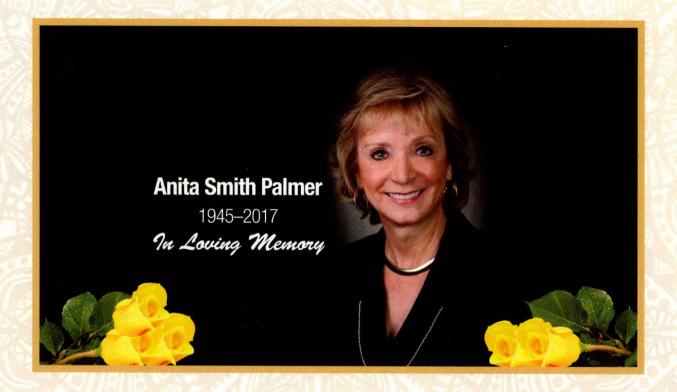
# **CAFR 2017** Comprehensive Annual Financial Report



Anita Smith Palmer "The Storm," 2012

A Component Unit of the State of Texas Fiscal Year Ended August 31, 2017



From TRS, with fondness and gratitude, we dedicate the FY 2017 TRS Comprehensive Annual Financial Report to former TRS Trustee, Anita Smith Palmer, featuring her beautiful artwork.

Anita Smith Palmer of Jacksboro represented retired Texas teachers as a TRS trustee from September 2011 until her death in January of 2017. She was a community volunteer and retired educator with 30 years teaching and administrative experience, including 12 years of service in the Wichita Falls ISD. Anita was also a published author and a truly gifted artist. She was a Special Selected Member of Women Artists of the West, the National Association of Oil and Acrylic Painters, and the American Association of Equine Artists. Anita served as director of the Faith Community Hospital Foundation of Jacksboro and was an active member of The Parish of Jacksboro. Anita was an honorary life member of the National Parent Teacher Association, past district president of the Texas Retired Teachers Association (TRTA), and a former member of TRTA's State Retirement Education Committee. Anita held eight state teaching certifications and served as an adjunct professor at Midwestern State University. She earned bachelor's and master's degrees in education from Southwestern Oklahoma State University.



## **TEACHER RETIREMENT SYSTEM OF TEXAS**

## **COMPREHENSIVE ANNUAL FINANCIAL REPORT**

A Component Unit of the State of Texas

FISCAL YEAR ENDED August 31, 2017

Prepared by Teacher Retirement System of Texas 1000 Red River Street Austin, Texas 78701-2698 1-800-223-8778

> Brian K. Guthrie Executive Director www.trs.texas.gov

## Table of Contents

#### **INTRODUCTORY SECTION**

-

Board of Trustees
Professional Awards4
Letter of Transmittal
Organization Chart
Staff and Advisors
Membership12
Communications14
FINANCIAL SECTION
Independent Auditor's Report
Management's Discussion and Analysis25
Basic Financial Statements
Exhibit I - Statement of Fiduciary Net Position
Exhibit II - Statement of Changes in Fiduciary Net Position
Exhibit III - Statement of Net Position - Proprietary Funds
Exhibit IV - Statement of Revenues, Expenses and Changes in
Net Position - Proprietary Funds
Exhibit V - Statement of Cash Flows - Proprietary Funds
Notes to the Financial Statements
Required Supplementary Information
Pension Trust Fund
Schedule of Changes in the Employers' Net Pension Liability and Related Ratios
Schedule of Employer and Non-Employer Contributing Entity Actuarially Determined
Contributions (ADC)
Schedule of Investment Returns
TRS-Care
Schedule of Changes in the Employers' Net OPEB Liability and Related Ratios
Supporting Schedules
Exhibit A - Statement of Changes in Assets and Liabilities - Agency Funds
Schedule 1 - Comparative Schedule of Changes in Account Balance - Pension Trust Fund
Interest Account102
Member Savings Account103
State Contribution Account104
Retired Reserve Account105
Deferred Retirement Option Account106
Expense Account
Schedule 2 - Schedule of Administrative and Investing Activity Expenses - All Funds
Schedule 3 - Schedule of Professional and Consulting Fees - All Funds

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2017 Comprehensive Annual Financial Report

-

## Table of Contents

INVESTMENT SECTION	
Investment Overview	118
Report on Investment Activities	120
ACTUARIAL SECTION	
Pension Trust Fund	
Actuary's Certification Letter	134
Actuarial Present Value of Future Benefits	139
Actuarial Methods and Assumptions	140
TRS-Care	
Actuary's Certification Letter	147
Actuarial Present Value of Future Benefits	149
Actuarial Methods and Assumptions	150
STATISTICAL SECTION	
Statistical Section Overview	157
Financial Trends Information	
Ten-Year Summary of Changes in Fiduciary Net Position and Revenues, Expenses, and	
Changes in Net Position	158
Benefits and Refund Deductions from Net Position by Type	166
Operating Information	
Average Benefit Payments	168
Retired Members by Type of Benefit and Health Benefit Payments by Range	172
Principal Participating Employers	174
List of Participating Employers	176
BENEFITS SECTION	
Changes in the Law	190
Summary of Benefits	198

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## **INTRODUCTORY SECTION**



Anita Smith Palmer "Me Too," 2006





2017 Comprehensive Annual Financial Report

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## **Board of Trustees**



**R. David Kelly, Chair** Managing Partner Straight Line Realty Partners Plano Direct appointment of the governor Term expires 2017



John Elliott Partner Elliott Stratmann, PLLC Austin Direct appointment of the governor Term expires 2021



**Dolores Ramirez, Vice Chair** Teacher San Benito CISD San Benito Active public education position Term expires 2019



**Dr. Greg Gibson** Superintendent Schertz-Cibolo-Universal City ISD Schertz Active public education position Term expires 2021



Karen Charleston Former Space Management Assistant Prairie View A&M University Houston Higher education position Term expires 2017



#### **Christopher Moss**

President Allendale, Inc. DBA The Advanced Financial Group Lufkin Position nominated by the State Board of Education Term expires 2021

#### **Anita Smith Palmer**

Former Texas Public School Teacher, Administrator and University Adjunct Professor Jacksboro Retiree Position Term expires 2017

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Joe Colonnetta Private Investor Dallas Direct appointment of the governor Term expires 2019





David Corpus Senior Vice President CommunityBank of Texas, N.A. Humble Position nominated by the State Board of Education Term expires 2019

We regret to report the passing of Anita Smith Palmer on January 6, 2017. Thanks to her dedication to the students and public education employees of Texas, her contributions will live on to benefit others for years to come.

For information on the board election process and the higher education position, please refer to Note 1 in the Financial Section.

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Introductory Section

3

## **Professional Awards**



Government Finance Officers Association

## Certificate of Achievement for Excellence in Financial Reporting

Presented to

## Teacher Retirement System of Texas

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

August 31, 2016

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Executive Director/CEO

Introductory Section-4 >>-

## **Professional Awards**

#### **Public Pension Coordinating Council**

### **Public Pension Standards Award** For Funding and Administration 2016

Presented to

#### **Teacher Retirement System of Texas**

In recognition of meeting professional standards for plan funding and administration as set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA) National Conference on Public Employee Retirement Systems (NCPERS) National Council on Teacher Retirement (NCTR)

alan Allindle

Alan H. Winkle Program Administrator

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800.223.8778 www.trs.texas.gov Executive Director 1000 Red River Street Austin. Texas 78701-2698

Brian K. Guthrie

November 20, 2017

Honorable Greg Abbott, Governor Honorable Glenn Hegar, Texas Comptroller Ursula Parks, Director, Legislative Budget Board Lisa Collier, First Assistant State Auditor The Board of Trustees and Members of the Teacher Retirement System

Ladies and Gentlemen,

On behalf of the board of trustees, I am pleased to present the *Comprehensive Annual Financial Report* (CAFR) of the Teacher Retirement System of Texas (TRS or System) for the fiscal year ended August 31, 2017—the System's 80<sup>th</sup> year of operation. During the past fiscal year, the System experienced modest growth as membership grew to 1,545,057 participants. The pension trust fund saw positive returns in the past year. The fund ended the 2017 fiscal year with a net position of \$147.4 billion compared to \$134.0 billion at the close of the 2016 fiscal year. TRS investment earnings, combined with contribution increases and benefit changes approved by the 85<sup>th</sup> Texas Legislature, are continuing to enable TRS to provide secure benefits for current and future retirees.

#### MANAGEMENT RESPONSIBILITY

This report consists of management's representations concerning TRS finances. Management assumes full responsibility for the completeness and reliability of all information presented in this report. To provide a reasonable basis for making these representations, management has established a comprehensive internal control framework that is designed both to protect the assets from loss, theft, or misuse and to compile sufficient, reliable information for the preparation of TRS financial statements in conformity with generally accepted accounting principles. The cost of controls should not exceed the benefits to be derived as the objective of the internal control framework is to provide reasonable rather than absolute assurance that the financial statements will be free from material misstatement. As management, we assert that, to the best of our knowledge and belief, this financial report is complete and reliable in all material respects.

#### CERTIFICATE OF ACHIEVEMENT FOR EXCELLENCE IN FINANCIAL REPORTING

The Government Finance Officers Association of the United States and Canada (GFOA) awarded TRS the Certificate of Achievement for Excellence in Financial Reporting for its *Comprehensive Annual Financial Report* for the previous fiscal year. To be awarded the certificate, a report must meet or exceed program standards and must satisfy both generally accepted accounting principles and applicable legal requirements. TRS has received a Certificate of Achievement for the last 27 years. We believe that the current report continues to meet program requirements, and it is being submitted to the GFOA for consideration again this year.

#### **FINANCIAL INFORMATION**

The basic financial statements have been prepared in accordance with generally accepted accounting principles applied on a consistent basis as promulgated by the Governmental Accounting Standards Board (GASB). The Management's Discussion and Analysis (MD&A) includes a narrative introduction, overview and analysis to accompany the basic financial statements. This transmittal letter is designed to complement the MD&A and should be read in conjunction with it. The MD&A can be found immediately following the report of the independent auditors.

During the past year, TRS also continued its program of auditing reports submitted by reporting entities to TRS in response to GASB accounting and American Institute of Certified Public Accounting (AICPA) auditing guidance. TRS Internal Audit staff have tested employer census data for active members. TRS is reviewing the following elements of the data: gender; dates of birth; dates of hire or years of service; eligible compensation; and termination or retirement dates. TRS auditors are also testing eligibility and compensation for accuracy, completeness, and compliance with *TRS Laws & Rules*.

#### INVESTMENTS

For the 12-month period ending August 31, 2017, the total portfolio delivered investment returns of 12.6 percent, which is 1.6 percent above the fund's benchmark. By asset class, returns were 17.3 percent for Global Equity, -1.3 percent for Stable Value and 11.1 percent for Real Return. On a three-year annualized basis, the fund has returned 6.4 percent, which is 0.5 percent above its benchmark. As a result, the total investment value of the fund as of August 31 was \$146.1 billion, or \$12.7 billion more than this time last year, after contributions and benefit payouts. Annual rates of return for the five- and 10-year periods ending August 31, 2017, were 9.0 percent and 5.8 percent, respectively.

Investment risks are diversified over a very broad range of market sectors and securities. TRS' investment strategy is designed to address three different potential market scenarios and has an advantage in each of them by allocating 57 percent to Global Equities, 22 percent to Real Return, 16 percent to Stable Value, and 5 percent to Risk Parity, which has a balanced exposure to all three economic scenarios. This allocation is designed to minimize downside risk while capturing upside performance in any of the three scenarios. This strategy reduces portfolio risk from adverse developments in sectors and issuers experiencing unusual difficulties and offers opportunity to benefit from future markets.

#### PENSION PLAN BENEFITS

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For fiscal year 2017, TRS paid pension benefit payments to more than 407,000 retirees and their beneficiaries totaling \$9.9 billion. These benefits were funded from a combination of cumulative investment income, member contributions, and state and employer contributions.

#### ACTUARIAL SOUNDNESS OF THE PENSION TRUST FUND

As of August 31, 2017, the System had a funded ratio of 80.5 percent with an Unfunded Actuarial Accrued Liability (UAAL) of \$35.5 billion. The unfunded actuarial liability was expected to increase from the prior year based on the deferral of investment losses from prior valuations. However, due to higher than expected investment performance and population growth of approximately two percent, the UAAL remained relatively unchanged compared to the previous fiscal year. Together, these gains decreased the UAAL by \$1.1 billion. This decrease was partially offset by a reversal of expected retirement patterns due to plan design changes made to TRS-Care.

The System earned a return of 12.9 percent on market value, compared to an assumed rate of 8.0 percent. These investment gains more than offset the prior year's deferred investment losses which resulted in a gain on the actuarial value of assets. As a result, the System is now deferring net investment

#### gains of \$1.1 billion.

The period of time necessary to amortize the unfunded liability has decreased from 33.6 years to 32.2 years. Given that current contributions cannot amortize the unfunded liability in less than 31 years, the System does not meet the state's definition for actuarial soundness.

In 2013, the Legislature adopted Senate Bill 1458 that provided a stair-step increase in the member contribution rate from 6.4 percent in FY 2014 to 7.7 percent in FY 2017. The state contribution rate for FY 2017 was 6.8 percent and districts that do not participate in Social Security pay a 1.5 percent contribution rate to the System. It is estimated that the unfunded liability will increase over the next decade before beginning to decline.

TRS will be conducting an experience study over the coming months to ascertain if the assumption set, including the 8 percent return assumption, continues to be appropriate for the System. The impact of any change to the assumption set has yet to be determined.

#### **RETIREE HEALTH BENEFITS PROGRAM**

TRS administers TRS-Care, a health benefits program for eligible retired public education employees and their eligible dependents that was established in 1985. TRS-Care is the source of health benefits coverage which almost all retired public education employees rely upon. Funding is provided by premium payments from retiree participants and contributions from the state, public schools, and active public education employees. TRS-Care also receives additional revenue from the Medicare Part D subsidy program.

An actuarial valuation for TRS-Care was conducted as of Aug. 31, 2017. The valuation results indicate that TRS-Care has a Net Other Post-Employment Benefit Liability of \$43.5 billion. The program was 0.91 percent funded as of the end of the fiscal year 2017. More detailed information about the valuation results is included in the Notes to the Financial Statements and the Required Supplementary Information.

Plan changes made by the TRS Board of Trustees decreased the liability slightly; however, a legislative directive prevented changes to retiree contributions. The current funding formula of 1.0 percent of public school payroll from the State, 0.55 percent from the participating employers and 0.65 percent from the active employees is insufficient to sustain the TRS-Care program. Funding from the 84<sup>th</sup> legislature infused \$768 million into the program to ensure solvency of the TRS-Care fund through the FY 16-17 Biennium. Even with the additional funding, projections for the TRS-Care balance showed a shortfall ranging from \$1.3 to \$1.6 billion for the 2018-19 biennium. The 85<sup>th</sup> Legislature, in regular and special sessions, contributed additional funding to address the current solvency and affordability of TRS-Care.

#### ACTIVE MEMBER HEALTH BENEFITS PROGRAM

TRS-ActiveCare, initiated in 2002, is a self-funded health benefits program that offers options ranging from catastrophic coverage with reduced premiums to a comprehensive plan at higher premiums. TRS-ActiveCare covers eligible public education employees currently employed by public education employers that participate in the program, along with the employees' eligible dependents. TRS-ActiveCare receives funding from the state in the amount of \$75 per employee per month and participating entities are required to provide at least \$150 per employee per month. Active employees pay premiums established by TRS for the cost of the program. The TRS Board of Trustees approved a modest increase in premiums and plan design changes for fiscal year 2017. TRS worked with the 85<sup>th</sup> legislature on options to improve the affordability of TRS-ActiveCare.

#### **AGENCY HIGHLIGHTS**

During the past year, TRS continued progress on the TRS Enterprise Application Modernization (TEAM) Program. Phase 1 of the new Pension Line of Business System under the TEAM program launched on October 2, 2017 as planned. Phase 1 included the new Reporting Entity Portal and processes related to active membership. TRS continued to work on requirements for Phase 2 of the TEAM Program which will include Pension Benefit Payments and a newly developed Web Self Service Application for TRS members. A separate Health Insurance Line of Business project was started during 2017, and TRS began implementing the CAPPS Financial solution from the Office of the Comptroller in September 2017.

From September 2016 through May 2017, TRS released a 15-part financial awareness video series. The purpose of the series was to help current members learn even more about retirement self-sufficiency. The series included a live-action welcome video featuring the Executive Director and 14 animated whiteboard videos. A diverse cast of characters guided members through three important concepts: what they have – their TRS defined benefit plan; what they need – to save more; and how to get it – by saving smart. The series covered a variety of topics, including how to estimate your TRS benefit, understanding Social Security, the impact of inflation on your TRS benefit, and understanding 403(b) fees.

In fiscal year 2017, TRS began offering remote counseling sessions for members wanting appointments with a benefit counselor. Remote counseling allows members to communicate through the internet in the comfort of their home. Additional counseling options include communicating by phone, email, group presentations and field office visits.

Thanks to the hard work and dedication of its employees, TRS was named a "Top Workplace" by the *Austin American-Statesman* for the sixth year in a row.

#### ACKNOWLEDGMENTS

We wish to express our appreciation for the support of the Governor's, Lieutenant Governor's, and Speaker's Offices, as well as members of the legislature, in maintaining a strong retirement system, which provides valuable benefits for public education employees and retirees.

We are grateful for the dedicated service of all of our trustees. Trustee willingness to accept the substantial responsibilities of directing system administration is a great service to the state and to the members served by TRS.

TRS trustees and staff are keenly focused on prudent pension trust fund portfolio management and efficient, service-oriented delivery of valuable retirement and related benefits for public education employees and retirees. We are pleased to report on operational results for the year and to acknowledge the substantial support of state leadership, trustees, members, interested associations, and TRS staff.

Respectfully submitted,

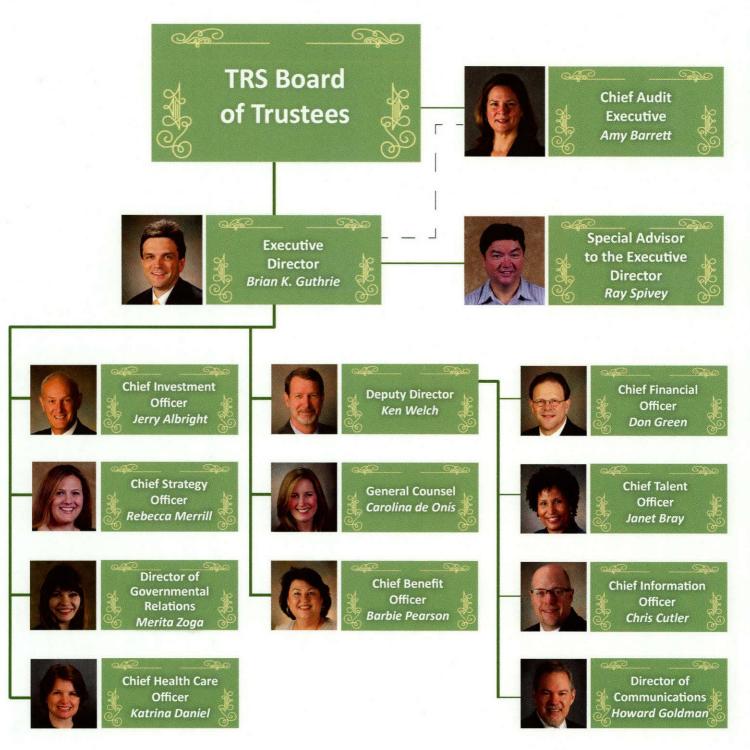
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Brian K. Guthrie Executive Director

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2017 Comprehensive Annual Financial Report

## **Organization Chart**



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**Teacher Retirement System of Texas** 

2017 Comprehensive Annual Financial Report

## Staff and Advisors

#### EXECUTIVE ADMINISTRATIVE STAFF

Brian K. Guthrie, Executive Director Ken Welch, Deputy Director Jerry Albright, Chief Investment Officer Carolina de Onís, General Counsel Amy L. Barrett, Chief Audit Executive Barbie Pearson, Chief Benefit Officer Don Green, Chief Financial Officer Katrina Daniel, Chief Health Care Officer Chris Cutler, Chief Information Officer Janet L. Bray, Chief Talent Officer Rebecca K. Merrill, Chief Strategy Officer Ray Spivey, Special Advisor to the Executive Director Howard J. Goldman, Director, Communications Merita Zoga, Director, Governmental Relations

#### GENERAL INVESTMENT CONSULTANT

Aon Hewitt Investment Consulting, Inc., Chicago, IL

CONSULTING ACTUARY

Gabriel, Roeder, Smith & Company, Dallas

## INTERNATIONAL TAX CONSULTING AND COMPLIANCE SERVICES

Ernst & Young, L.L.P., Austin and London, England

#### INVESTMENT CONSULTANTS

Albourne America, L.L.C., San Francisco, CA (Absolute Return) BlackRock Investment Management, L.L.C., New York, NY (Private Equity Co-investments) Grosvenor Capital Management, L.P., Chicago, IL (Emerging Managers) Hamilton Lane Advisors, L.L.C., San Francisco, CA and Bala Cynwyd, PA (Private Equity) LaSalle Investment Management, Inc., Chicago, IL (Real Estate) Lenox Park Advisory L.L.C., Austin (Emerging Managers) The Rock Creek Group, L.P., Washington, D.C. (Emerging Managers) The Townsend Group, Inc., Cleveland, OH (Real Estate)

Tudor, Pickering, Holt & Co., L.L.C., Houston (Energy and Natural Resources)
Valuation Research Corporation, New York, NY (Private Investment Valuation)
W.D. Von Gonten & Co., Houston (Oil and Gas)

#### **INVESTMENT ADVISORS**

Keith C. Brown, Ph.D., Austin

#### AUDIT SERVICES

Texas State Auditor's Office, Austin

#### FIDUCIARY COUNSEL

Reinhart Boerner Van Deuren, S.C., Milwaukee, WI

#### **MEDICAL BOARD**

Dr. Alice Cox, Fredericksburg Dr. James Reinarz, Austin Dr. Larry D. Wilson, Austin

#### TEXAS PUBLIC SCHOOL RETIRED EMPLOYEES GROUP INSURANCE PROGRAM ADVISORY COMMITTEE

Bill Barnes, Haslet Marcia McNeil, Austin Grace Mueller, McQueeney Teresa Koehler, Houston Dr. Celeste Cardenas, McAllen Dr. H. John Fuller, Mineola Dr. Bruce Gearing, Austin Jesus H. Soto, San Antonio Andrea Avery, Lancaster

#### HEALTH CARE CONSULTANT

Gabriel, Roeder, Smith & Company, Dallas

#### MASTER CUSTODIAN AND SECURITIES LENDING AGENT

State Street Bank and Trust Company, Boston, MA

#### PERFORMANCE MEASUREMENT

State Street Bank and Trust Company, Boston, MA

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For a schedule of fees and commissions, please refer to the Investment Section.

Introductory Section

2017

2016

Membership

**Active Member Profile** 

#### **PENSION TRUST FUND**

Membership of the Teacher Retirement System of Texas includes employees and retirees of state-supported educational institutions in Texas. At August 31, 2017, participating employers included the following:

Public School Districts	1,024
Charter Schools	170
Community and Junior Colleges	50
Senior Colleges and Universities	47
Regional Service Centers	20
Medical Schools	9
Other Education Districts	4
State Agencies	1
_	1,325

	Year Ended August 31,				
Member Categories	2017	2016			
Current Members:					
Active Contributing	864,233	847,631			
Deferred Retirement Option	28	42			
Inactive Non-vested	174,918	167,275			
Inactive Vested	98,110	95,078			
Total Current Members	1,137,289	1,110,026			
Retirement Recipients:					
Service	379,765	370,761			
Disability	11,802	9,650			
Survivor *	16,201	13,503			
Total Retirement Recipients	407,768	393,914			
TOTAL MEMBERSHIP	1,545,057	1,503,940			

\* Annuities Certain moved from Service to Survivor in 2017.

Population Changes	2017	2016	
Active Membership:			
New Members	92,576	97,729	
Members Withdrawing	(42,370)	(38,459)	
Service Retirements	(20,986)	(20,833)	
<b>Disability Retirements</b>	(791)	(791)	
In-Service Deaths	(1,452)	(1,386)	
Other Changes	286	(7,739)	
NET INCREASE	27,263	28,521	
Retired Membership:			
Retirements	21,777	21,624	
Deaths After Retirement	(8,700)	(8,355)	
<b>Option Continuations</b>	2,745	2,601	
Other Changes	(1,968)	306	
NET INCREASE	13,854	16,176	

Active Member Prome	2017	2010
Average Annual Salary	\$47,330	\$46,343
Average Age	44.6	44.5
Average Years of Service	10.3	10.2
Annuitant and Beneficiary Profile	2017	2016
Average Monthly Annuities		
Life Annuities	\$2,060	\$2,035
Disability Annuities	\$1,178	\$1,231
Annuities Certain	\$1,125	\$1,108
Average Age of Current Retirees	71.2	70.9
Average Age at Retirement		
All Retirees	60.2	60.1
Current Year Retirees	61.9	61.8
Average Years of Service		
All Retirees	24.3	24.3
Current Year Retirees	23.1	23.4
Average Salary at Retirement		
All Retirees	\$44,527	\$43,800
Current Year Retirees	\$52,510	\$51,962
Ratio of Current Members		
to Retirees	2.8 to 1	2.8 to 1

#### TEXAS PUBLIC SCHOOL RETIRED EMPLOYEES GROUP INSURANCE PROGRAM (TRS-CARE)

Participation for the Retired Plan is summarized below:

Member Categories	2017	2016
Retirees	204,987	200,231
Surviving Spouses	6,672	6,351
Surviving Children	125	106
Dependent Spouses and Children	56,643	54,840
TOTAL	268,427	261,528

There were 1,218 participating employers during fiscal year 2017.

#### TEXAS ACTIVE SCHOOL EMPLOYEES UNIFORM GROUP BENEFITS PROGRAM (TRS-ACTIVECARE)

Participation for the Active Plan is summarized below:

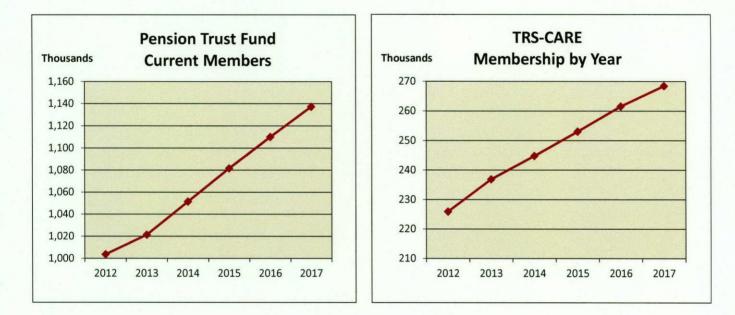
Member Categories	2017	2016
Employees	305,234	296,523
Dependents	187,083	187,793
TOTAL	492,317	484,316

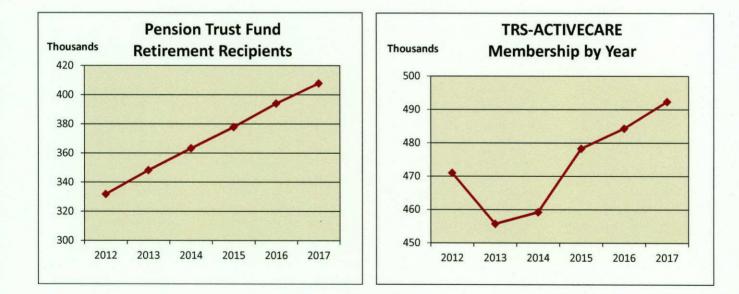
As of August 31, 2017 there were 1,093 participating employers.

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## Membership

Using the data presented on the previous page, the following presents a graphical view of the growth of the system for Current Members, Retirement Recipients, TRS-Care and TRS-ActiveCare as of August 31, 2017.





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During fiscal year 2017, TRS communicated with members, retirees, participating employers, and the general public over the telephone as well as through group presentations, one-on-one meetings, print publications, webcasts, videos, social media, the agency's website, and email. TRS staff also spoke at conferences across the state to update members and retirees on their pension and health care benefits as well as TRS investment performance. Major communications from the past year are summarized below:

#### **PRINT PUBLICATIONS**

During fiscal year 2017, TRS published three *TRS News* issues to provide members and retirees with important information relating to their benefits. Employers also received TRS-related information through 11 *Update* newsletters. Annual statements were distributed in October to all active members of the system. In early 2017, TRS published a high-level summary of its *Comprehensive Annual Financial Report.* TRS also published a number of other publications for members and retirees, including brochures and other materials related to TRS pension and health care benefits.

#### THE INTERNET

In fiscal year 2017, TRS continued to seek improvements for the newly-redesigned external website. Enhancements scheduled for fall, 2017 include a responsive calendar, a "decision tree" function to improve search capabilities and a feature that allows website users to click on certain areas of charts and images to receive additional information. The site also offers improved access to persons with disabilities, reducing the need for those visitors to resize documents or scroll through multiple website pages to find the information they are seeking.

TRS also began using a new analytics tool to better track the activity on the website and continually improve the users' experience. Our statistics are from Oct, 2016 through August, 2017. During this time, analytics recorded 2,319,573 website visits with nearly 6 million page views. The number of unique users totaled 1,287,630.

*MyTRS*, the secure, member access portion of the website was promoted during the year through email, newsletter articles, social media, and the agency website. As of Aug. 31, 2016, 595,000 members and retirees had registered to participate in *MyTRS*, nearly 7.5% percent more than in the previous year.

#### SOCIAL MEDIA

In fiscal year 2017, TRS broadened its engagement through social media with a growing number of members, retirees and others. TRS introduced a TRS\_Careers Instagram account featuring photos of TRS current employees and other content and expanded its use of LinkedIn to attract and recruit new employees. The agency recorded 11,778 Facebook likes. LinkedIn followers grew to 3,894 and Twitter followers numbered 3,429. In addition, TRS videos were viewed 134,072 times on YouTube.

#### WEBCASTING OF BOARD MEETINGS

As part of its commitment to open and transparent communication, TRS continued to webcast board meetings during the past year. All board meetings are streamed live so members and others can watch the proceedings as they take place from anywhere in Texas or around the world. Each meeting is also recorded for on-demand playback. All TRS board meetings are archived on the TRS website where individual agenda items can be easily accessed through an online catalog.

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#### **ASSOCIATION MEETINGS**

Early in the fiscal year, TRS continued its outreach to members and retirees through a series of Texas Retired Teacher Association meetings. TRS officials spoke to members and retirees at more than 30 conventions around the state and provided updates on TRS developments. These meetings provide an opportunity for TRS representatives to meet with members and retirees face-to-face and answer any questions they may have. Legislators or their representatives from the area also frequently attend the meetings.

#### GROUP PRESENTATIONS AND INDIVIDUAL RETIREMENT COUNSELING SESSIONS

In September 2016, TRS successfully launched our remote counseling sessions conducted through the internet. Members have the option to schedule either a remote or in-person appointment with a TRS benefit counselor. Remote counseling allows members with a computer or tablet and an internet connection to meet with a benefit counselor without traveling to Austin.

In the past year, TRS made a number of group presentations to professional associations, employee and retiree groups and at regional education service centers. Presentations focused on retirement options, health care benefits for active and retired members, long-term care insurance, employment after retirement, and other TRS benefits. A total of 13,275 people attended 173 group presentations, and 15,400 people attended four conventions where TRS was represented.

In addition, 10,083 people visited in person with a TRS counselor – 9,534 of those in Austin, 129 people were helped via a remote counseling sessions, and 420 people were counseled in field office visit locations. Fiscal year 2017 was the eleventh year that one-on-one retirement counseling sessions were offered in limited field locations throughout Texas (450 available appointments in 10 cities).

#### **TELECOMMUNICATIONS**

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In fiscal year 2017, the agency's Benefit Counseling department handled a total of 550,865 calls. In addition, 212,326 calls were completed during the past year within the agency's automated telephone system.

TRS and its contractors also provided telephone assistance to a large number of participants seeking health care-related information. TRS-Care staff and contractors responded to 868,575 calls—a nearly 50 percent increase in call volume from the prior fiscal year. The first significant changes to TRS-Care in twelve years took effect on Jan. 1, 2017 and drove increased demand from participants for information from TRS and its vendors. In early 2017, TRS contracted with a third-party call center dedicated to TRS-Care participants to meet the growing demand and ensure low wait times. TRS-ActiveCare staff and contractors responded to 326,964 calls during the year, which reflected a decrease in call volume of 8 percent from the prior fiscal year likely due to modest plan changes and increased reliance on online tools and content.

#### **COORDINATION WITH REPORTING ENTITIES**

The TRS Reporting and Query System (TRAQS), the agency's internet-based reporting system for employers, had 1,325 reporting entities submit monthly reports to TRS by year end. During the year, 10 professional association and software user group presentations were attended by 469 people. Three participating employers traveled to TRS for on-site training. Three live webinars were conducted in cooperation with an agency serving charter schools attended by 29 people and these webinars were then linked on the TRS website for viewing by any Reporting Entity

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contact who wished to do so. One presentation on Employment after Retirement and Surcharges was conducted for an ISD at the request of and in partnership with TRS Internal Audit that was attended by 17 people.

TRS engaged TRS-ActiveCare stakeholders in person, online, and over the phone during fiscal year 2017. TRS-ActiveCare contractors held 27 in-person trainings around the state and 8 live webinars for benefits administrators to prepare for 2017-2018 TRS-ActiveCare annual enrollment. In addition, TRS-ActiveCare contractors hosted an annual summit in April for third-party administrators (TPAs) that carry out enrollment and eligibility functions for certain TRS-ActiveCare districts. Thirty TPAs attended the summit, representing a majority of TRS-ActiveCare districts that contract with third parties for these functions.

Online tools continued to serve an important role as a means to communicate information to TRS-ActiveCare benefits administrators and plan participants. TRS-ActiveCare participants accessed on-demand webinars 4,353 times to learn about their benefits. Throughout the year, the TRS-ActiveCare website was viewed 292,237 times, and 60,418 visitors accessed coverage documents through the website. There were 27,260 total visits to ALEX, the online benefits counselor that provides an overview of plan options—a nearly 20 percent increase in visits since it ALEX was launched in fiscal year 2016.

TRS and its TRS-ActiveCare contractors released a new online toolkit for benefits administrators that provides in-depth training on important aspects of a benefits administrator's role. The toolkit was viewed 125 times from its release in July through the end of August 2017. TRS' contractors continued to provide ongoing support over the phone to benefit administrators through the BA Advocate Team and to TPAs throughout the year, holding more than 25 calls with TPAs to ensure the success of TRS-ActiveCare enrollment.

#### FINANCIAL AWARENESS INITIATIVES

During the past fiscal year, TRS developed an outreach program to help members learn about retirement self-sufficiency through a series of financial awareness videos. Through these short, animated whiteboard videos, a cast of characters will guide viewers through three important concepts: "what you have – your TRS defined benefit plan;" "what you need – to save more;" and "how to get it – by saving smart." The series will cover a variety of topics, including how to estimate TRS benefits, understanding how TRS benefits may affect members' Social Security benefits, and the impact of inflation on their TRS benefits. Most videos will cover topics applicable to all members. However, some will target early- and mid-career members, and others will target members nearing retirement. TRS began releasing the videos in September 2016 and plans to continue releasing them through early 2017.

#### HEALTH CARE COMMUNICATION INITIATIVES

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TRS is dedicated to helping participants in its health plans get the most out of their health care coverage. Communication is key to this objective. In fiscal year 2017, the Health and Insurance Benefits Department (HIB) advanced important initiatives to help participants understand and use their benefits. These efforts to engage participants will help TRS inform and prepare them for plan changes passed by the 85<sup>th</sup> Texas Legislature that will take effect in 2018.

In May 2017, HIB launched *The Pulse*, a monthly email newsletter for TRS health plan participants. With distinct versions for retirees and active employees, *The Pulse* provides tailored information to these populations about their benefits. As of August 2017, there are 146,996 subscribers to the version for active employees and 44,227 subscribers to the version for retirees.

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*The Pulse* links to online articles on the new Health Care News section of the TRS website and drives users online where they can find new health care content specific to them. HIB's objective is to provide health care information relevant to an individual's circumstances. Consistent with this strategy, HIB reorganized its health care website content around three key groups—active employees, retirees who are not yet eligible for Medicare, and retirees who are eligible for Medicare—to deliver content specific to these populations that have different health benefits.

During the first quarter of fiscal year 2017, TRS held more than 100 in-person meetings with retirees to inform them of the change to Humana as the administrator for the TRS-Care Medicare Advantage plan and answer questions among retirees about the transition to the Medicare prescription drug plan as the sole option for drug coverage in 2017. TRS reached more than 18,000 retirees through that initiative.

Building on the success of the 2017 in-person meetings, TRS and its health plan administrators—including Humana, Aetna, and CVS Caremark—will hold more than 60 face-to-face meetings across the state in the first quarter of fiscal year 2018 to inform participants about the changes to retiree health plans that take effect Jan. 1, 2018.

TRS developed two videos—one announcing the TRS-ActiveCare plan changes and another introducing the TRS-Care changes that will take effect in 2018. HIB also tracked the most common questions about the 2018 plan changes and developed an online FAQ for participants. HIB plans to continue to provide information each month through *The Pulse* leading up to Jan. 1, 2018, expand online content, and refine its communication strategies as it receives feedback from participants and stakeholders. This page is intentionally left blank.

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## **FINANCIAL SECTION**



Anita Smith Palmer "Morning Count," © 2000



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#### 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 Colonnetta Mr. David Corpus Mr. John Elliott Dr. Greg Gibson Mr. Christopher Moss

#### **Report on the Financial Statements**

We have audited the accompanying financial statements of the major enterprise fund and the aggregate remaining funds information, consisting of the fiduciary funds and the nonmajor 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 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 opinions 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 and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. 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

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SAO Report No. 18-305

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statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity'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 the entity'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 opinions.

#### Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the major enterprise fund and aggregate remaining funds information, consisting of the fiduciary funds and the non-major enterprise fund of the System as of August 31, 2017, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

#### **Emphasis of Matters**

Teacher Retirement System Financial Statements

As discussed in Note 1, the financial statements of the System are intended to present the financial position, the changes in financial position and, where applicable, cash flows of only that portion of the major enterprise fund and the aggregate remaining funds information of the State that is attributable to the transactions of the System. They do not purport to, and do not, present fairly the financial position of the State of Texas as of August 31, 2017, the changes in its financial position, or where applicable, its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

#### Investments with Values that are not Readily Determined

As discussed in Note 1, the financial statements include investments valued at approximately \$59.0 billion as of August 31, 2017, whose fair values have been estimated by management in the absence of readily determinable fair values. Our opinion is not modified with respect to this matter.

#### Implementation of Governmental Accounting Standards Board Statement 74

As discussed in Note 1, the System adopted the provisions of Governmental Accounting Standards Board Statement 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, in fiscal year 2017. Our opinion is not modified with respect to this matter.

#### **Other Matters**

#### Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule of Changes in the Employers' Net Pension Liability and Related Ratios, Schedule of Employer and Non-Employer Contributing Entity Actuarially Determined Contributions (including the note to that schedule), Schedule of Investment Returns, and Schedule of Changes in the Employers' Net OPEB Liability and Related Ratios, as listed in the table of contents be presented to supplement the basic financial statements. Such information, although not a 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. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which 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.

#### **Other Information**

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the System's basic financial statements. The information in Exhibit A and Schedules 1 through 3, as listed in the table of contents is presented for purposes of additional analysis and are not a required part of the financial statements.

The information in Exhibit A and Schedules 1 through 3, as listed in the table of contents is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information in Exhibit A and Schedules 1 through 3, as listed in the

table of contents is fairly stated in all material respects in relation to the basic financial statements as a whole.

The Introductory, Investment, Actuarial, Statistical, and Benefits sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

#### Report on Summarized Comparative Information

We have previously audited the System's fiscal year 2016 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated November 17, 2016. In our opinion, the summarized comparative information presented herein as of and for the year ended August 31, 2016, is consistent, in all material respects, with the audited financial statements from which it has been derived

#### Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated November 20, 2017, on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that 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 System's internal control over financial report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

R. Pollier

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

November 20, 2017

The following is Management's Discussion and Analysis (MD&A) of the Teacher Retirement System's (TRS or system) financial performance for the fiscal year ended August 31, 2017. The information presented here should be considered in conjunction with other areas of the Financial Section as well as information presented in the Executive Director's Letter of Transmittal in the Introductory Section of the *TRS Comprehensive Annual Financial Report*.

#### FINANCIAL HIGHLIGHTS

- The net position of the TRS Pension Trust Fund was \$147.4 billion as of August 31, 2017, an increase of 10 percent, in fiscal year 2017.
- As of August 31, 2017, the date of the most recent actuarial valuation, the net pension liability on a GAAP basis was \$32.0 billion, which is a decrease of \$5.8 billion from August 31, 2016 when the liability was \$37.8 billion. As of August 31, 2017, plan net position was 82.2 percent of the total pension liability.
- The annual rate of return on investments for the pension fund for the year ended August 31, 2017 was 12.6 percent. The rate of return for fiscal year 2016 was 7.4 percent.
- The net position of TRS-Care was \$399.5 million as of August 31, 2017, a decrease of \$242.0 million from fiscal year end 2016.
- As of August 31, 2017, the date of the most recent actuarial valuation which was calculated in conformity with GASB 74, TRS-Care trust fund's net Other Post-Employment Benefit (OPEB) liability on a GAAP basis was \$43.5 billion. The total liability decreased \$33.5 billion from the beginning of the year. The majority of the decrease is due to changes in plan benefit terms and changes in actuarial assumptions. As of August 31, 2017, plan net position was 0.91 percent of the total OPEB liability.
- TRS-ActiveCare had a net position of \$97.8 million as of August 31, 2017, an increase of \$44.3 million or 83 percent in fiscal year 2017.

#### **OVERVIEW OF THE FINANCIAL STATEMENTS**

This discussion and analysis is intended to serve as an introduction to the TRS financial presentation, which consists of the following components:

• Fund financial statements

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- Notes to the financial statements
- Required supplementary information
- Other supplementary schedules

Collectively, this information presents the net position available for pension and other postemployment benefits, health care benefits, and other purposes as of August 31, 2017, and summarizes any changes in net position for the year then ended. The information available in each of these sections is summarized as follows:

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#### Fund Financial Statements

Individual fund financial statements are presented for all fiduciary and proprietary funds as of August 31, 2017 and for the year then ended. Comparative data in total as of August 31, 2016, and for the year then ended has also been presented with the exception of agency funds. These financial statements reflect the resources available to pay benefits to retirees and other beneficiaries, to pay health care benefits for covered participants, and to administer the 403(b) Administrative Program. Fiduciary funds presented include the Pension Trust Fund, TRS-Care and Agency Funds. Fiduciary funds are used to account for resources held for the benefit of parties outside of TRS. Proprietary funds account for business-type activities and include the TRS-ActiveCare and the non-major 403(b) Administrative Program enterprise funds.

#### **Notes to the Financial Statements**

The financial statement notes provide additional information that is essential to a full understanding of the data provided in the fund financial statements. Information available in the notes to the financial statements is described below:

- Note 1 provides a summary of significant accounting policies, including the basis of accounting, budgets and appropriations, explanations of major asset and liability classes, and legal reserve account information. Also included is a general description of TRS as well as a description of each of the funds administered by TRS.
- Note 2 provides information on capital assets.
- Note 3 describes deposits and investments, including investing authority, fair value measurements, and deposit and investment risk factors.
- Note 4 provides information on employee compensable leave.
- Note 5 provides information on the operating lease.
- Note 6 provides information on fringe benefits paid by the state and federal government on behalf of employees and participants of the health care plans.
- Note 7 describes deferred compensation plans available to TRS employees.
- Note 8 provides information on contingent liabilities such as TRS employees' accumulated sick leave, lump sum death benefits, incentive compensation, retiree benefits and any pending litigation.
- Note 9 addresses TRS' continuance subject to review under the Texas Sunset Act.
- Note 10 provides other post-employment health care benefits disclosure information for retired public school employees, including detailed data on the plan description, contributions, and the net Other Post-Employment Benefits (OPEB) liability.
- Note 11 provides other post-employment healthcare benefits disclosure information for TRS employees participation in the Employer's Retirement System (ERS) of Texas plan.

- Note 12 provides pension disclosure information including detailed data on the plan description, contributions, legal reserve balances and the net pension liability.
- Note 13 addresses risk management issues related to ActiveCare, the health benefits program for active school district employees.
- Note 14 provides information including description, criteria for inclusion, reporting method, fund type, fiscal year-end, and information about how to obtain the separate financial statements for each component unit.
- Note 15 provides information on subsequent events.

#### **Required Supplementary Information**

Required supplementary information for the pension plan consists of schedules related to the net pension liability, contributions from employers and the non-employer contributing entity, and the annual money weighted rate of return on pension plan investments. RSI for Care, the other post-employment benefit plan (OPEB) administered by TRS, includes schedules related to the net OPEB liability and the contributions from the participating employers. Also included in this component is Management's Discussion and Analysis.

#### **Other Supplementary Schedules**

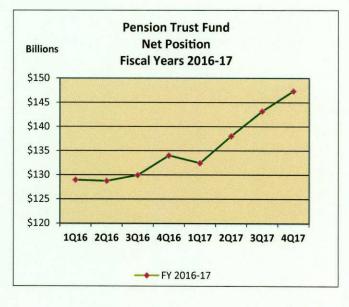
Other schedules include information on agency funds, changes in statutory reserve account balances, schedule of administrative and investing activity expenses, and payments to consultants.

#### FINANCIAL ANALYSIS OF TRS FUNDS

#### Pension and Other Employee Benefit Trust Funds

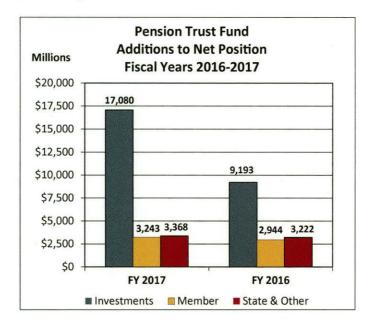
#### **Pension Trust Fund**

Net position held in trust for benefits at August 31, 2017 was \$147.4 billion, an increase of \$13.4 billion from the \$134.0 billion at August 31, 2016.



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Refer to the graph below for a graph of Additions to Net Position. Fiscal year 2017 investment gain was \$17.1 billion, an increase of \$7.9 billion over 2016. Net investment gain includes interest from investing activities, investment dividends, net increases (decreases) in the fair value of investments, and net income from securities lending activities. In fiscal year 2017, the fund experienced generally positive returns across most asset classes due to slower than expected growth and inflation, an ongoing tightening of monetary policy, a healthy market rally which was fueled by strong earnings, and an outperformance of emerging markets compared to developed markets. Current year additions from member contributions were \$3.2 billion while state contributions and other additions totaled \$3.4 billion. Total contributions and other additions increased \$444.2 million, or 7.2 percent, during fiscal year 2017. The member contribution rate increased from 7.2 percent in fiscal year 2016 to 7.7 percent in fiscal year 2017 and accounted for the increase in member contributions. Employer and state contributions increased 4.5 percent, a slight increase over 2016. The increase is attributable to normal payroll growth as the state contribution rate remained at 6.8 percent for fiscal year 2017, the fourth year in a row since the change in 2014.



Deductions from TRS net position held in trust for benefits are predominantly retirement, death, and survivor benefit payments. During fiscal year 2017, retirement benefits and other payments totaled \$9.9 billion, an increase of \$400.6 million, or 4.2 percent. Refunds of Contributions for fiscal year 2017 were \$420.4 million, an increase of \$47.0 million from fiscal year 2016. Administrative expenses were \$44.2 million compared to \$44.4 from fiscal year 2016. Administrative expenses, excluding investing activities expense, on a cost per member basis were \$28.60 for fiscal year 2017 as compared to \$29.52 in fiscal year 2016. Investment cost per member was \$141.17 for fiscal year 2017. Investment expense in basis points of net position was 15.50 for fiscal year 2017 and was calculated using average net asset value. Investment expense in basis points for fiscal year 2016 was 18.53.

0-6

**Teacher Retirement System of Texas** 



## Management's Discussion and Analysis

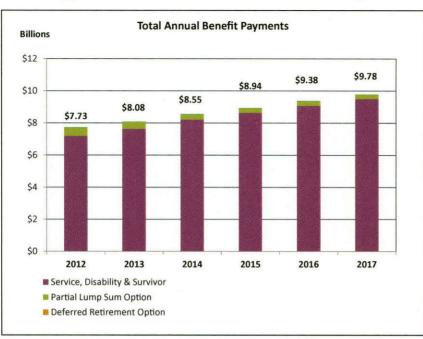
**Growth of the System** - As of August 2017, the monthly annuity payroll had grown to \$793 million, and TRS was paying benefits to 407,768 recipients. Refer to the graph on the following page for details on benefit payments by type of recipient.

Service recipients include retirees and beneficiaries receiving continuing monthly annuity payments. Disability recipients are disabled members who are receiving continuing monthly disability payments. Survivor recipients are beneficiaries who have elected to receive death benefits in the form of monthly benefits. The number of retiree accounts increased by 13,854 during fiscal year 2017.

Of the current TRS member accounts, 864,261 (active contributing and deferred retirement option participants) were employed during fiscal year 2017 and made contributions to the system. The remaining 273,028 members were no longer employed by TRS covered employers, but maintained their membership in TRS by leaving their contributions in the system. The number of current member accounts increased by 27,263 during fiscal year 2017.

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**TRS Enterprise Application Modernization (TEAM)** is the name of the related projects that will modernize TRS technologies, allowing greater efficiency and flexibility in providing services to TRS membership. The Line of Business (LOB) project phase I was launched October 2, 2017 and will replace some of TRS' mainframe-based pension administration systems.

#### **Statement of Net Position - Pension Trust Fund**

#### (Dollars in Thousands)

		<b>Fiscal Year</b>	<b>Fiscal Year</b>	Dollar	Percentage	
	E.	2017	2016	Change	Change	
Assets						
Cash and Receivables	\$	1,721,984	\$ 1,965,622	\$ (243,638)	(12.4)	%
Investments		145,916,402	132,762,467	13,153,935	9.9	
Invested Securities Lending Collateral		17,654,071	18,128,073	(474,002)	(2.6)	
Capital Assets		86,885	69,485	17,400	25.0	24
TOTAL ASSETS	\$	165,379,342	\$ 152,925,647	\$ 12,453,695	8.1	%
Liabilities						
Benefits Payable	\$	128,998	\$ 138,542	\$ (9,544)	(6.9)	%
Investments Purchased Payable/Securities						
Sold Short		801,219	615,627	185,592	30.1	
Accounts Payable and Other		51,548	46,817	4,731	10.1	
Collateral Obligations		17,035,655	18,116,023	(1,080,368)	(6.0)	
TOTAL LIABILITIES	\$	18,017,420	\$ 18,917,009	\$ (899,589)	(4.8)	%
<b>Total Net Position Restricted for Pensions</b>	\$	147,361,922	\$ 134,008,638	\$ 13,353,284	10.0	%

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# Management's Discussion and Analysis

Statement of Changes in Net Position - Pension Trust Fund (Dollars in Thousands)

	Fiscal Year 2017	Fiscal Year 2016		Dollar Change	Percentage Change	
Additions			1.1			
Member Contributions	\$ 3,242,556	\$ 2,943,669	\$	298,887	10.2	%
Non-Employer Contributing Entity Contributions	1,697,963	1,675,631		22,332	1.3	
Participating Employers Contributions	1,588,309	1,483,389		104,920	7.1	
Other Revenue	81,367	63,334		18,033	28.5	
Investment Income	17,079,807	9,193,281		7,886,526	85.8	
TOTAL ADDITIONS	\$ 23,690,002	\$ 15,359,304	\$	8,330,698	54.2	%
Deductions						
Retirement Benefits and Other	\$ 9,872,107	\$ 9,471,551	\$	400,556	4.2	%
Refunds of Contributions	420,421	373,419		47,002	12.6	
Administrative Expenses	44,189	44,403		(214)	(0.5)	
TOTAL DEDUCTIONS	\$ 10,336,717	\$ 9,889,373	\$	447,344	4.5	%
Change in Net Position	\$ 13,353,285	\$ 5,469,931	\$	7,883,354	144.1	%

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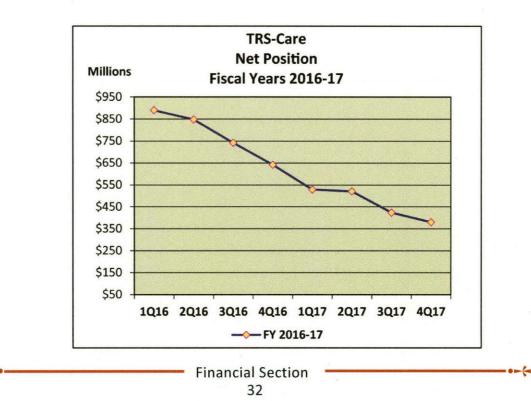
## Management's Discussion and Analysis TRS-Care

The net position of TRS-Care at August 31, 2017 was \$399.5 million, a decrease of \$242.0 million from the \$641.5 million at August 31, 2016.

Additions to net position include premium contributions received from retirees, active members, participating employers and the State, federal revenue and investment earnings. Total contributions of \$732.4 million increased by \$13.8 million from the \$718.6 million in fiscal year 2016 due to normal payroll growth. There was a supplemental appropriation from the State's General Fund in the amount of \$15.6 million.

Federal Revenue received in fiscal year 2017 includes Retiree Drug Subsidy (RDS) payments totaling \$5.3 million and Employee Group Waiver Plan (EGWP) subsidy payments totaling \$96.4 million. Rebates and discount income increased by \$72.7 million to \$291.7 million due to drug cost inflation. The remaining \$20.1 million is a result of Medicare Part D Coverage Gap payment increase as drug costs and utilization increased. Investment Income was \$4.7 million, which was a decline from 2016 and correlated to the decline in Cash in the State Treasury of \$274.5 million in fiscal year 2017.

Deductions from net position totaled \$1.4 billion during fiscal year 2017. This is a decrease of \$10.7 million over fiscal year 2016. The decrease was due primarily to an increase of \$29.3 million in health care premiums paid by retirees, which was considered a contra deduction in fiscal year 2017 due to the requirements of GASB 74. The Medicare Advantage premiums decreased \$7.4 million. Health care fees decreased by \$1.8 million because of the termination of the Affordable Care Act mandated Transitional Reinsurance Program for calendar year 2017. Administrative expenses were \$5.0 million, an increase of 5.4 percent from fiscal year 2016.



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# Management's Discussion and Analysis

Statement of Net Position - TRS-Care (Dollars in Thousands)

	Fiscal Year 2017	Fiscal Year 2016	Dollar Change	Percenta Change	•
Assets					
Cash, Receivables and Capital Assets	\$ 526,398	\$ 777,316	\$ (250,918)	(32.3)	%
TOTAL ASSETS	\$ 526,398	\$ 777,316	\$ (250,918)	(32.3)	%
Liabilities			Apres -		
Accounts Payables and Other	\$ 926	\$ 915	\$ 11	1.2	%
Health Care Fees Payable	360	1,735	(1,375)	(79.3)	
Health Care Claims Payables	125,576	133,180	(7,604)	(5.7)	
TOTAL LIABILITIES	\$ 126,862	\$ 135,830	\$ (8,968)	(6.6)	%
Total Net Position	\$ 399,536	\$ 641,486	\$ (241,950)	(37.7)	%

### **Statement of Changes in Net Position - TRS-Care**

(Dollars in Thousands)

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	Fiscal Year 2017	Fiscal Year 2016		Dollar Change	Percenta Change	
Additions			12			
Member Contributions	\$ 213,241	\$ 208,582	\$	4,659	2.2	%
Non-Employer Contributing Entity Contributions	303,761	297,071		6,690	2.3	
Participating Employers Contributions	215,360	212,936		2,424	1.1	
Rebates and Discount Income	291,726	218,995		72,731	33.2	
Federal Revenue	101,719	124,740		(23,021)	(18.5)	
Other Revenue	529	89		440	494.4	
Investment Income	4,697	5,422		(725)	(13.4)	
Supplemental Appropriation from State's General Fund - Non-Employer Contributing Entity	15,559			15,559	0.0	
TOTAL ADDITIONS	\$ 1,146,592	\$ 1,067,835	\$	78,757	7.4	%
Deductions						
Health Care Claims	\$ 1,678,892	\$ 1,651,713	\$	27,179	1.6	%
Less: Health Care Premiums Paid by Retirees	(404,028)	(374,736)		(29,292)	7.8	
Health Care Claims Processing	45,873	45,485		388	0.9	
Insurance Premium Payments	61,793	69,229		(7,436)	(10.7)	
Health Care Fees	1,058	2,876		(1,818)	(63.2)	
Administrative Expenses	4,954	4,701		253	5.4	
TOTAL DEDUCTIONS	\$ 1,388,542	\$ 1,399,268	\$	(10,726)	(0.8)	%
Change in Net Position	\$ (241,950)	\$ (331,433)	\$	89,483	27.0	%

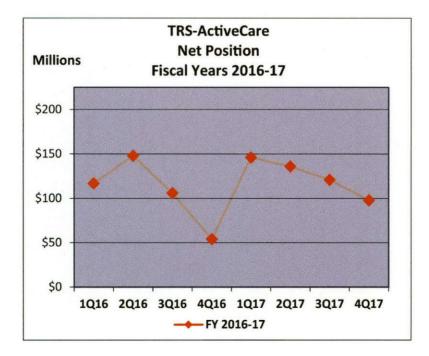
# Management's Discussion and Analysis Enterprise Funds

#### **TRS-ActiveCare**

The TRS-ActiveCare program operates under the authority of the Texas Insurance Code, Title 8, Subtitle H, Chapter 1579 and the Texas Administrative Code, Title 34, Part 3, Chapter 41, and began operations in fiscal year 2003. The Net Position of the plan was \$97.8 million at the end of fiscal year 2017, an increase of \$44.3 million or 82.6 percent from fiscal year 2016.

Operating revenues for fiscal year 2017 included \$2.2 billion from health care premiums, an increase of \$166 million, or 8.0 percent over fiscal year 2016. This was primarily due to premium rates and enrollment increases. Investment income for the year was \$4.7 million, an increase of \$1.6 million, or 51.6 percent from fiscal year 2016. Other revenues for 2017 totaled \$321 thousand, a decrease of \$35 thousand from fiscal year 2016.

Health care claims for fiscal year 2017 were \$1.85 billion, a \$78 million, or 4.4 percent increase over the \$1.77 billion in fiscal year 2016 due to health care cost inflation. Other expenses included claims processing costs of \$120 million, \$227.1 million for HMO premium payments, and \$3.3 million for administrative expenses. Health care fees mandated by the Affordable Care Act totaled \$4.2 million.



0-4

## Management's Discussion and Analysis

# Statement of Net Position - TRS-ActiveCare (Dollars in Thousands)

	Fiscal Year 2017	Fiscal Year 2016	Dollar Change	Percentage Change	9
Assets					
Cash and Receivables	\$ 373,677	\$ 349,990	\$ 23,687	6.8	%
TOTAL ASSETS	373,677	349,990	23,687	6.8	%
Liabilities		1.1			
Accounts Payable and Other	\$ 551	\$ 347	\$ 204	58.8	%
Unearned Premium Revenue	402		402		
Premiums and Fees Payable	19,534	25,195	(5,661)	(22.5)	
Health Care Claims Payable	255,385	270,897	(15,512)	(5.7)	
TOTAL LIABILITIES	\$ 275,872	\$ 296,439	\$ (20,567)	(6.9)	%
Total Net Position	\$ 97,805	\$ 53,551	\$ 44,254	82.6	%

# Statement of Revenues, Expenses, and Changes in Net Position - TRS-ActiveCare (Dollars in Thousands)

	Fiscal Year 2017	Fiscal Year 2016	Dollar Change	Percentage Change	9
Revenues (Operating and Non-Operating)					
Health Care Premiums	\$ 2,240,008	\$ 2,073,564	\$ 166,444	8.0	%
Investment Income	4,669	3,079	1,590	51.6	
Other Revenue	321	356	(35)	(9.8)	
TOTAL REVENUE	\$ 2,244,998	\$ 2,076,999	\$ 167,999	8.1	%
<b>Operating Expenses</b> Health Care Claims	\$ 1,846,526	\$ 1,768,287	\$ 78,239	4.4	%
Health Care Claims Processing	119,584	111,988	7,596	6.8	
Health Care Fees	4,200	13,814	(9,614)	(69.6)	
Premium Payments to HMOs	227,089	214,529	12,560	5.9	
Administrative Expenses	3,345	2,645	700	26.5	
TOTAL EXPENSES	\$ 2,200,744	\$ 2,111,263	\$ 89,481	4.2	%
Change in Net Position	\$ 44,254	\$ (34,264)	\$ 78,518	(229.2)	%

#### **REQUEST FOR INFORMATION**

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This financial report is designed to provide a general overview of the Teacher Retirement System for those with an interest in the system's finances.

Questions concerning any of the information provided in this report or requests for additional information should be addressed to the Communications Department of the Teacher Retirement System, 1000 Red River Street, Austin, Texas 78701.

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Exhibit

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# **Statement of Fiduciary Net Position** AS OF AUGUST 31, 2017 (With Comparative Data for August 31, 2016)

	Fiduciary Fund Types Pension and Other Employee Benefit Trust Funds			
	Per	nsion Trust Fund		TRS-Care
ASSETS				
Cash				
Cash in State Treasury	\$	303,574,622	\$	221,723,009
Cash in Bank (Note 3B)		129,537,801		
Cash on Hand (Note 3B)		3,095,144		
TOTAL CASH	\$	436,207,567	\$	221,723,009
Receivables				
Sale of Investments	\$	670,312,268	\$	
Interest and Dividends		234,907,858		349,140
Member and Retiree		1,252,003		61,728,292
Service Credit Purchases		16,377,376		
Participating Employers		294,007,295		25,190,402
Due from State's General Fund		66,647,068		19,889,709
Due from Employees Retirement System of Texas		1,941,433		,,-
Prepaid Expenses and Deposits		131,981		
Other		199,308		196,808,000
TOTAL RECEIVABLES	\$	1,285,776,590	\$	303,965,543
Investments (Note 1F and 3)				
Short-Term Investment Fund	\$	3,910,166,490	\$	
Short-Term Foreign Currency Contracts		(27,073)		
Equity Investments		49,791,863,021		
Fixed Income Investments		21,741,743,293		
Alternative Investments		59,008,168,730		
Derivative Investments		(27,791,460)		
Pooled Investments		11,492,278,916		
TOTAL INVESTMENTS	\$	145,916,401,917	\$	(
Invested Securities Lending Collateral	\$	17,654,070,642	\$	(
Capital Assets (Note 2)				
Intangible Assets	\$	11,755,403	\$	
Less Accumulated Amortization		(10,332,605)		
Depreciable Assets		57,348,438		
Less Accumulated Depreciation		(35,844,016)		
Non-Depreciable Assets		63,958,028		709,417
TOTAL CAPITAL ASSETS	\$	86,885,248	\$	709,417
TOTAL ASSETS	\$	165,379,341,964	\$	526,397,969

**Financial Section** 36

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		F	iduciary Fund Typ	es	and the second second second
	Total Pen Other Employee B		Agency Funds		
	2017		2016	E	Child Support Employee Deductions
\$	525,297,631	\$	810,059,891	\$	6,612
	129,537,801		142,480,269		
	3,095,144		1,994,151		
\$	657,930,576	\$	954,534,311	\$	6,612
\$	670,312,268	\$	943,213,488	\$	
	235,256,998		219,150,693		
	62,980,295		31,879,247		
	16,377,376		10,311,624		
	319,197,697		299,510,130		
	86,536,777		77,682,267		
	1,941,433		1,812,677		
	131,981		69,608		
	197,007,308		204,774,790		
\$	1,589,742,133	\$	1,788,404,524	\$	0
\$	3,910,166,490	\$	3,227,490,758	\$	
~	(27,073)	Ŷ	(14,948)	Ŷ	
	49,791,863,021		47,785,677,843		
	21,741,743,293		20,483,627,614		
	59,008,168,730		52,120,428,956		
	(27,791,460)		41,503,506		
	11,492,278,916		9,103,753,601		
\$	145,916,401,917	\$	132,762,467,330	\$	0
\$ \$	17,654,070,642	\$	18,128,072,568	\$	C C
\$	11 755 400	ć	10 727 011	4	
ç	11,755,403	\$	10,727,011	\$	
	(10,332,605)		(9,920,670)		
	57,348,438		56,513,102		
	(35,844,016)		(33,114,122)		
¢	64,667,445	~	45,279,732		
\$ \$	87,594,665	\$	69,485,053	\$	0
Ş	165,905,739,933	\$	153,702,963,786	\$	6,612

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Exhibit I (concluded)

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# **Statement of Fiduciary Net Position** AS OF AUGUST 31, 2017 (With Comparative Data for August 31, 2016)

	Fiduciary Fund Types				
		Pension and Ot	her E	mployee	
	Benefit Trust Funds				
	Per	ision Trust Fund		TRS-Care	
LIABILITIES (Note 1F)					
Accounts Payable	\$	6,679,651	\$	228,976	
Payroll Payable		5,198,506		308,746	
External Manager Fees Payable		22,448,429			
Benefits Payable		128,997,802			
Health Care Claims Payable				125,576,406	
Fees Payable				360,144	
Investments Purchased Payable		619,004,590			
Securities Sold Short		182,214,448			
Collateral Obligations		17,035,654,924			
Due to State's General Fund		7,689			
Due to Employees Retirement System of Texas		8,093,936			
Employee Compensable Absences Payable (Note 4)		8,608,482		387,711	
Unrealized Lease Incentives		269,662			
Other Liabilities		241,725			
Funds Held for Others					
TOTAL LIABILITIES	\$	18,017,419,844	\$	126,861,983	
NET POSITION		-			
Net Investment in Capital Assets	\$	86,885,248	\$	709,417	
Restricted for Pensions/Other Post Employment		447 275 026 070		200 026 560	
Benefits		147,275,036,872		398,826,569	
NET POSITION RESTRICTED FOR PENSIONS AND OTHER POST EMPLOYMENT BENEFITS	\$	147,361,922,120	\$	399,535,986	

The accompanying Notes to the Financial Statements are an integral part of this financial statement.

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Fiduciary	Fund	Types
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	Total Per	ision a	and				
•	Other Employee B	Trust Funds	Agency Funds				
	2017		2016	Child Support Employee Deductions			
\$	6,908,627	\$	8,077,851	\$			
	5,507,252		5,312,265				
	22,448,429		17,619,651				
	128,997,802		138,541,977				
	125,576,406		133,180,593				
	360,144		1,734,759				
	619,004,590		476,565,551				
	182,214,448		139,061,759				
	17,035,654,924		18,116,023,297				
	7,689						
	8,093,936		7,706,962				
	8,996,193		8,606,280				
	269,662		344,916				
	241,725		64,299				
				6,612			
\$	18,144,281,827	\$	19,052,840,160	\$ 6,612			
\$	87,594,665	\$	69,485,053	\$			
	147,673,863,441		134,580,638,573				
\$	147,761,458,106	\$	134,650,123,626	\$ 0			

# **Statement of Changes in Fiduciary Net Position** AS OF AUGUST 31, 2017 (With Comparative Data for August 31, 2016)

	Fiduciary Fund Types			pes
		Pension and Othe	er En	nployee
		Benefit Trus	t Fur	nds
	Per	nsion Trust Fund		TRS-Care
ADDITIONS				
Contributions				
Member	\$	3,242,556,261	\$	213,241,179
State's General Fund - Non-Employer Contributing Entity		1,697,962,608		303,760,632
Employer (Notes 10, 12)				
State's General Fund		128,713,466		
Participating Employer Contributions		1,030,095,335		180,415,839
Participating Employer Contributions Paid at				
State Contribution Rate				24,302,720
Surcharges (Notes 10, 12)				
Employment after Retirement-Employee		11,480,134		
Employment after Retirement-Employer		9,315,673		10,641,961
Non-OASDI Participating Employers		408,704,737		
Supplemental Appropriation from State's General Fund -				
Non-Employer Contributing Entity				15,559,552
Purchase of Service Credit-Refundable		27,561,982		
Purchase of Service Credit - Non-Refundable		27,530,759		
State Contributions for 415 Excess Benefit Arrangement		2,930,399		
Employees Retirement System of Texas:				
For Service Contributions		21,965,490		
For 415 Excess Benefit Arrangement		78,439		
Federal Revenue (Note 6)				101,718,551
Rebate and Discount Income				291,725,635
TOTAL CONTRIBUTIONS AND PREMIUMS	\$	6,608,895,283	\$	1,141,366,069
Investment Income				
Investing Activities Income (Loss)	\$	17,203,713,635	\$	4,696,973
Less: Investing Activity Expenses (Schedule 2)		(218,119,912)		
Net Income (Loss) from Investing Activities	\$	16,985,593,723	\$	4,696,973
From Securities Lending Activities:				
Securities Lending Income	\$	237,357,886	\$	
Securities Lending Expenses	4	(143,144,262)		
Net Income from Securities Lending Activities	\$	94,213,624	\$	C
TOTAL NET INVESTMENT INCOME	\$	17,079,807,347	\$	4,696,973
Other Additions				
Miscellaneous Revenue	\$	1,299,284	\$	529,020
TOTAL ADDITIONS	\$	23,690,001,914	\$	1,146,592,062

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Exhibit II

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Teacher Retirement System of Texas

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Fiduciary Fund Types									
	<b>Total Pension and</b>								
0	ther Employee B	enefi	it Trust Funds						
	2017		2016						
\$	3,455,797,440	\$	3,152,251,310						
	2,001,723,240		1,972,702,168						
	128,713,466		104,714,221						
	1,210,511,174		1,169,232,300						
	24,302,720		23,824,450						
	11,480,134		9,184,795						
	19,957,634		22,565,534						
	408,704,737		366,804,399						
	15,559,552								
	27,561,982		18,818,999						
	27,530,759		18,570,535						
	2,930,399		3,482,186						
	21,965,490		20,376,732						
	78,439		91,960						
	101,718,551		124,739,649						
	291,725,635		218,995,436						
\$	7,750,261,352	\$	7,226,354,674						
\$	17,208,410,608	\$	9,343,664,650						
	(218,119,912)		(237,509,682)						
\$	16,990,290,696	\$	9,106,154,968						
\$	237,357,886	\$	165,668,053						
	(143,144,262)		(73,121,015)						
\$	94,213,624	\$	92,547,038						
\$ \$	17,084,504,320	\$	9,198,702,006						
\$	1,828,304	\$	2,082,417						
\$ \$	24,836,593,976	\$	16,427,139,097						
			(to next page)						

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# **Statement of Changes in Fiduciary Net Position** FOR THE FISCAL YEAR ENDED AUGUST 31, 2017 (With Comparative Data for August 31, 2016)

		<b>Fiduciary Fun</b>	d Ty	pes		
		Pension and Other Employee Benefit Trust Funds				
	Pe	nsion Trust Fund		TRS-Care		
DEDUCTIONS						
Benefits	\$	9,775,775,472	\$			
Refunds of Contributions - Active		414,049,308				
Refunds of Contributions - Death		6,371,748				
415 Excess Benefit Arrangement		2,721,567				
Benefits Paid to Employees Retirement System of Texas:						
For Service Contributions		93,321,903				
For 415 Excess Benefit Arrangement		287,271				
Health Care Claims				1,678,892,21		
Less: Health Care Premiums Paid by Retirees (Note 1)				(404,027,71		
Health Care Claims Processing				45,873,39		
Insurance Premium Payments				61,792,67		
Patient-Centered Outcomes Research Institute Fee				367,83		
Transitional Reinsurance Fee				690,32		
Administrative Expenses, Excluding Investing Activity Expense	s:					
Salaries and Wages		23,121,553		2,486,92		
Payroll Related Costs		7,067,155		408,76		
Professional Fees and Services		3,738,821		1,658,64		
Travel		189,065		24,17		
Materials and Supplies		2,406,577		158,91		
Communications and Utilities		455,230		1,56		
Repairs and Maintenance		2,140,019		57,42		
Rentals and Leases		120,177		24,90		
Printing and Reproduction		183,648		62,82		
Depreciation Expense		2,706,732				
Amortization Expense		411,935				
Gain/Loss on Capital Asset						
Other Expense		1,649,086		69,34		
TOTAL DEDUCTIONS	\$	10,336,717,267	\$	1,388,542,22		
Net Increase (Decrease) in Net Position	\$	13,353,284,647	\$	(241,950,16		
NET POSITION RESTRICTED FOR PENSIONS AND OTHER				2		
POST EMPLOYMENT BENEFITS - BEGINNING OF YEAR	\$	134,008,637,473	\$	641,486,15		
NET POSITION RESTRICTED FOR PENSIONS AND OTHER						
POST EMPLOYMENT BENEFITS - END OF YEAR	\$	147,361,922,120	\$	399,535,98		

The accompanying Notes to the Financial Statements are an integral part of this financial statement.

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Teacher Retirement System of Texas

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2017 Comprehensive Annual Financial Report

Fiduciary Fund Types								
<b>Total Pension and</b>								
ther Employee B	enef	it Trust Funds						
2017		2016						
9,775,775,472	\$	9,379,122,730						
414,049,308		366,039,111						
6,371,748		7,379,576						
2,721,567		3,286,875						
93,321,903		88,854,383						
287,271		287,271						
1,678,892,217		1,651,712,836						
(404,027,710)		(374,736,269)						
45,873,396		45,485,440						
61,792,671	69,228,8							
367,838	838							
690,325		2,528,652						
25,608,482		24,103,192						
7,475,923		5,880,960						
5,397,466		4,714,610						
213,237		110,957						
2,565,491		3,331,572						
456,798		394,941						
2,197,446		5,035,767						
145,077		809,353						
246,475		124,729						
2,706,732		2,435,241						
411,935		421,057						
		832						
1,718.428		1,741,176						
11,725,259,496	\$	11,288,640,923						
13,111,334,480	\$	5,138,498,174						
134,650,123,626	\$	129,511,625,452						
147,761,458,106	\$	134,650,123,626						
	Total Pen           2017           9,775,775,472           414,049,308           6,371,748           2,721,567           93,321,903           287,271           1,678,892,217           (404,027,710)           45,873,396           61,792,671           367,838           690,325           25,608,482           7,475,923           5,397,466           213,237           2,565,491           456,798           2,197,446           145,077           246,475           2,706,732           411,935           1,718,428           11,725,259,496           13,111,334,480           134,650,123,626	Total Pension           Dther Employee Benef           2017           9,775,775,472         \$           414,049,308         6,371,748           6,371,748         2,721,567           93,321,903         287,271           1,678,892,217         (404,027,710)           45,873,396         61,792,671           367,838         690,325           25,608,482         7,475,923           5,397,466         213,237           2,565,491         456,798           2,197,446         145,077           246,475         2,706,732           411,935         1,718,428           11,725,259,496         \$           13,111,334,480         \$						

Exhibit III

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## Statement of Net Position

**PROPRIETARY FUNDS** 

FOR THE FISCAL YEAR ENDED AUGUST 31, 2017 (With Comparative Data for August 31, 2016)

		Enterp	rise Fund	e Funds		
	N	Aajor Fund	Non-	Major Fund		
			403(b	) Administra-		
	TRS	-ActiveCare	tive	e Program		
ASSETS						
Current Assets						
Cash						
Cash In State Treasury	\$	339,043,170	\$	309,520		
Cash on Hand				12,000		
TOTAL CASH	\$	339,043,170	\$	321,520		
Receivables						
Interest	\$	421,889	\$	303		
COBRA Premiums and Other		34,211,784				
TOTAL RECEIVABLES	\$	34,633,673	\$	303		
TOTAL ASSETS	\$	373,676,843	\$	321,823		
LIABILITIES (Note 1F)			2			
Current Liabilities						
Accounts Payable	\$	215,494	\$	55,609		
Payroll Payable		159,315		6,585		
Unearned Premium Revenue		401,536				
Fees Payable		996,244				
Premiums Payable to HMOs		18,537,633				
Health Care Claims Payable		255,385,246				
Employee Compensable Absences Payable (Note 4)		132,367		5,030		
TOTAL CURRENT LIABILITIES	\$	275,827,835	\$	67,224		
Non-Current Liabilities			12			
Employee Compensable Absences Payable (Note 4)	\$	44,179	\$	6		
TOTAL NON-CURRENT LIABILITIES	\$	44,179	\$	6		
TOTAL LIABILITIES	\$	275,872,014	\$	67,230		
NET POSITION						
Restricted for Health Care Programs	\$	97,804,829	\$			
Restricted for Administrative Expenses				254,593		
TOTAL NET POSITION	\$	97,804,829	\$	254,593		

The accompanying Notes to the Financial Statements are an integral part of this financial statement.

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Total Enterprise Funds						
	2017		2016			
\$	339,352,690	\$	337,059,474			
\$	12,000 339,364,690	\$	337,059,474			
\$	422,192 34,211,784	\$	289,006 12,988,010			
\$	34,633,976	\$	13,277,016			
\$	373,998,666	\$	350,336,490			
\$	271,103	\$	131,402			
	165,900		125,668			
	401,536		68,654			
	996,244		7,535,944			
	18,537,633		17,658,919			
	255,385,246		270,897,392			
	137,397		76,984			
\$	275,895,059	\$	296,494,963			
¢	44,185	ć	22 070			
\$ \$	44,185	\$ \$	23,079 23,079			
\$	275,939,244	\$	296,518,042			
	,	Ŧ				
\$	97,804,829	\$	53,550,894			
	254,593		267,554			
\$	98,059,422	\$	53,818,448			

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Exhibit IV

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# Statement of Revenues, Expenses and Changes in Net Position

PROPRIETARY FUNDS

FOR THE FISCAL YEAR ENDED AUGUST 31, 2017 (With Comparative Data for August 31, 2016)

		Enterpri	se Fund	s		
		Major Fund	Non	-major Fund		
				403(b)		
			Administrative			
	TF	RS-ActiveCare		Program		
OPERATING REVENUES						
Health Care Premiums	\$	2,119,959,039	\$			
COBRA Premiums and Other		120,049,492				
Administrative Fees		145,792				
Certification Fees				135,000		
Product Registration Fees				33,000		
TOTAL OPERATING REVENUES	\$	2,240,154,323	\$	168,000		
OPERATING EXPENSES						
Health Care Claims	\$	1,846,526,430	\$			
Health Care Claims Processing		119,583,574				
Premium Payments to HMOs		227,088,895				
Patient-Centered Outcomes Research Institute Fee		988,208				
Transitional Reinsurance Fee		3,211,965				
Administrative Expenses:		· ·				
Salaries and Wages		1,609,295		55,41		
Payroll Related Costs		234,665		8,693		
Professional Fees and Services		1,380,105		112,63		
Travel		8,672				
Materials and Supplies		45,571		1,65		
Communications and Utilities		79				
Repairs and Maintenance		14,412		2,550		
Rentals and Leases		22,982				
Printing and Reproduction		5,708		167		
Other Operating Expense		23,953		2,633		
TOTAL OPERATING EXPENSES	\$	2,200,744,514	\$	183,74		
OPERATING INCOME (LOSS)	\$	39,409,809	\$	(15,745		
NON-OPERATING REVENUE						
Investment Income	\$	4,668,888	\$	2,78		
Other Non-operating Revenue		175,238				
TOTAL NON-OPERATING REVENUES	\$	4,844,126	\$	2,78		
Change in Net Position	\$	44,253,935	\$	(12,961		
TOTAL NET POSITION - BEGINNING OF YEAR	\$	53,550,894	\$	267,55		
TOTAL NET POSITION - END OF YEAR	\$	97,804,829	\$	254,593		

The accompanying Notes to the Financial Statements are an integral part of this financial statement.

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### **Total Enterprise Funds**

_	2017	2016
\$	2,119,959,039	\$ 2,055,658,822
	120,049,492	17,904,885
	145,792	156,054
	135,000	12,000
	33,000	3,000
\$	2,240,322,323	\$ 2,073,734,763
\$	1,846,526,430	\$ 1,768,287,120
	119,583,574	111,987,718
	227,088,895	214,529,160
	988,208	683,288
	3,211,965	13,131,104
	1,664,710	1,211,277
	243,357	228,290
	1,492,735	1,190,957
	8,672	12,915
	47,225	3,175
	79	813
	16,968	
	22,982	41,599
	5,875	
	26,584	4,406
\$	2,200,928,259	\$ 2,111,311,820
\$	39,394,064	\$ (37,577,059
\$	4,671,672	\$ 3,081,163
	175,238	200,000
\$	4,846,910	\$ 3,281,163
\$	44,240,974	\$ (34,295,898
\$ \$ \$ \$	53,818,448	\$ 88,114,346
\$	98,059,422	\$ 53,818,44

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Exhibit

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## Statement of Cash Flows

**PROPRIETARY FUNDS** 

FOR THE FISCAL YEAR ENDED AUGUST 31, 2017 (With Comparative Data for August 31, 2016)

	Enterprise Funds				
		Major Fund	No	n-major Fund	
			Ad	403(b) Iministrative	
	TF	S-ActiveCare		Program	
CASH FLOWS FROM OPERATING ACTIVITIES					
Receipts from Health Care Premiums	\$	2,120,291,921	\$		
Receipts from COBRA Premiums and Other		98,825,718			
Receipts from Long-Term Care Administrative Fees		145,792			
Receipts from Certification/Product Registration Fees				168,000	
Payments for Administrative Expenses		(3,141,229)		(126,506	
Payments for Health Care Claims		(1,862,038,576)			
Payments for Health Care Claims Processing		(119,583,574)			
Payments for HMO Premiums		(226,210,181)			
Payments for Affordable Care Act Fees		(10,739,873)			
NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES	\$	(2,450,002)	\$	41,494	
CASH FLOWS FROM NON-CAPITAL FINANCING ACTIVITIES					
Proceeds from Other Non-Operating Revenue	\$	175,238	\$		
NET CASH PROVIDED BY NON-CAPITAL FINANCING ACTIVITIES	\$	175,238	\$	(	
CASH FLOWS FROM INVESTING ACTIVITIES					
Interest Received	\$	4,535,811	\$	2,67	
NET CASH PROVIDED BY INVESTING ACTIVITIES	\$	4,535,811	\$	2,67	
Net Increase (Decrease) in Cash	\$	2,261,047	\$	44,169	
CASH AND CASH EQUIVALENTS - SEPTEMBER 1	\$	336,782,123	\$	277,35	
CASH AND CASH EQUIVALENTS - AUGUST 31	\$	339,043,170	\$	321,52	
RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES					
Operating Income (Loss)	\$	39,409,809	\$	(15,745	
Adjustments to Reconcile Operating Income (Loss) to	Ŷ	33,403,803	Ŷ	(13,743	
Net Cash Provided (Used) by Operating Activities:					
Changes in Assets & Liabilities:					
Increase (Decrease) in Unearned Health Care Premium					
Revenue	\$	332,882	\$		
(Increase) in COBRA Premiums and Other Receivable		(21,223,774)			
Increase in Premiums Payable to HMOs		878,714			
Increase in Health Care Claims Payable		(15,512,146)			
(Decrease) in Affordable Care Act Fees Payable		(6,539,700)			
Increase in Accounts Payable		84,092		55,609	
Increase (Decrease) in Payroll Payable		38,985		1,24	
Increase (Decrease) in Employee Compensable Absences					
Payable		81,136		383	
Total Adjustments	\$	(41,859,811)	\$	57,239	
NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES	\$	(2,450,002)	\$	41,494	

The accompanying Notes to the Financial Statements are an integral part of this financial statement.

**Financial Section** 48

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	Total Enterg	orise	Funds
	2017		2016
\$	2,120,291,921	\$	2,055,012,996
	98,825,718		4,916,875
	145,792		156,054
	168,000		15,000
	(3,267,735)		(2,606,218)
	(1,862,038,576)		(1,750,764,115)
	(119,583,574)		(111,987,718)
	(226,210,181)		(211,539,537)
	(10,739,873)		(19,786,448)
\$	(2,408,508)	\$	(36,583,111)
\$	175,238	\$	200,000
\$	175,238	\$	200,000
\$	4,538,486	\$	2,930,337
\$	4,538,486	\$	2,930,337
\$	2,305,216	\$	(33,452,774)
\$	337,059,474	\$	370,512,248
\$	339,364,690	\$	337,059,474
\$	39,394,064	\$	(37,577,059)
\$	332,882	\$	(919,887)
7	(21,223,774)	Ŷ	(12,713,949)
	878,714		2,989,623
	(15,512,146)		17,523,005
	(6,539,700)		(5,972,056)
	139,701		129,537
	40,232		(1,006)
	.0,202		(1)000
	81,519		(41,319)
\$	(41,802,572)	\$	993,948
\$	(2,408,508)	Ś	(36,583,111

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# Notes to the Financial Statements

#### TABLE OF CONTENTS

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES	51
NOTE 2: CAPITAL ASSETS	59
NOTE 3: DEPOSITS AND INVESTMENTS	61
NOTE 4: EMPLOYEE COMPENSABLE LEAVE	76
NOTE 5: OPERATING LEASES	76
NOTE 6: FRINGE BENEFITS PAID BY THE STATE OF TEXAS AND THE FEDERAL GOVERNMENT	77
NOTE 7: DEFERRED COMPENSATION	77
NOTE 8: CONTINGENT LIABILITIES	
NOTE 9: CONTINUANCE SUBJECT TO REVIEW	
NOTE 10: OTHER POST-EMPLOYMENT BENEFITS	78
NOTE 11: OTHER POST-EMPLOYMENT BENEFITS - TRS EMPLOYEES	
NOTE 12: PENSION DISCLOSURE	85
NOTE 13: RISK MANAGEMENT	91
NOTE 14: COMPONENT UNITS	91
NOTE 15: SUBSEQUENT EVENTS	92

#### NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### A. REPORTING ENTITY

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The Teacher Retirement System of Texas (TRS or system) is a separate legal entity and considered a discrete component unit of the State of Texas. The system is governed by a nine member board of trustees which has significant independence in the operation and management of the system under the provisions of the state constitution and laws. The trustees serve staggered six-year terms that expire on August 31 of odd numbered years and are all appointed by the Governor. The trustees are appointed as follows:

- Three are direct appointments by the Governor.
- Two appointments are from a list nominated by the State Board of Education.
- Two appointments are from three public school district active members nominated by employees of public school districts.
- One appointment is from three higher education active members nominated by employees of institutions of higher education. Beginning with the 2017 board election, this position became an "open" seat which means retirees and active members from public or higher education are eligible for nomination.
- One appointment is from three retired member candidates nominated by TRS retirees.

The state legislature confirms trustees appointed by the governor, establishes laws with regard to structure, benefits and contributions, and authorizes Pension Trust Fund administrative expenses. State contributions and appropriations received by TRS are determined by the legislature.

This report includes all activities and programs for which TRS exercises fiscal control and responsibility and includes all funds that comprise the system's legal entity.

TRS administers retirement and related benefits to employees and beneficiaries of employees of the public, state-supported, educational institutions of Texas. It operates primarily under the provisions of the Texas Constitution, Article XVI, Section 67 and Texas Government Code, Title 8, Subtitle C. The pension trust fund is a multiple-employer, cost-sharing, defined benefit pension plan with a special funding situation that is a qualified pension trust under Section 401(a) of the Internal Revenue Code.

The system administers the Texas Public School Retired Employees Group Insurance Program and the Texas Active School Employees Uniform Group Benefits Program. These programs provide two separate health care plans, TRS-Care and TRS-ActiveCare, respectively.

TRS-Care is considered an employee benefit trust fund and provides health care coverage for certain persons (and their dependents) who retire under TRS. The statutory authority for the program is Texas Insurance Code, Title 8, Subtitle H, Chapter 1575 and Texas Administrative Code, Title 34, Part 3, Chapter 41. The inception of the plan was fiscal year 1986.

TRS-ActiveCare provides health care coverage to employees (and their dependents) of participating public education entities. Optional life and long-term care insurance, which are provided to active

members and retirees, are also accounted for in the fund. Authority for the plan can be found in the Texas Insurance Code, Title 8, Subtitle H, Chapter 1579 and in the Texas Administrative Code, Title 34, Part 3, Chapter 41. The plan began operations on September 1, 2002.

The system also administers a 403(b) Administrative Program in which companies must be certified by TRS to offer qualified investment products to public education employees through payroll deductions in accordance with Internal Revenue Code section 403(b). Authority for the program can be found in Vernon's Civil Statutes, Title 109, Article 6228a-5, Sections 4-8A and in the Texas Administrative Code, Title 34, Part 3, Chapter 53. The program began operations on September 1, 2001.

An Agency Fund is used to account for garnishments of salaries and wages for child support payments from TRS employees.

#### B. MEASUREMENT FOCUS, BASIS OF ACCOUNTING, AND BASIS OF PRESENTATION

The system's accounts are organized on the basis of funds, each of which is considered a separate accounting entity. The operations of each fund are accounted for with a self-balancing set of accounts that comprise its assets, liabilities, additions/revenues and deductions/expenses. The following fund types are used to reflect the system's transactions:

- *Fiduciary Funds* include the Pension Trust Fund, TRS-Care (employee benefits trust fund) and the Agency Fund.
- Proprietary Funds include TRS-ActiveCare and the 403(b) Administrative Program which are both Enterprise funds. TRS-ActiveCare is considered a major fund.

*Fiduciary* funds are used to report assets held in a trustee or agency capacity on behalf of others. The reporting focus is on net position and changes in net position. The pension and other employee benefit trust funds are used to report resources held in trust for the members and beneficiaries of the defined benefit pension plan and the other employee benefit plan. Agency funds are used to report resources held in a purely custodial capacity by the reporting government.

*Proprietary*, enterprise funds account for business-type activities or those for which a fee is charged to external users for goods or services. The reporting focus is on the determination of operating income, changes in net position, financial position, and cash flows. Proprietary funds distinguish operating activities from non-operating. Operating activities generally result from providing services and producing or delivering goods. Operating revenues for the system's proprietary funds are derived from self-insurance premiums and providing plan and product certification services to qualified 403(b) plans. Operating expenses include the costs of claims, costs of certification/product services and related administrative expenses. Non-operating revenues and expenses are those items that do not meet any of the above definitions.

Separate financial statements are provided for each fund. The fiduciary (excluding agency funds) and proprietary financial statements are reported using the economic resources measurement focus and the accrual basis of accounting. Additions are recognized when earned, and deductions are recognized when the liability is incurred, regardless of the timing of related cash flows. Contributions

are recognized in the period in which amounts are due, pursuant to state law. Benefits and refunds of contributions are recognized when due and payable in accordance with the terms of the plan. All economic resources, including financial and capital assets, and related liabilities, both current and long-term, and the changes therein are reported in each funds' financial statements. Capital assets are depreciated or amortized on a straight-line basis, if appropriate.

Agency funds are custodial in nature and do not measure the results of operations. Assets and liabilities are recorded using the accrual basis of accounting. Agency funds are used to report assets collected and transferred to the state or other entities.

#### C. NEW ACCOUNTING PRONOUNCEMENTS

The accompanying financial statements were prepared in conformity with generally accepted accounting principles (GAAP) as prescribed by the Governmental Accounting Standards Board (GASB). GASB issued the following statements that relate to TRS.

GASB Statement No. 74, *Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans,* was issued June 2015 and is effective for fiscal years beginning after June 15, 2016. This statement replaces GASB Statement 43 and establishes standards for financial reporting and amends note disclosure and supplemental information requirements for other post-employment defined benefit plans administered through qualified trusts. The requirements of this statement were implemented by TRS this fiscal year.

GASB Statement No. 75, Accounting and Financial Reporting for Post-Employment Benefits Other Than Pensions, relates to governmental employers that provide post-employment benefits other than pensions and is effective for fiscal years beginning after June 15, 2017. TRS will work with plan auditors to provide the information necessary for employers to comply with this statement in the next fiscal year.

GASB Statement No. 80, *Blending Requirements for Certain Component Units*, amends the blending requirements for the financial statement presentation of component units of all state and local governments and is effective for fiscal years beginning after June 15, 2016.

GASB Statement No. 82, *Pension Issues*, amends certain pension reporting requirements of GASB Statements No. 67, No. 68, and No. 73 and is effective for fiscal years beginning after June 15, 2016.

#### D. COMPARATIVE DATA IN TOTAL

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The basic financial statements include certain prior year summarized comparative data in total but not at the level of detail required for a presentation in conformity with generally accepted accounting principles. Accordingly, such information should be read in conjunction with the system's financial statements for the fiscal year ended August 31, 2016, from which the summarized information was derived.

Health Care Premiums (paid by retirees) have been moved from the "Additions" section of the Statement of Changes in Fiduciary Net Position to be a contra-expense item netted against Health Care Claims Expense in the "Deductions" section. This change was made due to the implementation

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of GASB Statement 74 *Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans.* The related amounts from the prior year's financial statements have been reclassified to conform to the presentation in the current year's financial statements.

#### E. BUDGETS AND APPROPRIATIONS

The administrative costs and capital asset outlay for each of the system's funds and programs are controlled by annual budgets approved by the board of trustees.

The Pension Trust Fund receives state contributions for retirement benefits from general revenue appropriations. In fiscal years 2017 and 2016, contributions were made by the State of Texas to the retirement system at the rate of 6.8 percent of the aggregate compensation paid to active retirement system members for each year. Although appropriated by the legislature, administrative expenses and capital outlay for the Pension Trust Fund are paid from the fund's Expense Account, and not from the state's General Fund.

TRS-Care received contributions from the state's General Fund equal to 1.00 percent of salaries paid to public education employees in fiscal year 2017. Administrative expenses for this program are paid from the trust fund.

The two Enterprise Funds, TRS-ActiveCare and the 403(b) Administrative Program, are supported by fees and receive no appropriations from the state for administrative expenses.

Effective September 1, 1997, legislation authorized TRS to administer a governmental excess benefit arrangement under section 415(m) of the Internal Revenue Code of 1986 (26 U.S.C.). This legislation created a separate, nonqualified, unfunded excess benefit arrangement outside the trust fund of the retirement system. Contributions to this arrangement are made from the state's general revenue appropriations. These contributions are not held in trust and may not be commingled with other funds of the retirement system. They yield no net position; therefore, for reporting purposes only the contributions and benefits are reflected on Exhibit II, Statement of Changes in Fiduciary Net Position.

#### F. ASSETS, LIABILITIES AND LEGAL RESERVES

#### Cash and Cash Equivalents

Investments with an original maturity of three months or less that are used for cash management instead of investing activities are considered cash equivalents. Highly liquid investments invested as part of a short-term investment fund are not considered cash equivalents.

#### Receivables

Receivables represent the amount of money owed to TRS for goods or services delivered or used that have not been received at fiscal year-end.

• *Sale of Investments* receivables occur when the trade date is before the fiscal year-end and the settlement date is in the next fiscal year.

- Interest and Dividend receivables represent distributions of income made on bank accounts and other investments that TRS earned in the current fiscal year but did not receive until after fiscal year-end.
- *Member and Retiree* receivables represent contributions that are due from members for the current fiscal year but not received until after fiscal year-end.
- *Participating Employers* receivables represent contributions that are due from participating employers for the current fiscal year which are not received until after fiscal year-end.
- Service Credit Purchase receivables represent the outstanding balance due from members on service credit purchase installment contracts at fiscal year-end. Payments can be made on a monthly basis for up to five years for purchasing additional creditable service. Receivables are recognized when an agreement is signed.
- *Other* receivables represent amounts owed to TRS such as refund or annuity repayments due at fiscal year-end but not received until the next fiscal year.

#### Investments

Investments are reported at fair value. Fair value is a market-based measurement, not an entityspecific measurement. It is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Measurement, recognition, or disclosure of an asset or liability depends on the aggregation or disaggregation of the unit of account of the asset or liability. TRS utilizes one or more of the following valuation techniques in order to measure fair value: the market approach, the cost approach, and the income approach.

Fair value maximizes the use of relevant observable inputs and minimizes the use of unobservable inputs. A fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value, assigning the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1) and the lowest priority to unobservable inputs (level 3). A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Fair value inputs are categorized into the following three levels:

- Level 1 Quoted prices (unadjusted) in active markets for identical assets or liabilities that can be accessed at the system's measurement date;
- Level 2 Inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly or indirectly;
- Level 3 Unobservable inputs for an asset or liability.

For investments that do not have a readily determinable fair value and fall outside of the fair value hierarchy, the system establishes fair value by utilizing the Net Asset Value Per Share (NAVPS), or its equivalent, as a practical expedient, provided all of the following criteria are met:

Fair value is not readily determinable;

- The NAVPS is calculated consistently with the Financial Accounting Standards Board's measurement principles for investment companies (Accounting and Standards Codification Topic 946);
- The NAVPS represents a proportionate share of the net assets to which it is attributed;
- And the NAVPS is provided by the investee.

The system obtains the NAVPS from the most recent capital account statement or audited financial statement issued by a General Partner or Fund Administrator. If either statement's fiscal year end does not coincide with the system's fiscal year end, the NAVPS is adjusted for any distributions or contributions that occur subsequent to the statement's measurement date through the system's fiscal year end.

*Short-Term Investments* include Short-Term Commingled Funds, Short-Term Foreign Currency Contracts, and the Short-Term Investment Fund (STIF). The following fair value measurements determine the appropriate level within the fair value hierarchy:

- Short-Term Commingled Funds are valued at the NAVPS by the General Partner or Fund Administrator.
- Short-Term Foreign Currency Contracts are priced at the spot rate in active markets and valued at Level 1.
- The STIF is a 2a-7 like fund and is priced at the NAVPS by the custodian bank, State Street Bank and Trust Company.

*Equity Investments* include both Domestic and International Equity. The following fair value measurements determine the appropriate level within the fair value hierarchy:

- Equities priced at the last sale price in their respective active markets are valued at Level 1.
- Domestic Equities priced at a mean price by a third party are valued at Level 3.
- Domestic Equities priced by a third party that uses a guideline market multiples approach and a sum of parts valuation analyses are valued at Level 3.
- Equities that are not actively traded with a stale price as of the system's measurement date are valued at Level 3.

*Fixed Income Investments* include Asset and Mortgage Backed Bonds, Corporate Bonds, Sovereign Government Issues, U.S. Government Agency Bonds, U.S. Treasuries, U.S. Treasury STRIPS, and U.S. TIPS. The following fair value measurements determine the appropriate level within the fair value hierarchy:

• U.S. Treasuries priced at the last sale price of the primary exchange are valued at Level 1.

• Fixed Income Investments priced using a bid evaluation matrix pricing technique that is based on their relationship to non-proprietary index market quotations, yields, maturities, call features, and ratings are valued at Level 2.

*Alternative Investments* include Absolute Return, Energy, Natural Resources & Infrastructure, Hedge Funds, Other Private Markets, Private Equity, Real Assets, and Risk Parity. The following fair value measurements determine the appropriate level within the fair value hierarchy:

- Other Private Markets priced by a third party that uses a guideline market multiples approach and a sum of parts valuation analyses is valued at Level 3.
- All other Alternative Investments are valued at the NAVPS by the General Partners or Fund Administrators.

*Derivative Investments* include Futures, Forwards, Options, Rights, Swaps, and Warrants, and they are either executed on an exchange or in a bilateral deal in an over-the-counter (OTC) market with an International Swaps and Derivatives Association (ISDA) counterparty as a broker. The following fair value measurements determine the appropriate level within the fair value hierarchy:

- Options priced at the mean and settle price, and Forwards, Rights, and Warrants priced at the last sale price in their respective active markets are valued at Level 1.
- Derivative Investments that are valued using a matrix pricing technique that are based on their relationship to benchmark quoted prices are valued at Level 2.

*Pooled Investments* include Commingled Equity, Commingled Fixed Income, and Mutual Funds and are priced at the NAVPS by the General Partners or Fund Administrators.

*Invested Securities Lending Collateral* is comprised of the reinvested cash collateral received from borrowers in the securities lending program, in addition to the operating costs of the program. The following fair value measurements of the reinvested cash collateral determine the appropriate level within the fair value hierarchy:

- Securities priced at the last sale price in their respective active markets are valued at Level 1.
- Securities priced using a bid evaluation matrix pricing technique that is based on their relationships to non-proprietary index market quotations, yields, maturities, call features, and ratings are valued at Level 2.

#### **Other Assets**

Prepaid deposits and rent expense reflects payment for rental costs applicable to a future accounting period.

#### **Capital Assets**

Capital assets associated with the funds' activities are included in the statement of net position. Purchases of capital assets by the fund are reported at cost on the acquisition date. Depreciation of all exhaustible capital assets is charged as an expense against the fund's operations. Depreciation

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is calculated using the straight-line method over the asset's useful life. Note 2 includes a table identifying the capitalization threshold and estimated useful life by asset type.

#### Liabilities

- Accounts Payable represents the liability for assets or services received at fiscal year-end for which payment has not been made.
- *Benefits Payable* for the Pension Trust Fund represent the liability for retirement, disability, and death benefits due at fiscal year-end and payable within the next 30 days.
- *Health Care Claims Payable* for TRS-Care and TRS-ActiveCare include an estimate for health care claims incurred but not reported to the system at fiscal year-end.
- Investments Purchased Payable represent the liability for securities purchased prior to fiscal year-end for which payment has not been made. Foreign investments purchased payable is reported at current exchange rates.
- Securities Sold Short represent obligations to deliver securities which include Equities and Rights. These obligations are priced at fair value at the last sale price in their respective active markets and valued at Level 1 in the fair value hierarchy.
- *Collateral Obligations* are the cash collateral received from borrowers in the securities lending program.
- *Employee Compensable Absences Payable* represents the liability that becomes due upon the resignation, retirement and use of leave balances by employees. These obligations are normally paid from the same funding source from which each employee's salary or wage compensation was paid. Liabilities are reported separately as either current or non-current in the Statement of Net Position for enterprise funds, if appropriate.
- Unrealized Lease Incentives represent a reduction to rental expenses for the rent abatement and incentives received from the non-cancelable operating lease that are being amortized over the lease term.

#### Interfund/Interagency Transactions and Balances

The Pension Trust Fund provides various administrative services to other TRS programs and accounts for these services as reciprocal interfund activity. These transactions are reported using the appropriate classification accounts for additions/revenues or deductions/expenses as if transacted with parties external to the state, i.e., they are not presented as transfers. The interfund receivables and payables related to reciprocal interfund activity are classified as receivables and accounts payable on the financial statements.

Interagency transactions have been classified using the above criteria for reciprocal inter-fund activity.

#### Legal Reserve Accounts

The Pension Trust Fund has five statutorily required reserves. The statutory accounts are a requirement of the Texas Government Code, Chapter 825, Sections 307-313.

- The *Member Savings Account* represents the accumulation of active member deposits plus interest.
- The *State Contribution Account* represents the reserves available to fund future active member retirement, death, and survivor benefits. Net investment gains or losses are accumulated in the Interest Account and transferred to the State Contribution Account together with any other balance remaining in the Interest Account.
- The *Retired Reserve Account* represents the reserves available to fund retirement, death, survivor benefits and post-retirement benefit increases.
- The *Deferred Retirement Option Account* represents the accumulation of participating member deposits plus interest less benefits paid out.
- The *Expense Account* represents the reserves to pay administrative expenses of the Pension Trust Fund that exceed the state's appropriations and that are required to perform the fiduciary duties of the board.

#### **NOTE 2: CAPITAL ASSETS**

Capital assets are presented at historical cost or, if not purchased, at fair value at the date of acquisition. When appropriate, straight-line depreciation and amortization have been charged over the shorter of estimated useful lives of the assets or lease period. Capitalization thresholds for all capital asset classes and useful lives for depreciable assets are shown below:

Asset Class	pitalization hreshold	Depreciable Life
Land and Land Improvements	\$ 0	N/A
Construction in Progress	0	N/A
Buildings and Building Improvements	100,000	10-50 years
Facilities and Other Improvements	100,000	10 years
Leasehold Improvements	100,000	22 years
Furniture and Equipment	5,000	5-10 years
Vehicles, Boats, and Aircraft	5,000	5-7 years
Internally Developed Computer Software	1,000,000	5 years
Computer Software	100,000	5 years
Other Capital Assets	Various	6 years

Capital asset balances and current year transactions are presented in the following table:

Asset Class	Balance 09/01/2016		Reclasses & Completed CIP	Additions	Deletions	Balance 08/31/2017 (Exhibit I)
Non-Depreciable Assets:						
Land and Land Improvements	\$ 1,658,310	\$		\$	\$	\$ 1,658,310
Construction in Progress	43,497,286		(641,213)	20,028,926		62,884,999
Other Tangible Capital Assets	124,136					124,136
<b>Total Non-Depreciable Assets</b>	\$ 45,279,732	\$	(641,213)	\$ 20,028,926	\$ 0	\$ 64,667,445
Depreciable Assets:						
Buildings and Building	\$ 39,175,704	\$		\$	\$	\$ 39,175,704
Improvements						
Furniture and Equipment	13,369,698			830,161		14,199,859
Vehicle, Boats & Aircraft	76 <mark>,</mark> 363			5,175		81,538
Leasehold Improvements	3,547,715					3,547,715
Facilities and Other Improvements	343,622					343,622
Total Depreciable Assets at						
Historical Costs	\$ 56,513,102	\$	0	\$ 835,336	\$ 0	\$ 57,348,438
Less Accumulated Depreciation for:						
Buildings and Building						
Improvements	\$ (20,853,215)	\$		\$ (1,353,671)	\$	\$ (22,206,886)
Furniture and Equipment	(8,904,810)			(1,314,977)		(10,219,787)
Vehicles, Boats & Aircraft	(52,897)			(6,361)		(59,258)
Leasehold Improvements	(3,118,424)			(20,523)		(3,138,947)
Facilities and Other Improvements	(184,776)			(34,362)		(219,138)
<b>Total Accumulated Depreciation</b>	\$ (33,114,122)	\$	0	\$ (2,729,894)	\$ 0	\$ (35,844,016)
Depreciable Assets, Net	\$ 23,398,980	\$	0	\$ (1,894,558)	\$ 0	\$ 21,405,422
Amortizable Assets-Intangible:						
Computer Software	\$ 10,727,011	\$	641,213	\$ 387,179	\$	\$ 11,755,403
Total Amortizable Assets at						
Historical Costs	\$ 10,727,011	\$	641,213	\$ 387,179	\$ 0	\$ 11,755,403
Less Accumulated Amortization for:						
Computer Software	\$ (9,920,670)	\$		\$ (411,935)	\$	\$ (10,332,605)
Total Accumulated Amortization	\$ (9,920,670)	-		\$ (411,935)	 \$ 0	 (10,332,605)
Amortizable Assets-Intangible, Net	\$ 806,341	\$	641,213	\$ (24,756)	\$ \$ 0	\$ 1,422,798
Capital Assets, Net	\$ 69,485,053	\$	0	\$ 18,109,612	\$ \$ 0	\$ 87,594,665

3-1

#### NOTE 3: DEPOSITS AND INVESTMENTS

#### A. INVESTMENT POLICY AND TARGET ASSET ALLOCATION

The Board of Trustees has the primary fiduciary responsibility for investing TRS trust assets in accordance with Article XVI, Section 67 of the Texas Constitution and with applicable law. The Board adopts the Investment Policy Statement which establishes investment objectives and policy, obtains expert advice and assistance, and oversees the employment of a qualified and competent investment staff (Investment Management Division) and legal staff. The Board also monitors the actions of staff, consultants, and advisors to ensure compliance with its policies. The current Investment Policy Statement has been in effect since October 1, 2016, and there were no significant investment policy changes during the reporting period. For the fiscal year ended August 31, 2017, there were no significant violations of state statute, investment policy, or contractual provisions. The Statement in its entirety can be accessed at <u>www.trs.texas.gov</u>.

The total or overall investment portfolio includes all assets invested by TRS to provide retirement, death, health, and disability benefits administered by the system, and is structured and managed to achieve the following objectives:

- a. Control risk through proper diversification of asset classes and by establishing long-term risk and return expectations; and
- b. As applicable to the pension plan, achieve a long-term rate of return that:
  - i. Exceeds the assumed actuarial rate of return adopted by the Board;
  - ii. Exceeds the long-term rate of inflation by an annualized 5 percent; and
  - iii. Exceeds the return of the Fund Policy Benchmark.

Categories of permissible investments include cash equivalents, debt securities, private markets, derivatives, mutual funds, closed-end funds, publicly traded or Rule 144A assets, and commingled funds. The target asset allocation, long-term expected real rate of return, and expected contribution to long-term portfolio returns by asset class set forth in the Investment Policy Statement is shown in the table on the following page as of August 31, 2017.

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Asset Class	Target Allocation * %	Long-Term Expected Geometric Real Rate of Return	Expected Contribution to Long-Term Portfolio Returns**
Global Equity			
U.S.	18%	4.6%	1.0%
Non-U.S. Developed	13	5.1	0.8
Emerging Markets	9	5.9	0.7
Directional Hedge Funds	4	3.2	0.1
Private Equity	13	7.0	1.1
Stable Value			
U.S. Treasuries	11	0.7	0.1
Absolute Return	0	1.8	0.0
Stable Value Hedge Funds	4	3.0	0.1
Cash	1	-0.2	0.0
Real Return			
Global Inflation Linked Bonds	3	0.9	0.0
Real Assets	16	5.1	1.1
Energy and Natural Resources	3	6.6	0.2
Commodities	0	1.2	0.0
Risk Parity			
Risk Parity	5	6.7	0.3
Inflation Expectation			2.2%
Alpha			1.0
Total	100%		8.7%

\* Target allocations are based on the FY2014 policy model. Infrastructure was moved from Real Assets to Energy and Natural Resources in FY2017, but the reallocation does not affect the long-term expected geometric real rate of return or expected contribution to long-term portfolio returns.

\*\*The Expected Contribution to Long-Term Portfolio Returns incorporates the volatility drag resulting from the conversion between arithmetic and geometric mean returns.

For the fiscal year ended August 31, 2017, the annual money-weighted rate of return on pension plan investments was 12.98 percent. The annual money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

#### B. CASH AND DEPOSITS

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Cash and deposits of the system are maintained in bank accounts and in the State of Texas Treasury. The Treasury invests funds in time deposits, repurchase and reverse repurchase agreements, obligations of the United States government, and obligations of federal credit organizations. The Treasury has an arrangement with financial institutions to collateralize state deposits in excess of depository insurance. As of August 31, 2017, the carrying amount and bank balance of cash and deposits at the Treasury totaled \$303,574,622. The carrying amount of the system's bank accounts totaled \$129,537,801, the bank balance totaled \$129,497,864, and cash on hand totaled \$3,095,144.

0-4

## Notes to the Financial Statements

#### C. INVESTMENTS

The system reports the following recurring fair value measurements as of August 31, 2017.

	Fair Value						
- Investment Type	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Net Asset Value Per Share (NAVPS)	Total		
nvestments							
Alternative Investments							
Absolute Return	\$ - :	- \$	- \$	1,769,495,081 \$	1,769,495,08		
Directional Hedge Funds		-		5,894,151,419	5,894,151,41		
Domestic Energy, Natural Resources & Infrastructure				5,459,606,585	5,459,606,58		
Domestic Private Equity				13,836,329,690	13,836,329,69		
Domestic Real Assets		1. J. J. M. M. M. M.	~	13,861,772,333	13,861,772,3		
International Energy, Natural Resources & Infrastructure				80,840,724	80,840,7		
International Private Equity				4,129,194,180	4,129,194,1		
International Real Assets				3,654,258,498	3,654,258,4		
Other Private Market			926,560,825		926,560,8		
Risk Parity				3,754,033,129	3,754,033,1		
Stable Value Hedge Funds				5,641,926,266	5,641,926,2		
Total Alternative Investments			926,560,825	58,081,607,905	59,008,168,7		
Derivative Investments							
Forwards	(52,603,444)				(52,603,44		
Futures	1 - F - M			· •			
Options	387,431	(1,608,941)			(1,221,51		
Rights	147,256			-	147,2		
Swaps	-	19,924,959			19,924,9		
Warrants	2,485,140	3,476,139	-	-	5,961,2		
Total Derivative Investments	(49,583,617)	21,792,157	-		(27,791,46		
Equity Investments							
Domestic Equity	21,153,070,563		91,762	-	21,153,162,3		
International Equity	28,631,772,653		6,928,043	•	28,638,700,6		
Total Equity Investments	49,784,843,216	•	7,019,805	11. A.	49,791,863,02		
Fixed Income Investments							
Asset and Mortgage Backed Bonds		132,860,923	-		132,860,9		
Domestic Corporate Bonds	-	7,983,302			7,983,3		
International Corporate Bonds		92,857			92,8		
Sovereign Government Issue Bonds		900,937,012	-		900,937,0		
U.S. Government Agency Bonds		8,595,392		-	8,595,3		
U.S. Treasuries	14,440,953,938		-	-	14,440,953,9		
U.S. Treasury STRIPS		12,401,754			12,401,7		
U.S. TIPS	-	6,237,918,115		-	6,237,918,1		
Total Fixed Income Investments Pooled Investments	14,440,953,938	7,300,789,355			21,741,743,2		
Commingled Domestic Equity				E E 77 E 04 304	F F77 F04 3		
				5,577,504,284	5,577,504,2		
Commingled Fixed Income				122,286,643	122,286,6		
Commingled International Equity				5,282,722,514	5,282,722,5		
Domestic Mutual Funds			5	392,737,522	392,737,5		
International Mutual Funds Total Pooled Investments				117,027,953	117,027,9		
Short-Term Investments				11,492,278,916	11,492,278,9		
Short-Term Investment Fund			1.	3,910,166,490	3,910,166,4		
Short-Term Foreign Currency Contracts	(27,073)			3,910,100,490	(27,07		
Total Short-Term Investments	(27,073)			3,910,166,490	3,910,139,4		
				and the second			
Total Investments Securities Lending	\$ 64,176,186,464	\$ 7,322,581,512 \$	933,580,630 \$	73,484,053,311 \$	145,916,401,9		
Invested Securities Lending Collateral*	5,905,046,000	11,734,848,840		1	17 630 904 0		
Total Securities Lending	\$ 5,905,046,000	and the second		- \$	17,639,894,8		
	÷ 5,505,040,000	- II,/J-1,040,040 \$	- >	- >	17,639,894,8		
Securities Sold Short							
	(182 214 448)			100	(182 214 44		
Securities Sold Short Securities Sold Short Total Securities Sold Short	(182,214,448) \$ (182,214,448)	- \$ - \$	- \$	- \$	(182,214,44		

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As of August 31, 2017, the system has no plans to sell investments for an amount different from the NAVPS (or its equivalent), and all investments to be sold have been identified.

The system achieves portfolio diversification by investing in a variety of strategies, geographies, and industry sectors. The significant investment strategies of the investees for investments reported at the NAVPS, as of August 31, 2017, are disclosed in the following table.

	Significant Investment Strategies
	Alternative Investments
Absolute Return	
US Investment Grade	Invests in US dollar-denominated investment-grade credit securities.
US High Yield	Invests in U.S. dollar-denominated, high-yield corporate bonds issued in the U.S.
US Securitized / Structured	Invests in bonds backed by securities.
Non-US Developed Fixed Income	Primarily invests in sovereign debt issued by developed countries outside of the US.
Emerging Market Debt	Invests in debt issued by corporations or governments in Emerging market countries.
Partnerships	Invests in fixed income related portfolios managed by strategic partners.
Directional Hedge Funds	
Event Driven	Seeks to exploit pricing inefficiencies that may occur before or after a corporate event, such as an earnings call, bankruptcy, merger, acquisition, or spino
Fixed Income	Invests in fixed income strategies which typically involve some amount of credit exposure.
Long Short Equity	Involves buying long equities that are expected to increase in value and selling short equities that are expected to decrease in value.
Multi Strategy	Engages in a variety of investment strategies with the objective to smooth returns, reduce volatility, and decrease asset-class and single-strategy risks. Strategies adopted in a multi-strategy fund may include, but are not limited to, convertible bond arbitrage, equity long/short, statistical arbitrage and merger arbitrage.
Other	Trades in a broad range of instruments.
omestic/International Energy, Natural Re	
Energy Diversified	Invests in exploration, production, or distribution of oil, gas and other energy sources.
Infrastructure	Invests in infrastructure projects like roads, railways, ports, airports, telecommunications facilities, etc
Natural Resources	Invests in companies engaged in extractive practices of commodities, including mining for coal, metallic ore, sand, gravel and oil shale; logging of natural occurring trees; and drilling for oil and gas.
Domestic/International Private Equity	
Buyouts	Acquires shares of a company to gain a controlling interest.
Credit/Special Situations	Invests and trades in public and private debt obligations or equity securities or other indebtedness of companies undergoing financial distress, a turn- around in business operations, or companies which management believes are undervalued because of a discrete extraordinary event.
Emerging Managers	Trades in a broad range of instruments with emerging managers.
Venture/Growth Equity	Invests in companies with potential for significant growth.
Domestic/International Real Assets	
Core	Invests in stable, fully leased, multi-tenant properties typically within strong, diversified metropolitan markets.
Emerging Managers	Trades in a broad range of instruments with emerging managers.
Opportunistic	Targets underperforming and/or undermanaged properties, or properties that are temporarily depressed in value.
Other	Trades in a broad range of instruments.
REIT	Invests in companies that own or finance income-producing real estate.
Special Situations	Typically provides both equity and debt capital to distressed properties.
Value Added	Involves buying a property, improving it in some way, and selling it at an opportune time for gain. Properties are considered value added when they exhibit management or operational problems, require physical improvement, and/or suffer from capital constraints.
Risk Parity	
Risk Parity	Targets specific levels of risk to certain factors and/or assets in order to achieve increased portfolio diversification.
Stable Value Hedge Funds	
Commodities and Trends	Trades in a number of debt, equity, foreign exchange and commodity instruments and derivative contracts relating to those instruments, including swaps indices, forwards, futures and option contracts.
Equity Market Neutral	Seeks to exploit differences in stock prices by being long and short in stocks within the same sector, industry, market capitalization, country, etc.
Fixed Income	Assumes opposing positions in fixed income products to take advantage of small price discrepancies while limiting interest rate risk.
Macro & Volatility	Invests in instruments whose prices fluctuate based on the changes in economic policies, along with the flow of capital around the globe.
Multi Strategy	Aims to deliver consistently positive returns regardless of the directional movement in equity, interest rate or currency markets.
Other	Trades in a broad range of instruments.
Reinsurance	Provides property catastrophe and specialty reinsurance coverages to insurers and reinsurers on a worldwide basis.
	Pooled Investments
ommingled Domestic/International Equit	y, Commingled Fixed Income, and Mutual Funds
External Public Total Non-US Developed	Invests in long positions in equity securities as well as certain derivatives in non-US developed markets.
External Public Total USA	Invests in long positions in equity securities as well as certain derivatives in US markets.
External Public Total World Equity	Invests in equity securities in countries represented in the MSCI ACWI Value Index, as well as certain other global markets. Instruments used include but are not limited to ADRs, swaps, warrants, and other derivative instruments, money market instruments, and currency forwards and/or futures.
External Public Strategic Partnership	Allocations to strategic partners that have a broad mandate to invest in a variety of public markets.
External Public Total Emerging Markets	Invests mainly in equity and equity-related securities traded in the securities markets of newly industrializing countries and emerging markets.
	Short-Term Investments
Short-Term Investment Fund	Invests in highly liquid short-term ("cash-like") funds.

The system manages unfunded capital commitments that it is legally obligated to fund when called by a General Partner. Funding of committed capital occurs over an extended time period and may take several years before the total allocation to each asset class is fully invested. Because an individual investment may begin to return capital to the system prior to the full funding of the system's commitment, the outstanding invested capital of the investment might at times be substantially less than the total commitment. The fair value of investments reported at the Net Asset Value Per Share (NAVPS) that have an unfunded capital commitment balance is presented in the following table as of August 31, 2017.

		Investments Valued at the NAVPS			
Investment Type		Fair Value		Unfunded Capital Commitment	
Absolute Return	\$	1,769,495,081	\$	1,032,071,950	
Directional Hedge Funds		5,894,151,419		165,000,000	
Domestic Energy, Natural Resources & Infrastructure		5,459,606,585		3,860,954,718	
Domestic Private Equity		13,836,329,690		9,719,361,198	
Domestic Real Assets		13,861,772,333		6,415,920,946	
International Energy, Natural Resources & Infrastructure		80,840,724		37,188,106	
International Private Equity		4,129,194,180		2,924,946,468	
International Real Assets		3,654,258,498		2,818,788,801	
Total	\$	48,685,648,510	\$	26,974,232,187	

Additionally, as of August 31, 2017, the system reported an unfunded capital commitment balance of \$385,373,470 that has not yet been allocated to a specific Alternative Investment type and an unfunded capital commitment balance of \$321,265,241 for externally managed funds that are not reported at the NAVPS.

The system's Directional Hedge Funds, Stable Value Hedge Funds, Commingled Domestic Equity, and Commingled International Equity are subject to redemption restrictions that constrain the system's ability to redeem these types of Alternative and Pooled Investments. The following table details the redemption frequency, redemption notice period, redemption restrictions, such as lockups and gates, and an estimate of the eventual lapse of those restrictions, or, if an estimate cannot be made, the fiscal year in which the restriction took place, by fair value as of August 31, 2017.

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1

# Notes to the Financial Statement

Fair Value	Redemption Frequency	Redemption Notice Period	mption Terms and Restrictions	Padamatian Proteint				
Fair value	Redemption Frequency		Redemption Restrictions	Redemption Restrictions Lapse				
		the second s	l Hedge Funds					
\$ 596,209,379	NA	NA	NA	NA				
527,585,812	Monthly	30-90 Days	NA	NA				
16,457,865	Monthly	60 Days	25% Investor Gate	No Estimate; Effective 2016				
290,870,129	Monthly	90 Days	36 Months, 10% of Capital Lockup Period	Lapses 08/01/2019				
11,522,456	Quarterly	30 Days	12 Month Lockup; 25% Investor Gate	Lockup Lapses 01/01/2017; Gate- No Estimate; Effective 2016				
903,141,358	Quarterly	45-90 Days	NA	NA				
320,301,393	Quarterly	45 Days	3 Year Lockup; 25% Fund Gate	Lockup Lapses 12/31/2019;				
220.005.005	<b>A</b>		200 - 10 W -	Gate- No Estimate; Effective 2017				
330,995,906	Quarterly	45 Days	3 Year Lockup	Lockup Lapses 01/01/2020				
22,575,104	Quarterly	45 Days	3% Withdrawal Fee	12 months (soft) lockup				
882,136,326	Quarterly	40-65 Days	10%-25% Fund Gate	No Estimate; Effective 2011-2017				
2,372,200	Quarterly	60 Days	20% Quarterly Fund Gate	No Estimate; Effective 2010				
688,918,986	Quarterly	60-90 Days	16.7%-25% Investor Gate	No Estimate; Effective 2012-2017				
15,478,250	Quarterly	65 Days	25% Investor Gate	12 months (soft) lockup; 4% Withdrawal fe				
37,262,414	Quarterly	65-90 Days	25% Quarterly Investor Gate	No Estimate; Effective 2014-2016				
206,599,216	Quarterly	90 Days	25% Fund Gate; 3 Year Rolling Hard Lock	Lockup Lapses June 2019; Gate- No Estimate: Effective 2017				
277,785,790	Quarterly	24 Months	259/ Investor Conte					
			35% Investor Gate	No Estimate; Effective 2014				
440,307,366	Semi-Annual	95 Days	NA	NA				
241,096,830	Semi-Annual	90 Days	20% Fund Gate	No Estimate; Effective 2010				
74,898,987	Yearly	60 Days	NA	NA				
7,635,652	Yearly	60 Days	20% Fund Gate	No Estimate; Effective 2012				
\$ 5,894,151,419								
		Stable Valu	e Hedge Funds					
\$ 342,272,093	Daily	15 Days	NA	NA				
305,339,390	<b>Bi-Monthly</b>	15 or 30 Day Notice	10% Fund Gate for 15 Day Notice	No estimate; Effective 2013				
1,615,867,708	Monthly	2-60 Days	NA	NA				
395,255,805	Monthly	45-90 Days	10%-20% Fund Gate	No estimate; Effective 2006-2012				
280,849,515	Monthly	25-90 Days	20%-25% Investor Gate	No estimate; Effective 2010-2017				
174,391,291	Monthly; Semi-Annual	Monthly, 20 Day Notice; Semi-Annual, 10/31 or 03/31 Notice	36 Month Lockup	Lapses January 1, 2018				
391,015,982	Monthly, Quarterly, 12/31	Monthly- 45-90 Days; Quarterly- 45 Days; 12/31- 90 Days	24 Month Lockup; 1/6th Investor Gate	Lockup- Lapses October 1, 2016; Gate- No estimate; Effective 2014				
339,991,758	Quarterly	45-90 Days	NA	NA				
625,560,088	Quarterly	45-90 Days	15%-25% Fund Gate	No estimate; Effective 2007-2015				
670,872,493	Quarterly	- Contraction of the Contraction	25% Quarterly Investor Gate					
365,296,300	Semi-Annual	90 Days		No estimate; Effective 2014-2015				
135,213,843	Annual	90 Days 03/01	16.67% Semi-Annual Investor Gate Up to 50% can be redeemed at 25% Fund Gate. Redemption could also be gated if request	No estimate; Effective 2013 No estimate; Effective 2013				
			exceeds the amount of capital required by law.					
\$ 5,641,926,266								
	Commingled Domestic Equity							
\$ 761,406,418	NA	NA	NA	NA				
2,142,494,683	Daily	1-5 Days	NA	NA				
508,735,750	Bi-Monthly	9 Days	30% Fund Gate	No Estimate; Effective 2017				
1,342,657,245	Monthly	6-15 Days	NA	NA				
(153,835)	Quarterly	95 Days	NA	NA				
479,444,877	Quarterly	90 Days	2 Year Lockup; 50% Quarterly Investor Gate	Lockup Lapses 2018; Gate- No Estimate; Effective 2017.				
342,919,146	Annual	90 Days	25% Fund Gate	No Estimate; Effective 2010				
\$ 5,577,504,284		and the second						
			iternational Equity					
\$ 1,245,008,666	NA	NA	NA	NA				
110,881,312	Daily	3 Days	NA	NA				
2 070 071 092	Monthly	5-30 Days	NA	NA				
2,079,971,083								
634,673,409	Monthly	90 Days	12, 36, 48 Month Lockup	No Estimate; Rolling 3 Year Lock Up Perio				
	Monthly Quarterly	90 Days 60 Days	12, 36, 48 Month Lockup NA	No Estimate; Rolling 3 Year Lock Up Perio NA				

**Financial Section** 

66

The system receives distributions through the liquidation of the underlying assets of the investees for a majority of its Alternative Investment interests in Private Equity, Real Assets, and Energy, Natural Resources & Infrastructure since these investments can never be redeemed with the investees. The following table discloses the system's estimate of the period over which the underlying assets are expected to be liquidated by the investees as of August 31, 2017.

	للمنط			100	Liqui	dation	Period		: D.,	
Alternative Investment Type		Less than 1 Year	1-5 Years		6-10 Years		Greater than 10 Years	NA		Total
Absolute Return	\$	- \$	30,063,020	\$	-	\$	- \$	1,739,432,061	\$	1,769,495,081
Domestic Private Equity		995,534,602	3,420,644,491		4,203,491,968		711,258,649	4,505,399,980		13,836,329,690
Domestic Real Assets		205,568,699	2,608,532,334		3,492,679,569		5,185,710,584	2,369,281,147		13,861,772,333
Domestic Energy, Natural Resources, and Infrastructure		97,970,872	1,142,294,174		2,598,355,302		644,615,913	976,370,324		5,459,606,585
International Private Equity		785,622,733	1,132,553,642		1,211,934,103		37,990,633	961,093,069		4,129,194,180
International Real Assets		257,164,836	843,668,164		1,758,829,278		157,008,802	637,587,418		3,654,258,498
International Energy, Natural Resources, and Infrastructure			-		-			80,840,724		80,840,724
Risk Parity								3,754,033,129		3,754,033,129
Total	\$	2,341,861,742 \$	9,177,755,825	\$	13,265,290,220	\$	6,736,584,581	15,024,037,852	\$	46,545,530,220

### D. DERIVATIVE INVESTMENTS

Derivatives are used to efficiently manage and reduce the risk of the overall investment portfolio. Through the use of derivatives, the risks that are bound together in traditional cash market investments can be separated and managed independently. Derivative Investments are classified as Investments on the Statement of Fiduciary Net Position, and the changes in their fair value are classified as Investment Revenue on the Statement of Changes in Fiduciary Net Position. The fair value, changes in fair value, and notional value of the system's Derivative Investments, classified by derivative type, are displayed in the following table as of August 31, 2017.

Fiduciary Funds Derivative Investments	F	air Value	e in Fair Value ain/(Loss)	Notional Value
Forwards				
FX Forwards	\$	(52,603,444)	\$ (54,562,538)	\$ (1,988,070,131)
Total Forwards		(52,603,444)	(54,562,538)	
Futures				8
Commodity Futures		-	75,248,277	893,802,933
Fixed Income Futures		-	(100,912,388)	3,034,326,384
Foreign Currency Futures			(2,052,417)	(7,319,276)
Index Futures		-	369,015,524	2,519,409,519
Total Futures		-	341,298,996	
Options				
Equity Options		303,097	(10,477,684)	953,709
Futures Options		-	(115,143)	-
Index Options		(1,524,607)	32,212,661	(2,438,637)
Total Options		(1,221,510)	21,619,834	
Rights				
Rights		147,256	4,816,738	692,832
Total Rights		147,256	4,816,738	
Swaps				
Credit Default Swaps		20,909,308	18,183,388	482,055,330
Interest Rate Swaps		(581,472)	1,797,126	(422,648,637)
Total Return Swaps		(402,877)	(65,390,817)	(150,383,494)
Total Swaps		19,924,959	(45,410,303)	
Warrants				
Warrants		5,961,279	774,151	817,919
Total Warrants		5,961,279	774,151	
Total	\$	(27,791,460)	\$ 268,536,878	

The system's over-the counter (OTC) Derivative Investments include contingent features that require the system to post collateral in the event that the fair value surpasses a specified contractual threshold. The aggregate fair value of all Derivative Investments with these collateral posting provisions is (54,352,464). If the collateral posting requirements were triggered at August 31, 2017, the system would be required to post (72,683,154) in collateral to its counterparties. As of August 31, 2017, the system has posted (12,732,882) in collateral.

### E. SECURITIES LENDING

The system is authorized by Texas Government Code, Section 825.303 to contractually lend securities to borrowers in accordance with the Securities Lending Policy established by the Board of Trustees and as required by statute. The system's lending agent, State Street Global Advisors, administers its securities lending program for domestic and international equity and fixed income securities. TRS securities held by a prime broker are not eligible for securities lending by the prime broker. The current Policy has been in effect since January 1, 2017, and there were no significant securities lending policy changes during the reporting period. The Securities Lending Policy in its entirety can

0-6

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be accessed at <u>www.trs.texas.gov</u>. There were no significant policy violations during the fiscal year.

Collateral received from borrowers are delivered in the form of cash or government securities eligible for book entry in either the Federal Reserve system or the Participants Trust Company, or their respective successors. The initial collateral delivered to secure a loan of domestic securities must have a market value of at least 102 percent of the initial market value of the domestic loaned securities and at least 105 percent of the initial market value of the international loaned securities. Collateral is marked to market daily. If, while the loan is outstanding, the current market value of the collateral initially delivered is less than 100 percent or 105 percent of the current market value of the domestic or international securities, respectively, the securities lending agent must require the borrower to deliver additional collateral to restore the value to 102 percent or 105 percent of the current market value of the loaned securities for domestic or international securities, respectively. The system is authorized to invest cash collateral in the following types of instruments: U.S. government securities or U.S. government-sponsored enterprise (GSE) securities, money market instruments, repurchase agreements, fixed or floating rate debt obligations, and derivative instruments.

The securities lending contracts require the custodian to indemnify the system if the borrower fails to return the securities or income distributions made while the securities are on loan. Non-cash collateral cannot be pledged or sold unless the borrower defaults. All securities loans can be terminated on demand by the system or the borrower.

The par value, dollar-weighted average maturity of the collective cash collateral investment portfolio may not exceed 120 days. The expected final maturity of any individual fixed-rate instrument and individual floating-rate instrument may not exceed 36 months and seven years, respectively. As of August 31, 2017, the maturities of the investments made with cash collateral generally match the maturities of their securities loans, with the weighted average maturity of the invested cash collateral at 16 days, and the weighted average term of all securities on loan at 8 days.

As of August 31, 2017, the system reported \$17,654,070,642 worth of Invested Securities Lending Collateral. The system holds \$17,582,858,689 in cash collateral and \$431,287,122 in non-cash collateral. Securities on loan totaled \$17,698,026,554 and include investments in Domestic Corporate Bonds, Domestic Equities, International Equities, U.S. Government Agency Bonds, and U.S. Treasury Bonds.

### F. DEPOSIT AND INVESTMENT RISK FACTORS

2

#### **Custodial Credit Risk**

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, the system will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, the system will not be able to recover the value of investment or collateral securities that are in the possession of an outside party.

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#### **Deposits**

The system does not have a formal deposit policy for custodial credit risk. Deposits held at the State of Texas Treasury are not subject to custodial credit risk since the Treasury holds collateral in the system's name in excess of depository insurance. Deposits held in bank accounts in excess of depository insurance are uninsured and uncollateralized. As of August 31, 2017, \$129,160,822 of the System's bank balance was uninsured and uncollateralized.

#### Investments

The system has contracted with State Street Bank and Trust Company and Goldman Sachs to serve as custodians for the system's investments. The system does not have a formal investment policy for custodial credit risk. As of August 31, 2017, the Short-Term Investment Fund is held by the custodian in a 2a-7 like investment pool not evidenced by a security and is not exposed to custodial credit risk. These securities are held in the name of the system by the custodian. All other investments are registered in the name of the Teachers Retirement System of Texas or in the name of the system's custodian.

### Securities Lending

The system does not have a formal investment policy for custodial credit risk for its securities lending program. The system's reinvests all cash collateral received in an unrated cash collateral pool held by the system's securities lending agent and is, therefore, not exposed to custodial credit risk. Since non-cash collateral is not reported on the balance sheet, it is exposed to custodial credit risk, as is the related underlying securities on loan. The following table shows the underlying securities for the non-cash collateral loans, which are held by the counterparty, the securities lending agent, but not in the system's name and are not insured as of August 31, 2017.

Investment Type	Securities o	n Loan Fair Value	Non-Cash Collateral Value		
Domestic Corporate Bonds	\$	4,214	\$	4,300	
Domestic Equity		228,619,839		233,401,285	
International Equity		149,942,567		160,542,949	
U.S. Treasuries		36,749,321		37,338,588	
Total	\$	415,315,941	\$	431,287,122	

### **Credit Risk**

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations.

#### Investments

The system does not have a formal credit risk policy for its investments. The S&P credit rating and fair value of the system's Short-Term Investment Fund and Fixed Income Investments as of August 31, 2017 is disclosed in the following table.

Notes to the Financial Stateme
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							Inves	tme	nt Type				
S&P Rating	Asset and Mortgage Backed Bonds	Domestic Corporate Bonds	International Corporate Bonds		Short-Term Investment Fund		Sovereign Government Issue Bonds		U.S. Government Agency Bonds <sup>1</sup>	U.S. Treasuries <sup>2</sup>	U.S. Treasury STRIPS <sup>2</sup>	U.S. TIPS <sup>2</sup>	Total
NA \$	-	\$ *	\$ 	\$		\$	•	\$	- \$	\$ 14,440,953,938 \$	12,401,754 \$	6,237,918,115	20,691,273,807
AAA	1,394,008						497,164		-		-		1,891,172
AA+	23,648,218	-					3,362,408		3,601,847		-		30,612,473
AA	340,147						17			- 2	-		340,147
A+		-	-		-		4,189,206		-	5	-	-	4,189,206
A	525,883	-	-						-		-		525,883
A-	521,838	-	-				-		-				521,838
BBB+	1,576,233	~			-		9,663,382		-	-	-		11,239,615
BBB	708,569	V	-				-		-				708,569
BBB-	789,676	-					6,063,982				1		6,853,658
BB+	6,509,585		-				-		-				6,509,585
BB	1,508,948				-		21,722,704				-		23,231,652
BB-	4,241,427	-											4,241,427
B+	5,945,884	-	-						1.0				5,945,884
В	5,048,570	-			-		2		-	2		1.1	5,048,570
B-	19,856,799	139,219	1				22,684,574				2	-	42,680,592
CCC	29,778,078	-			-		-		-		2	-	29,778,078
CC	1,482,629	-											1,482,629
D	9,804,227				-				1.1				9,804,227
NR <sup>3</sup>	19,180,204	7,844,083	92,857		3,910,166,490		832,753,592		4,993,545		-		4,775,030,771
	132,860,923	\$ 7,983,302	\$ 92,857	Ś	3,910,166,490	s	900,937,012	\$	8,595,392	\$ 14,440,953,938 \$	12,401,754 \$	6,237,918,115	25,651,909,783

### **Derivative Investments**

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The maximum allowable unsecured counterparty exposure for over-the-counter (OTC) derivative transactions is \$500 million, based on the total net market value of all OTC positions held with each counterparty. The total counterparty exposure for each counterparty, including the collateralized portions of these agreements, may not exceed 5 percent of the system's total fund market value. The minimum credit rating, based on a Nationally Recognized Statistical Rating Organization (NRSRO), must be rated at least A- or better at the inception of the contract. For any counterparty that experiences deterioration in credit quality that results in a NRSRO rating below the A- level, subsequent to the inception of transaction, additional eligible collateral may be posted, or the transaction may be terminated.

All OTC derivatives must be governed by an International Swaps and Derivatives Association (ISDA) Master Agreement and Credit Support Annex or, if centrally cleared by clearing agreements, the close-out netting provisions and collateralization provisions must be included.

The counterparty limits for repurchase transactions and tri-party repurchase transactions may not exceed 5 percent of the system's total fund market value, unless the transactions are covered by a third-party indemnification agreement by an organization that bears a long-term NRSRO credit rating of A- or better and is enhanced by acceptable collateral. Each repurchase agreement will be entered into under the Public Securities Association (PSA) and International Securities Market Association

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(ISMA) Global Master Repurchase Agreement. Each ISDA Master Agreement must also include a table that delineates the excess purchased securities margin (haircut) required, based on the collateral type, duration, and credit quality.

The aggregate fair value of Derivative Investment instruments in asset positions as of August 31, 2017, was \$94,676,095, which represents the maximum amount of loss due to credit risk that would be recognized if all counterparties failed to perform as contracted. The exposure is reduced by \$2,730,000 of collateral held and \$76,345,405 of liabilities included in netting arrangements with those counterparties, resulting in a net exposure to credit risk of \$15,600,690. The following table discloses the net exposure to credit risk by counterparty and their corresponding credit rating by each of the Big Three credit rating agencies as of August 31, 2017.

Counterparty	Net Exposure	Percentage of Net Exposure	S&P Rating	Fitch Rating	Moody's Rating
Bank of America	\$ 5,527,384	35%	A+	A+	A1
Citibank	7,804,278	50%	A+	A+	A1
Morgan Stanley	2,269,028	15%	A+	А	A1
Total	\$ 15,600,690	100%	-		

The system's net exposure to credit risk is limited to 5% of the market value of the system's total fund value. As of August 31, 2017, significant concentrations of net exposure to credit risk existed at Bank of America (35%) and Citibank (50%), but the net exposure for each counterparty did not surpass 5% of the system's total fund market value.

### Securities Lending

Instruments having a maturity at the time of purchase of less than 13 months must be rated in one of the two highest short-term ratings categories of the following Nationally Recognized Statistical Ratings Organizations (NRSRO) – Moody's, Standard & Poor's, Fitch or DBRS – or be considered by the Board of Trustees to be of comparable quality. Instruments having a maturity at the time of purchase greater than 13 months must be rated at the time of purchase within the highest major, long-term rating category of an NRSRO (e.g., Moody's A3 or Standard & Poor's A-), or, if unrated, be determined to be of comparable quality by the Board of Trustees. As of August 31, 2017, there was no credit risk exposure because the amounts owed to borrowers exceeded the amounts owed to the system.

#### **Interest Rate Risk**

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment.

### Investments

The system does not have a formal interest rate risk policy for its investments. The following table presents the fair value and the weighted effective duration rate for the system's Fixed Income Investments that are subject to interest rate risk as of August 31, 2017.

Fixed Income Investment Type	Fair Value	Weighted Effective Duration Rate
Asset and Mortgage Backed Bonds	\$ 132,860,923	1.53
Domestic Corporate Bonds	7,983,302	0.03
International Corporate Bonds	92,857	7.37
Sovereign Government Issue Bonds	900,937,012	8.31
U.S. Government Agency Bonds	8,595,392	4.75
U.S. Treasuries	14,440,953,938	17.90
U.S. Treasury STRIPS	12,401,754	17.63
U.S. TIPS	6,237,918,115	5.44
Total	\$ 21,741,743,293	13.82

Asset and Mortgage Backed Bonds are based on cash flows from interest payments on underlying mortgages, which makes them highly sensitive to interest rate changes when mortgagees make prepayments in periods of declining interest rates.

#### **Derivative Investments**

The system does not have a formal interest rate risk policy for its Derivative Investments. The system's investments in Swaps are highly sensitive to interest rate changes because they are based on fluctuating Interbank Offered Rates. As the Rates fluctuate, the total expected cash flows will fluctuate. The reference rates, embedded options, fair value, and notional value of the system's Interest Rate and Return Swaps that are exposed to interest rate risk, as of August 31, 2017, are presented in the following table.

		Investm	ent Maturities (	in Years)	
Reference Rate & Embedded Options	Fair Value	Less than 1	1-5	6-10	Notional Value
Interest Rate Swaps					inotional value
Receive Variable 6-month EURIB, Pay Fixed 0.28200%	\$ 397,163	\$-	\$-\$	397,163 \$	(11,873,539)
Receive Variable 6-month EURIB, Pay Fixed 0.52200%	286,555	2	2	286,555	(27,557,501)
Receive Variable 6-month EURIB, Pay Fixed 0.55300%	198,951	-	-	198,951	(29,051,948)
Receive Variable 6-month EURIB, Pay Fixed 0.73100%	(110,235)		-	(110,235)	(57,019,619)
Receive Variable 6-month EURIB, Pay Fixed 0.73300%	43,675	- <sup>-</sup>	-	43,675	(12,280,975)
Receive Variable 6-month EURIB, Pay Fixed 0.81450%	(106,711)		-	(106,711)	(12,780,669)
Receive Variable 6-month EURIB, Pay Fixed 0.83950%	(22,720)	-	100	(22,720)	(2,503,822)
Receive Variable 6-month EURIB, Pay Fixed 0.98500%	(1,537,471)	-	÷	(1,537,471)	(75,151,287)
Receive Variable 6-month PRIBO, Pay Fixed 1.05500%	42,476	-	42,476	-	(12,978,028)
Receive Variable 6-month PRIBO, Pay Fixed 1.06000%	41,651	-	41,651	-	(12,931,866)
Receive Variable 6-month PRIBO, Pay Fixed 1.06750%	36,818	-	36,818		(12,931,794)
Receive Variable 6-month PRIBO, Pay Fixed 1.06800%	36,503	-	36,503	-	(12,931,794)
Receive Variable 6-month PRIBO, Pay Fixed 1.08500%	53,310	-	53,310	-	(26,637,655)
Receive Variable 6-month PRIBO, Pay Fixed 1.09900%	30,784	-	30,784	÷	(26,079,286)
Receive Variable 6-month PRIBO, Pay Fixed 1.10000%	14,753		14,753	5 ¥	(13,039,643)
Receive Variable 6-month PRIBO, Pay Fixed 1.10500%	2,580	-	2,580	<b>a</b>	(5,348,657)
Receive Variable 6-month PRIBO, Pay Fixed 1.11500%	5,899	-	5,899	· ·	(58,510,910)
Receive Variable 6-month PRIBO, Pay Fixed 1.12000%	4,548	-	4,548	-	(13,039,643)
Total Interest Rate Swaps	(581,471)	-	269,322	(850,793)	
Total Return Swaps					
Receive Equity, Pay Variable 12-month FEDFU	(112,523)	(112,523)	-	-	4,929,100
Receive Equity, Pay Variable 1-month FEDFU	(2,165)	-	(2,165)	2	7,054,623
Receive Equity, Pay Variable 1-month FEDLO	262,731	-	262,731		10,990,663
Receive Equity, Pay Variable 1-month JPYIB	(128,914)	-	(128,914)	-	2,218,697
Receive Equity, Pay Variable 1-month LIBOR	898,440	808,800	89,640	-	32,277,840
Receive Equity, Pay Variable 3-month LIBOR	11,633,919	11,633,919	-	-	168,757,519
Receive Variable 12-month FEDFU, Pay Equity	(5,281,672)	(5,281,672)	-		(17,320,688)
Receive Variable 1-month FEDFU, Pay Equity	(152,943)	(152,943)	-	Э	(7,039,979)
Receive Variable 1-month FEDLO, Pay Equity	(52,197)	-	(52,197)	-	(32,712,585)
Receive Variable 1-month OBFR, Pay Equity	(43,499)	(43,499)	-	-	(2,494,245)
Receive Variable 3-month LIBOR, Pay Equity	(3,802,844)	(3,711,578)	(91,266)	÷	(247,809,020)
Receive Variable 1-month LIBOR, Pay Equity	(918,222)	(918,222)	10	-	(62,413,307)
Total Return Swaps	3,218,333	3,140,504	77,829	-	
Total Swaps	\$ 1,718,640	\$ 2,222,282	\$ 347,151 \$	(850,793)	

#### **Foreign Currency Risk**

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of a deposit or an investment. The system does not have a formal deposit policy for foreign currency risk. The risk of holding investments in foreign currency is managed by applying currency hedge ratios to the system's public markets and private markets non-dollar exposures. Each currency hedge ratio is the percentage of aggregate, non-dollar currency exposure to be passively hedged, and the hedging horizon is intermediate (one to three years). The system's exposure to foreign currency risk as of August 31, 2017 is presented in the following table.

Financial Section 74

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4

# Notes to the Financial Statements

Currency by Country	Cash	Alternative Investments	Derivative Investments	Equity Investments	Fixed Income Investments	Pooled Investments	Total
Australia Dollar	\$ 6,419,530 \$	- \$	(7,378,408) \$	729,109,095		the second s	909,471,15
Bangladesh Taka	75,350		-	8,991,342	-	-	9,066,69
Botswana Pula	44,676		-	3,010,190	-		3,054,86
Brazil Real	3,732,119	-	66,067	762,386,016	21,722,704		787,906,90
Canada Dollar	8,673,427		2,391,499	1,067,070,978	497,164		1,078,633,06
Chile Peso	96,876		(1,467,111)	78,064,748	-		76,694,51
China Yuan Renminbi Offshore			(128,902)	-			(128,902
China Yuan Renminbi			383,693				383,69
Colombia Peso	98,338	1 - C - C - C - C - C - C - C - C - C -	(364,488)	19,516,947			19,250,79
Croatia Kuna	168,390		()	6,023,501		-	6,191,89
Czech Republic Koruna	248,986		12,003,828	35,227,003			47,479,81
Denmark Krone	70,572	_	(57,118)	383,228,758			383,242,21
Egypt Pound	157,049		(0.)==0)	27,235,147	2 <sup>14</sup> - 2 1 1 1		27,392,19
Euro Member Countries	46,391,473	2,479,608,243	(42,654,040)	4,760,879,117	311,447,733	634,673,409	8,190,345,93
Ghana Cedi	159,557	2,475,000,245	(42,034,040)	2,129,315	511,447,755	034,073,403	
Hong Kong Dollar	11,895,808	N42	440,987	3,231,968,761			2,288,87
							3,244,305,55
Hungary Forint	27,296		(324,607)	107,748,073	-		107,450,76
India Rupee	2,774,041	-	87,347	913,251,563	92,857	-	916,205,80
Indonesia Rupiah	156,845		(37,544)	371,680,887		-	371,800,18
Israel Shekel	132,695		(292,891)	31,119,409	-		30,959,21
Japan Yen	27,738,151		(428,088)	3,805,391,019	4,629,851		3,837,330,93
Jordan Dinar	51,863	-	-	5,217,924	-	-	5,269,78
Kenya Shilling	174,789		-	6,755,452		-	6,930,24
Korea (South) Won	925,191		660,859	1,609,559,330			1,611,145,38
Kuwait Dinar	117,295		- C	15,471,677			15,588,97
Malaysia Ringgit	186,019		74,768	208,381,059	-		208,641,84
Mauritius Rupee	110,923		- 1	6,117,208	12	-	6,228,13
Mexico Peso	346,794	-	960,174	374,183,751	-	-	375,490,71
Morocco Dirham	157,888		2,127	5,811,345	-		5,971,36
New Zealand Dollar	268,856		(211,962)	17,144,477	3,362,408		20,563,77
Nigeria Naira	258,849			4,810,773			5,069,62
Norway Krone	77,656		912,980	342,237,701	1	÷	343,228,33
Oman Rial	222,332	-	-	4,972,918			5,195,25
Pakistan Rupee	97,714	-		40,443,723		-	40,541,43
Peru Sol	74,879			2,891,239	-		2,966,11
Philippines Peso	170,496		(18,473)	86,542,165			86,694,18
Poland Zloty	383,289		110,856	161,953,013		1.	162,447,15
Qatar Riyal	4,529	1. S.	-	22,531,387	V		22,535,91
Romania New Leu	307,719		4,214	8,164,391			8,476,32
Russia Ruble	-		719,049	47,905,130	-		48,624,17
Singapore Dollar	708,272		(23,856)	90,052,951			90,737,36
South Africa Rand	889,144		(844,068)	717,375,077	6,063,982		723,484,13
Sri Lanka Rupee	64,483		-	5,083,315	-		5,147,79
Sweden Krona	165,858		1,221,461	207,196,118			208,583,43
Switzerland Franc	1,524,125		(741,589)	879,212,165			879,994,70
Taiwan New Dollar	4,702,750		(811,386)	1,007,814,930			1,011,706,29
Thailand Baht	602,290		(58,641)	238,591,734			239,135,38
Tunisia Dinar	72,987		(38,041)	2,296,717			2,369,71
Turkey Lira	137,423			2,296,717			
United Arab Emirates Dirham			4,627,438				225,620,49
	108,098	422 552 752	-	42,897,585	-		43,005,68
United Kingdom Pound	3,950,501	423,553,752	(3,210,702)	2,445,518,711	367,703,026		3,237,515,28
Viet Nam Dong Total Foreign Currency Risk	493,093	-		6,006,723			6,499,81

Financial Section 75

### NOTE 4: EMPLOYEE COMPENSABLE LEAVE

Salary costs related to employees' rights to be compensated for leave balances are accrued as expenses in the period in which the services are rendered. Accumulated compensable leave liabilities are reported in the Statement of Fiduciary Net Position for the Pension and Other Employee Benefit Trust Funds and in the Statement of Net Position for the Proprietary Funds. The employees' compensable leave activity for fiscal year 2017 is shown in the table below:

Fund	Beginning Balance 09/01/16	Additions	Reductions	Ending Balance 08/31/17	Amounts Due Within One Year	Amounts Due Thereafter
Fiduciary Funds:				and the state		
Pension Trust Fund	\$8,280,209	\$8,608,827	(\$8,280,554)	\$8,608,482	\$6,004,008	\$2,604,474
TRS-Care	326,071	385,238	(323,598)	387,711	247,132	140,579
<b>Proprietary Funds:</b>						
TRS-ActiveCare	95,410	199,464	(118,328)	176,546	132,367	44,179
403(b) Adminis-						
trative Program	4,652	9,853	(9,469)	5,036	5,030	6
Total	\$8,706,342	\$9,203,382	(\$8,731,949)	\$9,177,775	\$6,388,537	\$2,789,238

#### NOTE 5: OPERATING LEASES

In fiscal year 2014, TRS entered into a non-cancelable operating lease agreement for building space which expires March 31, 2021. As part of the building lease, TRS received a construction allowance which is being amortized on a straight-line basis over the life of the lease as a reduction of rental expenses.

Rental expenses related to the lease for the fiscal year ended August 31, 2017 for the Pension Trust Fund were \$2,198,281 and includes an adjustment for amortization of unrealized lease incentives of \$75,254. Rental expenses related to Teacher Retirement Investment Company of Texas (TRICOT) located in London were \$306,453 for leases. Off-site storage fees for data security was \$15,562, copier rentals were \$367,763 and rental for a mail machine was \$91,065.

The future minimum lease payment for the next four years are as follows:

Fiscal Year	Amount
2018	1,820,193
2019	1,492,759
2020	1,534,447
2021	 884,706
Total	\$ 5,732,105

### NOTE 6: FRINGE BENEFITS PAID BY THE STATE OF TEXAS AND THE FEDERAL GOVERNMENT

The state has a joint contributory retirement plan for substantially all its employees. The employees of TRS participate in the same pension plan they administer (Note 12).

Federal legislation enacted in January 2006 established prescription drug coverage for Medicare beneficiaries known as Medicare Part D. One of the provisions of Medicare Part D provided retiree drug subsidy reimbursements to TRS-Care on behalf of certain plan participants totaling \$5,341,625 for the fiscal year ended August 31, 2017. Under TRS-Care's Employer Group Waiver Plan (EGWP) reimbursements totaled \$32,993,639 for Medicare Part D direct subsidies, \$55,793,940 for catastrophic reinsurance subsidies and \$7,589,347 for low income subsidies.

#### NOTE 7: DEFERRED COMPENSATION

Employees of the system may elect to defer a portion of their earnings for income tax and investment purposes pursuant to authority granted in the Tex. Gov. Code Ann., Sec. 609.001. Two plans are available for employees. Both plans are administered by the Employees Retirement System. The system has no additional or unfunded liability for this program.

### NOTE 8: CONTINGENT LIABILITIES

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Sick leave, the accumulation of which is unlimited, is earned at the rate of eight hours per month and is taken only in the event of illness or paid to the estate of an employee in the event of death. The maximum sick leave that may be paid to an employee's estate is one-half of the employee's accumulated entitlement or 336 hours, whichever is less. The system's policy is to recognize the cost of any sick leave when paid.

The system is contingently liable for benefits payable to retiring members who remain in a pending status longer than 30 days after fiscal year end. In addition, under Texas Insurance Code, Article 3.51-7, the system is contingently liable to pay a lump-sum death benefit not to exceed \$5,000 when added to the death benefit authorized under Texas Government Code, Title 8, Chapter 824, to the beneficiaries of deceased, retired employees.

A Performance Incentive Compensation Plan was adopted effective September 2007 and amended 2015, to enable the system to remain competitive in its efforts to attract, retain and motivate high caliber investment division staff. The purpose of the Plan is to provide the opportunity for investment division employees to earn performance incentive pay based on the fund's investment performance and the employee's job performance. The performance incentive pay is paid over the subsequent 2 years. For the incentive pay plan year ending September 30, 2017 the liability is estimated not to exceed \$12.8 million. Payments can only be earned following years in which the fund experiences a positive return, and employees must be employed by TRS on the designated dates in the Plan to earn and receive payment. The board of trustees may cancel or modify the Plan at any time.

An Executive Performance Incentive Plan was adopted effective July 1, 2016 in order to remain competitive in its efforts to attract and retain high caliber executives. The purpose of the plan is to provide an opportunity for select executive management to earn performance incentive pay based

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on the key objectives tied to the overall success of TRS. The performance incentive pay is paid over the subsequent 2 years. For the incentive pay plan year ending June 30, 2016 the remaining liability is estimated at \$4,775. For the incentive pay plan year ending June 30, 2017 the liability is estimated at \$16,372.

TRS is a defendant in litigation involving issues arising from its normal activities. The outcome of this litigation cannot be determined at this time. Based upon consultation with legal counsel, management believes there will be no material adverse effect on the basic financial statements as a result of the ultimate outcome of these matters.

### NOTE 9: CONTINUANCE SUBJECT TO REVIEW

As provided by Texas Government Code, Title 8, Section 825.006, "The board of trustees of the Teacher Retirement System of Texas is subject to review under Chapter 325 (Texas Sunset Act), but is not abolished under that chapter. The board shall be reviewed during the period in which state agencies abolished in 2025, and every 12<sup>th</sup> year after that year, are reviewed."

### NOTE 10: OTHER POST-EMPLOYMENT BENEFITS

### A. PLAN DESCRIPTION

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The Texas Public School Retired Employees Group Insurance Program (TRS-Care) is a multipleemployer, cost-sharing, defined benefit Other Post-Employment Benefit (OPEB) plan with a special funding situation. The TRS-Care program was established in 1986 by the Texas Legislature. The plan is administered through a trust and has the following characteristics:

- Contributions from employers and non-employer contributing entities to the OPEB plan and earnings on those contributions are irrevocable.
- OPEB plan assets are dedicated to providing OPEB to plan members in accordance with the benefit terms.
- OPEB plan assets are legally protected from the creditors of plan members, employers, non-employer contributing entities, and the OPEB plan administrator.

The Board of Trustees of TRS administers the TRS-Care program and the related fund in accordance with the Texas Insurance Code Chapter 1575. The Board of Trustees is granted the authority to establish basic and optional group insurance coverage for participants as well as to amend benefit terms as needed under Chapter 1575.052. The Board may adopt rules, plans, procedures and orders reasonably necessary to administer the program, including minimum benefits and financing standards. Information regarding the TRS-Care board and its composition can be found in the CAFR on the "Board of Trustees" page and in Note 1.

Contributors to the plan include active and retired members, employers, and the State of Texas as the only non-employer contributing entity. Employers include public schools, educational districts, regional education service centers and open-enrollment charter schools whose employees are members of the Teacher Retirement System of Texas. During fiscal 2017, the number of participating employers were as follows:

Participating Employers	
Independent School Districts*	1,023
Open Enrollment Charter Schools	170
<b>Regional Education Service Centers</b>	20
Other Educational Districts	4
Total	1,217

\* Excludes Windham School District which is not covered by TRS-Care.

### As of August 31, 2017, TRS-Care plan membership consisted of the following:

TRS-Care Plan Membership	
Active plan members	712,260
Inactive plan members currently receiving benefits	216,810
Inactive plan members entitled to but not yet receiving benefits	10,512
Total	939,582

The Average Expected Remaining Service Life (AERSL) of 8.5761 is based on the membership information as of the beginning of the fiscal year.

TRS-Care provides a basic health insurance coverage at no cost to all retirees from public schools, charter schools, regional education service centers and other educational districts who are members of the TRS Pension. Eligible non-Medicare retirees and their dependents may pay premiums to participate in one of the two standard insurance plans with more comprehensive benefits. Eligible Medicare retirees and dependents may pay premiums to participate in one of the two Medicare health plans. To qualify for TRS-Care coverage, a retiree must have at least 10 years of service credit in the TRS Pension system. For more information on TRS-Care eligibility and detailed information on TRS-Care, please refer to the Benefits section.

The premium rates for the optional health insurance are based on years of service of the member. The schedule on the following page shows the monthly rates for the average retiree with 20 to 29 years of service for the optional standard plan with Medicare Part A and Part B:

TRS-Care Standard Plan Premium Rates Effective Sept. 1, 2016 - Dec. 31, 2017						
TRS-Care 1 TRS-Care 2 TRS-Care 3						-Care 3
Retiree*	\$	0	\$	70	\$	100
Retiree and Spouse		20		175		255
Retiree* and Children		41		132		182
Retiree and Family		61		237		337
Surviving Children only		28		62		82

\* Or surviving spouse

Other participants' premiums may be higher or lower depending upon the years of service of the member. The plan does not provide automatic cost of living adjustments (COLAs). During fiscal year 2017, deductibles were \$2,350 for those enrolled in Medicare Part A and eligible for Part B, \$3,900 for those not enrolled in Medicare Part A, but eligible for Part B, and \$5,250 for those not enrolled in Medicare.

The 85<sup>th</sup> Legislature, Regular Session, passed the following statutory changes in House Bill 3976 which became effective September 1, 2017:

- Creates the TRS-Standard plan that provides a zero cost for generic prescriptions for certain maintenance drugs, and provides a zero premium for disability retirees who retired as a disability retiree on or before January 1, 2017 and are not eligible to enroll in Medicare.
- Creates the TRS-Care Medicare Advantage Plan for Medicare-eligible participants which will
  maintain similar benefits as the current TRS-Care Medicare Advantage level 2 plan; and maintain Medicare Part D plan for prescription drug benefits.
- Eliminates the statutory requirement for TRS to provide a zero premium health benefit.

### **B. CONTRIBUTIONS**

Contribution rates for the TRS-Care plan are established in state statute by the Texas Legislature, and there is no continuing obligation to provide benefits beyond each fiscal year. The TRS-Care plan is currently funded on a pay-as-you-go basis and is subject to change based on available funding. Funding for TRS-Care is provided by retiree premium contributions and contributions from the state, active employees, and school districts based upon public school district payroll. The TRS Board does not have the authority to set or amend contribution rates.

At the inception of the plan, funding was projected to last 10 years through fiscal year 1995. The original funding was sufficient to maintain the solvency of the fund through fiscal year 2000. Since that time, appropriations and contributions have been established to be sufficient to provide benefits for each biennium.

Section 1575.202 of the Texas Insurance Code establishes the state's contribution rate which is 1.0% of the employee's salary. Section 1575.203 establishes the active employee rate which is 0.65% of

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Financial Section 80

pay. Section 1575.204 establishes a public school contribution of not less than 0.25 percent or not more than 0.75 percent of the salary of each active employee of the public school. The actual public school contribution rate is prescribed by the Legislature in the General Appropriations Act. Employers are also required to pay a surcharge of \$535 per month when employing a retiree of the TRS. The following table shows contributions to the TRS-Care plan by type of contributor.

2017 Contribution Rates				
Contributor	Rate	Amount		
Active Employee	0.65%	\$ 213,241,179		
Nonemployer Contributing Entity (State)	1.00	303,760,632		
Participating Employers	0.55	180,415,839		
Federal/Private Funding*	1.00	24,302,720		
Total		\$ 721,720,370		

\*Contributions from Federal Funds and Private Grants are remitted by the employer and paid at the State rate.

Contribution Rates				
Year	Active Employee	State	Participating Employers	
2013	0.65%	0.50%	0.55%	
2014	0.65	1.00	0.55	
2015	0.65	1.00	0.55	
2016	0.65	1.00	0.55	
2017	0.65	1.00	0.55	
2018	0.65	1.25	0.75	
2019	0.65	1.25	0.75	

The following table shows past and future contribution rates:

To alleviate a funding shortfall for the 2016-17 biennium, the 84<sup>th</sup> Texas Legislature appropriated \$768 million in supplemental funding with House Bill 2 that was paid in August 2015. An additional supplemental appropriation was received in 2017 for \$15.6 million, which was reappropriated from amounts received by the pension in excess of the state's actual obligation and then transferred to Care. Senate Bill 1, 85<sup>th</sup> Legislature, Regular Session provides for the following increases in contributions for fiscal years 2018-19:

- Increases the State contribution 0.25 percent of active employee payroll to 1.25 percent
- Increases the Employer contribution 0.20 percent of active employee payroll to 0.75 percent

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House Bill 3976 made the 0.25 percent increase in the State contribution a permanent and ongoing increase of state funding to the program. The 85th Texas Legislature, 1st Called Special Session, House Bill 30 provided an additional \$212 million in supplemental funding for the FY2018-19 biennium to continue to support the program.

### C. OPEB LIABILITY

Components of the Net OPEB Liability of the TRS-Care plan as of August 31, 2017 are as follows:

Components of Liability	Amount
Total OPEB Liability	\$43,885,784,621
Less: Plan Fiduciary Net Position	399,535,986
Net OPEB Liability	\$43,486,248,635
Net Position as a Percentage of Total OPEB Liability	0.91 %

#### D. ACTUARIAL METHODS AND ASSUMPTIONS

The actuarial valuation of TRS-Care is similar to the actuarial valuations performed for the pension plan, except that the OPEB valuation is more complex. All of the demographic assumptions, including mortality, and most of the economic assumptions are identical to those which were adopted by the Board in 2015 and are based on the 2014 actuarial experience study of TRS.

The active mortality rates were based on 90 percent of the RP-2014 Employee Mortality Tables for males and females. The Post-retirement mortality rates were based on the 2015 TRS of Texas Healthy Pensioner Mortality Tables.

The following assumptions and other inputs used for members of TRS-Care are identical to the assumptions employed in the August 31, 2017 TRS annual pension actuarial valuation:

Rates of Mortality Rates of Retirement Rates of Termination Rates of Disability Incidence

Additional Actuarial Methods and Assumptions:

Valuation Date Actuarial Cost Method Inflation Discount Rate \* Aging Factors Expenses

Payroll Growth Rate Projected Salary Increases \*\* Healthcare Trend Rates \*\*\* General Inflation Wage Inflation Expected Payroll Growth

August 31, 2017 Individual Entry Age Normal 2.50% 3.42% \*

Based on plan specific experience

Third-party administrative expenses related to the delivery of health care benefits are included in the ageadjusted claims costs.

2.50% 3.50% to 9.50% \*\* 4.50% to 12.00%\*\*\*

Financial Section 82

**Election Rates** 

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Normal Retirement: 70% participation prior to age 65 and 75% participation after age 65

Ad hoc post-employment benefit changes

None

\* Source: Fixed Income municipal bonds with 20 years to maturity that include only federal tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of August 31, 2017. \*\* Includes Inflation at 2.50%

\*\*\* Initial trend rates are 7.00% for non-Medicare retirees; 10.00% for Medicare retirees and 12.00% for prescriptions for all retirees. Initial trend rates decrease to an ultimate trend rate of 4.50% over a period of 10 years.

The following assumptions and other inputs which are specific to TRS-Care were updated from the prior year's report:

- Significant plan changes were adopted during fiscal year ending August 31, 2017. Effective January 1, 2018, only one health plan option will exist (instead of three), and all retirees will be required to contribute monthly premiums for coverage. The health plan changes triggered changes to several of the assumptions, including participation rates, retirement rates, and spousal participation rates.
- 2. The August 31, 2016 valuation had assumed that the savings related to the Medicare Part D reimbursements would phase out by 2022. This assumption was removed for the August 31, 2017 valuation. Although there is uncertainty regarding these federal subsidies, the new assumption better reflects the current substantive plan. This change was unrelated to the plan amendment, and its impact was included as an assumption change in the reconciliation of the total OPEB liability. This change significantly lowered the OPEB liability.
- 3. The discount rate changed from 2.98 percent as of August 31, 2016 to 3.42 percent as of August 31, 2017. This change lowered the total OPEB liability.

In this valuation the impact of the Cadillac Tax has been calculated as a portion of the trend assumption. Assumptions and methods used to determine the impact of the Cadillac Tax include:

- 2018 thresholds of \$850/\$2,292 were indexed annually by 2.50 percent.
- Premium data submitted was not adjusted for permissible exclusions to the Cadillac Tax.
- There were no special adjustments to the dollar limit other than those permissible for non-Medicare retirees over 55.

Results indicate that the value of the excise tax would be reasonably represented by a 25 basis point addition to the long term trend rate assumption.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law.

**Discount Rate:** A Single Discount Rate of 3.42 percent was used to measure the total OPEB liability. There was a change of 0.44 percent in the discount rate since the previous year. Because the plan is essentially a "pay-as-you-go" plan, the Single Discount Rate is equal to the prevailing municipal bond rate.

### Sensitivity of the Net OPEB Liability:

**Discount Rate** – The following presents the net OPEB liability of the plan using the discount rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher, as well as what the net OPEB liability would be if it were calculated using a discount rate that is one-percentage point lower (2.42%) or one-percentage point higher (4.42%) than the AA/Aa rate:

Sensitivity of the Net OPEB Liability to the Single Discount Rate Assumptions				
1% Decrease 2.42%	Current Single Discount Rate 3.42%	1% Increase 4.42%		
\$51,324,568,976	\$43,486,248,635	\$37,186,006,400		

*Healthcare Cost Trend Rates* – The following presents the net OPEB liability of the plan using the assumed healthcare cost trend rate, as well as what the net OPEB liability would be if it were calculated using a trend rate that is one-percentage point lower or one-percentage point higher than the assumed healthcare cost trend rate:

Sensitivity of the Net OPE	B Liability to the Healthcare Co	st Trend Rate Assumptions
	Current Healthcare Cost	
1% Decrease	Trend Rate	1% Increase
\$36,206,646,484	\$43,486,248,635	\$53,038,004,180

### NOTE 11: OTHER POST-EMPLOYMENT BENEFITS - TRS EMPLOYEES

Employees of the system who retire with 10 or more years of eligible service credit and meet the Rule of 80 or are at least 65 years of age continue to receive health care and basic life insurance benefits through the Texas Employees Group Benefits Program (GBP) of the State Retiree Health Plan (SRHP) in accordance with Texas Insurance Code, Chapter 1551. The SRHP is maintained and administered through the Employees Retirement System (ERS) of Texas and is considered a cost-sharing, multiple-employer, defined benefit post-employment health care plan with a special funding situation. ERS issues a publicly available financial report that includes financial statements and required supplementary information for the SRHP. That report may be obtained by visiting the ERS website at www.ers.texas.gov, by writing to the Finance Division of the Employees Retirement System of Texas at 200 East 18<sup>th</sup> Street, Austin, Texas 78701, or by calling 1-877-275-4377.

Benefits and contribution provisions of the SRHP are not actuarially determined, but are authorized by state law and may be amended by the Texas Legislature. For the year ended August 31, 2017, the system contributed up to a maximum monthly amount on a pay-as-you-go basis toward a retiree's health and basic life insurance premiums as follows:

Employer Contribution Rates Retiree Health and Basic Life Premium						
				For the Fisca	al Year	
Type of Coverage		2017		2016		<b>2015</b> °
Member Only	\$	617.30	\$	576.54	\$	537.66
Member & Spouse		970.98		906.78		845.54
Member & Children		854.10		797.66		743.80
Member & Family		1,207.78		1,127.90		1,051.68

The system covers 100 percent of a Member Only premium and 50 percent of the additional premium for family coverage. The basic plan includes up to \$2,500 for life insurance for the retiree. The retiree contributes any premium over and above the system's contribution for additional coverage. The board has adopted contributions based on rates set by the Texas Legislature on a biennial basis. At August 31, 2017, there were 283 TRS retirees and their beneficiaries receiving post-employment health care and basic life insurance benefits. Contractually required contributions to the SRHP are currently based on the annual pay-as-you-go expenses of the SRHP. The system has annually made 100 percent of its contractually required contributions to the SRHP.

### NOTE 12: PENSION DISCLOSURE

### A. PLAN DESCRIPTION

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The Teacher Retirement System of Texas is a public employee retirement system (PERS) that is a multiple-employer, cost-sharing, defined benefit pension plan with a special funding situation. The plan is administered through a trust and has the following characteristics:

- Contributions from employers and the non-employer contributing entity to the pension plan and earnings on the plan are irrevocable,
- Pension plan assets are dedicated to providing pensions to plan members in accordance with benefit terms, and
- Pension plan assets are legally protected from the creditors of employers, the non-employer contributing entity, and the pension plan administrator. Plan assets are also legally protected from creditors of the plan members.

Benefits are established or amended primarily under the authority of the provisions of the Texas Constitution, Article XVI, Section 67 and by the Legislature in the Texas Government Code, Title 8, Subtitle C. The pension's board of trustees does not have the authority to establish or amend benefits.

The normal service retirement is at age 65 with 5 years of credited service or when the sum of the member's age and years of credited service equals or exceeds 80 years. The benefit formula is 2.3 percent (multiplier) times the average of the five highest annual creditable salaries times years of credited service to equal the annual standard annuity. For members who are grandfathered, the three

highest annual salaries are used. Reduced service retirement is at age 55 with 5 years of credited service and any age below 50 with 30 years of credited service. A member is fully vested after 5 years of creditable service and entitled to any benefit for which eligibility requirements have been met. The plan does not provide automatic cost of living adjustments (COLAs).

To be eligible for disability retirement, a member must have a physical or mental disability that precludes the member's continued performance of current duties, and the disability must be certified by the TRS Medical Board as probably permanent. Death and Survivor retirement benefits are available to the beneficiary of an active member. For more detail about benefits see the *Summary of Benefits* section in this report.

Contributors to the plan include members, employers and the State of Texas as the only non-employer contributing entity. The State is also the employer for senior colleges, medical schools and state agencies including TRS. In each respective role, the State contributes to the plan in accordance with state statutes and the General Appropriations Act.

All employees of public, state-supported educational institutions in Texas who are employed for onehalf or more of the standard work load and who are not exempted from membership under Texas Government Code, Title 8, Section 822.002, are covered by the system.

The number of participating employers during fiscal year 2017 were as follows:

Participating Employers	
Independent School Districts	1,024
Charter Schools (open enrollment only)	170
Community and Junior Colleges	50
Senior Colleges and Universities	47
Regional Service Centers	20
Medical Schools	9
Educational Districts	4
State Agency	1
Total	1,325

As of August 31, 2017, TRS Pension membership consisted of the following:

Pension Membership	
Retired plan members or beneficiaries currently receiving benefits	407,768
Inactive plan members entitled to but not yet receiving benefits	273,028
Active plan members	864,261
Total	1,545,057

The Average Expected Remaining Service Life (AERSL) of 6.7496 is based on the membership information as of the beginning of the fiscal year.

### **B. CONTRIBUTIONS**

Contribution requirements are established or amended pursuant to the following state laws: (1) Article 16, section 67 of the Texas Constitution requires the legislature to establish a member contribution rate of not less than 6 percent of the member's annual compensation and a state contribution rate of not less than 6 percent and not more than 10 percent of the aggregate annual compensation paid to members of the system during the fiscal year. Government Code section 821.006 prohibits benefit improvements, if as a result of the particular action, the time required to amortize TRS' unfunded actuarial liabilities would be increased to a period that exceeds 31 years, or, if the amortization period already exceeds 31 years, the period would be increased by such action. Actuarial implications of the funding provided in this manner are determined by the system's actuary.

As the non-employer contributing entity, the State of Texas contributes to the retirement system an amount equal to the current employer contribution rate times the aggregate annual compensation of all members of the pension trust fund during that fiscal year reduced by the amounts described below which are paid by the employers.

Employers (public school, junior college, other entities or the State of Texas as the employer for senior universities and medical schools) are required to pay the employer contribution rate in the following instances:

- On the portion of the member's salary that exceeds the statutory minimum for members entitled to the statutory minimum under Section 21.402 of the Texas Education Code.
- During a new member's first 90 days of employment.
- When any part or all of an employee's salary is paid by federal funding sources, a privately sponsored source, from non-educational and general, or local funds.
- When the employing district is a public junior college or junior college district, the employer shall contribute to the retirement system an amount equal to 50 percent of the state contribution rate for certain instructional or administrative employees; and 100 percent of the state contribution rate for all other employees.

The following table shows contributions to the pension fund by type of contributor for Fiscal Year 2017:

Contributor	Contribution Rate	Amount
Member	7.7%	\$3,242,556,261
Non-Employer Contributing Entity (State)	6.8%	1,697,962,608
Employers	6.8%	1,158,808,801
Total		\$6,099,327,670

Employers are also required to pay surcharges in the following cases:

- When a school district or charter school does not contribute to the Federal Old-Age, Survivors and Disability Insurance (OASDI) Program for certain employees, they must contribute 1.5 percent of the applicable salary.
- When employing a retiree of the Teacher Retirement System, the employer shall pay an amount equal to the member contribution and the state contribution as an employment after retirement surcharge.

The following table shows the types of surcharges paid by the participating employers for Fiscal Year 2017:

Surcharge	Contribution Rate	Amount
Non-OASDI	1.5%	\$408,704,737
Employment after Retirement- Employer	6.8%	9,315,673
Employment after Retirement- Employee	7.7%	11,480,134
Total		\$429,500,544

Employee contribution rates are set in state statute, Texas Government Code 825.402. The 84<sup>th</sup> Texas Legislature, General Appropriations Act established the employer contribution rate for fiscal year 2017. Contribution rates for past and future years are as follows:

	<b>Contribution Rates</b>	
Year	Member	Employer
2014	6.4%	6.8%
2015	6.7%	6.8%
2016	7.2%	6.8%
2017	7.7%	6.8%
2018	7.7%	6.8%

### C. LEGAL RESERVE ACCOUNT BALANCES

Section 825.309 of the Government Code requires that money in the Retired Reserve Account be used to pay all retirement annuities and all death or survivor benefits, including post-retirement benefit increases and other adjustments to annuities.

The balances in the statutory accounts as of August 31, 2017 were:

* Does not include TRICOT Net Position	
Total	\$ 147,361,717,403
Expense Account	150,400,760
Deferred Retirement Option Account	13,174,533
Retired Reserve Account	90,153,116,853
State Contribution Account	20,634,649,455
Member Savings Account	\$ 36,410,375,802

#### D. DEFERRED RETIREMENT OPTION PROGRAM

The Deferred Retirement Option Plan (DROP) was closed to new members on December 31, 2005. It was a plan available for active members who were eligible for normal age service retirement and had at least 25 years of credited service. They could choose to participate in 12-month increments for up to five years. For detailed information on the plan, see the Summary of Benefits section. The remaining balance in the reserve account is shown in item C. above.

### **E. PENSION LIABILITY**

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**Components of the Liability** – Components of the Net Pension Liability of the pension plan as of August 31, 2017 are as follows:

Components of Liability	Amount
Total Pension Liability	\$179,336,534,819
Less: Plan Fiduciary Net Position	147,361,922,120
Net Pension Liability	\$ 31,974,612,699
Net Position as a Percentage of Total Pension Liability	82.17 %

**Actuarial Assumptions** – The total pension liability is determined by an annual actuarial valuation. The actuarial methods and assumptions have been selected by the Board of Trustees based upon analysis and recommendations by the System's actuary. The Board of Trustees has sole authority to determine the actuarial assumptions used for the plan. The actuarial methods and assumptions are primarily based on a study of actual experience for the four year period ending August 31, 2014 and were adopted in September 2015.

The active mortality rates were based on 90 percent of the RP 2014 Employee Mortality Tables for males and females. The post-retirement mortality rates were based on the 2015 TRS of Texas Healthy Pensioner Mortality Tables.

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**Financial Section** 

**Discount Rate** – A single discount rate of 8.0 percent was used to measure the total pension liability. There was no change in the discount rate since the previous fiscal year. This single discount rate was based on the expected rate of return on pension plan investments of 8.0 percent. The projection of cash flows used to determine this single discount rate assumed that contributions from plan members and those of the contributing employers and the non-employer contributing entity will be made at the rates set by the legislature during the 2013 legislative session.

Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability with no cross-over point to a municipal bond rate.

The long-term expected rate of return on pension plan investments is 8.0 percent. The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of geometric real rates of return for each major asset class included in the Systems target asset allocation as of August 31, 2017 are summarized in Note 3.

The following assumptions were applied to this measurement period:

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Valuation Date	August 31, 2017
Actuarial Cost Method	Individual Entry Age Normal
Asset Valuation Method	Market Value
Single Discount Rate	8.00%
Long-term Expected Rate	8.00%
Municipal Bond Rate	N/A*
Last year ending August 31 in 2017 to 2116	
Projection period (100 years)	2116
Inflation	2.50%
Salary Increases	3.50% to 9.50% including inflation
Ad hoc post-employment benefit changes	None

\*If a municipal bond rate was to be used, the rate would be 3.42% as of August 2017 (i.e. the rate closest to but not Later than the Measurement date). The source for the rate is the Fixed Income Market Data/Yield Curve/Data Municipal Bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index."

**Sensitivity of the Net Pension Liability** – The following presents the net pension liability of the plan using the discount rate of 8 percent, as well as what the net pension liability would be if it were calculated using a discount rate that is one-percentage point lower (7%) or one-percentage point higher (9%) than the current rate:

Sensitivity of the Net Per	nsion Liability to the Single Discount	Rate Assumptions									
1% Decrease	1% Decrease Current Single Discount Rate 1% Increase										
7%	8%	9%									
\$53,902,879,534	\$31,974,612,699	\$13,715,771,590									

*Trend Information* – The required schedule of changes in the employer's net pension liability and related ratios immediately following the notes to the financial statements presents multi-year trend information about whether the net position of the plan is increasing or decreasing relative to the pension liability over time.

### NOTE 13: RISK MANAGEMENT

The 77th Texas Legislature enacted the Texas Active School Employees Uniform Group Benefits Act (H.B. 3343), establishing a new statewide health coverage program for public school employees and their dependents. TRS began administering this program, known as TRS-ActiveCare, September 1, 2002. The plan is available to all public school districts, charter schools with open enrollment, education service centers and certain other employers. The risk associated with this program is retained by the plan's participants, and no risk is transferred to the plan's administrators, to employers, or to the state.

#### NOTE 14: COMPONENT UNITS

#### A. DESCRIPTION

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Teacher Retirement Investment Company of Texas, Ltd. (TRICOT) is a private company limited by shares in the United Kingdom (UK) that began operating in November 2015. TRS is the sole shareholder of TRICOT. TRS formed TRICOT for the purpose of opening a London investment office to increase investment opportunities for the TRS portfolio. TRICOT is presented as a **Blended Component Unit** in the Pension Trust Fund fiduciary fund type of TRS with a year-end of August 31.

#### **B. CRITERIA FOR INCLUSION AS A COMPONENT UNIT**

TRICOT was determined to be a component unit according to GASB 14 as modified by GASB 39 and 61 based on the following criteria.

- TRICOT is considered a special-purpose government entity engaged only in fiduciary activities on behalf of TRS.
- TRICOT is a part of the System. TRS maintains complete control over TRICOT and all related assets. If TRICOT were dissolved, any remaining assets net of liabilities would revert back to TRS.

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- As a "private limited liability company" in the UK, TRICOT is legally separate according to GASB 14, paragraph 15.
- TRS' executive director, as a shareholder representative, appoints the sole director of TRICOT.
- TRICOT is financially dependent upon TRS and has no other sources of funding.
- TRICOT provides services exclusively to TRS.
- It would be misleading to exclude TRICOT in the financial statements.

Written requests for the financial statements of the individual component unit (TRICOT) should be addressed to:

Communications Department Teacher Retirement System of Texas 1000 Red River Street Austin, TX 78701 1-800-223-8778

#### NOTE 15: SUBSEQUENT EVENTS

In order to sustain TRS-Care for current and future retirees, the regular and special sessions of the 85th Texas Legislature passed legislation during the spring and summer of 2017 that changed TRS-Care's benefit structure and provided additional funding to further support the program. The TRS Board of Trustees approved the new plan designs and premiums on September 1, 2017 to be effective January 1, 2018. The new plan designs and premium structures will likely reduce TRS-Care's long term liability.

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## Required Supplementary Information PENSION TRUST FUND

FISCAL YEARS 2008 - 2017

### SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

### LAST TEN FISCAL YEARS (DOLLAR AMOUNTS SHOWN IN THOUSANDS)

		2017		2016		2015	2014
Total Pension Liability*							
Service Cost	\$	4,489,046	\$	4,392,077	\$	4,225,449	\$ 3,965,994
Interest on Net Pension Liability		13,515,486		12,896,571		12,555,646	11,813,446
Differences between Expected and Actual Experience		(969,831)		373,669		(1,588,619)	482,639
Changes of Actuarial Assumptions		700,880				(1,474,724)	2,028,541
Benefit Payments		(9,775,775)		(9,379,123)		(8,935,112)	(8,548,643)
Refunds of Member Accounts		(420,421)		(373,419)		(391,341)	(410,600)
Net Change in Total Pension Liability	\$	7,539,385	\$	7,909,775	\$	4,391,299	\$ 9,331,377
Total Pension LiabilityBeginning		171,797,150		163,887,375		159,496,076	150,164,699
Total Pension LiabilityEnding (a)	\$	179,336,535	\$	171,797,150	\$		\$ 159,496,076
Plan Fiduciary Net Position					1142		
ContributionsEmployer	\$	1,588,309	Ş	1,483,390	\$	1,377,973	\$ 984,552
ContributionsMember		3,242,556		2,943,669		2,576,024	2,357,686
Non-Employer Contributing Entity		1,697,963		1,675,631		1,591,483	1,530,624
Net Investment Income		17,079,807		9,193,281		(412,759)	19,434,430
Benefit Payments		(9,775,775)		(9,379,123)		(8,935,112)	(8,548,643)
Refunds of Member Accounts		(420,421)		(373,419)		(391,341)	(410,600)
Administrative Expense		(44,190)		(44,403)		(35,557)	(41,904)
Other		(14,964)	_	(29,095)	_	(11,248)	 84,954
Net Change in Plan Fiduciary Net Position	\$	13,353,285	\$	5,469,931	\$	(4,240,537)	\$ 15,391,099
Plan Fiduciary Net PositionBeginning		134,008,637	2	128,538,706		132,779,243	117,388,144
Plan Fiduciary Net PositionEnding (b)	\$	147,361,922	\$	134,008,637	\$	128,538,706	\$ 132,779,243
Net Pension LiabilityEnding (a)-(b)	\$	31,974,613	\$	37,788,513	\$	35,348,669	\$ 26,716,833
Plan Fiduciary Net Position as a							
Percentage of the total Pension Liability*		82.17%		78.00%		78.43%	83.25%
Covered Payroll*		42,111,120		40,742,826		38,448,124	36,654,291
Net Pension Liability as a percentage of Covered Payroll*		75.93%		92.75%		91.94%	72.89%
*Total pension liability is presented on a prospective basis	in acco	ordance with GAS	B 67	, paragraph 50.			

**Financial Section** 

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# Required Supplementary Information PENSION TRUST FUND

FISCAL YEARS 2008 - 2017

2013	2012	2011	2010	2009	2008
\$	\$	\$	\$	\$	\$
\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
\$ 150,164,699	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
\$ 925,694 2,252,095	\$ 760,838 2,188,020	\$ 856,220 2,243,955	\$ 835,605 2,205,017	\$ 791,450 2,107,058	\$ 703,723 1,998,139
1,337,215 9,834,136	1,299,078 7,847,298	1,484,286 14,636,935	1,461,035 9,411,447	1,378,304 (13,971,869)	1,352,243 (4,604,972)
(8,075,209) (391,292) (36,264)	(7,723,622) (381,231) (33,074)	(7,173,505) (334,269) (35,850)	(6,617,397) (265,187) (29,993)	(6,294,434) (266,695) (28,310)	(6,406,644) (278,003) (26,123)
\$ 91,882 5,938,257	\$ 71,793 4,029,100	\$ 54,610 11,732,382	\$ 34,906 7,035,433	\$ 26,970 (16,257,526)	\$ 43,335 (7,218,302)
\$ 111,449,887 117,388,144	\$ 107,420,787 111,449,887	\$ 95,688,405 107,420,787	\$ 88,652,972 95,688,405	\$ 104,910,498 88,652,972	\$ 112,128,800 104,910,498
\$ 32,776,555	\$ 111,113,007	\$ 107,420,707	\$ 55,000,405	\$ 00,032,572	\$ 104,510,450
78.17% 35,188,983					

93.14%

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### Required Supplementary Information PENSION TRUST FUND

FISCAL YEARS 2008 - 2017

### SCHEDULE OF EMPLOYER AND NON-EMPLOYER CONTRIBUTING ENTITY ACTUARIALLY DETERMINED CONTRIBUTIONS (ADC)

Fiscal Year Ending August 31	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2014	\$ 3,177,927,012 \$	2,515,176,220	\$ 662,750,792	\$ 36,654,290,800	6.86%
2015	3,171,970,234	2,969,455,641	202,514,593	38,448,124,045	7.72
2016	3,226,831,846	3,159,020,596	67,811,250	40,742,826,333	7.75
2017	3,343,622,950	3,286,271,953	57,350,997	42,111,120,273	7.80

This schedule will ultimately contain 10 years of information. Additional years will be presented on a prospective basis in accordance with GASB 67, paragraph 50.

Note 1: Actuarial Methods and Assumptions Used to Determine Contribution Rates - The information presented in the preceding table was used in the actuarial valuation for determining the actuarially determined contribution rate used for funding purposes. The methods and assumptions are as follows:

Valuation Date	August 31, 2017	
Amortization Method	Level Percentage of Payroll, Floating	
Actuarial Cost Method	Ultimate Entry Age Normal Method	
Remaining Amortization Period	34 years	
Asset Valuation Method	5 year smoothed market	
Actuarial Assumptions:		
Investment Rate of Return	8.00%	
Inflation	2.50%	
Salary Increases	3.5% to 9.50% including inflation	

\*\* Actuarially determined contribution rates are calculated as of August 31 of the preceding fiscal year. Members and employers are based upon statutorily fixed rates.

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### Required Supplementary Information PENSION TRUST FUND

FISCAL YEARS 2008 - 2017

		SCHEDU	JLE OF INVE	STMENT RE	TURNS		반 각 전 내
	Annual Mo	ney-Weight	ed Rate of R	eturn, Net c	of Investme	nt Expense	
2017	2016	2015	2014	2013	2012	2011	2010
12.98%	7.27%	(0.31%)	16.87%	9.01%	7.41%	15.60%	10.69%

This schedule will ultimately contain 10 years of information. Additional years will be presented on a prospective basis in accordance with GASB 67, paragraph 50.

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### Required Supplementary Information TRS-CARE FUND

FISCAL YEARS 2008 - 2017

### SCHEDULE OF CHANGES IN THE EMPLOYERS' NET OPEB LIABILITY AND RELATED RATIOS

### LAST TEN FISCAL YEARS (DOLLAR AMOUNTS SHOWN IN THOUSANDS)

		2017		2016		2015		2014
Total OPEB Liability*						-		
Service Cost	\$	4,312,406	\$		\$		\$	
Interest on the total OPEB Liability		2,354,931						
Changes of Benefit Terms		(18,610,363)						
Differences between Expected and Actual								
Experience		(929,821)						
Changes of Actuarial Assumptions		(19,563,767)						
Benefit Payments		(1,091,863)						
Net Change in Total OPEB Liability	\$	(33,528,477)	\$		\$		\$	
Total OPEB LiabilityBeginning	\$	77,414,262	\$		\$		\$	
Total OPEB LiabilityEnding (a)	\$	43,885,785	\$		\$		\$	
	3							
Plan Fiduciary Net Position								
ContributionsEmployer	\$	215,361	\$	212,936	\$	202,976	\$	193,125
ContributionsNon-Employer Contributing								
Entity		319,320		297,071		1,049,199		303,556
ContributionsMember		213,241		208,582		198,196		189,004
Net Investment Income		4,697		5,421		1,496		2,062
Benefit Payments		(1,787,617)		(1,769,301)		(1,660,560)		(1,420,428)
Less: Health Care Premiums Paid by Retirees		404,028		374,736		369,066		363,631
Administrative Expense		(4,953)		(4,702)		(3,770)		(3,647)
Other		393,973	_	343,824		358,376		279,589
Net Change in Plan Fiduciary Net Position	\$	(241,950)	\$	(331,433)	\$	514,979	\$	(93,108)
Plan Fiduciary Net PositionBeginning	\$	641,486		972,919	_	457,940	_	551,048
Plan Fiduciary Net PositionEnding (b)	\$	399,536	Ş	641,486	Ş	972,919	Ş	457,940
Net OPEB LiabilityEnding (a)-(b)	\$	43,486,249	\$		_			
Plan Fiduciary Net Position as a Percentage of								
the Total OPEB Liability*		0.91%						
Covered Payroll*	\$	32,806,335	\$					
Net OPEB Liability as a percentage of Covered		400 554						
Payroll*	. 10	132.55%	400	74	<b>C</b> 2			
*Total OPEB liability is presented on a prospective basis	s in a	ccoraance with G	ASR	74, paragraph	02.			

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# **Required Supplementary Information**

TRS-CARE FUND

FISCAL YEARS 2008 - 2017

2013	_	2012	_	2011		2010	_	2009	2008
\$	\$		\$		\$		\$		\$
\$	\$		\$		\$		\$		\$ 
\$	\$		\$		\$		\$		\$
\$ 	\$		\$		\$		\$		\$ 
\$ 172,613	\$	179,002	\$	184,509	\$	181,543	\$	171,423	\$ 162,355
229,799		247,531		256,997		253,626		245,611	234,040
180,825		176,751		183,809		181,513		173,856	165,569
3,041		5,190		8,169		11,679		17,482	29,252
(1,285,236)		(1,186,702)		(1,036,594)		(1,013,892)		(925,497)	(870,256)
355,686		363,348		345,164		332,482		329,723	328,505
(3,398)		(3,714)		(3,144)		(3,032)		(2,916)	(3,001)
 156,704		68,738		136,996	1	70,897		61,627	59,578
\$ (189,966)	\$	(149,856)	\$	75,906	\$	14,816	\$	71,309	\$ 106,042
\$ 741,014	\$	890,870	\$	814,964	\$	800,148	\$	728,839	\$ 622,797
\$ 551,048	\$	741,014	\$	890,870	\$	814,964	\$	800,148	\$ 728,839

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Financial Section 100

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# Statement of Changes in Assets and Liabilities

AGENCY FUNDS

FOR THE FISCAL YEAR ENDED AUGUST 31, 2017

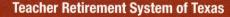
	Balances September 1, 2016		Additions		Deductions		No.	Balances August 31, 2017	
Child Support Employee Deductions	1. 1. 1. 1.								
Total Assets									
Cash in State Treasury	\$	6,337	\$	87,548	\$	87,273	\$	6,612	
TOTAL ASSETS	\$	6,337	\$	87,548	\$	87,273	\$	6,612	
Total Liabilities									
Funds Held for Others	\$	6,337	\$	87,548	\$	87,273	\$	6,612	
TOTAL LIABILITIES	\$	6,337	\$	87,548	\$	87,273	\$	6,612	



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### Comparative Schedule of Changes in Account Balance PENSION TRUST FUND

FOR THE FISCAL YEAR ENDED AUGUST 31, 2017 (With Comparative Data for August 31, 2016)

3

INTEREST ACCOUNT		2017	2016		
Additions					
Investing Activities Income (Loss)*	\$	17,203,713,635	\$	9,338,243,204	
Securities Lending Program		94,213,624		92,547,038	
Transfers In:					
Transfer from State Contribution Account for:					
Allocation of Interest		1,925,918,751		1,844,080,496	
Investing Income					
Transfer from Deferred Retirement Option Account					
for Revokes				2,370,155	
TOTAL ADDITIONS	\$	19,223,846,010	\$	11,277,240,893	
Deductions					
Bank Fees	\$	6,906,799	\$	4,530,867	
Research Fees		9,177,517		13,680,098	
External Manager Fees		126,449,587		143,254,507	
External Legal Fees		4,695,246		3,758,721	
External Custodial Fees		22,000,000		22,000,000	
Transfers Out:					
Allocation of Interest to:					
Member Savings Account		704,490,566		681,633,434	
Retired Reserve Account		6,839,419,656		6,487,969,444	
Deferred Retirement Option Account		321,959		403,677	
Expense Account		118,080,810		117,033,476	
Transfer to State Contribution Account for					
Investing Income		11,392,303,870		3,802,976,669	
TOTAL DEDUCTIONS	\$	19,223,846,010	\$	11,277,240,893	
Net Change in Account Balance		0	\$	0	
Account Balance - Beginning September 1		0	\$	0	
Account Balance - Ending August 31		0	\$	0	

\*Investing Activities Income (Loss) includes Interest from Investing Activities, Investment Dividends and Net Increase (Decrease) in Fair Value of Investments.

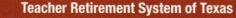
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FOR THE FISCAL YEAR ENDED AUGUST 31, 2017 (With Comparative Data for August 31, 2016)

MEMBER SAVINGS ACCOUNT	2017		2016
Additions	the state of the state of the	2	
Contributions:			
Contributions Paid by Member	\$ 3,242,556,261	\$	2,943,669,320
Purchase of Service Credit-Refundable	28,557,845		29,004,823
Transfers In:			
Allocation from Interest Account	 704,490,566		681,633,434
TOTAL ADDITIONS	\$ 3,975,604,672	\$	3,654,307,577
Deductions			
Refund of Contributions-Active	\$ 414,049,308	\$	366,039,111
Transfers Out:			
Transfer to Retired Reserve Account:			
For Dormant Accounts	22,081,780		20,604,877
To Fund Benefits	2,000,522,873		2,319,697,385
Transfer to State Contribution Account			33,756,075
Transfer to Expense Account			24,926,487
TOTAL DEDUCTIONS	\$ 2,436,653,961	\$	2,765,023,935
Net Change in Account Balance	\$ 1,538,950,711	\$	889,283,642
Account Balance - Beginning September 1	\$ 34,871,425,091	\$	33,982,141,449
Account Balance - Ending August 31	\$ 36,410,375,802	\$	34,871,425,093

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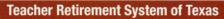


FOR THE FISCAL YEAR ENDED AUGUST 31, 2017 (With Comparative Data for August 31, 2016)

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STATE CONTRIBUTION ACCOUNT	2017	2016
Additions		
Contributions:		
State's General Fund - Non-Employer Contributing Entity	\$ 1,697,962,608	\$ 1,675,631,24
State's General Fund - Employer	128,713,466	104,714,22
Participating Employers	1,030,095,335	992,916,84
Surcharges:		
Employment after Retirement - Employee	11,480,134	9,184,79
Employment after Retirement - Employer	9,315,673	9,769,09
Non-OASDI Participating Employers	408,704,737	366,804,39
Purchase of Service Credit-Non-Refundable	28,699,815	31,337,54
Transfers In:		
Transfer from Interest Account for:		
Investing Income	11,392,303,870	3,802,976,66
Transfer from Member Savings Account		33,756,07
Transfer from Retired Reserve Account:		
For Retirement Benefits Forfeited While		
Member Returned to Teaching	1,174,488	1,102,20
For Retirement Benefits Waived by Member	27,516	26,20
TOTAL ADDITIONS	\$ 14,708,477,642	\$ 7,028,219,29
Deductions		
Transfers Out:		
Transfer to Interest Account for:		
Allocation of Interest	1,925,918,751	1,844,080,49
Transfer to Retired Reserve Account:		
To Fund Benefits	4,349,445,228	4,990,946,87
Based on Actuarial Valuation as of August 31	73,121,136	318,769,98
TOTAL DEDUCTIONS	\$ 6,348,485,115	\$ 7,153,797,35
Net Change in Account Balance	\$ 8,359,992,527	\$ (125,578,054
Account Balance - Beginning September 1	\$ 12,274,656,928	\$ 12,400,234,98
Account Balance - Ending August 31	\$ 20,634,649,455	\$ 12,274,656,92



FOR THE FISCAL YEAR ENDED AUGUST 31, 2017 (With Comparative Data for August 31, 2016)

ETIRED RESERVE ACCOUNT		2017		2016
Additions	Denty			
Contributions Transferred in from Employees				
Retirement System of Texas	\$	21,965,490	\$	20,376,732
Transfers In:				
Allocation from Interest Account		6,839,419,656		6,487,969,444
Transfer from Member Savings Account:				
For Dormant Accounts		22,081,780		20,604,87
To Fund Benefits		2,000,522,873		2,319,697,38
Transfer from State Contribution Account:				
To Fund Benefits		4,349,445,228		4,990,946,87
Based on Actuarial Valuation as of August 31		73,121,136		318,769,98
Transfer from Deferred Retirement Option Account				
to Fund Benefits			A.,	4,073,97
TOTAL ADDITIONS	\$	13,306,556,163	\$	14,162,439,26
Deductions				
Benefits Paid:				
Service Retirement Annuities	\$	9,059,855,790	\$	8,633,505,85
Partial Lump Sums		263,705,342		300,420,70
Disability Retirement Annuities		177,627,306		173,464,93
Death and Survivor Benefits:				
Annual Salary		44,398,830		44,952,73
Survivor Annuities		109,519,771		108,509,07
Life Annuities		93,714,871		92,087,96
60 Monthly Payments		15,518,472		15,523,05
Remainder of Contributions		6,204,030		5,491,55
Refund of Contributions-Death		6,371,748		7,379,57
Benefits Transferred to				
Employees Retirement System of Texas		93,321,903		88,854,38
Retirement Benefits Forfeited:				
Member Returned to Teaching		1,174,488		1,102,20
For Retirement Benefits Waived by Member		27,516		26,20
TOTAL DEDUCTIONS	\$	9,871,440,067	\$	9,471,318,25
Net Change in Account Balance	\$	3,435,116,096	\$	4,691,121,01
Account Balance - Beginning September 1	\$	86,718,000,757	\$	82,026,879,74
Account Balance - Ending August 31	\$	90,153,116,853	\$	86,718,000,75

Schedule 1

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Schedule 1

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## Comparative Schedule of Changes in Account Balance PENSION TRUST FUND

FOR THE FISCAL YEAR ENDED AUGUST 31, 2017 (With Comparative Data for August 31, 2016)

DEFERRED RETIREMENT OPTION ACCOUNT		2017	2016
Additions			
Transfers In:			
Allocation from Interest Account	\$	321,959	\$ 403,677
Transfer from Expense Account			780
TOTAL ADDITIONS	\$	321,959	\$ 404,457
Deductions		_	
Benefits Paid	\$	5,231,060	\$ 5,166,851
Transfers Out:			
Transfer to Retired Reserve Account to Fund Benefits			4,073,970
Allocation to Interest Account for DROP Revokes			2,370,155
TOTAL DEDUCTIONS	\$	5,231,060	\$ 11,610,976
Net Change in Account Balance	\$	(4,909,101)	\$ (11,206,519)
Account Balance - Beginning September 1	\$	18,083,634	\$ 29,290,153
Account Balance - Ending August 31	\$	13,174,533	\$ 18,083,634

FOR THE FISCAL YEAR ENDED AUGUST 31, 2017 (With Comparative Data for August 31, 2016)

EXPENSE ACCOUNT		2017	2016			
Additions						
Miscellaneous Revenues	\$	1,299,284	\$	1,993,029		
Transfers In:						
Transfer from Member Savings				24,926,487		
Allocation from Interest Account		118,080,810		117,033,476		
Transfer in from Teacher Retirement Investment						
Company of Texas Ltd.	1.1	817				
TOTAL ADDITIONS	\$	119,380,911	\$	143,952,992		
Deductions						
Service Credit Purchase:						
Refundable	\$	995,863	\$	10,185,824		
Non-Refundable		1,169,056		12,767,012		
Administrative Expenses:						
Salaries, Wages and Other Personnel Costs		68,991,054		67,409,307		
Professional Fees and Services		4,348,743		4,131,185		
Travel		836,068		1,092,461		
Materials and Supplies		4,185,230		4,696,454		
Communications and Utilities		613,900		866,937		
Repairs and Maintenance		3,689,689		6,576,462		
Rentals and Leases		2,567,422		2,659,054		
Printing and Reproduction		316,636		184,958		
Depreciation Expense		2,727,256		2,825,183		
Amortization Expense		411,935		421,057		
Gain/Loss on Capital Assets				832		
Other Expense		2,843,216		2,673,564		
Transfers Out:						
Transfer Out to Deferred Retirement Option Account				780		
Transfer Out to Teacher Retirement Investment						
Company of Texas Ltd.		1,624,167		1,281,723		
TOTAL DEDUCTIONS	\$	95,320,235	* \$	117,772,793		
Net Change in Account Balance	\$	24,060,676	\$	26,180,199		
Account Balance - Beginning September 1	\$	126,340,084	\$	100,159,885		
Account Balance - Ending August 31	\$	150,400,760	\$	126,340,084		

\*This amount includes investment related administrative expenses of \$47,341,151 and benefit related administrative expenses of \$44,189,998 (Schedule 2). Teacher Retirement Investment Company of Texas Ltd. administrative expenses are not included.

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## Schedule of Administrative and Investing Activity Expenses ALL FUNDS

FOR THE FISCAL YEAR ENDED AUGUST 31, 2017

	Pension Trust Fur					nd		
		Benefits	In	vestments		TRICOT		
Administrative Expenses								
Personnel Services:								
Salaries and Wages:								
Salaries	\$	22,757,833	\$	32,625,855	\$			
Longevity Pay		185,105		192,661				
Benefit Replacement Pay		21,178		22,042				
Employee Compensable Absences		157,437		170,836				
Payroll Related Costs:								
Employer FICA Contributions		1,012,592		1,053,922				
Employer Health Insurance Contributions		4,940,844		3,577,853				
Other Employee Benefits		1,113,719		1,159,177				
Seconded Employees and Other Services						789,57		
TOTAL PERSONNEL SERVICES	\$	30,188,708	\$	38,802,346	\$	789,57		
Professional Fees and Services	\$	3,738,821	\$	609,922	\$	1,72		
Other Operating Expenses:						e		
Travel	\$	189,065	\$	647,003	\$	26,72		
Materials and Supplies:								
Consumable Supplies and Fuels		225,585		199,313				
Subscriptions and Reference Information		423,080		306,369		3,34		
Postage, Mailing and Delivery Services		1,461,199		1,058,110		1,22		
Furniture and Equipment - Expensed		296,713		214,861		5,04		
Communications and Utilities		455,230		158,670		3,15		
Repairs and Maintenance:								
Software Purchases and Maintenance		1,782,698		1,290,918		4,66		
Computer Hardware Maintenance		344,685		249,601				
Maintenance - Buildings and Equipment		12,636		9,151				
Rentals and Leases		120,177		2,447,245		309,52		
Printing and Reproduction		183,648		132,988		21		
Depreciation Expense		2,732,732		20,524		2,63		
Amortization Expense		411,935						
Taxes						385,70		

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TRS-Care	TRS	-ActiveCare	Admi	03(b) nistrative ogram	Total
\$ 2,399,252	\$	1,518,712	\$	54,504	\$ 59,356,156
23,842		8,930		488	411,020
2,195		517		39	45,97
61,640		81,136		384	471,433
1,666		50,186		2,187	2,120,55
196,490		106,734		4,231	8,826,15
210,612		77,745		2,274	2,563,52
		100 B 100			789,57
\$ 2,895,697	\$	1,843,960	\$	64,107	\$ 74,584,39
\$ 1,658,645	\$	1,380,105	\$	112,630	\$ 7,501,84
\$ 24,172	\$	8,672	\$		\$ 895,63
1,607		1,041			427,54
8,711		3,650		288	745,44
139,409		37,364		1,066	2,698,37
9,187		3,516		300	529,62
1,568		79			618,69
46,010		11,516		2,053	3,137,86
11,147		2,790		497	608,72
270		106		6	22,16
24,900		22,982			2,924,82
62,827		5,708		167	385,54
					2,729,89
					411,93
					385,70
					(to next page

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# Schedule 2

## Schedule of Administrative and Investing Activity Expenses ALL FUNDS

FOR THE FISCAL YEAR ENDED AUGUST 31, 2017

		Pension Trust Fund						
	Benefits	Investments			TRICOT			
	358,377		259,513			4,021		
	403,909		292,485			74		
	886,800		642,132			11,972		
<b>s</b> \$	10,262,469	\$	7,928,883		\$	758,318		
\$	44,189,998	\$	47,341,151		\$	1,549,612		
\$		\$	6,906,799		\$			
			9,177,517					
			126,449,587					
			4,695,246					
			22,000,000					
\$	0	\$	169,229,149		\$	0		
	<mark>5 \$</mark> \$ \$	358,377 403,909 886,800 \$ \$ 10,262,469 \$ 44,189,998 \$	358,377 403,909 886,800 5 \$ 10,262,469 \$ \$ 44,189,998 \$ \$ \$	358,377       259,513         403,909       292,485         886,800       642,132         5       \$       10,262,469       \$       7,928,883         \$       44,189,998       \$       47,341,151         \$       44,189,998       \$       6,906,799         \$       \$       \$       6,906,799         \$       \$       4,126,449,587         \$       \$       \$       4,695,246         \$       \$       22,000,000	358,377       259,513         403,909       292,485         886,800       642,132         5       \$ 10,262,469       \$ 7,928,883         \$ 44,189,998       \$ 47,341,151         \$ 44,189,998       \$ 6,906,799         9,177,517       126,449,587         4,695,246       22,000,000	358,377       259,513         403,909       292,485         886,800       642,132         5       \$       10,262,469       \$       7,928,883       \$         \$       44,189,998       \$       47,341,151       \$         \$       44,189,998       \$       9,177,517       \$         \$       \$       6,906,799       \$       9,177,517         126,449,587       4,695,246       22,000,000       \$		

\* For more information on External Manager Fees, including fees that are netted against returns, please refer to the Investment Section.

\*\* Reported as Investing Activity Expenses under Investment Income on Exhibit II.

Financial Section 110

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2017 Comprehensive Annual Financial Report

					403(b) inistrative			
TR	S-Care	TRS-ActiveCare		Pi	rogram	Total		
		1997						
	10,946		6,179		1,256		640,292	
	15,561		9,662		282		721,973	
	42,835		8,112		1,093	12	1,592,944	
\$	399,150	\$	121,377	\$	7,008	\$	19,477,205	
\$	4,953,492	\$	3,345,442	\$	183,745	\$	101,563,440	
\$		\$		\$		\$	6,906,799	
							9,177,517	
							126,449,587	
							4,695,246	
							22,000,000	
\$	0	\$	0	\$	0	\$	169,229,149	
\$	4,953,492	\$	3,345,442	\$	183,745	\$	270,792,589	

Schedule 2

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Schedule 3

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## Schedule of Professional and Consulting Fees ALL FUNDS

FOR THE FISCAL YEAR ENDED AUGUST 31, 2017

Individual or Firm	Nature of Service	A	mount
Hewlett Packard	Consulting Services	\$	13,000,000
Gabriel, Roeder, Smith, & Company	Legal Services		2,036,822
JP Morgan Securities	Investment Research		1,659,051
Jackson Walker	Legal Services		1,412,259
Credit Suisse	Investment Research		1,410,007
Hamilton Lane	Investment Consulting Services		1,400,000
Provaliant Holdings LLC	Consulting Services		1,326,405
Allied Consultants Inc	Investment Consulting Services		1,294,669
Macquarie Group Limited	Investment Research		1,016,554
AON Consulting Inc	Investment Consulting Services		1,000,000
Neos Consulting Group, LLC	IT Consulting Services		857,122
Norton Rose Fulbright	Legal Services		835,344
Seyfarth Shaw LLP	Legal Services		788,566
Access Sciences Corp	Other Professional Services		613,008
Ernst & Young LLP	Financial and Accounting Services		573,099
State Auditors Office	Financial and Accounting Services		563,000
The Townsend Group	Investment Consulting Services		550,000
Teksystems	Temporary Employment Services		501,062
Albourne America LLC	Investment Consulting Services		488,575
TIBH Industries Inc	Temporary Employment Services		460,894
Advanced Call Center Technologies, LLC	Other Professional Services		446,400
Rhyan Technology Services	Consulting Services		441,794
lce Miller	Legal Services		416,884
GTS Technology Solutions, Inc	IT Consulting Services		352,699
Deutsche Bank AG	Investment Research		320,113
Bridgepoint Consulting LLC	Consulting Services		319,960
Jefferies & Company Inc	Investment Research		309,037
CLSA Limited	Investment Research		287,269
State Street Bank And Trust Company	Investment Consulting Services		280,000
Soal Technologies LLC	Temporary Employment Services		273,822
Katten Muchin Roseman LLP	Legal Services		272,005
Cornerstone Macro LP	Investment Research		264,130
Bank of America Merrill Lynch	Investment Research		254,808

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## Schedule of Professional and Consulting Fees ALL FUNDS

FOR THE FISCAL YEAR ENDED AUGUST 31, 2017

Individual or Firm	Nature of Service	Amount
Citigroup Global Markets	Investment Research	252,920
Evercore ISI	Investment Research	250,959
NF Consulting Services	Consulting Services	245,388
Bernstein	Investment Research	225,756
Truven Health Analytics Inc	Consulting Services	223,275
Squire Patton Boggs LLP	Legal Services	211,097
IG Igloo Holdings Inc	Consulting Services	202,035
PricewaterhouseCoopers LLP	Financial and Accounting Services	200,870
Election-America Inc	Financial and Accounting Services	200,345
Nomura Group	Investment Research	197,757
Focus Consulting Group Inc	Consulting Services	190,200
Green Street Advisors LLC	Investment Research	185,000
Redburn Limited	Investment Research	182,365
Reinhart Boerner Van Deuren SC	Legal Services	178,606
Catapult Systems	IT Consulting Services	175,129
Cowen and Company	Investment Research	168,094
BMO Capital Markets	Investment Research	162,554
Wolfe Research LLC	Investment Research	162,214
Keefe, Bruyette & Woods Inc	Investment Research	153,539
Protiviti Inc	Consulting Services	149,590
HSBC Bank PLC	Investment Research	146,258
Coaching by Cornerstone	Other Professional Services	144,400
Langrand and Company LLC	Consulting Services	143,846
Empirical Research Partners	Investment Research	126,095
RBC Capital Markets	Investment Research	125,269
ISI Group	Investment Research	125,000
Sanford Bernstein	Investment Research	125,000
Foster Pepper PLLC	Legal Services	119,715
CEM Benchmarking Inc	Other Professional Services	115,000
SMBC Nikko Securities	Investment Research	114,795
IHS Herold Inc	Investment Research	110,018
Wood Mackenzie	Investment Research	105,000
Grant Thornton LLP	Legal Services	97,307

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## Schedule of Professional and Consulting Fees ALL FUNDS

FOR THE FISCAL YEAR ENDED AUGUST 31, 2017

Individual or Firm	Individual or Firm Nature of Service				
Wells Fargo Securities	Investment Research	80,469			
Brown, Keith C	Investment Consulting Services	80,000			
Lenox Park Solutions Inc	Investment Research	75,000			
BCA Research Publications	Investment Research	74,429			
Tudor Pickering Holt & Co Inc	Investment Research	73,805			
Customer Relationship Metrics LC	Other Professional Services	73,432			
The Leuthold Group	Investment Research	64,000			
Piper Jaffray & Co	Investment Research	62,597			
Stifel Nicolaus & Co	Investment Research	57,322			
Connecttel Inc	Temporary Employment Services	48,680			
Zelman & Associates	Investment Research	48,423			
UBM LLC	Consulting Services	46,975			
Perryman Group	Consulting Services	44,800			
LogicManager Inc	Consulting Services	41,250			
Purrington Moody Weil	Legal Services	40,005			
Reed Fire Protection Engineering LLC	Consulting Services	39,795			
Munsch Hardt Kopf & Harr PC	Legal Services	39,641			
Myers and Stauffer LC	Financial and Accounting Services	39,518			
Scotia Capital	Investment Research	38,785			
Cox, Alice Md	Medical Services	36,630			
Reinarz, James Allen Md	Medical Services	36,630			
Wilson, Larry Md	Medical Services	36,630			
The Predictive Index LLC	Other Professional Services	35,123			
Gardere Wynne Sewell	Legal Services	33,619			
W.D. Von Gonten	Investment Research	31,456			
Furey Research Partners LLC	Investment Research	30,000			
Bespoke Investment Group LLC	Investment Research	25,000			
Renaissance Macro Research	Investment Research	25,000			
Yardeni Research Inc	Investment Research	25,000			
Rosen Consulting Group	Investment Research	23,750			
Rosen Consulting Group	Legal Services	23,750			
Alexander Consulting	Consulting Services	22,500			
Texas A&M University	Other Professional Services	20,545			
Workers Assistance Program Inc	Consulting Services	20,312			

Schedule 3

N/A

**Financial Section** 

## Schedule of Professional and Consulting Fees ALL FUNDS

FOR THE FISCAL YEAR ENDED AUGUST 31, 2017

Individual or Firm	Nature of Service	Amount		
Unify Inc	IT Consulting Services	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	15,600	
ImageNet Consulting	Financial and Accounting Services		15,453	
Lyris Technologies	Other Professional Services		14,155	
Benson Design Associates Inc	Other Professional Services		13,850	
Merrill Lynch	Investment Research		12,500	
Eversheds Sutherland LLP	Legal Services		11,000	
Aggregate Payees less than \$10,000	Other Professional Services		74,398	
		\$	43,192,581	
Prior Budget Year Expenditure Adjustment			(59,549)	
TOTAL PROFESSIONAL AND CONSULTING FEES		\$	43,133,032	
METHOD OF FINANCE:				
Fiduciary Funds:				
Pension Trust Fund		\$	35,562,446	
TRS-Care			2,335,993	
Total Fiduciary Funds			37,898,439	
Proprietary Funds:				
TRS-ActiveCare			1,354,299	
403(b) Administrative Program			112,630	
Total Proprietary Funds			1,466,929	
Commission Credits:			3,767,660	
TOTAL METHOD OF FINANCE		\$	43,133,028	

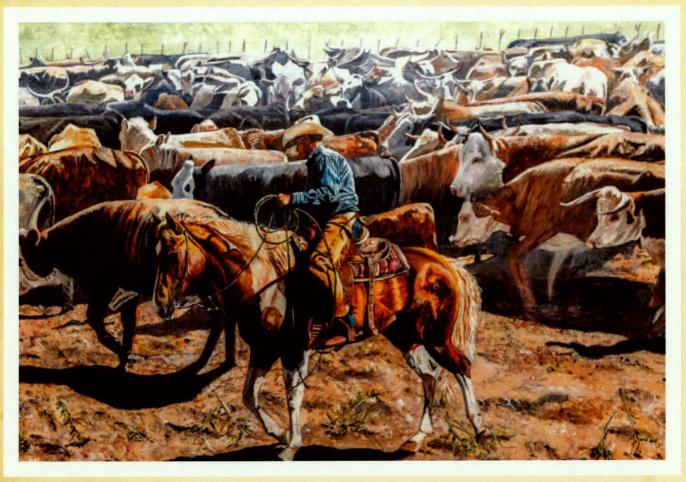
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# **INVESTMENT SECTION**



Anita Smith Palmer "Roundup," 2001 Founders Award in Painting, American Academy of Equine Art



## Investment Overview

### STRATEGIC INITIATIVES

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The Investment Management Division (IMD) completed a review of the TRS Pension Fund's (Trust) public global equity portfolio in the last fiscal year. The project compared TRS' approach to other industry participants and focused on areas such as the use of internal and external management, quantitative and fundamental strategies, the challenging environment for active management in the U.S. stock market, and the use of risk premium strategies. The review resulted in both organizational and portfolio changes aimed at improving our results and helping us achieve the goal of a 1 percent return above passive benchmarks. Consequently, the IMD created one unit to oversee the public equity portfolio. Within the portfolio, allocations to internally managed fundamental and externally managed strategies were decreased.

In 2016, the IMD developed and implemented a new fee philosophy within the hedge fund industry with a goal to retain 70 percent of value generated by its hedge fund partners. The fee structure is aimed at achieving a more consistent share of value across return environments relative to traditional fee structures. A majority of the IMD's invested managers have been converted to the new fee structures, and the IMD will continue to implement the strategy throughout the portfolio. After its successful launch, the IMD was endorsed by multiple influential industry partners for its market leading initiative.

The year 2017 marked the ninth anniversary of the TRS Public Strategic Partnership Network (SPN). At its outset, four managers (JP Morgan, Neuberger Berman, Morgan Stanley, and Black-Rock) were funded with \$1 billion each to invest globally across the same public asset classes as the Trust. As of August 31, 2017, the total Public SPN is valued at \$7.7 billion. TRS also replicated the SPN concept in the private markets in 2012, establishing long-term partnerships with Apollo and KKR to manage assets in private equity, real assets and credit markets. As of August 31, 2017, the total Private SPN had a net asset value of \$3.9 billion, and commitments totaled \$8 billion. In early 2015, TRS committed another \$1 billion each to KKR and Apollo to be directed towards tactical opportunities, including non-traditional credit investments. As of August 31, 2017, the total Tactical Value SPN had a net asset value of \$1.2 billion and commitments totaled \$2 billion. Each year the SPN collaborates to produce several research projects used to benefit the Trust and to provide valuable insights into asset allocation. These strategic partnerships continue to add value to the Trust through beneficial investment returns and proprietary research projects.

The past year saw continued growth in the successful Principal Investments Program, which seeks to take advantage of TRS' competitive advantages as a large, long-term investor by initiating high-transparency, low-fee, alpha-producing investment arrangements with select investment partners. Since the program began in 2009, the fund has committed \$10.2 billion in more than 75 principal investments across Energy and Natural Resources, Private Equity and Real Assets. In addition, the IMD has committed another \$2.4 billion across more than 90 smaller

# **Investment Overview**

principal investments in separate dedicated vehicles managed by select general partners, as well as an even greater volume of principal investments in side-car vehicles.

The IMD opened TRS' first international office in London on November 1, 2015 to supplement TRS' Principal Investments Program internationally. TRS achieved its target to increase deal opportunities by 50 percent over the prior year. TRS will continue to build upon its reputation as a leading institutional investor and strengthen investment relationships with key players overseas. The principal investment effort has been highly accretive to the Trust's returns, producing an even greater level of high quality deal flow for TRS, which will continue to make principal investments a greater portion of the IMD's private market investments.

## Prepared by:

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Investment Staff of the System

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### A. INVESTMENT POLICY

The Board of Trustees has the primary fiduciary responsibility for investing TRS trust assets in accordance with Article XVI, Section 67 of the Texas Constitution and with applicable law. The Board establishes investment objectives and policy, obtains expert advice and assistance, and oversees the employment of a qualified and competent investment staff, the Investment Management Division (IMD), and legal staff. The Board also monitors the actions of staff, consultants and advisors to ensure compliance with its policies. The Board has a Policy Committee of the Board ("Policy Committee"), an Investment Management Committee of the Board ("IMD Committee") and a Risk Management Committee of the Board ("Risk Management Committee"), each of which is a standing committee of the Board charged with those responsibilities set forth in the Bylaws of the Board. The Board and the Investment Division are assisted by outside investment consultants and internal and external legal counsel.

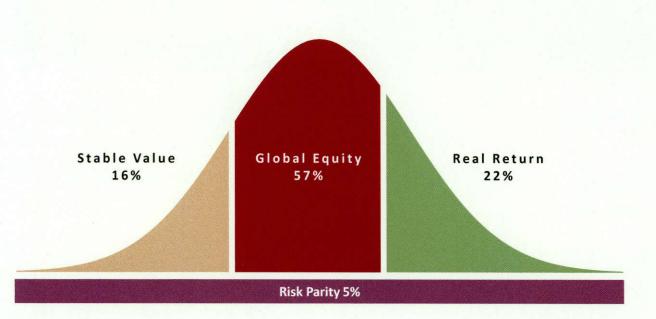
The total or overall investment portfolio includes all assets invested by TRS to provide retirement, death, health, and disability benefits administered by the system, and is structured and managed to achieve the following objectives:

- a. Control risk through proper diversification of asset classes and by establishing long-term risk and return expectations; and
- b. As applicable to the pension plan, achieve a long-term rate of return that:
  - i. Exceeds the assumed actuarial rate of return adopted by the Board;
  - ii. Exceeds the long-term rate of inflation by an annualized 5%; and
  - iii. Exceeds the return of the Fund Policy Benchmark.

### **B. PORTFOLIO STRUCTURE**

TRS follows a diversified investment approach that focuses on the three most common economic scenarios. Scenario One is characterized by favorable Gross Domestic Product (GDP) growth and moderate inflation as measured by the Consumer Price Index (CPI), which has been the prevailing economic condition 68 percent of the time since 1948. Scenario Two is one of low GDP growth and high inflation, which has occurred 18 percent of the time. Finally, Scenario Three is characterized by stagnant GDP growth and low inflation, which has occurred 14 percent of the time. TRS is positioned to take advantage of any of these various market scenarios. TRS' long-term asset allocation target is 57 percent to Global Equity markets, which perform well under Scenario One, 22 percent to Real Return, which should perform well in Scenario Two, 16 percent to a Stable Value portfolio, which should perform well and minimize downside risk in Scenario Three, and 5 percent to the Risk Parity strategy, which has a balanced exposure to all three economic scenarios.

## **Report on Investment Activities**



## C. ASSET ALLOCATION

The normal portfolio mix represents the portfolio that is expected to meet the Board's actuarial return objectives for the pension plan within the risk tolerances specified in the Investment Policy Statement. Each asset class allocation percentage has a "long-term target" position within the overall portfolio and a maximum and minimum range around that target allocation. All percentages refer to market value.

Generally Accepted Accounting Principles (GAAP) and the Governmental Accounting Standards Board (GASB) require that investments be reported at **fair value** in the basic financial statements (Exhibit 1 and Note 3). However, TRS' asset allocation is based on **market value**, which includes investment-related cash, receivables, and payables and securities sold short. These items cannot be included as part of the fair value of investments under GAAP. Table 1 presents the asset allocation policy ranges and market values as of August 31, 2017. A reconciliation to fair value is provided following Table 1.

# **Report on Investment Activities**

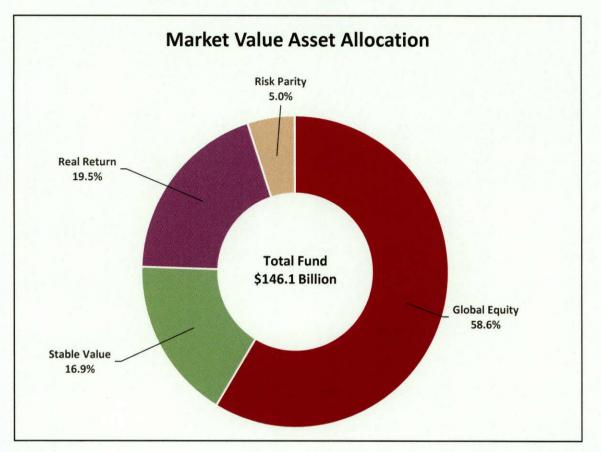
Asset Allocation								
For the Fiscal	Year Ende	d August 3	1, 2017					

Table 1

	Policy Ranges			Actual				
Asset Class	Minimum Range	Maximum Range	Target	% of Total Market Value Fund				
Global Equity								
Public Equity								
USA	13%	23%	18%	\$ 27,403,618,462 18.8%				
Non-US Developed	8%	18%	13%	19,655,343,375 13.5%				
Emerging Markets	4%	14%	9%	14,230,593,057 9.7%				
Directional Hedge Funds	0%	10%	4%	5,894,151,419 4.0%				
Total Public Equity	39%	49%	44%	67,183,706,313 46.0%				
Private Equity	8%	18%	13%	18,488,655,302 12.6%				
Total Global Equity	50%	64%	57%	85,672,361,615 58.6%				
Stable Value								
US Treasuries	0%	20%	11%	15,777,732,403 10.8%				
Absolute Return	0%	20%	0%	2,349,039,082 1.6%				
Stable Value Hedge Funds	0%	10%	4%	5,641,926,266 3.9%				
Cash	11%	5%	1%	813,521,981 0.6%				
Total Stable Value	11%	21%	16%	24,582,219,732 16.9%				
Real Return								
Global Inflation Linked Bonds	0%	8%	3%	5,038,532,449 3.4%				
Real Assets	9%	19%	14%	17,801,757,943 12.1%				
Energy, Natural Resources & Infrastructure	0%	10%	5%	5,649,962,453 3.9%				
Commodities	0%	5%	0%	75,097,113 0.1%				
Total Real Return	17%	27%	22%	28,565,349,958 19.5%				
Total Risk Parity	0%	10%	5%	7,306,662,031 5.0%				
Total Fund			100%	\$ 146,126,593,336 100.0%				

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# **Report on Investment Activities**

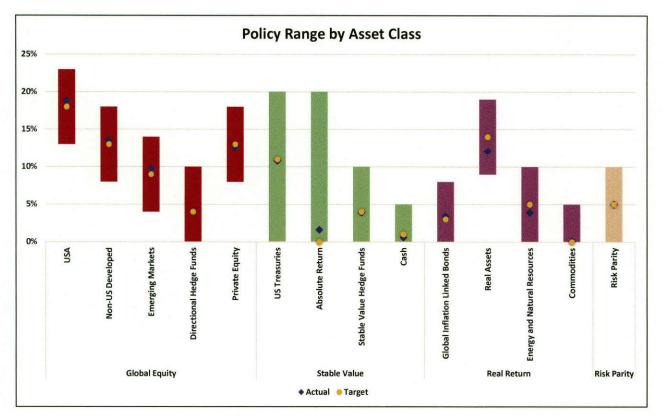


## Market Value to Fair Value Reconciliation For the Fiscal Year Ended August 31, 2017

Market Value	\$ 146,126,593,336
Investment-Related Cash	(129,410,821)
Investment-Related Receivables	(904,448,065)
Investment-Related Payables	641,453,019
Securities Sold Short	182,214,448
Fair Value	\$ 145,916,401,917

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## D. LARGEST HOLDINGS

## **Fixed Income Investments**

The ten largest fixed income investments held by TRS are all U.S. Treasury Bonds which represent 32.4 percent of all fixed income securities. The ten largest fixed income investments reported at GAAP fair value is displayed in Table 2. A complete list of fixed income investments is available by contacting the TRS Communications Department.

	LARGEST FIXED INCOME INVESTMENTS For the Fiscal Year Ended August 31, 2017 Table 2									
Rank	Fixed Income Securities	Par Value		GAAP Fair Value	% of Total Fixed Income Investments					
1	U.S. Treasury Bond 3.000% Due 11/15/2045	884,804,600	\$	934,052,222	4.3%					
2	U.S. Treasury Bond 3.625% Due 02/15/2044	765,610,000		902,340,351	4.2%					
3	U.S. Treasury Bond 3.000% Due 05/15/2047	739,237,500		780,995,703	3.6%					
4	U.S. Treasury Bond 2.875% Due 08/15/2045	667,900,000		688,415,744	3.2%					
5	U.S. Treasury Bond 3.625% Due 08/15/2043	571,135,000		671,931,418	3.1%					
6	U.S. Treasury Bond 3.000% Due 05/15/2045	624,880,000		660,073,798	3.0%					
7	U.S. Treasury Bond 3.750% Due 11/15/2043	529,703,300		636,654,253	2.9%					
8	U.S. Treasury Bond 3.375% Due 05/15/2044	534,600,000		604,648,558	2.8%					
9	U.S. Treasury Bond 2.500% Due 02/15/2045	617,200,000		591,006,908	2.7%					
10	U.S. Treasury Bond 2.875% Due 05/15/2043	549,065,000		567,688,198	2.6%					
	Total Top Ten	6,484,135,400		7,037,807,153	32.4%					
	Total Fixed Income Securities		\$	21,741,743,293						

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## **Equity Investments**

Table 3 discloses TRS' ten largest equity investments reported at GAAP fair value which constitute 7.9 percent of the fund's total equity exposure. A complete list of equity investments is available by contacting the TRS Communications Department.

	LARGEST EQUITY INVESTMENTS For the Fiscal Year Ended August 31, 2017 Table 3									
Rank	% of Total GAAP Equity Rank Equity Holdings Total Shares Fair Value Investment									
1	Apple Incorporated	3,790,981	\$	621,720,884	1.2%					
2	Tencent Holdings Limited	13,780,908		579,307,187	1.2%					
3	Microsoft Corporation	5,877,225		439,440,113	0.9%					
4	Samsung Electronics Company Limited	211,237		433,863,863	0.9%					
5	Alibaba Group Holding Limited	2,339,910		401,856,143	0.8%					
6	Facebook Incorporated	1,889,614		324,956,920	0.7%					
7	Johnson & Johnson	2,405,651		318,436,023	0.6%					
8	China Construction Bank	340,512,603		298,464,368	0.6%					
9	JPMorgan Chase & Company	2,829,489		257,172,255	0.5%					
10	Alphabet Incorporated	265,351		249,252,155	0.5%					
	Total Top Ten	373,902,969		3,924,469,911	7.9%					
	Total Equity Holdings		\$	49,791,863,021						

### E. INVESTMENT RESULTS

#### **Performance Reporting**

Each asset class is described by an associated benchmark that describes, in general terms, the opportunity set and return characteristics associated with the asset class. For certain private or more complex asset classes, the benchmark serves as a proxy for expected returns rather than an approximation of the actual investments that will characterize that component of the portfolio. Those benchmarks are identified in Table 4 and are referred to as the "Policy Benchmarks."

Policy Benchmarks						
Table 4						
Asset Class Benchmark Portfolio						
Global Equity						
USA	MSCI USA Investable Market Index					
Non-US Developed	MSCI EAFE + Canada Market Index					
Emerging Markets	MSCI Emerging Markets Market Index					
Directional Hedge Funds	Hedge Fund Research, Inc. (HFRI) Fund of Funds Composite					
Private Equity	Equity Index - lagged one quarter					
	State Street Private Equity Index (SSPEI)					
Stable Value						
US Treasuries	Barclays Capital (BarCap) Long Treasury Index					
Absolute Return	3 Month LIBOR + 2%					
Stable Value Hedge Funds	Hedge Fund Research, Inc. (HFRI) Fund of Funds Composite					
Cash	Citigroup 90-day US Treasury					
Real Return						
Global Inflation Linked Bonds	Barclays Capital (BarCap) US Treasury TIPS Index					
Real Assets	NCREIF ODCE Index - lagged one quarter					
Energy, Natural Resources & Infrastructure	40% Cambridge Associates Natural Resources/					
	40% Cambridge Associates Infrastructure/					
	20% quarterly Consumer Price Index - lagged one quarter					
Commodities	Goldman Sachs Commodity Index					
Risk Parity	Calculated using a group of risk parity managers					

#### **Performance Results**

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Investment performance is calculated using a time-weighted rate of return. Returns are calculated by State Street Bank and Trust Company, TRS' custodian bank, independently and using industry best practices. The total time-weighted rates of return have been adjusted for cash flows and are calculated net of bank fees, external manager fees, external legal fees, and external custodial fees. Administrative expenses for the Investment Management Division (IMD) are not netted against or included in performance calculations.

For the fiscal year ending August 31, 2017, the TRS Pension Fund delivered investment returns of 12.6 percent, which is 1.6 percent above the fund's benchmark. By asset class, returns were 17.3 percent for Global Equity, -1.3 percent for Stable Value and 11.1 percent for Real Return. On a three-year annualized basis, the fund has returned 6.4 percent, which is 0.5 percent above its benchmark. As a result, the total investment value of the fund as of August 31, 2017 was \$146.1 billion, or \$12.7 billion more than this time last year, after contributions and benefit payouts.

Due to TRS' fiscal year ending on August 31, 2017, the most complete performance and benchmark information by asset class is available for periods ended June 30<sup>th</sup>, presented in Table 5. For a complete list of composite benchmark compositions, contact the TRS Communications Department.

For Periods Ended June 30	TOTAL TIME WEIGHTED RETURNS For Periods Ended June 30								
Table 5 3 5 10									
Asset Class	2017	Years	Years	Years					
TRS	12.9%	6.0%	8.8%	5.4%					
Custom Benchmark	11.3%	5.6%	8.1%	5.2%					
Global Equity									
USA	19.0%	7.4%	13.3%	6.7%					
USA Composite Benchmark	18.4%	9.2%	14.6%	0.0%					
Non-US Developed	19.1%	2.2%	9.2%	0.0%					
Non-US Developed Composite Benchmark	19.5%	0.7%	8.1%	1.0%					
Emerging Markets	23.9%	2.1%	5.2%	0.0%					
Emerging Markets Composite Benchmark	23.7%	1.1%	4.0%	1.9%					
Directional Hedge Funds	11.7%	0.9%	4.9%	0.0%					
Directional Hedge Fund Composite Benchmark	6.3%	1.5%	3.8%	0.9%					
Total Public Equity	19.5%	4.3%	9.7%	3.6%					
Public Equity Composite Benchmark	18.9%	4.4%	9.6%	3.5%					
Private Equity	15.4%	10.8%	14.1%	10.1%					
Private Equity Composite Benchmark	15.1%	9.1%	10.7%	7.1%					
Total Global Equity	18.6%	5.5%	10.5%	4.4%					
Global Equity Composite Benchmark	18.1%	5.3%	9.8%	4.1%					
Stable Value									
US Treasuries	-7.6%	6.5%	3.4%	0.0%					
US Treasuries Composite Benchmark	-7.2%	5.6%	2.8%	7.3%					
Absolute Return	6.5%	8.7%	13.2%	0.0%					
Absolute Return Composite Benchmark	3.0%	2.6%	2.5%	2.9%					
Stable Value Hedge Funds	7.0%	4.9%	5.0%	2.2%					
Stable Value Hedge Fund Composite Benchmark	5.3%	1.5%	3.7%	3.4%					
Cash	2.1%	2.5%	2.4%	1.6%					
Cash Composite Benchmark	0.5%	0.2%	0.2%	0.6%					
Total Stable Value	-2.1%	6.8%	4.7%	6.6%					
Stable Value Composite Benchmark	-3.8%	4.5%	2.9%	6.0%					
Real Return									
Global Inflation Linked Bonds	-0.4%	0.8%	0.4%	0.0%					
Global Inflation Linked Bonds Composite Benchmark	-0.6%	0.6%	0.3%	0.0%					
Real Assets	10.9%	11.9%	11.9%	0.0%					
Real Assets Composite Benchmark	7.4%	10.8%		4.7%					
Energy, Natural Resources & Infrastructure	N/A	N/A		N/A					
Energy, Natural Resources & Infrastructure Composite Benchmark	N/A	N/A		N/A					
Commodities	-4.5%		-14.3%	0.0%					
Commodities Composite Benchmark	-9.0%		-13.7%	-9.7%					
Total Real Return	10.3%	7.9%	7.8%	6.3%					
Real Return Composite Benchmark	6.8%	7.1%	7.4%	5.8%					
Total Risk Parity	7.6%	2.6%	5.0%	0.0%					
Risk Parity Benchmark	6.3%	2.6%	4.5%	0.0%					

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#### F. FEES AND COMMISSIONS

#### **Investment Manager Fees**

Management and Performance Fees that are paid from the Pension Trust Fund are charged by the manager or general partner to cover normal operating costs and the expenses of administering the partnership. The manager or general partner usually receives an annual management fee paid in quarterly, but sometimes in semi-annual or annual installments, from the limited partners. Management Fees are typically 1.5 percent to 2 percent of the investment or the investment commitment during the investment period and are sometimes scaled down after the investment period. The management fee rate, basis for the calculation, and specific terms are agreed to in the Limited Partnership Agreement (LPA).

Performance Fees/Carried Interest are accrued and paid based on the amount of profit or returns in excess of a benchmark or hurdle rate established in the LPA. Certain other Management Fees are charged by investment partnerships and netted against the investment earnings of the partnership. For investments in Private Equity, Real Assets, Energy and Natural Resources, Performance Fees/Carried Interest represent the general partner's share of the partnership's profits, which is typically 20 percent, with 80 percent going to limited partners, such as TRS. Carried Interest is calculated and paid as partnership investments are realized, and Carried Interest on the unrealized investments is accrued over the life of the partnership based on the current valuation.

Fees paid from the pension trust fund are booked as expenses on the income statement. Fees netted against returns are charged by investment partnerships and netted against the investment earnings of the partnership. Generally, the information for fees netted against returns are requested and received from fund general partners on a quarterly basis. Due to the timing of information received from fund general partners, fees paid or accrued in conjunction with investment activities, along with the related market value of assets under management, is presented for the calendar year ended June 30, 2017 in Table 6.

### Investment Manager Fees For the Calendar Year Ended June 30, 2017 Table 6

			a	ole o				
Fees Pa					the Pension und	Fees Netted	gainst Returns	
Asset Class		Market Value of Assets Under Management		Management Fees	Performance Fees	Management Fees		Performance Fees/Carried Interest
Global Equity								
Public Equity								
USA	\$	26,085,799,934	\$	30,610,647	\$ 8,581,379	\$ 10,850,512	\$	7,889,700
Non-US Developed		22,128,097,098		15,706,904	20,353,613	16,862,277		5,662,864
Emerging Markets		13,951,080,872		32,455,477	11,124,433	5,362,186		1,107,653
Directional Hedge Funds		5,802,915,802		2,213,541	529,827	68,245,757		52,394,501
Total Public Equity		67,967,893,706		80,986,569	40,589,252	101,320,732		67,054,718
Private Equity		17,832,356,502		-	-	171,852,529		271,646,001
Total Global Equity		85,800,250,208		80,986,569	40,589,252	273,173,261		338,700,719
Stable Value	1.1							
US Treasuries		10,827,520,623		-	-	-		-
Absolute Return		3,971,463,355		-	-	6,635,833		3,724,997
Stable Value Hedge Funds		5,491,479,017			-	93,741,379		68,898,729
Cash		1,079,075,684		-	-	-		-
Total Stable Value		21,369,538,679		-	-	100,377,212		72,623,726
Real Return						14		
Global Inflation Linked Bonds		5,047,444,139		-	-	-		-
Real Assets		17,155,839,732		596,162	-	158,269,206		109,111,231
Energy, Natural Resources & Infrastructure		5,564,900,150		646,194	54,661	60,045,891		22,015,392
Commodities		104,192,694		-	-	-		-
Total Real Return		27,872,376,715		1,242,356	54,661	218,315,097		131,126,623
Total Risk Parity		6,996,931,342		1,586,159	-	11,448,072		1,175,430
Total Fund	\$	142,039,096,944	\$	83,815,084	\$ 40,643,913	\$ 603,313,642	\$	543,626,498

The amount of fees paid from the pension trust fund and booked as expenses in Table 6 are for the calendar year ended June 30, 2017. The amount of fees paid from the pension trust fund and booked as expenses for the fiscal year ended August 31, 2017, which appear in Exhibit II and Schedule 2 as External Manager Fees, amounted to \$126,449,587, which includes \$83,925,746 in management fees and \$42,523,841 in performance fees.

## **Broker Commissions**

Broker commissions are the incremental direct costs incurred to sell an asset or transfer a liability in the principal, or most advantageous, market for the asset or liability. Table 7 presents the commissions paid to brokers for the fiscal year ended August 31, 2017. Over 22 million shares were traded by 288 brokers, and commissions paid amounted to \$53.5 million.

Broker Commissions For the Fiscal Year Ended August 31, 2017 Table 7							
Brokerage Firm	Shares Traded	<b>Commissions Paid*</b>					
Goldman Sachs Group, Inc.	7,072,176,165,754 \$	7,868,120					
Merrill Lynch	237,401,036,301	4,039,431					
Morgan Stanley	482,793,489,036	3,653,678					
Credit Suisse Group	386,613,252,740	3,388,936					
JPMorgan Chase	1,062,141,477,014	3,375,245					
Citigroup	7,118,819,298,544	2,547,362					
Nomura Group	191,149,433,153	1,799,694					
UBS AG	2,070,110,403,484	1,759,873					
Deutsche Bank AG	461,423,649,577	1,675,599					
Macquarie	322,426,837,362	1,645,427					
Summary of remaining 278 brokerage firms	3,192,386,238,902	21,794,714					
Total	22,597,441,281,867 \$	53,548,079					

\*Commissions paid per share is less than \$0.01.

For the fiscal year ended August 31, 2017, a portion of the total commissions was paid through various Commission Sharing Arrangements (CSA) and Commission Recapture Arrangements (CRA). CSA proceeds generated \$14,184,638 and were used in accordance with Section 28(e) of the Securities Exchange Act of 1934 to acquire research services from various investment-related firms, totaling \$14,179,340. CRA proceeds generated \$588,947 and were used to acquire services totaling \$389,065. Unspent CSA proceeds, totaling \$9,833,844, and unspent CRA proceeds, totaling \$839,555, were held by State Street Bank and Trust Company as the system's CSA and CRA Administrator.

Vendor paid expenses are legal arrangements that are used to acquire investment-related items other than those paid for with commission credit proceeds. Through contractual agreements with various firms, the system benefited from \$4,534,954 in vendor paid expenses and contractual allowances for the fiscal year ended August 31, 2017.

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 Investment Section -132

37

# **ACTUARIAL SECTION**



Anita Smith Palmer "Barrel Racer," 2000





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October 27, 2017

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

#### Subject: Actuary's Certification of the Actuarial Valuation as of August 31, 2017

We certify that the information included herein and contained in the 2017 Actuarial Valuation Report is accurate and fairly presents the actuarial position of the Teacher Retirement System of Texas (TRS) as of August 31, 2017. This report was prepared at the request of the Board and is intended for use by the TRS staff and those designated or approved by the Board. This report may be provided to parties other than TRS staff only in its entirety and only with the permission of the Board.

All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, the results presented comply with the requirements of the Texas statutes and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned are independent actuaries. Mr. Siblik and Mr. Newton are Enrolled Actuaries, members of the American Academy of Actuaries and are qualified to give a Statement of Opinion. All are experienced in performing valuations for large public retirement systems.

#### **ACTUARIAL VALUATIONS**

The primary purpose of the valuation report is to determine the adequacy of the statutory contribution rates through measuring the resulting funding period, to describe the current financial condition of the System, and to analyze changes in the System's condition. In addition, the report provides various summaries of the data. This report may not be appropriate for other purposes. The information required by the System in connection with Governmental Accounting Standards Board Statement No. 67 (GASB No. 67) will be provided under separate cover.

Valuations are prepared annually, as of August 31 of each year, the last day of the System's plan and fiscal year.

#### FINANCING OBJECTIVE OF THE PLAN

The employee, employer, and State contribution rates are established by Law that, over time, are intended to remain level as a percent of payroll and provide assets to cover benefits when due. The

**Actuarial Section** 

134

5605 North MacArthur Boulevard | Suite 870 | Irving, Texas 75038-2631

Board of Trustees October 27, 2017 Page 2

actuarially determined employer contribution rates determined in this actuarial valuation are intended to provide for the normal cost plus the level percentage of payroll required to amortize the unfunded actuarial accrued liability over a period not in excess of 30 years.

#### PROGRESS TOWARD REALIZATION OF FINANCING OBJECTIVE

The actuarial accrued liability, the unfunded actuarial accrued liability (UAAL), and the calculation of the resulting funding period illustrate the progress toward the realization of financing objectives. Based on this actuarial valuation as of August 31, 2017, the System's under-funded status has remained relatively unchanged at \$35.5 billion as of August 31, 2017 compared to \$35.5 billion as of August 31, 2017 compared to \$35.5 billion as of August 31, 2016. The System's UAAL was expected to increase from the prior year based on the deferral of investment losses from prior valuations. However, due to higher than expected investment performance during the year, the System actually experienced a gain on the actuarial value of assets. In addition, the System also experienced a gain due to demographic experience. These two gains combined to decrease the UAAL by \$1.1 billion. However, there was also a legislative change to TRS-CARE which resulted in a change to the expected retirement patterns of TRS. The legislative change was a reversal of changes to the expected retirement behavior that were adopted following the 2013 session and increased the UAAL by \$0.7 billion.

This valuation shows a normal cost equal to 9.94% of pay plus an addition to the normal cost of 0.12% of pay to cover the annual cost of administrative expenses. The State began contributing the current contribution rate of 6.80% in fiscal year 2014 and it is assumed the rate will remain at that level. In addition, covered employers whose employees are not participating in Social Security began contributing 1.50% of salary (capped at the minimum salary schedule) in fiscal year 2015. Combined these contributions are assumed to approximate 7.70% of total payroll. The member contribution began increasing in fiscal year 2015 and reached its ultimate rate of 7.70% in fiscal year 2017. As a result, for FY2018 and thereafter, the System is expected to receive a total contribution rate of 15.40% of pay.

Hence, there is expected to be 5.34% of pay available to amortize the UAAL (15.40% less normal cost of 9.94% less administrative expenses of 0.12%). If payroll grows as expected (2.5% per year), the contributions provided by this portion of the contribution rate are sufficient to amortize the current unfunded actuarial accrued liabilities of the System over a period of 32.2 years based on the smoothed asset value as the valuation date. Therefore, the financing objectives of the System are not currently being met.

The actuarial valuation report as of August 31, 2017 reveals that the funded ratio (the ratio of actuarial assets to actuarial accrued liability) is 80.5%. The funded status is one of many metrics used to show trends and develop future expectations about the health of the System. The funded status measure itself is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations or assessing the need for or the amount of future contributions since it does not reflect normal cost contributions, the timing of amortization payments, or future experience other than expected.

Actuarial Section 135

5605 North MacArthur Boulevard | Suite 870 | Irving, Texas 75038-2631

Board of Trustees October 27, 2017 Page 3

The System earned more than the assumed rate of return during fiscal year 2017 (12.9% on market value compared to an assumed 8.0%). This return more than offset the prior year' deferred investment losses. In fact, the System experienced an actuarial gain on assets and is now deferring net investment gains of \$1.1 billion and the funded status using the market value of assets is 81.1%. If there are no significant investment losses or other actuarial losses over the next several years, the funded status of the System would be expected to increase towards this number. This \$1.1 billion in net deferred gains compares to the last valuation when the System was deferring \$4.8 billion in net deferred losses and had a 76.9% funded ratio based on the market value of assets.

As stated previously, the System's UAAL is relatively unchanged from the prior year. The UAAL had been expected to increase by \$0.4 billion without any gains or losses thus the UAAL decreased by \$0.4 billion more than expected during the year. The fiscal year 2017 investment return completely offset the prior years' deferred investment losses and resulted in a gain of \$0.3 billion on the actuarial value of assets. Therefore, the liabilities actually increased \$0.1 billion less than expected. This \$0.1 billion gain can split into the impact of the legislative change which increased the liabilities by \$0.7 billion and a liability experience gain of \$0.8 billion. This \$0.8 billion represents a gain of 0.46% of total liabilities and was due to the liabilities growing slower than expected due to salary increases being less than expected, more terminations than expected and fewer retirements than expected during the year.

Based on the actuarial (smoothed) value of assets, the number of years needed to amortize the UAAL will decrease annually if all assumptions are met. Please note that this annual decrease in the funding period will only occur if the currently scheduled contribution levels remain in place over the funding period. Any decrease in the contribution rates will result in higher funding periods. It should be noted that with the \$1.1 billion in deferred investment gains still to be recognized in the actuarial value of assets, future gains in the actuarial value of assets will result in a decrease in the funding period in future valuations until the gains are fully recognized.

Due to the current funding policy which utilizes level percentage of payroll amortization, the amortization payments will not be sufficient to cover all of the interest charges on the UAAL until the funding period reaches approximately 20 years. Table 11a provides a 10 year projection of various valuation results, including the UAAL, and that projection shows the UAAL is expected to increase to \$38.7 billion in 2027. Extending the projection further would show the UAAL starts to decrease in 2028 and is fully amortized 20 years after that (assuming 8% return on the market value of assets).

Please note these expectations are based on the current benefit provisions, assumptions, and contribution rates. Any additional benefit enhancements (ad hoc COLAs) granted without additional funding would increase the ultimate UAAL and extend the period before the funding status begins to improve. Thus, we continue to advise against any future benefit enhancements without additional sources of funding.

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Board of Trustees October 27, 2017 Page 4

#### **PLAN PROVISIONS**

The plan provisions used in the actuarial valuation are described in Appendix 1 of the valuation report. There have been no changes to the benefit and contribution provisions of the System since the prior valuation.

#### **DISCLOSURE OF PENSION INFORMATION**

Beginning with fiscal year 2014, the System began reporting financial information in accordance with Governmental Accounting Standards Board (GASB) Statement No. 67. The disclosure information for GASB No. 67 is provided in a separate report and is not contained herein.

This report should not be relied on for any purpose other than the purpose described above. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

#### **ACTUARIAL METHODS AND ASSUMPTIONS**

The actuarial methods and assumptions have been selected by the Board of Trustees of the Teacher Retirement System of Texas based upon our analysis and recommendations. These assumptions and methods are detailed in Appendix 2 of the valuation report. The Board of Trustees has sole authority to determine the actuarial assumptions used for the plan. The actuarial methods and assumptions are primarily based on a study of actual experience for the four year period ending August 31, 2014 and adopted on September 24, 2015. The retirement rates for selected individuals were modified to reflect changes to TRS-CARE. No other changes in the actuarial assumptions or methods were made since the prior valuation. The next experience study is scheduled to be performed in the spring of 2018.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. To illustrate this point, on page 8 of this report we have shown illustrative results based on future investment experience deviating from the assumptions. Based on the scope of this engagement, we have not performed analysis on the potential range of future measurements based on other factors. The actuarial calculations are intended to provide information for rational decision making.

In our opinion, the actuarial assumptions used are appropriate for purposes of the valuation and are internally consistent and reasonably related to the experience of the System and to reasonable expectations.

#### Data

Member data for retired, active and inactive members was supplied as of August 31, 2017 by the TRS staff. The staff also supplied asset information as of August 31, 2017. We did not audit this

**Actuarial Section** 

137

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Board of Trustees October 27, 2017 Page 5

data, but we did apply a number of tests to the data and concluded that it was reasonable and consistent with the prior year's data. GRS is not responsible for the accuracy or completeness of the information provided to us by TRS.

The following schedules in the Actuarial Section of the TRS CAFR were prepared by GRS:

- Actuarial Present Value of Future Benefits
- Schedule of Retirees and Beneficiaries Added to and Removed from Rolls
- Schedule of Funding Progress
- Post-Retirement Mortality
- Rates of Retirement
- Probability of Decrement due to Withdrawal
- Active Mortality

All other schedules shown in the actuarial section were prepared by TRS staff based upon our work. For further information please see the full actuarial valuation report.

This document and the PowerPoint presentation of the actuarial valuation results presented to the TRS Board on December 7, 2017 comprise the full actuarial report.

**Actuarial Section** 

138

Respectfully submitted, Gabriel, Roeder, Smith & Company

Lewis Ward

Lewis Ward Consultant

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Joseph P. Newton, FSA, EA, MAAA Pension Market Leader and Actuary

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Daniel J. Siblik, ASA, EA, MAAA Consultant

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**Teacher Retirement System of Texas** 

2017 Comprehensive Annual Financial Report

4

## Actuarial Information Pension Trust Fund

Actuarial Present Val	ue of	f Future Benefits		
From Actuarial Valuation as of August 31, 2017	' (Wit	h Comparative Data	for A	August 31, 2016)
		<u>2017</u>		<u>2016</u>
Present Value of Benefits Presently Being Paid				
Service Retirement Benefits	\$	88,265,853,858	\$	84,731,139,810
Disability Retirement Benefits		1,159,723,275		1,141,195,638
Death Benefits		878,484,700		867,637,073
Present Survivor Benefits		267,992,457		256,188,158
TOTAL PRESENT VALUE OF				
BENEFITS PRESENTLY BEING PAID	\$	90,572,054,290	\$	86,996,160,679
Present Value of Benefits Payable in the			6.	
Future to Present Active Members				
Service Retirement Benefits	\$	106,686,289,188	\$	102,594,460,159
Disability Retirement Benefits		1,390,485,196		1,305,439,740
Termination Benefits		9,104,608,213		8,518,349,795
Death and Survivor Benefits		1,873,738,711		1,846,700,055
TOTAL ACTIVE MEMBER LIABILITIES	\$	119,055,121,308	\$	114,264,949,749
Present Value of Benefits Payable in the	-		-	
Future to Present Inactive Members				
Inactive Vested Participants	\$	4,591,531,545	\$	4,333,837,796
Refunds of Contributions to Inactive				
Non-vested Members		444,096,753		413,997,543
Future Survivor Benefits Payable				
On Behalf of Present Annuitants		1,462,466,211		1,401,763,178
TOTAL INACTIVE LIABILITIES	\$	6,498,094,509	\$	6,149,598,517
TOTAL ACTUARIAL PRESENT VALUE			-	
OF FUTURE BENEFITS	\$	216,125,270,107	\$	207,410,708,945

Summary of Cost Items										
		<u>2017</u>		<u>2016</u>						
Actuarial Present Value of Future Benefits	\$	216,125,270,107	\$	207,410,708,945						
Present Value of Future Normal Costs		(34,372,473,392)		(33,171,982,143)						
Actuarial Accrued Liability	\$	181,752,796,715	\$	174,238,726,802						
Actuarial Value of Assets		(146,282,044,842)		(138,786,120,728)						
UNFUNDED ACTUARIAL ACCRUED LIABILITY	\$	35,470,751,873	\$	35,452,606,074						

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**Financing Objective and Funding Policy:** The funding policy of the Teacher Retirement System (TRS) is established by the state legislature. Contribution rates may not be reduced or eliminated, or benefits may not be improved, if, as a result of the particular action, the time, as determined by an actuarial valuation, required to amortize the unfunded actuarial liabilities of the retirement system, would be increased to a period that exceeds 30 years by one or more years. For detailed information, see Note 1.

Plan Provisions: For plan provisions, see Note 12.

Actuarial Methods and Assumptions: The actuarial valuation for TRS was prepared by Gabriel, Roeder, Smith & Company (GRS). The actuary relied on membership data and asset information provided by TRS staff. While not verifying the data at their source, the actuary performed such tests for consistency and reasonableness as was deemed necessary to be satisfied with the appropriateness of using the data supplied.

The actuarial methods and assumptions have been selected by the Board of Trustees of the Teacher Retirement System of Texas based upon GRS analysis and recommendations. The Board of Trustees has sole authority to determine the actuarial assumptions used for the plan. The actuarial methods and assumptions are primarily based on a study of actual experience for the four year period ending August 31, 2014 and was adopted on September 24, 2015. The results of the actuarial valuation are dependent on the assumptions used. Actual results can and will differ as actual experience deviates from these assumptions. Seemingly minor changes in assumptions can materially change the liabilities, calculated contribution rates and funding periods. There have been no changes in the actuarial assumptions or methods since the prior valuation. Post-Retirement Mortality rates for current and future retirees are prepared in accordance with the Actuarial Standards of Practice No. 35 which advises actuaries to "adjust mortality rates to reflect mortality improvement prior to the measurement date and to include an assumption as to the expected mortality improvement after the measurement date."

Actuarial Methods: The actuarial cost method used for *financial reporting purposes* was the Individual Entry Age Normal method as prescribed by GASB 67 and the method used for *funding purposes* was the Ultimate Entry Age Normal (EAN) method. The Ultimate EAN cost method is used because it creates the most level funding requirement across the generations of members and stakeholders. The difference between the two methods resides in the calculation of the normal cost for the members in the system. Under Individual EAN, the normal cost for each member is based on the benefit tier for that member while the Ultimate EAN method uses the normal cost for the tier new members are currently being hired into; which reflects the longer term normal cost.

#### **Actuarial Assumptions:**

**1.** *Investment Return Rate*: 8.00% per annum, compounded annually, composed of an assumed 2.50% inflation rate and a 5.50% real rate of return, net of investment expenses.

**2.** Post-Retirement Mortality, Assumed Retirement Age, Disability Retirement, Death, and Withdrawal from System: Rates and scales developed in the actuarial investigation as of August 31, 2014, with values at specimen ages shown in the tables below:

a. Post-Retirement Mortality:

	Post-Retirement Mortality									
<u>Age</u>	Male Members	<u>Female Members</u>								
40	0.001938	0.001585								
50	0.004247	0.002791								
60	0.005584	0.003882								
70	0.015547	0.009613								
80	0.053691	0.035591								
90	0.162983	0.133727								
100	0.407509	0.284047								
110	0.500000	0.467915								

#### b. Assumed Retirement Age:

For members hired after August 31, 2007 and who are vested as of August 31, 2014, the retirement rates for members once they reach unreduced retirement eligibility at age 60 are increased 10% for each year the member is beyond the Rule of 80 (i.e. if the member reached the Rule of 80 at age 58 then the probability of retirement at age 60 is 120% of the rate shown below).

For members hired after August 31, 2007 and who are not vested as of August 31, 2014, or, for members hired after August 31, 2014, the retirement rates for members once they reach unreduced retirement eligibility at age 62 are increased 10% for each year the member is beyond the Rule of 80 (i.e. if the member reached the Rule of 80 at age 58 then the probability of retirement at age 62 is 140% of the rate shown below).

Assumed Retirement Age										
Ν	Normal Retirer	ment		Early Retirem	ent					
Age	Male	Female	Age	Male	Female					
50	0.1300	0.3000	45-46	0.0100	0.0100					
51	0.1300	0.1200	47	0.0100	0.0200					
52	0.1300	0.1300	48	0.0200	0.0300					
53	0.1300	0.1400	49	0.0300	0.0400					
54	0.1400	0.1500	50-58	0.0100	0.0100					
55	0.1500	0.1600	59	0.0100	0.0200					
56	0.1600	0.1700	60-61	0.0200	0.0200					
57	0.1700	0.1800	62	0.0500	0.0400					
58	0.1800	0.1900	63	0.0500	0.0500					
59	0.1800	0.2000	64	0.0600	0.0600					
60	0.2200	0.2100	65	0.0500	0.0500					
61	0.2000	0.2200								
62	0.2400	0.2300								
63-64	0.2000	0.2300								
65-74	0.2200	0.2300								
75	1.0000	1.0000								

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c. Disability Retirement:

<u> </u>	Probability of Decrement Due to Disability											
	For Servi	<u>ice &gt;= 10</u>	For Serv	<u> </u>								
Age	Male	Female	Male	Female								
20	0.000184	0.000276	0.000037	0.000055								
30	0.000184	0.000276	0.000037	0.000055								
40	0.000430	0.000469	0.000086	0.000094								
50	0.001993	0.001817	0.000399	0.000363								
60	0.003505	0.002754	0.000701	0.000551								

*d. Active Mortality:* RP-2014 Employee Mortality Tables for male and female multiplied by 90%, with full generational projection using Scale BB.

	Active Mortality										
Age	Male Members	Female Members									
20	0.000365	0.000146									
30	0.000407	0.000196									
40	0.000565	0.000356									
50	0.001517	0.000992									
60	0.004219	0.002198									
70	0.012469	0.005678									
80	0.034930	0.016542									
90	0.123749	0.092945									

e. Withdrawal:

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Probability of Decrement Due to Withdrawal										
<u>Years of Service</u>	Male Members	Female Members								
1	0.149027	0.143098								
2	0.119756	0.117329								
3	0.096637	0.097896								
4	0.072275	0.076765								
5	0.062453	0.068443								
6	0.055556	0.060368								
7	0.047176	0.049631								
8	0.041464	0.043108								
9	0.036978	0.038477								
10	0.033777	0.035264								

**3.** Rates of Salary Increase: The following table reflects an inflation rate of 2.50%, plus productivity component of 1.00%, plus step-rate/promotional component as shown.

	Rates of Salary Increase										
Years of Service	<u>Longevity</u>	General	<u>Total</u>								
1	6.00%	3.50%	9.50%								
2	2.50	3.50	6.00								
3	1.90	3.50	5.40								
4	1.70	3.50	5.20								
5	1.50	3.50	5.00								
6	1.40	3.50	4.90								
7	1.20	3.50	4.70								
8-12	1.00	3.50	4.50								
13	0.80	3.50	4.30								
14	0.70	3.50	4.20								
15	0.60	3.50	4.10								
16-17	0.50	3.50	4.00								
18	0.40	3.50	3.90								
19-20	0.30	3.50	3.80								
21-22	0.20	3.50	3.70								
23-24	0.10	3.50	3.60								
25 or more	0.00	3.50	3.50								

**4.** Actuarial Value of Assets: The intent of the actuarial asset valuation method is to smooth out year-to-year fluctuations in market rates of return. The current asset method determines the expected actuarial value of assets and then recognizes at least 20% of the difference between that expected actuarial value of assets and the actual market value of assets. Each year a base is set up to reflect this difference. If the current year's base is of the opposite sign from the remaining deferred bases then it is offset against any prior deferred bases of the opposite sign. Any remaining bases are then recognized over the remaining number of years. This is intended to ensure the smoothed value of assets will converge towards the market value in a reasonable and finite amount of time.

This year's excess investment income of \$6.1 billion completely offset the prior years' remaining investment losses, with \$1.3 billion remaining. After recognizing 20% of this amount (\$270 million) in this year's actuarial assets, \$1.1 billion in deferred investment gains remain to be recognized in the future valuations. The actuarial value of assets is \$146.3 billion.

**5.** Actuarial Cost Method: The normal cost of the Retirement System is developed based on the valuation method known as the entry-age-normal actuarial cost method.

**Funding of Unfunded Actuarial Accrued Liability:** The Unfunded actuarial accrued liability (UAAL) is funded by the excess of future State and employer contributions required by law over the amount of such contributions required to fund the normal cost of benefits.

a. The "normal cost" for the System is deemed to be equal to the average cost of benefits for newly hired participants. The normal cost to pay for the benefits earned under the Retirement System is 9.94% of payroll, this amount being inclusive of the amount contributed by the employees. An additional estimated 0.12% of payroll is used to pay for administrative expenses of the System, bringing the total normal cost to 10.06% (9.94% plus .12%) of pay.



b. The "actuarial accrued liability" for benefits payable in the future to present active members is calculated as the present value of benefits payable in the future to present active members less the present value of future normal costs.

The State's contribution rate increased to 6.8% beginning in fiscal year 2014. Beginning in fiscal year 2015, covered employers whose employees are not participating in Social Security began contributing 1.5% of the minimum salary schedule. Combined with the State contribution, it is expected that these aggregate contributions will be approximately 7.7% of total payroll. Since the total State/employer contribution rate is 7.70%, this allows 5.34% of pay contributed by the State to be available to amortize any unfunded actuarial accrued liabilities.

As of the valuation as of August 31, 2017, these excess contributions of 5.34% of pay are sufficient to amortize the UAAL over a period of 32.2 years (assuming all actuarial assumptions are exactly met).

	Active	e N	/lember Valuati	ion	Data	
Valuation Year	Active Members		<u>Annualized Payroll</u> <u>in Thousands</u>		<u>Average Annual</u> <u>Salary</u>	<u>Annual %</u> Increase in Average Salary
2008	801,455	\$	33,237,942	\$	41,472	3.7%
2009	817,537		35,096,863		42,930	3.5
2010	834,060		36,628,579		43,916	2.3
2011	828,919		36,797,372		44,392	1.1
2012	815,155		36,309,449		44,543	0.3
2013	831,302		37,104,333		44,634	0.2
2014	857,342		39,195,104		45,717	2.4
2015	828,851		37,121,750		44,787	(2.0)
2016	847,631		39,281,763		46,343	3.5
2017	864,233		40,904,148		47,330	2.1

#### 1. Schedule of Active Member Valuation Data:

#### 2. Schedule of Retirees, Beneficiaries, and Disabled Participants Added to and Removed from Rolls:

Retiree	s, Bene	fic	iaries, and	Disabl	ed	Participant	s Adde	d t	o and Remo	oved fro	m Rolls			
Valuation as of August 31	<u>Added to Rolls</u> <u>Annual</u> <u>Number Benefits</u>		Annual		Annual				<u>Roll</u> <u>Number</u>	<u>s - E</u>	End of Year Annual Benefits	<u>Average</u> <u>Annual</u> <u>Benefits</u>	<u>% Increase</u> <u>Average</u> <u>Annual</u> <u>Benefits</u>	
2008	17,727	\$	391,920,863	7,806	\$	135,160,090	275,228	\$	5,743,921,279	20,870	4.7%			
2009	17,326		392,452,923	7,940		136,537,511	284,614		5,999,836,691	21,081	4.5			
2010	20,076		473,512,423	8,199		142,187,645	296,491		6,331,161,469	21,354	5.5			
2011	24,688		620,038,676	8,499		147,985,004	312,680		6,803,215,141	21,758	7.5			
2012	27,915		697,134,389	8,848		155,597,838	331,747		7,344,751,692	22,140	8.0			
2013	25,825		743,998,946	9,344		165,231,795	348,228		7,923,518,843	22,754	7.9			
2014	24,429		573,876,713	9,475		174,915,127	363,182		8,322,480,429	22,915	5.0			
2015	25,134		604,436,264	10,578		191,966,951	377,738		8,734,949,742	23,124	5.0			
2016	27,018		673,313,552	10,842		195,097,916	393,914		9,213,165,378	23,389	5.5			
2017	24,739		613,145,920	10,885		203,792,399	407,768		9,622,518,899	23,598	4.4			

#### 3. Analysis of Financial Trends:

			Changes i		Financial			ies	(UAAL)*			
	<u>Re</u>	sul	ting from Differ	100	es Between As rease/(Decreas	100	and the second se		Actual Experien	<u>ce</u>		
<u>As of</u> August 31	<u>Investment</u> <u>Gains/</u> (Losses)		Contribution Experience		Assumption Changes		<u>Liability</u> Experience		<u>Net Increase/</u> (Decrease)		<u>Beginning</u> <u>UAAL</u>	<u>Ending</u> <u>UAAL</u>
2017	\$ 0.270	\$	0.415	\$	(0.701)	\$	0.828	\$	0.018	\$	35.453	\$ 35.471
2016	(1.504)		0.525				(0.460)		2.485		32.968	35.453
2015	(1.237)		0.912		0.682		(1.501)		1.330		31.638	32.968
2014	1.095		1.157		2.282		0.358		2.702		28.936	31.638
2013	(2.045)		1.911		0.708		(1.829)		2.835		26.101	28.936
2012	(2.208)		1.258				(1.427)		2.039		24.062	26.101
2011	(1.958)		0.826		(0.271)		(1.350)		1.163		22.899	24.062
2010	(1.161)		0.797				(0.705)		1.253		21.646	22.899
2009	(10.321)		0.149				(0.347)		10.123		11.523	21.646
2008	1.232		0.228		0.676		(0.694)		(1.022)		12.545	11.523

\*Calculated on a 5-year smoothed market basis

**Solvency Test:** A short-term solvency test is one means of checking a retirement system's progress under its funding program. The schedule below provides a historical illustration of a short-term solvency test for TRS wherein present assets are compared with:

- a. active member contributions on deposit
- b. the liabilities for future benefits to present annuitants (Retirees and Beneficiaries)
- c. the liabilities for active members under the entry age normal actuarial cost method including a projection of future salary increases and anticipated future service Active Members-State Financed Portion)

Under the level percent of payroll financing followed by TRS, liabilities for active member contributions on deposit and the liabilities for future benefits to present retirees and beneficiaries will be fully covered by present assets except in rare circumstances. In addition, liabilities for active member benefits earned or to be earned in the future will be partially covered by the remainder of present assets. Generally, if the system has been using level cost financing, the funded portion of active member benefits will increase over time.

The following table shows the solvency test:

				Solvency	the second s				
	Aggregat	e A	ctuarial Accrue		Portion of Aggregate Actuarial Accrued Liabilities Covered by Valuation Assets				
Valuation as of August 31	Active Member Contributions (1) *		Retirees and Beneficiaries (2) *	Active Members (State Financed Portion) (3)	Valuation Assets	Active Member Contributions (1) *	Retirees and Beneficiaries (2) *	Active Member (State Financed Portion) (3)	
2008	\$ 23,928	\$	53,243	\$ 44,585	\$ 110,233	100%	100%	74.2%	
2009	23,914		55,484	48,632	106,384	100	100	55.5	
2010	27,559		58,476	48,156	111,293	100	100	52.5	
2011	28,911		63,470	46,934	115,253	100	100	48.7	
2012	30,006		68,449	45,972	118,326	100	100	43.2	
2013	31,365		73,841	45,460	121,730	100	100	36.4	
2014	33,028		78,431	48,576	128,398	100	100	34.9	
2015	33,856		82,535	50,062	133,485	100	100	34.1	
2016	34,803		86,986	52,451	138,786	100	100	32.4	
2017	36,513		90,573	54,667	146,282	100	100	35.1	

\*Adjusted for pending transfers to retired reserve at August 31 for pending retirements.

**Schedule of Funding Progress:** Taking into account only the dollar amounts of aggregate actuarial accrued liabilities and unfunded actuarial accrued liabilities (UAAL) can be misleading. The dollar amounts of these two items can be increasing at a time when their actual substance may be decreasing. Dividing valuation asset dollars by aggregate actuarial accrued liability dollars and dividing UAAL dollars by active member payroll dollars provide clarifying indices. The larger the ratio of valuation assets to aggregate actuarial accrued liabilities, the stronger the system. Observation of these relative indices over a period of years will give an indication of whether the system is becoming stronger or weaker.

		and the second	-	OF Funding P	and the second		
[1] Valuation as of August 31	[2] Actuarial Value of Assets	[3] Actuarial Accrued Liability (AAL)		[4] Unfunded AAL (UAAL) (3)-(2)	[5] Funded Ratio Assets as a % of AAL (2)/(3)	[6] Projected Payroll	[7] UAAL as a % of Covered Payroll (4)/(6)
2008	\$ 110,233	\$ 121,757	\$	11,523	90.5%	\$ 33,238	34.7%
2009	106,384	128,029		21,645	83.1	35,097	61.7
2010	111,293	134,191		22,899	82.9	36,629	62.5
2011	115,253	139,315		24,062	82.7	36,797	65.4
2012	118,326	144,427		26,101	81.9	36,310	71.9
2013	121,730	150,666		28,936	80.8	37,104	78.0
2014	128,398	160,036		31,638	80.2	38,522	82.1
2015	133,485	166,453		32,968	80.2	39,620	83.2
2016	138,786	174,239		35,453	79.7	42,229	84.0
2017	146,282	181,753		35,471	80.5	43,164	82.2

The 10-year *Schedule of Actuarially Determined Contributions* is located in the Required Supplementary Information section.

Actuarial Section 146



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November 9, 2017

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

#### Subject: GASB 74 Actuarial Valuation as of August 31, 2017 for TRS-Care

Submitted in this report are the results of an Actuarial Valuation of the liabilities associated with the employer financed retiree health benefits provided through TRS-Care, a benefit program designed to provide post-retirement medical benefits for certain members of the Teacher Retirement System of Texas (TRS). The date of the valuation was August 31, 2017. This report was prepared at the request of TRS.

The actuarial calculations were prepared for purposes of complying with the requirements of Statement No. 74 of the Governmental Accounting Standards Board (GASB). The calculations reported herein have been made on a basis consistent with our understanding of this accounting standard. Determinations of the liability associated with the benefits described in this report for purposes other than satisfying the financial reporting requirements of TRS-Care and participating employers may produce significantly different results. Actuarial valuations of the post-retirement benefits are performed annually.

The valuation was based upon information, furnished by TRS, concerning retiree health benefits, members' census, and financial data. Data was checked for internal consistency but was not otherwise audited. Certain demographic and economic assumptions are identical to the set of demographic and economic assumptions adopted by the Board based on the 2015 Experience Study of TRS. Assumptions applicable only to TRS-Care have changed since the prior report, and they are disclosed in the assumptions section of this report.

The following CAFR schedules were prepared by GRS and can be found in Sections E and D of this report:

- 1. Actuarial Present Value of Benefits
- 2. Schedule of Funding Progress
- 3. Schedule of Contributions form Employer(s) and Other Contributing Entities
- 4. Key actuarial assumptions and methods
- 5. Solvency Test
- 6. Analysis of Financial Experience
- 7. Schedule of Retirants and Beneficiaries Added and Removed from Rolls

GRS is not responsible for any trend data schedules not found in this report.

5605 North MacArthur Boulevard | Suite 870 | Irving, Texas 75038-2631

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Board of Trustees Teacher Retirement System of Texas November 9, 2017 Page 2

The current objective is to fund the Trust in order to maintain benefits through individual biennial periods. There is no arrangement into which the participating employers would make contributions to advance-fund the obligation. However, a Trust does exist into which participating employers are making contributions based on the current funding policy.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law.

To the best of our knowledge, this report is complete and accurate and was made in accordance with generally accepted actuarial principles and practices as well as the Actuarial Standards of Practice. Joseph Newton and Mehdi Riazi are members of the American Academy of Actuaries and meet the Qualification Standards of the Academy of Actuaries to render the actuarial opinion herein. The signing individuals are independent of the plan sponsor.

Respectfully submitted,

Mehdi Ricyi

William J. Hickman Senior Consultant

Joseph P. Newton, FSA, MAAA Senior Consultant

Mehdi Riazi, FSA, MAAA Consultant

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2017 Comprehensive Annual Financial Report

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### Actuarial Information TRS-Care

Actuarial Present Value of Future Benefits	
From Actuarial Valuation as of August 31, 2017	
Based on a 3.42% discount rate	
	<u>2017</u>
Present Value of Benefits Being Paid	
Future Medical Claims	\$ 10,611,169,258
Future Rx Claims	19,067,975,083
Retiree Premiums Collected	(14,017,887,963)
NET PRESENT VALUE OF BENEFITS FOR CURRENT RETIREES	\$ 15,661,256,378
Present Value of Benefits Payable in the Future to Inactive	
Plan Members Entitled to But Not Yet Receiving Benefits*	
Future Medical Claims	\$ 594,504,466
Future Rx Claims	1,102,652,469
Retiree Premiums Collected	(789,936,796)
NET PRESENT VALUE OF FUTURE BENEFITS FOR INACTIVE MEMBERS	\$ 907,220,139
Present Value of Benefits Payable in the Future	
to Present Active Members	
Future Medical Claims	\$ 39,097,342,487
Future Rx Claims	63,586,219,532
Retiree Premiums Collected	(46,185,732,525)
NET PRESENT VALUE OF BENEFITS FOR FUTURE RETIREES	\$ 56,497,829,494
TOTAL ACTUARIAL PRESENT VALUE OF FUTURE BENEFITS	\$ 73,066,306,011

Summary of Cost Items	
	<u>2017</u>
Actuarial Present Value of Future Benefits	\$ 73,066,306,011
Present Value of Future Normal Costs	(29,180,521,390)
Total OPEB Liability	\$ 43,885,784,621
Plan Fiduciary Net Position	(399,535,986)
NET OPEB LIABILITY	\$ 43,486,248,635

\* Comparative information is not presented for fiscal year 2016 due to changes between the funding approach used in fiscal year 2016 as compared to the approach used for GASB 74 in fiscal year 2017.

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Actuarial Methods and Assumptions: The actuarial valuation of TRS-Care is prepared by Gabriel, Roeder, Smith & Company. The actuary relies on information concerning other post-employment benefits, membership and financial data provided by TRS staff. While not auditing the data, the actuary checks for internal consistency.

The calculation of the liability associated with other post-employment benefits (OPEB) was performed for the purpose of satisfying the requirements of GASB Statement No. 74. The calculation of the plan's liability is not applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement No. 74 may produce significantly different results.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law.

The actuarial valuation of TRS-Care is similar to the actuarial valuations performed for the pension plan, except that the OPEB valuation is more complex. All the demographic assumptions (rates of retirement, termination, and disability) and most of the economic assumptions (general inflation, salary increases, and general payroll growth) used in this OPEB Valuation are identical to those used in the respective annual pension actuarial valuation. The assumptions are based upon a recent actuarial experience study and are reasonable for this OPEB Valuation.

The following assumptions used for members of TRS-Care are identical to the assumptions employed in the August 31, 2017 TRS annual actuarial valuation:

- Rates of Mortality
- Rates of Retirement
- Rates of Termination
- Rates of Disability Incidence
- General Inflation
- Wage Inflation
- Expected Payroll Growth

The following assumptions and other inputs which are specific to TRS-Care were updated from the prior year's report:

 Significant plan changes were adopted during fiscal year ending August 31, 2017. Effective January 1, 2018, only one health plan option will exist (instead of three), and all retirees will be required to contribute monthly premiums for coverage. These health plan changes triggered changes to several of the assumptions, including participation rates, retirement rates, and spousal participation rates.

- 2) The August 31, 2016 valuation had assumed that the savings related to the Medicare Part D reimbursements would phase out by 2022. This assumption was removed for the August 31, 2017 valuation. Although there is uncertainty regarding these federal subsidies, the new assumption better reflects the current substantive plan. This change was unrelated to the plan amendment, and its impact was included as an assumption change in the reconciliation of the total OPEB liability. This change significantly lowered the OPEB liability.
- 3) The discount rate changed from 2.98% as of August 31, 2016 to 3.42% as of August 31, 2017. This change lowered the total OPEB liability.

Actuarial Cost Method: Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an Individual Entry Age Normal Actuarial Cost Method having the following characteristics:

- the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and
- each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce/(increase) the Net OPEB Liability.

	Ad	Added to Rolls			oved	from Rolls	Rolls	s - E	nd of Year		
<u>Valuation</u> <u>as of</u> August 31	(2) <u>Number</u>		(3) <u>Annual</u> <u>Allowances</u>	(4) <u>Number</u>		(5) <u>Annual</u> <u>Allowances</u>	(6) <u>Number</u>		(7) <u>Annual</u> <u>Allowances *</u>	(8) <u>% Increase</u> <u>in Annual</u> <u>Allowances</u>	(9) <u>Average</u> <u>Annual</u> <u>Allowances</u>
2009	12,158	\$	54,271,769	8,192	\$	19,365,868	202,934	\$	694,017,558	14.5%	\$ 3,420
2010	14,996		71,136,696	7,924		21,837,784	210,006		757,979,912	9.2	3,609
2011	20,467		109,331,023	8,019		24,802,618	222,454		898,001,599	18.5	4,037
2012	19,407		92,279,848	8,220		28,700,248	233,641		768,682,199	(14.4)	3,290
2013	19,798		98,603,255	10,176		25,946,471	243,263		824,715,257	7.3	3,390
2014	18,916		97,956,524	10,656		27,648,497	251,523		933,885,969	13.2	3,713
2015	19,171		106,177,651	11,116		31,400,277	259,578		1,050,329,854	12.5	4,046
2016	20,883		120,035,127	12,250		48,462,388	268,211		1,132,169,358	7.8	4,221
2017	19,121		105,535,109	13,113		59,695,737	274,219		986,039,302	(12.9)	3,596

#### Schedule of Retirees and Beneficiaries Added to and Removed from Rolls:

\* Expected employer provided claims and expenses (net of retiree premiums). Annual allowances in Column (7) include increases due to health care inflation and the impact of plan changes. As a result, the annual allowances are not equal to the beginning of year allowances plus the "Added to Rolls" allowances minus the "Removed from Rolls" allowances.

#### Analysis of Financial Experience:

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Valuation as of August 31	Asset in/(Loss)	Liability Gain/(Loss)	New Assumptions Gain/(Loss)		Benefit Changes Gain/(Loss)	Contributions Gain/(Loss)	Net Gain/(Loss)
2012	\$ (38)	\$ 2,148	\$ (1,302)	\$	3,458	\$ (1,485)	\$ 2,781
2013	(31)	24	(1,699)		1,266	(1,458)	(1,898)
2014	(24)	(619)	(1,235)			(1,522)	(3,400)
2015	(36)	(3,369)	(6,232)			(1,004)	(10,641)
2016	(37)	1,517	(4,199)			(3,518)	(6,237)

\* Years presented ended in fiscal year 2016 due to implementation of GASB 74. Refer to Required Supplementary Information for future trend information.

#### Solvency Test:

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	Aggregat	e Actuarial Accrued	Liabilities For		Portion of Aggregate Actuarial Accrued Liabilities Covered by Valuation Assets					
	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
Valuation as of August 31	Active Member Contributions*	Beneficiaries and Vested Terminations	Members (Employer Financed Portion)	Valuation Assets	Active Member Contributions (5)/(2)	Beneficiaries and Vested Terminations [(5)-(2)]/(3)	Members (Employer Financed Portion [(5)-(2)-(3)]/(4)			
2008	NA	\$ 9,318	\$ 12,994	\$ 729	NA	7.8%	0.0%			
2009	NA	9,642	14,716	800	NA	8.3	0.0			
2010	NA	10,918	14,889	815	NA	7.5	0.0			
2011	NA	13,710	16,075	891	NA	6.5	0.0			
2012	NA	12,676	14,866	741	NA	5.8	0.0			
2013	NA	14,367	15,468	551	NA	3.8	0.0			
2014	NA	16,307	17,411	458	NA	2.8	0.0			
2015	NA	20,749	23,454	973	NA	4.7	0.0			
2016	NA	23,260	26,938	641	NA	2.8	0.0			

\*Active member contributions are non-refundable. Years presented ended in fiscal year 2016 due to implementation of GASB 74. Refer to Required Supplementary Information for future trend information.

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### Actuarial Information TRS-Care

**Schedule of Funding Progress:** 

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		SCHEDULE OF F	and the second sec	and the second se		
[1] Valuation as of August 31	[2] Actuarial Value of Assets	[3] Actuarial Accrued Liability (AAL)	[4] Unfunded AAL (UAAL) (3)-(2)	[5] Funded Ratio Assets as a % of AAL (2)/(3)	[6] Annual Covered Payroll	[7] UAAL as a % of Covered Payroll (4)/(6)
2009	\$ 800	\$ 24,357	\$ 23,557	3.3%	\$ 29,490	80%
2010	815	25,808	24,993	3.2	30,758	81
2011	891	29,785	28,894	3.0	30,515	95
2012	741	27,542	26,801	2.7	29,777	90
2013	551	29,835	29,284	1.8	30,511	96
2014	458	33,719	33,261	1.4	32,247	103
2015	973	44,203	43,230	2.2	31,254	138
2016	641	50,198	49,557	1.3	32,892	151

\* Years presented ended in fiscal year 2016 due to implementation of GASB 74. Refer to Required Supplementary Information for future trend information.

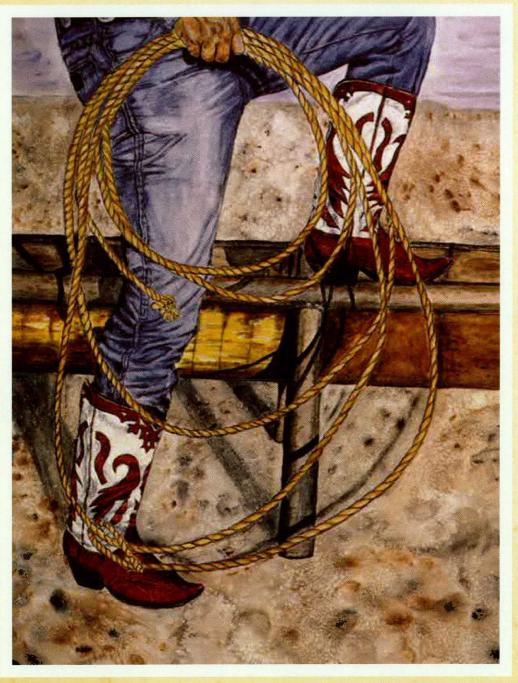
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Actuarial Section 154

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# **STATISTICAL SECTION**



Anita Smith Palmer "Boots & Rope," © 2000





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### Statistical Section Overview

The Statistical Section presents additional information to provide financial statement users with added historical perspective, context and detail to assist in using the information in the financial statements, notes to financial statements, and required supplementary information to understand and assess the system's financial condition. Information is presented for the Pension Trust Fund, TRS-Care, TRS-ActiveCare, and the 403(b) Administrative Program.

#### **FINANCIAL TRENDS INFORMATION**

The schedules on the following pages show financial trends information that assists users in understanding and assessing how the system's financial position has changed over time. The financial trend schedules presented are:

- Changes in Fiduciary Net Position
- Revenues, Expenses and Changes in Net Position
- Benefit and Refund Deductions from Net Position by Type
- Benefit Deductions from Net Position by Type

#### **OPERATING INFORMATION**

The schedules presented immediately following the Financial Trends Information contain contextual data about the system's benefit operations, resources and the benefit services it provides. The operating information schedules presented are:

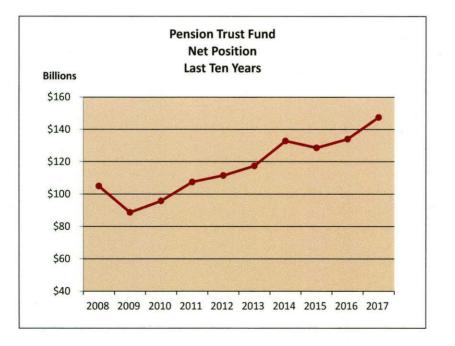
- Average Benefit Payments Pension Trust Fund
- Average Monthly Benefit Pension Trust Fund
- Average Benefit Payments Health Benefits
- Retired Members by Type of Benefit Pension Trust Fund
- Health Benefit Payments by Range
- Principal Participating Employers

In addition, a complete listing of participating employers has been included. The information in this section was derived from internal sources and the CAFR for the relevant year.

### FINANCIAL TRENDS INFORMATION Changes in Fiduciary Net Position

PENSION TRUST FUND For the Fiscal Years Ended August 31

	2017		2016		2015		2014
Additions							
Member Contributions	\$ 3,242,556,261	\$	2,943,669,320	\$	2,576,024,311	\$	2,357,686,000
Non-Employer Contributing Entity							
Contributions	1,697,962,608		1,675,631,248		1,591,482,988		1,530,623,829
Employer Contributions			104,714,221		93,079,033		120,206,921
Participating Employers Contributions	1,158,808,801		1,378,675,127		1,284,893,620		864,345,470
Purchase of Service Credit	55,092,741		37,389,534		50,089,106		143,534,091
415 Excess Benefit Arrangement	2,930,399		3,574,146		2,216,586		2,273,832
Service Contributions Transferred							
In from ERS	22,043,929		20,376,732		18,989,008		17,440,313
Net Investment Income	17,079,807,347		9,193,280,560		(412,759,100)		19,434,430,034
Other	430,799,828		1,993,029		3,733,133		4,143,449
TOTAL ADDITIONS	\$ 23,690,001,914	\$	15,359,303,917	\$	5,207,748,685	\$	24,474,683,939
Deductions							
Benefits	\$ 9,775,775,472	\$	9,379,122,730	\$	8,935,111,459	\$	8,548,642,525
Excess Benefits	2,721,567	2	3,574,146	4.810.	2,216,586	30.	2,273,832
Refunds of Contributions	420,421,056		373,418,687		391,341,181		410,600,319
Service Contributions Transferred to ERS	93,609,174		88,854,383		84,059,353		80,163,847
Administrative Expenses, Excluding							
Investing Activity Expenses	44,189,998	\$	44,402,710	\$	35,556,979	\$	41,904,190
TOTAL DEDUCTIONS	\$ 10,336,717,267	\$	9,889,372,656	\$	9,448,285,558	-	9,083,584,713
Net Increase (Decrease)	\$ 13,353,284,647	\$	5,469,931,261	\$	(4,240,536,873)	_	15,391,099,226
Net Position - Beginning of Year	\$ 134,008,637,473	\$	128,538,706,212	\$	132,779,243,085		117,388,143,859
Net Position - End of Year	\$ 147,361,922,120	\$	134,008,637,473	\$	128,538,706,212	\$	132,779,243,085



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 2013	_	2012	 2011	_	2010		2009	_	2008
\$ 2,252,094,934	\$	2,188,020,423	\$ 2,243,954,725	\$	2,205,017,425	\$	2,107,057,870	\$	1,998,138,487
1,337,214,693		1,299,077,635	1,484,285,519		1,461,034,870		1,378,304,342		1,352,243,134
105,559,580		91,532,506	111,486,255		116,553,826		103,539,599		98,785,295
820,134,412		669,305,127	744,733,236		719,051,333		687,910,583		604,937,605
148,400,880		125,971,764	105,177,104		84,519,762		74,542,413		87,207,374
2,520,830		2,483,369	1,750,588		1,504,510		1,553,381		1,646,494
16,365,042		14,940,228	12,628,712		11,167,772		9,558,927		8,897,722
9,834,136,005		7,847,298,290	14,636,935,228		9,411,446,873		(13,971,868,722)		(4,604,971,847)
2,629,383		1,867,389	1,576,613		788,787		3,899		3,596
\$ 14,519,055,759	\$	12,240,496,731	\$ 19,342,527,980	\$	14,011,085,158	\$	(9,609,397,708)	\$	(453,112,140)
\$ 8,075,208,484	\$	7,723,622,166	\$ 7,173,504,788	\$	6,617,397,374	\$	6,294,434,115	\$	6,406,644,540
2,520,830		2,483,369	1,750,588		1,504,510		1,553,381		1,646,494
391,292,412		381,231,352	334,268,822		265,186,589		266,695,076		278,002,614
75,513,146		70,985,963	64,772,079		61,570,750		57,135,135		52,773,854
\$ 36,264,062	\$	33,073,740	\$ 35,849,819	\$	29,992,608	\$	28,310,448	\$	26,122,662
\$ 8,580,798,934	\$	8,211,396,590	\$ 7,610,146,096	\$	6,975,651,831	\$	6,648,128,155	\$	6,765,190,164
\$ 5,938,256,825	\$	4,029,100,141	\$ 11,732,381,884	\$	7,035,433,327	\$	(16,257,525,863)	\$	(7,218,302,304)
\$ 111,449,887,034	\$	107,420,786,893	\$ 95,688,405,009	\$	88,652,971,682	\$	104,910,497,545	\$	112,128,799,849
\$ 117,388,143,859	Ś	111,449,887,034	\$ 107,420,786,893	\$	95,688,405,009	Ś	88,652,971,682	ć	104,910,497,545

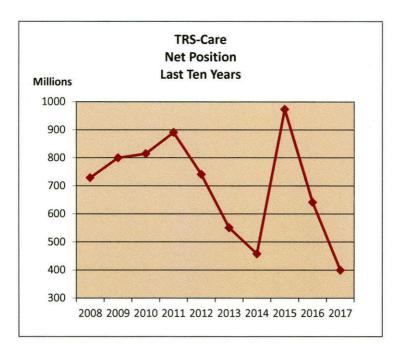
### FINANCIAL TRENDS INFORMATION Changes in Fiduciary Net Position

TRS-CARE For the Fiscal Years Ended August 31

	2017	2016	2015		2014
Additions					
Member Contributions	\$ 213,241,179	\$ 208,581,990	\$ 198,196,273	\$	189,003,903
State's General Fund -					
Non-Employer Contributing Entity	303,760,632	297,070,920	281,098,358		267,497,910
Participating Employers	215,360,520	212,936,351	202,976,470		193,124,772
Fringe Benefits Paid by State's General Fund on					
Behalf of TRS Employees					139,422
Supplemental Appropriation From State's Genera					
Fund - Non-Employer Contributing Entity	15,559,552		768,100,754		36,058,148
Federal Revenue	101,718,551	124,739,649	126,806,652		78,589,415
Rebate and Discount Income*	291,725,635	218,995,436	231,569,472		200,859,859
Investment Income	4,696,973	5,421,446	1,495,680		2,061,745
Miscellaneous Revenue	529,020	89,388			
TOTAL ADDITIONS	\$ 1,146,592,062	\$ 1,067,835,180	\$ 1,810,243,659	\$	967,335,174
Deductions	an an ann an taoine an Ann Ann Ann Ann Ann Ann Ann Ann Ann				
Health Care Claims	\$ 1,678,892,217	\$ 1,651,712,836	\$ 1,554,181,197	\$	1,347,532,839
Less: Health Care Premiums Paid by Retirees	(404,027,710)	(374,736,269)	(369,066,459)		(363,631,292)
Health Care Claims Processing and Other	46,931,559	48,361,151	47,380,407		45,387,769
Insurance Premium Payments	61,792,671	69,228,872	59,000,081		27,507,106
Administrative Expenses	4,953,492	4,701,677	3,769,680	_	3,646,546
TOTAL DEDUCTIONS	\$ 1,388,542,229	\$ 1,399,268,267	\$ 1,295,264,906	\$	1,060,442,968
Net Increase (Decrease)	\$ (241,950,167)	\$ (331,433,087)	\$ 514,978,753	\$	(93,107,794)
Net Position - Beginning of Year	\$ 641,486,153	\$ 972,919,240	\$ 457,940,487	\$	551,048,281
Net Position - End of Year	\$ 399,535,986	\$ 641,486,153	\$ 972,919,240	\$	457,940,487

\*Prior to fiscal year 2013, rebates were offset within health care claims.

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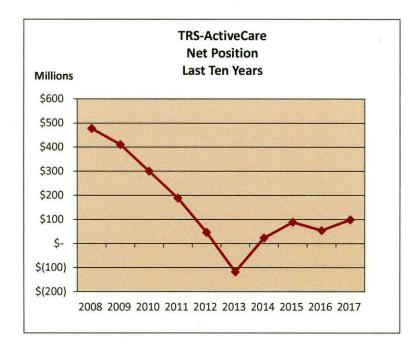
 2013	2012	2011	2010		2009		2008
\$ 180,824,523 \$	176,751,407 \$	183,808,580	\$ 181,512,856	\$	173,856,344	\$	165,569,413
139,095,786	271,925,242	282,782,431	279,250,547		267,471,299		254,722,174
160,952,396	154,607,926	158,724,010	155,918,241		149,562,613		141,672,630
117,770	103,676	108,440	101,511		95,929		91,945
102,363,704							
74,511,473	68,633,946	136,887,805	70,795,686		61,530,735		59,486,239
82,074,803							
3,041,001	5,189,934	8,168,640	11,679,229		17,482,143		29,252,347
\$ 742,981,456 \$	677,212,131 \$	770,479,906	\$ 699,258,070	\$	669,999,063	\$	650,794,748
\$ 1,240,508,361 \$	1,142,131,410 \$	992,478,380	\$ 971,356,805	\$	885,132,865	\$	833,509,538
(355,685,504)	(363,348,030)	(345,164,271)	(332,481,933)		(329,723,191)		(328,505,433)
43,577,852	44,470,323	44,007,586	42,435,939		40,268,436		36,651,413
1,148,013	101,060	108,286	99,662		95,627		96,297
3,398,109	3,714,018	3,143,922	3,031,686		2,916,259		3,000,536
\$ 932,946,831 \$	827,068,781 \$	694,573,903	\$ 684,442,159	\$	598,689,996	\$	544,752,351
\$ (189,965,375) \$	(149,856,650) \$	NAME AND ADDRESS OF TAXABLE PARTY.	14,815,911	-	71,309,067	\$	106,042,397
\$ 741,013,656 \$	890,870,306 \$	814,964,303	\$ 800,148,392	\$	728,839,325	\$	622,796,928
\$ 551,048,281 \$	741,013,656 \$	890,870,306	\$ 814,964,303	\$	800,148,392	Ś	728,839,325

### FINANCIAL TRENDS INFORMATION Revenues, Expenses, and Changes in Net Position

TRS-ACTIVECARE For the Fiscal Years Ended August 31

	2017	2016	2015	2014
Revenues				
Health Care Premiums	\$ 2,119,959,039	\$ 2,055,658,822	\$ 1,938,621,262	\$ 1,919,557,855
COBRA Premiums and Other	120,049,492	17,904,885	5,328,003	9,337,610
Administrative Fees and Miscellaneous Revenue	321,030	356,054	236,749	139,608
Investment Income	4,668,888	3,079,039	1,537,408	940,022
Federal Revenue ARRA-COBRA Reimbursements				
Fringe Benefits Paid by State's General Fund				
on Behalf of TRS Employees				79,792
TOTAL REVENUES	\$ 2,244,998,449	\$ 2,076,998,800	\$ 1,945,723,422	\$ 1,930,054,887
Expenses				
Health Care Claims	\$ 1,846,526,430	\$ 1,768,287,120	\$ 1,565,255,957	\$ 1,521,834,989
Health Care Claims Processing and Other	123,783,747	125,802,110	135,073,416	109,925,954
Premium Payments to HMOs	227,088,895	214,529,160	178,192,468	154,913,859
Administrative Expenses	3,345,442	2,644,792	2,225,417	2,569,850
TOTAL EXPENSES	\$ 2,200,744,514	\$ 2,111,263,182	\$ 1,880,747,258	\$ 1,789,244,652
Net Increase (Decrease)	\$ 44,253,935	\$ (34,264,382)	\$ 64,976,164	\$ 140,810,235
Net Position - Beginning of Year	\$ 53,550,894	\$ 87,815,276	\$ 22,839,112	\$ (117,971,123)
Net Position - End of Year	\$ 97,804,829	\$ 53,550,894	\$ 87,815,276	\$ 22,839,112

\* For FY 2014 and fiscal years prior to FY 2013, Net Position balances were all restricted. In FY 2013 the unrestricted balance is \$(117,971,123) and restricted is zero.



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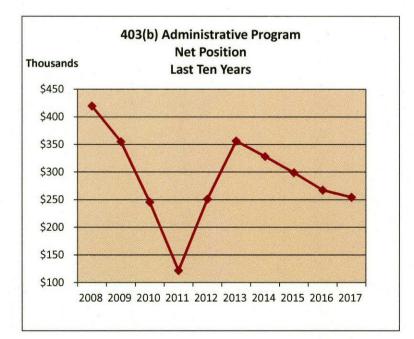
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_	2013	_	2012		2011	_	2010	_	2009	2008
\$	1,797,745,785	\$	1,738,705,410	\$	1,540,604,828	\$	1,322,426,709	\$	1,164,113,369	\$ 1,089,656,363
	10,775,898		11,199,707		8,926,063		6,744,702		7,897,679	6,880,659
	137,630		136,324		135,917		125,321		187,813	186,844
	746,936		1,697,553		3,387,062		6,421,269		11,597,992	21,164,640
			29,706		667,746		1,225,158		170,219	
	75,664		72,094		67,373		64,328		64,975	61,894
\$	1,809,481,913	\$	1,751,840,794	\$	1,553,788,989	\$	1,337,007,487	\$	1,184,032,047	\$ 1,117,950,400
\$	1,785,069,768	\$	1,718,903,645	\$	1,510,090,981	\$	1,313,114,197	\$	1,122,646,958	\$ 952,156,339
	84,903,101		83,346,223		76,960,951		67,906,654		60,934,432	54,583,499
	100,905,702		89,706,406		76,270,706		64,532,253		64,820,440	68,204,743
	2,351,802		2,176,610	0	2,207,051		1,883,148		1,861,949	1,830,258
\$	1,973,230,373	\$	1,894,132,884	\$	1,665,529,689	\$	1,447,436,252	\$	1,250,263,779	\$ 1,076,774,839
\$	(163,748,460)	\$	(142,292,090)	\$	(111,740,700)	\$	(110,428,765)	\$	(66,231,732)	\$ 41,175,561
\$	45,777,337	\$	188,069,427	\$	299,810,127	\$	410,238,892	\$	476,470,624	\$ 435,295,063
\$	(117,971,123)	\$	45,777,337	\$	188,069,427	\$	299,810,127	\$	410,238,892	\$ 476,470,624

#### FINANCIAL TRENDS INFORMATION **Revenues, Expenses, and Changes in Net Position** 403(b) ADMINISTRATIVE PROGRAM For the Fiscal Years Ended August 31

	2017	2016	2015		2014
Revenues					
Certification Fees	\$ 135,000	\$ 12,000	\$ 27,000	\$	15,000
Product Registration Fees	33,000	3,000	21,000		15,000
Investment Income	2,784	2,122	1,360		1,324
Fringe Benefits Paid by State's General Fund on Behalf of TRS Employees					3,131
TOTAL REVENUES	\$ 170,784	\$ 17,122	\$ 49,360	\$	34,455
Expenses					
Administrative Expenses	\$ 183,745	\$ 48,638	\$ 78,446	\$	62,636
TOTAL EXPENSES	\$ 183,745	\$ 48,638	\$ 78,446	\$	62,636
Net Increase (Decrease)	\$ (12,961)	\$ (31,516)	\$ (29,086)	\$	(28,181)
Net Position - Beginning of Year	\$ 267,554	\$ 299,070	\$ 328,156	\$	356,337
Net Position - End of Year	\$ 254,593	\$ 267,554	\$ 299,070	\$	328,156
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 2013	 2012	_	2011	_	2010	2009	2008
\$ 60,000	\$ 114,000	\$	12,000	\$	30,000	\$ 6,000	\$ 30,000
81,000	63,000		3,000		21,000	9,000	180,000
1,333	707		1,801		4,318	8,558	19,337
2,890	2,772		7,898		8,034		
\$ 145,223	\$ 180,479	\$	24,699	\$	63,352	\$ 23,558	\$ 229,337
\$ 40,194	\$ 51,203	\$	148,444	\$	172,835	\$ 88,000	\$ 192,000
\$ 40,194	\$ 51,203	\$	148,444	\$	172,835	\$ 88,000	\$ 192,000
\$ 105,029	\$ 129,276	\$	(123,745)	\$	(109,483)	\$ (64,442)	\$ 37,337
\$ 251,308	\$ 122,032	\$	245,777	\$	355,260	\$ 419,702	\$ 382,365
\$ 356,337	\$ 251,308	\$	122,032	\$	245,777	\$ 355,260	\$ 419,702

#### FINANCIAL TRENDS INFORMATION Benefits and Refund Deductions from Net Position by Type PENSION TRUST FUND

ENSIC		1031	FUN
Last T	en Fi	scal Y	'ears

		ien riscar rea				
2017		2016		2015		2014
		-				
\$ 9,059,855,790	\$	8,633,505,859	\$	8,215,765,876	\$	7,795,690,586
5,231,060		5,166,851		9,643,121		14,974,505
263,705,342		300,420,702		288,923,266		322,033,388
177,627,306		173,464,936		169,318,064		164,299,506
44,398,830		44,952,730		39,574,595		44,846,010
109,519,771		108,509,074		100,150,048		97,822,817
93,714,871		92,087,967		90,563,081		89,547,742
15,518,472		15,523,059		14,443,193		13,415,885
6,204,030		5,491,553		6,730,215		6,012,086
\$ 9,775,775,472	\$	9,379,122,731	\$	8,935,111,459	\$	8,548,642,525
\$ 6,371,748	\$	7,379,576	\$	5,474,475	\$	5,455,829
414,049,308		366,039,111		385,866,706		405,144,490
\$ 420,421,056	\$	373,418,687	\$	391,341,181	\$	410,600,319
\$	2017 \$ 9,059,855,790 5,231,060 263,705,342 177,627,306 44,398,830 109,519,771 93,714,871 15,518,472 6,204,030 \$ 9,775,775,472 \$ 6,371,748 414,049,308	2017         \$       9,059,855,790       \$         5,231,060       263,705,342       177,627,306         177,627,306       109,519,771       93,714,871         93,714,871       15,518,472       6,204,030         \$       9,775,775,472       \$         \$       6,371,748       \$         \$       6,371,748       \$	2017       2016         \$       9,059,855,790       \$       8,633,505,859         5,231,060       \$       5,166,851         263,705,342       \$       300,420,702         177,627,306       \$       173,464,936         44,398,830       \$       44,952,730         109,519,771       \$       108,509,074         93,714,871       \$       92,087,967         15,518,472       \$       15,523,059         6,204,030       \$       5,491,553         \$       9,775,775,472       \$       9,379,122,731         \$       6,371,748       \$       7,379,576         \$       6,371,748       \$       7,379,576         \$       6,371,748       \$       366,039,111	2017       2016         \$       9,059,855,790       \$       8,633,505,859       \$         5,231,060       5       5,166,851       \$         263,705,342       4       300,420,702       \$         177,627,306       173,464,936       \$         44,398,830       44,952,730       \$         109,519,771       108,509,074       \$         93,714,871       92,087,967       \$         15,518,472       15,523,059       \$         \$       9,775,775,472       \$       9,379,122,731         \$       6,371,748       \$       7,379,576         \$       6,371,748       \$       7,379,576	2017       2016       2015         \$       9,059,855,790       \$       8,633,505,859       \$       8,215,765,876         5,231,060       5,166,851       9,643,121       263,705,342       300,420,702       288,923,266         177,627,306       173,464,936       288,923,266       169,318,064         109,519,771       108,509,074       169,318,064         93,714,871       92,087,967       90,563,081         15,518,472       15,523,059       14,443,193         6,204,030       5,491,553       6,730,215         \$       9,775,775,472       \$       9,379,122,731       \$       8,935,111,459         \$       6,371,748       \$       7,379,576       \$       5,474,475         \$       6,371,748       \$       7,379,576       \$       5,474,475         \$       414,049,308       \$       7,379,576       \$       5,474,475	2017       2016       2015         \$       9,059,855,790       \$       8,633,505,859       \$       8,215,765,876       \$         \$       5,231,060       5,166,851       9,943,121       9,043,121       9,043,121       9,043,121         \$       263,705,342       300,420,702       288,923,266       9,169,318,064       9,169,318,064       9,169,318,064       169,318,064       169,318,064       169,318,064       169,318,064       100,150,048

\* A one-time supplemental payment that is capped at \$2,400 was distributed to eligible retirees in January 2008.

\*\* For fiscal years 2010 and prior, Service Retirements changed due to the reclassification of Transfers of Service Contributions with Employees Retirement System of Texas.

### FINANCIAL TRENDS INFORMATION Benefit Deductions from Net Position by Type

	TRS	S-CAR	E
Last	Ten	Fiscal	Years

	La.	st	ien riscar rea	13		
	2017		2016		2015	2014
Claims						
Medical Claims and						
Insurance Premiums	\$ 807,831,048	\$	858,985,138	\$	805,668,819	\$ 691,283,731
Prescription Drugs***	734,805,874		716,536,786		649,457,501	539,842,962
TOTAL CLAIMS	\$ 1,542,636,922	\$	1,575,521,924	\$	1,455,126,320	\$ 1,231,126,693

\*\*\* Note: For TRS-CARE, 2013 and 2014 Prescription claims numbers have been revised to reflect claims net

of rebates. These two years were reported gross of rebates in 2013 and 2014.

### FINANCIAL TRENDS INFORMATION Benefit Deductions from Net Position by Type

TRS-ACTIVECARE Last Ten Fiscal Years

An 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 19		2017		2016	2015	 2014
Claims	-					
Medical Claims and Insurance Premiums	\$	1,653,483,496	\$	1,644,795,868	\$ 1,479,302,696	\$ 1,397,249,236
Prescription Drugs		306,703,364		325,475,512	264,145,729	279,499,612
TOTAL CLAIMS	\$	1,960,186,861	\$	1,970,271,380	\$ 1,743,448,425	\$ 1,676,748,848
***		Sta	atis	stical Section 166		 

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	2013		2012		2011		2010	1	2009	-	2008	
\$	7,251,369,740	\$	6,808,592,209	\$	6,241,946,655	\$	5,841,963,927	\$	5,565,925,090	\$	5,649,308,335	*
	17,223,523		22,361,937		27,822,115		22,607,290		23,272,668		26,757,772	
	410,323,790		501,152,157		524,925,790		385,555,126		348,261,100		363,668,944	
	156,308,471		150,238,202		144,865,109		141,396,837		138,569,650		146,907,654	
	41,219,707		46,859,444		47,295,194		45,698,147		43,235,232		42,216,290	
	94,563,001		92,126,049		86,898,720		82,574,358		79,951,723		78,862,569	
	87,044,328		85,816,402		84,893,007		83,238,898		81,764,240		85,576,098	
	12,659,471		11,816,313		11,564,275		10,824,948		10,180,012		10,169,530	
_	4,496,453		4,659,453		3,293,923		3,537,843		3,274,400		3,177,348	
\$	8,075,208,484	\$	7,723,622,166	\$	7,173,504,788	\$	6,617,397,374	\$	6,294,434,115	\$	6,406,644,540	
\$	4 705 220	ć	E 204 006	ć	2 084 240	ć	2 710 041	ć	2 004 710	ć	2 520 282	
Ş	4,705,228	Ş	5,294,006		3,984,340	Ş	3,710,941	\$	3,084,718	Ş	2,520,283	
ć	386,587,184	ć	375,937,346		330,284,482	ć	261,475,648	ć	263,610,358	ć	275,482,331	-
Ş	391,292,412	\$	381,231,352	\$	334,268,822	\$	265,186,589	\$	266,695,076	\$	278,002,614	

_	2013		2012	2011	-	2010	2009	2008
\$	687,469,016	\$	687,987,585 \$	608,461,321	\$	575,539,788	\$ 531,239,020 \$	498,767,038
	496,229,923	1847	454,143,825	384,017,059	280.0	395,817,017	353,893,845	334,742,500
\$	1,183,698,939	\$	1,142,131,410 \$	992,478,380	\$	971,356,805	\$ 885,132,865 \$	833,509,538

_	2013	<u></u>	2012	-	2011	 2010	 2009		2008
\$	1,613,167,792	\$	1,450,574,875	\$	1,242,673,156	\$ 1,092,107,916	\$ 934,733,927	\$	788,240,087
	272,807,678	Ē	268,328,770		267,417,825	221,006,281	187,913,031	-	163,916,252
\$	1,885,975,470	\$	1,718,903,645	\$	1,510,090,981	\$ 1,313,114,197	\$ 1,122,646,958	\$	952,156,339

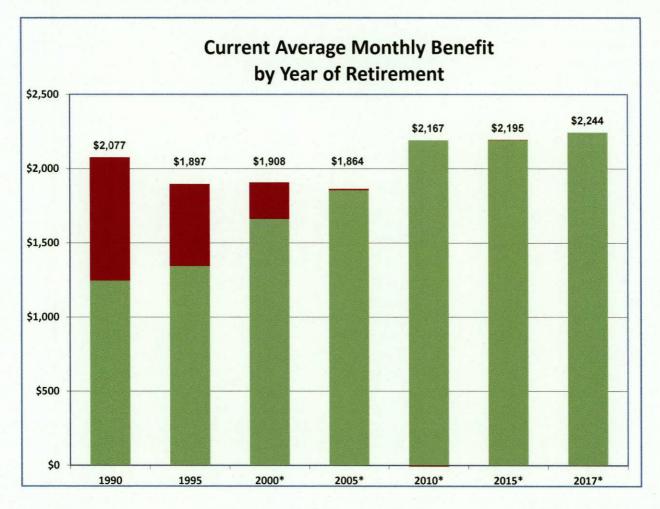
#### OPERATING INFORMATION Average Benefit Payments PENSION TRUST FUND Last Ten Fiscal Years

**Years Credited Service Retirement Effective Dates** 5-10 11-15 21-25 16-20 26-30 30+ 9-1-07 to 8-31-08 Average Monthly Benefit \* Ś 315 Ś 621 \$ 1,154 \$ 1,761 \$ 2,539 \$ 3,516 Average Final Average Salary \$ 27,892 \$ 32,365 \$ 38,421 \$ 45,583 \$ 53,616 \$ 61,848 Number of Retirees 1,532 1,280 1,902 2,941 3,754 3,332 9-1-08 to 8-31-09 Average Monthly Benefit \* \$ 351 \$ 659 \$ 1,220 \$ 1,775 \$ 2,614 \$ 3,639 Average Final Average Salary \$ 29,747 \$ 33,093 \$ 40,368 \$ 45,670 \$ 54,752 \$ 63,080 Number of Retirees 1,462 1.377 1,918 2,878 3,361 3,229 9-1-09 to 8-31-10 Average Monthly Benefit \* Ś 364 \$ 672 S 1,228 \$ 1.841 \$ 2.641 \$ 3.739 Average Final Average Salary \$ 30,279 \$ 34,348 \$ 40,459 \$ 47,312 \$ 55,184 \$ 64,260 Number of Retirees 1,675 1,604 2,235 3,517 3,825 4,187 9-1-10 to 8-31-11 Average Monthly Benefit \* \$ 389 \$ 1,267 \$ 1,871 \$ 711 \$ 2,669 \$ 3,775 Average Final Average Salary \$ 32,134 \$ 35,562 \$ 42,122 \$ 48,196 \$ 55,191 \$ 64,951 Number of Retirees 2,092 2,045 2,873 4,545 4,983 6.394 9-1-11 to 8-31-12 Average Monthly Benefit \* Ś 389 \$ 727 \$ 1,306 \$ 1,923 \$ 2.783 \$ 3,863 Average Final Average Salary \$ 32,113 \$ 36,522 \$ 43,164 \$ 49,383 \$ 56,755 \$ 66,323 Number of Retirees 2,138 2,853 4,257 4,372 2,226 5,208 9-1-12 to 8-31-13 Average Monthly Benefit \* \$ 389 \$ 742 \$ 1,290 \$ 1,937 \$ 2,798 \$ 3,863 37,083 \$ 43,047 \$ Average Final Average Salary \$ 31,582 \$ 49,217 \$ 56,455 \$ 65,472 Number of Retirees 2,234 2,381 3,069 4,388 4,676 4,952 9-1-13 to 8-31-14 1,963 \$ Average Monthly Benefit \* \$ 413 \$ 800 \$ 1,326 \$ 2,846 \$ 3,874 Average Final Average Salary \$ 32,906 \$ 39,267 \$ 43,889 \$ 49,222 \$ 56,835 \$ 65,447 Number of Retirees 2,291 2,286 3,084 4,252 4,429 4,197 9-1-14 to 8-31-15 Average Monthly Benefit \* \$ 424 \$ 1,344 \$ 2,007 \$ 824 \$ 2,850 \$ 3,989 Average Final Average Salary \$ 33,580 \$ 40,064 \$ 44,613 \$ 49,606 \$ 56,892 \$ 66,598 Number of Retirees 2,274 2,234 3,101 4,131 4,392 4,413 9-1-15 to 8-31-16 Average Monthly Benefit \* \$ 444 \$ 836 \$ 1,348 \$ 2,049 \$ 2,892 \$ 4,049 Average Final Average Salary \$ 33,925 \$ 40,412 \$ 44,706 \$ 50,290 \$ 57,753 \$ 67,429 Number of Retirees 2,184 2,279 3,195 4,300 4,291 4,668 9-1-16 to 8-31-17 Average Monthly Benefit \* \$ 441 \$ 862 \$ 1,408 \$ 2,071 \$ 2,962 \$ 4,069 Average Final Average Salary \$ 34,292 \$ 41,423 \$ 45,931 \$ 50,501 \$ 58,860 \$ 67,855 3,007 Number of Retirees 1,917 2,136 3,786 3,960 3,949

\* Average monthly benefits have been reduced for Partial Lump Sum Option payments of \$363.7, \$348.3, \$385.6, \$524.9, \$501.2, \$410.3, \$322.0, \$288.9, \$300.4 and \$263.7 million in fiscal years 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016 and 2017, respectively.

### OPERATING INFORMATION Average Monthly Benefits PENSION TRUST FUND

The following graph of service retiree accounts as of August 31, 2017 reflects benefit increases and decreases since retirement:

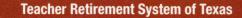


	1990	1995	2000*	2005*	2010*	2015*	2017*
Original Benefits	\$1,246	\$1,345	\$1,663	\$1,856	\$2,192	\$2,194	\$2,245
Increase (Decrease) Since Retirement	831	552	245	8	(25)	1	(1)
Current Benefits	\$2,077	\$1,897	\$1,908	\$1,864	\$2,167	\$2,195	\$2,244
Number of Retirees**	3,199	5,138	9,989	10,296	16,102	20,492	18,935

\* Before adjustment for the Partial Lump Sum Option, average original benefits were \$1,800, \$2,028, \$2,369, \$2,304 and \$2,343 for fiscal years 2000, 2005, 2010, 2015 and 2017, respectively.

\*\* For each of the retirement years shown, number of service retirees currently receiving benefits

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#### OPERATING INFORMATION

### Average Benefit Payments

TRS-CARE Last Ten Fiscal Years

2017			
Average Benefit Per Participant	\$	5,755	
Benefit Payments	\$	1,542,636,922	
Average Participants		268,066	
2016			
Average Benefit Per Participant	\$	6,062	
Benefit Payments	\$	1,575,521,924	
Average Participants		259,889	
2015			
Average Benefit Per Participant	\$	5,780	
Benefit Payments	\$	1,455,126,320	
Average Participants		251,758	
2014			
Average Benefit Per Participant	\$	5,059	*
Benefit Payments	\$	1,231,126,693	*
Average Participants		243,336	
2013			
Average Benefit Per Participant	\$	5,053	*
Benefit Payments	\$	1,183,698,939	*
Average Participants		234,277	
2012			
Average Benefit Per Participant	\$	5,115	
Benefit Payments	\$	1,142,131,410	
Average Participants		223,287	
2011			
Average Benefit Per Participant	\$	4,718	
Benefit Payments	\$	992,478,380	
Average Participants		210,353	
2010			
Average Benefit Per Participant	\$	4,790	
Benefit Payments	\$	971,356,805	
Average Participants		202,778	
2009			
Average Benefit Per Participant	\$	4,464	
Benefit Payments	\$	885,132,865	
Average Participants		198,282	
2008			
Average Benefit Per Participant	\$	4,302	
Benefit Payments	\$	833,509,538	
Average Participants	Ŧ	193,733	

### Average Benefit Payments

TRS-ACTIVECARE Last Ten Fiscal Years

2017		
Average Benefit Per Participant	\$	3,932
Benefit Payments	\$	1,960,186,861
Average Participants		498,462
2016		
Average Benefit Per Participant	\$	4,053
Benefit Payments	\$	1,970,271,380
Average Participants		486,139
2015		
Average Benefit Per Participant	\$	3,607
Benefit Payments	\$	1,743,448,426
Average Participants		483,299
2014		
Average Benefit Per Participant	\$	3,603
Benefit Payments	\$	1,676,748,847
Average Participants	Ŷ	465,330
		103,330
2013	4	2.000
Average Benefit Per Participant	\$	3,966
Benefit Payments	\$	1,885,975,470 475,508
Average Participants		475,508
2012		
Average Benefit Per Participant	\$	3,868
Benefit Payments	\$	1,718,903,645
Average Participants		444,382
2011		
Average Benefit Per Participant		3,662
Benefit Payments	\$	1,510,090,981
Average Participants		412,385
2010		
Average Benefit Per Participant	\$	3,509
Benefit Payments	\$	1,313,114,197
Average Participants		374,201
2009		
Average Benefit Per Participant	\$	3,324
Benefit Payments	\$	1,122,646,958
Average Participants		337,781
2008		
Average Benefit Per Participant	\$	3,060
Benefit Payments	\$	952,156,339
Average Participants		311,200

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\*Note: For TRS-CARE, 2013 and 2014 Average Benefit Per Participant and Benefit Payments numbers have been revised to reflect prescription drug claims net of rebates. These two years were reported as gross numbers in previous years.

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#### OPERATING INFORMATION Retired Members by Type of Benefit PENSION TRUST FUND Fiscal Year 2017

Amount of	Number	Type of Retirement*						
Monthly Benefit	of Retired Members	1	2	3	4	5	6	7
\$ 1-200	14,878	5,894	7,005	251	1,626	51	37	14
201-400	41,117	11,251	12,286	657	2,652	975	1,038	12,258
401-600	25,959	12,835	8,803	1,320	2,448	356	197	
601-800	23,770	14,239	5,552	1,316	2,003	433	227	
801-1,000	23,022	15,524	3,889	1,193	1,812	424	180	
1,001-1,200	20,630	14,982	2,656	915	1,600	341	136	
1,201-1,400	17,638	12,850	2,075	745	1,589	263	116	
1,401-1,600	17,889	13,078	2,301	675	1,483	273	79	
1,601-1,800	18,099	13,630	2,280	585	1,294	239	71	
1,801-2,000	19,017	15,249	1,915	510	1,085	214	44	
2,001-3,000	96,022	83,471	5,784	1,323	4,474	891	79	
3,001-4,000	57,175	53,227	1,198	195	2,151	395	9	
4,001-5,000	20,961	19,768	272	26	757	133	5	
over 5,000	11,591	10,972	100	5	429	84	1	
Totals	407,768	296,970	56,116	9,716	25,403	5,072	2,219	12,272

#### \*Type of Retirement:

1 Normal Retirement of Age and Service

- 2 Early Retirement
- **3** Disability Retirement

5 Survivor Payment, Death in Service

6 Survivor Payment, After Disability Retirement

7 Survivor Payment, After Service Retirement

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4 Survivor Payment, Joint Life or Guarantee

### Health Benefit Payments by Range

TRS-CARE Fiscal Year 2017

Benefit Range	<b>Average Participants</b>
\$ 0	14,592
1 - 5,000	198,294
5,001 - 10,000	26,759
10,001 - 20,000	13,833
20,001 - 30,000	4,706
30,001 - 40,000	2,353
40,001 - 50,000	1,546
50,001 - 100,000	3,781
over 100,000	2,202
Totals	268,066

Option Selected**									
1	2	3	4	5	6				
6,486	5,182	1,474	566	1,128	42				
12,104	8,807	2,896	1,272	2,147	13,891				
11,760	7,862	3,244	1,231	1,862					
10,458	7,222	3,492	1,166	1,432					
10,226	6,819	3,586	1,155	1,236					
8,631	6,458	3,451	955	1,135					
6,876	5,890	3,209	770	893					
6,865	6,136	3,190	774	924					
6,893	6,186	3,342	729	949					
7,130	6,663	3,531	693	1,000					
34,445	35,316	18,050	3,294	4,917					
21,085	20,149	11,400	1,801	2,740					
8,037	6,959	4,552	593	820					
4,148	4,141	2,624	269	409					
155,144	133,790	68,041	15,268	21,592	13,933				

#### **\*\*Option Selected:**

Option 1 - Life Annuity

Option 2 - Joint to Survivor Option 3 - Joint to Survivor 50% / Joint to Survivor 75% Option 4 - 5-year Guarantee Option 5 - 10-year Guarantee Option 6 - Survivor Benefit

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# Health Benefit Payments by Range

TRS-ACTIVECARE Fiscal Year 2017

_	Benefit Range	<b>Average Participants</b>
\$	0	59,054
	1 - 5,000	379,413
	5,001 - 10,000	25,526
	10,001 - 20,000	17,330
	20,001 - 30,000	5,795
	30,001 - 40,000	2,978
	40,001 - 50,000	1,914
	50,001 - 100,000	3,937
	over 100,000	2,515
	Totals	498,462

#### Statistical Section 173

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# OPERATING INFORMATION Principal Participating Employers

PENSION TRUST FUND Current Fiscal Year and Nine Years Ago

		2017		2008			
Participating Reporting Entity	Covered Employees	Rank	Percentage of Total Covered Employment	Covered Employees	Rank	Percentage of Total Covered Employment	
Houston ISD	23,811	1	2.81 %	23,957	1	3.10 %	
Dallas ISD	19,856	2	2.34	20,777	2	2.69	
UT MD Anderson Cancer Center	18,347	3	2.16	15,496	3	2.01	
Cypress Fairbanks ISD	14,272	4	1.68	12,693	4	1.64	
Northside ISD	13,594	5	1.60	11,829	6	1.53	
Austin ISD	12,270	6	1.45	11,863	5	1.54	
Fort Worth ISD	11,354	7	1.34	10,523	7	1.36	
UT SW Medical Center-Dallas	10,496	8	1.24				
UT at Austin	9,946	9	1.17	9,836	9	1.27	
UT Med BR at Galveston	9,689	10	1.14	10,132	8	1.31	
El Paso ISD				8,971	10	1.16	
All Other	704,450		83.07%	636,359		82.39%	
Total	848,085		100.00%	772,436		100.00%	

Source: May report month information submitted to the Teacher Retirement System by participating reporting entities.

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# OPERATING INFORMATION Principal Participating Employers

TRS-CARE Current Fiscal Year and Nine Years Ago

	2017			2008		
Participating Reporting Entity	Covered OPEB Employees	Rank	Percentage of Total Covered OPEB Employment	Covered OPEB Employees	Rank	Percentage of Total Covered OPEB Employment
Houston ISD	23,811	1	3.41%	23,957	1	3.72%
Dallas ISD	19,856	2	2.84	20,777	2	3.22
Cypress Fairbanks ISD	14,272	3	2.05	12,693	3	1.97
Northside ISD	13,594	4	1.95	11,829	5	1.83
Austin ISD	12,270	5	1.76	11,863	4	1.84
Fort Worth ISD	11,354	6	1.62	10,523	6	1.63
Aldine ISD	9,264	7	1.32	8,429	9	1.31
North East ISD	9,248	8	1.32	8,694	8	1.35
Katy ISD	9,166	9	1.31			
Fort Bend ISD	8,589	10	1.23	8,414	10	1.30
El Paso ISD				8,971	7	1.39
ALL OTHERS	567,323	2	81.19%	518,625		80.44%
Total	698,747		100.00%	644,775		100.00 %

Source: May report month information submitted to the Teacher Retirement System by participating reporting entities.

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### List of Participating Employers

#### PUBLIC SCHOOLS

Abbott ISD Abernathy ISD Abilene ISD Academy ISD Adrian ISD Agua Dulce ISD Alamo Heights ISD Alba Golden ISD Albany ISD Aldine ISD Aledo ISD Alice ISD Alief ISD Allen ISD Alpine ISD Alto ISD Alvarado ISD Alvin ISD Alvord ISD Amarillo ISD Amherst ISD Anahuac ISD Anderson-Shiro Cons ISD Andrews ISD Angleton ISD Anna ISD Anson ISD Anthony ISD Anton ISD **Apple Springs ISD** Aquilla ISD Aransas County ISD Aransas Pass ISD Archer City ISD Argyle ISD

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Arlington ISD Arp ISD Aspermont ISD Athens ISD Atlanta ISD Aubrey ISD Austin ISD Austwell Tivoli ISD Avalon ISD Avery ISD Avinger ISD Axtell ISD Azle ISD Baird ISD **Ballinger ISD** Balmorhea ISD Bandera ISD Bangs ISD **Banquete ISD Barbers Hill ISD** Bartlett ISD **Bastrop ISD Bay City ISD** Beaumont ISD Beckville ISD **Beeville ISD Bellevue ISD** Bells ISD **Bellville ISD Belton ISD** Ben Bolt Palito ISD **Benavides ISD Benjamin ISD** Big Sandy ISD - Big Sandy Big Sandy ISD - Dallarsville **Big Spring ISD Birdville ISD** 

**Bishop Cons ISD** Blackwell ISD Blanco ISD Bland ISD Blanket ISD **Bloomburg ISD Blooming Grove ISD Bloomington ISD** Blue Ridge ISD Bluff Dale ISD **Blum ISD** Boerne ISD **Boles ISD Boling ISD** Bonham ISD **Booker ISD Borden County ISD** Borger ISD **Bosqueville ISD Bovina ISD** Bowie ISD Boyd ISD **Boys Ranch ISD** Brackett ISD Brady ISD Brazos ISD Brazosport ISD Breckenridge ISD **Bremond ISD Brenham ISD** Bridge City ISD **Bridgeport ISD** Broaddus ISD Brock ISD **Bronte ISD Brookeland ISD Brookesmith ISD** 

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**Brooks County ISD** Brownfield ISD Brownsboro ISD Brownsville ISD Brownwood ISD Bruceville-Eddy ISD Bryan ISD Bryson ISD **Buckholts ISD Buena Vista ISD Buffalo ISD Bullard ISD Buna ISD** Burkburnett ISD **Burkeville ISD Burleson ISD Burnet Cons ISD Burton ISD Bushland ISD Bynum Cons ISD** Caddo Mills ISD Calallen ISD Caldwell ISD Calhoun County ISD Callisburg ISD Calvert ISD Cameron ISD Campbell ISD Canadian ISD Canton ISD Canutillo ISD Canyon ISD Carlisle ISD Carrizo Springs CISD Carroll ISD **Carrollton Farmers Branch ISD** Carthage ISD

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Castleberry ISD Cayuga ISD Cedar Hill ISD Celeste ISD Celina ISD Center ISD Center Point ISD Centerville ISD - Centersville Centerville ISD - Groveton **Central Heights ISD** Central ISD Channelview ISD Channing ISD Chapel Hill ISD - Mt. Pleasant Chapel Hill ISD - Tyler Charlotte ISD Cherokee ISD Chester ISD Chico ISD Childress ISD Chillicothe ISD Chilton ISD China Spring ISD Chireno ISD Chisum ISD Christoval ISD Cisco ISD **City View ISD Clarendon Cons ISD** Clarksville ISD Claude ISD **Clear Creek ISD** Cleburne ISD **Cleveland ISD Clifton ISD** Clint ISD Clyde ISD

Coahoma ISD Coldspring Oakhurst ISD Coleman ISD **College Station ISD Collinsville ISD** Colmesneil ISD Colorado ISD Columbia Brazoria ISD Columbus ISD Comal ISD Comanche ISD Comfort ISD **Commerce ISD Community ISD Como Pickton ISD** Comstock ISD **Connally Cons ISD** Conroe ISD Coolidge ISD Cooper ISD Coppell ISD **Copperas Cove ISD** Corpus Christi ISD Corrigan Camden CISD Corsicana ISD **Cotton Center ISD** Cotulla ISD Coupland ISD **Covington ISD** Crandall ISD Crane ISD Cranfills Gap ISD Crawford ISD Crockett Cty School Dist Crockett ISD Crosby ISD **Crosbyton Cons ISD** 

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**Cross Plains ISD** Cross Roads ISD **Crowell Cons ISD** Crowley ISD **Crystal City ISD** Cuero ISD Culberson County-Allamoore ISD Cumby ISD **Cushing ISD Cypress Fairbanks ISD** D'Hanis ISD Daingerfield-Lone Star ISD Dalhart ISD Dallas ISD Damon ISD **Danbury ISD** Darrouzett ISD Dawson ISD - Dawson Dawson ISD - Welch Dayton ISD De Kalb ISD De Leon ISD De Soto ISD Decatur ISD **Deer Park ISD** Del Valle ISD **Dell City ISD Denison ISD Denton ISD Denver City ISD** Detroit ISD **Devers** ISD **Devine ISD** Dew ISD **Deweyville ISD Diboll ISD Dickinson ISD** 

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**Dilley ISD Dime Box ISD Dimmitt ISD** Divide ISD Dodd City ISD Donna ISD Doss Cons ISD Douglass ISD **Dripping Springs ISD** Driscoll ISD **Dublin ISD** Dumas ISD **Duncanville ISD** Eagle Mount Saginaw ISD Eagle Pass ISD Eanes ISD Early ISD East Bernard ISD East Central ISD East Chambers ISD Eastland ISD Ector Cty ISD Ector ISD Edcouch Elsa ISD Eden CISD Edgewood ISD - Edgewood Edgewood ISD - San Antonio Edinburg CISD Edna ISD El Campo ISD El Paso ISD Electra ISD Elgin ISD Elkhart ISD **Elysian Fields ISD** Ennis ISD Era ISD

**Etoile ISD** Eula ISD **Eustace ISD** Evadale ISD Evant ISD **Everman ISD** Excelsior ISD Ezzell ISD Fabens ISD Fairfield ISD Falls City ISD Fannindel ISD Farmersville ISD Farwell ISD Fayetteville ISD Ferris ISD Flatonia ISD Florence ISD Floresville ISD Flour Bluff ISD Floydada ISD Follett ISD Forestburg ISD Forney ISD Forsan ISD Fort Bend ISD Fort Davis ISD Fort Elliott Cons ISD Fort Hancock ISD Fort Sam Houston ISD Fort Stockton ISD Fort Worth ISD Franklin ISD Frankston ISD Fredericksburg ISD Freer ISD Frenship ISD

Friendswood ISD Friona ISD Frisco ISD Frost ISD Fruitvale ISD Gainesville ISD Galena Park ISD Galveston ISD Ganado ISD Garland ISD Garner ISD Garrison ISD Garv ISD Gatesville ISD Gause ISD George West ISD Georgetown ISD **Gholson ISD Giddings ISD** Gilmer ISD **Gladewater County Line ISD** Glasscock County ISD Glen Rose ISD Godley ISD Goldburg ISD Goldthwaite ISD Goliad ISD Gonzales ISD Goodrich ISD Goose Creek CISD Gordon ISD Gorman ISD Grady ISD Graford ISD Graham ISD Granbury ISD Grand Prairie ISD

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Grand Saline ISD Grandfalls Royalty ISD Grandview Hopkins ISD Grandview ISD Granger ISD Grape Creek ISD Grapeland ISD Grapevine-Colleyville ISD Greenville ISD Greenwood ISD **Gregory-Portland ISD** Groesbeck ISD Groom ISD Groveton ISD Gruver ISD **Gunter ISD** Gustine ISD Guthrie CSD Hale Center ISD Hallettsville ISD Hallsburg ISD Hallsville ISD Hamilton ISD Hamlin ISD Hamshire Fannett ISD Happy ISD Hardin ISD Hardin-Jefferson ISD Harlandale ISD Harleton ISD Harlingen CISD Harmony ISD Harper ISD Harrold ISD Hart ISD Hartley ISD Harts Bluff ISD

Haskell CISD Hawkins ISD Hawley ISD Hays Cons ISD Hearne ISD Hedley ISD Hemphill ISD Hempstead ISD Henderson ISD Henrietta ISD Hereford ISD Hermleigh ISD Hico ISD Hidalgo ISD **Higgins ISD High Island ISD Highland ISD** Highland Park ISD - Amarillo Highland Park ISD - Dallas Hillsboro ISD Hitchcock ISD Holland ISD Holliday ISD Hondo ISD Honey Grove ISD Hooks ISD Houston ISD Howe ISD Hubbard ISD - Dekalb Hubbard ISD - Hubbard Huckabay ISD Hudson ISD Huffman ISD **Hughes Springs ISD** Hull Daisetta ISD Humble ISD Hunt ISD

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Statistical Section 179

Huntington ISD Huntsville ISD Hurst-Euless-Bedford ISD Hutto ISD Idalou ISD Industrial ISD Ingleside ISD Ingram ISD Iola ISD Iowa Park Cons ISD Ira ISD Iraan-Sheffield ISD Iredell ISD Irion County ISD Irving ISD Italy ISD Itasca ISD Jacksboro ISD Jacksonville ISD Jarrell ISD Jasper ISD Jayton Girard ISD Jefferson ISD Jim Hogg County ISD Jim Ned Cons ISD Joaquin ISD Johnson City ISD Jonesboro ISD Joshua ISD Jourdanton ISD Judson ISD Junction ISD Karnack ISD Karnes City ISD Katy ISD Kaufman ISD Keene ISD

Keller ISD Kelton ISD Kemp ISD Kenedy County Wide CSD Kenedy ISD Kennard ISD Kennedale ISD Kerens ISD Kermit ISD Kerrville ISD **Kilgore ISD** Killeen ISD **Kingsville ISD Kirbyville Cons ISD** Klein ISD Klondike ISD Knippa ISD Knox City Obrien CISD **Kopperl ISD** Kountze ISD Kress ISD Krum ISD La Feria ISD La Gloria ISD La Grange ISD La Joya ISD La Porte ISD La Poynor ISD La Pryor ISD La Vega ISD La Vernia ISD La Villa ISD Lackland ISD Lago Vista ISD Lake Dallas ISD Lake Travis ISD Lake Worth ISD

Lamar Cons ISD Lamesa ISD Lampasas ISD Lancaster ISD Laneville ISD Laredo ISD Lasara ISD Latexo ISD Lazbuddie ISD Leakey ISD Leander ISD Leary ISD Lefors ISD Leggett ISD Leon ISD Leonard ISD Levelland ISD Leveretts Chapel ISD Lewisville ISD Lexington ISD Liberty Eylau ISD Liberty Hill ISD Liberty ISD Lindale ISD Linden Kildare Cons ISD Lindsay ISD Lingleville ISD Lipan ISD Little Cypress-Mauriceville CISD Little Elm ISD Littlefield ISD Livingston ISD Llano ISD Lockhart ISD Lockney ISD Lohn ISD Lometa ISD

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Matagorda ISD

London ISD Lone Oak ISD Longview ISD Loop ISD Loraine ISD Lorena ISD Lorenzo Cons ISD Los Fresnos Cons ISD Louise ISD Lovejoy ISD Lovelady ISD Lubbock Cooper ISD Lubbock ISD Lueders-Avoca ISD Lufkin ISD Luling ISD Lumberton ISD Lyford Cons ISD Lytle ISD Mabank ISD Madisonville Cons ISD Magnolia ISD Malakoff ISD Malone ISD Malta ISD Manor ISD Mansfield ISD Marathon ISD Marble Falls ISD Marfa ISD Marion ISD Marlin ISD Marshall ISD Mart ISD Martins Mill ISD Martinsville ISD Mason ISD

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Mathis ISD Maud ISD May ISD Maypearl ISD McAllen ISD McCamey ISD McDade ISD McGregor ISD McKinney ISD McLean ISD McLeod ISD McMullen County ISD Meadow ISD Medina ISD Medina Valley ISD Melissa ISD Memphis ISD Menard ISD Mercedes ISD Meridian ISD Merkel ISD Mesquite ISD Mexia ISD Meyersville ISD Miami ISD Midland ISD Midlothian ISD Midway ISD - Henrietta Midway ISD - Waco Milano ISD Mildred ISD Miles ISD Milford ISD Miller Grove ISD Millsap ISD Mineola ISD

Mineral Wells ISD **Mission Cons ISD** Monahans-Wickett-Pyote ISD Montague ISD Monte Alto ISD Montgomery ISD Moody ISD Moran ISD Morgan ISD Morgan Mill ISD Morton ISD Motley County ISD Moulton ISD Mount Calm ISD Mount Enterprise ISD Mount Pleasant ISD Mount Vernon ISD Muenster ISD Muleshoe ISD Mullin ISD Mumford ISD Munday Consolidated ISD Murchison ISD Nacogdoches ISD Natalia ISD Navarro ISD Navasota ISD Nazareth ISD Neches ISD Nederland ISD Needville ISD New Boston ISD New Braunfels ISD New Caney ISD New Deal ISD New Diana ISD New Home ISD

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New Summerfield ISD New Waverly ISD Newcastle ISD Newton ISD Nixon Smiley CISD Nocona ISD Nordheim ISD Normangee ISD North East ISD North Hopkins ISD North Lamar ISD North Zulch ISD Northside ISD - San Antonio Northside ISD - Vernon Northwest ISD Nueces Canyon Cons ISD Nursery ISD O Donnell ISD Oakwood ISD **Odem-Edroy ISD Oglesby ISD** Olfen ISD **Olney ISD** Olton ISD Onalaska ISD **Orange Grove ISD Orangefield ISD** Ore City ISD **Overton ISD** Paducah ISD Paint Creek ISD Paint Rock ISD Palacios ISD Palestine ISD Palmer ISD Palo Pinto ISD Pampa ISD

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Panhandle ISD Panther Creek Cons ISD Paradise ISD Paris ISD Pasadena ISD Patton Springs ISD Pawnee ISD Pearland ISD Pearsall ISD Peaster ISD Pecos Barstow Toyah ISD Penelope ISD Perrin Whitt Cons ISD Perryton ISD Petersburg ISD Petrolia ISD Pettus ISD **Pewitt Cons ISD Pflugerville ISD** Pharr-San Juan-Alamo ISD Pilot Point ISD Pine Tree ISD Pittsburg ISD Plains ISD **Plainview ISD** Plano ISD Pleasant Grove ISD Pleasanton ISD Plemons-Stinnett-Phillips CISD Point Isabel ISD Ponder ISD Poolville ISD Port Aransas ISD Port Arthur ISD Port Neches-Groves ISD Post ISD Poteet ISD

Poth Cons ISD Pottsboro ISD Prairie Lea ISD Prairie Vallev ISD Prairiland ISD Premont ISD Presidio ISD Priddy ISD Princeton ISD Pringle-Morse Cons ISD Progreso ISD **Prosper ISD** Quanah ISD Queen City ISD Quinlan ISD Quitman ISD Rains ISD Ralls ISD Ramirez Common SD Randolph Field ISD Ranger ISD Rankin ISD Raymondville ISD **Reagan County ISD Red Lick ISD** Red Oak ISD **Redwater ISD Refugio ISD Ricardo ISD Rice Cons ISD Rice ISD Richards ISD Richardson ISD Richland Springs ISD Riesel ISD Rio Grande City CISD Rio Hondo ISD** 

0-6

Statistical Section 182

**Rio Vista ISD Rising Star ISD River Road ISD Rivercrest ISD Riviera ISD** Robert Lee ISD Robinson ISD Robstown ISD **Roby CISD** Rochelle ISD Rockdale ISD **Rocksprings ISD** Rockwall ISD **Rogers ISD** Roma ISD **Roosevelt ISD Ropes ISD** Roscoe ISD **Rosebud-Lott Cons ISD** Rotan ISD Round Rock ISD Round Top Carmine ISD Roxton ISD Royal ISD **Royse City ISD** Rule ISD **Runge ISD** Rusk ISD S & S Cons ISD Sabinal ISD Sabine ISD Sabine Pass ISD Saint Jo ISD Salado ISD Saltillo ISD Sam Rayburn Cons ISD San Angelo ISD

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San Antonio ISD San Augustine ISD San Benito Cons ISD San Diego ISD San Elizario ISD San Felipe Del Rio CISD San Isidro ISD San Marcos Cons ISD San Perlita ISD San Saba ISD San Vicente ISD Sands Cons ISD Sanford-Fritch ISD Sanger ISD Santa Anna ISD Santa Fe ISD Santa Gertrudis ISD Santa Maria ISD Santa Rosa ISD Santo ISD Savoy ISD Schertz-Cibolo-Universal City ISD Schleicher Cty ISD Schulenburg ISD Scurry Rosser ISD Seagraves ISD Sealy ISD Seguin ISD Seminole Public Schools Seymour ISD Shallowater ISD Shamrock ISD Sharyland ISD Shelbyville ISD Sheldon ISD Shepherd ISD Sherman ISD

Shiner ISD Sidney ISD Sierra Blanca ISD Silsbee ISD Silverton ISD Simms ISD Sinton ISD Sivells Bend ISD Skidmore Tynan ISD Slaton ISD Slidell ISD Slocum ISD Smithville ISD Smyer ISD Snook ISD Snyder ISD Socorro ISD Somerset ISD Somerville ISD Sonora ISD South San Antonio ISD South Texas ISD Southland ISD Southside ISD Southwest ISD Spearman ISD Splendora ISD Spring Branch ISD Spring Creek ISD Spring Hill ISD Spring ISD Springlake-Earth ISD Springtown ISD Spur ISD Spurger ISD Stafford Muncpl Sch Dist Stamford ISD

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Statistical Section 183

Stanton ISD Stephenville ISD Sterling City ISD Stockdale ISD Stratford ISD Strawn ISD Sudan ISD Sulphur Bluff ISD Sulphur Springs ISD Sundown ISD Sunnyvale ISD Sunray ISD Sweeny ISD Sweet Home ISD Sweetwater ISD Taft ISD Tahoka ISD Tarkington ISD Tatum ISD Taylor ISD Teague ISD Temple ISD Tenaha ISD Terlingua CSD **Terrell County ISD** Terrell ISD Texarkana ISD Texas City ISD Texhoma ISD Texline ISD Thorndale ISD Thrall ISD **Three Rivers ISD** Three Way ISD Throckmorton ISD **Tidehaven ISD Timpson ISD** 

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**Tioga ISD** Tolar ISD Tom Bean ISD Tomball ISD Tornillo ISD Trent ISD Trenton ISD Trinidad ISD **Trinity ISD Troup ISD Troy ISD** Tulia ISD **Tuloso-Midway ISD Turkey Quitaque CISD** Tyler ISD Union Grove ISD Union Hill ISD United ISD Utopia ISD **Uvalde Cons ISD** Valentine ISD Valley Mills ISD Valley View ISD - Pharr Valley View ISD - Valley View Van Alstyne ISD Van ISD Van Vleck ISD Vega ISD Venus ISD Veribest ISD Vernon Cons ISD Victoria ISD Vidor ISD Vysehrad ISD Waco ISD Waelder ISD Walcott ISD

Wall ISD Waller ISD Walnut Bend ISD Walnut Springs ISD Warren ISD Waskom ISD Water Valley ISD Waxahachie ISD Weatherford ISD Webb CISD Weimar ISD Wellington ISD Wellman-Union ISD Wells ISD Weslaco ISD West Hardin County CISD West ISD West Orange-Cove CISD West Oso ISD West Rusk Cty Cons ISD West Sabine ISD Westbrook ISD Westhoff ISD Westphalia ISD Westwood ISD Wharton ISD Wheeler ISD White Deer ISD White Oak ISD White Settlement ISD Whiteface ISD Whitehouse ISD Whitesboro ISD Whitewright ISD Whitharral ISD Whitney ISD Wichita Falls ISD

Eden Park Academy

### List of Participating Employers (Continued)

Wildorado ISD Willis ISD Wills Point ISD Wilson ISD Wimberley ISD Windham School District Windthorst ISD Winfield ISD Wink-Loving Cons ISD Winnsboro ISD Winona ISD Winters ISD Woden ISD Wolfe City ISD Woodsboro ISD Woodson ISD Woodville ISD Wortham ISD Wylie ISD - Abilene Wylie ISD - Wylie Yantis ISD Yoakum ISD Yorktown ISD **Ysleta ISD** Zapata County ISD Zavalla ISD Zephyr ISD

#### **CHARTER SCHOOLS**

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A Plus Academy A W Brown Flwshp Charter School A+ Unlimited Potential Academy of Accelerated Learning Academy of Dallas Accelerated Intermediate Academy Alief Montessori School

Alpha Charter School Ambassadors Preparatory Academy Amigos Por Vida-Friends For Life Charter El Paso Academy East Aristoi Classical Academy Arlington Classics Academy Arrow Academy Austin Achieve Public Schools Austin Discovery School **Basis San Antonio Beatrice Mayes Institute** Beta Academy Bexar County Academy **Big Springs Charter School Bob Hope School Brazos River Charter School** Brazos School For Inquiry & Creativity Brooks Academy of Science & Eng Burnham Wood Charter School **Calvin Nelms Charter Carpe Diem Schools Cedars International Academy** Chaparral Star Academy Chapel Hill Academy **Cityscape Schools Inc Compass Academy Compass Rose Education Comquest Academy** Core Academy Corpus Christi Montessori School **Crosstimbers Academy Cumberland Academy Dallas Comm Charter School** Dr M L Garza-Gonzalez Charter Draw Academy Eagle Advantage School East Fort Worth Montessori School East Texas Charter School

**Education Center Int Academy** El Paso Leadership Academy Eleanor Kolitz Hebrew Lang Academy Erath Excels! Academy **Evolution Academy Charter School** Excellence In Leadership Academy Faith Fam Acad Waxahachie Focus Learning Academy Ft Worth Acad Fine Arts **Gateway Academy** Gateway Charter Academy George Gervin Academy George I Sanchez Charter **Global Learning Academy** Golden Rule Charter School Goodwater Montessori School Great Hearts Academy -San Antonio **Gulf Coast Trades Center** Harmony School of Excel - Houston Harmony School of Science-Houston Harmony Science Academy - Austin Harmony Science Academy El Paso Harmony Science Academy Houston Harmony Science Acad San Antonio Harmony Science Academy Waco Henry Ford Academy - San Antonio **High Point Academy** Houston Gateway Charter School Houston Heights High School Houston Hghts Learning Academy Idea Public Schools Inspired Vision Academy International Leadership of Texas Jean Massieu Academy John H Wood Charter School

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Statistical Section 185

**Trivium Academy** 

### List of Participating Employers (Continued)

Jubilee Academic Center Katherine Anne Porter School Kauffman Leadership Academy **Ki Charter Academy KIPP** Aspire Academy **KIPP Austin College Prep KIPP Inc Charter KIPP Truth Academy** La Academia De Estrellas La Fe Preparatory School Leadership Prep School Legacy Preparatory Life School Lighthouse Charter School Manara Academy Meadowland Charter School Meridian World School Meyerpark Elementary Charter Midland Academy Charter School Mid-Valley Academy Montessori For All New Frontiers Charter School Newman International Academy North Texas Elementary School of Arts Nova Charter School Nova Charter Southeast **NYOS Charter School Odyssey Academy Orenda Charter School** Panola Charter School Paso Del Norte Academy Pegasus School of Liberal Arts & Science The Rhodes School **Pineywoods Academy** Pioneer Technology & Arts Academy Por Vida Academy **Premier High Schools Promise Community School** 

Radiance Acad of Learning Ranch Academy **Rapoport Academy** Raul Yzaguirre School **Richard Milburn - Killeen Rise Academy** San Antonio School Inquiry School of Excellence In Education School of Science & Tech-Discovery School of Science & Technology Seashore Middle Academy Ser-Ninos Charter School South Plains Academy South Texas Educational Tech Inc Southwest High School Southwest Preparatory School St Anthony School St Marys Charter School Stepping Stones Charter Elementary Tekoa Academy **Temple Education Center** Texans Can Academy **Texas College Preparatory Academies Texas Education Center** Texas Empowerment Academy **Texas Preparatory School** Texas Serenity Academy The East Austin College Prep Academy The Ehrhart School The Excel Center The Pro-Vision Academy **TLC Academy** Treetops INTERNATIONAL **Trinity Basin Preparatory Trinity Charter School Trinity Environmental Academy** 

Two Dimensions Prep Academy **UME Preparatory Academy** Universal Academy **Uplift Education** Vanguard Academy Varnett Charter School Village Tech Schools Vista Del Futuro Charter School Waco Charter School Walipp Academy Westlake Academy Winfree Academy Charter Schools Yes Prep Public Schools Zoe Learning Academy

#### COMMUNITY AND JUNIOR COLLEGES

Alamo Community College District Alvin Community College Amarillo College Angelina College Austin Community College **Blinn College Brazosport College Central Texas College Cisco Junior College Clarendon College Coastal Bend College** College of The Mainland Collin County Comm College Dallas County Comm College Dist **Del Mar College** El Paso Community College Frank Phillips College **Galveston College** Grayson County College

#### Hill College

Houston Comm College System Howard County Jr College Dist **Kilgore College** Laredo Community College Lee College Lone Star College System McLennan Community College Midland College Navarro College North Central TX College Northeast TX Community College **Odessa College** Panola College **Paris Junior College Ranger Junior College** San Jacinto College District South Plains College South Texas College Southwest TX Jr College Tarrant County College District **Temple College** Texarkana College **Texas Southmost College** Trinity Valley Jr College **Tyler Junior College** Vernon College Victoria College Weatherford College Western Texas College Wharton County Jr College

#### UNIVERSITIES

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Angelo State University Lamar Inst of Technology Lamar State College - Orange Lamar State College - Port Arthur Lamar University - Beaumont Midwestern State University Prairie View A & M University Sam Houston State University Stephen F Austin State University Sul Ross State University **Tarleton State University** Texas A&M - Agrilife Extension Servi Texas A&M - Agrilife Research Texas A&M - Eng Exp Station Texas A&M - Eng Ext Service Texas A&M - Forest Service Texas A&M - International University Texas A&M - Transportation Inst Texas A&M University Texas A&M University - Central TX Texas A&M University - Commerce Texas A&M University -Corpus Christi Texas A&M University - Galveston Texas A&M University - Kingsville Texas A&M University - San Antonio Texas A&M University - Systems Off Texas A&M University - Texarkana Texas Southern University Texas State Tech College Texas State University - San Marcos Texas State University System Texas Tech University Texas Woman's University U of N Texas System Admin Univ of TX - Arlington Univ of TX - Austin Univ of TX - Dallas Univ of TX - El Paso Univ of TX - Permian Basin

Univ of TX - San Antonio Univ of TX - Tyler University of Houston University of North TX University of Texas System UNT at Dallas West Texas A & M University

#### MEDICAL SCHOOLS

Texas A&M - University System HSC Texas A&M - Vet Medical Diag Lab U N T HSC at Fort Worth UT Health Ctr at Tyler UT HSC at Houston UT HSC at San Antonio UT Med Anderson Cancer Center UT Med Br at Galveston UT SW Medical Center

#### **REGIONAL SERVICE CENTERS**

Region 01 Educ Service Center Region 02 Educ Service Center Region 03 Educ Service Center Region 04 Educ Service Center Region 05 Educ Service Center Region 06 Educ Service Center Region 07 Educ Service Center Region 08 Educ Service Center Region 09 Educ Service Center Region 10 Educ Service Center Region 11 Educ Service Center Region 12 Educ Service Center Region 13 Educ Service Center Region 14 Educ Service Center Region 14 Educ Service Center

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Univ of TX - Rio Grande Valley

**Teacher Retirement System of Texas** 

2017 Comprehensive Annual Financial Report

### List of Participating Employers (Continued)

Region 16 Educ Service Center Region 17 Educ Service Center Region 18 Educ Service Center Region 19 Educ Service Center Region 20 Educ Service Center

#### **OTHER EDUCATIONAL DISTRICTS**

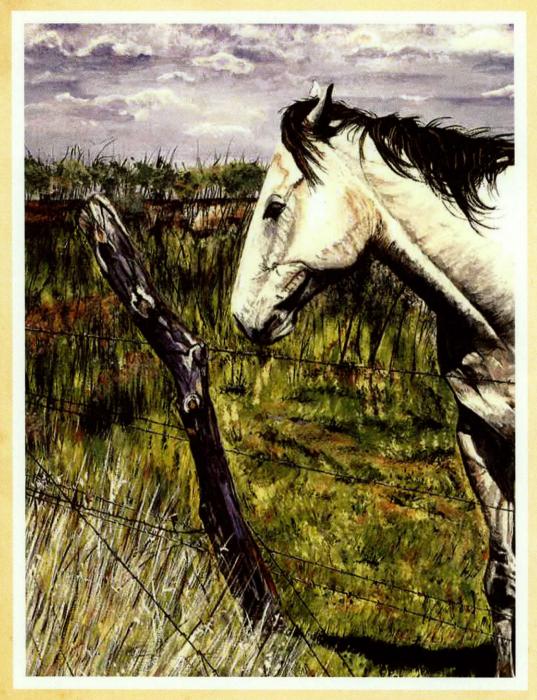
Anderson City Spc Ed Co Op Bowie County Sch Dist Dallas County School Dist Harris City Dept Education

#### **OTHER ENTITIES**

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Teacher Retirement System

## **BENEFITS SECTION**



Anita Smith Palmer "Lonely, "© 2000



STATE: The Legislature met in fiscal year 2017. Several noteworthy state law developments affecting TRS occurred during the fiscal year.

FEDERAL: On the federal level, several reportable developments occurred.

### <u>State</u>

**Legislation related to limitations on Investments** – The Legislature in SB 1665 eliminated sunset dates on both the use of derivatives to efficiently manage and reduce the risk of the overall investment portfolio and the use of external managers that had been set for September 1, 2019. The Legislature also revised the definition of "security" to clarify that it includes derivatives and any instrument commonly used by institutional investors to manage institutional investment portfolios.

In addition, the Legislature passed HB 89 and SB 253, which became effective September 1, 2017, that require TRS to divest securities of companies identified by the Texas Comptroller that boycott Israel or are doing business with a foreign terrorist organization. Such divestment requirements follow a similar divestment schedule and reporting framework as those currently in Texas Government Code Chapter 806 and 807 for Sudan and Iran, respectively.

### Legislation related to administration, procurements, and contracting:

*Sunset review* – SB 1663 extended the date for the next sunset review of TRS from 2019 to 2025.

**Protection from disclosure of personal financial information** – SB 1663 clarified that personal financial disclosures of employees of TRS are confidential and excepted from disclosure under the Public Information Law.

*Matters authorized for discussion in executive session clarified* – SB 1663 clarified that the TRS Board of Trustees does not have to meet in open session to discuss investment transactions or potential investment transactions if the board concludes in open session that deliberating or conferring in open session would have a detrimental effect on the position of TRS in negotiations with third parties or put TRS at a competitive disadvantage in the market.

**Procurements and contracts** – As it applies to TRS, Senate Bill 533 (85th Leg., R.S., 2017) changes certain ethics provisions involving procurement and contracts. Under SB 533, former TRS trustees and employees may not go to work for a person with whom they participated in a procurement or contract negotiation until two years after the contract was signed or the procurement was terminated or withdrawn. Trustees and employees previously had to wait two years after leaving office or terminating employment with TRS before they could go to work for a vendor involved in a procurement or contract in which they participated. The bill also enhances conflict-of-interest disclosure requirements for TRS trustees and employees with regard to claims-administration procurements and contracts for the TRS-Care, TRS-ActiveCare, and long-term care programs.

#### Legislation related to pension matters:

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**Employment eligible for participation in TRS** – SB 1663 removed student employment from membership eligible employment effective September 1, 2017. Student employment is employment that requires enrollment as a student at an institution of higher education as a condition of employment. Currently, student employment is eligible only if the person is also employed in other membership eligible employment. The change in the law also precludes compensation earned in student employment from being used in benefit calculations but does not affect compensation or service credited on eligible student prior to September 1, 2017.

**Changing retirement plan or beneficiaries of a joint and survivor annuity after retirement** – SB 1663 clarified that the consent of a spouse or a court order from a court with jurisdiction over the marriage of the retiree and the beneficiary is required to change the retirement plan if the beneficiary was the retiree's spouse at the time the designation was made. The bill also provided that a determination by the executive director that the order is not sufficient to authorize the change of retirement plan or beneficiary of the Option 1, 2, or 5 joint and survivor annuity plans may be appealed to the Board of Trustees unless the board by rule waives the requirement for the appeal to the board. The bill also clarified that a retiree who designated a trust as beneficiary of a joint and survivor annuity at the time of retirement may later change the beneficiary to the individual who is the sole beneficiary of that trust and the annuity may be paid for the remainder of the beneficiary's life rather than for the remaining life expectancy of the beneficiary as was previously required.

**Calculation of the amount of joint and survivor annuity payable at the death of an active member** – SB 1663 changed the manner of calculating the amount of joint and survivor benefit payable as a death benefit on behalf of an active member who died with at least five years of service credit. Under the new law, which affects death benefits payable on behalf of a member who dies on or after September 1, 2017 or who died before September 1, 2017 but the death benefits payable by TRS have not commenced on September 1, 2017, TRS determines whether the benefit amount is reduced for early age and the amount of the reduction after including five additional years of service credit on the last day of the month preceding the month in which the member died. The five additional years of service credit is not used in determining whether the joint and survivor benefit is payable or the amount of the standard annuity used in calculating the benefit.

**Return of excess contributions provided for beneficiary of disability retiree with less than 10 years of service credit** – SB 1663 extended a benefit to the beneficiaries of a disability retiree with less than 10 years of service credit that has been available for disability retirees with 10 years of service credit or more as well as service retirees. The change allows the beneficiary of a disability retiree with less than 10 years of service credit who dies while receiving retirement benefits to receive a return of the excess accumulated contributions that represent the amount of member contributions plus interest that exceed the amount of annuities paid on behalf of

the member before death, in addition to other benefits payable at death.

Additional employment arrangements included in limits on employment after retirement – SB 1663 provided that retirees involved in certain employment-like relationships in the first 12 calendar months following retirement are considered employment for purposes of employment after retirement that is limited, interrupts the required 12 full, consecutive-calendar-month break in service, and must be reported to TRS. The arrangement must be reported to TRS if the retirees are performing duties or providing services that employees of the institution would otherwise perform. These relationships include:

- Independent contractors;
- Working but waiving, deferring, or foregoing compensation; or
- Volunteering but performing duties or providing services that the retiree performed immediately before retirement and has an agreement to perform those same services after the 12 consecutive calendar month break in service required before full-time employment.

These changes apply to retirees who retire after September 1, 2017 and those who are within the first 12 calendar months following their effective date of retirement on September 1, 2017.

**Authority to charge late fees for late reports filed by TRS-covered employers** – SB 1663 authorized TRS to charge a late fee for late reports and change the report date for reporting the employment of a retiree. The late fee cannot exceed \$1,000 per business day that the report is late and caps the total late fees for a month at \$25,000. The bill also shifts the due date for the employment of retirement members report to before the 11<sup>th</sup> day after the end of the calendar month for which the report is due. The due date for the August report was kept the same to facilitate year-end closing.

**Removal of prohibition on using installment purchase plan within three years of receipt of refund of purchase payments** – SB 1663 removed the statutory prohibition on purchasing the same type of service credit using an installment method of payment if the member received a refund of installment payments or payroll deduction payments within the last three years.

**Authority to provide certain information electronically** – SB 1663 clarified that TRS may provide non-confidential information to participants required by Chapter 802, Government Code to an email address provided by their employer. TRS may provide confidential information to participants using an email address specified by the participant. TRS may also meet the statutory requirement to provide non-confidential information by giving written or electronic notice and directing the participant to an internet website address to access the information.

**Confirmation of test for independent contractor** – SB 1664 confirmed that the test used by TRS to determine the status of an individual as an employee vs independent contractor is the common law test.

*Time period to purchase service credit at retirement* – SB 1664 provided a period of two calendar months from the later of the member's effective retirement date or the last day of the month in which TRS receives the retirement application to complete the purchase of service credit and that the purchase must be completed before TRS makes the first annuity payment. If the purchase cannot be completed in the time period provided, the member can revoke retirement and establish a new retirement date that allows sufficient time to complete the purchase or decline to purchase the service credit and retain the effective date of retirement. The bill also provided a period of 90 days after the date the retirement system issues a cost statement for the member to complete the purchase of state sick and/or personal leave service credit. The additional time was needed because state sick and/or personal leave service credit can only be purchased at the time of retirement. The member can request a one-time extension of 30 days to complete the purchase using a rollover of funds or a direct trustee-to-trustee transfer. If the purchase cannot be completed in the time period provided, the member can revoke retirement and establish a new retirement date that allows sufficient time to complete the purchase or decline to purchase the service credit and retain the effective date of retirement.

**Amounts to be deposited in the member savings account** – SB 1664 clarified that the portion of cost representing member deposits used to purchase USERRA, developmental leave, state sick and/or personal leave, membership waiting period, and SCPO service credit are credited to the member savings account. This update in the law comports with TRS practice.

**Accounts to which an eligible rollover distribution may be made** – SB 1664 authorizes TRS to make an eligible rollover distribution to a qualified plan described in Section 401(a) of the Internal Revenue Code if the plan agrees to separately account for the amounts transferred and earnings on the amounts transferred and the portion of the distribution that is includable in gross income and the portion that is not includable in gross income.

*Election period for the Optional Retirement Program (ORP)* – SB 1954 provides a defined time period that a person may elect ORP when the employer does not notify the person on the first day of eligibility for ORP. If the person is notified before the end of the first 90 days after becoming eligible, the person must elect before the later of the 91<sup>st</sup> day after becoming eligible or the 31<sup>st</sup> day after being notified of eligibility. If the person is notified after the 90<sup>th</sup> day after becoming eligible but before the 151<sup>st</sup> day, the person must elect before the later of the 151<sup>st</sup> day after becoming eligible or the 31<sup>st</sup> day after being notified of the 91<sup>st</sup> day after before the 151<sup>st</sup> day. If the person must elect before the later of the 151<sup>st</sup> day after becoming eligible or the 31<sup>st</sup> day after being notified of the opportunity to participate. If the person is not notified before the 151<sup>st</sup> day of eligibility, the person may not elect ORP and must remain in TRS.

**Correction of reporting errors when a person is mistakenly reported to TRS instead of ORP** – SB 1954 provides a correction method that requires a person who is mistakenly reported to TRS as a member after electing ORP and vesting in participation in ORP to be restored to ORP. The bill allows TRS to transfer certain member contributions equal to the participant contributions that should have been made to ORP plus 4 percent earnings to the person's ORP account. It also

0-4

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provides a process for employers to recoup from TRS any employer contributions made in lieu of state contributions but no earnings using the employer reporting system. The State Comptroller is authorized to transfer the state's contributions plus 4 percent earnings to the employer for deposit in the person's ORP account. The bill also provides for the employer to make applicable contributions to the person's ORP account plus a rate of earnings determined by the employer in accordance with applicable IRC correction requirements. The bill also authorizes TRS to return contributions in excess of the amount that should have been contributed to the ORP account directly to the member without earnings as well as any amounts paid to purchase service credit while the person was not eligible to participate in TRS.

**Forfeiture of annuities when convicted of certain felonies involving an educator and a student** – SB 7 requires that an annuitant forfeits the right to receive an annuity when convicted of certain crimes involving a student. The bill applies only to crimes committed by an employee of a public school and those in which each and every element of the crime is committed after the effective date of rules adopted by TRS; the bill requires TRS to adopt rules to implement the law by December 31, 2017. There are provisions in the bill for the payment of a portion of the benefit to the spouse or former spouse of the participant under the terms of a QDRO and for the refund of contributions to the participant if an annuity cannot be paid. Restoration of the annuity is authorized if the conviction is overturned provided certain requirements are met.

*Legislation related to TRS-Care* – During its Regular Session, the 85<sup>th</sup> Legislature took the following action concerning TRS-Care:

**SB 1** – The Legislature increased the public school contribution from 0.55 percent to 0.75 percent of the salary of each active employee of the public school.

**SB 1 and HB 3976** – The Legislature increased the state contribution from 1 percent to 1.25 percent of the salary of each active employee of public schools.

**SB 507** – The Legislature expanded, beginning January 1, 2018, the mandatory mediation program under Chapter 1467 of the Texas Insurance Code to apply to TRS-Care.

**HB 3976** – The Legislature: (i) eliminated free coverage under TRS-Care, except with regard to certain disability retirees enrolled during Plan Year 2018 through Plan Year 2021; (ii) directed the creation of a high deductible health plan for enrollees who are not eligible to enroll in Medicare; (iii) directed the creation of a Medicare Advantage plan and Medicare prescription drug plan for enrollees eligible to enroll in Medicare; (iv) granted the right to make available other appropriate health benefit plans to address the needs of enrollees eligible to enroll in Medicare; and (v) established the right of eligible retirees and their eligible dependents to enroll in TRS-Care when the retiree reaches 65 years of age.

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During its Special Session, using identically worded language in both HB 21 and HB 30, the 85<sup>th</sup> Legislature provided \$212,000,000 in additional funding for TRS-Care. TRS-Care may use these

Benefits Section 194

-1-

monies to: (1) decrease the premiums and deductibles that would otherwise be paid during the 2018 and 2019 plan years; and (2) reduce costs for an enrolled adult child with a mental disability or a physical incapacity during the 2018 and 2019 plan years.

*Legislation related to TRS-ActiveCare* – During its Regular Session, the 85<sup>th</sup> Legislature took the following action concerning TRS-ActiveCare:

**SB 507** – The Legislature expanded, beginning January 1, 2018, the mandatory mediation program under Chapter 1467 of the Texas Insurance Code to apply to TRS-ActiveCare.

### <u>Federal</u>

#### INVESTMENTS

Implementation of Rulemaking under the Dodd–Frank Wall Street Reform and Consumer Protection Act (2010) (Dodd–Frank) – During this fiscal year, TRS amended all of its ISDA documentation to take into account margin requirements for uncleared swaps recently issued by the Commodities Futures Trading Commission (CFTC) and the U.S. Prudential Regulators. Those amendments, which represent implementation of the first phase of the new regulations, addressed the treatment of variation margin, for example shortening the transfer timing and removing thresholds for movements of margin and providing maximum valuation percentages for non-cash collateral. The second implementation phase of the new margin requirements will address initial margin, for example requiring two-way posting and segregation of initial margin. While the initial-margin regulations should not apply to TRS for another two or three years, TRS will again amend its ISDA agreements to account for the new requirements in advance of their application. Finally, TRS anticipates additional rule making from the CFTC in the coming fiscal year now that the U.S. Senate has voted to confirm the appointment of additional Commissioners.

#### BENEFITS

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#### **Health Care**

**Federal Patient Protection and Affordable Care Act of 2010 (PPACA)** – During this fiscal year, TRS continued to monitor regulations issued with regard to the PPACA and implemented various provisions of the PPACA that impact the health benefit plans administered by TRS. TRS continued to implement regulations under Section 1557, which prohibit discrimination on the basis of race, color, national origin, sex, age, or disability in certain health programs or activities. TRS continues to allow certain school districts, charter schools, and other entities participating in TRS-ActiveCare to designate TRS, acting in its capacity as trustee of TRS-ActiveCare, to fulfill the reporting requirements under Internal Revenue Code Section 6055 for months of enrollment in calendar year 2017. Section 6055 addresses the reporting of health care coverage selected by active employees and COBRA qualified beneficiaries (and their dependents) who are enrolled in one of the PPO plans offered under TRS-ActiveCare.

> Benefits Section 195

#### PENSION

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#### Tax Laws, Regulations and Guidance

Normal Retirement Age Regulations – In January 2016, the IRS and the U.S. Treasury Department issued a Notice of Proposed Rulemaking for governmental plans regarding pension distributions upon attainment of "normal-retirement age" (NRA). The guidance provides that a NRA under a governmental plan must satisfy the pre-ERISA vesting rules. A governmental plan is permitted to use a period of service to determine NRA if the period of service used is reasonable and uniformly applicable and the other pre-ERISA rules relating to NRA are satisfied. A governmental plan is allowed to specify a NRA that is less than age 65 if the lower age is an age that is reasonably representative of the typical retirement age for the industry in which the covered workforce is employed. The guidance also distinguishes between governmental plans that allow "in-service distributions" and those that do not. In the case of a governmental plan that allows "in-service" distributions before age 62, the plan's NRA must meet the reasonably representative requirement, which may be satisfied by meeting one of the safe harbors set forth in the guidance. In the case of a governmental plan that does not allow "in-service" distributions before age 62, the plan is not required to define NRA or comply with the reasonably representative requirement or the safe harbors, but the plan's NRA must satisfy the pre-ERISA vesting rules.

Safe harbors for governmental plans provided in the IRS' Notice of Proposed Rulemaking that are deemed to satisfy the reasonably representative requirement include the following: (1) the NRA is at least age 62 or the later of age 62 or another specified date, such as five years of service; (2) the NRA is the later of age 60 or the age at which the participant has been credited with at least five years of service; (3) the NRA is the later of age 55 or the age at which the participant has been credited with at least 10 years of service; (4) the NRA is the participant's age if the sum of the participant's age plus the number of years of service credited to the participant equals 80 or more; and (5) the NRA is based on a combination of any of the other safe harbors (except for the qualified public safety employee safe harbors) with 25 years of service, so that the NRA is the participant's age when the number of years of service that have been credited to the participant equals 25 if that age is earlier than what the participant's NRA would be under the other safe harbors. The guidance also includes three safe harbors specifically for gualified public safety employees: (1) the NRA is age 50 or later; (2) the NRA is based on a combination of the participant's age plus the number of years of service credited to the participant that equals 70 or more; and (3) the NRA is the participant's age when the number of years of service that have been credited to the participant equals 20 or more.

In addition, the Notice of Proposed Rulemaking provides that the use of different NRAs based on different classifications of employees or benefit structures in a single plan would not fail to satisfy the pre-ERISA rules. Additionally, the use of one NRA for employees hired before a certain date and another NRA for employees hired on or after that date generally would not fail to satisfy the pre-ERISA rules. The guidance further provides that a NRA in a governmental plan

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that does not satisfy any of the safe harbors could still satisfy the reasonably representative requirement based on all of the relevant facts and circumstances. TRS will continue to monitor developments with respect to these anticipated changes in federal regulations.

Advance Notice of Proposed Rulemaking Regarding the Determination of Governmental Plan Status - In November 2011, the IRS issued advance notice of proposed rulemaking indicating that the IRS and the U.S. Treasury Department intend to issue regulations to define the term "governmental plan" under Section 414(d) of the Internal Revenue Code. The preliminary guidance defines a "governmental plan" as "a plan established and maintained for its employees by the Government of the United States, by the government of any state or political subdivision thereof, or by any agency or instrumentality of the foregoing." The IRS received over 2,000 comments from the public charter school community regarding the draft proposed regulations contained in the preliminary guidance. In February 2015, the IRS issued Notice 2015-07 indicating that the IRS anticipates issuing proposed regulations that provide that a state or local retirement system that covers public charter school employees will not fail to be a governmental plan under Section 414(d) if certain requirements are satisfied. The IRS and the U.S. Treasury Department anticipate that the final regulations under Section 414(d) will apply prospectively and will include a delayed effective date. In addition, the IRS and the U.S. Treasury Department anticipate that the final regulations will contain certain transition relief. The IRS and the U.S. Treasury Department will also continue to review other comments received in response to the 2011 advance notice of proposed rulemaking. TRS will continue to monitor developments.

#### **OFAC Iran Sanctions**

#### **Other Developments**

On Jan. 20, 2016, the Governor of Texas issued a directive that Texas will continue to enforce the investment restrictions in Texas Government Code Chapter 807, and the revocation in January 2016 of some of the economic and trade sanctions against Iran, administered by the Office of Foreign Assets Control (OFAC) of the U.S. Treasury Department, did not trigger the revocation of the Texas sanctions. Further, in July 2017, OFAC added certain additional sanctions against Iran-linked individuals and entities.

TRS will continue to monitor developments.

The Teacher Retirement System of Texas (TRS) administers a defined benefit retirement plan that is a qualified pension trust under Section 401(a) of the Internal Revenue Code. The pension trust fund provides service retirement; disability retirement; death benefits; and survivor benefits on behalf of eligible employees of public and higher education in Texas. The TRS Benefits Handbook, a general information booklet, is available to TRS members, annuitants and the public on the TRS website, www.trs.texas.gov. Retirement benefits are financed by member, state, and employer contributions, along with earnings from pension trust fund investments.

TRS also administers two separate trust funds related to health care. First, TRS administers TRS-ActiveCare, the statewide health benefits program for eligible public education employees of participating entities and their eligible dependents. The program is mainly financed by plan participant premium payments. In addition to TRS-ActiveCare, TRS administers TRS-Care, a separate statewide health benefits program for eligible retired public education employees and their eligible dependents. This program is financed by contributions from the state, active public school employees, reporting entities (employers), premium payments from plan participants, and subsidy revenue from the Medicare Part D program.

In addition to the three trust funds, TRS also administers an optional long-term care insurance program for eligible retirees, and eligible public school employees, their eligible dependents, and certain other eligible family members. The plan is available on an enrollee-pay-all-basis.

### **Retirement Plan Benefits**

This summary of benefits is based on statutory provisions of the plan effective for fiscal year 2017.

The major retirement plan benefits are:

#### SERVICE RETIREMENT

#### **Normal Retirement Eligibility**

For members whose membership began prior to Sept. 1, 2007, who had at least five years of service credit as of Aug. 31, 2014, and who maintained membership until retirement:

- Age 65 with at least five years of credited service, or
- The sum of member's age and years of credited service equals or exceeds 80 with at least five years of credited service.

For members whose membership began on or after Sept. 1, 2007 but prior to Sept. 1, 2014, who had at least five years of service credit as of Aug. 31, 2014, and who maintained membership until retirement:

- Age 65 with at least five years of credited service, or
- Age 60 and the sum of member's age and years of credited service equals or exceeds 80 with at least five years of credited service.

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Benefits Section 198

For members who did not have at least five years of service credit as of Aug. 31, 2014, who established TRS membership on or after Sept. 1, 2014, or who had at least five years of service credit as of Aug. 31, 2014 but terminated membership in TRS by withdrawal of accumulated contributions and later resumed TRS membership:

- Age 65 with at least five years of credited service, or
- Age 62 and the sum of member's age and years of credited service equals or exceeds 80 with at least five years of credited service.

**Standard Annuity -** A monthly benefit payable at retirement throughout the retiree's lifetime and calculated according to the statutory benefit formula.

**Benefit Formula -** 2.3 percent (multiplier) times the average of the five highest annual creditable salaries times years of credited service equals an annual standard annuity. For members who are grandfathered, the three highest annual salaries are used.

**Minimum Benefit -** \$150 per month less any reduction for early age retirement or optional annuity selection.

### **Early Age Retirement Eligibility**

For members whose membership began prior to Sept. 1, 2007, who had at least five years of service credit as of Aug. 31, 2014, and who maintained membership until retirement:

- At least 55 with five or more years of service credit, but the sum of the member's age and years of service credit total less than 80, or
- 30 or more years of service credit, but the sum of the member's age and years of service credit total less than 80.

For members whose membership began on or after Sept. 1, 2007 but prior to Sept. 1, 2014, who had at least five years of service credit as of Aug. 31, 2014, and who maintained membership until retirement:

- At least 55 with five or more years of service credit, but the sum of the member's age and years of service credit total less than 80, or
- 30 or more years of service credit, but the sum of the member's age and years of service credit total less than 80, and the member is less than age 60, or
- The sum of the member's age and years of service credit total at least 80, but the member is less than age 60.

For members who met the requirements to be grandfathered before Sept. 1, 2005, there is no reduction to their benefit based on actuarial tables if they are at least age 55, the sum of their age and years of service credit total at least 80, and they are below age 60; however, these members are still considered early-age retirees.

For members who did not have at least five years of service credit as of Aug. 31, 2014, who

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Benefits Section 199

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established TRS membership on or after Sept. 1, 2014, or who had at least five years of service credit as of Aug. 31, 2014 but terminated membership in TRS by withdrawal of accumulated contributions and later resumed TRS membership:

- At least 55 with five or more years of service credit, but the sum of the member's age and years of service credit total less than 80, or
- 30 or more years of service credit, but the sum of the member's age and years of service credit total less than 80, and the member is less than age 62, or
- The sum of the member's age and years of service credit total at least 80, but the member is less than age 62.

For members who met the requirements to be grandfathered before Sept. 1, 2005, there is no reduction to their benefit based on actuarial tables if they are at least age 55, have at least 20 years of service credit, the sum of their age and years of service credit total at least 80, and they are below age 62; however, these members are still considered early-age retirees.

**Early Age Retirement Benefit -** The standard annuity amount calculated under the benefit formula (or the minimum benefit, if applicable) and used to determine the amount of any optional retirement annuity is reduced for early age retirement. The amount of the reduction varies depending on age, years of service credit, and whether a member is grandfathered.

#### **DISABILITY RETIREMENT**

**Eligibility** - Physical or mental disability precludes the member's continued performance of current duties and the disability is probably permanent, as certified by the TRS Medical Board.

**Benefit** - For disabled members with at least 10 years of credited service, the greater of the standard annuity unreduced for early age or \$150 per month minimum benefit, less any reduction for the selection of an optional annuity. For disabled members with fewer than 10 years of credited service, \$150 per month. The minimum benefit amounts are subject to reduction for the selection of an optional retirement annuity.

**Duration -** For retirees with 10 or more years of credited service, payments continue for as long as the disability continues. For those with fewer than 10 years of credited service, payments continue for the life of the retiree, the duration of the disability, or the number of months of credited service, whichever is shorter.

**Earnings Limit** - Disability retirees who applied and retired after Aug. 31, 2007 are subject to an annual limit on earnings from any employment. The current limit is the greater of the highest annual salary before retirement or \$40,000. Excess earnings will cause benefits to be forfeited until such time as the excess earnings cease or are reduced to an allowable amount.

#### ANNUITY PAYMENT OPTIONS

All service and eligible disability retirees may select an optional form of payment that reduces the stan-

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Benefits Section 200

dard annuity by application of actuarial reduction factors in order to continue payment to a beneficiary after the retiree's death. Actuarial factors for disability retirees are different from those for service retirees because of different assumptions about life expectancy for the two groups. The available options include 100, 75, and 50 percent joint and survivor annuities, and five- and 10-year guaranteed period annuities. Selection of a 100 or 75 percent joint and survivor annuity and a five- or 10-year guaranteed period annuity may not be allowed in certain situations based on the minimum distribution provisions of federal tax law.

#### THE POP-UP PROVISION

If a designated beneficiary under any of the joint and survivor options dies while the retiree is still living, the retiree's future monthly payment increases to the amount of the standard annuity.

#### PARTIAL LUMP SUM OPTION

Under the Partial Lump Sum Option (PLSO), available for election at the time of retirement, eligible members may elect to receive an actuarially reduced service retirement annuity plus a lump sum distribution.

Members may elect to receive a PLSO if they are eligible for service retirement, meet the Rule of 90 (age and years of service credit equal at least 90), are not participating in the Deferred Retirement Option Plan (DROP), and are not retiring with disability retirement benefits. Grandfathered members may elect PLSO at retirement if they are eligible for normal age service retirement under the pre-Sept. 1, 2005 law (age 65 with at least five years of credited service, or the sum of the member's age and years of credited service equals or exceeds 80 with at least five years of credited service), are not participating in DROP, and are not retiring with disability retirement benefits. Members retiring under the proportionate retirement program are not eligible to elect the PLSO.

Partial lump sum distributions equal to 12, 24, or 36 months of a standard service retirement annuity may be selected. When a member selects this option, the monthly annuity is actuarially reduced to reflect the lump sum distribution. Flexible annual distribution options are available, including rollovers to another eligible retirement plan.

#### DEFERRED RETIREMENT OPTION PLAN

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The TRS plan permitted eligible members to participate in a Deferred Retirement Option Plan (DROP) by enrolling no later than Dec. 31, 2005. DROP participants continued employment while accumulating a portion of their standard retirement annuity in a special account that is disbursed beginning at the time of their retirement or death. Any eligible member who wanted to participate in DROP must have done so by Dec. 31, 2005.

Members who elected DROP chose to participate in 12-month increments for up to five years. During DROP participation, the member did not accrue additional service credit, nor is any compensation earned during DROP participation considered in calculating the standard annuity. Also, during DROP participation, the member's statutory contributions to TRS continue; however, contributions were not credited to the member's contribution account and are not subject to refund.

Interest on the DROP account balance prior to September 1, 20014 was computed at a rate of five percent per year. Interest on the DROP account balance is currently computed at a rate of two percent per year.

Members who participated in DROP but continued working in membership eligible employment after the close of their participation period earn post-DROP retirement benefits based solely on creditable compensation received and service credit earned after their DROP participation period ended. Post-DROP benefits are distributed with the retirement and DROP benefits.

#### MINIMUM SERVICE CREDIT REQUIRED FOR SERVICE RETIREMENT BENEFITS

Under current law, a member who has completed at least five years of credited service has earned a right to service retirement benefits after reaching eligible retirement age, provided that the member's accumulated contributions are not withdrawn from the system. Service credited in another retirement system that participates in the Proportionate Retirement Program may be combined with TRS service credit to determine eligibility for TRS service retirement benefits. Any qualifying USERRA military service, up to a maximum of five years, may also be counted in determining eligibility for TRS service retirement benefits. The USERRA service and/or compensation credit may also be purchased to increase the amount of the retirement benefit or may simply be verified and used to establish eligibility. An eligible member must apply for benefits and meet other requirements, such as termination of Texas public education employment, in order to begin receiving benefits.

#### **DEATH AND SURVIVOR BENEFITS**

Active Members - The beneficiary of an active member may elect to receive one of the following benefits in the event of the member's death before retirement, if the member dies during a school year in which the member performed service or if the member was absent from service because of sickness, accident or another reason TRS determines is involuntary or in furtherance of the objectives or welfare of the public school system. Active member death benefits are also payable if the member dies when eligible to retire or would have become eligible without further service before the fifth anniversary of the members last day of service as a member or if the member dies while performing qualified military service as defined by applicable federal law. These benefits also are available due to death when the member is absent from service as described by law, such as when the absence is due to sickness, accident, or other involuntary cause or when the member is within five years of being eligible to retire when leaving employment:

- 1. A lump sum payment equal to twice the member's annual rate of compensation or \$80,000, whichever is less.
- 2. Sixty monthly payments equal to the member's standard annuity without reduction for early age, provided the member had at least five years of service credit at the time of death.
- 3. Lifetime payments equal to a 100 percent joint and survivor annuity, provided the member had at least five years of service credit, and is subject to any reduction applicable for early age. This benefit is only available when there is a sole beneficiary.

- 4. An amount equal to a return of the member's contributions with accumulated interest.
- 5. Survivor benefits of \$2,500 lump sum payment plus a monthly benefit to eligible beneficiaries. For example, \$350 per month to a beneficiary spouse with minor children, continuing until the youngest child reaches age 18. When the spouse turns age 65, or when the youngest child reaches age 18, whichever is later, the spouse would begin receiving \$250 per month for life.

In addition to these five options, a lump sum death benefit of \$160,000 is available if the active member is employed in a TRS-covered position and dies as the result of a physical assault during the performance of the employee's regular job duties.

Also, the beneficiary of a DROP participant will receive the accumulated DROP account balance, payable as a lump sum or in periodic installments.

**Retirees -** In addition to any joint and survivor or guaranteed period annuity that may be payable under an optional form of payment a retiree elected, the beneficiary of a service or disability retiree is entitled to a \$10,000 lump sum payment. Eligible survivors may select alternate payment options in lieu of the lump sum benefit. The alternate payment options include a lump sum payment of \$2,500 plus an applicable monthly survivor benefit.

If total payments made before death to a retiree and, when applicable, to a beneficiary for an optional service retirement annuity, are less than accumulated contributions at retirement, an amount equal to the remainder of the balance of accumulated contributions is paid to the beneficiary or as otherwise provided by law. Should a retiree die prior to receiving all PLSO payments that are due, TRS will pay any remaining PLSO payments in a single lump sum payment to the beneficiary. If the retiree participated in DROP and died before receiving all DROP distributions, any unpaid DROP payments are paid to the beneficiary designated by the retiree.

#### **GRANDFATHERED PROVISIONS**

- A person who, as a member, met any one of the following criteria on or before Aug. 31, 2005, is grandfathered under plan provisions repealed with respect to non-grandfathered members:
- the member was at least 50 years old,
- the member's age and years of service credit equaled at least 70 ("Rule of 70"), or
- the member had at least 25 years of service credit.
- Members who are grandfathered will have their benefits determined in the following manner:
- Final Average Salary at retirement will be determined by the highest three years (instead of five years) of salary.
- Preservation of certain retirement reduction factors means that members age 55 or older with 20 to 24 years of credited service who take early retirement will receive a lesser

reduction to their annuities than those members who are not grandfathered.

• Partial Lump Sum Option eligibility will require either age 65 with at least five years of service credit, or a combined age plus years of credited service that equals at least 80 ("Rule of 80") instead of 90.

### Health Benefits

#### The major health benefits and long-term care provisions are:

#### HEALTH BENEFITS FOR ACTIVE PUBLIC SCHOOL EMPLOYEES

TRS-ActiveCare, the statewide health benefits program for eligible full-time and part-time employees of participating school districts, open enrollment charter schools, regional education service centers, and other educational districts, went into effect on Sept. 1, 2002. The program initially focused on smaller districts, where affordable health coverage was often harder to find, and later expanded to include larger school districts. In fiscal year 2017, 1,093 entities participated in the program. Employees can choose from three PPO plans and, in certain areas, employees also have the option of enrolling in a health maintenance organization.

#### **RETIREE HEALTH COVERAGE**

TRS administers TRS-Care, a health benefits program for eligible retired public education employees and their eligible dependents that was established in 1985. TRS-Care is the source of health benefits coverage which almost all retired public education employees rely upon. Funding is provided by premium payments from retiree participants and contributions from the state, public schools, and active public education employees. TRS-Care also receives additional revenue from the Retiree Drug Subsidy (RDS) program.

For information on TRS-Care eligibility, please refer to the TRS website.

### LONG-TERM CARE INSURANCE PROGRAM

Eligible retirees and eligible public school employees, their eligible dependents, and certain other family members may participate in the TRS long-term care insurance program. The plan pays benefits if the participant becomes unable to perform at least two activities of daily living without substantial assistance from another person. The plan also pays benefits as a result of a severe cognitive impairment that requires supervision or verbal direction from another person in order to protect the member or others from serious injury.

## **TRS Mission Statement**

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The mission of the Teacher Retirement System of Texas is:

Improving the retirement security of Texas educators by prudently investing and managing trust assets and delivering benefits that make a positive difference in members' lives.

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