TEACHER RETIREMENT SYSTEM OF TEXAS MEETING
BOARD OF TRUSTEES

AGENDA

October 27, 2017 – 11:00 a.m.

TRS East Building, 5th Floor, Boardroom

All or part of the October 27, 2017, meeting of the TRS 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.

NOTE: The Board may take up any item posted on the agenda during its meeting on Friday, October 27, 2017.

The open portions of the October 27, 2017, Board meeting are being broadcast over the Internet. Access to the Internet broadcast of the Board meeting is provided at www.trs.texas.gov.

1. Call roll of Board members.

2. Consider the following administrative items – David Kelly:
   A. Approval of the proposed September 21-22, 2017, Board meeting minutes.
   B. Setting, rescheduling, or canceling future Board meetings, including the June 2018 meeting.

3. Provide opportunity for public comment – David Kelly.

4. Discuss the Executive Director's report on the following – Brian Guthrie:
   A. Administrative operational matters, including updates on legislative implementation of investment matters, the Executive Director's goals, audit, legal, staff services, investment, special projects, long-term space planning, and strategic planning.
   B. Board operational matters, including a review of draft agendas for upcoming meetings.
   C. Event notices or reminders; holiday and other schedules of interest; board member, employee, or other individual recognitions; and expressions of thanks, congratulations, or condolences.

5. Receive an update on the TEAM Program – Brian Guthrie.
6. Consider the evaluation and performance of Bridgepoint Consulting as the TEAM Program Independent Program Assessment (IPA) Vendor and as appropriate, consider extending the related agreement – Amy Barrett.

7. Review the reports of the Chief Financial Officer regarding end of Fiscal Year 2017 Budget Report, expenditures, current financial review and other financial matters involving TRS programs – Don Green.

8. Consider adoption of proposed amendments to the Resolution Designating Persons Authorized to Sign TRS Vouchers – Don Green.


10. Consider adoption of the proposed 403(b) rules, Title 34, Part 3, Chapter 53 of the Texas Administrative Code – Rebecca Merrill.


12. Consider personnel matters, including the appointment, employment, evaluation, compensation, performance, duties, discipline, or dismissal of the Executive Director, Chief Investment Officer, or Chief Audit Executive – David Kelly.

13. Consult with the Board's attorney(s) in Executive Session on any item listed above on this meeting agenda as authorized by Section 551.071 of the Texas Open Meetings Act (Chapter 551 of the Texas Government Code) – David Kelly.
TAB 2
Minutes of the Board of Trustees

September 21-22, 2017

The Board of Trustees of the Teacher Retirement System of Texas met on September 21, 2017 in the boardroom located on the fifth floor of the TRS East Building offices at 1000 Red River, Austin, Texas. The following Board members were present:

David Kelly, Chair
Karen Charleston
Joe Colonnetta
David Corpus
John Elliott
Greg Gibson
Christopher Moss
Dolores Ramirez

Others present:

Brian Guthrie, TRS  Nancy Byler, TRTA President
Ken Welch, TRS  Sabina Rahman-Garcia, Humana
Don Green, TRS  Tiffany Calderon, Humana
Carolina de Onis, TRS  Jennifer Cawley, TALHI
Jerry Albright, TRS  Jay Thompson, TALHI
Jase Auby, TRS  Tom Rogers, TRTA, ARTA
Barbie Pearson, TRS  Victor Ferreira, DXC
Chet Henry, TRS  Scot McAfee, DXC
Katherine Farrell, TRS  Trevor Simmons, LBB
Horacio Zambrana, TRS  Ann Fickel, TCTA
Michael Johnson, Bridgepoint  David Gonzales, Humana
Steve Voss, Aon Hewitt  Shannon Meroney, AIG & Nat’l Life Ins. Group
Mike Comstock, Aon Hewitt  Sean Donovan, CVS
Michael McCormick, Aon Hewitt  Ted Melina Raab, Texas AFT
Keith Brown, Investment Advisor  James Walsh, Albourne
Steve Huff, Reinhart Boerner Van Deuren  Ta Lohachiffard, Albourne

Mr. Kelly called the meeting to order at 9:10 a.m.

1. **Call roll of Board members.**

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

2. **Consider the following administrative items – David Kelly:**

   A. **Approval of the proposed September 1, 2017 Board meeting minutes.**
On a motion by Ms. Ramirez, seconded by Mr. Moss, the Board unanimously voted to approve the proposed minutes of the September 1, 2017 Board meeting.

**B. Excusing Board member absences from the September 1, 2017 Board meeting.**

On a motion by Mr. Moss, seconded by Dr. Gibson, the Board unanimously voted to excuse the absence of Mr. Joe Colonnetta and Mr. David Corpus from the September 1, 2017 Board meeting.

**C. Setting, rescheduling, or canceling future Board meetings.**

On a motion by Mr. Colonnetta, seconded by Mr. Moss, the Board unanimously voted to approve the proposed schedule for the calendar-year 2018 Board and committee meetings.

3. **Provide opportunity for public comment – David Kelly.**

Mr. Tom Rogers, representing the Austin Retired Teachers Association, addressed the Board regarding concerns of the future possibility of lowering the 8 percent earnings benchmark for the TRS fund.

Mr. Jay Thompson, representing the Texas Association of Life and Health Insurers, addressed the Board regarding the 403(b) proposed rules and expressed appreciation for the efforts of TRS staff in administering the related rule review.

4. **Receive an update on the TEAM Program – Brian Guthrie and Chet Henry.**

Mr. Guthrie reported that despite disruption and in some cases major damage to facilities from Hurricane Harvey, reporting entities for the most part were still able to get their September reports submitted to TRS on a timely basis. He said only one reporting entity was directly impacted by Harvey and unable to submit data on time. Mr. Guthrie announced that TRS was only ten days away from going live with TEAM Phase 1. He said the cutover process began on September 9, and Phase 1 was scheduled to go live on October 2, 2017. Mr. Guthrie discussed the go/no-go decision points leading up to October 2.

Mr. Ken Welch, in response to Mr. Kelly’s inquiry, stated that there were no amendments to the project budget, which was still within the original contract amount for the HPE/DXC contract.

5. **Receive a presentation from the TEAM Program Independent Program Assessment (IPA) Vendor – Michael Johnson.**

Mr. Michael Johnson provided an execution score from Bridgepoint’s independent view. He said there were two differences regarding scheduling and quality from the TRS TEAM Transparency report. He stated the strengths were the training classes, and communications with the reporting entities. Mr. Johnson noted scheduling concerns involving resources being pulled from Phase 2 activities to focus on Phase 1. As to quality control, he said they were still identifying defects.

6. **Discuss the Executive Director's report on the following – Brian Guthrie:**

   A. Administrative operational matters, including updates on the following: Executive Director’s goals, financial awareness project, audit, legal, staff services, investments, board administration, special projects, actuarial matters, and strategic planning.

   B. Board operational matters, including a review of draft agendas for upcoming meetings.
C. Event notices or reminders; holiday and other schedules of interest; board member, employee, or other individual recognitions; and expressions of thanks, congratulations, or condolences.

Mr. Guthrie provided the Board with general updates. Mr. Guthrie listed upcoming events for TRS and the Board. He then reviewed his goals and objectives for the upcoming fiscal year.

Mr. Guthrie then reviewed the proposed items for the next two upcoming Board meetings.

7. Receive the report of the Chief Benefit Officer, and consider the following related matters – Barbie Pearson:
   A. Consider approving the list of members qualified for retirement for March through May 2017 and June through August 2017.
   B. Consider approving the minutes of the March 22, 2017 and May 9, 2017 Medical Board meetings.

Ms. Pearson presented two items for the Board’s approval. The first one is the list of members qualified for benefits for March through May 2017 and June through August 2017.

Dr. Gibson moved, Mr. Corpus seconded, and the Board unanimously approved the list of members qualified for benefits for March through May 2017 and June through August 2017.

The second item Ms. Pearson presented for approval comprised the minutes of the March 22, 2017 and May 9, 2017 Medical Board meetings.

Mr. Corpus moved, Ms. Ramirez seconded, and the Board unanimously approved the minutes of the March 22, 2017 and May 9, 2017 Medical Board meetings.


Mr. Jase Auby provided a market report. He announced the fund has returned 12.9 percent over the past year and 8.9 percent over the past five years. Mr. Auby stated the first half of 2017 was characterized by slower than expected growth and inflation but that the market remained healthy and still continued to outperform. He provided a macroeconomic backdrop. He reviewed the normal business cycle. He discussed each of TRS asset classes. Mr. Auby concluded with a discussion regarding recessions. He said there will be a recession again at some point, and he described what the potential impact of a recession to the trust might be.


Mr. Mike Comstock presented the trust performance review on a year-to-date basis through June 30. He said over the last one-year period, there has been outperformance and in some cases significant outperformance in the underlying asset classes. Mr. McCormick discussed what drove the 160 basis points of outperformance for the one-year period. There was further discussion regarding benchmarking, including that related to risk parity.
Mr. Kelly announced without objection that the Board would next take up Agenda Item 12.

12. Receive an update on 403(b) product registration system – Rebecca Merrill.

Ms. Rebecca Merrill provided an update on the 403(b) product registration system. She demonstrated what the product registration system looked like via the website from a company’s vantage and from a member’s vantage point. Ms. Merrill stated that the system must be restructured and updated in order to make sure the new data is captured as a result of the proposed rule changes and to make it easier to interface. Ms. Merrill proposed that once the pending rules are adopted, staff would kick off the product registration update to be completed by December 1, 2017. She said IT believes the project will take about 6,500 hours to complete, the equivalent of two developers. She said that because all of TRS developers are understandably focused on TEAM and TRUST, contractors may be necessary. Ms. Merrill noted that 403(b) is not a drain on the trust fund, there is a separate reimbursement that occurs from 403(b) funds.

At 12:58 p.m. Mr. Kelly announced the Board would recess to in order to take up the noticed committee meetings.

The Board of Trustees of the Teacher Retirement System of Texas reconvened 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. The following board members were present:

David Kelly, Chair
Karen Charleston
Joe Colonnetta
David Corpus
John Elliott
Greg Gibson
Christopher Moss
Dolores Ramirez

Others present:
Brian Guthrie, TRS       Dina Arce
Ken Welch, TRS          Michael Clayton, SAO
Amy Barrett, TRS        Anca Pinchas, SAO
Carolina de Onis, TRS   Sabina Rahman-Garcia, Humana
Jerry Albright, TRS     Eddie Solis, AXA
Don Green, TRS          Ann Fickel, TCTA
Jase Auby, TRS
Katherine Farrell, TRS
Eileen O’Grady, TRS
Steve Huff, Reinhart Boerner Van Deuren

Mr. Kelly called the meeting to order at 10:20 a.m.
1. Call role of Board members.

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


No public comment was received.

11. Receive the Deputy Director’s report, including matters related to administrative, financial, and staff services operations – Ken Welch.

Mr. Welch provided an update as to what is going on operationally around the agency. He noted that over the past weekend of September 16-17, 2017, TRS performed the year-end close. He said this was the last year-end in the legacy system. Mr. Welch also stated this year-end close was of great importance because the data set would be migrated into TRUST.

Mr. Welch reported the 2017 fiscal year closed with a 9.2 percent increase in the number of people TRS saw in office counseling visits and an 8.5 percent increase in telephone counseling calls.

Mr. Welch provided an update on communications regarding the TRS-Care changes, for which educational mailings and mass communications have begun. He announced the Government Financial Officers Association (GFOA) recognized TRS’ 2016 Comprehensive Annual Financial Report (CAFR) submission with a distinguished budget presentation award. He also announced that, for 27th straight year, the 2016 CAFR was awarded the GFOA certificate of excellence.

13. Receive the report of the Investment Management Committee on its September 21, 2016, meeting - Committee Chair.

Mr. Colonnetta, Committee Chair, provided the following report of the Investment Management Committee:

The Investment Management Committee met on September 21, 2017. The committee approved the proposed minutes of the June 1, 2017 meeting. The first presentation was an overview of external public markets led by Dale West, Susanne Gealy and Brad Gilbert. Next there was a presentation by Michael Pia and J.B. Daumerie with a review of the public strategic partnership network. The final presentation was given by Jase Auby and Dale West with an update on the global equity best practices.

Mr. Kelly announced without objection that the Board would next take up Agenda Item 15.

15. Receive the report of the Policy Committee on its September 21, 2017 meeting and consider final proposed amendments to or adoption or repeal of the following TRS rules in Title 34, Part 3 of the Texas Administrative Code – Committee Chair.

A. § 23.9, relating to Communicating Information Electronically
B. § 25.10, relating to Student Employment
C. § 25.28, relating to Payroll Report
Mr. Corpus, Committee Chair, provided the following report of the Policy Committee:

The Policy Committee met on September 21, 2017. The committee approved the proposed minutes of the June 1, 2017 meeting. The committee conducted the required review of the Resolution Regarding Correction of Errors and Other Edits. There were no proposed amendments to the Resolution.

The committee approved the updates to the Policy Review Schedule as proposed by Staff.

The committee authorized public comment publication in the Texas Register of proposed rule amendments to Chapter 29 and 41 of TRS’ rules. Those rules will be brought back to the committee at a future meeting for recommendation to the Board and final adoption.

And finally, the committee approved recommending to the Board adoption of the new, amended, or repealed TRS rules within the following chapters: 23, 25, 31, 41, and 43 in Title 34, Part 3 of the Administrative Code.

Mr. Corpus then moved and the Board unanimously voted to adopt the proposed new, amended or repealed TRS rules listed on Board agenda item 15.
14. Receive the report of the Risk Management Committee on its September 22, 2016, meeting – Committee Chair.

Ms. Charleston, Committee Chair, provided the following report of the Risk Management Committee:

The Risk Management Committee met on September 21, 2017. The committee approved the proposed minutes of June 1, 2017 meeting. A presentation was given on the review of the investment risk report which was presented by Jase Auby and James Nield.

16. Receive the report of the Audit Committee on its September 22, 2017, meeting and consider related matters, including adoption of the Proposed Audit Plan for Fiscal Year 2018 – Committee Chair.

Mr. Moss, the Committee Chair, provided the following report of the Audit Committee:

The Audit Committee met at 8:00 a.m. on Friday, September 22, 2017 in the 5th Floor Boardroom. The State Auditor's Office staff presented the plan for the audit of TRS' comprehensive annual of the financial report for fiscal year 2017 and results of the audit of TRS' fiscal year 2016 employer pension liability allocation schedules. The chief compliance officer presented routine compliance reports.

Internal Audit staff, joined by the chief compliance officer, PWC external auditor, and chief operating officer for the investment management division presented the results of projects on TRS compliance testing, the Investment Management division, benefit services division, executive division, and reports on the internal audit quality assurance and improvement program self-assessment, follow-up on outstanding audit and consulting recommendations and various administrative reports.

The committee approved the recommendation to the Board of Trustees to approve the proposed audit plan for fiscal year 2018.

Mr. Moss then moved and the Board unanimously voted to approve the proposed audit plan for Fiscal Year 2018, as recommended by the Audit Committee.

17. Receive the report of the Compensation Committee on its September 21, 2017, meeting and consider related matters, including the annual adoption of the Performance Incentive Payment Plan and any proposed amendments – Committee Chair.

Ms. Ramirez, the Committee Chair, provided the following report of the Compensation Committee:

The Compensation Committee met on September 21, 2017. The committee adopted the proposed minutes of the September 22, 2016 meeting. The committee received a presentation on matters related to the current performance incentive pay plan for
investment staff from Sylvia Bell and Katy Hoffman. The committee recommended continuation and adoption of the performance incentive pay plan and amendments for the performance period beginning October 1, 2017.

Ms. Ramirez then moved for the Board to confirm the continuation and adoption of the investment performance incentive pay plan for the performance period beginning October 1, 2017, as recommended by the committee.

Mr. Colonnetta proposed a modification based upon the request for Internal Audit to review the plan. He said the chief audit executive had recommended the following to be added to addendum A and B: “The term executive include the general counsel is classified as a senior associate for the purpose of this Plan.”

Mr. Colonnetta moved, Ms. Ramirez seconded, and the Board unanimously voted to amend the proposed plan as discussed.

Mr. Kelly then took up Ms. Ramirez’s motion, as amended, and the Board unanimously voted to confirm the continuation and adoption of the investment performance incentive pay plan for the performance period beginning October 1, 2017 as recommended by the committee and amended by the Board.

Mr. Kelly announced without objection that the Board would next take up Agenda Item 19.

19. Review the report of the General Counsel on pending and contemplated litigation, including updates on litigation involving benefit-program contributions, retirement benefits, health-benefit programs and open records.

Ms. Carolina de Onis noted that it had been a banner quarter for class-action recoveries.

18. Consider personnel matters, including the appointment, employment, evaluation, compensation, performance, duties discipline or dismissal of the Executive Director, Chief Investment Officer, Chief Audit Executive or Investment Management Division Directors. – David Kelly.

Mr. Kelly announced that the board would go into executive session on agenda item 18 under Section 551.074 and 551.071 of the Government Code to discuss personnel matters and to consult with legal counsel as needed. At 10:45 a.m. the open session recessed.

After completing the executive session, Mr. Kelly announced that the Board was reconvened in open session at 12:14 p.m.

Mr. Corpus moved, Mr. Elliott seconded, and the Board voted unanimously to award the chief audit executive a salary increase of 4.66 percent with a one-time merit payment of $10,000.

Mr. Moss moved, Ms. Ramirez second and the Board unanimously voted to increase the executive director’s base salary by three percent.
20. Consult with the Board's attorney(s) in Executive Session on any item listed above on this meeting agenda as authorized by Section 551.071 of the Texas Open Meetings Act (Chapter 551 of the Texas Government Code). – David Kelly.

This item was not taken up.

At 12:16 p.m., Mr. Moss moved, Mr. Elliott seconded and the Board unanimously voted to adjourn.

APPROVED BY THE BOARD OF TRUSTEES OF THE TEACHER RETIREMENT SYSTEM OF TEXAS ON THE 27TH DAY OF OCTOBER, 2017

ATTESTED BY:

__________________________   _________________________
Katherine H. Farrell     Date
Secretary to the TRS Board of Trustees
<table>
<thead>
<tr>
<th>Calendar Year 2018 Dates</th>
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<tr>
<td>February 14-16, 2018 (Harlingen/McAllen Region)</td>
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<tr>
<td>April 19-20, 2018 (Quarterly Meeting)</td>
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<td><strong>June 14-15, 2018, June 21-22, 2018</strong> (Quarterly Meeting)</td>
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<td>July 27, 2018</td>
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<td>September 20-21, 2018 (Quarterly Meeting)</td>
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<td>October 19, 2018</td>
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<td>December 13-14, 2018 (Quarterly Meeting)</td>
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TAB 4
• General Updates.
• Interim Charges.
• Communications Outreach.
• Upcoming Board Agendas.
General Updates
Past Conferences and Meetings:

- October 6\(^{th}\): NIRS Visionary Circle Roundtable; Tucson, AZ.
- October 7-11\(^{th}\): NCTR Annual Convention; Tucson, AZ.
- October 23\(^{rd}\): Public Pension Financial Forum Conference; Albuquerque, NM

Upcoming Conferences and Meetings:

- November 29-30\(^{th}\): TRS SPN Summit; Austin, TX.
General Updates

NCTR
• New ED hired effective January 1, 2018.
• Strategic Planning underway.
• Appointed Secretary/Treasure for 2017-18.

NASRA
• New Chair of the Legislative and Resolutions Committee.
• Federal Issues we are monitoring (Tax Reform).
September 29, 2017 Benefits and HIB had an internal training day with our own Dr. Gibson providing the keynote for the day.
Interim Committee
Charges
• **House Appropriations:**
  – Study sustainability of TRS-Care and consider options for funding retired teacher health care, especially as it pertains to contributions being based on active employee payroll rather than the cost of health care. Monitor the implementation of H.B. 3976 (85R) and H.B. 30 (85(1)).

• **House Committee on Pensions:**
  – Review state’s oversite of pension systems and study the effectiveness of corrective mechanisms, including the Funding Soundness Restoration Plan and Pension Review Board Funding Guidelines. Make recommendations to enhance state oversight and to maintain or achieve soundness among local pension systems.
  – Evaluate the governance structures, including investment oversight of ERS, TRS and other systems. Identify best practices and make recommendations to strengthen oversight within the systems.
  – Review and evaluate health incentive programs within the group benefit programs at ERS and TRS. Identify best practices among similar programs and barriers to implementation. Make recommendations for achieving further savings through existing and/or new programs.
  – Monitor the agencies and programs under the Committee’s jurisdiction and oversee the implementation of relevant legislation passed by the 85th Legislature.

• **House Public Education:**
  – Review the charter school system in Texas. Consider the differences in charter and district contributions to TRS on behalf of their employees and make appropriate recommendations to support the retirement benefits of all public school teachers.

• **Senate Finance:**
  – Monitor Health Care Costs Across State Agencies- monitor coordination efforts among state agencies to improve health care costs and reduce costs pursuant to Article IX, Section 10.06 and Section 10.07.

• **Senate Health and Human Services:**
  – Compare alternative payment models and value-based payment arrangements with providers in Medicaid managed care, ERS and TRS and identify areas for cross-collaboration and coordination among these entities.
Communications Outreach
Health Care
Communications Outreach

42,482 Total Retirees

Capacity of Retiree Meetings by Region

- Central Texas: 13.63%
- Northeast/Gulf Coast: 17.05%
- North Texas: 23.45%
- South Texas: 13.46%
- West Texas: 9.10%
- Panhandle: 1.79%

TOTAL REACHED: 42,482
- In-person RSVP's + webinar registrants
- 14% Of total TRS-Care enrollment
- Increase of over the 2016 outreach campaign

INFORMATION SESSION WEBINARS
- 20 Webinars
- 2,059 Non-Medicare Attendees
- 3,304 Medicare Attendees
- = 5,363 Total Webinar Attendees
Communications Outreach

Lewisville, Texas – more than 450 participants in each of the two sessions.
Communications Outreach

TRS-Care Medicare Advantage
Intro Video
Upcoming Agendas
December 14-15, 2017

**Major Items Include:**
Pension Fund Valuation: including fiduciary and actuarial standards
Health Care Overviews (Including Actuarial Valuation for OPEB).
1st – 3rd Floor Redesign Update.
Guest Speaker: Cliff Asness, Founder/CEO of AQR

**Committees:**
Audit Committee.
Investment Management Committee.
Risk Management Committee.
Policy Committee.
February 14-16, 2018

Wednesday, February 14, 2018
*Return Assumption Set – final adoption  
*Review of DB/DC Report and Proposed Update  
*TEAM – Reset for Phase 2  
*Allocation of Resources - Post TEAM  
*Update on Call Center modernization  
*Update on Management Continuity  
*Business Process and Rule Review  

Thursday, February 15, 2018  
Investments Focused Day  
*State Street  
*IMD Strategic Goals  
*Market Update  
*Emerging Manager Annual Update  

Friday, February 16, 2018  
*Top 10 Innovations  
*Value Add of Audit  
*Fiduciary Training  
*Board Elections  
*TRS Strategic Communications
Legislative Implementation Matters
TEAM PROGRAM – Key Milestones Phase 1

10/02

Phase 1 Go Live

YOU MADE IT HAPPEN!

TRUST
PHASE 1 GO-LIVE 2017
Positive Comments To Date

• Refunds screens are very user-friendly and easy to use
• The TRUST Account Summary page has all the important information on one screen
• Easy single login to TRUST
• Documents appear in imaging almost immediately
• Staff commitment is incredible and cooperation is great
• There are challenges, but everything is fixable
Experiences To Date

• Initial problems that were addressed
  – Refunds
  – Reporting Entity reporting
  – Permissions
  – Printing
  – Health Insurance
Underway/Planned

Go Live

– TRS Alerts and Frequently Asked Questions (FAQs) page
– War Room and SWAT team
– Defect Releases
– Maintenance & Enhancements

Phase 2 Planning
## TEAM PROGRAM - Summary

### TEAM TRANSPARENCY

<table>
<thead>
<tr>
<th>September 1 – September 31, 2017</th>
<th>Days to P1 Go Live</th>
<th>September 2017</th>
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### Project Health

#### Schedule Trend
- [ ] April
- [ ] May
- [ ] June
- [ ] July
- [ ] August
- [ ] September

#### Cost Trend
- [ ] April
- [ ] May
- [ ] June
- [ ] July
- [ ] August
- [ ] September

#### Quality Trend
- [ ] April
- [ ] May
- [ ] June
- [ ] July
- [ ] August
- [ ] September

#### Individual Assessment Trend
- [ ] April
- [ ] May
- [ ] June
- [ ] July
- [ ] August
- [ ] September

### Estimated P2 DLR Sessions

- Remaining: 265
- Completed: 589
- Total: 854

### Milestones

### Other Key Updates/Notes

**Achievements**
- P1 – TRS completed end-user training sessions
- P1 – Cutover completed
- P1 – Went live on 10/02

**Key Goals Upcoming**
- 11/06/2017: Start TRUST DLR sessions back up

**Issues/Risks**
- Risk – P1 and P2 – Focus on P1 impacting P2 schedule
Near Term Goals and Progress

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<tr>
<th>Project Task</th>
<th>Jan</th>
<th>Feb</th>
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<td>4  P1 - Cut-over Dry Runs</td>
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<td>6  P1 - Execute Cut-over Plan</td>
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<td>10 P2 - CRM - Complete 1st 10 Workflows</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **On Schedule**
- **Schedule Risks**
- **Behind Schedule**
- **Not Started**
- **Completed**
- **As of Date for Report**
DXC Spin-off/Merger

- BDXC Technology (NYSE: DXC), has unanimously approved a plan to combine its U.S. Public Sector (USPS) business with Vencore Holding Corporation and KeyPoint Government Solutions to form a separate, independent publicly traded company to serve U.S. public sector clients.

- The formation of the new company is expected to be completed by the end of March 2018, subject to regulatory and other approvals.
QUESTIONS?
TAB 6
MEMORANDUM

TO: TRS Board of Trustees; Brian Guthrie, Executive Director

FROM: Amy Barrett, Chief Audit Executive

SUBJECT: Consideration of Independent Program Assessment Services Vendor Evaluation and Agreement Renewal

DATE: October 27, 2017

On January 3, 2013, TRS entered into an agreement with Bridgepoint Consulting, LLC (the “Vendor”) to provide Independent Program Assessment (IPA) Services for the TRS Enterprise Application Modernization (TEAM) Program. The objective of IPA services is to provide independent reporting and oversight to the TRS Board and Executive Director regarding critical risks related to the TEAM Program to enable informed decision making.

The original agreement award period is through December 31, 2017 with four additional one year renewal options. After discussions with the Vendor and TRS staff, we recommend continuation of the scope of work. Fees will be paid monthly based on the level of effort incurred multiplied by the rate per hour from the original agreement and are estimated to be as follows:

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>2018 Estimated Fees</th>
<th>Quantity</th>
<th>2018 Total Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarterly presentation to the Board of Trustees</td>
<td>$10,000</td>
<td>4</td>
<td>$40,000</td>
</tr>
<tr>
<td>Monthly Status Report to Executive Director</td>
<td>$20,000 - 25,000*</td>
<td>12</td>
<td>$240,000 - $300,000</td>
</tr>
<tr>
<td><strong>Total Estimated Fees</strong></td>
<td></td>
<td></td>
<td><strong>$280,000 - $340,000</strong></td>
</tr>
</tbody>
</table>

*Increases from $15,000 in the original agreement. Increase due to stage of overall TEAM Program and history of actual hours incurred during past 9 – 12 months.

Highlights of Vendor performance include the following:

- Meeting the terms of the scope of work including monitoring and reporting activities; gathering, analyzing, and reporting; and additional contractor services
- Requesting feedback periodically and making changes to their approach as a result
- Billing TRS timely and accurately, without dispute
- Availability for meetings and presentations, as requested
- Knowledge and expertise of staff regarding system implementation risks and controls

TRS staff request board consideration of the agreement renewal through December 31, 2018 as outlined.
FY 2017 YEAR END ANALYSIS

DON GREEN, CHIEF FINANCIAL OFFICER

BOARD OF TRUSTEES MEETING, OCTOBER 27, 2017
Recap of FY 2017 Budget by Fund

The total operating budget is $170,570,786 across all funds, including $199,973 for fund 403(b). Label amounts in millions.
Recap of FY 2017 Budget by Division

The Agency Support Division includes executive, human resources, communications, internal audit, strategic initiatives, risk management and legal. Label amounts in millions.

- **Agency Support**: $19.7, 12%
- **TEAM**: $27.9, 16%
- **Info Tech**: $18.3, 11%
- **Finance**: $16.1, 9%
- **IMD**: $67.1, 39%
- **Benefits**: $11.1, 7%
- **Healthcare**: $10.4, 6%

The Agency Support Division includes executive, human resources, communications, internal audit, strategic initiatives, risk management and legal. Label amounts in millions.
Recap of FY 2017 Budget by Expense

- **Operating costs:**
  - Software
  - Hardware
  - Postage
  - Printing
  - Equipment
  - Reference materials

- **Professional fees and services:**
  - Contractors
  - Consultants
  - Contractual services

- **Support:**
  - Rent
  - Bldg/equip maint
  - Utilities
  - Supplies

Label amounts in millions.
## Summary By Fund

<table>
<thead>
<tr>
<th>Fund</th>
<th>Budget</th>
<th>Exp/Enc</th>
<th>% Spent</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pension</td>
<td>107,845,483</td>
<td>96,068,912</td>
<td>89%</td>
<td>11,776,571</td>
</tr>
<tr>
<td>TEAM</td>
<td>27,120,717</td>
<td>25,842,911</td>
<td>95%</td>
<td>1,277,806</td>
</tr>
<tr>
<td>Commission Credits</td>
<td>24,408,296</td>
<td>18,861,945</td>
<td>77%</td>
<td>5,546,351</td>
</tr>
<tr>
<td>Care</td>
<td>6,986,996</td>
<td>6,112,873</td>
<td>87%</td>
<td>874,123</td>
</tr>
<tr>
<td>ActiveCare</td>
<td>4,009,321</td>
<td>3,250,241</td>
<td>81%</td>
<td>759,080</td>
</tr>
<tr>
<td>403(b)</td>
<td>199,973</td>
<td>183,361</td>
<td>92%</td>
<td>16,612</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>170,570,786</strong></td>
<td><strong>150,320,243</strong></td>
<td><strong>88%</strong></td>
<td><strong>20,250,543</strong></td>
</tr>
</tbody>
</table>
## Pension Fund

<table>
<thead>
<tr>
<th>Explanation of Balance</th>
<th>$11.8 Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries/Benefits</td>
<td>$7.6 M</td>
</tr>
<tr>
<td>Professional Fees/Services</td>
<td>$269 K</td>
</tr>
<tr>
<td>Travel</td>
<td>$647 K</td>
</tr>
<tr>
<td>Operating Costs</td>
<td>$599 K</td>
</tr>
<tr>
<td>Capital Budget</td>
<td>$318 K</td>
</tr>
<tr>
<td>Other Operating Expenses</td>
<td>$2.4 M</td>
</tr>
</tbody>
</table>

- **Salaries/Benefits**: $7.6 M, $4.4M for incentive compensation; $1.5M in benefits; $1.7M in salaries
- **Professional Fees/Services**: $269 K, $95K for financial services, $74K for IT services, $100K in other services
- **Travel**: $647 K, 42% of total travel budget
- **Operating Costs**: $599 K, $176K in utilities; $122K in supplies, $301K in facilities expenses
- **Capital Budget**: $318 K, $200K for pension legislation and $118K for mainframe
- **Other Operating Expenses**: $2.4 M, 2.2% of total budgeted amount; $1.1M for hardware and software, $393K in staff support costs, $276K in facilities, $265K for mailing costs, $363K in other costs
<table>
<thead>
<tr>
<th>Explanation of Balance</th>
<th>$1.3 Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries/Benefits</td>
<td>$26 K 76 total positions charged to TEAM in FY2017</td>
</tr>
<tr>
<td>Professional Fees/Services</td>
<td>$1.2 M $800K for the LOB and $400K for contractors and project management</td>
</tr>
<tr>
<td>Operating Costs</td>
<td>$116 K $60K for travel and training $56K for supplies and other support</td>
</tr>
</tbody>
</table>
## Commission Credits

<table>
<thead>
<tr>
<th>Explanation of Balance</th>
<th>$5.5 Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSB Partnership Agreement, Commission Sharing Arrangement (CSA), and Commission Recapture</td>
<td>$5.5 M</td>
</tr>
</tbody>
</table>

$5.5M difference between budget and actual spent is related to contractor staffing and data & systems expenses.

$1.3M is related to SSB partnership agreement, $3.8M is related to CSA and $386K is related to Commission Recapture.

Any unspent revenue for the SSB partnership agreement will carry forward to subsequent fiscal years.
<table>
<thead>
<tr>
<th>Explanation of Balance</th>
<th>$1.7 Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRS Care Administrative Operations</td>
<td>$874 K</td>
</tr>
<tr>
<td></td>
<td>$231K for salary and benefits</td>
</tr>
<tr>
<td></td>
<td>$643K for consulting services and</td>
</tr>
<tr>
<td></td>
<td>other support costs</td>
</tr>
<tr>
<td>ActiveCare Administrative Operations</td>
<td>$759 K</td>
</tr>
<tr>
<td></td>
<td>$174K for salary and benefits</td>
</tr>
<tr>
<td></td>
<td>$585K for consulting services and</td>
</tr>
<tr>
<td></td>
<td>other support costs</td>
</tr>
<tr>
<td>403(b) Certification Program Administrative Operations</td>
<td>$16 K</td>
</tr>
<tr>
<td></td>
<td>$9K for salary and benefits</td>
</tr>
<tr>
<td></td>
<td>$7K for consulting services</td>
</tr>
</tbody>
</table>
TAB 8
RESOLUTION
DESIGNATING PERSONS AUTHORIZED TO SIGN TRS VOUCHERS

October 27, 2017

WHEREAS, In accordance with section 825.104 of the Texas Government Code, the Board of Trustees (the "Board") of the Teacher Retirement System of Texas ("TRS") has previously granted authority to certain persons to approve and sign vouchers for payment from accounts of TRS; and

WHEREAS, The Board desires to re-designate those persons to whom this authority has been granted and to add Richard Scheel as Director of Accounting (Controller) as an additional authorized designee; now, therefore, be it

RESOLVED, That the Board designates the following persons to approve and sign vouchers for payment from accounts of TRS from and after October 27, 2017, and until the designated person separates from employment with TRS, is no longer employed in any capacity for which authority is granted under this resolution, or is not re-designated by the Board, whichever occurs first:

Brian K. Guthrie Executive Director
Ken Welch Deputy Director
Don Green Chief Financial Officer
Janie Duarte Director of Administrative Operations
Richard Scheel Director of Accounting (Controller)
Scot Leith Director of Investment Accounting
Cindy Haley Senior Financial Business Analyst
Arlene Caballero Employee Payroll & Benefits Manager
Lauren Burroughs Team Leader of Investment Accounting

ATTESTED:

Signed: ________________________  Date: October 27, 2017
R. David Kelly, Board Chairman

Signed: ________________________  Date: October 27, 2017
Brian K. Guthrie, Executive Director
E-RECORDS PROJECT MANAGEMENT

DON GREEN, CHIEF FINANCIAL OFFICER

BOARD OF TRUSTEES MEETING, OCTOBER 27, 2017
Electronic records are **Growing**

It’s time to pay attention to our electronic file storage!

In the last 3 years

**TRS storage of electronic files is up**

175%

In the last 3 years

**TRS storage of paper documents is down**

45%
Electronic records are Growing FAST!

Electronic Storage / Deletion (GB)

- Total Storage
- Total Deleted

- May 13: 6,191 GB
- May 14: 8,010 GB
- May 15: 11,006 GB
- Feb 16: 14,537 GB
- Feb 17: 16,808 GB

Electronic records are growing rapidly!
E-Records Project - Goals

Collaborative Project – Contractor (Access Sciences), TRS RM Staff, & Agency Staff

• Create centralized repositories & standard processes to improve efficiency of information management and reduce cost
• Maximize use of technology tools (SharePoint/harmon.ie)
  – Storage and access (SharePoint)
  – Collaboration and communication (harmon.ie)
• Automated management of electronic records & information
  – Retention and defensible deletion
E-Records Project Partners

Executive Sponsor
Don Green

PMO
Tom Fry

CFT Division Representatives
Ronnie Bounds
Jay LeBlanc
Jan Engler
Frances Torres
Janie Duarte
Monica Bernal
Barbara Forssell

Tech Partners
Jim Ross (CFT Rep)
Rees Coombe
Lance Rayborn
Kyle Weigum
Teresa Granger
Simon Key

HR/Office of Change Management
Stephanie Scott-Rivera (CFT Rep)
Stacy Sakoulas (CFT Rep)
Mikki Teneyuca
E-Records Project - Timeline

- **Assessment**: Jan 17 - Apr 17, Complete
- **Workshops**: Jan 17 - Mar 17, Complete
- **Analysis**: Apr 17 – May 17, Complete
- **Solution Design**: May 17 – Aug 17, Complete
- **Build & Deploy**: Sep 17 – Jun 18, Just Started
Status as of 10/27/17

**Status – Approximately 1/3 complete**

- Assessment - Done
- Key Findings & Recommendations – In Review
- SharePoint Sites – Just Beginning w/Pilot (Strategy Office & Communications)
- Retention Schedule - Revised & in review
Accomplishments

• Content catalogs
  • Outlines for shared repositories (SharePoint Sites)
  • File plans
• Beginnings of an Agency-wide taxonomy (classification)
• Key findings and recommendations
• Revised Retention “Big Bucket” schedule
Findings & Recommendations

Lost Time
- Use SharePoint to improve access and search
- Use SharePoint functionality to improve processes

Multiple Versions
- Collaborate with SharePoint with versioning
- Create SharePoint Locations specific to processes
- Store email records and information in SharePoint

Business Continuity
- Automate records classification
- Automate records management
- Use links rather than attachments (control access)

Make it Easy to Find

Work in One Location

Lack of Control

Automate Compliance
Key Areas of Concern from RM Assessment

- Lost Time: 27%
- Lack of Control: 16%
- Multiple Versions: 16%
- Business Continuity: 16%
- More than One Area: 16%
Key Findings: Storage

Outlook
Files: 30,225,479
Folders: 139,239
Size: 5.075 tb

G Drive
Files: 3,690,355
Folders: 586,948
Size: 1.551 tb

S Drive
Files: 6,239,674
Folder count (3/17): 275,016
Potential duplicates (3/17): 1,041,730

Single source of truth?

August 2017 Agency Wide Data
## Key Findings: Storage (cont.)

### What goes where?

<table>
<thead>
<tr>
<th>Used for...</th>
<th>SharePoint</th>
<th>S:\ Drive</th>
<th>Egnyte</th>
<th>Secure FTP</th>
<th>G:\ Drive</th>
<th>Outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Examples</strong></td>
<td>Work products, invoices, reports, strategy documents, meeting minutes</td>
<td>Records older than five years that need to be retained but have not been accessed in five years</td>
<td>Gov’t relations collaborations on files with TRS staff while at the Capitol; TRS collaborates on contracts with vendor</td>
<td>Large batch files used by non-TFRS systems or needing to be shared with outside vendors</td>
<td>Personal photos or notes</td>
<td>Transient emails, general administrative communication</td>
</tr>
<tr>
<td><strong>Collaboration features</strong></td>
<td>Permission-based access, versioning, co-authoring, check in/out, workflows</td>
<td>Permission-based access, versioning, check in/out</td>
<td>Permission-based access, versioning, check in/out</td>
<td>Provide access to files and remove files from non-TFRS entities</td>
<td>None</td>
<td>Group mailboxes, distribution lists</td>
</tr>
<tr>
<td><strong>Search features</strong></td>
<td>Full search, site search, refiners</td>
<td>Windows Search</td>
<td>Windows Search</td>
<td>Limited</td>
<td>Windows Search</td>
<td>Outlook Search</td>
</tr>
<tr>
<td><strong>Other notes</strong></td>
<td>Records and non-records</td>
<td>Archived and special format records, and non-records</td>
<td>Convenience copies</td>
<td>Convenience copies</td>
<td>Non-records</td>
<td>Non-records</td>
</tr>
</tbody>
</table>
Next Steps

SharePoint Implementation Phase

Design  Build  Test  Migrate  Train  Deploy

**Workgroup Implementations**
- Strategy Office: August 2017 – October 2017
- Communications: August 2017 – October 2017
- Executive Director: September 2017 – November 2017
- Investment Accounting: October 2017 – December 2017
- Internal Audit: October 2017 – December 2017
- Governmental Relations: October 2017 – November 2017
# E-Records Project Implementation Roadmap

<table>
<thead>
<tr>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic Initiatives</strong></td>
<td><strong>Lessons Learned</strong></td>
<td><strong>Records Management</strong></td>
<td><strong>Investment Management</strong></td>
<td><strong>ISS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kick-Off</td>
<td>Migration Planning</td>
<td>Design/Build, Implement, Train</td>
<td>Kick-Off</td>
<td>Migration Planning</td>
<td>Design/Build, Implement, Train</td>
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<td>Kick-Off</td>
<td>Migration Planning</td>
<td>Design/Build, Implement, Train</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Executive Director</th>
<th>Strategic Partnerships</th>
<th>Governmental Relations</th>
<th><strong>Human Resources</strong></th>
<th><strong>Investment Operations and Info Systems</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kick-Off</td>
<td>Migration Planning</td>
<td>Design/Build, Implement, Train</td>
<td>Kick-Off</td>
<td>Migration Planning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Internal Audit</th>
<th><strong>Trading and Investment Performance</strong></th>
<th><strong>IT Management and Administration</strong></th>
<th><strong>Information Security</strong></th>
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</thead>
<tbody>
<tr>
<td>Kick-Off</td>
<td>Migration Planning</td>
<td>Design/Build, Implement, Train</td>
<td>Kick-Off</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Investment Accounting</th>
<th>CFO, Fin Rep, Budget, AP, Payroll</th>
<th><strong>Client Services</strong></th>
<th><strong>Benefit Services (all teams)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kick-Off</td>
<td>Migration Planning</td>
<td>Design/Build, Implement, Train</td>
<td>Kick-Off</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Procurement and Contracts</th>
<th><strong>External and Internal Public Markets</strong></th>
<th><strong>Staff Services</strong></th>
<th><strong>Asset Allocation and Risk</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kick-Off</td>
<td>Migration Planning</td>
<td>Design/Build, Implement, Train</td>
<td>Kick-Off</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Communications</strong></th>
<th><strong>Professional Development</strong></th>
<th><strong>External Private Markets</strong></th>
<th><strong>HB (all teams)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kick-Off</td>
<td>Migration Planning</td>
<td>Design/Build, Implement, Train</td>
<td>Kick-Off</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>PMO</strong></th>
<th><strong>Enterprise Architecture</strong></th>
<th><strong>Legal and Compliance</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kick-Off</td>
<td>Migration Planning</td>
<td>Design/Build, Implement, Train</td>
</tr>
</tbody>
</table>

---

**Kick-Off:** Meet with department managers one month prior to implementation period – 1 hour

**Migration Planning:** SME(s) work with Records Management to identify content to be migrated to SharePoint – 4 hours

**Design/Build, Implement, Train:**
- Week 1: SMEs participate in design session – 2 hours
- Week 2: SMEs review design in SharePoint and provide feedback – 2 hours (may only need 1 hour or may be split into 2 – 1-hour sessions)
- Week 3: SMEs review design in SharePoint and provide feedback – 2 hours (may only need 1 hour or may be split into 2 – 1-hour sessions)
- Week 3 or 4: SMEs perform user acceptance testing (UAT) – 2 hours
- Weeks 3–4: SME(s) finalize migration mapping – 2–4 hours
- Week 3, 4, or 5:
  - Workgroup attends Site Overview – 1 hour
  - Workgroup attends Training – 1 hour (several training sessions may be needed to accommodate larger workgroups)
After the E-Records Project

- Common SharePoint locations for improved search and collaboration
- Improve records and information availability with SharePoint
- Improved access for management & staff across repositories
- Continuous Improvement Phase:
  - Streamline processes with SharePoint workflows
  - Site revisions
  - Refined roles and responsibilities
  - Expedited Purge and Exiting Employees processes
- File plans to identify and manage records locations
Proposed Rule Amendments

- Restructure chapter.
- Clarify company and product structures.
- Add needed terminology.

Non-Substantive

- Adjust allowable maximum fees, costs, and penalties.
- Require certification application disclosures.
- Formalize the closed and restricted product lists.

Substantive
<table>
<thead>
<tr>
<th>Category</th>
<th>Current Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Surrender Penalty</strong></td>
<td>Max 10 years (12 years with disclosure) &amp; 10% penalty declining annually</td>
</tr>
<tr>
<td><strong>Front-/Back-End Sales Load</strong></td>
<td>6% Combined</td>
</tr>
<tr>
<td><strong>Annual Asset-Based</strong></td>
<td>2.75%</td>
</tr>
<tr>
<td><strong>Effective Date</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Company Participation Fees</strong></td>
<td>$3,000 five-year company certification fee.</td>
</tr>
<tr>
<td><strong>Suspension &amp; Revocation</strong></td>
<td>Contested Case Proceeding Under Administrative Procedures Act</td>
</tr>
<tr>
<td><strong>Grandfathering</strong></td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>October 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Surrender Penalty</strong></td>
<td>Current Rule</td>
</tr>
<tr>
<td><strong>Front-/Back-End Sales Load</strong></td>
<td>Eliminate</td>
</tr>
<tr>
<td><strong>Annual Asset-Based</strong></td>
<td>Separate maximum asset-based fee caps for variable annuities and mutual funds. Maximum allow fee caps are tiered by asset class. Allowable fees range from 1.90% to 2.70% for variable annuity products and 1.65% to 2.45% for non-annuity products.</td>
</tr>
<tr>
<td><strong>Effective Date</strong></td>
<td>All except amended maximum allowable fees, costs, &amp; penalties – November 2017.</td>
</tr>
<tr>
<td><strong>Company Participation Fees</strong></td>
<td>$5,000 five-year company certification fee.</td>
</tr>
<tr>
<td><strong>Suspension &amp; Revocation</strong></td>
<td>Current Rule</td>
</tr>
<tr>
<td><strong>Grandfathering</strong></td>
<td>Contributions under any existing salary reduction agreements for existing registered products may continue, be increased or decreased, or re-executed as needed.</td>
</tr>
</tbody>
</table>
Major Provisions

- Fees, Costs, and Penalties
- Timing
- Certification and Registration Fees
- Other Considerations
### Fees, Costs, & Penalties

<table>
<thead>
<tr>
<th>Category</th>
<th>Current Rule</th>
<th>Proposed in June 2017</th>
<th>Proposed in September 2017</th>
<th>Proposed for Final Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Allowable Surrender Penalty</td>
<td>Max 10 years (12 years with disclosure) &amp; 10% penalty declining annually</td>
<td>Max 5 years &amp; 5.0% penalty</td>
<td>Current Rule</td>
<td>Current Rule</td>
</tr>
<tr>
<td>Maximum Allowable Front-/Back-End Sales Load</td>
<td>6% Combined</td>
<td>Eliminate</td>
<td>Eliminate</td>
<td>Eliminate</td>
</tr>
<tr>
<td>Maximum Allowable Loan Initiation Fee</td>
<td>$50</td>
<td>$25</td>
<td>$25</td>
<td>$25</td>
</tr>
<tr>
<td>Maximum Allowable Annual Fixed Dollar</td>
<td>$50</td>
<td>$50</td>
<td>$60</td>
<td>$60</td>
</tr>
<tr>
<td>Maximum Allowable Annual Asset-Based</td>
<td>2.75%</td>
<td>Two separate maximum asset-based fee caps:</td>
<td>Separate maximum asset-based fee caps tiered by asset class for variable annuities and mutual funds.</td>
<td>Separate maximum asset-based fee caps tiered by asset class for variable annuities and mutual funds. Renamed an asset class.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Maximum annual expense ratio tiered by asset class; and</td>
<td>• Balanced to Asset Allocation</td>
<td>• Balanced to Asset Allocation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Maximum annual product administration fee of 1.25%</td>
<td>Added additional asset classes.</td>
<td>Added additional asset classes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Real Estate</td>
<td>• Real Estate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Other</td>
<td>• Other</td>
</tr>
<tr>
<td>Other &amp; Optional Fees</td>
<td>Allowable: No Capped</td>
<td>Allowable: Optional Capped</td>
<td>Allowable: Optional Capped</td>
<td>Allowable: Optional Capped</td>
</tr>
</tbody>
</table>
Fees, Costs, & Penalties

- Used the Dollar Weighted Expense Ratio by Asset Class from 12/31/15 Morningstar Data plus either:
  - 1.75% for administrative expenses for variable annuity products and investment options; or
  - 1.50% for administrative expenses for non-annuity products and investment options.

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Maximum Annual Asset-Based Fee Variable Annuity</th>
<th>Maximum Annual Asset-Based Fee Non-Annuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Money Market</td>
<td>1.90%</td>
<td>1.65%</td>
</tr>
<tr>
<td>Diversified Bond</td>
<td>2.25%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Asset Allocation</td>
<td>2.25%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Large Cap U.S. Equity</td>
<td>2.25%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Small/Mid Cap U.S. Equity</td>
<td>2.45%</td>
<td>2.20%</td>
</tr>
<tr>
<td>International Equity</td>
<td>2.55%</td>
<td>2.30%</td>
</tr>
<tr>
<td>Global Equity</td>
<td>2.55%</td>
<td>2.30%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>2.60%</td>
<td>2.35%</td>
</tr>
<tr>
<td>Other</td>
<td>2.70%</td>
<td>2.45%</td>
</tr>
</tbody>
</table>
## Fee, Costs, & Penalties

<table>
<thead>
<tr>
<th>Fee Type</th>
<th>Current Rule</th>
<th>Proposed in June 2017</th>
<th>Proposed in September 2017</th>
<th>Proposed for Final Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>• Allow companies to register “other fees” that are transactional. &lt;br&gt;• Other fees are not defined.</td>
<td>• Same as current practice. &lt;br&gt;• Define other fees as transactional in nature, including: redemption, short-term trading, closeout, excessive trading, and one-time.</td>
<td>• Same as current practice. &lt;br&gt;• Define other fees as transactional in nature, including: redemption, short-term trading, closeout, excessive trading, and one-time.</td>
<td>• Same as current practice. &lt;br&gt;• Define other fees as transactional in nature, including: redemption, short-term trading, closeout, excessive trading, and one-time.</td>
</tr>
<tr>
<td>Optional</td>
<td>• Allow companies to register “optional fees” that exceed the annual asset-based fee cap. &lt;br&gt;• Companies must have controls in place to ensure that participants are not charged more than the maximum annual asset-based fee. &lt;br&gt;• Report fees in the PRS (e.g. investment advisor and enhanced rider)</td>
<td>• Companies may only register “optional fees” that are under the annual asset-based fee cap. &lt;br&gt;• No longer necessary. &lt;br&gt;• Same as current practice.</td>
<td>• Companies may only register “optional fees” that are under the annual asset-based fee cap. &lt;br&gt;• No longer necessary. &lt;br&gt;• Same as current practice.</td>
<td>• Companies may only register “optional fees” that are under the annual asset-based fee cap. &lt;br&gt;• No longer necessary. &lt;br&gt;• Same as current practice.</td>
</tr>
</tbody>
</table>
Major Provisions

- Fees, Costs, and Penalties
- Timing
- Certification and Registration Fees
- Other Considerations
- Delayed implementation of amended fee caps to allow legislative input and to afford time needed to rebuild the Product Registration System.

<table>
<thead>
<tr>
<th>Provision</th>
<th>Proposed in June 2017</th>
<th>Proposed in September 2017</th>
<th>Proposed for Final Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Other</td>
<td>November 30, 2017</td>
<td>November 30, 2017</td>
<td>November 30, 2017</td>
</tr>
<tr>
<td>Fee Caps</td>
<td>April 1, 2018</td>
<td>October 1, 2018</td>
<td>October 1, 2019</td>
</tr>
</tbody>
</table>
Major Provisions

- Fees, Costs, and Penalties
- Timing
- Certification and Registration Fees
- Additional Clarifications
## Certification and Registration Fees

- FY 2018 Beginning balance - $271,000.
- Average annual operating expense for FY 13-19 - $85,000.
- Estimated cost for the Product Registration Rebuild - $500,000.

<table>
<thead>
<tr>
<th></th>
<th>Three Year Estimation of Certification and Registration Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2018</td>
<td>$451,000</td>
</tr>
<tr>
<td>FY 2019</td>
<td>$90,000</td>
</tr>
<tr>
<td>FY 2020</td>
<td>$115,000</td>
</tr>
</tbody>
</table>
Major Provisions

- Fees, Costs, and Penalties
- Timing
- Certification and Registration Fees
- Additional Clarifications
Grandfathering

• Clarified with the addition of 53.3 (f)

(f) If a TRS registered product or investment option that was registered prior to October 1, 2019, is the subject of a salary reduction agreement that was signed before November 16, 2019, and does not exceed the fee limitations of subsections (a)(1) through (a)(4) and (e) of this section, then on or after November 16, 2019, an employee may:

(1) continue to make contributions under the existing salary reduction agreement;

(2) increase or decrease the amount of contributions under the existing salary reduction agreement; and

(3) execute a revised or updated salary reduction agreement.
Suspension & Revocation

• Clarified that suspension and revocation occur under Contested Case Procedures of APA.

§53.14. Suspension or Revocation of Certification

(b) A proceeding to revoke or suspend is a contested case proceeding under Chapter 2001, Government Code.
Looking Ahead

October 27, 2017
Board Adopts Final Rules

November 2017
Final Rules—Other Than Amended Fee Caps—Become Effective

January 2018 – September 2019
Product Registration System Rebuild

January – May, 2019
Regular Legislative Session

October 1, 2019
Amended Fee Caps Become Effective

October 1 – November 15, 2019
First Registration Period in Rebuilt PRS

November 16, 2019
New Product List Goes Live
Experience Study Overview
Rebecca Merrill, Chief Strategy Officer
Overview

• Objective
• Valuation
  ➢ Purpose
  ➢ Timing
  ➢ Elements
• Experience Study
  ➢ Purpose
  ➢ Timing
  ➢ Assumptions
  ➢ Impact
  ➢ Requirements
  ➢ 2015 Assumption Set Changes
Objective

- Review valuation and assumption terminology and elements in advance of the valuation presentation in December, the experience study, and the assumption set decision in February.
• Primary purpose of the valuation report:
  ➢ Determine the adequacy of current contribution rates through measuring the resulting funding period.
  ➢ Describe the current financial condition of TRS pension trust fund.
  ➢ Analyze changes in the trust’s condition.
Valuation Timing

- Prepared annually, as of August 31 of each year, the last day of the fiscal year.
- Presented at the December Board meeting.
- Valuation is not adopted by the Board. It is an item reported to the Board by the TRS pension actuary.
Valuation Elements

**Actuarial Value of Assets**

- Market value of assets that is smoothed (recognize 20% each year) to lessen the impact of year-to-year fluctuations in market rates of return.

**Actuarial Present Value of Benefits**

- Present value of benefits presently being paid + the present value of benefits payable in the future to active and inactive members.
# Valuation Elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unfunded Actuarial Accrued Liability (UAAL)</strong></td>
<td>$36.6M*</td>
<td>$36.6M* is the actuarial present value of benefits less the actuarial value of assets.</td>
</tr>
<tr>
<td><strong>Funding Period</strong></td>
<td>34.3 years*</td>
<td>34.3 years* is the period of time necessary to amortize the UAAL.</td>
</tr>
<tr>
<td><strong>Funded Ratio</strong></td>
<td>79.5%*</td>
<td>79.5%* is the ratio of actuarial assets to actuarial accrued liability.</td>
</tr>
<tr>
<td><strong>Normal Cost</strong></td>
<td>10.05%*</td>
<td>10.05%* is the average cost of benefits for newly hired participants.</td>
</tr>
</tbody>
</table>

*As of the February 28, 2017 valuation*
• Purpose of the experience study is to evaluate the accuracy of the assumptions.
  ➢ Economic
  ➢ Demographic

• Assumptions are not static; they should occasionally change to reflect:
  ➢ New information and changing knowledge.
  ➢ Mortality changes.
  ➢ Changing patterns of retirements, terminations, etc.
  ➢ Implementation of improved technology and processes.

• Analysis will address these questions for each assumption:
  ➢ What was the plan’s actual experience?
  ➢ How does that compare with current assumptions?
  ➢ Is a change warranted?

Source: GRS Experience Study Presentation, September 24, 2015.
• Why develop assumptions?
  - Assumptions help us anticipate / understand each element of the benefits equation.

  \[ Contributions + Investments = Benefits \]

  - Statutory requirements.
  - Used by the actuary to calculate the valuation.
  - Fiduciary duty – Intersection of assumptions and fiduciary duty discussion in December.
Texas Government Code Section 825.206:

(d) Each actuarial experience study must include a review of all actuarial assumptions in light of relevant experience, important trends, and economic projections. Interrelated actuarial assumptions shall be reviewed carefully to ensure that adjustments in one assumption are reflected appropriately in related assumptions.

(e) Each actuarial valuation must include a detailed analysis comparing experience factors to their actuarial assumptions. The analysis shall be developed and reported to identify significant variations in actual experience from what was assumed. A material variation should be the focus of an actuarial experience study.
Texas Government Code Section 825.206:

(b) At least once every five years the actuary, on authorization of the board of trustees, shall:
(1) investigate the mortality, service, and compensation experience of the members and beneficiaries of the retirement system;
(2) on the basis of the investigation made under Subdivision (1), recommend to the board of trustees tables and rates that are required; and
(3) on the basis of tables and rates adopted by the board of trustees under Section 825.105, evaluate the assets and liabilities of the retirement system.
Experience Study Timing

• Last experience study was completed in September 2015 and included TRS’ experience for the previous four-year period.
  - FY 2011
  - FY 2012
  - FY 2013
  - FY 2014

• Upcoming experience study will be completed in February 2018, a year earlier than statutorily required, and include TRS’ experience for the previous three-year period.
  - FY 2015
  - FY 2016
  - FY 2017

• When conducting the experience study, the actuary will use between three and twenty years of data, depending on the assumption being studied. For example, 20 years of data will be used when analyzing payroll/population growth, whereas 3 years of data will be used for post-retirement mortality.
Experience Study Assumptions

**ECONOMIC**
- Investment Return Rate*
- Wage Growth*
- Payroll Growth Rate*
- Cost of Living Increases
- Inflation

**DEMOGRAPHIC**
- Termination & Retirement
- Mortality
- Disability

*The inflation assumption is incorporated into these economic assumptions.*
Major Benefit Equation Assumptions

Contributions + Investments = Benefits

**Contributions**
- Contribution Rates
- Payroll Growth*

**Investments**
- Inflation Assumption
- Investment Return Rate*

**Benefits**
- Wage Growth*
- Termination & Retirement
- Mortality Rates

*The inflation assumption is incorporated into these economic assumptions.*
Experience Study Impact

• The true cost of benefits is not affected by the actuarial assumptions.
  ➢ The true cost is determined by actual participant behavior (termination, retirement), plan provisions (benefit structure), actual investment returns.
  ➢ Conduct an experience study to determine if actual behavior, plan provisions, and investment returns have matched assumptions. Adjust assumptions accordingly, if needed.
• Incorrect Assumptions can lead to poor decisions and poor outcomes.
  ➢ If a plan objective is to fund levelly over an active career, and assumptions suggest the cost is 10% per year, but the true cost is 14%, then losses and unfunded liabilities will develop.
  ➢ Plans cannot “out-assume” the true cost of benefits.
  ➢ Important for plans to update regularly and re-chart the course.

• Negative outcomes can result from not only overly optimistic but also overly conservative assumptions.
  ➢ Overly conservative assumptions would pull resources to the System and away from other alternatives or force unnecessary reductions in benefits.

Source: GRS Experience Study Presentation, September 24, 2015.
Economic Assumption Requirements

- Must represent an estimate of future experience and observation of market data.
- May not have significant bias (i.e. cannot be significantly optimistic or pessimistic).
- Must be appropriate for the purpose of the measurement (e.g. Relying only on short-term expected returns to develop a long-term assumption would be inappropriate).
- Must take into account historical and current economic data that is relevant as of the measurement date.

Actuarial Standards of Practice No. 27
• Actuary must determine in the study that:
  ➢ He/she believes the recommended set of actuarial assumptions presents an accurate portrayal of TRS’ financial condition and should reduce the magnitude of future experience gains and losses.
  ➢ The study was conducted in accordance with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Source: GRS Experience Study Presentation, September 24, 2015.
## 2015 Major Assumption Set Changes

<table>
<thead>
<tr>
<th>Assumption Prior to 2015 Experience Study</th>
<th>Current Assumption Set</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Investment Return</strong></td>
<td>8%</td>
</tr>
<tr>
<td><strong>Administrative Expense</strong></td>
<td>Not explicit. Netted against investment returns</td>
</tr>
<tr>
<td><strong>Mortality</strong></td>
<td>Static. Assume same improvement in life expectancy across the population, reassess amount of margin periodically.</td>
</tr>
<tr>
<td><strong>Inflation Assumption</strong></td>
<td>3.0%</td>
</tr>
<tr>
<td><strong>Real Wage Growth</strong></td>
<td>4.25%</td>
</tr>
<tr>
<td><strong>Payroll Growth</strong></td>
<td>3.50%</td>
</tr>
<tr>
<td><strong>Normal Cost</strong></td>
<td>9.91 + .12 = 10.03%</td>
</tr>
</tbody>
</table>