Guthrie
Executive Director

R. David Kelly
Chair, Board of Trustees





Executive Summary

Professional and Statutory Requirements

This document provides the *Fiscal Year 2018 Audit Plan* (Audit Plan) as required by professional auditing standards, the *Texas Internal Auditing Act* (Act), and *Texas Government Code 2102.008* for the Teacher Retirement System of Texas (TRS). The Act requires state agencies to conduct a program of internal auditing that includes an annual audit plan that is prepared using risk assessment techniques and identifies individual audit projects to be conducted during the year. The Audit Plan is required to be evaluated and updated annually for recommendation of approval by the TRS Audit Committee of the Board of Trustees (Audit Committee) to the TRS Board of Trustees (Board). Internal Audit is independent of management and provides objective assurance and consulting services designed to add value and improve TRS' operations.

Audit Plan Development and Scope

Our Audit Plan is designed to provide coverage of key risks, given the existing staff and approved budget. See the **Appendices** for information regarding the internal audit budget, performance measures, and audit plan mapped to the TRS Risk Assessment.

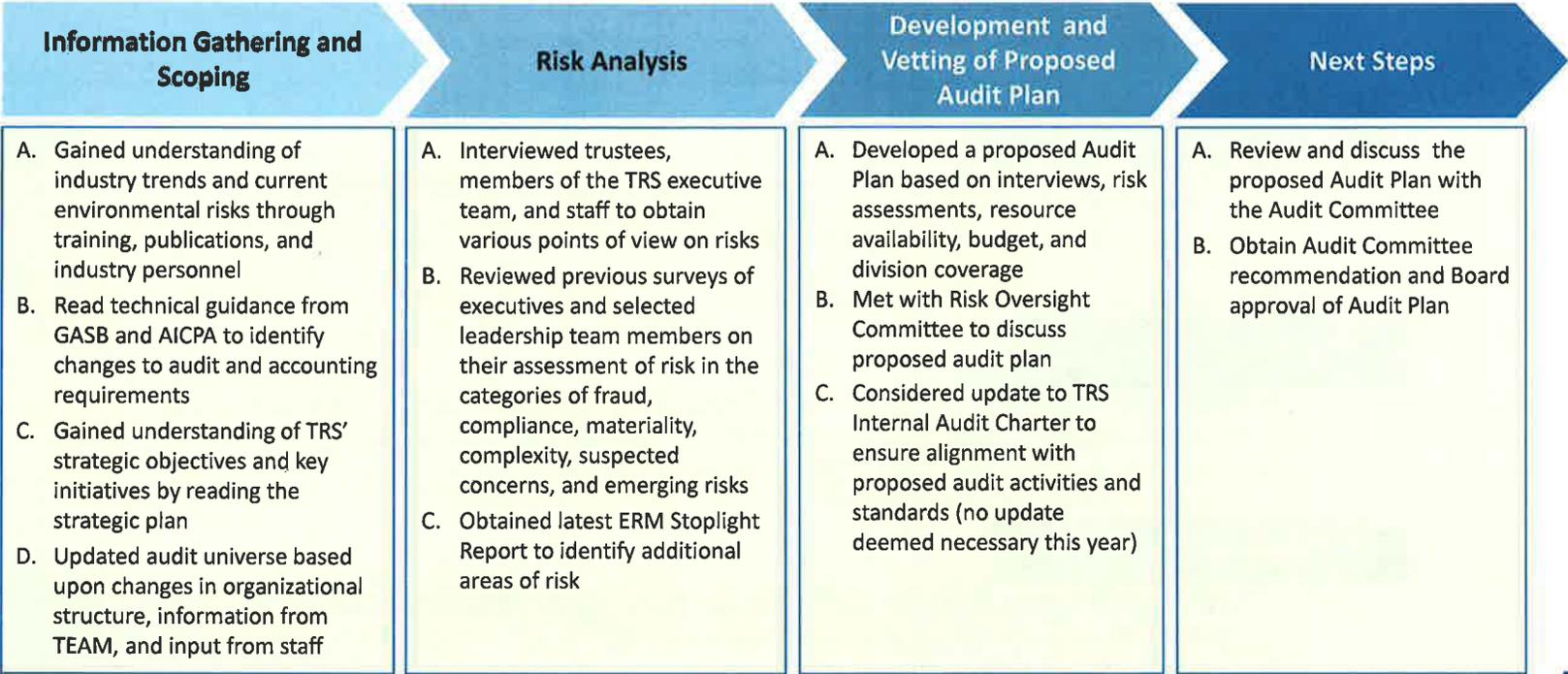
Changes Subsequent to Approval

Interim changes to the Audit Plan will occur from time to time due to changes in business risks, timing of TRS' initiatives, and staff availability. We will report Audit Plan changes to executive management and present changes to the Audit Committee at the next quarterly Audit Committee meeting. Amendments to the approved Audit Plan deemed to be significant (based on discussions with the executive director and audit committee chair) will be submitted to the Audit Committee for recommendation to the Board for approval. We will also notify the State Auditor's Office of material changes to the Audit Plan.



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:





Types of Projects to Cover Risk Areas

An important part of the Audit Plan is that the identified processes, systems, and initiatives should receive differing types and levels of review based on their importance, perceived risk, and most efficient approach. Our suggested levels of review activities are as follows:

Audit

- Audit Focus: Assess evidence available in order to provide assurance on an audit objective
- Deliverable: Audit report for public distribution unless protected by statute
- Estimated level of effort per project: 400 - 500 hours

Agreed-Upon Procedures

- Agreed-Upon Procedures Focus: 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
- Deliverable: Agreed-upon procedures report for public distribution (use is limited to those with understanding of procedures performed)
- Estimated level of effort per project: 100 - 300 hours

Formal Consulting

- Consulting Focus: Respond to requests for formal study or assessment with recommendations; no assurance provided
- Deliverable: 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
- Estimated level of effort per project: 100 - 200 hours

Informal Consulting (Advisory)

- Advisory Focus: Participate in activities in a non-voting capacity, e.g., provide training and input on policies and procedures
- Deliverable: Verbal discussion or a brief memo to management
- Estimated level of effort per year: 10 – 100 hours



Audit Plan: Pension Benefits and Employer Audits

The tables on this page and the following pages provide the name of each project, type of project, and preliminary scope of work to be performed. Scope of work will be finalized as part of each project’s formal planning phase.

Title	Type	Preliminary Scope
Annual Benefits Testing	Agreed-Upon Procedures	Recalculate a sample of benefit payments annually and determine whether documentation on file supports the calculation; scope in other tests related to benefits as agreed-upon with management
Employer Audits	Audit	Determine whether information reported to TRS is complete and accurate, especially in the areas of eligibility, compensation, contributions, surcharges (pension and healthcare)
Employer Data Analysis Testing	Agreed-Upon Procedures	Gather and use full payroll data to risk assess reporting entities for audit and to identify noncompliance with TRS Laws and Rules
TRS Reporting Entity Website Audit Information Update and Communication Activities	Advisory	Update audit-related information and tools on the TRS employer (reporting entity) website. Information may include self-audits, audit programs, audit results, technical guidance, and frequently asked questions about reporting entity audits



Audit Plan: Health Care

Title	Type	Preliminary Scope
TRS-ActiveCare Billing, Reporting, and Exceptions Process Audit	Audit	Assess whether the billing process used by subcontractor results in bills that are complete and accurate; determine whether reporting entities are reconciling bills and reporting errors to subcontractor; assess the effectiveness of the exceptions process; assess the completeness and accuracy of reports provided to TRS by subcontractor and contractor including eligibility reports
TRS-Care and TRS-ActiveCare Vendor Procurement and Oversight Audit	Audit	Using recent healthcare procurements, validate that the processes were followed in accordance with the state procurement manual and TRS policies and procedures
Health Care Administrative Expenses audit	Audit	Validate completeness and accuracy of administrative expenses charged to TRS-Care and TRS-ActiveCare
TRS-Care Legislative Change Management Review	Consulting	Review legislative changes effective January 1 requiring programming changes by IT for accuracy
Health Care Vendor Update Meetings Attendance	Advisory	Attend quarterly meetings with health care vendors to understand results, issues, and TRS management's monitoring controls
Health Care Vendor Selection Observation	Advisory	Observe selection process of large vendor and service providers, when applicable



Audit Plan: Investment Management

Title	Type	Preliminary Scope
Private Equity Management Fees and Carried Interest Desk Audits	Audit	Assess the accuracy of management fees and carried interest using information contained in Limited Partnership portals as a starting point and other information as needed
Performance Calculations Audit	Audit	Assess whether pension trust and incentive pay plan investment returns are accurate, consistent, and based on accepted industry performance standards
Quarterly Investment and Ethics Policies Compliance Testing	Agreed-Upon Procedures	Assess compliance with TRS ethics policies and the Investment Policy Statement (IPS) requirements; assess select operating procedures
Annual Testing of Investment Incentive Pay Plan	Agreed-Upon Procedures	Prior to payment, recalculate the investment incentive compensation award amounts to determine if they are calculated in accordance with plan provisions; reconcile performance to the service provider
Investment Committees Attendance	Advisory	Stay current on Investment Management Division initiatives by attending the Internal Investment Committee, Derivatives Operations, monthly staff, and other meetings such as the Annual Town Hall meeting and meeting with risk, compliance, and operations staff



Audit Plan: Finance and Staff Services

Title	Type	Preliminary Scope
General Accounting Change in Management Audit	Audit	Determine whether key management controls are in place and functioning as intended. Key management controls could include account reconciliations, access controls, departmental policies and procedures, TRS-wide policies and procedures, segregation of duties, etc.
Capital Improvement Planning Process Review	Consulting	Review TRS' process for requesting and planning capital improvements and make recommendations for increased formalization
Comprehensive Annual Financial Report (CAFR) 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 CAFR audit
CAFR Audit Coordination (SAO, auditors)	Advisory	Coordinate activities of the SAO to ensure deadlines are met; coordinate quarterly update meetings with executive management and the SAO; maintain SAO document request SharePoint site; walkthrough CAFR development process and identify opportunities for efficiencies
CAPPS Implementation	Advisory	Participate in meetings associated with CAPPS and provide input into controls identification projects.
Teacher Retirement Investment Company of Texas (TRICOT) Financial Audit Coordination (Grant Thornton, auditors)	Advisory	Coordinate a financial audit of TRICOT, a wholly-owned subsidiary of TRS in London



Audit Plan: Executive

Title	Type	Preliminary Scope
Board Reporting Process and Materials Review	Consulting	Walk through the process for developing board materials; interview staff about challenges with timely board reporting and provide suggestions for improving timeliness
Executive Incentive Pay Testing	Agreed-Upon Procedures	Independently recalculate executive incentive pay in order to test the accuracy of the calculation by management
Special Requests and Emerging Issues	Advisory or Consulting	Set aside time to address special requests and emerging issues during the year as requested by management
Meetings Participation	Advisory	Participate (non-voting) in various TRS-wide meetings such as Executive Council, Leadership Team, and Risk Oversight Committee



Audit Plan: TEAM and Technology

Title	Type	Preliminary Scope
TEAM Independent Program Assessment (IPA) Vendor Support	Advisory	Coordinate and facilitate activities of the IPA vendor and ensure direct access to executive management and the board
TEAM Committees, Projects, and Controls Assessment Participation	Advisory	<p>Participate in TEAM Executive Steering Committee (ESC) and other committees and requirements-gathering sessions in a non-voting capacity, and provide advisory services related to TEAM project activities as outlined in the TEAM charter of internal audit activities. Provide input into controls identification projects. In FY 17, Internal Audit participated in the following TEAM committees and projects:</p> <ul style="list-style-type: none"> - Executive Program Oversight Committee (including TEAM budget) - Organizational Change Management Advisory Groups - Business Procedures and Training Project - Monthly meetings with TEAM program manager and DXC executives
Disaster Recovery, Network Penetration Tests; Security Risk Assessment Review	Advisory	Observe, obtain, read, and follow-up on any issues identified during the network disaster recovery, penetration tests, and the security risk assessment conducted by the TRS Information Security Officer



Audit Plan: Internal Audit Activities

Title	Project Description
Internal Quality Assurance Review	Assess Internal Audit's audit and administrative practices in order to make recommendations for continuous improvement. This project includes Internal Audit performance measure tracking and reporting
Annual Internal Audit Report	Prepare annual report of audit activities in accordance with SAO instructions
Quarterly Audit Recommendations Follow-Up	Follow-up and report on the status of outstanding audit recommendations
Data Analysis Process Buildout	Continue to build out data analysis skills of audit staff; incorporate into audit projects and annual audit plan development; and pilot analysis projects in various business units
Staff training initiative	Develop and launch auditor training in key areas including report writing, workpaper documentation, and audit risk assessment
Employer audit process re-engineering	Revise approach to auditing reporting entities including audit procedures, templates, documentation, internal communications, and reports
Fiscal Year 2019 Audit Plan	Prepare annual audit plan based on a documented risk assessment in accordance with professional auditing standards and the Texas Internal Auditing Act
Audit Committee Meetings Preparation	Prepare communications and attend Audit Committee and Board Meetings



Audit Plan: High Risk Areas (High, Elevated, or Caution) and Areas of Interest to the SAO (Procurement and IT Security) excluded from the Audit Plan

Area	Reason for Exclusion
Information Security & Confidentiality	TRS is in process of implementing recommendations made from two IT security-related audits in the prior year
Cybersecurity	TRS is in process of implementing recommendations made from two IT security-related audits in the prior year. TRS uses Department of Information Resources (DIR) services for network penetration testing
Records & Information Management	TRS is in process of revising its records management system and procedures
TEAM Program	TRS is in process of replacing its benefits systems (an effort known as the TEAM Program) and is using an independent program assessment vendor to assess the sufficiency of risk mitigation activities

Appendix A

Internal Audit Operating Budget



Appendix A Internal Audit Operating Budget

Line Item	Budget FY 2018	Budget FY 2017
000 – Salaries	\$1,094,123	\$1,086,970
000 – Benefits	280,233	279,344
200 – Professional Fees for Internal Audit Services	450,000	450,000
200 – Professional Fees for External Audit Services (CAFR, TRICOT, and Fiduciary Review)	442,500	500,000
505 – Travel-In-State	14,600	13,500
510 – Travel-Out-of-State	26,000	23,000
600 - Offsite Retreat	500	0
705 – Dues, Fees, and Staff Development	27,500	25,000
710 – Subscriptions and Reference Materials	2,000	2,000
Total Operating Budget	\$2,337,456	\$2,379,814
Full Time Equivalent (FTE) Positions (excluding interns)	13.0	12.0

Resources are sufficient to complete the annual audit plan.

Appendix B

Internal Audit Performance Measures



Appendix B

Internal Audit Goals and Performance Measures

For the internal audit function, the FY 2018 goals and performance measures are as follows:

Goal 1: Facilitate Audit Committee Governance

Objective 1: Provide assurance and advice to the Audit Committee and executive management on risk mitigation activities related to the pension and healthcare trusts

Performance Measures

- a. 80% or more of audit and agreed-upon procedures projects are completed in the fiscal year (80% allows for flexibility due to changes in TRS business practices and special requests)
- b. 70% or more of total available department hours (excluding uncontrollable leave) are spent for internal audit staff on direct assurance, consulting, and advisory services
- c. 100% of internal audit processes are in accordance with internal auditing standards as reported in the annual quality assurance and improvement report
- d. 80% (4.0/5.0) or higher score received for audit project client surveys in overall satisfaction
- e. 76% (3.8/5.0) or higher score on staff 360 evaluations in accountability, critical thinking, and initiative
- f. 90% (4.5/5.0) or higher score received for CAE 360 evaluation in "Leads the Agency" (aka Firm Leadership) and "Leads the Team" (aka Managerial Leadership)



Appendix B

Internal Audit Goals and Performance Measures

Goal 1: Facilitate Audit Committee Governance, continued

Objective 2: Improve Internal Audit communication

Performance Measures

- a. 80% (4.0/5.0) or higher score received for audit project client surveys regarding communication of the audit purpose, results, and reports
- b. 80% (4.0/5.0) or higher score on staff 360 evaluations in the area of verbal and written communication and collaborative audit perspective

Objective 3: Provide information on effective Audit Committee practices

Performance Measures

- a. 100% of relevant current "Tone at the Top" articles uploaded to Diligent
- b. One speaker on the benefits of an effective audit function presents at the February board meeting



Appendix B

Internal Audit Goals and Performance Measures

Goal 2: Support TRS Initiatives

Objective 1: Support the success of the TEAM Program and Financial Software Implementations

Performance Measures

- a. 86% (4.3/5.0) or higher score for CAE 360 evaluation in contribution goals
- b. 80% (4.0/5.0) or higher score received for audit project client surveys in TEAM-related projects, when applicable

Objective 2: Integrate TRS Core Values into Internal Audit activities

Performance Measures

- a. 80% (4.0/5.0) or higher score on staff 360 evaluations in the area of organizational awareness
- b. 83% (5.0/6.0) or higher score for departmental organizational health on the annual Workplace Dynamics Survey



Appendix B

Internal Audit Goals and Performance Measures

Goal 3: Enhance Internal Audit Staff Competence and Expertise

Objective 1: Cultivate in-house Subject Matter Experts (SME's)

Performance Measures

- a. 80% (4.0/5.0) or higher score received for audit project client surveys regarding the usefulness of audit recommendations in improving business processes and controls
- b. 80% (4.0/5.0) or higher score on staff 360 evaluations in the area of audit acumen
- c. 92% (4.6/5.0) or higher score for CAE 360 evaluation in "Leads the Self" (aka Technical Leadership)

Objective 2: Ensure continued competence and expertise of Internal Audit

Performance Measures

- a. 100% of audit staff complete annual training plans and obtain a minimum of 40 hours of continuing education credits
- b. 100% of audit staff maintain professional certifications or actively pursue certifications and related eligibility requirements
- c. 100% of audit staff participate in professional organizations
- d. 100% of audit staff acknowledge an understanding of their career path
- e. 92% or more of audit staff remain in internal audit or TRS (excluding retirements and transfers)



Appendix C

Audit Plan Mapped to TRS Risk Assessment



Appendix C

Audit Universe Mapped to TRS Risk Assessment

#	TRS Risk Level	TRS Risk Category	TRS Goal	TRS-Assessed Overall Risk	Planned Approach	Project Type
1	High	TRS-Care Funding	Facilitate long-term soundness of TRS-Care in order to provide sustainable retiree health care benefits.	Inadequate funding and/or unanticipated external forces would affect solvency of the program over the current biennium and future years, requiring significant premium increases or benefit reductions.	Employer audits of TRS-Care surcharges; Healthcare administrative expenses	Audit
2	Elevated	TRS-ActiveCare Affordability	Facilitate financial soundness of TRS-ActiveCare in order to provide affordable health care benefits.	Inadequate funding by the state and participating entities and/or unanticipated external forces could affect affordability.	TRS-ActiveCare billing audit; Healthcare administrative expenses	Audit
3	Elevated	Records & Information Management	Manage the organization, retention and disposition of TRS information and records with adherence to laws, rules, policies and best practices.	An ineffective records and information management program results in wasted resources; and does not protect, preserve, retain, dispose, or make records accessible in an accountable or transparent manner.	None - TRS project in process	n/a
4	Elevated	Employer Reporting	Accurately capture and utilize employer reported data to project and calculate future benefits of TRS members and to properly allocate the total pension liability across districts.	Incorrect reporting could lead to calculated benefits being inaccurate; Improperly allocating actuarial liability across districts.	Employer audits and data analysis; updates to external communications about audits	Audit; Advisory
5	Caution	TEAM Program	Implement cost effective, efficient, and sustainable processes and systems that enable TRS to serve its members, employers, and annuitants.	System design, implementation and functionality of the new processes and systems do not meet the growing demands of TRS in service of its members. Program/ project implementation schedule and cost exceeds original estimates.	TEAM oversight vendor coordination; participation in oversight committees; employer full payroll data analysis	Advisory
6	Caution	Pension Funding	Sustain a financially sound pension trust fund.	A lack of sound funding for the plan could lead to insufficient assets to pay for long-term benefits and financial obligations.	Employer audits	Audit
7	Caution	Legacy Information Systems	Provide information systems to meet TRS' business and customer service needs.	Inability to provide adequate and consistent information in a timely fashion via the preferred delivery mechanism.	TRS-Care legacy change management review	Consulting
8	Caution	Information Security & Confidentiality	Maintain the integrity, availability, and protection in the storage, use, and transfer of TRS information resources (in any form or medium).	Unauthorized or unintentional release/access of TRS confidential information could result in state or federal law violations, sanctions against TRS or its employees, and harm the best interests of TRS.	Quarterly follow up on prior year HIPAA and access controls audits	Advisory
9	Caution	Health Care Plans Administration	Administer retiree and active member health care programs that are valued by enrollees.	Inadequate administration of the health care programs could possibly affect the quality of health care services provided to those who depend on the delivery of TRS health care benefits which would in turn increase health care costs.	TRS-ActiveCare billing; vendor procurement and oversight; Healthcare administrative expenses	Audit



Appendix C

Audit Universe Mapped to TRS Risk Assessment

#	TRS Risk Level	TRS Risk Category	TRS Goal	TRS-Assessed Overall Risk	Planned Approach	Project Type
10	Caution	Cyber Security	To prevent malicious attacks and unauthorized access of TRS information resources.	Ineffective cyber threat controls could lead to breaches or sabotage of TRS systems.	Quarterly follow up on prior year HIPAA audit; DIR and other consultant Pen tests	Advisory
11	Guarded	Talent Continuity	Attract, retain and develop a highly competent staff.	The delivery of member services and pension fund management could be negatively impacted by turnover, the inability to retain qualified staff, lack of a sufficient knowledge transfer program, and an inconsistent performance management process.	Executive and investment incentive pay testing	AUP
12	Guarded	Regulatory, Compliance, & Litigation	Adhere to and analyze current laws, rules, and policies (e.g., maintain tax qualification status); Render competent advice on legal risk management and awareness, manage litigation risks, and negotiate contracts to address risks.	Non-compliance with laws and rules could lead to penalties, fines, liability and litigation; impaired ability to conduct business; burdensome oversight; third-party investigations/audits; adverse legislation; increased scrutiny; or loss of tax qualification status.	Employer audits; quarterly investment policy testing; annual benefits testing	Audit, Agreed-Upon Procedures (AUP)
13	Guarded	Procurement & Contracts	Maintain effective procurement and contract management systems. Inappropriate procurement practices could result in purchases of sub-standard products and services, unfavorable pricing or contract terms, and violation of laws. Ineffective contract management could result in contractors not fulfilling their contractual obligations.	Inappropriate procurement practices could result in purchases of sub-standard products and services, unfavorable pricing or contract terms, and violation of laws. Ineffective contract management could result in contractors not fulfilling their contractual obligations.	Vendor procurement and oversight audit	Audit
14	Guarded	Pension Benefit Administration	Accurate delivery of benefits to TRS members, retirees and beneficiaries, including systems monitoring and controls related to accurate calculations and benefit payments to others.	Ineffective delivery of benefits could lead to inaccurate information, inaccurate benefits/ payments, dissatisfied members, retirees, or beneficiaries, and loss of credibility, adverse public perception, increased scrutiny, and oversight.	CAFR benefits payment testing; annual benefits testing	SAO Audit, AUP
15	Guarded	Open Government	Ensure compliance with laws and rules related to open records and meetings.	Non-compliance could lead to penalties and fines or voiding of board actions.	None	n/a
16	Guarded	Investment Accounting	Ensure all TRS Investments are properly and completely accounted for; Ensure investments are valued correctly; Ensure investment fees are accurately reported and disclosed; Ensure cash flows into and out of the Fund are complete and properly controlled; Accurately calculate performance incentive pay (PIP)	TRS investments are not properly accounted for, valued correctly or properly reported, and investment-related cash is not properly controlled.	Incentive pay testing; SAO CAFR audit; private equity management fee/carried interest audit; performance calculation audit; quarterly investment compliance testing	AUP, SAO audit, audit
17	Guarded	Global Initiatives	Ensure employee safety by complying with laws and regulations and providing awareness of challenges when traveling abroad.	Not being aware of safety, compliance, and other challenges when traveling abroad could jeopardize the safety of our employees.	TRICOT Financial Audit	Audit

Appendix C

Audit Universe Mapped to TRS Risk Assessment

#	TRS Risk Level	TRS Risk Category	TRS Goal	TRS-Assessed Overall Risk	Planned Approach	Project Type
18	Guarded	Facilities Management & Planning	Provide a physical work environment that is safe and enhances productivity.	Inadequate facilities management or ineffective space utilization could result in less than desirable conditions for TRS members, visitors, and staff and could jeopardize our ability to continue providing an exemplary level of service to our members.	Capital improvement planning process project	Consulting
19	Guarded	Ethics & Fraud Prevention	Maintain a culture that upholds ethical behavior and values that contribute and promote the fiduciary duties of prudence and loyalty, and reduces fraud risks.	A lack of ethics could undermine the duties of prudence and loyalty and create fraud risks resulting in loss of assets, credibility, and business opportunities, adverse publicity, violations of law, and increased scrutiny and oversight.	Ethics policies compliance testing as part of investment policies compliance quarterly testing; participation in triage team	AUP
20	Guarded	Customer Service	Deliver superior service to members and internal/external customers.	Inadequate customer service could result in dissatisfied members or customers and could lead to increased scrutiny and oversight.	None (management is implementing consulting recommendations)	n/a
21	Guarded	Credit	Maintain effective management of counterparty and securities lending risks.	Unmanaged counterparty and securities lending exposures could result in losses to the investment portfolio.	Attendance at monthly securities lending calls; quarterly investment compliance testing	Advisory, AUP
22	Guarded	Communications & External Relations	Maintain effective communication and positive relations with members, retirees, employers, TRS employees, news media, and the public.	Poor communication could lead to confusion resulting in increased calls to TRS, poor or inappropriate decision-making regarding TRS benefits, and incorrect information provided to external parties.	Update employer audits webpage; make presentations on employer audit initiatives and common findings	Advisory
23	Guarded	Business Continuity	Recover and resume operations in the event of a major business interruption.	Members do not receive statutorily required services timely.	Observation of disaster recovery and business continuity exercises/tests	Advisory
24	Guarded	Budget	Ensure TRS has appropriate budget to provide and sustain resources necessary to successfully carry out TRS' mission, goals, and objectives to serve our members.	Lack of a sufficient operating budget could jeopardize our ability to effectively serve our members.	Attend TEAM budget meetings	Advisory
25	Guarded	Accounting & Reporting	Maintain and monitor the integrity, accuracy, and completeness of financial information and timeliness of reporting.	Materially inaccurate financial information and reports would result in Board of Trustees and Texas Legislature decisions being made on flawed data and adverse or qualified audit opinions.	General Accounting Change in Management Audit; SAO CAFR Audit; CAPPs implementation participation	Audit, SAO Audit; Advisory



Appendix C

Audit Universe Mapped to TRS Risk Assessment

#	TRS Risk Level	TRS Risk Category	TRS Goal	TRS-Assessed Overall Risk	Planned Approach	Project Type
26	Guarded	403(b)	Maintain a list of certified companies and a list of registered products and investment options which meet requirements of law and TRS rule. Adopt fee caps to help ensure fees paid by members are competitive.	Public education employees purchase products and investment options from companies that are not on either list.	None (audited in prior year)	n/a
27	Low	Market	Maintain market risk exposures consistent with investment objectives.	Too little or too much exposure to market risk could each lead to undesirable investment outcomes.	Quarterly investment compliance testing and reporting	Advisory
28	Low	Liquidity	Maintain levels of liquidity appropriate for the support of fund disbursements, anticipated investment funding needs and trust level leverage.	Inadequate liquidity could lead to cash shortfalls.	Quarterly investment compliance testing and reporting; updating meetings with risk officer	Advisory
29	Low	Performance Reporting	Maintain the integrity of investment information - reporting and disclosure, accuracy, completeness and valuation; Develop and disseminate customized investment reporting for both management and governance to enhance making better strategic and tactical investment decisions.	Performance reports contain material inaccuracies.	Performance calculation audit	Audit
30	Low	Private Market Operations	Maintain integrity of the transaction settlement and position information for optimal investment management decisions.	Inefficient or ineffective transaction settlement or position management process could result in losses to the fund.	Private market fee/carried interest audits	Audit
31	Low	Public Market Operations	Maintain the integrity of the transaction settlement and position information for optimal investment management decisions.	Inefficient or ineffective transaction settlement or position management process could result in losses to the fund.	Quarterly investment compliance testing and reporting; TRS Compliance monitors IMA compliance; IIC attendance	AUP, Advisory
32	Low	Government Relations	Maintain effective communications and positive relations with the Legislature, associations, and other public parties.	Poor communications could lead to adverse relations, unfavorable legislation, and restricted funding.	None	n/a
33	Other	Governance and Administration	n/a	n/a	Board materials project; executive incentive pay testing; General Accounting change in management audit; participation in various committees	Consulting, Audit, AUP, Advisory

2017 - 2021 TRS Internal Audit Strategic Plan



*Trusted Assurance,
Valued Advice*

Mission, Vision, and Stakeholders

- ▶ Our mission: to enhance and protect organizational value by providing risk-based and objective assurance, advice, and insight
- ▶ Our vision: to provide trusted assurance and valued advice through our services to primary stakeholders:
 - ▶ Assurance that TRS' risk management, governance, and control processes support achievement of TRS mission and business objectives
 - ▶ Advice and consultation for improving processes through business partnerships and collaboration
- ▶ Our primary stakeholders:
 - ▶ TRS Board of Trustees and the Audit Committee of the Board of Trustees
 - ▶ Executive Director and Executive Management

Strategic Goals

- ▶ Our strategic goals were developed to align with the TRS Strategic Plan and Core Values and ensure that we support the changing needs of TRS' stakeholders in fulfilling fiduciary duties and achieving business goals:
 - ▶ Internal Audit Goal 1: Facilitate Audit Committee governance
 - ▶ TRS Goal 1: Sustain a financially sound pension trust fund
 - ▶ TRS Goal 2: Continue to improve benefit delivery
 - ▶ TRS Goal 3: Facilitate access to competitive, reliable healthcare benefits for our members
 - ▶ Internal Audit Goal 2: Support TRS initiatives
 - ▶ TRS Goal 2: Continue to improve benefit delivery
 - ▶ TRS Core Values
 - ▶ Internal Audit Goal 3: Enhance Internal Audit staff competence and expertise
 - ▶ TRS Goal 4: Attract, retain, and develop highly competent staff

Goal 1: Facilitate Audit Committee Governance

Objective 1: Provide assurance and advice to the Audit Committee and executive management on risk mitigation activities related to the pension and healthcare trusts

Strategy 1	Conduct assurance activities relating to the completeness and accuracy of Reporting Entity information submitted to TRS
Strategy 2	Provide assurance on investment risk mitigation activities
Strategy 3	Provide assurance on health care risk mitigation activities
Strategy 4	Coordinate with Enterprise Risk Management (ERM) on risk assessment activities
Strategy 5	Collaborate with Compliance Team and Risk Group on risk and compliance monitoring of investment-related activities

- ▶ Quantitative measurements:
 - ▶ Audit project surveys (TRS and Reporting Entities)
 - ▶ TASBO presentation surveys
 - ▶ Chief Audit Executive (CAE) and staff 360 evaluations
 - ▶ Audit plan completion rate
 - ▶ Staff utilization rates

Goal 1: Facilitate Audit Committee Governance

Objective 2: Improve Internal Audit communication

Strategy 1	Refine report format of Internal Audit reports and Audit Committee materials
Strategy 2	Improve delivery of information
Strategy 3	Identify and promote resources within Internal Audit that could be beneficial to TRS

- ▶ Quantitative measurements:
 - ▶ CAE and staff 360 evaluations

Goal 1: Facilitate Audit Committee Governance

Objective 3: Provide information on effective Audit Committee practices

Strategy 1	Obtain and provide information to the Audit Committee on best practices of audit committees
Strategy 2	Consider using Audit Committee self-evaluation tool
Strategy 3	Share governance resources through Diligent

- ▶ Quantitative measurements:
 - ▶ CAE and staff 360 evaluations

Goal 2: Support TRS Initiatives

Objective 1: Support the success of the TEAM Program and Financial Software Implementations

Strategy 1	Facilitate independent oversight for board and external oversight agencies
Strategy 2	Provide input and assistance during development and implementation of TRUST (new Benefits system) and new financial system
Strategy 3	Use TRUST and financial system in future audits

- ▶ Quantitative measurements:
 - ▶ CAE and staff 360 evaluations

Goal 2: Support TRS Initiatives

Objective 2: Integrate TRS Core Values into Internal Audit activities

Strategy 1	Explore opportunities and methods to tie audit findings into TRS Core Values of Customer Satisfaction, Accountability, Ethics, and Excellence
Strategy 2	Integrate TRS Core Values of Collaboration/ Teamwork, Respect, and Employee Fulfillment into IA documents
Strategy 3	Establish staff recognition programs

- ▶ Quantitative measurements:
 - ▶ CAE and staff 360 evaluations
 - ▶ TRS Workplace Survey

Goal 3: Enhance Internal Audit Staff Competence and Expertise

Objective 1: Cultivate in-house Subject Matter Experts

Strategy 1	Deepen knowledge of TRS laws (federal and state), rules, and internal policies
Strategy 2	Broaden foundational skills in data analytics
Strategy 3	Define and broaden auditing skills

- ▶ Quantitative measurements:
 - ▶ TRS project surveys
 - ▶ CAE and staff 360 evaluations

Goal 3: Enhance Internal Audit Staff Competence and Expertise

Objective 2: Ensure continued competence and expertise of Internal Audit

Strategy 1

Develop workforce continuity plans

- ▶ Quantitative measurements:
 - ▶ CAE and staff 360 evaluations
 - ▶ TRS Workplace Survey
 - ▶ HR turnover rates

Teacher Retirement System of Texas
Internal Audit Annual Report for Fiscal Year 2017

VI. External Audit Services Procured in Fiscal Year 2017

Teacher Retirement System of Texas
Internal Audit Annual Report for Fiscal Year 2017

VI. External Audit Services Procured in Fiscal Year 2017

External Audit Services Procured and Outsourced by Internal Audit	Provided by	Report Date
Contractor Onboarding and Off-Boarding	Myers and Stauffer LC	5/2/2017

External Audit Services Procured by TRS	Provided by	Report Date
Review of Health Plan Administration	Truven Health Analytics	In Progress
Comprehensive Annual Financial Report (CAFR) – Fiscal Year 2016	State Auditor’s Office	11/17/2016
Comprehensive Annual Financial Report (CAFR) – Fiscal Year 2017	State Auditor’s Office	In Progress
TRS Investment Company (TRICOT) Financial Audit Fiscal Year 2016	Grant Thornton	12/6/2016
TRS Investment Company (TRICOT) Financial Audit Fiscal Year 2017	Grant Thornton	In Progress

VII. Reporting Suspected Fraud and Abuse

Teacher Retirement System of Texas

Internal Audit Annual Report for Fiscal Year 2017

VII. Reporting Suspected Fraud and Abuse

TRS has taken the following actions to implement the fraud detection and reporting requirements of Section 7.09 of the General Appropriations Act and Section 321.022 of the Texas Government Code:

- Updated in July 2017, *TRS Fraud, Waste, and Abuse Policy* establishes a fraud, waste, and abuse prevention awareness program that includes employee training and guidelines for reporting suspected fraud, waste, and abuse. Key elements of the policy include definitions, covered acts, reporting procedures of detected or suspected fraud, waste, or abuse, detection and investigation, awareness training, and corrective action.
- The TRS Internet site includes the contact number of the State Auditor's Office Hotline and a link for reporting instructions.
- Links are available on the TRS Intranet for both the State Auditor's Office Hotline and the TRS Internal Fraud and Ethics Hotline.
- Administration of the TRS Internal Fraud and Ethics Hotline is vested with the Chief Compliance Officer & Compliance Counsel since fiscal year 2016.
- In compliance with the reporting requirement of fraud, waste, and abuse, TRS reports all instances of suspected fraud, waste, and abuse to SAO.

TAB 8

Chief Audit Executive Goals for FY 2018

Goal 1

Sustain a Financially Sound Pension System

Provide assurance on performance calculations and private equity fees

Test compliance with investment policies

Coordinate CAFR and TRICOT financial audits

Goal 2

Continuously Improve Our Benefit Delivery

Coordinate TEAM program assessment vendor activities

Review key TEAM phase 1 controls and participate in TEAM activities

Test benefit annuity payments

Analyze full payroll data and provide assurance on employer reports

Goal 3

Facilitate Access to Competitive, Reliable, Health Care Benefits.

Test implementation of select TRS-Care legislative changes

Provide assurance on TRS-Care procurement and administrative fees

Provide assurance on TRS-ActiveCare billing, procurement, and administrative fees

Follow up on outstanding HIPAA audit recommendations



-- Planned



-- Reported at current Audit Committee or Board



-- Work occurred during current quarter

Chief Audit Executive Goals for FY 2018

Goal 4

Align People to Achieve the TRS Mission

Provide assurance on accounting change in management controls

Test investment and executive incentive compensation

Participate in the management continuity program and nominate staff for leadership program

Develop new auditor training modules and revisit career paths

Goal 4

Align Processes to Achieve the TRS Mission

Consult on board reporting timeliness and capital projects initiations

Implement department records management changes

Communicate on reporting entity audit issues found

Participate in Executive Council and Risk Oversight Committees

Participate in TRS rules review related to reporting entities

Measure and trend internal audit activities and present on audit value add

Re-engineer reporting entity audit processes

Participate in hotline triage team

Goal 4

Align Technology to Achieve the TRS Mission

Follow up on innovation top 10

Advise on the CAPPs project

Review info security tests and risk assessments

Observe disaster recovery and business continuity tests

**Internal Audit Goals and Performance Measures
Fiscal Year 2018 - 1st Quarter Ending November 2017**

Target Performance	Annual Target	Cumulative Score	Activity / Comment	Status
Goal 1: Facilitate Audit Committee Governance				
1. 80% or more of audit and agreed-upon procedures projects are completed in the fiscal year (80% allows for flexibility due to changes in TRS business practices and special requests)	80%	13%		On Task
2. 70% or more of total available department hours (excluding uncontrollable leave) are spent for internal audit staff on direct assurance, consulting, and advisory services	70%	72%		On Task
3. 100% of internal audit processes are in accordance with internal auditing standards as reported in the annual quality assurance and improvement (QAIP) report	100%	N/A	QAIP to be completed in June 2018	N/A
4. 80% (4.0/5.0) or higher score received for audit project client surveys in overall satisfaction	80%	98%		On Task
5. 76% (3.8/5.0) or higher score on staff 360 evaluations in accountability, critical thinking, and initiative	76%	79%	Score based on staff 360 evaluations completed in October 2017	Achieved
6. 90% (4.5/5.0) or higher score received for CAE 360 evaluation in “Leads the Agency” (aka Firm Leadership) and “Leads the Team” (aka Managerial Leadership)	90%	N/A	CAE 360 evaluation to be completed in July 2018	N/A
7. 80% (4.0/5.0) or higher score received for audit project client surveys regarding communication of the audit purpose, results, and reports	80%	98%		On Task
8. 80% (4.0/5.0) or higher score on staff 360 evaluations in the area of verbal and written communication and collaborative audit perspective	80%	81%		Achieved
9. 100% of relevant current “Tone at the Top” articles uploaded to Diligent	100%	25%		On Task
10. One speaker on the topic of the benefits of an effective audit function presents at the February board meeting	1	N/A	Presentation to be made at the February board meeting	N/A

**Internal Audit Goals and Performance Measures
Fiscal Year 2018 - 1st Quarter Ending November 2017**

Target Performance	Annual Target	Cumulative Score	Activity / Comment	Status
Goal 2: Support TRS Initiatives				
1. 86% (4.3/5.0) or higher score for CAE 360 evaluation in contribution goals	86%	N/A	CAE 360 evaluation to be completed in July 2018	N/A
2. 80% (4.0/5.0) or higher score received for audit project client surveys in TEAM-related projects, when applicable	80%	N/A	No formal projects scheduled	N/A
3. 80% (4.0/5.0) or higher score on staff 360 evaluations in the area of organizational awareness	80%	81%	Score based on staff 360 evaluations completed in October 2017	Achieved
4. 83% (5.0/6.0) or higher score for departmental organizational health on the annual Workplace Dynamics Survey	83%	N/A	Survey results to be reported in September 2018	N/A
Goal 3: Enhance Internal Audit Staff Competence and Expertise				
1. 80% (4.0/5.0) or higher score received for audit project client surveys regarding the usefulness of audit recommendations in improving business processes and controls	80%	92%		On Task
2. 80% (4.0/5.0) or higher score on staff 360 evaluations in the area of audit acumen	80%	79%	Result due to turnover of experienced staff	Not Achieved
3. 92% (4.6/5.0) or higher score for CAE 360 evaluation in “Leads the Self” (aka Technical Leadership)	92%	NA	CAE 360 evaluation to be completed in July 2018	N/A
4. 100% of audit staff complete annual training plans and obtain a minimum of 40 hours of continuing education credits	100%	0%	Staff expected to complete 40 hours/each towards year end	On Task
5. 100% of audit staff maintain professional certifications or actively pursue certifications and related eligibility requirements	100%	100%		On Task
6. 100% of audit staff participate in professional organizations	100%	100%		On Task
7. 100% of audit staff acknowledge an understanding of their career path	100%	82%	Survey results indicate that two staff are uncertain of their career path	Below Target

**Internal Audit Goals and Performance Measures
Fiscal Year 2018 - 1st Quarter Ending November 2017**

Target Performance	Annual Target	Cumulative Score	Activity / Comment	Status
8. 92% or more of audit staff remain in internal audit or TRS (excluding retirements and transfers)	92%	100%		On Task

Legend: Target Status

- Target not achieved
- Below target but expect to achieve
- On task to achieve
- Achieved target

Fiscal Year 2018 Audit Plan Status As of November 2017

Title and Project #	Type	Status
Executive and Finance		
Board Reporting Process and Materials Review	Consulting	Complete
General Accounting Change in Management Audit	Audit	
Capital Improvement planning process	Consulting	
Coordination for State Auditor’s Office (SAO) Comprehensive Annual Financial Report (CAFR) Audit for Fiscal Year 2017	Advisory	Complete
Teacher Retirement Investment Company of Texas (TRICOT) Financial Audit Coordination (Grant Thornton)	Advisory	Complete
Testing of Executive Performance Incentive Pay Calculations	Agreed-Upon Procedures	
New Financial System – CAPPs Implementation Meeting Participation	Advisory	Ongoing
Committee and Workgroup Meetings Participation	Advisory	Ongoing
Special Requests and Emerging Issues (TBD)	Advisory or Consulting	
TEAM Program		
TEAM Independent Program Assessment (IPA) Vendor Support	Advisory	Ongoing
TEAM Committees, Projects and Controls Assessment Participation	Advisory	Ongoing
Pension Benefits		
Annuity Payment Testing for SAO CAFR Audit of FY 2017	Audit	Complete
Annual Benefits Testing	Agreed-Upon Procedures	In progress
Reporting Entity Audits	Audit	
Employer Audit of Pension and TRS-Care Surcharges	Audit	
TRS Reporting Entity Website Audit Information and Communication	Advisory	In Progress

Fiscal Year 2018 Audit Plan Status As of November 2017

Health Care		
TRS-Care Legislative Change Management Review	Consulting	In Progress
TRS-ActiveCare Billing, Reporting, and Exceptions Process Audit	Audit	
TRS-Care and TRS-ActiveCare Vendor Procurement and Oversight Audit	Audit	
Health Care Administrative Expenses Audit	Audit	
Health Care Vendor Update Meetings Attendance	Advisory	Ongoing
Information Technology		
Disaster Recovery, Network Penetration Tests; Security Risk Assessment Review	Advisory	
Investment Management		
Private Equity Management Fees and Carried Interest Desk Audits	Audit	
Performance Calculations Audit	Audit	
Quarterly Investment and Ethics Policies Compliance Testing	Agreed-Upon Procedures	1 st Quarter Complete
Annual Testing of Investment Incentive Pay Plan	Agreed-Upon Procedures	In Progress
Investment Committees Attendance	Advisory	Ongoing
Internal Audit Department		
Annual Internal Audit Report	Administrative	Complete
Data Analysis Process Buildout	Administrative	
Quarterly Audit Recommendations Follow-up	Administrative	Ongoing
Internal Quality Assurance Review	Administrative	
Fiscal Year 2019 Audit Plan	Administrative	
Employer Audit Process Re-engineering	Administrative	In Progress
Internal Audit Staff Training Initiative	Administrative	
Audit Committee Meetings Preparation	Administrative	Ongoing

Internal Audit Advisory Services¹
Fiscal Year 2018 – 1st Quarter

BENEFIT SERVICES
<ul style="list-style-type: none"> • Participated in the TEAM Program <ul style="list-style-type: none"> ○ Enterprise Projects Oversight Committee (EPOC) ○ Organizational Change Management Advisory Group (OCM) ○ Monthly meetings with TEAM Program Manager and vendor personnel ○ Independent Program Assessment (IPA) Vendor Coordination • Facilitated discussions on observations around TRUST access controls and segregation of duties controls
HEALTH INSURANCE BENEFITS (HIB)
<ul style="list-style-type: none"> • Attended the Health Plan Administrator (HPA) and Pharmacy Benefit Manager (PBM) Vendor Quarterly Update Meetings • Attended weekly update calls during the Annual Enrollment Period
INVESTMENT MANAGEMENT DIVISION (IMD)
<ul style="list-style-type: none"> • Attended Internal Investment Committee (IIC) meetings • Participated in quarterly Proxy Voting Committee meeting • Participated in monthly Securities Lending monitoring calls • Liaison for Grant Thornton’s (GT) Fiscal Year 2017 Annual Financial Report Audit of Teacher Retirement Investment Company of Texas, Ltd. (TRICOT)
FINANCIAL SERVICES
<ul style="list-style-type: none"> • Liaison for the State Auditor’s Office (SAO) Fiscal Year 2017 Comprehensive Annual Financial Report (CAFR) Audit • Participated in project team meetings for new financial system replacement
EXECUTIVE
<ul style="list-style-type: none"> • Facilitated SAO’s Quarterly Update Meetings • Participated in the Risk Oversight Committee • Participated in Health and Safety Committee Quarterly Meetings • Monthly collaboration meetings with Enterprise Risk Management (ERM) management • Participated in the Records Management Cross-functional Workgroup
INFORMATION TECHNOLOGY (IT)
<ul style="list-style-type: none"> • Tracking outstanding audit recommendations from HIPAA Gap Assessment Project and Audit of On/Off Boarding Processes of Non-TRS Workers

¹ Advisory Services (non-audit services) - The scope of work performed does not constitute an audit under Generally Accepted Government Auditing Standards (GAGAS).

Internal Audit Staff Accomplishments

Promotions and Certifications

- Nick Ballard was promoted to Internal Audit Manager in October. He also passed Part I of the Certified Internal Auditor exams in November.

Professional Organization Activities and Conferences

- Simin Pang served as one of the panel judges for the Best Project Award Competition in the IT Audit & Security Course at UT Austin. This competition is one of the ISACA-Austin Academic Projects.
- Amy Barrett was elected for another term as Secretary to the Association of Public Pension Fund Auditors (APPFA) Board.
- Hugh Ohn, Simin Pang, Rodrigo Dominguez, and Amy Barrett attended the APPFA conference in Sacramento, California, November 6 – 9. Topics covered: controlling costs, real estate investment management, LEAN process improvement, cyber security risks, employer audits, and direct investing.

While in Sacramento, Internal Audit met with State Street accounting and derivatives staff. Hugh Ohn provided an overview of TRS Internal Audit and how we use the information provided by State Street in our work.

- Art Mata, Anandhi Mani, and Cari Casey attended the 2017 P2F2 conference in Albuquerque, New Mexico, October 22-25. Topics covered: OPEB Implementation, GASB 67 & 68, Census Data, Cyber Security, Ethics, Fee Transparency in Alternate Funds, SOC Reports and current Federal Legislation and Tax Issues.
- Anandhi Mani participated in the P2F2 Conference Speaker Committee
- Toma Miller, Art Mata, and Cari Casey volunteered, and Anandhi Mani and Lih-Jen Lan attended, the 2017 Southern Regional Conference for the Institute of Internal Auditors held in Austin, TX, September 17-20. Topics covered: general auditing, IT/data analytics, fraud and ethics, and government and industry trends.

New Hire

- New IA Staff - Mary Presley, an experienced TRS IT Quality Assurance Team (QAT) member joined Internal Audit as a Senior IT Consultant in November.

Mary holds a master degree in Computer Education from Johnson and Wales University, Rhodes Island. She also holds two Microsoft certificates: Microsoft Certified Professional (MCP) and Microsoft Certified Application Developer (MCAD).

Her work experience includes 10 years in top IT companies such as Verizon, CISCO, and MCI as software engineer and web developer. She then worked for Texas Education Agency (TEA) developing and maintaining five web applications, workflow and FileNet systems for near 10 years. In 2015, she joined TRS QAT team performing QA tests for TEAM TRUST system prior to transfer to Internal Audit.