



TEACHER
RETIREMENT
SYSTEM of
TEXAS

Growing Strong

2020

COMPREHENSIVE ANNUAL FINANCIAL REPORT

A Component Unit of the State of Texas
Fiscal Year Ended August 31, 2020

OUR MISSION

***IMPROVING THE RETIREMENT
SECURITY OF OUR MEMBERS BY
PRUDENTLY INVESTING AND MANAGING
THE TRUST ASSETS AND DELIVERING
BENEFITS THAT MAKE A POSITIVE
DIFFERENCE IN THEIR LIVES.***

As a part of this year's Comprehensive Annual Financial Report — *Growing Strong* — we're proud to display some of the diverse native flora and agricultural bounty growing in our great state. This report highlights how we are constantly keeping things growing in order to better serve our membership.

TEACHER RETIREMENT SYSTEM OF TEXAS

2020

Comprehensive Annual
Financial Report

A Component Unit of
the State of Texas



Fiscal Year Ended August 31, 2020

Prepared by TRS Staff

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Cotton

Texas is the nation's #1 cotton producer.

From the High Plains to the Lower Rio Grande Valley, more than 120 Texas counties in six different regions grow cotton, making cotton Texas' most valuable crop.

The state of Texas named cotton its official state fiber/fabric in 1997.



ONE OUT OF EVERY 20 TEXANS
RELIES ON TRS FOR RETIREMENT,
DISABILITY AND SURVIVOR BENEFITS.

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Jarvis V. Hollingsworth, Chair
General Counsel
Kayne Anderson Capital Advisors, L.P.
Missouri City
Direct appointment of the governor
Term expires 2023



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



Nanette Sissney, Vice Chair
Counselor and Former Teacher
Whitesboro Independent School District
Whitesboro
At-Large position
Term expires 2023



James Dick Nance
Former Texas Public School Teacher
Member of Texas Athletic Directors Association
Hallettsville
Retiree position
Term expires 2023



Michael Ball
Chief Financial Officer
Fort Worth ISD
Argyle
Active public education position
Term expires 2025



Robert H. Walls, Jr.
Business and Legal Executive
Energy, Media and Private Equity Industries
San Antonio
Direct appointment of the governor
Term expires 2025



David Corpus
Bank Office President
Allegiance Bank
Humble
Position nominated by the State Board
of Education
Term expires 2025



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

Dr. Greg Gibson resigned from the board in April 2019. This vacancy will be filled after the May 2021 election for the Active Public Education position.

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



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, 2019

Christopher P. Morill

Executive Director/CEO



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2019***

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)

A handwritten signature in black ink, reading 'Alan H. Winkle'.

Alan H. Winkle
Program Administrator



1.800.223.8778
www.trs.texas.gov

Brian K. Guthrie
Executive Director
1000 Red River Street
Austin, Texas 78701-2698

November 20, 2020

Honorable Greg Abbott, Governor
Honorable Glenn Hegar, Texas Comptroller
Jerry McGinty, 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, 2020, the System's 82nd year of operation. During the past fiscal year, the System experienced growth as membership increased by 53,026, ending the year with 1,682,708 participants. The Pension Trust Fund saw positive returns in the past year, ending the 2020 fiscal year with a net position of \$165.4 billion compared to \$158.0 billion at the close of the 2019 fiscal year. TRS investment earnings, combined with contribution increases and benefit changes approved by the 86th Texas Legislature, are continuing to enable TRS to provide secure benefits for current and future retirees.

The State Auditor's Office performed an audit, in accordance with generally accepted auditing standards, of the System's financial statements. The opinion letter is presented in this report preceding the financial statements.

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 maintains a comprehensive internal control framework designed to protect 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 (GAAP). 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 since the cost of controls should not exceed the benefits to be derived. To the best of our knowledge and belief, management asserts 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 CAFR for the previous fiscal year. To be awarded the certificate, a report must meet or exceed program standards and must satisfy both GAAP and applicable legal requirements. TRS has received a Certificate of Achievement for each of the last 30 years. We believe that the current report continues to meet program requirements and will be submitted to the GFOA for consideration again this year.

Financial Information

The Basic Financial Statements have been prepared in accordance with GAAP 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 financial statements. The 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 Independent Auditor's Report.

Investments

For the twelve-month period ending August 31, 2020, the total portfolio delivered investment returns of 7.24 percent, which is 1.2 percent below the Pension Trust Funds (Fund) benchmark. On a three-year annualized basis, the Fund has returned 6.9 percent, which is 0.3 percent below its benchmark. As a result, the total investment value of the Fund as of August 31 was \$164.6 billion, or \$7.2 billion more than this time last year, after contributions and benefit payouts. Annual rates of return for the five and ten-year periods ending August 31, 2020, were 8.1 percent and 8.8 percent, respectively, exceeding the Board's adopted long-term assumed rate of return of 7.25 percent.

Investment risks are diversified over a very broad range of market sectors and securities. TRS' investment strategy is designed to minimize downside risk while capturing upside performance, and it reduces portfolio risk from adverse developments in sectors and issuers experiencing unusual difficulties and offers opportunity to benefit from future markets.

Pension Plan Benefits

For fiscal year 2020, TRS made pension benefit payments totaling \$11.0 billion to 445,274 retirees and their beneficiaries. 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, 2020, the System had a funded ratio of 76.8 percent with an Unfunded Actuarial Accrued Liability (UAAL) of \$50.6 billion. The UAAL increased \$1.1 billion during the year largely due to interest on the existing UAAL exceeding contributions toward the UAAL. This occurred partly because contribution rate increases passed by the 86th Legislature are still being phased-in. If contribution rates stay at current levels, the UAAL would be expected to continue to grow, indicating the importance of increasing contribution rates prospectively.

The 86th Legislature increased contribution rates for the State, employers and members in a phase-in approach that concludes in fiscal year 2025. The State's base rate of 7.50 percent in fiscal year 2020 will increase to 8.00 percent in fiscal year 2023 and phase-in to 8.25 percent by fiscal year 2024. In addition, all public education employers will pay a supplemental contribution rate of 1.50 percent for fiscal year 2020 and will increase to 2.00 percent by fiscal year 2025. At the end of the phase-in period, these supplemental contributions will equal approximately 1.25 percent of total payroll. Combined, with additional contributions from retirees, these contributions are ultimately assumed to approximate 9.55 percent of total payroll. The member contribution rate will increase from the current 7.70 percent to 8.00 percent in fiscal year 2022 and ultimately 8.25 percent in fiscal year 2024.

Based on these contribution increases, it is estimated that the UAAL will grow for approximately 7 years before beginning to decline. If payroll grows as expected (3.0 percent per year), the contributions provided by the increased contribution rate pattern are sufficient to amortize the current UAAL of the System over a period of 27 years based on the smoothed asset value as of the valuation date. Therefore the financing objectives of the System are expected to be met, assuming all assumptions are realized.

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 upon which a substantial portion of retired public education employees rely. 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.

As of August 31, 2020, TRS-Care had a Net Other Post-Employment Benefit Liability of \$38.0 billion. The program was 5.0 percent funded as of the end of the fiscal year 2020. More detailed information about the valuation results is included in the Notes to the Financial Statements and the Required Supplementary Information.

The 85th Legislature, in regular and special sessions, passed legislation that restructured TRS-Care and provided additional funding to address the solvency and affordability of TRS-Care. The state contribution rate to TRS-Care is

1.25 percent of public school payroll and the district contribution is 0.75 percent. Active employee contributions remained unchanged at 0.65 percent. The 86th Texas Legislature also appropriated \$231 million to keep TRS-Care premiums consistent through fiscal year 2021.

Active Member Health Benefits Program

TRS-ActiveCare, initiated in 2002, is a self-funded health benefits program that offers plan options that range from catastrophic coverage with reduced premiums to a comprehensive plan at higher premiums. TRS-ActiveCare covers active employees currently employed by public education employers that participate in the program, along with the employees' eligible dependents. TRS-ActiveCare is funded by State, employer, and active employee contributions. Each plan year, the TRS Board of Trustees has made plan changes and increased premiums to sustain the program.

Agency Highlights

The System transitioned the TEAM program in-house and has implemented an Agile approach to managing the next phase of the program. This approach involves incremental releases that give earlier benefits to both members and the business. Benefits include: enhanced member services, consistency in communications, and new, helpful functionality for the MyTRS portal delivered sooner. The Agile approach allows TRS to introduce new functionality incrementally, conduct more focused testing for improved quality, enhanced data conditioning, and focused incremental end-user training for a less disruptive transition for TRS staff.

The healthcare program successfully completed the largest procurement in history, saving the System \$745 million over the next three to five years.

Information technology worked tirelessly to transition almost 90 percent of TRS staff from on-site to remote work in response of the COVID 19 pandemic. To assist with this transition, TRS leveraged e-sign, automated payment voucher signing processes and automated workflows to securely perform business transactions and offer member flexibility while offices were closed to the public. Mainframe systems were migrated to a MFaaS system to help mitigate risks and improve support to members and staff.

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,



Brian K. Guthrie
Executive Director



Donald C. Green
Chief Financial Officer

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Executive Administrative Staff

Brian K. Guthrie, *Executive Director*
Andrew Roth, *Chief Operations
and Administration Officer*
Jase Auby, *Chief Investment Officer*
Heather Traeger, *General Counsel*
Amanda Jenami, *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 Organizational Excellence Officer*
Rebecca K. Merrill, *Chief Strategy Officer*
Carolyn Perez, *Director, Communications*
Merita Zoga, *Director, Governmental Relations*
Kellie Sauls, *Director, Diversity, Equity and Inclusion*

General Investment Advisors and Consultants

Aon Hewitt Investment Consulting, Inc., Chicago, IL
Keith C. Brown, Ph.D., Austin

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
(Hedge Funds and Private Markets)
BlackRock Investment Management, L.L.C.,
New York, NY (Private Equity Co-investments)
Grosvenor Capital Management, L.P.,
Chicago, IL (Emerging Managers)
KPMG, L.L.P.,
Philadelphia, PA (Tax Services and Investment Advice)
LaSalle Investment Management, Inc.,
Chicago, IL (Real Estate)
The Rock Creek Group, L.P.,
Washington, D.C. (Emerging Managers)
Valuation Research Corporation,
New York, NY (Private Investment Valuation)
W.D. Von Gonten & Co.,
Houston (Oil and Gas)

Audit Services

Texas State Auditor's Office, Austin

Fiduciary Counsel

Cohen Milstein Sellers & Toll, P.L.L.C.
Washington, D.C.

Medical Board

Dr. Brian C. Buck, Austin
Dr. Alice Cox, Fredericksburg
Dr. David Rothschild, Austin

Texas Public School Retired Employees Group Insurance Program Advisory Committee

Nancy Byler, Early
Marcia McNeil, Austin
Grace Mueller, McQueeney
Teresa Koehler, Houston
Dr. Celeste Cardenas, Austin
Dr. H. John Fuller, Mineola
Dr. Bruce Gearing, Austin

Health Care and Actuarial Consultant

Gabriel, Roeder, Smith & Company, Dallas
Segal 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

*For a schedule of fees and commissions, please refer to the
Investment Section, Report on Investment Activities, Table 8 for
Investment Manager Fees and Table 9 for Broker Commissions.*

Pension Trust Fund

Membership of the Teacher Retirement System of Texas includes employees and retirees of state-supported educational institutions in Texas. Participating employers for fiscal year 2020 are disclosed in the following table.

Number of Participating Employers	
Participating Employers	2020
Public School Districts	1,022
Charter Schools	187
Community and Junior Colleges	50
Senior Colleges and Universities	48
Regional Service Centers	20
Medical Schools	9
Other Education Districts	3
State Agencies	1
Total Participating Employers	1,340

Membership Numbers by Category		
Member Categories	As of August 31,	
Current Members	2020	2019
Active Contributing	914,752	884,540
Inactive Non-vested	209,956	201,948
Inactive Vested	112,726	108,768
Total Current Members	1,237,434	1,195,256
Retirement Recipients		
Service	415,696	405,236
Disability	11,926	11,994
Survivor	17,652	17,196
Total Retirement Recipients	445,274	434,426
Total Membership	1,682,708	1,629,682

Net Membership Changes		
	As of August 31,	
Population Changes	2020	2019
Active Membership:		
New Members	80,540	88,953
Members Withdrawing	(32,667)	(37,806)
Service Retirements	(19,521)	(22,160)
Disability Retirements	(671)	(711)
In-Service Deaths	(1,520)	(1,387)
Other Changes	16,017	(3,130)
Net Increase	42,178	23,759
Retired Membership:		
Retirements	20,192	22,871
Deaths After Retirement	(10,272)	(9,433)
Option Continuations	2,999	2,939
Other Changes	(2,071)	(2,409)
Net Increase	10,848	13,968

Membership Profile			
	As of August 31,		
	2020	2019	
Active Membership			
Average Annual Salary	\$ 51,477	\$ 49,495	
Average Age	44.7	44.8	
Average Years of Service	10.3	10.4	
Annuitant and Beneficiary			
Average Monthly Annuities			
Life Annuities	\$ 2,118	\$ 2,096	
Disability Annuities	1,214	1,200	
Annuities Certain	1,157	1,142	
Average Age of Current Retirees	72.0	71.4	
Average Age at Retirement			
All Retirees	60.4	60.3	
Current Year Retirees	62.3	62.2	
Average Years of Service			
All Retirees	24.1	24.2	
Current Year Retirees	22.8	22.6	
Average Salary at Retirement			
All Retirees	\$ 46,677	\$ 45,951	
Current Year Retirees	55,500	53,278	
Ratio of Members to Retirees	2.8 to 1	2.8 to 1	

Texas Public School Retired Employees Group Insurance Program (TRS-Care)

Membership of TRS-Care is eligible to TRS public school retirees. There were 1,231 participating employers during fiscal year 2020.

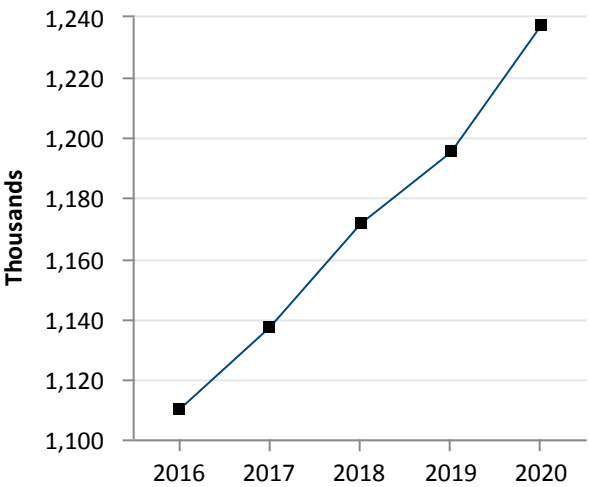
Membership Numbers by Category		
Member Categories	As of August 31,	
	2020	2019
Retirees	178,771	181,409
Surviving Spouses	6,047	6,194
Surviving Children	116	116
Dependent Spouses and Children	35,028	37,578
Total Membership	219,962	225,297

TRS-ActiveCare

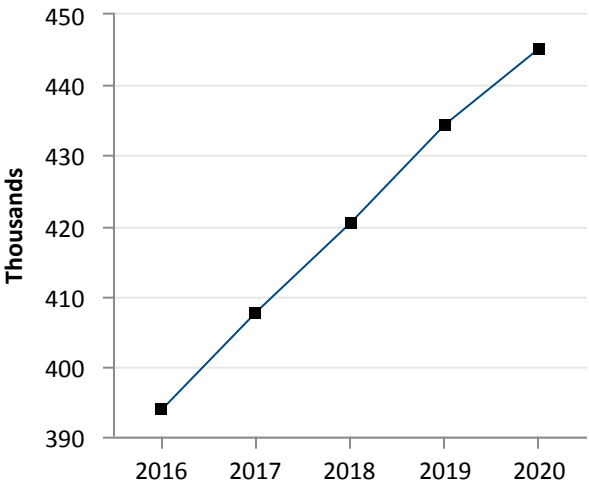
Membership of TRS-ActiveCare includes employees of public school districts, open enrollment charter schools, regional service centers, and other educational districts. There were 1,088 participating employers during fiscal year 2020.

Membership Numbers by Category		
Member Categories	As of August 31,	
	2020	2019
Employees	307,264	306,897
Dependents	165,507	168,842
Total Membership	472,771	475,739

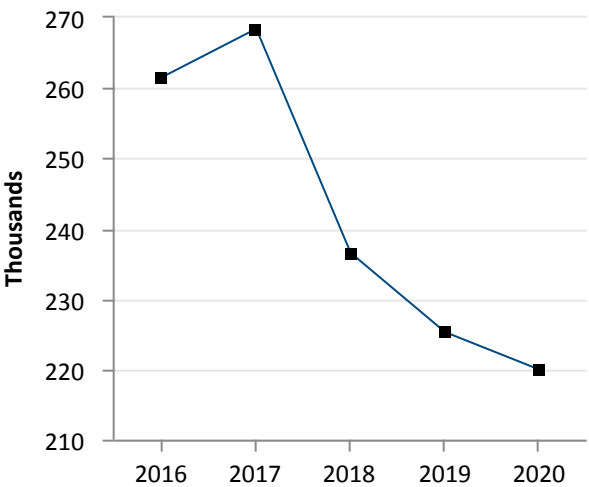
**Current Membership by Year
Pension Trust Fund**



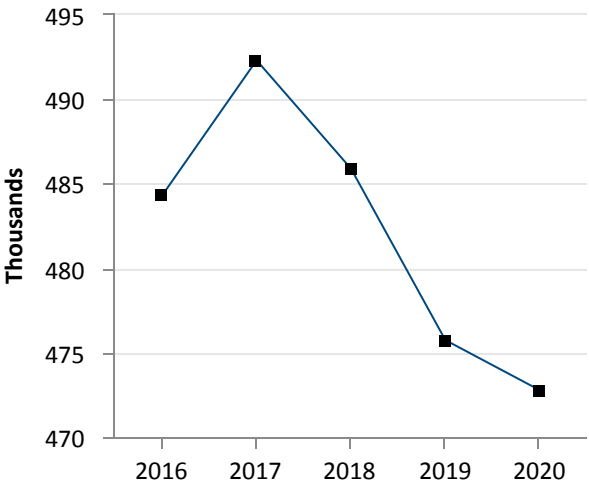
**Retirement Recipients by Year
Pension Trust Fund**



**Membership by Year
TRS-Care**



**Membership by Year
TRS-ActiveCare**



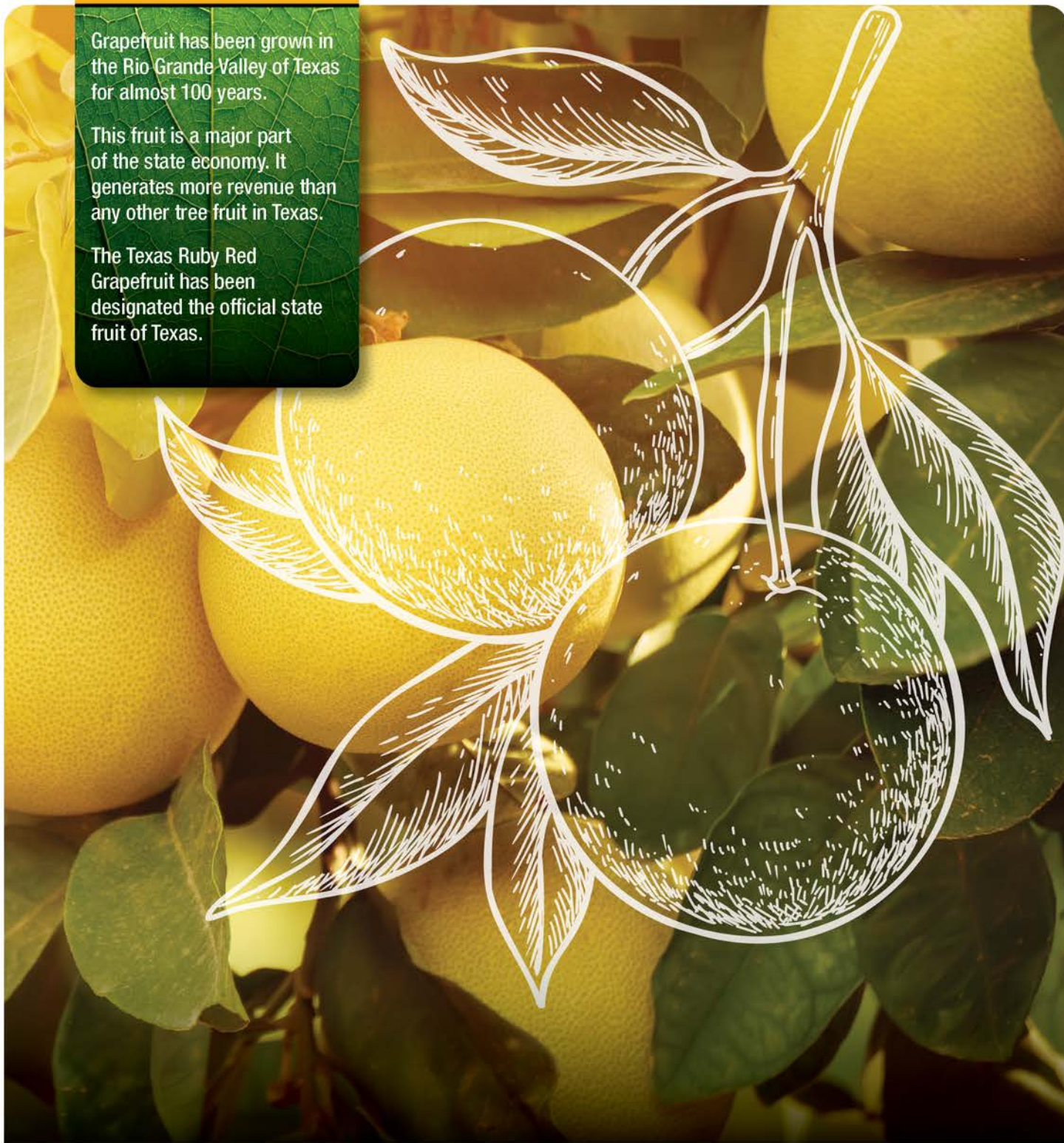
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Grapefruit

Grapefruit has been grown in the Rio Grande Valley of Texas for almost 100 years.

This fruit is a major part of the state economy. It generates more revenue than any other tree fruit in Texas.

The Texas Ruby Red Grapefruit has been designated the official state fruit of Texas.



APPROXIMATELY 94% OF BENEFIT PAYMENTS GO TO RETIREES AND THEIR BENEFICIARIES WHO LIVE AND SPEND THESE DOLLARS IN TEXAS.

SOURCE: TRS 2020 ANNUITY PAYROLL

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

Independent Auditor's Report

Teacher Retirement System Board of Trustees

Mr. Jarvis V. Hollingsworth, Chairman
Ms. Nanette Sissney, Vice Chair
Mr. Michael Ball
Mr. David Corpus
Mr. John Elliott
Mr. Christopher Moss
Mr. James Nance
Mr. Robert H. Walls

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 of the Teacher Retirement System (System), as of and for the year ended August 31, 2020, 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 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

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SAO Report No. 21-304

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 of the System, as of August 31, 2020, 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, 2020, 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 3, the financial statements include investments valued at approximately \$75.6 billion as of August 31, 2020, 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.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, and the Pension Trust Fund and TRS-Care Required Supplementary Schedules, 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 Schedules 1 and 2, as listed in the Table of Contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The information in Schedules 1 and 2, 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 Schedules 1 and 2, 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 2019 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated November 20, 2019. In our opinion, the summarized comparative information presented herein as of and for the year ended August 31, 2020 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 will issue a separate report 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 reporting or on compliance. That 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.

Lisa R. Collier

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

November 20, 2020

Management's Discussion and Analysis

We are pleased to provide this overview of the Teacher Retirement System's (TRS or System) financial performance for the fiscal year ended August 31, 2020. The information presented herein should be read in conjunction with other areas within the Financial Section.

Financial Highlights

- The net position of the TRS Pension Trust Fund was \$165.4 billion as of August 31, 2020, an increase of \$7.4 billion from fiscal year 2019.
- The net pension liability was \$53.6 billion, a \$1.6 billion increase from the fiscal year 2019 liability of \$52.0 billion.
- Fiscal year 2020 investment income was \$11.1 billion, an increase of \$3.4 billion from fiscal year 2019.
- Pension Plan investments experienced a 7.2 percent annual rate of return for the year ended August 31, 2020, compared to a 5.2 percent annual rate of return for fiscal year 2019.
- The net position of TRS-Care was \$2.0 billion as of August 31, 2020, an increase of \$704.3 million from fiscal year 2019.
- TRS-Care's net Other Post-Employment Benefit (OPEB) liability was \$38.0 billion. The liability decreased \$9.3 billion from fiscal year 2019 liability of \$47.3 billion.
- TRS-ActiveCare had a net position of \$168.3 million as of August 31, 2020, an increase of \$3.3 million from fiscal year 2019.

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:

- Basic Financial Statements
- Notes to the Financial Statements
- Required Supplementary Information
- Other Supplementary Information

This information presents the net position available for the funds TRS administers as of August 31, 2020 and any changes in net position for the year then ended. The information available in each of these sections is summarized below.

Basic Financial Statements

Basic Financial Statements are presented for the major funds for the fiscal year ended August 31, 2020, along with comparative data for the prior year. Financials presented include the Pension Trust Fund, TRS-Care Fund, TRS-ActiveCare Fund, and Custodial Fund.

Notes to the Financial Statements

The Notes to the Financial Statements provide additional information that is essential to a full understanding of the financial position and are considered an integral part of the financial statements.

Required Supplementary Information

Required Supplementary Information (RSI) consists of the Governmental Accounting Standards Board (GASB) related requirements for the Pension and TRS-Care Funds.

Other Supplementary Information

Other Supplementary Information includes custodial fund changes in assets and liabilities, administrative and investing activity expenses, and payments for professional and consulting services.

Growth of the System

As of August 2020, the monthly annuity payroll had decreased to \$914.4 million, and TRS was paying benefits to 445,274 recipients. Benefit payments by type of recipient are illustrated in the Total Annual Benefit Payments chart in the financial analysis of the TRS Pension Trust Fund on the following pages.

Pension recipients include retirees and beneficiaries. Disability recipients are disabled members who are receiving disability payments. Survivor recipients are beneficiaries who have elected to receive death benefits in the form of monthly payments. The number of retiree accounts increased by 10,848 during fiscal year 2020.

Of the current TRS member accounts, 914,752 active contributing and deferred retirement option participants were employed during fiscal year 2020 and made contributions to the System. The remaining 322,682 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 total current member accounts increased by 42,178 during fiscal year 2020.

Financial Analysis of TRS Funds

Pension Trust Fund

Net position held in trust for benefits at August 31, 2020 was \$165.4 billion, an increase of \$7.4 billion from the \$158.0 billion at August 31, 2019.

Fiscal year 2020 investment income was \$11.1 billion, an increase of \$3.4 billion over 2019. The year presented unprecedented investment challenges due to the global COVID-19 pandemic. Despite an adverse impact to the economy, global markets recovered in the final months of fiscal year 2020.

Total contributions and other additions increased \$301.8 million, or 3.9 percent, during fiscal year 2020. The increase is due to normal payroll growth.

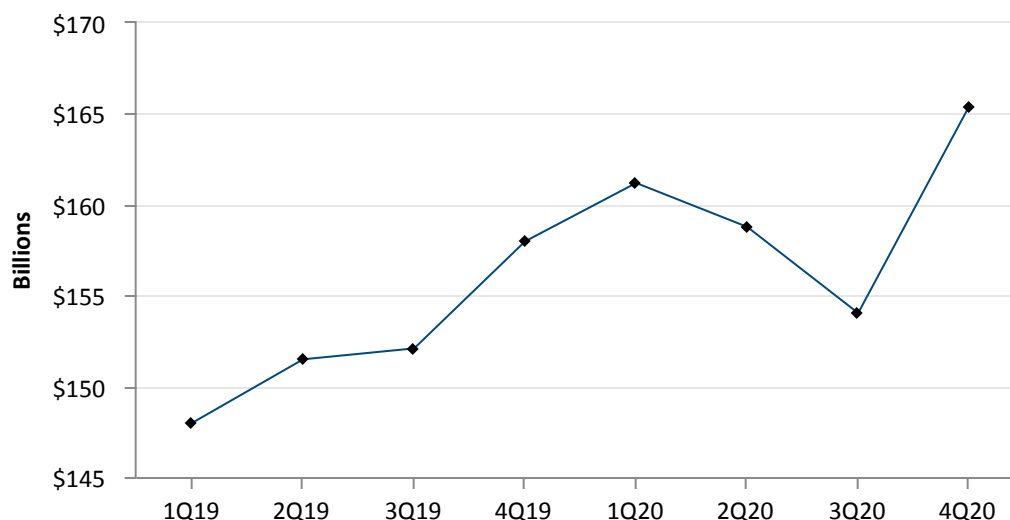
Deductions from net position are primarily retirement pension payments. Fiscal year 2020, benefit payments totaled \$11.1 billion, a decrease of

\$276.2 million. This is in line with the increase in the number of retirees from the prior year and the decrease of \$588.8 million supplemental funding for the one-time benefit payment made in 2019. For fiscal year 2020, refund of contributions were \$421.4 million, a decrease of \$65.1 million over fiscal year 2019, largely due to an increase in member withdrawals.

Administrative expenses, excluding investing activities expenses, on a cost per member basis were \$39.90 for fiscal year 2020 compared to \$37.11 in fiscal year 2019.

Investment cost per member was \$132.12 for fiscal year 2020 as compared to \$126.66 in fiscal year 2019. Investment expense in basis points of net position was 14.1 for fiscal year 2020 and was calculated using the average net asset value. Investment expense in basis points for fiscal year 2019 was 13.6.

**Quarterly Net Position
Pension Trust Fund
Fiscal Years 2019-2020**



Statement of Fiduciary Net Position**Pension Trust Fund**

As of August 31

(Dollars in Thousands)

	2020	2019	Dollar Change	Percentage Change
Assets				
Cash and Receivables	\$ 3,532,268	\$ 4,014,345	\$ (482,077)	(12.0)%
Investments	173,602,714	158,881,842	14,720,872	9.3
Invested Securities Lending Collateral	7,167,588	18,832,476	(11,664,888)	(61.9)
Capital Assets	59,301	71,496	(12,195)	(17.1)
Total Assets	\$ 184,361,871	\$ 181,800,159	\$ 2,561,712	1.4 %
Total Deferred Outflow of Resources	\$ 42,079	\$ 28,118	\$ 13,961	49.7 %
Liabilities				
Benefits Payable	\$ 41,244	\$ 109,861	\$ (68,617)	(62.5)%
Net Other Post-Employment Benefit Liability	104,446	85,009	19,437	22.9
Investments Purchased Payable and Other Investment Liabilities	11,466,477	3,956,610	7,509,867	189.8
Collateral Obligations	7,288,848	686,423	6,602,425	961.9
Accounts Payable and Other	63,757	18,821,815	(18,758,058)	(99.7)
Total Liabilities	\$ 18,964,772	\$ 23,659,718	\$ (4,694,946)	(19.8)%
Total Deferred Inflow of Resources	\$ 22,933	\$ 190,360	\$ (167,427)	(88.0)%
Total Net Position	\$ 165,416,245	\$ 157,978,199	\$ 7,438,046	4.7 %

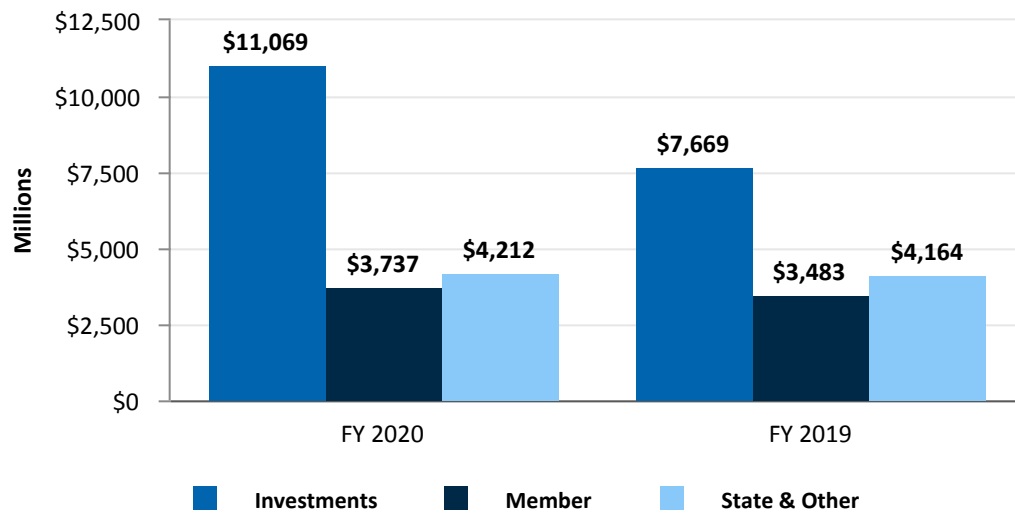
Statement of Changes in Fiduciary Net Position**Pension Trust Fund**

For the Fiscal Years Ended August 31

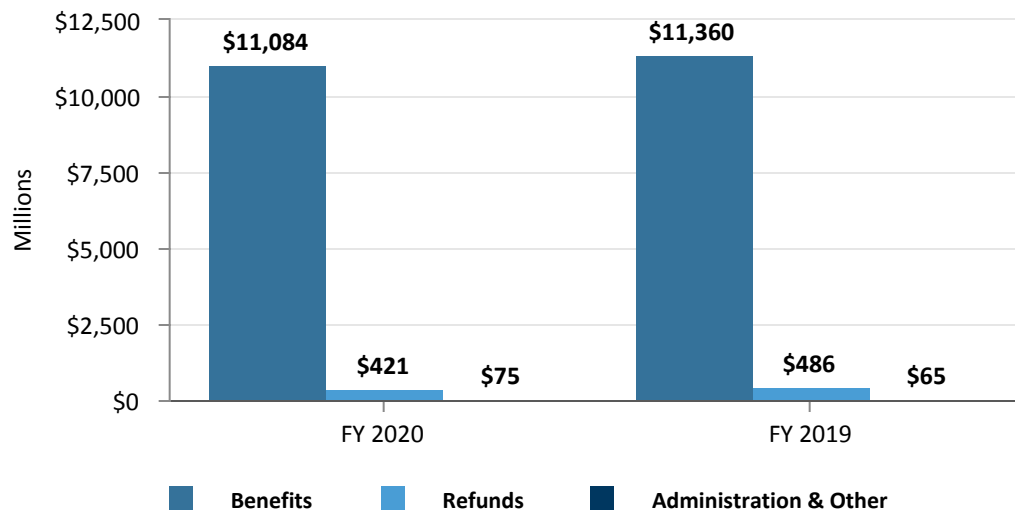
(Dollars in Thousands)

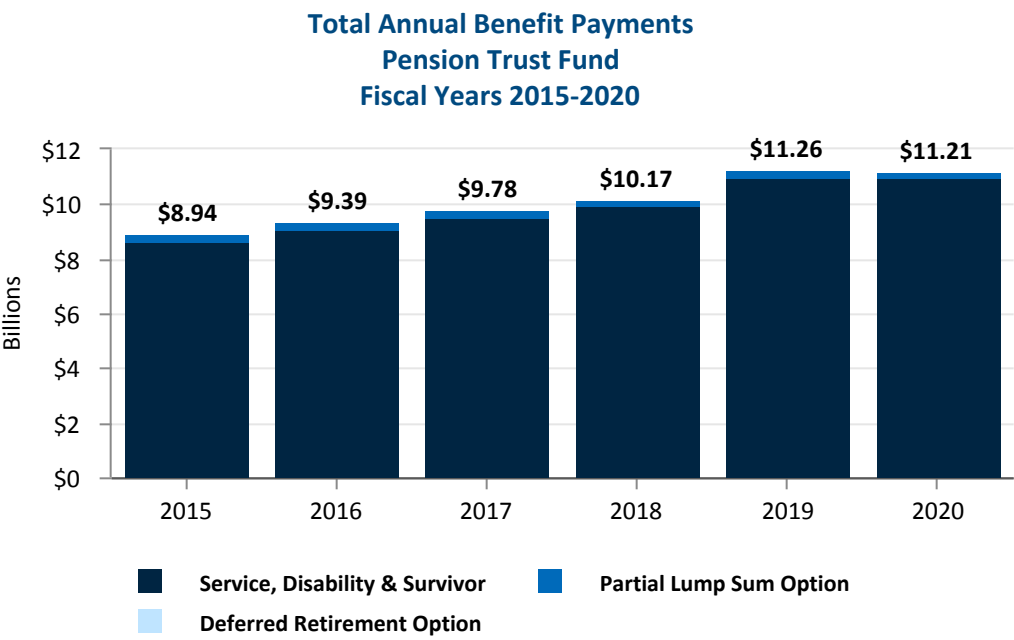
	2020	2019	Dollar Change	Percentage Change
Additions				
Member Contributions	\$ 3,736,877	\$ 3,482,870	\$ 254,007	7.3 %
Non-Employer Contributing Entity Contributions	1,844,999	1,737,853	107,146	6.2
Employers Contributions	2,016,482	1,761,822	254,660	14.5
Other Revenue	350,650	664,666	(314,016)	(47.2)
Investment Income	11,068,917	7,669,029	3,399,888	44.3
Total Additions	\$ 19,017,925	\$ 15,316,240	\$ 3,701,685	24.2 %
Deductions				
Retirement Benefits and Other	\$ 11,083,643	\$ 11,359,826	\$ (276,183)	(2.4)%
Refunds of Contributions	421,366	486,461	(65,095)	(13.4)
Other Post-Employment Benefit Expense	7,734	4,438	3,296	74.3
Administrative Expenses	67,136	60,486	6,650	11.0
Total Deductions	\$ 11,579,879	\$ 11,911,211	\$ (331,332)	(2.8)%
Change in Net Position	\$ 7,438,046	\$ 3,405,029	\$ 4,033,017	118.4 %

**Additions to Fiduciary Net Position
Pension Trust Fund
Fiscal Years 2019-2020**



**Deductions to Fiduciary Net Position
Pension Trust Fund
Fiscal Years 2019-2020**



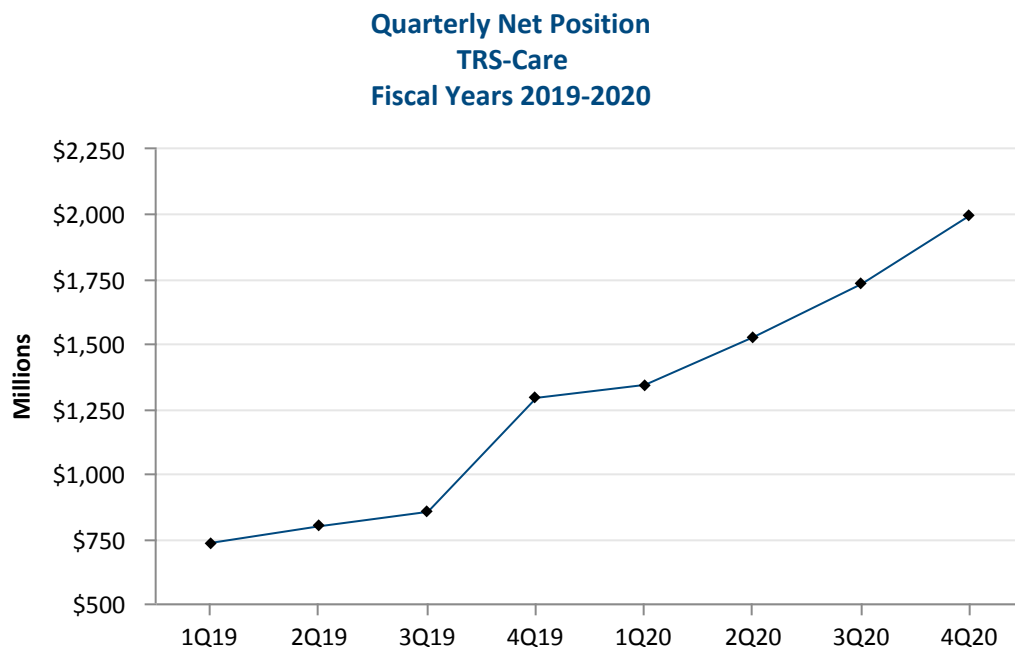


TRS-Care

The net position of TRS-Care at August 31, 2020 was \$2.0 billion, an increase of \$704.3 million from the \$1.3 billion at August 31, 2019.

Total contributions of \$1.0 billion increased \$66.6 million from \$937.6 million over 2019 due to an increase in the employer contribution rate. Rebates increased by \$66.9 million due to an increase in rebates for specialty drugs by contract. Federal revenue decreased by \$34.6 million due to a reduction in program usage and a change in the subsidy rate. Investment income totaled \$25.5 million, which was an increase of \$0.5 million from fiscal year 2019.

Deductions from net position totaled \$1.2 billion during fiscal year 2020 which was an increase of \$45.8 million from fiscal year 2019. The increase is mainly due to a changes in the Affordable Care Act, the Health Insurer Provider fee resuming, a decrease in enrollment, and an increase on retail and specialty pharmacy claims.



Statement of Fiduciary Net Position**TRS-Care**

As of August 31

(Dollars in Thousands)

	2020	2019	Dollar Change	Percentage Change
Assets				
Cash, Receivables and Capital Assets	\$ 2,146,681	\$ 1,475,509	\$ 671,172	45.5 %
Total Assets	\$ 2,146,681	\$ 1,475,509	\$ 671,172	45.5 %
Liabilities				
Accounts Payables and Other	\$ 3,740	\$ 9,984	\$ (6,244)	(62.5)%
Health Care Fees Payable	30,657	—	30,657	—
Health Care Claims Payables	115,966	154,660	(38,694)	(25.0)
Total Liabilities	\$ 150,363	\$ 164,644	\$ (14,281)	(8.7)%
Total Deferred Inflow of Resources	\$ —	\$ 18,843	\$ (18,843)	(100.0)%
Net Position	\$ 1,996,318	\$ 1,292,022	\$ 704,296	54.5 %

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

For the Fiscal Years Ended August 31

(Dollars in Thousands)

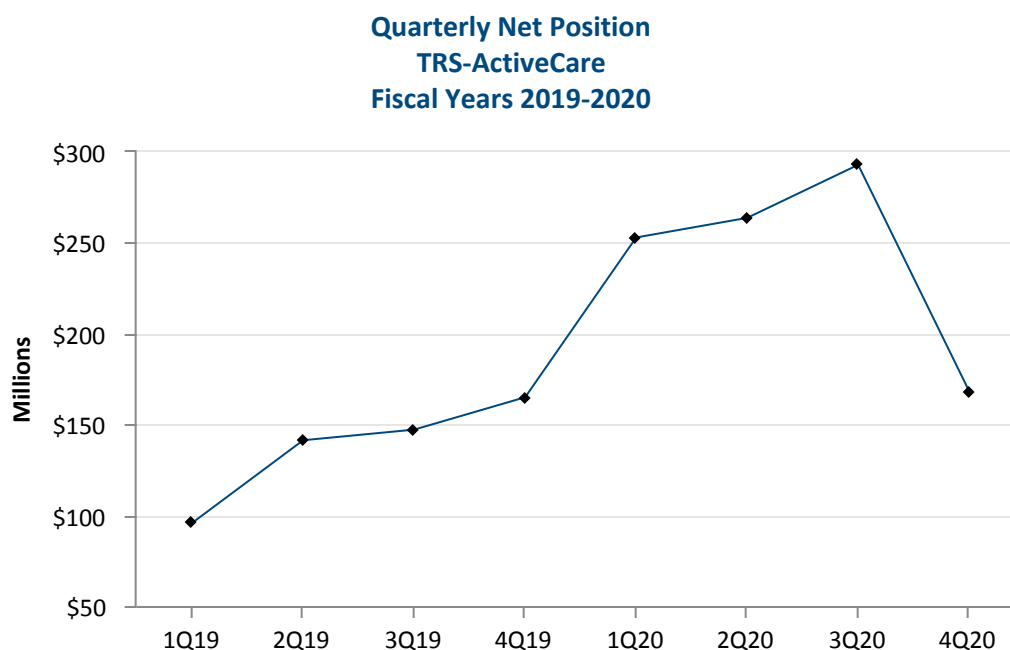
	2020	2019	Dollar Change	Percentage Change
Additions				
Member Contributions	\$ 243,532	\$ 227,338	\$ 16,194	7.1 %
Non-Employer Contributing Entity Contributions	435,769	404,937	30,832	7.6
Participating Employers Contributions	324,973	305,362	19,611	6.4
Rebates and Discount Income	423,426	356,440	66,986	18.8
Federal Revenue	186,169	220,784	(34,615)	(15.7)
Other Revenue	18	—	18	—
Investment Income	25,537	25,047	490	2.0
Supplemental Appropriation from State's General Fund - Non-Employer Contributing Entity	230,757	73,642	157,115	213.3
Total Additions	\$ 1,870,181	\$ 1,613,550	\$ 256,631	15.9 %
Deductions				
Health Care Claims	\$ 1,538,212	\$ 1,515,398	\$ 22,814	1.5 %
Less: Health Care Premiums Paid by Retirees	(499,058)	(517,965)	18,907	(3.7)
Health Care Claims Processing	37,420	38,982	(1,562)	(4.0)
Insurance Premium Payments	51,410	71,795	(20,385)	(28.4)
Health Care Fees	30,833	5,887	24,946	423.7
Administrative Expenses	7,068	6,005	1,063	17.7
Total Deductions	\$ 1,165,885	\$ 1,120,102	\$ 45,783	4.1 %
Change in Net Position	\$ 704,296	\$ 493,448	\$ 210,848	42.7 %

TRS-ActiveCare

The net position was \$168.3 million at August 31, 2020, an increase of \$3.3 million from \$165.0 million the previous fiscal year.

Total revenue of \$2.31 billion decreased \$26.3 million from \$2.34 billion in 2019 mostly due to lower health care claims caused by lower enrollment and a \$2.8 decrease in investment income.

Total expenses of \$2.31 billion increased \$79.0 million from \$2.23 billion in fiscal year 2019 due to higher enrollment in the HMO plans, and better than expected claims experience.



Statement of Fiduciary Net Position**TRS-ActiveCare**

As of August 31

(Dollars in Thousands)

	2020	2019	Dollar Change	Percentage Change
Assets				
Cash and Receivables	\$ 430,506	\$ 414,096	\$ 16,410	4.0 %
Total Assets	\$ 430,506	\$ 414,096	\$ 16,410	4.0 %
Liabilities				
Accounts Payable and Other	\$ 31,636	\$ 9,933	\$ 21,703	218.5 %
Premiums and Fees Payable	953	20,932	(19,979)	(95.4)
Health Care Claims Payable	228,723	216,387	12,336	5.7
Total Liabilities	\$ 261,312	\$ 247,252	\$ 14,060	5.7 %
Total Deferred Inflow of Resources	\$ 895	\$ 1,891	\$ (996)	(52.7)%
Total Net Position	\$ 168,299	\$ 164,953	\$ 3,346	2.0 %

Statement of Changes in Fiduciary Net Position**TRS-ActiveCare**

For the Fiscal Years Ended August 31

(Dollars in Thousands)

	2020	2019	Dollar Change	Percentage Change
Revenues (Operating and Non-Operating)				
Health Care Premiums	\$ 2,304,205	\$ 2,327,440	\$ (23,235)	(1.0)%
Investment Income	7,854	10,623	(2,769)	(26.1)
Other Revenue	413	686	(273)	(39.8)
Total Revenue	\$ 2,312,472	\$ 2,338,749	\$ (26,277)	(1.1)%
Operating Expenses				
Health Care Claims	\$ 1,932,461	\$ 1,863,374	\$ 69,087	3.7 %
Health Care Claims Processing	115,227	118,883	(3,656)	(3.1)
Health Care Fees	841	929	(88)	(9.5)
Premium Payments to HMO's	256,851	243,199	13,652	5.6
Administrative Expenses	3,746	3,703	43	1.2
Total Expenses	\$ 2,309,126	\$ 2,230,088	\$ 79,038	3.5 %
Change in Net Position	\$ 3,346	\$ 108,661	\$ (105,315)	(96.9)%

Request for Information

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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Basic Financial Statements

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Exhibit I**Statement of Fiduciary Net Position****Fiduciary Funds**

As of August 31, 2020 (With Comparative Data as of August 31, 2019)

	Pension and Other Post-Employment Benefit (OPEB) Trust Funds	
	Pension Trust Fund	TRS-Care
Assets		
Cash		
Cash in State Treasury	\$ 352,604,861	\$ 1,753,803,542
Cash in Bank (Note 3B)	320,110,687	—
Cash on Hand (Note 3B)	7,092,327	—
Total Cash	\$ 679,807,875	\$ 1,753,803,542
Receivables		
Sale of Investments	\$ 2,077,559,628	\$ —
Interest and Dividends	258,550,465	4,768,114
Member and Retiree	5,891,006	—
Service Credit Purchase	12,490,993	—
Due from Employers	458,396,038	37,551,554
Due from State's General Fund	30,615,231	5,360,412
Due from Employees Retirement System of Texas	2,339,914	—
Prepaid Expenses and Deposits	2,799,025	—
Other	3,817,940	337,627,401
Total Receivables	\$ 2,852,460,240	\$ 385,307,481
Investments (Note 1F and 3)		
Short-Term Investments	\$ 9,470,466,884	\$ —
Equity Investments	47,146,352,906	—
Fixed Income Investments	23,812,737,094	—
Alternative Investments	75,588,432,067	—
Derivative Investments	523,025,238	—
Pooled Investments	17,061,700,017	—
Total Investments	\$ 173,602,714,206	\$ —
Invested Securities Lending Collateral	\$ 7,167,587,747	\$ —
Capital Assets (Note 2)		
Intangible Assets	\$ 54,668,221	\$ —
Less Accumulated Amortization	(32,676,259)	—
Depreciable Assets	61,607,091	—
Less Accumulated Depreciation	(40,551,623)	—
Non-Depreciable Assets	16,253,083	7,570,121
Total Capital Assets	\$ 59,300,513	\$ 7,570,121
Total Assets	\$ 184,361,870,581	\$ 2,146,681,144

(Continued)

Total Pension and Other Post-Employment Benefit (OPEB) Trust Funds		Custodial Funds	
2020	2019	Child Support Employee Deductions	
\$ 2,106,408,403	\$ 2,059,991,246	\$ 6,082	
320,110,687	109,659,682	—	
7,092,327	5,604,880	—	
\$ 2,433,611,417	\$ 2,175,255,808	\$ 6,082	
\$ 2,077,559,628	\$ 2,165,471,676	\$ —	
263,318,579	260,976,058	—	
5,891,006	3,511,529	—	
12,490,993	12,727,015	—	
495,947,592	621,147,260	—	
35,975,643	5,971	—	
2,339,914	2,236,438	—	
2,799,025	2,010,812	—	
341,445,341	242,811,443	—	
\$ 3,237,767,721	\$ 3,310,898,202	\$ —	
\$ 9,470,466,884	\$ 5,806,805,988	\$ —	
47,146,352,906	43,357,913,826	—	
23,812,737,094	24,173,126,105	—	
75,588,432,067	73,111,856,573	—	
523,025,238	110,009,349	—	
17,061,700,017	12,322,129,864	—	
\$ 173,602,714,206	\$ 158,881,841,705	\$ —	
\$ 7,167,587,747	\$ 18,832,476,273	\$ —	
\$ 54,668,221	\$ 55,247,353	\$ —	
(32,676,259)	(22,376,923)	—	
61,607,091	60,249,806	—	
(40,551,623)	(37,877,121)	—	
23,823,204	19,952,666	—	
\$ 66,870,634	\$ 75,195,781	\$ —	
\$ 186,508,551,725	\$ 183,275,667,769	\$ 6,082	

Exhibit I**Statement of Fiduciary Net Position****Fiduciary Funds**

As of August 31, 2020 (With Comparative Data as of August 31, 2019)

	Pension and Other Post-Employment Benefit (OPEB) Trust Funds	
	Pension Trust Fund	TRS-Care
Deferred Outflow of Resources		
Related to Participation in ERS' OPEB Plan	\$ 42,079,979	\$ —
Total Deferred Outflow of Resources	\$ 42,079,979	\$ —
Liabilities (Note 1F)		
Accounts Payable	\$ 3,263,039	\$ 1,974,148
Payroll Payable	13,472,663	778,367
Investment Fees Payable	24,291,628	—
Benefits Payable	41,243,854	—
Health Care Claims Payable	—	115,966,236
Fees Payable	—	30,657,148
Net Other Post-Employment Benefit Liability	104,446,218	—
Investments Purchased Payable	2,721,473,295	—
Securities Sold Short	1,594,473,921	—
Obligations Under Reverse Repurchase Agreements	7,150,529,625	—
Collateral Obligations	7,288,847,952	—
Due to State's General Fund	103,286	—
Due to Employees Retirement System of Texas	9,194,156	—
Employee Compensable Absences Payable (Note 4)	13,354,446	987,313
Other Liabilities	77,899	—
Funds Held for Others	—	—
Total Liabilities	\$ 18,964,771,982	\$ 150,363,212
Deferred Inflow of Resources		
Unrealized Lease Incentives	\$ 119,153	\$ —
Deferred Revenue - School Districts	—	—
Related to Participation in ERS' OPEB Plan	22,814,182	—
Total Deferred Inflow of Resources	\$ 22,933,335	\$ —
Net Position		
Net Investment in Capital Assets	\$ 59,300,513	\$ 7,570,121
Restricted for Pensions/Other Post-Employment Benefits	165,356,944,730	1,988,747,811
Net Position Restricted for Pensions and Other Post-Employment Benefits	\$ 165,416,245,243	\$ 1,996,317,932

See accompanying Notes to the Financial Statements.

(Continued)

Total Pension and Other Post-Employment Benefit (OPEB) Trust Funds		Custodial Funds	
2020	2019	Child Support Employee Deductions	
\$ 42,079,979	\$ 28,118,303	\$	—
\$ 42,079,979	\$ 28,118,303	\$	—
\$ 5,237,187	\$ 599,804,948	\$	—
14,251,030	6,032,462		—
24,291,628	21,081,478		—
41,243,854	109,861,304		—
115,966,236	154,659,738		—
30,657,148	—		—
104,446,218	85,009,492		—
2,721,473,295	2,242,052,271		—
1,594,473,921	1,714,558,083		—
7,150,529,625	—		—
7,288,847,952	18,821,814,504		—
103,286	46,376,313		—
9,194,156	10,920,557		—
14,341,759	11,987,292		—
77,899	203,986		—
—	—		6,082
\$ 19,115,135,194	\$ 23,824,362,428	\$	6,082
\$ 119,153	\$ 119,153	\$	—
—	178,899,437		—
22,814,182	30,183,630		—
\$ 22,933,335	\$ 209,202,220	\$	—
\$ 66,870,634	\$ 75,195,781	\$	—
167,345,692,541	159,195,025,643		—
\$ 167,412,563,175	\$ 159,270,221,424	\$	—

Exhibit II**Statement of Changes in Fiduciary Net Position****Fiduciary Funds**

For the Fiscal Year Ended August 31, 2020 (With Comparative Data for August 31, 2019)

	Pension and Other Post-Employment Benefit (OPEB) Trust Funds	
	Pension Trust Fund	TRS-Care
Additions		
Contributions		
Member	\$ 3,736,877,464	\$ 243,532,120
Non-Employer Contributing Entity - State	1,844,999,393	435,768,774
Employer (Notes 9, 11)		
Employer	1,353,667,766	280,997,853
State - Higher Education	171,733,531	—
Employer - Paid at State Rate	—	32,562,226
Employer Surcharges (Notes 9, 11)		
Employment after Retirement - Employee Rate	15,934,274	—
Employment after Retirement - Employer Rate	14,071,826	11,413,512
Public Education Employers	461,074,239	—
Supplemental Appropriation - Non-Employer Contributing Entity	263,000,000	230,756,971
Service Credit Purchase - Refundable	21,455,174	—
Service Credit Purchase - Non-Refundable	24,817,515	—
State Contributions for 415 Excess Benefit Arrangement	3,503,046	—
Employees Retirement System of Texas		
Service Contributions	27,517,707	—
415 Excess Benefit Arrangement	90,117	—
Other		
Federal Revenue (Note 6)	—	186,169,146
Rebate and Discount Income	—	423,426,202
Funds Received for Others	—	—
Total Contributions and Other	\$ 7,938,742,052	\$ 1,844,626,804
Net Investment Income		
Investment Income (Loss)	\$ 11,254,442,867	\$ 25,536,560
Less: Investing Activity Expenses (Schedule 1)	(222,312,131)	—
Total Investment Income (Loss)	\$ 11,032,130,736	\$ 25,536,560
Securities Lending Income (Loss)	\$ 238,742,128	\$ —
Less: Securities Lending Expenses	(201,956,251)	—
Total Securities Income (Loss)	\$ 36,785,877	\$ —
Total Net Investment Income	\$ 11,068,916,613	\$ 25,536,560
Other Additions		
Miscellaneous Revenue	\$ 10,266,475	\$ 17,879
Total Other Additions	\$ 10,266,475	\$ 17,879
Total Additions	\$ 19,017,925,140	\$ 1,870,181,243

(Continued)

Total Pension and Other Post-Employment Benefit (OPEB) Trust Funds		Custodial Funds	
2020	2019	Child Support Employee Deductions	
\$ 3,980,409,584	\$ 3,710,208,180	\$	—
2,280,768,167	2,142,789,003		—
1,634,665,619	1,408,549,630		—
171,733,531	182,863,093		—
32,562,226	32,252,833		—
15,934,274	13,118,045		—
25,485,338	22,385,479		—
461,074,239	408,015,906		—
493,756,971	662,469,349		—
21,455,174	19,942,841		—
24,817,515	22,262,344		—
3,503,046	3,325,686		—
27,517,707	26,307,593		—
90,117	156,542		—
186,169,146	220,783,898		—
423,426,202	356,439,596		—
—	—		73,834
\$ 9,783,368,856	\$ 9,231,870,018	\$	73,834
\$ 11,279,979,427	\$ 7,850,693,366	\$	—
(222,312,131)	(206,415,457)		—
\$ 11,057,667,296	\$ 7,644,277,909	\$	—
\$ 238,742,128	\$ 519,726,609	\$	—
(201,956,251)	(469,928,873)		—
\$ 36,785,877	\$ 49,797,736	\$	—
\$ 11,094,453,173	\$ 7,694,075,645	\$	—
\$ 10,284,354	\$ 3,844,018	\$	—
\$ 10,284,354	\$ 3,844,018	\$	—
\$ 20,888,106,383	\$ 16,929,789,681	\$	73,834

Exhibit II**Statement of Changes in Fiduciary Net Position****Fiduciary Funds**

For the Fiscal Year Ended August 31, 2020 (With Comparative Data for August 31, 2019)

	Pension and Other Post-Employment Benefit (OPEB) Trust Funds	
	Pension Trust Fund	TRS-Care
Deductions		
Benefits	\$ 10,972,292,168	\$ —
Refunds of Contributions - Active	415,829,519	—
Refunds of Contributions - Death	5,536,660	—
415 Excess Benefit Arrangement Paid to Employees Retirement System of Texas	3,346,831	—
Benefits Paid to Employees Retirement System of Texas		
Service Contributions	107,757,217	—
415 Excess Benefit Arrangement	246,332	—
Other Post Employment Benefit Expense	7,734,365	—
Health Care Claims	—	1,538,211,599
Less: Health Care Premiums Paid by Retirees (Note 1)	—	(499,057,861)
Health Care Claims Processing	—	37,420,201
Insurance Premium Payments	—	51,410,469
Affordable Care Act Fees	—	30,832,642
Funds Paid to Others	—	—
Administrative Expenses, Excluding Investing Activity Expenses		
Salaries and Wages	31,366,860	2,279,916
Payroll Related Costs	608,583	636,255
Professional Fees and Services	6,537,419	2,056,684
Travel	150,305	47,632
Materials and Supplies	4,063,969	707,503
Communications and Utilities	803,628	90,667
Repairs and Maintenance	2,849,252	427,408
Rentals and Leases	374,584	79,908
Printing and Reproduction	114,780	18,435
Depreciation Expense	2,636,125	—
Amortization Expense	10,299,336	—
Gain/Loss on Capital Assets	—	—
Other Expenses	7,331,039	724,202
Total Deductions	\$ 11,579,878,972	\$ 1,165,885,660
Net Increase (Decrease) in Net Position	\$ 7,438,046,168	\$ 704,295,583
Beginning Net Position Restricted for Pensions and Other Post-Employment Benefits	\$ 157,978,199,075	\$ 1,292,022,349
Prior Period Adjustments	—	—
Beginning Net Position, as Restated	\$ 157,978,199,075	\$ 1,292,022,349
Ending Net Position Restricted for Pensions and Other Post-Employment Benefits	\$ 165,416,245,243	\$ 1,996,317,932

See accompanying Notes to the Financial Statements.

(Continued)

Total Pension and Other Post-Employment Benefit (OPEB) Trust Funds		Custodial Funds	
2020	2019	Child Support Employee Deductions	
\$ 10,972,292,168	\$ 11,253,728,973	\$	—
415,829,519	480,400,199		—
5,536,660	6,060,703		—
3,346,831	3,052,513		—
107,757,217	102,787,422		—
246,332	257,502		—
7,734,365	4,438,264		—
1,538,211,599	1,515,397,609		—
(499,057,861)	(517,965,033)		—
37,420,201	38,982,314		—
51,410,469	71,794,507		—
30,832,642	5,886,524		—
—	—		73,834
33,646,776	29,612,513		—
1,244,838	1,755,244		—
8,594,103	10,557,113		—
197,937	303,275		—
4,771,472	3,018,722		—
894,295	1,579,623		—
3,276,660	2,564,202		—
454,492	402,632		—
133,215	244,588		—
2,636,125	2,449,013		—
10,299,336	12,133,546		—
—	(893)		—
8,055,241	1,872,296		—
\$ 12,745,764,632	\$ 13,031,313,371	\$	73,834
\$ 8,142,341,751	\$ 3,898,476,310	\$	—
\$ 159,270,221,424	\$ 155,367,476,466	\$	—
—	4,268,648		—
\$ 159,270,221,424	\$ 155,371,745,114	\$	—
\$ 167,412,563,175	\$ 159,270,221,424	\$	—

Exhibit III

Statement of Net Position

Proprietary Funds

As of August 31, 2020 (With Comparative Data as of August 31, 2019)

	Enterprise Funds-Major	
	TRS-ActiveCare	
	2020	2019
Assets		
Current Assets		
Cash		
Cash In State Treasury	\$ 368,971,478	\$ 354,492,676
Cash On Hand	—	—
Total Cash	\$ 368,971,478	\$ 354,492,676
Receivables		
Interest	\$ 1,667,199	\$ 1,402,451
Health Care Premiums	—	—
COBRA Premiums and Other	59,867,660	58,201,031
Total Receivables	\$ 61,534,859	\$ 59,603,482
Total Assets	\$ 430,506,337	\$ 414,096,158
Liabilities (Note 1F)		
Current Liabilities		
Accounts Payable	\$ 31,528,523	\$ 9,441,177
Payroll Payable	54,938	231,592
Fees Payable	952,996	1,043,296
Premiums Payable to HMOs	—	19,889,074
Health Care Claims Payable	228,723,434	216,386,981
Employee Compensable Absences Payable (Note 4)	30,461	72,420
Total Current Liabilities	\$ 261,290,352	\$ 247,064,540
Non-Current Liabilities		
Employee Compensable Absences Payable (Note 4)	\$ 22,045	\$ 187,671
Total Non-Current Liabilities	\$ 22,045	\$ 187,671
Total Liabilities	\$ 261,312,397	\$ 247,252,211
Deferred Inflow of Resources		
Deferred Revenue - School Districts	\$ 894,596	\$ 1,890,716
Total Deferred Inflow of Resources	\$ 894,596	\$ 1,890,716
Net Position		
Restricted for Health Care Programs	\$ 168,299,344	\$ 164,953,231
Total Net Position	\$ 168,299,344	\$ 164,953,231

See accompanying Notes to the Financial Statements.

Exhibit IV

Statement of Revenues, Expenses, and Changes in Net Position

Proprietary Funds

For the Fiscal Year Ended August 31, 2020 (With Comparative Data for August 31, 2019)

	Enterprise Funds-Major	
	TRS-ActiveCare	
	2020	2019
Operating Revenues		
Health Care Premiums	\$ 2,158,997,317	\$ 2,170,132,057
COBRA Premiums and Other	145,208,054	157,307,700
Administrative Fees	145,265	146,090
Total Operating Revenues	\$ 2,304,350,636	\$ 2,327,585,847
Operating Expenses		
Health Care Claims	\$ 1,932,461,054	\$ 1,863,374,439
Health Care Claims Processing	115,227,048	118,882,697
Premium Payments to HMOs	256,850,839	243,198,667
Affordable Care Act Fees	841,249	928,866
Administrative Expenses		
Salaries and Wages	1,834,500	2,072,033
Payroll Related Costs	309,932	379,775
Professional Fees and Services	978,464	1,197,891
Travel	19,049	14,170
Materials and Supplies	67,099	263
Communications and Utilities	49,317	9,586
Repairs and Maintenance	158,883	—
Rentals and Leases	9,287	22,982
Printing and Reproduction	336	53
Other Expenses	319,320	6,567
Total Operating Expenses	\$ 2,309,126,377	\$ 2,230,087,989
Operating Income (Loss)	\$ (4,775,741)	\$ 97,497,858
Non-Operating Revenues		
Investment Income	\$ 7,853,806	\$ 10,623,456
Other Non-Operating Revenues	268,048	539,533
Total Non-Operating Revenues	\$ 8,121,854	\$ 11,162,989
Change in Net Position	\$ 3,346,113	\$ 108,660,847
Beginning Net Position	\$ 164,953,231	\$ 56,292,384
Ending Net Position	\$ 168,299,344	\$ 164,953,231

See accompanying Notes to the Financial Statements.

Exhibit V**Statement of Cash Flows****Proprietary Funds**

For the Fiscal Year Ended August 31, 2020 (With Comparative Data for August 31, 2019)

	Enterprise Funds-Major	
	TRS-ActiveCare	
	2020	2019
Cash Flows from Operating Activities		
Receipts from Health Care Premiums	\$ 2,158,001,197	\$ 2,178,892,340
Receipts from COBRA Premiums and Other	143,541,426	153,104,257
Receipts from Long-Term Care Administrative Fees	145,265	146,090
Payments for Administrative Expenses	17,956,920	5,748,993
Payments for Health Care Claims	(1,920,124,602)	(1,921,329,495)
Payments for Health Care Claims Processing	(115,227,048)	(118,882,697)
Payments for HMO Premiums	(276,739,913)	(242,700,044)
Payments for Affordable Care Act Fees	(931,549)	(921,570)
Net Cash Provided (Used) by Operating Activities	\$ 6,621,696	\$ 54,057,874
Cash Flows from Non-Capital Financing Activities		
Proceeds from Other Non-Operating Revenues	\$ 268,048	\$ 539,533
Net Cash Provided (Used) by Non-Capital Financing Activities	\$ 268,048	\$ 539,533
Cash Flows from Investing Activities		
Interest Received	\$ 7,589,058	\$ 9,838,595
Net Cash Provided (Used) by Investing Activities	\$ 7,589,058	\$ 9,838,595
Net Increase (Decrease) in Cash	\$ 14,478,802	\$ 64,436,002
Beginning Cash and Cash Equivalents	\$ 354,492,676	\$ 290,056,674
Ending Cash and Cash Equivalents	\$ 368,971,478	\$ 354,492,676

See accompanying Notes to the Financial Statements.

Exhibit V**Statement of Cash Flows****Proprietary Funds**

For the Fiscal Year Ended August 31, 2020 (With Comparative Data for August 31, 2019)

	Enterprise Funds-Major	
	TRS-ActiveCare	
	2020	2019
Reconciliation of Operating Income (Loss) to Net Cash Provided (Used) by Operating Activities		
Operating Income (Loss)	\$ (4,775,741)	\$ 97,497,858
Adjustments to Reconcile Operating Income (Loss) to Net Cash Provided (Used) by Operating Activities		
Changes in Assets & Liabilities		
(Increase) Decrease in Health Care Premium Receivables	\$ (996,120)	\$ 8,760,283
(Increase) Decrease in COBRA Premiums and Other Receivables	(1,666,628)	(4,203,443)
Increase (Decrease) in Premiums Payable to HMOs	(19,889,074)	498,623
Increase (Decrease) in Health Care Claims Payable	12,336,452	(57,955,056)
Increase (Decrease) in Affordable Care Act Fees Payable	(90,300)	7,296
Increase (Decrease) in Accounts Payable	22,087,346	9,327,892
Increase (Decrease) in Payroll Payable	(176,654)	47,476
Increase (Decrease) in Employee Compensable Absences Payable	(207,585)	76,945
Total Adjustments	\$ 11,397,437	\$ (43,439,984)
Net Cash Provided (Used) by Operating Activities	\$ 6,621,696	\$ 54,057,874

See accompanying Notes to the Financial Statements.

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Notes to the Financial Statements

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Note 1: Summary of Significant

Accounting Policies

A. Reporting Entity

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 pursuant to Texas Government Code Title 8, Subtitle C, Chapter 825. The trustees are appointed as follows:

- Three direct appointments by the Governor
- Two appointments from a list nominated by the State Board of Education
- Two appointments from three active member candidates from a public school, charter school, regional service center, nominated by members of those districts
- One appointment from three retired member candidates nominated by TRS retirees
- One at-large appointment selected from three candidates nominated from active members of any public or charter school, regional service center, institute of higher learning, or from 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 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 administered a 403(b) Administrative Program in which companies were required to 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). In May 2019, the 86th Texas Legislature passed House Bill 2820 removing the System as the program administrator effective August 31, 2019.

A Custodial 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 Custodial Fund.
- Proprietary Funds include TRS-ActiveCare which is an Enterprise fund. TRS-ActiveCare is considered a major fund.

Fiduciary funds are used to report assets held in a trustee or custodial capacity for others. The reporting focus is on net position and changes in net position. The pension and other post-employment 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 post-employment benefit plan. Custodial funds are a type of fiduciary fund used to report assets collected and transferred to the State or other entities. Custodial funds do not measure the results of operations. Assets and liabilities are recorded using the accrual basis of accounting.

Enterprise funds are a type of proprietary fund used to report any activity 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 fund is derived from self-insurance premiums. Operating expenses include the costs of claims 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 custodial 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.

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. 84, Fiduciary Activities, relates to custodial funds used to report fiduciary activities that are not required to be reported in pension and other post-employment benefit trust funds. TRS has custodial funds that represent child support garnishments that are remitted to the appropriate agency. This is the only item that is subject to this statement.

GASB Statement No. 92, Omnibus 2020, was issued January 2020 with relevant requirements effective upon issuance. The Standard enhances comparability in accounting and financial reporting and improves the consistency of authoritative literature. The requirements of this statement were implemented by TRS this fiscal year.

GASB Statement No. 95, Postponement of the Effective Dates of Certain Authoritative Guidance, relates to providing temporary relief to governments and other stakeholders in light of the COVID-19 pandemic.

GASB Statement No. 97, Certain Component Unit Criteria, relates to determining whether a primary government is financially accountable for component units. TRS was already in compliance with this standard before it was issued.

D. Comparative Data in Total

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, 2019, from which the summarized information was derived.

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 from the Texas Legislature's general revenue appropriations for retirement benefits for active members employed by a participating employer. In fiscal year 2020, contributions were made by the State of Texas to the System at the rate of 7.5 percent of the pensionable compensation paid to active members for each year.

Although appropriated by the legislature, expenses for the Pension Trust Fund administrative operations and capital expenditures are paid from the Pension Trust Fund and not from the State's General Fund.

TRS-Care received contributions from the State's General Fund equal to 1.25 percent of salaries paid to public education employees in fiscal year 2020. Administrative expenses for this program are paid from the trust fund.

The 86th Texas legislature enacted SB1264 that appropriated funding to TRS-Care for consumer protection against medical and health care billing by out-of-network providers. \$2,208,137.00 for fiscal year 2020 and \$3,312,206.00 for fiscal year 2021 will be funded in fiscal year 2021.

TRS-ActiveCare is an Enterprise Fund supported by fees and receives no appropriations from the State for administrative expenses.

TRS administers a governmental excess benefit arrangement under section 415(m) of the Internal Revenue Code of 1986 (26 U.S.C.). Authorized under the provisions of the Texas Government Code, Title 8, Subtitle C, Section 825.517, this program created a separate, non-qualified, unfunded excess benefit arrangement outside the Pension Trust Fund of the retirement system.

Contributions to the excess benefit 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

Cash and cash equivalents include investments with an original maturity of three months or less that are used for cash management instead of investing activities.

Highly liquid assets 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 Dividends 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.
- 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.
- Due from State's General Fund represents amounts owed to TRS for contributions not received at fiscal year-end.
- Due from Employers receivables represent contributions that are due from participating employers for the current fiscal year but not received until after fiscal year-end.
- Due from Employees Retirement System (ERS) of Texas receivables represent ERS' share of current year retirement benefits that are due to TRS for retirees' service earned from ERS.
- Prepaid Expenses and Deposits receivables represent refundable security deposits paid on lease agreements that TRS has entered into.
- 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 entity-specific 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. TRS has investments that have values not based on quoted market prices.

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. Donated capital assets, donated works of art, and similar items are reported at acquisition value. Depreciation of all exhaustible capital assets is charged as an expense against the fund's operations. Depreciation 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.

Deferred Outflow of Resources

Deferred outflow of resources represent a consumption of net assets that applies to a future period and will not be recognized as an expense until that future period.

- Related to Participation in ERS' Other Post-Employment Benefit (OPEB) plan represents amounts for OPEB expenses that will be recognized in future periods. See Note 10.

Liabilities

- Accounts Payable represents the liability that exists at year-end for goods and services received for which payment has not been made.
- Payroll Payable represents the liability for employee salaries that is due and payable at fiscal year-end.
- Investment Fees Payable represent fees due to external investment managers and the

custodian bank that are due at fiscal year-end.

- Benefits Payable 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 includes an estimate for health care claims incurred but not reported to the System at fiscal year-end.
- Fees Payable represent health insurance provider fees payable at fiscal year-end.
- Net Other Post-Employment Benefit Liability represents TRS' share of the ERS plan net OPEB liability.
- 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.
- Collateral Obligations represent cash collateral received from borrowers for derivative instruments and the securities lending program.
- Due to State's General Fund represents amounts owed to the State for excess contributions received at fiscal year-end.
- Due to Employees Retirement System of Texas represents amounts owed for current year retirement benefits due to ERS for retirees' service earned from TRS.
- Employee Compensable Absences Payable represents amounts owed to employees for compensatory time unpaid at fiscal year-end.
- Other Liabilities represent taxes payable by the blended component unit, Teacher Retirement Investment Company of Texas, Ltd. (TRICOT) at fiscal year-end. See Note 13.

Deferred Inflow of Resources

Deferred Inflow of Resources represent an acquisition of net assets that applies to a future period and

will not be recognized as income until that future period.

- Unrealized Lease Incentives represent amounts for lease incentives granted to TRS at the inception of a lease that is amortized over future periods.
- Unearned Revenue represents payments for future contributions received during the fiscal year.
- Related to Participation in ERS' OPEB Plan represents amounts for OPEB revenues that will be recognized in future periods. See Note 10.

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. 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 interfund activity.

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 the estimated useful lives of the assets or the lease period.

All capital assets belong to either the Pension Trust Fund or the TRS-Care Fund. Asset and depreciation balances, capitalization thresholds, and depreciable lives for all capital asset classes are shown in the following tables.

Table 2.1: Capitalization of Assets

Asset Class	Capitalization Threshold	Depreciable Life
Land	\$ —	—
Construction in Progress	—	—
Artwork	—	—
Buildings and Building Improvements	100,000	10-50 years
Furniture and Equipment	5,000	3-10 years
Vehicles, Boats, and Aircraft	5,000	7 years
Leasehold Improvements	100,000	6-22 years
Facilities and Other Improvements	100,000	10-20 years
Internally Generated Computer Software	1,000,000	5 years
Other Computer Software	100,000	5 years

Table 2.2: Capital Asset Activity

Asset Class	Balance 9/1/2019	Adjustments	Reclasses & Completed CIP	Additions	Deletions	Balance 8/31/2020 (Exhibit I)
Non-Depreciable Assets						
Land and Land Improvements	\$ 1,658,310	\$ —	\$ —	\$ —	\$ —	\$ 1,658,310
Construction in Progress	18,170,220	—	—	3,870,538	—	22,040,758
Artwork	124,136	—	—	—	—	124,136
Total Non-Depreciable Assets	\$ 19,952,666	\$ —	\$ —	\$ 3,870,538	\$ —	\$ 23,823,204
Depreciable Assets						
Buildings and Building Improvements	\$ 43,048,735	\$ —	\$ —	\$ —	\$ —	\$ 43,048,735
Furniture and Equipment	12,799,558	—	—	1,357,285	—	14,156,843
Vehicle, Boats, and Aircraft	47,113	—	—	—	—	47,113
Leasehold Improvements	3,712,318	—	—	—	—	3,712,318
Facilities and Other Improvements	642,082	—	—	—	—	642,082
Total Depreciable Assets	\$ 60,249,806	\$ —	\$ —	\$ 1,357,285	\$ —	\$ 61,607,091
Accumulated Depreciation						
Buildings and Building Improvements	\$(24,902,168)	\$ —	\$ —	\$(1,425,005)	\$ —	\$(26,327,173)
Furniture and Equipment	(9,439,578)	—	—	(1,165,974)	—	(10,605,552)
Vehicles, Boats, and Aircraft	(38,293)	—	—	(6,232)	—	(44,525)
Leasehold Improvements	(3,180,618)	—	—	(28,006)	—	(3,208,624)
Facilities and Other Improvements	(316,464)	—	—	(49,285)	—	(365,749)
Total Accumulated Depreciation	\$(37,877,121)	\$ —	\$ —	\$(2,674,502)	\$ —	\$(40,551,623)
Total Net Depreciable Assets	\$ 22,372,685	\$ —	\$ —	\$ (1,317,217)	\$ —	\$ 21,055,468
Intangible Assets						
Computer Software	\$ 55,247,353	\$ (579,132)	\$ —	\$ —	\$ —	\$ 54,668,221
Total Intangible Assets	\$ 55,247,353	\$ (579,132)	\$ —	\$ —	\$ —	\$ 54,668,221
Accumulated Amortization						
Computer Software	\$(22,376,923)	\$ 353,277	\$ —	\$(10,652,613)	\$ —	\$(32,676,259)
Total Accumulated Amortization	\$(22,376,923)	\$ 353,277	\$ —	\$(10,652,613)	\$ —	\$(32,676,259)
Total Net Intangible Assets	\$ 32,870,430	\$ (225,855)	\$ —	\$(10,652,613)	\$ —	\$ 21,991,962
Total Net Capital Assets	\$ 75,195,781	\$ (225,855)	\$ —	\$ (8,099,292)	\$ —	\$ 66,870,634

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, 2019, and there were no significant investment policy changes during the reporting period. For the fiscal year ended August 31, 2020, there were no significant violations of state statute, investment policy, or contractual provisions. The Statement in its entirety can be accessed at www.trs.texas.gov.

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, derivative instruments, 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 as of August 31, 2020

Table 3.A.1: Asset Allocations

Asset Class	Target Allocation ¹ %	Long-Term Expected Geometric Real Rate of Return ²	Expected Contribution to Long- Term Portfolio Returns
Global Equity			
USA	18.0 %	3.9 %	0.99 %
Non-U.S. Developed	13.0	5.1	0.92
Emerging Markets	9.0	5.6	0.83
Private Equity	14.0	6.7	1.41
Stable Value			
Government Bonds	16.0 %	(0.7)%	(0.05)%
Absolute Return (Including Credit Sensitive Investments)	—	1.8	—
Stable Value Hedge Funds	5.0	1.9	0.11
Real Return			
Real Estate	15.0 %	4.6 %	1.02 %
Energy, Natural Resources, and Infrastructure	6.0	6.0	0.42
Commodities	—	0.8	—
Risk Parity			
Risk Parity	8.0 %	3.0 %	0.30 %
Asset Allocation Leverage			
Cash	2.0 %	(1.5)%	(0.03)%
Asset Allocation Leverage	(6.0)	(1.3)	0.08
Inflation Expectation			2.00 %
Volatility Drag ³			(0.67)%
Expected Return	100.0 %		7.33 %
¹ Target allocations are based on the FY2020 policy model.			
² Capital Market Assumptions come from Aon Hewitt (as of 08/31/2020).			
³ The volatility drag results from the conversion between arithmetic and geometric mean returns.			

For the fiscal year ended August 31, 2020, the annual money-weighted rate of return on pension plan investments was 7.2 percent. The annual money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

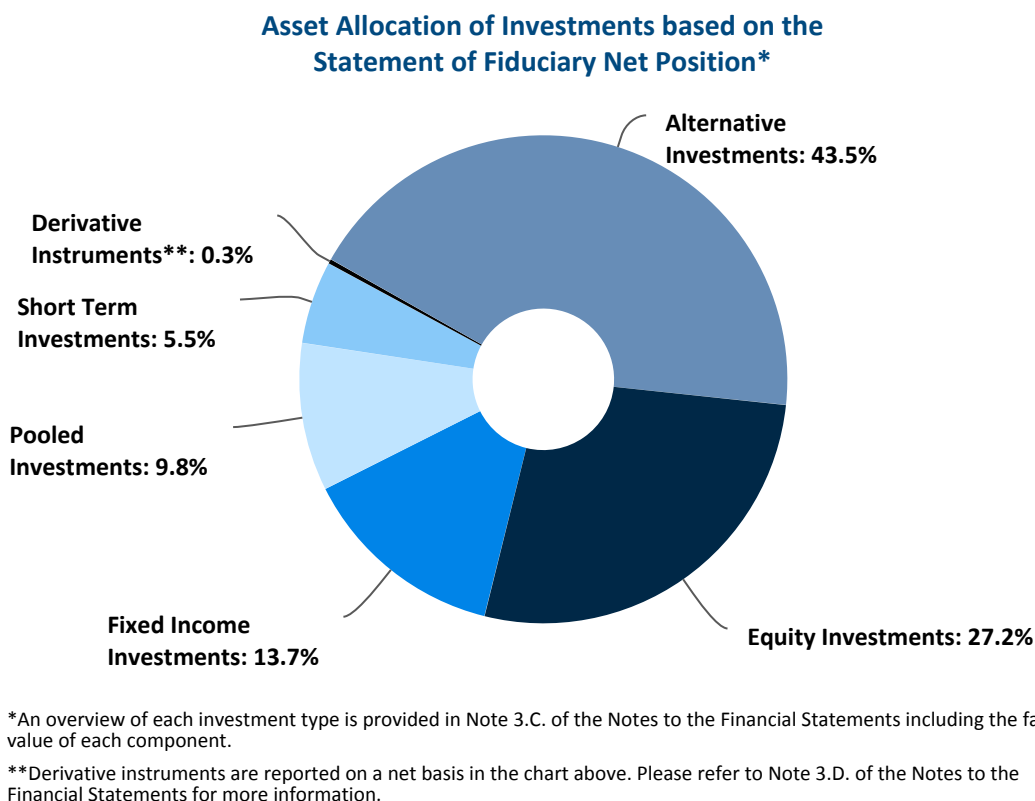
B. Cash and Deposits

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, 2020, the carrying amount of the system's bank accounts totaled \$320,110,687, the bank balance totaled \$320,110,883, and cash on hand totaled \$7,092,327.

C. Investments

The chart below presents net investments of the System (excluding securities lending collateral and obligations) allocated based on investment classifications within the Statement of Fiduciary Net Position as of June 30, 2020.



Fair Value Measurement Techniques

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

Short-Term Investments include Short-Term Foreign Currency Contracts, Short-Term Investment Funds (STIF), Short-Term Commingled Funds, and Treasury Bills.

Short-Term Foreign Currency Contracts are priced at the spot rate in active markets and valued at Level 1. U.S. Treasury Bills are priced at the last sale price of the primary exchange 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. Short-Term Commingled Funds are valued at the NAVPS by the General Partner or Fund Administrator.

Equity Investments

Equity Investments include both Domestic and International Equities.

Equities priced at the last sale price in their respective active markets are valued at Level 1.

Equities that are not actively traded and have a stale price as of the System's measurement date are valued at Level 3.

Fixed Income Investments

Fixed Income Investments include Asset and Mortgage Backed Bonds, Domestic Corporate Bonds, International Corporate Bonds, Sovereign Government Issue Bonds, U.S. Government Agency Bonds, U.S. Treasury Bonds, U.S. Treasury STRIPS, and U.S. TIPS.

U.S. Treasury Bonds 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.

Corporate Bonds priced at Level 3 are valued by a third party.

Alternative Investments

Alternative Investments include Privately Held Equity, Privately Held Debt, Absolute Return, Hedge Funds, Energy, Natural Resources and Infrastructure, Private Equity, Real Assets, Risk Parity.

Privately Held Equity and Debt are priced by a third party that uses a guideline market multiples approach and a sum of parts valuation analysis is valued at Level 3.

All other Alternative Investments are valued at the NAVPS by the General Partners or Fund Administrators.

Derivative Instruments

Derivative Instruments include Forwards, Futures, 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.

Derivative Instruments priced at the last sale price in their respective active markets are valued at Level 1.

Derivative Instrument that are valued using a matrix pricing technique that are based on their relationship to benchmark quoted prices are valued at Level 2.

Derivative Instruments that are not actively traded and have a stale price as of the System's measurement date are valued at Level 3.

Pooled Investments

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

Other Fair Value Measurements

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. 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.

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.

Fair Value Measurements and Unfunded Commitments

The recurring fair value measurement of the System as of August 31, 2020 are reported on the following page.

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 System's unfunded capital commitment balance is presented as of August 31, 2020. Additionally, as of August 31, 2020, the System reported an unfunded capital commitment balance of \$1,439,873,003 that has not yet been allocated to a specific Alternative Investment type and an unfunded capital commitment balance of \$39,000,000 for externally managed funds that are not reported at the NAVPS.

As of August 31, 2020, 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.

Table 3.C.1: Fair Value Measurement

Investments and Other Items	Total Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Short-Term Investments				
Short-Term Foreign Currency Contracts	\$ 11,710	\$ 11,710	\$ —	\$ —
U.S. Treasury Bills	32,997,761	32,997,761	—	—
Total Short-Term Investments	\$ 33,009,471	\$ 33,009,471	\$ —	\$ —
Equity Investments				
Domestic Equity	\$17,842,856,445	\$ 17,842,818,527	\$ —	\$ 37,918
International Equity	29,303,496,461	29,301,098,566	—	2,397,895
Total Equity Investments	\$47,146,352,906	\$ 47,143,917,093	\$ —	\$ 2,435,813
Fixed Income Investments				
Asset and Mortgage Backed Bonds	\$ 100,813,749	\$ —	\$ 100,813,749	\$ —
Domestic Corporate Bonds	63,040,287	—	63,040,037	250
International Corporate Bonds	27,655,607	—	27,655,607	—
Sovereign Government Issue Bonds	1,948,432,837	—	1,948,428,903	3,934
U.S. Government Agency Bonds	14,731,213	—	14,731,213	—
U.S. Treasury Bonds	19,394,910,800	19,394,910,800	—	—
U.S. Treasury STRIPS	35,876,575	—	35,876,575	—
U.S. TIPS	2,227,276,026	—	2,227,276,026	—
Total Fixed Income Investments	\$23,812,737,094	\$ 19,394,910,800	\$ 4,417,822,110	\$ 4,184
Alternative Investments				
Privately Held Debt	\$ 130,690,751	\$ —	\$ —	\$ 130,690,751
Privately Held Equity	703,853,780	—	—	703,853,780
Total Alternative Investments	\$ 834,544,531	\$ —	\$ —	\$ 834,544,531
Derivative Instruments				
Forwards	\$ (163,076,495)	\$ —	\$ (163,076,495)	\$ —
Futures	559,470,486	559,470,486	—	—
Options	(17,743,030)	—	(17,743,030)	—
Rights	81,018	74,305	—	6,713
Swaps	129,681,884	—	129,681,884	—
Warrants	14,611,375	2,555,655	—	12,055,720
Total Derivative Instruments	\$ 523,025,238	\$ 562,100,446	\$ (51,137,641)	\$ 12,062,433
Other Fair Value Measurements				
Invested Securities Lending Collateral*	\$ 7,165,280,719	\$ —	\$ 7,117,187,261	\$ 48,093,458
Securities Sold Short	(1,594,473,921)	(1,594,407,263)	—	(66,658)
Total Other Fair Value Measurements	\$ 5,570,806,798	\$ (1,594,407,263)	\$ 7,117,187,261	\$ 48,026,800
Total	\$77,920,476,038	\$ 65,539,530,547	\$ 11,483,871,730	\$ 897,073,761

*Excludes receivables and payables related to the Securities Lending Pool.

Table 3.C.2: Net Asset Value and Unfunded Capital Commitments

Investments	Net Asset Value Per Share (NAVPS)		Unfunded Capital Commitments
Short-Term Investments			
Short-Term Investment Funds	\$	9,356,108,619	\$ —
Short-Term Commingled Funds		81,348,794	—
Total Short-Term Investments	\$	9,437,457,413	\$ —
Alternative Investments			
Absolute Return	\$	4,338,844,848	\$ 2,836,848,500
Hedge Funds		14,128,276,041	314,743,691
Energy, Natural Resources, and Infrastructure		8,032,651,549	6,526,871,795
Private Equity		23,565,034,262	13,460,122,266
Real Estate		21,708,595,774	14,573,997,967
Risk Parity		2,980,485,062	—
Total Alternative Investments	\$	74,753,887,536	\$ 37,712,584,219
Pooled Investments			
Commingled Domestic Equity	\$	9,496,807,882	\$ —
Commingled Fixed Income		207,234,000	—
Commingled International Equity		6,709,522,987	—
Domestic Mutual Funds		648,135,148	—
Total Pooled Investments	\$	17,061,700,017	\$ —
Total	\$	101,253,044,966	\$ 37,712,584,219

Significant Investment Strategies

The System achieves portfolio diversification by investing in a variety of strategies, geographies, and industry sectors for investments reported at the NAVPS.

Absolute Return

U.S. Investment Grade - Invests in U.S. dollar-denominated investment grade securities.

U.S. High Yield - Invests in U.S. dollar-denominated, high-yield corporate bonds issued in the U.S.

U.S. Securitized/Structured - Invests in bonds backed by securities.

Non-U.S. Developed Fixed Income - Primarily invests in sovereign debt issued by developed countries outside of the U.S.

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.

Commingled Equity, Fixed Income, and Mutual Funds

External Public Total Non-U.S. Developed - Invests in long positions in equity securities as well as certain derivative instruments in non-U.S. developed markets.

External Public Total U.S. - Invests in long positions in equity securities as well as certain derivative instruments 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.

Energy, Natural Resources, and Infrastructure

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 naturally occurring trees; and drilling for oil and gas.

Hedge Funds

Commodities and Trends - Trades in a number of debt, equity, foreign exchange and commodity instruments and derivative instrument 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.

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 spinoff.

Fixed Income - Assumes opposing positions in fixed income products to take advantage of small price discrepancies while limiting interest rate risk.

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.

Macro and 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 - 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.

Reinsurance - Provides property catastrophe and specialty reinsurance coverages to insurers and reinsurers on a worldwide basis.

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.

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 under managed 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

Targets specific levels of risk to certain factors and/or assets in order to achieve increased portfolio diversification.

Short-Term Investment and Commingled Funds

Invests in highly liquid short-term (cash-like) funds.

Redemptions

The System's 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, 2020.

Table 3.C.3: Redemptions and Terms

	Fair Value	Redemption Frequency	Redemption Notice Period	Redemption Restrictions	Redemption Restrictions Lapse
\$	1,799,691,917	N/A	N/A	N/A	N/A
	1,298,236,542	Bi-Monthly	9 Days	30% Fund Gate	No Estimate; Effective 2017
	2,122,629,509	Daily	1 - 5 Days	N/A	N/A
	2,368,031,179	Monthly	10 - 30 Days	N/A	N/A
	(231,510)	Quarterly	95 Days	N/A	N/A
	16,085,252	3 months	45 days	N/A	N/A
	642,727,539	Annually	90 Days	25% Fund Gate	No Estimate, Effective 2010
	1,249,637,454	N/A	30 Days	N/A	N/A
\$	9,496,807,882	Total Commingled Domestic Equity			
\$	346,988,601	Monthly	90 Days	36 Months, 10% of Capital Lockup Period	Lapsed 2019
	1,795,717,204	N/A	N/A	N/A	N/A
	428,305,836	Quarterly	60 Days	15% Fund Gate	N/A
	1,562,923,394	Monthly	30 Days	N/A	N/A
	740,300,431	Monthly	90 Days	12, 36, 48 Month Lockup	No Estimate; Rolling 3 Year Lock Up Period
	149,898,255	Quarterly	90 Days	15% Fund Gate	Quarterly Liquidity; Four Quarter Lockup
	620,289,934	Quarterly	60 Days	N/A	N/A
	373,220,574	Quarterly	45 Days	12 month lockup with 10% fund gate	N/A
	691,878,758	Monthly	N/A	N/A	N/A
\$	6,709,522,987	Total Commingled International Equity			
\$	12,081,194	24 Months	90 Days	2 Year Lockup	Lockup Lapsed 2019
	25,619,262	Daily	30 Days	N/A	N/A
	491,904,071	Monthly	60 Days	1 Year Lockup; 20% Fund Gate; 25% Investor Gate	Lockup Lapsed 2019; Gate - No Estimate; Effective 2018
	18,549,157	Monthly	60 Days	25% Investor Gate	N/A
	1,852,473,643	Monthly	2 - 90 days	N/A	N/A
	859,168,551	N/A	N/A	N/A	N/A
	1,856,344,330	Quarterly	40 - 90 Days	10 - 25% Fund Gate	No estimate; Effective 2011-2017
	611,743	Quarterly	60 Days	20% Quarterly Fund Gate	No Estimate; Effective 2010
	935,332,458	Quarterly	30 - 90 Days	25% Investor Gate	No Estimate; Effective 2012 - 2017
	1,498,094,092	Quarterly	65 - 90 Days	25% Quarterly Investor Gate	No Estimate; Effective 2014 - 2016
	121,236,093	Quarterly	24 Months	35% Investor Gate	No Estimate; Effective 2014

Table 3.C.3: Redemptions and Terms (Continued)

Fair Value	Redemption Frequency	Redemption Notice Period	Redemption Restrictions	Redemption Restrictions Lapse
93,817,751	Quarterly	45 Days	3 Year Lockup; 25% Fund Gate	Lockup Lapsed 2019; Gate - No Estimate; Effective 2017
291,750,701	Quarterly	90 Days	25% Fund Gate; 3 Year Rolling Hard Lock	Lockup Lapsed June 2019; Gate - No Estimate; Effective 2017
1,370,117,320	Quarterly	45 - 95 Days	N/A	N/A
71,292,757	Semi-Annually	90 Days	20% Fund Gate	No Estimate; Effective 2010
238,479,153	Semi-Annually	95 Days	N/A	N/A
255,840,760	Yearly	60 Days	N/A	N/A
527,657,005	Yearly	90 Days	25% Investor Gate	N/A
5,149,688	Bi-Monthly	15 or 30 Days	10% Fund Gate for 15 Day Notice	No estimate; Effective 2013
294,498,004	Monthly	25 - 90 Days	20% - 25% Investor Gate	No estimate; Effective 2010 - 2017
425,121,000	Monthly & Quarterly Dealing Day	30 Days	N/A	N/A
576,428,226	Monthly, Quarterly, 12/31	Monthly - 45-90 Days; Quarterly - 45 Days; 12/31 - 90 Days	1/6th Investor Gate	No estimate; Effective 2014
322,887,870	Monthly; Semi-Annual	Monthly, 20 Day Notice; Semi-Annual, 10/31 or 03/31 Notice	N/A	N/A
563,339,803	Quarterly	90 Days	1-Year Soft Lock; 25% Investor Level per Quarter	Lockup Lapsed 2019; Gate - No Estimate; Effective 2018
580,048,004	Semi-Annually	90 Days	16.67% Semi-Annual Investor Gate	No estimate; Effective 2013
178,267,883	Monthly	30 Days	24 Month Lockup	N/A
12,026,316	3 months	45 days	12 month lock up	Out of original lock
48,223,298	3 months	60 - 90 Days	12 - 24 month lock up and 25% quarterly gate	Lock up expires April 1 2021 and April 1 2022
287,116,326	Monthly	Monthly, 30 Day Notice	N/A	N/A
314,799,582	N/A	90 Days	N/A	N/A
\$ 14,128,276,041	Total Hedge Funds			

Liquidations

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, and 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, 2020.

Table 3.C.4: Alternative Investments Liquidation Periods

Investment Type	Less than 1 Year	1-5 Years	6-10 Years	Greater than 10 Years	N/A	Total
Absolute Return	\$ 40,410,452	\$ 1,739,048,717	\$ —	\$ —	\$ 2,559,385,679	\$ 4,338,844,848
Energy, Natural Resources, and Infrastructure	828,395,709	2,847,838,611	3,809,019,269	547,397,960	—	8,032,651,549
Private Equity	1,488,032,633	10,191,015,451	10,187,079,263	1,698,906,915	—	23,565,034,262
Real Estate	588,477,117	5,980,087,515	8,115,129,708	7,024,901,434	—	21,708,595,774
Risk Parity	—	—	—	—	2,980,485,062	2,980,485,062
Total	\$2,945,315,911	\$20,757,990,294	\$22,111,228,240	\$9,271,206,309	\$5,539,870,741	\$60,625,611,495

D. Derivative Instruments

Derivative instruments are used to efficiently manage and reduce the risk of the overall investment portfolio. Through the use of derivative instruments, the risks that are bound together in traditional cash market investments can be separated and managed independently. Derivative Instruments 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 Instruments, classified by derivative instrument type,

are displayed in the following table as of August 31, 2020.

The System's over-the counter (OTC) Derivative Instruments 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 Instruments with these collateral posting provisions is \$(71,645,037), and as of August 31, 2020, the System has posted \$65,994,072 in collateral. At August 31, 2020, the System has not triggered any events that would require the posting of additional collateral to its counterparties.

Table 3.D.1: Derivative Instruments				
Fiduciary Funds Derivative Instruments	Fair Value		Change in Fair Value Gain/(Loss)	Notional Value
Forwards				
FX Forwards	\$	(163,076,495)	\$ (255,352,768)	\$ (2,663,390,010)
Total Forwards	\$	(163,076,495)	\$ (255,352,768)	
Futures				
Commodity Futures	\$	149,117,122	\$ (59,674,693)	\$ 1,850,072,191
Fixed Income Futures		(72,622,427)	1,174,061,295	12,164,727,384
Foreign Currency Futures		—	5,469,993	—
Index Futures		482,975,791	(287,399,252)	5,296,094,837
Total Futures	\$	559,470,486	\$ 832,457,343	
Options				
Equity Options	\$	—	\$ —	—
Futures Options		—	—	—
Index Options		(17,743,030)	(182,470,233)	(28,542,998)
Total Options	\$	(17,743,030)	\$ (182,470,233)	
Rights				
Rights	\$	81,018	\$ 1,712,032	\$ 305,837
Total Rights	\$	81,018	\$ 1,712,032	
Swaps				
Credit Default Swaps	\$	14,648,033	\$ (180,316,830)	\$ 661,109,971
Interest Rate Swaps		5,897,743	5,549,211	(98,332,666)
Total Return Swaps		109,136,108	235,903,785	3,199,954,027
Total Swaps	\$	129,681,884	\$ 61,136,166	
Warrants				
Warrants	\$	14,611,375	\$ 12,775,073	\$ 20,914,431
Total Warrants	\$	14,611,375	\$ 12,775,073	
Total	\$	523,025,238	\$ 470,257,613	

E. Securities Lending

The System is authorized by Section 825.303, Govt Code, to lend securities in accordance with the Securities Lending Policy adopted effective May 1, 2017 by the Board of Trustees and as required by statute. The system's custodian and lending agent, State Street Bank and Trust Company, administers the 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. During the reporting period, Securities Lending Policy changes permitted the lending agent to act as a principal to borrow TRS securities for its own account. This change facilitates the system's participation in the custodian's enhanced custody program, which allows the retirement system to self-borrow securities for short sale deliveries and to finance market

borrowing through loans of securities to the lending agent. The Securities Lending Policy can be accessed at www.trs.texas.gov. There were no significant policy violations during the fiscal year.

Collateral received from borrowers is delivered to the lending agent 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 domestic loaned securities and at least 105 percent of the initial market value of 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 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 against loss resulting from borrower default or failure of the agent to properly execute its responsibilities under the lending agreement as required by Section 825.303(b)(3), Govt Code. 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, and there are no restrictions on the amount of loans that can be made.

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, 2020, 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 15 days, and the weighted average term of all securities on loan at 17 days.

As of August 31, 2020, the system reported Invested Securities Lending Collateral worth \$7,167,587,747. The system holds \$7,165,996,116 in cash collateral and \$843,500,444 in non-cash collateral. Securities on loan totaled \$8,472,750,036, which included \$601,404,911 lent to the lending agent. Securities on loan 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

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.

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, 2020, \$319,545,479 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, 2020, 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 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, 2020.

Table 3.F.1: Securities Lending Custodial Credit Risk (Excluding Cash)

Investment Type	Securities on Loan Fair Value	Non-Cash Collateral Value
Domestic Corporate Bonds	\$ 2,088	\$ 2,130
Domestic Equity	520,113,521	525,737,425
International Equity	312,194,116	317,760,889
Total	\$ 832,309,725	\$ 843,500,444

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 Fixed Income Investments as of August 31, 2020 is disclosed in the following table.

Credit ratings of U.S. Treasuries, U.S. Treasury STRIPS, and U.S. TIPS are not disclosed since these investments are explicitly guaranteed by the U.S. Government. The System's Short-Term Investment Funds and Short-Term Commingled Funds are unrated.

Table 3.F.2: Credit Risk: Fixed Income Credit Rating

S&P Rating	Fixed Income Investment Type					Total
	Asset and Mortgage Backed Bonds	Domestic Corporate Bonds	International Corporate Bonds	Sovereign Government Issue Bonds	U.S. Government Agency Bonds ¹	
AAA	\$ 6,213,800	\$ —	\$ —	\$ —	\$ 1,103,424	\$ 7,317,224
AA+	1,024,129	—	—	—	7,628,367	8,652,496
AA	1,101,208	—	—	—	—	1,101,208
AA-	2,236,220	—	—	—	—	2,236,220
A+	2,294,535	—	—	—	—	2,294,535
A	11,742,644	—	—	—	—	11,742,644
A-	2,812,774	—	—	—	—	2,812,774
BBB+	2,104,112	8,642,520	—	68,718,245	—	79,464,877
BBB	7,017,584	22,292,436	2,292,900	—	—	31,602,920
BBB-	2,248,056	26,590,075	—	—	943,706	29,781,837
BB+	896,719	5,505,736	—	—	—	6,402,455
BB	1,149,816	—	8,171,760	—	—	9,321,576
BB-	1,016,511	—	7,615,600	80,376,472	—	89,008,583
B+	817,388	—	3,163,050	—	—	3,980,438
B	2,344,694	—	—	—	—	2,344,694
B-	2,078,088	—	—	—	—	2,078,088
CCC+	—	—	—	—	—	—
CCC	13,798,036	—	—	—	—	13,798,036
CCC-	—	—	—	—	—	—
CC	1,304,720	—	—	—	—	1,304,720
D	963,730	—	—	6,470,525	—	7,434,255
NR ²	37,648,985	9,520	6,412,297	1,792,867,595	5,055,716	1,841,994,113
Total	\$ 100,813,749	\$ 63,040,287	\$ 27,655,607	\$ 1,948,432,837	\$ 14,731,213	\$ 2,154,673,693

¹ U.S. Government Agency Bonds (FHLB, FNMA, FHLMC) are implicitly guaranteed by the U.S. Government.

² NR represents unrated securities.

Derivative Instruments

The maximum allowable unsecured counter-party exposure for over-the-counter (OTC) derivative instrument 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 derivative instruments 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 following table discloses the net Derivative Instruments exposure to credit risk by counterparty and their corresponding credit rating by each of the Big Three credit rating agencies as of August 31, 2020.

The aggregate fair value of Derivative Instruments in asset positions as of August 31, 2020, was \$283,304,831, 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 \$111,945,660 of collateral held and \$164,510,151 of

liabilities included in netting arrangements with those counterparties, resulting in a net exposure to credit risk of \$6,849,020.

Collateral held by the System includes \$645,076 held in custodial accounts which are not available for use in any other purposes. This collateral has been excluded from the Statement of Net Position as it does not represent an asset to the System. Additional collateral of \$122,851,836 is held by the System and under the terms of the related ISDAs, may be rehypothecated by the System. Depending on the nature of the collateral held and the ability rehypothecate the collateral, this balance is included

within short-term investments within the Statement of Net Position, and is offset by a related Collateral Obligations liability

The System's net exposure to credit risk is limited to 5 percent of the market value of the system's total fund value. As of August 31, 2020, significant concentrations of net exposure to credit risk existed at Citibank (84.1 percent) and some at Bank of America Merrill Lynch (15.9 percent), but the net exposure for the counterparty did not surpass 5 percent of the System's total fund market value.

Counterparty	Net Exposure	Percentage of Net Exposure	S&P Rating	Fitch Rating	Moody's Rating
Citibank	\$ 5,760,188	84.1 %	A+	A+	Aa3
Bank of America Merrill Lynch	1,088,831	15.9	A+	AA-	Aa2
Total	\$ 6,849,019	100.0 %			

Reverse Repurchase Agreements

TRS held \$7,150,529,625 in reverse repurchase agreements at August 31, 2020. The System's Investment Policy Statement permits TRS to enter into reverse repurchase agreements, that is, a sale of securities with a simultaneous agreement to repurchase them in the future at the same price plus a contract rate of interest. The market value of the securities underlying reverse repurchase agreements normally exceeds the cash received, providing counterparties a margin against a decline in market value of the securities. If a counterparty defaults on its obligations to resell these securities to TRS or provide securities or cash of equal value, the System would suffer an economic loss equal to the difference between the market value plus accrued interest of the underlying securities and the agreement obligation, including accrued interest. No losses were recognized during the year due to default by counterparties to reverse repurchase agreements.

The counterparty limits for reverse repurchase transactions and tri-party reverse 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 (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. There were no significant policy violations during the fiscal year. The System's counterparty credit exposure for reverse repurchase agreements at August 31, 2020 is summarized in the following table.

Table 3.F.4: Credit Risk: Reverse Repurchase Agreements

Counterparty	Fair Value of Collateral Held by Counterparty ¹	Cash and Interest Due to Counterparty ¹	Net Credit Risk
Barclays	\$ 281,818,744	\$ 279,531,294	\$ 2,287,450
Goldman Sachs	2,028,441,080	1,964,313,345	64,127,735
JP Morgan Chase	4,559,502,043	4,444,540,838	114,961,205
BNP Paribas	469,806,480	463,725,252	6,081,228
Total Reverse Repurchase Agreements	\$ 7,339,568,347	\$ 7,152,110,729	\$ 187,457,618

¹Includes accrued interest.

The cash proceeds from reverse repurchase agreements are reinvested by the System. Purchases made with the proceeds of reverse repurchase agreements are not necessarily restricted to certain investment types or maturities. The cash due to counterparties resulting from reverse repurchase agreements is reported as "Obligation Under Reverse Repurchase Agreements" and the interest due to counterparties is included in "Investment Payables" on the Statement of Fiduciary Net Position. The underlying assets, as well as the reinvested proceeds, are reported in the "Investments at Fair Value" section on the Statement of Fiduciary Net Position.

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, 2020, 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, 2020.

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

Table 3.F.5: Interest Rate Risk: Fixed Income Weighted Effective Duration Rate

Fixed Income Investment Type	Fair Value	Weighted Effective Duration Rate
Asset and Mortgage Backed Bonds	\$ 100,813,749	1.1
Domestic Corporate Bonds	63,040,287	14.6
International Corporate Bonds	27,655,607	4.6
Sovereign Government Issue Bonds	1,948,432,837	9.8
U.S. Government Agency Bonds	14,731,213	(4.0)
U.S. Treasury Bonds	19,394,910,800	18.5
U.S. Treasury STRIPS	35,876,575	17.6
U.S. TIPS	2,227,276,026	8.0
Total	\$ 23,812,737,094	16.7

Derivative Instruments

The System does not have a formal interest rate risk policy for its Derivative instruments. 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, 2020, are presented in the following table.

Table 3.F.6: Interest Rate Risk: Derivative Instruments by Maturities

Investment Maturities (in Years)						
Reference Rate & Embedded Options	Fair Value	Less than 1	1-5	6-10	Notional Value	
Interest Rate Swaps						
Receive Variable 12-month USCPI, Pay Fixed 1.29750%	\$ 573,495	\$ —	\$ —	\$ 573,495	\$ (9,329,442)	
Receive Variable 12-month USCPI, Pay Fixed 1.26937%	2,406,151	—	—	2,406,151	(37,312,419)	
Receive Variable 12-month USCPI, Pay Fixed 1.23500%	635,772	—	—	635,772	(9,327,442)	
Receive Variable 12-month USCPI, Pay Fixed 1.17600%	1,157,390	—	—	1,157,390	(15,551,363)	
Receive Variable 12-month USCPI, Pay Fixed 1.31125%	386,155	—	—	386,155	(6,337,000)	
Receive Variable 12-month USCPI, Pay Fixed 1.36700%	316,093	—	—	316,093	(5,098,000)	
Receive Variable 12-month USCPI, Pay Fixed 1.74500%	384,307	—	—	384,307	(10,797,000)	
Receive Variable 12-month USCPI, Pay Fixed 1.95600%	38,379	—	—	38,379	(4,580,000)	
Total Interest Rate Swaps	\$ 5,897,742	\$ —	\$ —	\$ 5,897,742		
Total Return Swaps						
Receive Equity, Pay Variable 3-month LIBOR	\$ 192,256,983	\$ 192,256,983	\$ —	\$ —	\$3,283,132,296	
Receive Equity, Pay Variable 3-month EURIB	(2,119,515)	(2,119,515)	—	—	50,915,674	
Receive Equity, Pay Variable 12-month FEDL	(14,522,438)	(13,829,831)	(692,607)	—	1,540,328,041	
Receive Variable 3-month LIBOR, Pay Equity	(66,075,161)	(65,835,064)	(240,097)	—	(1,869,135,205)	
Receive Variable 3-month EURIB, Pay Equity	909,905	909,905	—	—	(48,703,849)	
Receive Variable 12-month FEDL, Pay Equity	(477,990)	207,975	(685,965)	—	(48,783,152)	
Receive Variable 12-month SOFR, Pay Equity	(460,606)	(460,606)	—	—	(34,334,331)	
Total Return Swaps	\$ 109,511,178	\$ 111,129,847	\$ (1,618,669)	\$ —		
Total	\$ 115,408,920	\$ 111,129,847	\$ (1,618,669)	\$ 5,897,742		

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, 2020 is presented in the following table.

Table 3.F.7: Foreign Currency Risk

Currency by Country	Cash	Alternative Investments	Derivative Instruments	Equity Investments	Fixed Income Investments	Pooled Investments	Total
Australia Dollar	\$ 1,879,744	\$ —	\$ (34,585,321)	\$ 934,370,266	\$ 371,919,784	\$ —	\$ 1,273,584,473
Bangladesh Taka	3	—	—	—	—	—	3
Botswana Pula	6,257	—	—	51,157	—	—	57,414
Brazil Real	197,710	—	(5,130,211)	355,216,883	—	—	350,284,382
Canada Dollar	46,746,068	—	16,885,516	1,699,922,635	—	—	1,763,554,219
Chile Peso	9,386	—	240,822	15,791,638	—	—	16,041,846
China Yuan Renminbi	15,515,547	—	—	465,762,526	—	—	481,278,073
China Yuan Renminbi Offshore	(1,891,853)	—	1,779,147	—	—	—	(112,706)
Colombia Peso	—	—	96,820	5,506,189	—	—	5,603,009
Czech Republic Koruna	3,884,861	—	(1,213,934)	12,798,132	—	—	15,469,059
Denmark Krone	(6)	—	23,945	354,189,647	—	—	354,213,586
Egypt Pound	—	—	—	4,252,855	—	—	4,252,855
Euro Member Countries	37,635,054	3,881,291,479	(20,200,160)	5,274,277,264	555,820,799	740,300,431	10,469,124,867
Hong Kong Dollar	2,034,692	—	(7,693,567)	3,605,844,371	—	—	3,600,185,496
Hungary Forint	—	—	(495,951)	42,929,385	—	—	42,433,434
India Rupee	4,618,586	—	47,372	1,021,889,370	277	—	1,026,555,605
Indonesia Rupiah	22,731	—	415,595	219,436,297	—	—	219,874,623
Israel Shekel	391	—	137,315	39,334,061	—	—	39,471,767
Japan Yen	(270,631)	—	(1,536,899)	4,004,983,609	—	—	4,003,176,079
Korea (South) Won	518,514	—	2,807,836	1,288,942,173	—	—	1,292,268,523
Kuwait Dinar	—	—	—	5	—	—	5
Malaysia Ringgit	7,004	—	—	97,725,834	—	—	97,732,838
Mexico Peso	100,405	—	213,047	283,653,182	68,718,245	—	352,684,879
New Zealand Dollar	3,343	—	(4,502,591)	34,726,818	—	—	30,227,570
Nigeria Naira	118	—	—	3,576	—	—	3,694
Norway Krone	28,654	—	6,558,780	285,305,186	—	—	291,892,620
Pakistan Rupee	—	—	—	15,729,748	—	—	15,729,748
Peru Sol	—	—	(10,094)	—	—	—	(10,094)
Philippines Peso	—	—	(75,679)	30,139,515	—	—	30,063,836
Poland Zloty	113,612	—	685,843	81,575,948	—	—	82,375,403
Qatar Riyal	—	—	—	34,364,443	—	—	34,364,443
Russia Ruble	—	—	(70,763)	143,968,468	—	—	143,897,705
Saudi Arabia Riyal	292,215	—	—	115,114,341	—	—	115,406,556
Singapore Dollar	498,955	—	(1,307,440)	97,913,631	—	—	97,105,146
South Africa Rand	85,379	—	753,776	353,835,349	—	—	354,674,504
Sweden Krona	132,853	—	2,564,580	352,721,191	—	—	355,418,624
Switzerland Franc	959	—	(7,730,735)	1,361,695,551	—	—	1,353,965,775
Taiwan New Dollar	1,483,723	—	(10,483)	1,269,505,179	—	—	1,270,978,419
Thailand Baht	472,617	—	(57,485)	179,011,340	—	—	179,426,472
Turkey Lira	6,346	—	1,259,395	46,302,446	—	—	47,568,187
United Arab Emirates Dirham	4,275	—	—	33,519,987	—	—	33,524,262
United Kingdom Pound	3,788,348	607,261,680	(86,201,664)	2,191,456,338	945,503,485	—	3,661,808,187
Viet Nam Dong	1	—	—	78	—	—	79
Total	\$117,925,861	\$4,488,553,159	\$(136,353,188)	\$26,353,766,612	\$1,941,962,590	\$ 740,300,431	\$33,506,155,465

Note 4: Employee Compensable Leave

Salary costs related to an employees' right 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 Post-Employment Benefit Trust Funds and in the Statement of Net Position for the Proprietary Funds.

Note 5: Operating Leases

In the 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 building space lease for the fiscal year ended August 31, 2020 for the Pension Trust Fund were \$3,702,921, including an adjustment for amortization of unrealized lease incentives of \$73,234. Fees for off-site storage for data security, copier rentals, and a mail machine were \$14,773, \$310,034, and \$42,795, respectively. Rental expenses related to the Teacher Retirement Investment Company of Texas (TRICOT) located in London were \$436,980 for leases.

The future minimum lease payments for the next ten years are listed in the following table.

Fiscal Year	Amount
2021	\$ 2,420,142
2022	854,404
2023	324,917
2024	212,875
2025	195,148
2026-2030	780,591
Total	\$ 4,788,077

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 11).

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 (RDS) reimbursements to TRS-Care on behalf of certain plan participants totaling \$62,358 for the fiscal year ended August 31, 2020. TRS-Care's Employer Group Waiver Plan (EGWP) reimbursements totaled \$14,505,350 for Medicare Part D direct subsidies, \$165,907,865 for catastrophic reinsurance subsidies, and \$5,693,573 for low income subsidies.

Note 7: Contingent Liabilities

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. Pursuant to Texas Government Code 661.033, 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 balance of vacation leave, the accumulation of which is limited based on years of service is also paid to the estate of an employee in the event of death. The System's policy is to recognize the cost of any sick leave when paid and to recognize the cost of any vacation leave when earned.

The System is contingently liable for retro-active retirement benefits payable to retiring members who complete the retirement process within one year of applying for retirement benefits. As of August 31, 2020, the maximum liability for pending retirement benefits payable is \$17.2 million.

In addition, under Texas Insurance Code, Article 3.51-7, the System is liable to pay a lump-sum death benefit of \$2,500 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 established by the Board in September 2007 and most recently amended in September 2018, 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.

The remaining liability for the incentive pay plan year ending September 30, 2019 will not exceed \$6.1 million. For the incentive pay plan year ending September 30, 2020, the liability is estimated not to exceed \$17.4 million. Payments can only be earned following years in which the Pension Trust Fund experiences a positive return, and employees must be employed by TRS on the designated dates in the Plan in order 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 on 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 September 30, 2019, the remaining liability is estimated at \$24,383. For the incentive pay plan year ending September 30, 2020, the liability is estimated at \$213,100.

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 8: 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 2021, and every 12th year after that year, are reviewed." The staff of the Sunset Advisory Commission concluded a review of the agency in May 2020 and is awaiting final review.

Note 9: Other Post-Employment Benefits (OPEB) Plan - TRS-Care

A. Plan Description

The Texas Public School Retired Employees Group Insurance Program (TRS-Care) is a multiple-employer, cost-sharing, defined Other Post-Employment Benefit (OPEB) plan with a special funding situation. The TRS-Care program was established in 1986 by the Texas Legislature.

The Board of Trustees of TRS administers the TRS-Care program and the related fund in accordance with 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 on page 3 and in Note 1.

B. Benefits Provided

TRS-Care provides health insurance coverage to retirees from public schools, charter schools, regional service centers, and other educational districts who are members of the TRS pension system. Eligible non-Medicare retirees and their dependents may enroll in TRS-Care Standard, a high-deductible health plan. Eligible Medicare retirees and their dependents may enroll in the TRS-Care Medicare Advantage medical plan and the TRS-Care Medicare Rx prescription drug plan. 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 General Appropriations Act passed by the 86th Legislature included funding to maintain TRS-Care premiums at their current level through 2021. The 86th legislature also passed Senate Bill 1682 which requires TRS to establish a contingency reserve in the TRS-Care fund equal to 60 days of expenditures. This amount is estimated at \$277,490,586 as of August 31, 2020.

C. Contributors to the Plan

Contributors to the plan include active and retired members, employers, and the State of Texas as the only non-employer contributing entity.

During fiscal year 2020, the number of participating employers are presented in the following table.

Table 9.C.1: Number of Participating Employers	
Participating Employers	Number
Independent School Districts*	1,021
Open Enrollment Charter Schools	187
Regional Service Centers	20
Other Educational Districts	3
Total	1,231
*Excludes Windham School District which is not covered by TRS-Care.	

TRS-Care plan membership as of August 31, 2019 is shown in the following table. Because the actuarial valuation was based on a roll-forward (See Section F), the counts are as of that date.

Table 9.C.2: TRS-Care Plan Membership Numbers by Category	
Membership Type	Number
Active plan members	725,690
Inactive plan members currently receiving benefits	191,250
Inactive plan members entitled to but not yet receiving benefits	11,785
Total	928,725

The Average Expected Remaining Service Life (AERSL) of 9.1073 is based on the membership information as of the beginning of the fiscal year.

D. 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 participating employers are based on active employee compensation. 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 fund the benefits for each successive biennium.

Section 1575.202 of the Texas Insurance Code establishes the State's contribution rate which is 1.25 percent of the employee's salary. Section 1575.203 establishes the active employee rate which is 0.65 percent of salary. Section 1575.204 establishes a public school contribution rate of not less than 0.25 percent or not more than 0.75 percent of the salary of each active employee of the employer. The actual public school contribution rate is prescribed by the Legislature in the General Appropriations Act, which is 0.75 percent of each active employee's pay for fiscal year 2020. The following table shows contributions to the TRS-Care plan by type of contributor.

Table 9.D.1: Contribution Rates and Amounts by Contributor		
Contributor	Rate	Amount
Active Employee	0.65 %	\$ 243,532,120
Non-Employer Contributing Entity (State)	1.25	435,768,774
Participating Employers	0.75	280,997,853
Federal/Private Funding*	1.25	32,562,226
Total		\$ 992,860,973
*Contributions paid from federal funds and private grants are remitted by the employer and paid at the State rate.		

All employers whose employees are covered by the TRS pension plan are also required to pay a surcharge of \$535 per month when employing a retiree of the TRS. The TRS-Care surcharges for fiscal year 2020 totaled \$11,413,512.

A supplemental appropriation was authorized by Senate Bill 1264 of the 86th Texas Legislature to provide \$2,208,137 for fiscal year 2020 and \$3,312,206 for fiscal year 2021, for consumer protections against medical and health care billing by certain out-of-network providers. Funding will be in fiscal year 2021.

The premium rates for retirees are reflected in the following table.

Table 9.D.2: 2020 Monthly Premium Rate

Retiree Type	Medicare	Non-Medicare
Retiree or Surviving Spouse	\$ 135	\$ 200
Retiree and Spouse	529	689
Retiree or Surviving Spouse and Children	468	408
Retiree and Family	1,020	999

E. Net OPEB Liability

Components of the Net OPEB Liability of the TRS-Care plan as of August 31, 2020 are disclosed in the following table.

Table 9.E.1: Net OPEB Liability

Components of Liability	Amount
Total OPEB Liability	\$40,010,833,815
Less: Plan Fiduciary Net Position	(1,996,317,932)
Net OPEB Liability	\$38,014,515,883
Net Position as a Percentage of Total OPEB Liability	4.99 %

The primary reasons for this year's \$12.0 billion liability reduction related to the difference between expected and actual experience and were due to (a) savings to the fully-insured Medicare Advantage premiums, which resulted from Congress' repeal of the Health Insurer Fee in December 2019 and vendor premium guarantees, and (b) favorable claims and rebate experience for the prescription drug benefits provided to Medicare retirees.

F. Actuarial Methods and Assumptions

Roll Forward

The actuarial valuation was performed as of August 31, 2019. Update procedures were used to roll forward the Total OPEB Liability to August 31, 2020.

The actuarial valuation of the OPEB plan offered through TRS-Care is similar to the actuarial valuation performed for the pension plan, except that the OPEB valuation is more complex. All of the demographic assumptions, including rates of retirement, termination, and disability, and most of the economic assumptions, including general inflation and salary increases, used in the OPEB valuation were identical to those used in the respective TRS pension valuation. The demographic assumptions were developed in the experience study performed for TRS for the period ending August 31, 2017.

The following assumptions used for members of TRS are identical to the assumptions employed in the August 31, 2020 TRS annual pension actuarial valuation:

- Rates of Mortality
- Rates of Retirement
- Rates of Termination
- Rates of Disability
- General Inflation
- Wage Inflation
- Salary Increases

The active mortality rates were based on 90 percent of the RP-2014 Employee Mortality Tables for males and females, with full generational mortality using Scale BB. The post-retirement mortality rates for healthy lives were based on the 2018 TRS of Texas Healthy Pensioner Mortality Tables, with full generational projection using the ultimate improvement rates from the most recently published scale (U-MP).

Health Care Trend Rates

The initial medical trend rates were 9.00 percent for Medicare retirees and 7.30 percent for non-Medicare retirees. There was an initial prescription drug trend rate of 9.00 percent for all retirees. The initial trend rates decrease to an ultimate trend rate of 4.25 percent over a period of 13 years.

Table 9.F.1: Actuarial Methods and Assumptions

Component	Result
Valuation Date	August 31, 2019 rolled forward to August 31, 2020
Actuarial Cost Method	Individual Entry-Age Normal
Inflation	2.30%
Single Discount Rate	2.33% as of August 31, 2020
Aging Factors	Based on plan specific experience
Election Rates	Normal Retirement: 65% participation prior to age 65 and 40% participation after age 65, 25% of pre-65 retirees are assumed to discontinue coverage at age 65
Expenses	Third-party administrative expenses related to the delivery of health care benefits are included in the age-adjusted claims costs.
Salary Increases	3.05% to 9.05%, including inflation
Ad Hoc Post-Employment Benefit Changes	None

G. Discount Rate

A single discount rate of 2.33 percent was used to measure the total OPEB liability. This was a decrease of .30 percent in the discount rate since the previous year. Since the plan is a pay-as-you-go plan, the single discount rate is equal to the prevailing municipal bond rate.

H. Change of Assumptions Since the Prior Measurement Date

The following assumptions, methods and plan changes which are specific to TRS-Care were updated from the prior year's report:

- The discount rate changed from 2.63 percent as of August 31, 2019 to 2.33 percent, as of August 31, 2020. This change increased the Total OPEB Liability.
- The participation rate for post-65 retirees was lowered from 50 percent to 40 percent. This change lowered the Total OPEB Liability.
- The ultimate health care trend assumption was lowered from 4.50 percent to 4.25 percent as a result of Congress' repeal of the excise (Cadillac) tax on high-cost

employer health plans in December 2019. This change lowered the Total OPEB Liability.

I. Change of Benefit Terms Since the Prior Measurement Date

There were no changes in benefit terms since the prior measurement date.

J. Sensitivity of the Net OPEB Liability to the Single Discount Rate Assumption

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, 1.33 percent, or one-percentage point higher, 3.33 percent, than the AA/Aa rate.

Table 9.J.1: Sensitivity of the Net OPEB Liability to the Single Discount Rate Assumption

1% Decrease	Current Single Discount Rate	1% Increase
1.33%	2.33%	3.33%
\$ 45,617,332,072	\$ 38,014,515,883	\$ 32,009,382,286

K. Sensitivity of the Net OPEB Liability to the Healthcare Cost Trend Rate Assumption

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.

Table 9.K.1: Sensitivity of the Net OPEB Liability to the Health Care Cost Trend Rate Assumption

1% Decrease	Current Healthcare Cost Trend Rate	1% Increase
\$ 31,052,989,071	\$ 38,014,515,883	\$ 47,286,285,654

Note 10: Other Post-Employment Benefits (OPEB) Plan - TRS Employees

A. Plan Description

The employees of TRS are provided post-employment health care and basic life insurance benefits through the Texas Employees Group Benefits Program (GBP). The GBP is administered by the board of trustees of the Employees Retirement System (ERS) of Texas and operates under the provisions of the Texas Insurance Code, Chapter 1551. The GBP is a cost-sharing, multiple-employer, post-employment benefit plan with a special funding situation. Benefit and contribution provisions of the plan are authorized by state law and may be amended by the Texas Legislature.

B. Benefits Provided

The Plan covers retired employees of the State and other entities as specified by the State legislature.

Eligibility is limited to retirees:

- with 10 or more years of service credit, and who are at least 65 years of age, or
- when the sum of a member's age and years of service credit equals or exceeds 80, and
- if the individual was employed, as the last state employment before retirement, by a state agency whose employees are authorized to participate in the group benefits program, or
- if the individual retires under the jurisdiction of the Employees Retirement System of Texas or the Teacher Retirement System of Texas

The benefits include a health plan providing medical and prescription drug coverage and \$2,500 of life insurance. A retiree may pay for spouse and dependent coverage as well as coverage for dental, vision, life and dependent life insurance.

C. Contributors to the Plan

Contributors to the plan include state agencies, universities, junior and community colleges, other entities, the State of Texas as the only non-employer contributing entity, active and retired employees and their dependents.

D. Contributions

Employer and employee contribution rates are determined annually by the ERS Board of Trustees based upon the total amount appropriated by the Texas Legislature. The State of Texas is the only non-employer contributing entity in the plan and is required to contribute the cost of the retiree's group health coverage to the plan. Employers are required to contribute 1 percent of base payroll for group health insurance. TRS pays the State contribution for its employees and retirees. For the fiscal year ended August 31, 2020, there are four programs offered by ERS. The table below represents contribution rates for the most prevalent program.

Table 10.D.1: 2020 Contribution Rates Health and Basic Life Premium

Type of Coverage	Employer Pays	Employee Pays
Employee Only	\$ 624.82	\$ —
Employee + Spouse	982.82	358.00
Employee + Children	864.52	239.70
Employee + Family	1,222.52	597.70

TRS covers 100 percent of a member only premium and 50 percent of the additional premium for family coverage. The retiree contributes any premium over and above the system's contribution for additional coverage. The amount of TRS contributions recognized by the OPEB plan during the reporting period was \$8,954,706.

E. OPEB Plan Fiduciary Net Position

The fiduciary net position of the Employees Retirement System of Texas (ERS) and their OPEB plan has been determined using the full accrual basis of accounting and the economic resources measurement focus. For purposes of measuring the Net OPEB Liability, this includes deferred outflow of resources and deferred inflow of resources related to OPEB, OPEB expense, and information about assets, liabilities and additions to and deductions from ERS' fiduciary net position. Benefits and refunds of contributions are recognized when due and payable in accordance with the terms of the plan.

The State Retiree Health Plan is a pay-as-you-go plan and does not accumulate funds in advance of retirement. The ERS Board of Trustees adopted an amendment to the investment policy in August 2017 requiring that all funds be invested in short-term fixed income securities and specified that the expected rate of return on these investments is 2.4 percent.

F. Net OPEB Liability

At August 31, 2020, the amounts recognized by TRS as its proportionate share of the ERS Net OPEB Liability, the related State support and the Total Net OPEB Liability attributable to TRS are disclosed in the following table.

Table 10.F.1: ERS Net OPEB Liability

Components of the ERS OPEB Liability	Amount
TRS' proportionate share of the collective Net OPEB Liability	\$ 104,446,218
State's proportionate share of the collective Net OPEB Liability associated with TRS	N/A*
Total	\$ 104,446,218
*Pursuant to Texas Insurance Code, Sec. 1551.315, TRS paid the State contribution for TRS employees since they were compensated from funds not appropriated in the General Appropriations Act; the State was not allocated any proportionate share of TRS' Net OPEB Liability.	

TRS' portion of the collective Net OPEB Liability at August 31, 2020 was 0.30219368 percent and was based on TRS' employer contributions to the OPEB plan relative to the employer contributions of all employers to the plan for the period September 1, 2018 through August 31, 2019. There was an increase of .01536518 percent in TRS' proportionate share from the prior year of .2868285 percent.

The Net OPEB Liability at August 31, 2020 was based on a measurement date of August 31, 2019, and the Total OPEB Liability used to calculate the Net OPEB Liability was determined by an actuarial valuation as of August 31, 2019.

G. Actuarial Assumptions

Significant assumptions and other inputs used to measure the Total OPEB Liability for the Group Benefits Program (GPB) are disclosed in the following table.

Table 10.G.1: Group Benefits Program Actuarial Methods and Assumptions

Component	Result
Valuation Date	August 31, 2019
Discount Rate	2.97%
Actuarial Cost Method	Entry Age
Amortization Method	Level Percent of Payroll, Open
Amortization Period	30 Years
Asset Valuation Method	N/A
Salary Increases	2.50% to 9.50% including inflation
Inflation	2.50%
Ad Hoc Post-Employment Benefit Changes	None
Annual Healthcare Trend Rates	<u>HealthSelect</u> 7.30% for FY21, 7.40% for FY22, 7.00% for FY23, decreasing 50 basis points per year to an ultimate rate of 4.50% for FY28 and later years
Annual Healthcare Trend Rates	<u>HealthSelect Medicare Advantage</u> 10.80% for FY21, 7.40% for FY22, 7.00% for FY23, decreasing 50 basis points per year to an ultimate rate of 4.50% for FY28 and later years

Projections of the sharing of benefit-related costs are based on an established pattern of practice.

The sources of the mortality assumptions for State Agency Members are:

- For Service Retirees, Survivors and other Inactive Members - The 2017 State Retirees of Texas Mortality table with a 1 year set forward for male CPO/CO members and Ultimate MP Projection Scale projected from the year 2017
- For Disability Retirees - The RP-2014 Disabled Retiree Mortality with Ultimate MP Projection Scale projected from the year 2014
- For Active Members - RP-2014 Active Member Mortality tables with Ultimate MP Projection Scale from the year 2014

The sources of the mortality assumptions for Higher Education Members are:

- For Service Retirees, Survivors and other Inactive Members - Tables based on TRS experience with Ultimate MP Projection Scale from the year 2018
- Disability Retirees - Tables based on TRS experience with Ultimate MP Projection Scale from the year 2018 using a 3 year set forward and minimum mortality rates of 4 per 100 male members and 2 per 100 female members
- Active Members - Sex Distinct RP-2014 Employee Mortality multiplied by 90 percent with Ultimate MP Projection Scale from the year 2014

H. Discount Rate

The discount rate used to measure the Total OPEB Liability was 2.97 percent. The change in the discount rate since the OPEB plan's prior fiscal year-end is a decrease of 0.99 percent (from 3.96 percent to 2.97 percent), in order to reflect the requirements of GASB Statement 74.

Projected cash flows into the plan are equal to projected benefit payments out of the OPEB plan.

The long-term expected rate of return on OPEB plan investments, the assumed asset allocation and the arithmetic versus geometric means are not applicable since the plan operates on a pay-as-you-go basis and is not intended to accumulate assets.

The municipal bond rate was 2.97 percent and the source of the rate is the Bond Buyer Index of general obligation bonds with 20 years to maturity and mixed credit quality. The bonds' average credit quality is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's corporate AA rating.

The periods of projected benefit payments to which the long-term expected rate of return applies is zero years.

I. Sensitivity of the Net OPEB Liability

The sensitivity of the Net OPEB Liability to changes in the healthcare cost trend rate assumptions are disclosed in the following table.

Table 10.I.1: Sensitivity of the Net OPEB Liability to the Healthcare Cost Trend Rate Assumptions

1% Decrease	Current Healthcare Cost Trend Rate	1% Increase
\$ 87,702,565	\$ 104,446,218	\$ 126,326,338

The sensitivity of the Net OPEB Liability to variations in the single discount rate assumption is disclosed in the following table.

Table 10.I.2: Sensitivity of the Net OPEB Liability to the Single Discount Rate Assumption

1% Decrease	Current Healthcare Cost Trend Rate	1% Increase
\$124,636,825	\$104,446,218	\$88,910,279

J. Changes of Assumptions Since the Prior Measurement Date

Demographic Assumptions

The following assumptions have been updated since the previous valuation to reflect recent plan experience and expected trends.

- Percentage of current retirees and retiree spouses not yet eligible to participate in the HealthSelect Medicare Advantage Plan and future retirees and retiree spouses who will elect to participate in the plan at the earliest date at which coverage can commence
- Percentage of future male retirees assumed to be married and electing coverage for their spouse
- Percentage of future retirees and future retiree spouses assumed to use tobacco

Economic Assumptions

Assumed per capita health benefit costs, and health benefit costs and retiree contribution trends have been updated since the previous valuation to reflect recent health plan experience and its effects on short-term expectations.

The discount rate was changed from 3.96 percent to 2.97 percent as a result of requirements by GASB Statement 74 to utilize the yield or index rate for 20-year, tax-exempt general obligation bonds rated AA/Aa (or equivalent) or higher in effect on the measurement date.

The minor benefit changes described below have been reflected in the FY 2020 assumed per capita health benefit costs.

K. Changes of Benefit Terms since prior Measurement Date

The only benefit change for HealthSelect retirees and dependents for whom Medicare is not primary is an increase in the out-of-pocket maximums for both HealthSelect and Consumer Directed HealthSelect effective January 1, 2020. They changed from \$6,650 to \$6,750 for individuals and from \$13,300 to \$13,500 for families in order to remain consistent with Internal Revenue Service maximums.

There were no benefit changes for HealthSelect retirees and the dependents for whom Medicare is primary.

L. OPEB Expense and Deferred Inflow and Outflow of Resources

TRS recognized \$7,734,365 in OPEB expense during fiscal year 2020.

At August 31, 2020, TRS reported its proportionate share of the ERS collective deferred outflow and deferred inflow of resources related to OPEB from the sources listed in the following table.

Category	Deferred Outflow of Resources	Deferred Inflow of Resources
Differences between expected and actual experience	\$ 39,069	\$ (2,485,913)
Changes in assumptions	7,432,881	(20,328,269)
Net difference between projected and actual earnings		
Changes in proportion and differences between employer's contributions and employer's proportionate share of contributions	24,979,266	
Employer contributions subsequent to the measurement date of the ending Net OPEB Liability	\$ 9,628,763	
Total	\$ 42,079,979	\$ (22,814,182)

The OPEB expense that TRS will recognize in future years and the remaining balance of deferred outflow and deferred inflow of resources each year is disclosed in the following table.

Measurement Year Ended August 31,	OPEB Expense Amounts	Balance of Deferred Outflows (Inflows)
2020	\$ 409,830	\$ 9,227,204
2021	409,831	8,817,373
2022	2,686,336	6,131,037
2023	4,217,345	1,913,692
2024	1,913,692	—
Thereafter	—	—
Total	\$ 9,637,034	

M. OPEB Plan Financial Report

ERS issues a publicly available financial report that includes financial statements and required supplementary information for the GBP. The report may be obtained by visiting www.ers.texas.gov, by writing to the Finance Division of the Employees Retirement System of Texas at 200 East 18th Street, Austin, Texas 78701, or by calling 1-877-275-4377.

Note 11: TRS Pension Plan

A. Plan Description

The Teacher Retirement System of Texas (TRS or System or Plan) 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 by the Board of Trustees of TRS. Information regarding the Board and its composition can be found on page 3 or in Note 1.

Benefits are established or amended under the authority of the Texas Constitution, Article XVI, Section 67 and by the Legislature in the Texas Government Code, Title 8, Subtitle C. The Board of Trustees does not have the authority to establish or amend benefits.

B. Benefits Provided

TRS provides retirement, disability, and death benefits. Membership in the Plan includes all employees of public, state-supported educational institutions in Texas who are employed for one-half or more of the standard work load and who are not exempt from membership under Texas Government Code, Title 8, Section 822.002.

State law requires the plan to be actuarially sound in order for the legislature to consider a benefit enhancement, such as a supplemental payment to the retirees.

In May 2019, the 86th Texas legislature approved the TRS Pension Reform Bill (SB12) that provides for gradual contribution increases from the state, participating employers and active employees to make the pension fund actuarially sound. These increases immediately made the pension fund actuarially sound and the legislature approved funding for a 13th check.

All eligible members retired as of December 31, 2018 received an extra annuity check in September 2019 in either the matching amount of their monthly annuity payment or \$2,000, whichever was less.

C. Contributors to the Plan

Contributors to the Plan include active 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.

The number of participating employers during fiscal year 2020 are disclosed in the following table.

Employer Type	Number
Independent School Districts	1,022
Charter Schools (open enrollment only)	187
Community and Junior Colleges	50
Senior Colleges and Universities	48
Regional Service Centers	20
Medical Schools	9
Educational Districts	3
State Agency	1
Total	1,340

Plan membership as of August 31, 2019 is shown in the following table. Because the actuarial valuation was based on a roll forward from fiscal year 2019 (see Section F), the Plan membership counts are as of August 31, 2019.

Pension Plan Member Type	Number
Retired plan members or beneficiaries currently receiving benefits	434,426
Inactive plan members entitled to but not yet receiving benefits	310,716
Active plan members	884,540
Total	1,629,682

The Average Expected Remaining Service Life (AERSL) of 6.2975 years is based on membership information as of the beginning of the fiscal year.

D. Contributions

Contribution requirements are established or amended pursuant to the following state laws:

- 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 it increases the amortization period of TRS' unfunded actuarial liability to greater than 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 the current employer contribution rate times the aggregate annual compensation of all members of the Plan during the fiscal year, reduced by the employer contributions described below.

All participating employers and the State of Texas, as the employer for senior universities and medical schools, are required to pay the employer contribution rate in the following situations:

- On the portion of a 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 or all of an employee's salary is paid by federal, private, local or non-educational and general 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 Plan by type of contributor for the fiscal year 2020.

Table 11.D.1: Contribution Rates and Amounts by Contributor		
Contributor	Contribution Rate	Amount
Member	7.7 %	\$ 3,736,877,464
Non-Employer Contributing Entity (State)	7.5	1,844,999,393
Employers	7.5	1,525,401,297
Total		\$ 7,107,278,154

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

- All public schools, charter schools and regional education service centers must contribute 1.5 percent of the member's salary beginning in fiscal year 2020, gradually increasing to 2 percent in fiscal year 2025.
- When employing a retiree of TRS, the employer shall pay an amount equal to the member contribution and the state contribution as an employment after retirement surcharge.

Employer surcharges paid for the fiscal year 2020 are shown below.

Table 11.D.2: Employer Surcharges

Surcharge	Rate	Amount
Public Education Employers	1.5 %	\$ 461,074,239
Employment after Retirement - Employer	7.5	14,071,826
Employment after Retirement - Employee	7.7	15,934,274
Total		\$ 491,080,339

The current and future contribution rates are shown below.

Table 11.D.3: Contribution Rates by Contributor

Fiscal Year	State	Public Education Employer	Active Employee
2020	7.50 %	1.50 %	7.70 %
2021	7.50	1.60	7.70
2022	7.75	1.70	8.00
2023	8.00	1.80	8.00
2024	8.25	1.90	8.25
2025	8.25	2.00	8.25

E. Net Pension Liability

Components of the Net Pension Liability of the Plan as of August 31, 2020 are disclosed below.

Table 11.E.1: Net Pension Liability

Components of Liability	Amount
Total Pension Liability	\$ 218,974,205,084
Less: Plan Fiduciary Net Position	(165,416,245,243)
Net Pension Liability	\$ 53,557,959,841
Net Position as Percentage of Total Pension Liability	75.54 %

F. Actuarial Methods and Assumptions

Roll Forward

The actuarial valuation was performed as of August 31, 2019. Update procedures were used to roll forward the total pension liability to August 31, 2020.

The total pension liability is determined by an annual actuarial valuation. The actuarial methods and assumptions were 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 were primarily based on a study of actual experience for the three year period ending August 31, 2017 and were adopted in July 2018.

The active mortality rates were based on 90 percent of the RP 2014 Employee Mortality Tables for males and females with full generational mortality. The post-retirement mortality rates for healthy lives were based on the 2018 TRS of Texas Healthy Pensioner Mortality Tables with full generational projection using the ultimate improvement rates from the most recently published projection scale U-MP.

The long-term expected rate of return on pension plan investments is 7.25 percent. The long-term expected rate of return on plan investments was determined using a building-block method in which best-estimate 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 System's target asset allocation as of August 31, 2019 are summarized in Note 3.

The following table discloses the assumptions that were applied to this measurement period.

Table 11.F.1: Actuarial Methods and Assumptions

Component	Result
Valuation Date	August 31, 2019 rolled forward to August 31, 2020
Actuarial Cost Method	Individual Entry Age Normal
Asset Valuation Method	Market Value
Single Discount Rate	7.25%
Long-term Expected Rate	7.25%
Municipal Bond Rate as of August 2020	2.33% - 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"
Last year ending August 31 in Projection Period (100 years)	2119
Inflation	2.30%
Salary Increases	3.05% to 9.05% including inflation
Ad hoc post-employment benefit changes	None

The actuarial assumptions used in the determination of the total pension liability are the same assumptions used in the actuarial valuation as of August 31, 2019. For a full description of these assumptions please see the actuarial valuation report dated November 14, 2019

G. Discount Rate

A single discount rate of 7.25 percent was used to measure the total pension liability. The single discount rate was based on the expected rate of return on plan investments of 7.25 percent. The projection of cash flows used to determine this single discount rate assumed that contributions from active members, employers and the non-employer contributing entity will be made at the rates set by the Legislature during the 2019 legislative session. It is assumed that future employer and state contributions will be 8.50 percent of payroll in fiscal year 2020 gradually increasing to 9.55 percent of payroll over the next several years. This includes all employer and state contributions for active and rehired retirees.

Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected 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.

H. Change of Assumptions Since the Prior Measurement Date

There were no changes in assumptions since the prior measurement date.

I. Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption

The following table presents the net pension liability of the plan using the discount rate of 7.25 percent, and what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.25 percent) or one percentage point higher (8.25 percent) than the current rate.

Table 11.I.1: Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption		
1% Decrease	Current Single Discount Rate	1% Increase
6.25%	7.25%	8.25%
\$ 82,585,415,626	\$53,557,959,841	\$29,973,787,965

J. Deferred Retirement Option Program

The Deferred Retirement Option Plan (DROP) was closed to new members on December 31, 2005. The Plan was available for active members who were

eligible for normal age retirement with at least 25 years of credited service. Participation options were in 12-month increments for up to five years. For detailed information on the Plan, see the Summary of Benefits section. The balance in the DROP reserve account at August 31, 2020 was \$2,600,898.

K. Funding Progress

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 12: 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, regional 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 13: Component Units

A. Description

Teacher Retirement Investment Company of Texas, Ltd. (TRICOT) is a limited liability corporation organized under United Kingdom (UK) law 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 and increasing 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 fiscal year-end of August 31.

B. Criteria for Inclusion as a Component Unit

TRS used the following criteria and determined TRICOT to be a component unit according to GASB 14, as modified by GASB 39 and 61:

- 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.
- 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 TRICOT's financial statements should be addressed to:

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

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Required Supplementary Information

Pension Trust Fund

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Schedule of Changes in the Employers' Net Pension Liability and Related Ratios**Pension Trust Fund**

For the Fiscal Years Ended August 31

Last Ten Fiscal Years*

(Dollars in Thousands)

	2020	2019	2018	2017
Total Pension Liability				
Service Cost	\$ 5,651,647	\$ 5,642,075	\$ 4,654,171	\$ 4,489,046
Interest on the Total Pension Liability	15,014,048	14,267,256	14,109,277	13,515,486
Benefit Changes	—	588,828	—	—
Differences between Expected and Actual Experience	(259,157)	(982,694)	—	(969,831)
Changes of Actuarial Assumptions	—	(7,425,279)	22,106,679	700,880
Benefit Payments	(10,972,292)	(11,253,729)	(10,172,997)	(9,775,775)
Refunds of Member Accounts	(421,366)	(486,461)	(422,336)	(420,421)
Net Change in Total Pension Liability	\$ 9,012,880	\$ 349,996	\$ 30,274,794	\$ 7,539,385
Beginning Total Pension Liability	\$ 209,961,325	\$ 209,611,329	\$ 179,336,535	\$ 171,797,150
Ending Total Pension Liability (a)	\$ 218,974,205	\$ 209,961,325	\$ 209,611,329	\$ 179,336,535
Plan Fiduciary Net Position				
Employer Contributions	\$ 2,016,482	\$ 1,761,822	\$ 1,671,257	\$ 1,588,309
Member Contributions	3,736,877	3,482,870	3,360,773	3,242,556
Non-Employer Contributing Entity Contributions	1,844,999	1,737,852	1,715,785	1,697,963
Net Investment Income***	11,032,131	7,669,029	11,242,814	17,079,807
Benefit Payments	(10,972,292)	(11,253,729)	(10,172,997)	(9,775,775)
Refunds of Member Accounts	(421,366)	(486,461)	(422,336)	(420,421)
Administrative Expenses	(67,136)	(60,486)	(64,926)	(44,190)
Other	268,351	558,400	(123,390)	(14,964)
Net Change in Plan Fiduciary Net Position**	\$ 7,438,046	\$ 3,409,297	\$ 7,206,980	\$ 13,353,285
Beginning Plan Fiduciary Net Position	\$ 157,978,199	\$ 154,568,902	\$ 147,361,922	\$ 134,008,637
Ending Plan Fiduciary Net Position (b)	\$ 165,416,245	\$ 157,978,199	\$ 154,568,902	\$ 147,361,922
Ending Net Pension Liability (a)-(b)	\$ 53,557,960	\$ 51,983,126	\$ 55,042,427	\$ 31,974,613

*Schedule is presented on a prospective basis in accordance with GASB 67, paragraph 50.

**Prior period adjustment is reported in Net Change in Plan Fiduciary Net Position.

***Excludes Securities Lending, which is reported in Other.

(Continued)

2016	2015	2014
\$ 4,392,077	\$ 4,225,449	\$ 3,965,994
12,896,571	12,555,646	11,813,446
—	—	—
373,669	(1,588,619)	482,639
—	(1,474,724)	2,028,541
(9,379,123)	(8,935,112)	(8,548,643)
(373,419)	(391,341)	(410,600)
\$ 7,909,775	\$ 4,391,299	\$ 9,331,377
\$ 163,887,375	\$ 159,496,076	\$ 150,164,699
\$ 171,797,150	\$ 163,887,375	\$ 159,496,076
\$ 1,483,390	\$ 1,377,973	\$ 984,552
2,943,669	2,576,024	2,357,686
1,675,631	1,591,483	1,530,624
9,193,281	(412,759)	19,434,430
(9,379,123)	(8,935,112)	(8,548,643)
(373,419)	(391,341)	(410,600)
(44,403)	(35,557)	(41,904)
(29,095)	(11,248)	84,954
\$ 5,469,931	\$ (4,240,537)	\$ 15,391,099
\$ 128,538,706	\$ 132,779,243	\$ 117,388,144
\$ 134,008,637	\$ 128,538,706	\$ 132,779,243
\$ 37,788,513	\$ 35,348,669	\$ 26,716,833

Schedule of the Net Pension Liability
Pension Trust Fund
For the Fiscal Years Ended August 31
Last Ten Fiscal Years*

Fiscal Year	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2014	\$ 159,496,075,886	\$132,779,243,085	\$ 26,716,832,801	83.25 %	\$ 36,654,290,800	72.89 %
2015	163,887,375,172	128,538,706,212	35,348,668,960	78.43	38,448,124,045	91.94
2016	171,797,150,487	134,008,637,473	37,788,513,014	78.00	40,742,826,333	92.75
2017	179,336,534,819	147,361,922,120	31,974,612,699	82.17	42,111,120,273	75.93
2018	209,611,328,793	154,568,901,833	55,042,426,960	73.74	43,646,405,156	126.11
2019	209,961,325,288	157,978,199,075	51,983,126,213	75.24	45,232,074,364	114.93
2020	218,974,205,084	165,416,245,243	53,557,959,841	75.54	48,530,876,156	110.36

*This schedule is presented on a prospective basis in accordance with GASB 67, paragraph 50

Schedule of Employer and Non-Employer Contributing Entity Actuarially Determined Contributions (ADC)
Pension Trust Fund

For the Fiscal Years Ended August 31

Fiscal Year	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
2018	3,426,242,805	3,387,041,853	39,200,952	43,646,405,156	7.76
2019	4,288,000,650	3,499,674,404	788,326,246	45,232,074,364	7.74
2020	4,527,930,745	3,861,481,029	666,449,716	48,530,876,156	7.96

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

Notes to the Schedule of Actuarially Determined Contributions

Valuation Date	August 31, 2019 (to determine contribution rate for fiscal year ending August 31, 2020)
Notes	Actuarially determined contribution rates are calculated as of August 31 of the preceding fiscal year. Members and employers contribute based on statutorily fixed rates.

Methods and Assumptions Used to Determine Contribution Rates

Component	Result
Actuarial Cost Method	Individual Entry Age Normal actuarial cost method
Amortization Method	Level Percentage of Payroll, Floating
Remaining Amortization Period	29 years based on increased employer and member contribution rates enacted during the 2019 legislative session
Asset Valuation Method	5 year smoothed market
Inflation	2.30%
Salary Increases	3.05% to 9.05%, including inflation
Investment Rate of Return	7.25%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2018 valuation pursuant to an experience study conducted for the period ending on August 31, 2017.
Mortality	The active mortality rates were based on 90% of the RP-2014 Employee Mortality Tables for males and females with full generational mortality. Post-Retirement: The post-retirement mortality rates for healthy lives were based on the 2018 TRS of Texas Healthy Pensioner Mortality Tables, with full generational projection using the ultimate improvement rates from the most recently published projected scale "U-MP".
Benefit Improvements	None
Benefit Changes	None

Schedule of Investment Returns

Annual Money-Weighted Rate of Return, Net of Investment Expense

Pension Trust Fund

For the Fiscal Years Ended August 31

Last Ten Fiscal Years

2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
7.2 %	5.1 %	7.8 %	13.0 %	7.3 %	(0.3)%	16.9 %	9.0 %	7.4 %	15.6 %

Schedule of Employer's (TRS) Proportionate Share of ERS' Net OPEB Liability

Pension Trust Fund

For the Fiscal Years Ended August 31

Last Ten Fiscal Years*

Fiscal Year	Employer's (TRS) Proportionate Share of Collective Net OPEB Liability	Employer's (TRS) Proportionate Share of Collective Net OPEB Liability %	Employer's (TRS) Covered Employee Payroll	Employer's Proportionate Share of Collective Net OPEB Liability as a % of Employer's (TRS) Covered Employee Payroll	ERS Fiduciary Net Position as a % of Total OPEB Liability
2018	\$ 81,850,260	0.2402202 %	\$ 53,125,065	154.07 %	2.04 %
2019	85,009,492	0.2868285	60,679,696	140.10	1.27
2020	104,446,218	0.3021937	67,365,146	155.04	0.17

The amounts presented above are as of the measurement date of the collective Net OPEB Liability for the respective fiscal year.

*This schedule will ultimately contain 10 years of information. Additional years will be presented on a prospective basis in accordance with GASB 75, paragraph 245.

Schedule of Employer's (TRS) Contributions to ERS' OPEB Plan

Pension Trust Fund

For the Fiscal Years Ended August 31

Last Ten Fiscal Years*

Fiscal Year	Statutory Employer (TRS) Contributions**	Actual Employer (TRS) Contributions***	Contributions Deficiency (Excess)	Employer's (TRS) Covered Employee Payroll	Employer (TRS) Contributions as a % of Covered Employee Payroll
2018	\$ 2,251,441	\$ 2,251,441	\$ —	\$ 53,125,065	4.24 %
2019	8,954,706	8,954,706	—	60,679,696	14.76
2020	9,628,763	9,628,763	—	67,365,146	14.29

The amounts presented above are as of the employer's most recent fiscal year end.

*This schedule will ultimately contain 10 years of information. Additional years will be presented on a prospective basis in accordance with GASB 75, paragraph 245.

**ERS excluded Active Employee Health Insurance Contributions in fiscal year 2018 only.

***Contributions are not based on a measurement of pay.

Schedule of Changes in Employers' Net OPEB Liability and Related Ratios**TRS-Care**

For the Fiscal Years Ended August 31

Last Ten Fiscal Years*

(Dollars in Thousands)

	2020	2019	2018	2017**
Total OPEB Liability				
Service Cost	\$ 2,580,691	\$ 2,306,961	\$ 2,284,418	\$ 4,312,406
Interest on the Total OPEB Liability	1,304,452	1,904,512	1,524,880	2,356,367
Changes of Benefit Terms	—	—	—	(18,610,363)
Differences between Expected and Actual Experience	(11,973,222)	(7,950,584)	2,979,259	(1,027,634)
Changes of Actuarial Assumptions	64,950	2,133,219	936,862	(19,563,767)
Benefit Payments	(549,284)	(540,351)	(881,714)	(995,486)
Net Change in Total OPEB Liability	\$ (8,572,413)	\$ (2,146,243)	\$ 6,843,705	\$ (33,528,477)
Beginning Total OPEB Liability	\$ 48,583,247	\$ 50,729,490	\$ 43,885,785	\$ 77,414,262
Ending Total OPEB Liability (a)	\$ 40,010,834	\$ 48,583,247	\$ 50,729,490	\$ 43,885,785
Plan Fiduciary Net Position				
Employer Contributions	\$ 324,974	\$ 305,363	\$ 296,098	\$ 215,361
Non-Employer Contributing Entity Contributions	666,588	482,056	789,870	324,662
Member Contributions	243,532	227,338	221,325	213,241
Net Investment Income	25,537	25,047	10,127	4,697
Benefit Payments ****	(549,284)	(540,351)	(881,714)	(995,486)
Administrative Expense	(7,069)	(6,006)	(6,672)	(4,954)
Other	18	—	(29,995)	529
Net Change in Plan Fiduciary Net Position***	\$ 704,296	\$ 493,447	\$ 399,039	\$ (241,950)
Beginning Plan Fiduciary Net Position	\$ 1,292,022	\$ 798,575	\$ 399,536	\$ 641,486
Ending Plan Fiduciary Net Position (b)	\$ 1,996,318	\$ 1,292,022	\$ 798,575	\$ 399,536
Ending Net OPEB Liability (a)-(b)	\$ 38,014,516	\$ 47,291,225	\$ 49,930,915	\$ 43,486,249

*Total OPEB liability is presented on a prospective basis in accordance with GASB 74, paragraph 62.

**2017 was revised due to an amended GASB 74 report.

***Prior period adjustment is reported in Net Change in Plan Fiduciary Net Position.

****Benefit Payments are shown net of Health Care Premiums paid by Retirees

Schedule of the Net OPEB Liability

TRS-Care

For the Fiscal Years Ended August 31

Last Ten Fiscal Years*

Fiscal Year	Total OPEB Liability	Plan Net Position	Net OPEB Liability	Plan Net Position as a % of Total OPEB Liability	Covered Payroll	Net OPEB Liability as a % of Covered Payroll
2017	\$ 43,885,784,621	\$ 399,535,986	\$ 43,486,248,635	0.91 %	\$ 32,806,335,231	132.55 %
2018	50,729,490,103	798,574,633	49,930,915,470	1.57	34,050,058,000	146.64
2019	48,583,247,239	1,292,022,349	47,291,224,890	2.66	34,975,146,769	135.21
2020	40,010,833,815	1,996,317,932	38,014,515,883	4.99	37,466,480,000	101.46

*This schedule is presented on a prospective basis in accordance with GASB 74, paragraph 62.

Other Supplementary Information

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Schedule 1**Schedule of Administrative and Investing Activity Expenses****All Funds**

For the Fiscal Year Ended August 31, 2020

	Pension Trust Fund	
	Benefits	Investments
Administrative Expenses		
Personnel Services		
Salaries and Wages	\$ 31,366,860	\$ 56,461,931
Payroll Related Costs	608,583	3,873,079
Total Personnel Services	\$ 31,975,443	\$ 60,335,010
Total Professional Fees and Services	\$ 6,537,419	\$ 3,212,615
Other Operating Expenses		
Travel	\$ 150,305	\$ 813,674
Materials and Supplies		
Consumable Supplies and Fuels	201,218	71,404
Subscriptions and Reference Information	1,199,712	1,019,027
Postage, Mailing and Delivery Services	2,301,422	106,908
Furniture and Equipment - Expensed	361,617	1,122,925
Communications and Utilities	803,628	1,122,499
Repairs and Maintenance		
Software Purchases and Maintenance	1,844,318	2,703,911
Computer Hardware Maintenance	129,056	1,265,761
Buildings and Equipment Maintenance	875,878	652,292
Rentals and Leases	374,584	4,268,661
Printing and Reproduction	114,780	56,474
Depreciation Expense	2,636,125	38,378
Amortization Expense	10,299,336	—
Gain/Loss on Capital Assets	—	—
Other Expenses		
Dues, Fees And Staff Development	143,338	280,288
Insurance Premiums	272,839	410,882
Miscellaneous Expenses	6,914,860	1,802,432
Total Other Operating Expenses	\$ 28,623,016	\$ 15,735,516
Total Administrative Expenses	\$ 67,135,878	\$ 79,283,141

(Continued)

TRS-Care	TRS-ActiveCare	Total
\$ 2,279,916	\$ 1,834,500	\$ 91,943,207
636,255	309,932	5,427,849
\$ 2,916,171	\$ 2,144,432	\$ 97,371,056
\$ 2,056,684	\$ 978,464	\$ 12,785,182
\$ 47,632	\$ 19,049	\$ 1,030,660
33,016	2,969	308,607
82,943	31,604	2,333,286
502,701	6	2,911,037
88,843	32,520	1,605,905
90,667	49,317	2,066,111
238,647	88,640	4,875,516
110,996	41,227	1,547,040
77,765	29,016	1,634,951
79,908	9,287	4,732,440
18,435	336	190,025
—	—	2,674,503
—	—	10,299,336
—	—	—
47,132	23,440	494,198
35,786	13,296	732,803
641,279	282,582	9,641,153
\$ 2,095,750	\$ 623,289	\$ 47,077,571
\$ 7,068,605	\$ 3,746,185	\$ 157,233,809

Schedule 1**Schedule of Administrative and Investing Activity Expenses****All Funds**

For the Fiscal Year Ended August 31, 2020

	Pension Trust Fund	
	Benefits	Investments
Investment Fees		
Bank Fees	\$ —	\$ 8,222,073
Research Fees	—	8,853,740
External Manager Fees*	—	97,923,122
External Legal and Other Fees	—	6,030,055
External Custodial Fees	—	22,000,000
Total Investment Fees	\$ —	\$ 143,028,990
Total Administrative Expenses and Investment Fees**	\$ 67,135,878	\$ 222,312,131

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

** Pension Trust Fund - Investments reported as Investing Activity Expenses under Investment Income on Exhibit II.

(Continued)

TRS-Care	TRS-ActiveCare	Total	
\$ —	\$ —	\$ 8,222,073	
—	—	8,853,740	
—	—	97,923,122	
—	—	6,030,055	
—	—	22,000,000	
\$ —	\$ —	\$ 143,028,990	
\$ 7,068,605	\$ 3,746,185	\$ 300,262,799	

Schedule 2**Schedule of Professional and Consulting Services****All Funds**

For the Fiscal Year Ended August 31, 2020

	Amount		Amount
Consulting Services		Investment Research Fees	
Provaliant Holdings LLC	\$ 1,013,040	Wolfe Advisors LP	\$ 1,200,000
Addison Prof Financial Search LLC	227,620	JP Morgan Securities	1,109,294
Cornerstone On Demand Inc	126,148	Macquarie Group	980,156
CBRE Inc	94,154	Credit Suisse	965,380
Focus Consulting Group Inc	87,583	Jefferies & Company	432,401
Reengine Consulting LLC	83,765	Exane BNP	427,662
Square One Consultants Inc	79,557	Sanford Bernstein	350,000
International Center for Management	77,000	Bank of America Merrill Lynch	346,303
Rhyan Technology Services LLC	48,612	HSBC Bank	333,016
CEB Inc	19,880	Nomura Group	250,000
Raba Kistner Inc	17,800	Green Street Advisors	215,000
Guidehouse LLP	17,428	CLSA Limited	200,288
Troy L Coleman PHD Inc	17,127	Evercore ISI	187,500
Integro Inc	11,166	Deutsche Bank	185,747
Total Consulting Services	\$ 1,920,880	SMBC Nikko	166,139
Financial & Accounting Services		Kepler Cheuvreux	155,397
Gabriel Roeder Smith & Company	\$ 962,099	RS Energy Group Research	127,500
Ernst & Young LLP	608,387	Raymond James	122,627
Segal Company (Southeast) Inc	607,833	Robert W Baird	111,821
Deloitte Consulting LLP	551,990	GLG Research	90,000
Texas State Auditor's Office	289,000	Gartner Research	75,000
Gallagher Benefit Services Inc	124,136	Grupo Santander	65,140
CEM Benchmarking Inc	120,000	Cornerstone Macro	62,500
Milliman Inc	88,000	BCA Research	62,500
Grant Thornton LLP	54,880	BMO Capital Markets	62,500
Myers and Stauffer LC	46,692	Keefe, Bruyette & Woods	62,500
Total Financial & Accounting Services	\$ 3,453,017	Redburn (Europe) Limited	62,500
Investment Consulting Services		KeyBanc Capital Markets	58,256
Albourne	\$ 1,319,600	Stifel Nicolaus & Co.	54,965
AON Hewitt Consulting Services	1,261,900	RBC Capital Markets	51,126
Allied Consultants Inc	150,554	Reorg Americas	45,000
Keith C Brown	80,000	Piper Jaffray	43,764
Total Investment Consulting Services	\$ 2,812,054	Zelman & Associates	37,500
IT Consulting Services		The Leuthold Group	32,000
Perspecta Inc	\$ 2,629,244	Empirical Research Partners	25,000
Neos Consulting Group LLC	1,310,903	Yardeni Research	25,000
Advanced Call Center Tech LLC	579,665	Berenberg Capital Markets	24,758
Catapult Systems LLC	398,223	Renaissance Macro	15,000
Apex Systems Inc	333,343	BTG Pactual	12,500
Talend Inc	136,850	Institutional Research	12,500
Presidio Networked Sol Group LLC	39,161	Total Investment Research Fees	\$ 8,846,240
GTS Technology Solutions Inc	32,089	Legal Services	
Andisites Inc	10,000	Norton Rose Fulbright US LLP	\$ 908,943
Total IT Consulting Services	\$ 5,469,478	Seyfarth Shaw LLP	799,153
		Morgan Lewis & Bockius LLP	795,652

(Continued)

	Amount		Amount
Foster Pepper PLLC	699,112	Temporary Employment Services	
Jackson Walker LLP	547,376	TEKsystems Inc	\$ 555,350
Foley & Lardner LLP	297,458	Robert Half	418,133
Katten Muchin Rosenman LLP	275,222	State Street Bank	396,837
DLA Piper LLP US	257,894	Kforce	252,975
Ice Miller LLP	171,328	Horizons HRS LLC	200,190
Purrington Moody Weil LLP	136,130	V-Soft Consulting Group Inc	187,150
Cohen Milstein Sellers & Toll PLLC	98,723	Mitchell Martin	82,753
Reinhart Boerner Van Deuren SC	72,748	SOAL Technologies LLC	81,048
BLA Schwartz PC	64,279	Accountemps	79,746
Simpson Thacher & Bartlett LP	40,694	Office Team	66,597
Goodwin Procter LLP	15,791	The Computer Merchant	66,500
Debevoise & Plimpton	11,400	Total Temporary Employment Services	\$ 2,387,279
Total Legal Services	\$ 5,191,903		
Medical Services			
Alice D Cox MD	\$ 44,000	Total Professional and Consulting Services	\$ 31,976,864
Brian Buck MD	44,000		
David E Rothschild MD	44,000		
Total Medical Services	\$ 132,000		
Other Professional Services			
Valuation Research Corporation	\$ 265,845		
International Business Machines Corp	256,753		
Studio8 Architects Inc	178,003		
Coaching By Cornerstone	105,640		
University of Texas - Austin	86,240		
Texas A&M University	58,493		
American Realty Project Mgmt LLC	52,381		
Perkins+Will Inc	42,194		
Leanne Lowish Consulting	31,394		
HR Legal Search LLC	30,000		
Jordan-Markham Executive Coaching	27,600		
Horizons Southwest Management LP	21,233		
QVerity Inc	20,458		
Workers Assistance Program Inc	15,780		
LinkedIn Corporation	14,707		
SHI Government Solutions Inc	11,850		
S C Gatton & Associates Inc.	10,144		
Aggregate Payees less than \$10,000	125,413		
Total Other Professional Services	\$ 1,354,128		
Research Services			
AeroTek	\$ 351,205		
Info-Tech Research Group Inc	58,680		
Total Research Services	\$ 409,885		

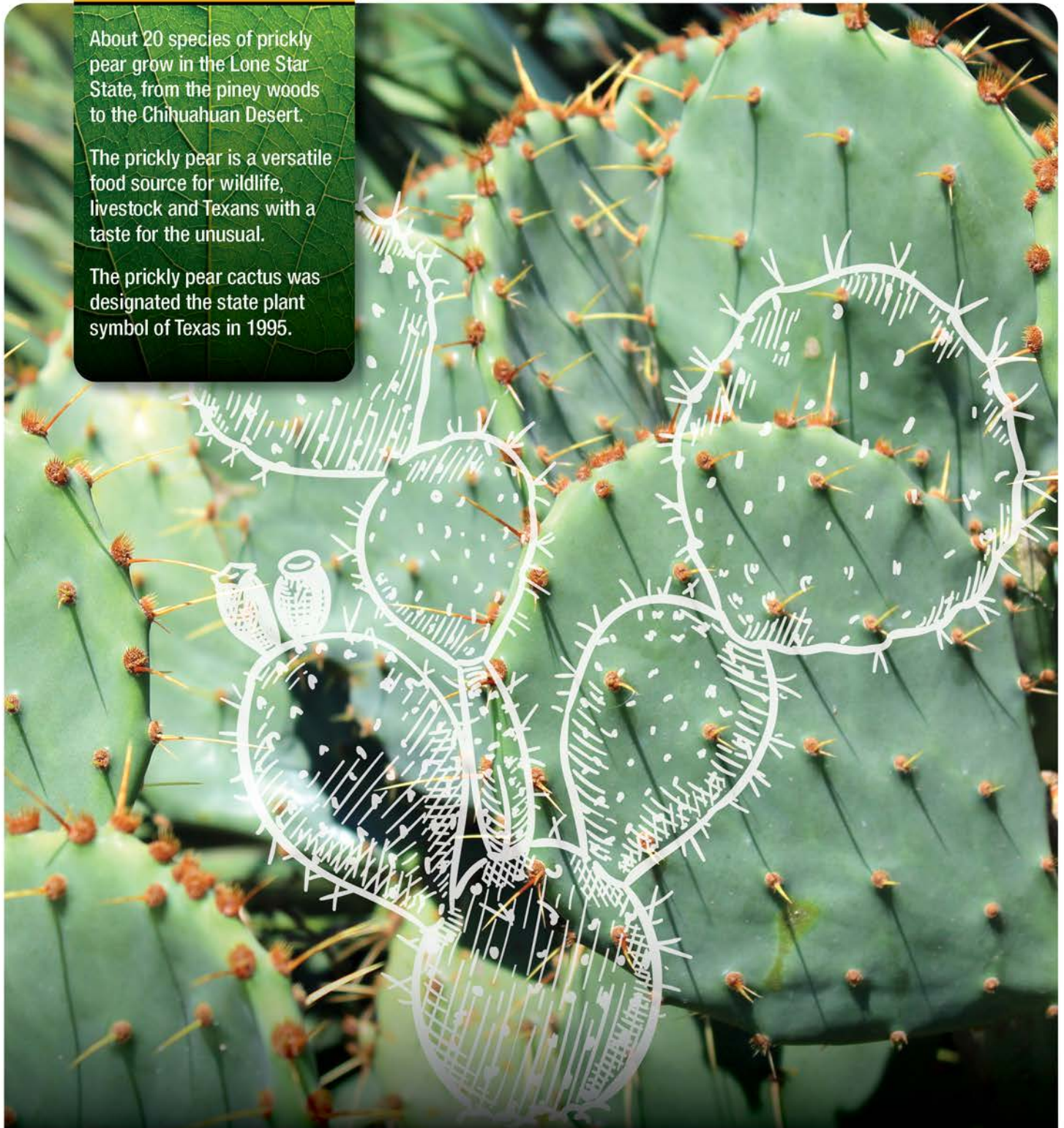
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Prickly Pear

About 20 species of prickly pear grow in the Lone Star State, from the piney woods to the Chihuahuan Desert.

The prickly pear is a versatile food source for wildlife, livestock and Texans with a taste for the unusual.

The prickly pear cactus was designated the state plant symbol of Texas in 1995.



1,828,780!



THIS IS HOW MANY MEMBER DOCUMENTS TRS' RECORDS & INFORMATION MANAGEMENT IMAGING TEAM PROCESSED THIS PAST YEAR.



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Fiscal Year 2020 presented the TRS Pension Fund (Trust) with unprecedented challenges due to the global COVID-19 pandemic. The first quarter of 2020 was a period of historically high volatility in the markets that resulted in a drawdown for the S&P 500 and the Trust. At the end of the first quarter, March 31, 2020, the S&P 500 was down -19.6% while the TRS Pension Fund only dropped -8.3%, a direct result of TRS' diversified portfolio. Despite an adverse impact to the economy and recessionary conditions, global markets staged a historic recovery throughout the final months of FY2020, and the Trust returned 7.24% for year ended August 31, 2020, on target with the 7.25% investment return assumption. As a result, the total investment value of the fund as of August 31, 2020 stood at \$164.6 billion, a \$7.2 billion increase over last year, net of benefit payments. Annual rates of return for the 5-year and 10-year periods ending August 31, 2020, were 8.1% and 8.8%, respectively. Investment performance is independently calculated using a time-weighted rate of return by State Street Bank and Trust Company, the fund's custodian bank, using industry best practices.

In FY2020, the TRS Investment Management Division (IMD) completed an extensive process to implement the TRS Board of Trustees' approved recommendations to the Trust's Strategic Asset Allocation. The implementation refined the Strategic Asset Allocation to make it more balanced and efficient through increased allocations to Private Markets as well as the increased use of Risk Parity and Asset Allocation Leverage. TRS' long-term investment strategy is centered on a broad diversification of assets so the total portfolio can weather volatile market conditions such as those recently brought on during the COVID-19 pandemic. The current mix of public, private, U.S. and international assets along with active and passive asset management provided the fund much needed diversification while preserving the flexibility to quickly capitalize on changing conditions. Given the high level of uncertainty driven by the economic slowdown, TRS's investment division also took multiple protective measures by re-prioritizing and focusing on liquidity, portfolio rebalancing, risk mitigation (especially those that might demand capital) and identifying new opportunities.

The Build the Fleet and Reduce Investment Fees initiative also continued its efforts through FY2020 despite the challenges presented by COVID-19. While the original goal of hiring 120 investor and operational support positions remains unchanged, the expected duration of the program was extended from a FY2023 completion to FY2025. Since the inception of this initiative, TRS hired an additional 42 investment professionals, bolstering TRS's capability to increase direct principal investments and significantly lower management fees and carried interest that would have otherwise been incurred using external managers.

On the Private Markets side, a slowdown in market activity due to the pandemic has temporarily impeded IMD's ability to achieve 2020 investment goals. The IMD initially set a goal for 2020 of committing \$2.8 billion to Private Equity opportunities, \$2.0 billion to Energy, Natural Resources and Infrastructure investments, and \$4.2 billion to Real Estate. In light of the current market conditions, IMD's Private Markets investment teams continue to carefully source and perform due diligence on select deals that will be accretive to Trust performance in this environment. The teams also completed deep dive reviews on all assets with adverse exposure to the current environment and continue close monitoring. The current Private Markets component of the asset allocation comprised 33% of the Trust and as of August 31, 2020 was valued at \$54.2 billion with a return of 0.7% for the current year.

In Public Markets, IMD's investment portfolios endured a historic market drawdown event and subsequently benefitted from the fastest recovery on record. Among the Trust's more defensive Stable Value assets, the \$23.7 billion Government Bonds portfolio returned 12.9% for the fiscal-year ended August 31, 2020. Global stock markets increased sharply since the market trough in March, and the Trust's Public Equity investments had a positive return of 11.9% for the year. Within the portfolio, US Equities and Emerging Markets Equities had a

particularly strong year, returning 13.4% and 15.4%, respectively. The Trust asset allocation had 41.3% in Public Equity investments valued at \$67.9 billion as of August 31, 2020, including over \$30 billion in internally-managed strategies.

TRS continues to develop ongoing relationships with emerging managers as an additional diversification component for the Trust's long-term growth. Since inception, \$4.4 billion has been committed with funds under four major asset classes. The team began implementation of Emerging Manager Select, a \$1 billion program with increased allocations to two existing Emerging Managers within Real Estate. This capital will promote and strengthen the relationships with these managers as they transition from the Emerging Manager Program (EMP) into the main Trust.

The IMD Risk and Portfolio Management (RPM) Team played a critical role in navigating the Trust through this year's volatile market conditions by successfully managing liquidity and applying several risk mitigation measures. Throughout the turbulent market conditions, the RPM team was able to monitor the Trust's intraday cash needs and impacts on a real time basis, ultimately protecting TRS' ability to ensure ongoing delivery of benefits to its members. Throughout FY2020, the RPM Group also further developed and integrated the capability to produce dynamic data to enhance portfolio management decision making that is useful to manage the Trust through high risk events such as the COVID-19 pandemic. Due to the significant market volatility and shock event to financial markets, the Risk Parity portfolio struggled in the second half of FY2020, resulting in a return of -1.9% for FY2020. TRS will continue to conscientiously and prudently manage the Trust for the long-term financial interest of the members we serve. If we can provide you with additional information on the Trust's performance, please let us know.

Prepared by:
Investment Staff of the System

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Report on Investment Activities

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A. Investment Policy

The Board of Trustees (Board) has the primary fiduciary responsibility for investing the Teacher Retirement System of Texas (TRS or System) 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, an Investment Management Committee of the Board and a Risk Management Committee of the Board, 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 IMD 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 percent; 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 54 percent to Global Equity markets, which should perform well under Scenario One, 21 percent to Real Return, which should perform well in Scenario Two, 21 percent to a Stable Value portfolio, which should perform well and minimize downside risk in Scenario Three, and 8 percent to the Risk Parity strategy, which has a balanced exposure to all three economic scenarios.

C. Asset Allocation

The normal portfolio mix represents the portfolio that is expected to meet the Board's actuarial return objectives for the Pension Trust Fund 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, the System's 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, 2020. A reconciliation to fair value is provided following Table 1.

Table 1: Asset Allocation as of August 31, 2020

Asset Class	Policy Range			Actual Value	
	Minimum Range	Maximum Range	Target	Market Value	% of Total Fund
Global Equity					
Public Equity					
USA	13 %	23 %	18 %	\$ 29,891,445,394	18.2 %
Non-US Developed	8	18	13	22,899,071,492	13.9
Emerging Markets	4	14	9	15,132,251,309	9.2
Private Equity	9	19	14	23,926,520,448	14.5
Total Global Equity	47 %	61 %	54 %	\$ 91,849,288,643	55.8 %
Stable Value					
Government Bonds	— %	21 %	16 %	\$ 23,680,390,453	14.4 %
Stable Value Hedge Funds	—	10	5	8,219,074,368	5.0
Absolute Return	—	20	—	6,052,166,750	3.7
Total Stable Value	14 %	28 %	21 %	\$ 37,951,631,571	23.1 %
Real Return					
Real Estate	10 %	20 %	15 %	\$ 22,023,052,723	13.4 %
Energy, Natural Resources & Infrastructure	1	11	6	8,224,730,641	5.0
Commodities	—	5	—	342,168,423	0.2
Total Real Return	14 %	28 %	21 %	\$ 30,589,951,787	18.6 %
Total Risk Parity	0 %	13 %	8 %	\$ 13,255,957,133	8.1 %
Asset Allocation Leverage					
Cash	— %	7 %	2 %	\$ 2,545,971,089	1.5 %
Asset Allocation Leverage	—	—	(6)	(11,551,276,554)	(7.0)
Net Asset Allocation Leverage			(4)%	\$ (9,005,305,465)	(5.5)%
Total Fund Market Value			100 %	\$ 164,641,523,669	100.0 %
Reconciling Items					
Investment Related Cash				\$ (319,585,957)	
Investment Related Receivables				(2,332,843,811)	
Investment Related Payables				2,745,764,923	
Securities Sold Short				1,594,473,921	
Obligations under Reverse Repurchase Agreements				7,150,529,625	
Collateral Obligations*				122,851,836	
Total Reconciling Items				\$ 8,961,190,537	
Total Fund Fair Value (Exhibit 1)				\$ 173,602,714,206	

*Excludes Securities Lending Collateral Obligations.

Table 2: Investment Summary as of August 31 (Dollars in Billions)

Asset Class	Market Value					
	2010	2015	2017	2019	2020	
Global Equity						
Public Equity						
USA ¹	\$ 27.389	\$ 26.355	\$ 27.404	\$ 22.813	\$ 26.006	
Non-US Developed ¹	9.126	20.175	19.655	19.825	21.237	
Emerging Markets ¹	12.848	11.437	14.231	13.187	15.090	
Directional Hedge Funds ^{1,4}	N/A	6.222	5.894	5.841	5.589	
Private Equity	8.501	16.032	18.488	23.055	23.927	
Total Global Equity	\$ 57.864	\$ 80.221	\$ 85.672	\$ 84.721	\$ 91.849	
Stable Value						
Government Bonds ²	\$ 18.214	\$ 16.980	\$ 20.816	\$ 21.363	\$ 23.680	
Stable Value Hedge Funds ⁴	3.947	5.395	5.642	6.588	8.219	
Absolute Return ⁴	4.786	2.961	2.349	5.756	6.052	
Total Stable Value	\$ 26.947	\$ 25.336	\$ 28.807	\$ 33.707	\$ 37.952	
Real Return						
Real Estate ⁴	\$ 7.664	\$ 16.495	\$ 17.802	\$ 21.534	\$ 22.023	
Energy, Natural Resources & Infrastructure ⁴	N/A	2.259	5.650	8.933	8.225	
Commodities	2.068	0.244	0.075	0.192	0.342	
Total Real Return	\$ 9.732	\$ 18.998	\$ 23.527	\$ 30.659	\$ 30.590	
Total Risk Parity⁴	N/A	\$ 2.715	\$ 7.307	\$ 8.459	\$ 13.256	
Asset Allocation Leverage						
Asset Allocation Leverage	N/A	N/A	N/A	\$ (2.835)	\$ (11.551)	
Cash ³	\$ 0.700	\$ 0.673	\$ 0.814	2.722	2.546	
Net Asset Allocation Leverage	N/A	N/A	N/A	\$ (0.113)	\$ (9.005)	
Total Fund	\$ 95.243	\$ 127.943	\$ 146.127	\$ 157.433	\$ 164.641	

¹In Fiscal Year 2020 Directional Hedge Funds were allocated across USA, Non US-Developed, and Emerging Market Equities.

²In Fiscal Year 2020 TIPS and US Treasuries were combined under the Stable Value Allocation into Government Bonds.

³Cash was included with the Stable Value Allocation through FY2018.

⁴Allocation includes Alternative Investments.

Table 3: Investment Allocations of August 31

Asset Class	% of Total Fund				
	2010	2015	2017	2019	2020
Global Equity					
Public Equity					
USA ¹	28.8 %	20.6 %	18.8 %	14.5 %	15.8 %
Non-US Developed ¹	9.6	15.8	13.5	12.6	12.9
Emerging Markets ¹	13.5	8.9	9.7	8.4	9.2
Directional Hedge Funds ^{1,4}	N/A	4.9	4.0	3.7	3.4
Private Equity ⁴	8.9	12.5	12.7	14.6	14.5
Total Global Equity	60.8 %	62.7 %	58.6 %	53.8 %	55.8 %
Stable Value					
Government Bonds ²	19.1 %	13.3 %	14.2 %	13.6 %	14.4 %
Stable Value Hedge Funds ⁴	4.1	4.2	3.9	4.2	5.0
Absolute Return ⁴	5.0	2.3	1.6	3.7	3.7
Total Stable Value	28.3 %	19.8 %	19.7 %	21.4 %	23.1 %
Real Return					
Real Estate ⁴	8.0 %	12.9 %	12.2 %	13.7 %	13.4 %
Energy, Natural Resources & Infrastructure ⁴	N/A	1.8	3.9	5.7	5.0
Commodities	2.2	0.2	0.1	0.1	0.2
Total Real Return	10.2 %	14.8 %	16.1 %	19.5 %	18.6 %
Total Risk Parity⁴	N/A	2.1 %	5.0 %	5.4 %	8.1 %
Asset Allocation Leverage					
Asset Allocation Leverage	N/A	N/A	N/A	(1.8)%	(7.0)%
Cash ³	0.7 %	0.5 %	0.6 %	1.7	1.5
Net Asset Allocation Leverage	N/A	N/A	N/A	(0.1)%	(5.5)%
Total Fund	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

¹In Fiscal Year 2020 Directional Hedge Funds were allocated across USA, Non US-Developed, and Emerging Market Equities.

²In Fiscal Year 2020 TIPS and US Treasuries were combined under the Stable Value Allocation into Government Bonds.

³Cash was included with the Stable Value Allocation through FY2018.

⁴Allocation includes Alternative Investments.

D. Largest Holdings

Fixed Income Investments

Table 4 discloses the Fund's ten largest fixed income investments as of August 31, 2020 reported at GAAP fair value which constitute 27.7 percent of all fixed income securities. A complete list of fixed income investments is available by contacting the TRS Communications Department.

Table 4: Largest Fixed Income Investments as of August 31, 2020

Rank	Fixed Income Securities	Par Value	GAAP Fair Value	% of Total Fixed Income Investments
1	U.S Treasury Bond 3.375% Due 11/15/2048	\$ 656,785,000	\$ 956,443,156	4.0 %
2	U.S Treasury Bond 3.000% Due 05/15/2047	619,697,500	838,915,491	3.5
3	U.S Treasury Bond 2.875% Due 11/15/2046	612,225,000	809,093,602	3.4
4	U.S Treasury Bond 3.000% Due 05/15/2049	477,400,000	640,088,969	2.7
5	U.S Treasury Bond 2.000% Due 02/15/2050	562,010,000	636,827,581	2.7
6	U.S Treasury Bond 1.250% Due 05/15/2050	583,320,000	554,154,000	2.3
7	U.S Treasury Bond 3.000% Due 02/15/2049	404,605,000	553,739,874	2.3
8	U.S Treasury Bond 2.250% Due 08/15/2049	459,234,500	546,991,343	2.3
9	U.S Treasury Bond 3.000% Due 02/15/2047	399,960,000	540,883,406	2.3
10	U.S Treasury Bond 3.125% Due 05/15/2048	378,070,000	525,930,814	2.2
Total Top Ten		\$ 5,153,307,000	\$ 6,603,068,236	27.7 %
Total Fixed Income Securities			\$ 23,812,737,094	

Equity Investments

Table 5 discloses the Fund's ten largest equity investments as of August 31, 2020 reported at GAAP fair value which constitute 11.7 percent of the Fund's total equity exposure.

A complete list of equity investments is available by contacting the TRS Communications Department.

Table 5: Largest Equity Investments as of August 31, 2020

Rank	Equity Holdings	Total Shares	GAAP Fair Value	% of Total Equity Investments
1	ALIBABA GROUP HOLDING SP ADR	3,000,652	\$ 861,277,144	1.8 %
2	TENCENT HOLDINGS LTD	11,774,855	805,992,217	1.7
3	APPLE INC	6,213,933	801,845,914	1.7
4	MICROSOFT CORP	2,922,071	659,014,673	1.4
5	AMAZON.COM INC	176,808	610,157,336	1.3
6	TAIWAN SEMICONDUCTOR MANUFAC	37,713,970	548,199,929	1.2
7	SAMSUNG ELECTRONICS CO LTD	7,434,707	337,969,676	0.7
8	ALPHABET INC CL A	196,139	319,614,385	0.7
9	FACEBOOK INC CLASS A	996,369	292,135,391	0.6
10	PERSHING SQUARE HOLDINGS LTD/F	10,303,383	286,949,217	0.6
Total Top Ten		80,732,887	\$ 5,523,155,882	11.7 %
Total Equity Holdings			\$ 47,146,352,906	

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 6 and are referred to as the "Policy Benchmarks".

Table 6: Policy Benchmarks	
Asset Class	Benchmark Portfolio
Global Equity	
USA	MSCI USA Investable Market
Non-US Developed	MSCI EAFE and Canada
Emerging Markets	MSCI EM
Private Equity	Customized State Street Private Equity Index – lagged one quarter
Stable Value	
Government Bonds	Bloomberg Barclays Long Treasury Index
Absolute Return	3 Month LIBOR + 2%
Stable Value Hedge Funds	HFRI Fund of Funds Conservative
Real Return	
Real Estate	NCREIF ODCE – 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	
Risk Parity	HFR Risk Parity Vol 12 Institutional Index
Asset Allocation Leverage	
Cash	FTSE 3 Month Treasury Bill
Asset Allocation Leverage	3 Month LIBOR

Performance Results

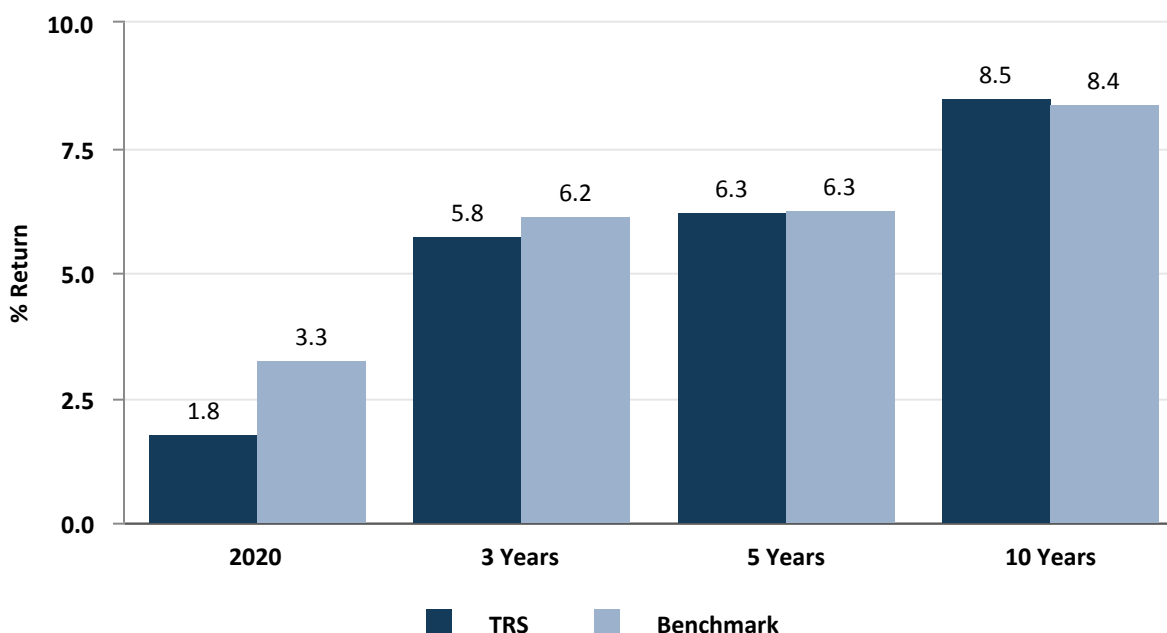
Investment performance is calculated using a time-weighted rate of return. Returns are calculated by State Street Bank and Trust Company, TRS' custodian bank, independently and using industry best practices. The total time-weighted rates of return have been adjusted for cash flows and are calculated net of bank fees, external manager fees, external legal fees, and external custodial fees.

Administrative expenses for the IMD are not netted against or included in performance calculations.

Due to TRS' fiscal year ending on August 31, 2020, the most complete performance and benchmark information by asset class is available as of June 30, 2020, presented in Table 7. For a complete list of composite benchmark compositions, contact the TRS Communications Department.

Table 7: Investment Performance: Time-Weighted Returns as of June 30, 2020				
Asset Class	2020	3 Years	5 Years	10 Years
Global Equity				
USA	0.2 %	6.7 %	7.3 %	11.8 %
USA Composite Benchmark	6.7	10.2	10.1	13.8
Non-US Developed	(3.8)	1.1	2.1	6.2
Non-US Developed Composite Benchmark	(5.3)	0.9	2.0	5.4
Emerging Markets	(2.2)	2.5	3.7	4.0
Emerging Markets Composite Benchmark	(3.2)	2.0	2.9	3.3
Private Equity	(1.9)	7.8	8.6	12.4
Private Equity Composite Benchmark	(1.7)	7.9	8.5	10.6
Total Global Equity	(1.7)%	4.6 %	5.4 %	8.7 %
Global Equity Composite Benchmark	(0.6)%	5.5 %	6.1 %	8.8 %
Stable Value				
Government Bonds	26.3 %	12.4 %	9.6 %	8.3 %
Government Bonds Benchmark	25.4	12.0	9.3	7.7
Absolute Return	(1.0)	3.8	4.8	9.3
Absolute Return Composite Benchmark	3.6	4.0	3.5	2.9
Stable Value Hedge Funds	2.4	3.8	4.1	4.0
Stable Value Hedge Funds Composite Benchmark	(0.6)	1.9	1.5	2.7
Total Stable Value	16.2 %	8.9 %	7.9 %	7.3 %
Stable Value Composite Benchmark	19.1 %	9.7 %	7.4 %	6.5 %
Real Return				
Real Estate	4.6 %	8.5 %	9.6 %	12.0 %
Real Estate Composite Benchmark	3.9	5.9	7.5	10.4
Energy, Natural Resources & Infrastructure	(13.1)	0.4	N/A	N/A
Energy, Natural Resources & Infrastructure Composite Benchmark	(10.7)	0.6	N/A	N/A
Commodities	40.6	(5.0)	—	(8.3)
Commodities Composite Benchmark	(33.9)	(8.7)	(12.5)	(8.5)
Total Real Return	(0.6)%	5.4 %	6.7 %	8.2 %
Real Return Composite Benchmark	(0.2)%	3.9 %	5.2 %	7.6 %
Total Risk Parity	(5.7)%	3.9 %	4.3 %	— %
Risk Parity Benchmark	0.3 %	5.6 %	4.9 %	— %
Asset Allocation Leverage				
Cash	1.0 %	1.8 %	1.8 %	1.7 %
Cash Composite Benchmark	1.6	1.8	1.2	0.6
Net Asset Allocation Leverage				
TRS	1.8 %	5.8 %	6.3 %	8.5 %
Custom Benchmark	3.3 %	6.2 %	6.3 %	8.4 %

Time-Weighted Returns as of June 30, 2020



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, Natural Resources and Infrastructure, 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, 2020 in Table 8.

The amount of fees paid from the Pension Trust Fund and booked as expenses in Table 8 are for the calendar year ended June 30, 2020. The amount of fees paid from the Pension Trust Fund and booked as expenses for the fiscal year ended August 31, 2020, which appear in Exhibit II and Schedule 1 as External Manager Fees, amounted to \$97,923,122, which includes \$48,440,261 in management fees and \$49,482,861 in performance fees.

Table 8: Investment Manager Fees¹
for the Period Ended June 30, 2020

Asset Class	Market Value of Assets Under Management	Fees Paid from the Pension Trust Fund ²		Fees Netted Against Returns	
		Management Fees	Performance Fees	Management Fees	Performance Fees/Carried Interest
Global Equity					
Public Equity					
USA	\$ 26,563,708,023	\$ 17,949,271	\$ 19,148,216	\$ 48,103,217	\$ 68,731,800
Non-US Developed	21,280,847,381	11,193,386	9,700,275	28,612,866	9,686,674
Emerging Markets	14,541,293,813	13,973,801	13,593,173	6,568,244	25,289,897
Private Equity	21,744,755,968	—	—	200,966,527	197,886,121
Total Global Equity	\$ 84,130,605,185	\$ 43,116,458	\$ 42,441,664	\$ 284,250,854	\$ 301,594,492
Stable Value					
Government Bonds	\$ 23,425,117,736	\$ 3,492,004	\$ 2,239,261	\$ —	\$ —
Absolute Return	5,515,765,871	1,299,338	833,206	19,928,838	8,924,756
Stable Value Hedge Funds	8,126,573,680	—	—	104,906,927	85,765,407
Total Stable Value	\$ 37,067,457,287	\$ 4,791,342	\$ 3,072,467	\$ 124,835,765	\$ 94,690,163
Real Return					
Real Assets	\$ 22,044,831,805	\$ 715,695	\$ 1,590,084	\$ 158,184,942	\$ 78,801,925
Energy, Natural Resources & Infrastructure	7,969,748,572	618,405	571,724	77,923,573	43,195,601
Commodities	270,417,739	66,176	42,435	—	—
Total Real Return	\$ 30,284,998,116	\$ 1,400,276	\$ 2,204,243	\$ 236,108,515	\$ 121,997,526
Total Risk Parity	\$ 12,544,141,216	\$ 2,017,867	\$ —	\$ 11,605,719	\$ 337,445
Asset Allocation Leverage	\$ (12,621,860,823)	\$ —	\$ —	\$ —	\$ —
Cash	3,797,149,202	—	—	—	—
Total Asset Allocation Leverage	\$ (8,824,711,621)	\$ —	\$ —	\$ —	\$ —
Total Fund	\$155,202,490,183	\$ 51,325,943	\$ 47,718,374	\$ 656,800,853	\$ 518,619,626
¹ Fees presented are for the calendar year ended June 30, 2020. They are unaudited and subject to change. Final audited numbers will be presented in the TRS 2020 Comprehensive Annual Financial report.					
² The amount of fees paid from the Pension Trust Fund and booked as expenses for the fiscal year ended August 31, 2020 amounted to \$97,923,122, which includes \$48,440,261 in management fees and \$49,482,861 in performance fees.					

Broker Commissions

Broker commissions are the incremental direct costs incurred to purchase, sell, or transfer investment assets and liabilities. Table 9 presents the commissions paid to brokers for the fiscal year ended August 31, 2020. Over 32 trillion shares were traded by 183 brokers, and commissions paid amounted to over \$50 million.

For the fiscal year ended August 31, 2020, a portion of the total commissions was paid through various Commission Sharing Arrangements (CSA) and

Commission Recapture Arrangements (CRA). CSA proceeds generated \$14,519,545 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 \$13,373,452. CRA proceeds generated \$59,183 and were used to acquire services totaling \$233,773. Unspent CSA proceeds, totaling \$8,741,846, and unspent CRA proceeds, totaling \$376,172, were held by State Street Bank and Trust Company as the Fund'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 Fund benefited from \$7,758,922 in vendor paid expenses and contractual allowances for the fiscal year ended August 31, 2020.

Table 9: Broker Commissions for the Fiscal Year Ended August 31, 2020		
Brokerage Firm	Shares Traded	Commissions Paid*
GOLDMAN SACHS	12,057,545,042,860	\$ 8,037,603
BANK OF AMERICA MERRILL LYNCH	190,351,411,791	5,199,841
CREDIT SUISSE FIRST BOSTON	962,007,614,676	5,074,744
J P MORGAN CHASE	687,337,037,609	4,149,663
CITIBANK	8,294,992,492,293	2,780,148
MORGAN STANLEY	825,367,899,564	2,705,672
JEFFERIES + COMPANY INC	134,853,113,716	1,995,464
UBS AG	603,325,715,989	1,918,024
BANK OF NEW YORK	624,034,365	1,819,896
CLSA	332,820,438,940	1,606,426
Summary of remaining 173 brokerage firms	8,628,242,430,342	14,985,350
Total	32,717,467,232,145	\$ 50,272,831
*Commissions paid per share is less than \$0.01.		

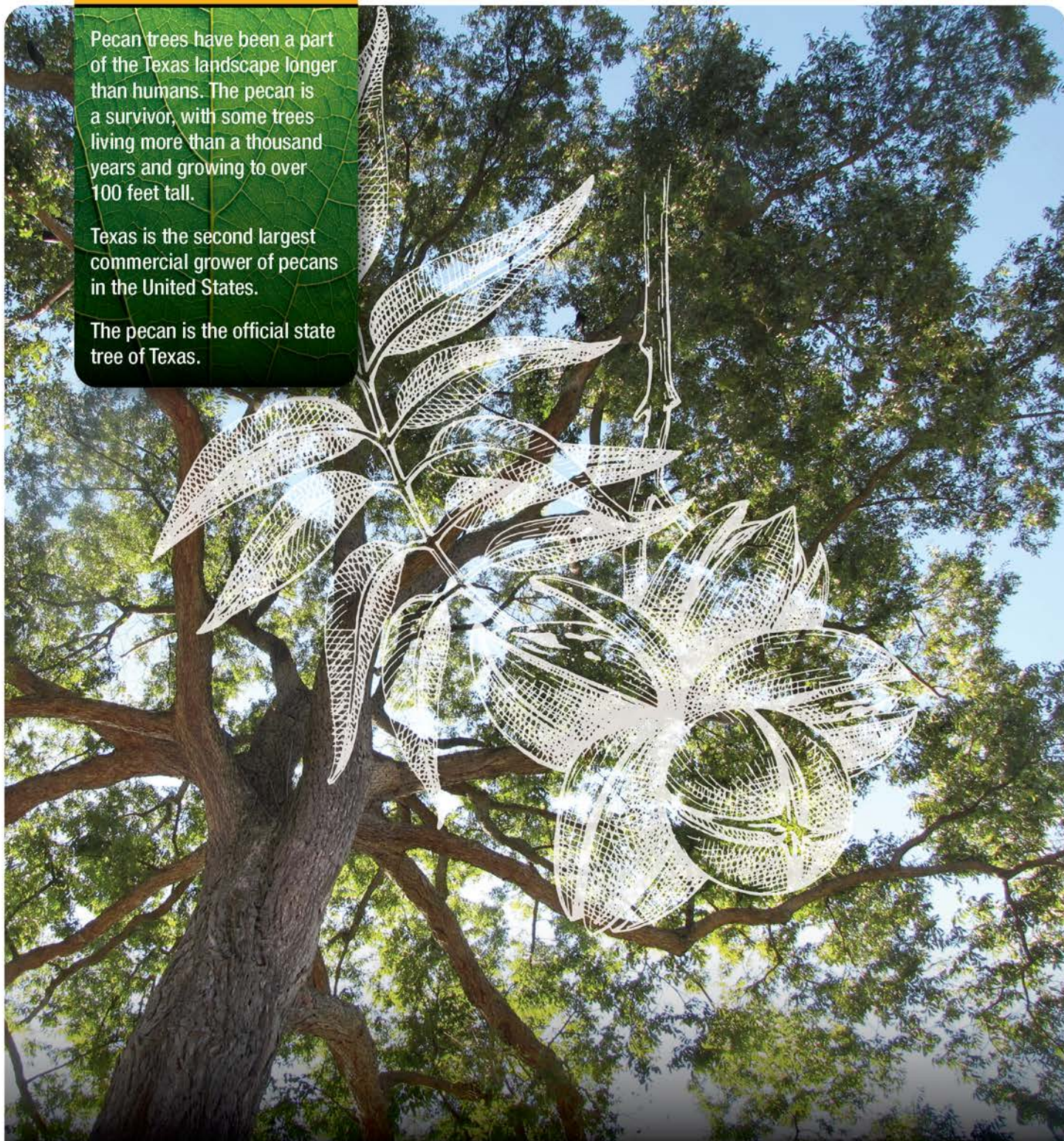
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Pecan Tree

Pecan trees have been a part of the Texas landscape longer than humans. The pecan is a survivor, with some trees living more than a thousand years and growing to over 100 feet tall.

Texas is the second largest commercial grower of pecans in the United States.

The pecan is the official state tree of Texas.



MORE THAN **38,000 ELIGIBLE TEACHERS** PARTICIPATED DURING TRS'S FIRST YEAR OF EXISTENCE IN 1937. TODAY, THE FUND PROVIDES RETIREMENT AND HEALTH CARE BENEFITS TO APPROXIMATELY **1.6M MEMBERS**.

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November 14, 2019

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, 2019

We certify that the information included herein and contained in the 2019 Actuarial Valuation Report is accurate and fairly presents the actuarial position of the Teacher Retirement System of Texas (TRS) as of August 31, 2019. 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

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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. Please see Appendix 2 for more discussion of these determinations.

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, 2019, the System's under-funded status has increased to \$49.5 billion as of August 31, 2019 compared to \$46.2 billion as of August 31, 2018. The primary reason for the increase was the interest on the UAAL being greater than the contributions towards the UAAL. This shortfall was \$1.5 billion for the fiscal year. This means that the UAAL would have increased \$1.5 billion even if all assumptions were met and shows why it was imperative that contribution rates were increased prospectively as that rate of growth would have continued.

In addition, the anticipated impact of salary increases provided by the 2019 Legislature represents \$1.4 billion of the change. The remainder of the increase was primarily from an actuarial loss generated on the actuarial value of assets from the fiscal year market return being less than the assumed 7.25%.

This valuation shows a normal cost equal to 11.65% of pay plus 0.11% of pay to cover the annual cost of administrative expenses. The 2019 Legislature increased contribution rates for the State, employers, and the members in a phase-in schedule that will end in Fiscal Year 2025. The State's base rate of 6.80% in Fiscal Year 2019 will increase to 7.50% in Fiscal Year 2020 and phase-in to 8.25% by Fiscal Year 2024. 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. Beginning in Fiscal Year 2020, all public education employers will pay this supplemental payment and the amount will gradually increase from 1.60% in Fiscal Year 2021 to 2.00% in Fiscal Year 2025. These supplemental contributions are assumed to be approximately 1.25% of total payroll at the end of the phase-in. Combined, these contributions are ultimately assumed to approximate 9.50% of total payroll. The member contribution rate will increase from the current 7.70% to 8.00% in Fiscal Year 2022 and ultimately 8.25% in Fiscal Year 2024. In addition to these contributions, there are contributions made on behalf of members who are receiving a pension but who have also returned to work. These contributions are assumed to be approximately 0.05% of total payroll. As a result, for FY2025 and thereafter, the System is expected to receive a total contribution rate of 17.80% of pay. All funding calculations in this report assume the rate will remain at that level thereafter.

If payroll grows as expected (3.0% per year), the contributions provided by this contribution rate pattern are sufficient to amortize the current unfunded actuarial accrued liabilities of the System over a period of 29 years based on the smoothed asset value as of the valuation date. Therefore, the financing objectives of the System are expected to be met (assuming all assumptions are realized).

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The actuarial valuation report as of August 31, 2019 reveals that the funded ratio (the ratio of actuarial assets to actuarial accrued liability) is 76.4%. 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.

The System earned less than the prior year's assumed rate of return during fiscal year 2019 (5.0% on market value compared to an assumed 7.25%). Even though the System was deferring investment gains from the prior year, the System experienced an actuarial loss on assets this year because the current year's shortfall was greater than the prior year's excess that was being deferred. After netting these two numbers against each other, the System recognized 20% of the remaining shortfall in an actuarial loss and is now deferring an investment shortfall of \$2.255 billion and the funded status using the market value of assets is 75.3%. If there are no significant investment excesses or other actuarial gains over the next several years, the funded status of the System would be expected to decrease towards this number. This \$2.255 billion in net deferred shortfall compares to the last valuation when the System was deferring a gain of \$0.5 billion.


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.

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 \$55.6 billion in 2028. Extending the projection further would show the UAAL is fully amortized 20 years after that (assuming all assumptions are exactly met including a 7.25% annual return on assets).

Please note these expectations are based on the current benefit provisions, assumptions, contribution rates and a level active population. Any additional benefit enhancements (ad hoc Cost of Living Adjustments or "COLAs") granted without additional funding would increase the ultimate UAAL and extend the funding period before the funding status begins to improve. Thus, we continue to advise against any future benefit enhancements without additional sources of funding that cover the cost of the enhancement.

PLAN PROVISIONS

The plan provisions used in the actuarial valuation are described in Appendix 1 of the valuation report. Except as noted below, there have been no changes to the ongoing benefit provisions of the System since the prior valuation. The 2019 Legislature provided a one-time appropriation to the System in



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August of 2019 to provide for a one time supplemental payment to retirees. The appropriation and resulting increased benefit payment have both been reflected fully in this valuation, meaning there are not residual liabilities or credits. In addition, the 2019 Legislature increased the member contribution rates to be paid into the System beginning in Fiscal Year 2022. The member rate will increase from the current 7.70% to 8.00% in Fiscal Year 2022 and increase again in Fiscal Year 2024 to 8.25% of pay, where it is expected to remain.

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

HB 3 in the 2019 Legislative session created a new mechanism for salary increases to be provided from the State. It is our understanding that approximately \$825 million was budgeted to provide salary increases to teachers, librarians, counselors, and nurses with at least 5 years of service. To estimate the impact in this valuation, we have assumed the \$825 million would be provided uniformly to all members in the data with the applicable position codes and at least 5 years of service. In addition, we have assumed aggregate covered payroll for Fiscal Year 2020 would be \$825 million more than the typical 3% annual growth from actual Fiscal Year 2019 payroll. Finally, we have assumed half of the \$825 million would be eligible for the supplemental contribution from employers. All assumptions are then assumed to continue thereafter without adjustment. This increased the UAAL in this valuation by approximately \$1.4 billion and increased the funding period by 1 year.

The actual data collected as of August 31, 2020 will provide the actual amount and distribution of the salary increases, as well as the actual increase in aggregate payroll and the portion eligible for supplemental contributions, meaning the 2020 valuation will provide more clarity on the actual impact from the HB 3 as the school districts do have discretion on how the actual increases are distributed. In addition, the true ultimate cost of the increases will not be fully known until the valuations for the following years are completed as it is possible that future salary decisions by employers are impacted by this one large decision. We believe it is possible that overall salary increases for the next few valuation cycles could be dampened compared to current assumptions and thus believe the proposed approach to projecting the impact is more likely to overestimate the impact than underestimate, but given the lack of detail from how local employers will distribute the increases and how it may impact future decisions, we believe the methods used in this valuation are appropriate and reasonable.



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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. Except for the assumption about potential impact from the salary increases provided by 2019 Legislature to be effective September 1, 2019, the actuarial methods and assumptions are primarily based on a study of actual experience for the period ending August 31, 2017 and adopted on July 27, 2018. Please see our experience study report dated July 27, 2018 for more information on the rationale for the current assumptions. In our opinion, the actuarial assumptions and methods used in this funding valuation meet the parameters set by the Actuarial Standards of Practice issued by the Actuarial Standards Board for such purposes.

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 7 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, 2019 by the TRS staff. The staff also supplied asset information as of August 31, 2019. While GRS did not audit this data, we did apply a number of tests to the data and concluded that it was reasonable and consistent with the prior year's data. It is also our understanding that TRS's auditor has attested to this information. 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



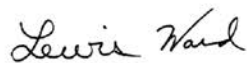
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All other schedules shown in the actuarial section were prepared by TRS staff based upon our work.
For further information please see the full actuarial valuation report.

This document and the PowerPoint presentation of the actuarial valuation results presented to the TRS Board in December 2019 comprise the full actuarial report.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



Lewis Ward
Consultant



Daniel J. Siblik, ASA, EA, MAAA
Consultant



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



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Actuarial Disclosure

The Actuarial Section is based on a valuation as of August 31, 2019.

Table 1: Actuarial Present Value of Future Benefits (With Comparative Data for August 31, 2018)				
	2019		2018	
Present Value of Benefits Presently Being Paid				
Service Retirement Benefits	\$	101,448,968,265	\$	97,778,733,445
Disability Retirement Benefits		1,289,682,794		1,262,559,579
Death Benefits		959,742,481		945,102,660
Present Survivor Benefits		306,369,380		294,529,850
Total Present Value of Benefits Presently Being Paid	\$	104,004,762,920	\$	100,280,925,534
Present Value of Benefits Payable in the Future to Present Active Members				
Service Retirement Benefits	\$	124,636,617,005	\$	117,752,030,618
Disability Retirement Benefits		2,794,848,963		2,473,609,365
Termination Benefits		12,528,081,082		11,614,967,251
Death and Survivor Benefits		2,380,100,956		2,253,693,291
Total Active Member Liabilities	\$	142,339,648,006	\$	134,094,300,525
Present Value of Benefits Payable in the Future to Present Inactive Members				
Inactive Vested Participants	\$	5,035,114,478	\$	4,931,520,979
Refunds of Contributions to Inactive Non-vested Members		549,266,564		501,473,614
Future Survivor Benefits Payable On Behalf of Present Annuitants		1,697,553,914		1,630,036,961
Total Inactive Liabilities	\$	7,281,934,956	\$	7,063,031,554
Total Actuarial Present Value of Future Benefits	\$	253,626,345,882	\$	241,438,257,613

Table 2: Summary of Cost Items (With Comparative Data for August 31, 2018)			
	2019		2018
Present Value of Future Benefits	\$	253,626,345,882	\$ 241,438,257,613
Present Value of Future Normal Costs		(43,906,658,835)	(41,221,951,786)
Actuarial Accrued Liability	\$	209,719,687,047	\$ 200,216,305,827
Actuarial Value of Assets	\$	(160,233,295,324)	\$ (154,050,930,573)
Unfunded Actuarial Accrued Liability	\$	49,486,391,723	\$ 46,165,375,254

Financing Objective and Funding Policy

The financing objective of the pension plan is the responsibility of the legislature. The contribution rates are established by the Legislature, that over time, are intended to remain level as a percent of payroll, and provide assets to cover benefits when due.

The funding policy of the pension plan is the responsibility of the TRS Board of Trustees. The Board supports contribution and benefit policies that will systematically decrease the Unfunded Actuarial Accrued Liability (UAAL) over time in order to achieve a funded ratio of the system that is equal to or greater than 100 percent. A declining UAAL over time will evidence that contribution and benefit policies are being implemented consistent with Texas Government Code §802.2011.

The contribution rates and scheduled increases, as described in Texas Government Code §§825.402, 825.4035, and 825.404 are expected to eliminate the UAAL over a period of 29 years.

Contribution rates may not be reduced or eliminated, and benefits may not be improved, if as a result of the particular action, the time required to amortize the unfunded actuarial liabilities of the System, would be increased to a period that exceeds 31 years. For detailed information, see Note 11.

Plan Provisions

For plan provisions, see Note 11.

Actuarial Methods and Assumption

The actuarial valuation for the TRS pension fund was prepared by Gabriel, Roeder, Smith & Company (GRS). The actuary relied on membership data and asset information provided by TRS staff. While GRS did not audit this data, a number of tests to the data were performed, and they concluded it was reasonable and consistent with the prior year's data.

House Bill (HB) 3 in the 2019 Legislative session created a new mechanism for salary increases to be provided by the State. It appears that approximately \$825 million was budgeted to provide salary increases to teachers, librarians, counselors, and nurses with at least 5 years of service. To estimate the impact in this valuation, it was assumed the \$825 million would be provided uniformly to all members in the data with the applicable position codes and at least 5 years of service. In addition, it was assumed aggregate covered payroll for fiscal year 2020 would

be \$825 million more than the typical 3 percent annual growth from actual fiscal year 2019 payroll. Lastly, it was assumed half of the \$825 million would be eligible for the supplemental contribution from employers. All assumptions are then assumed to continue thereafter without adjustment. This increased the UAAL in this valuation by approximately \$1.4 billion and increased the funding period by 1 year.

The actual data collected as of August 31, 2020 will provide the actual amount and distribution of the salary increases, as well as the actual increase in aggregate payroll and the portion eligible for supplemental contributions, meaning the 2020 valuation will provide more clarity on the actual impact from the HB 3 as the school districts do have discretion on how the actual increases are distributed. In addition, the true ultimate cost of the increases will not be fully known until the valuations for the following years are completed as it is possible that future salary decisions by employers are impacted by this one large decision. It is possible that overall salary increases for the next few valuation cycles could be dampened compared to current assumptions and believe the proposed approach to projecting the impact is more likely to overestimate the impact than underestimate, but given the lack of detail from how local employers will distribute the increases and how it may impact future decisions, it is believed the methods used in this valuation are appropriate and reasonable.

Since the data in this report is based on the roll-forward method, the results of the data collected as of August 31, 2020 will not be reported herein.

The actuarial methods and assumptions have been selected by the TRS Board of Trustees based upon GRS analysis and recommendations. The Board has sole authority to determine the actuarial assumptions used for the plan. Except for the assumption about potential impact from the salary increases provided by the 2019 Legislature to be effective September 1, 2019, the actuarial methods and assumptions are primarily based on a study of actual experience for the period ending August 31, 2017 and adopted on July 27, 2018.

The results of the actuarial valuation are dependent on the assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Seemingly minor changes in assumptions can materially change the

liabilities, calculated contribution rates, and funding periods.

Actuarial Methods

The actuarial cost method used for both financial reporting purposes and funding purposes was the Individual Entry Age Normal method as prescribed by GASB 67. The Individual EAN cost method is used because it creates the most level funding requirement across the generations of members and stakeholders. Under Individual EAN, the normal cost for each member is based on the benefit tier for that member.

Actuarial Assumptions

The actuarial assumptions used for funding purposes were the same assumptions used for financial reporting purposes.

A. Investment Rate of Return

The investment rate of return for the fiscal year ending August 31, 2018 was 7.25 percent, compounded annually, which was composed of an assumed 2.30 percent inflation rate and a 4.95 percent real rate of return, net of investment expenses. This was the same rate used to discount the actuarial accrued liability. The rate of return for fiscal year 2019 was used because of the selection of the Roll Forward Method for GASB 67.

B. Post-Retirement Mortality, Assumed Retirement Age, Disability Retirement, Death, and Withdrawal from System

Rates and scales were developed based on the experience in the actuarial investigation as of August 31, 2017, with values at specimen ages shown in the tables below.

Rates for members younger than age 65 will be reduced by 15 percent to reflect anticipated behavior changes stemming from the modifications to TRS-Care in the 2017 legislature. Five percent will be added to the rate at age 65 for members who reach normal retirement age prior to age 65.

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 percent 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 percent of the rate shown in Table 4 below).

For members hired after August 31, 2007 and who are not vested as of August 2014 or for members hired after August 2014, the retirement rates for members once they reach unreduced retirement eligibility at age 62 are increased 10 percent 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 percent of the rate shown in Table 4 below). The following table shows the probability of retirement at the various age brackets.

Age	Male Members	Female Members
40	0.000615	0.000388
50	0.001652	0.001080
60	0.004651	0.002668
70	0.014356	0.008969
80	0.046716	0.032270
90	0.152340	0.116359
100	0.490265	0.422361
110	0.496658	0.496658
120	1.000000	1.000000

Table 4: Assumed Retirement Age

Normal Retirement			Early Retirement		
Age	Male	Female	Age	Male	Female
50-54	0.13	0.14	45-59	0.01	0.01
55	0.13	0.15	60	0.01	0.02
56	0.14	0.16	61	0.02	0.02
57	0.15	0.17	62	0.04	0.04
58	0.16	0.18	63-65	0.05	0.05
59	0.17	0.19			
60	0.18	0.20			
61	0.19	0.21			
62	0.20	0.22			
63	0.21	0.23			
64	0.22	0.24			
65-74	0.25	0.25			
75	1.00	1.00			

The disability retirement rates for members once they reach the Rule of 80 but not eligible for unreduced retirement are adjusted by an additional 1 percent.

Table 5 below shows the rates of disability retirement by age.

Table 5: Probability of Decrement Due to Disability

Age	For Service ≥ 10		For Service < 10	
	Male	Female	Male	Female
20	0.000147	0.000262	0.000018	0.000028
30	0.000147	0.000262	0.000018	0.000028
40	0.000344	0.000446	0.000043	0.000047
50	0.001594	0.001726	0.000199	0.000182
60	0.002804	0.002616	0.000351	0.000275

The probability of decrement due to death is shown in Table 6 below.

The probability of decrement due to termination is shown in Table 7 below.

Table 6: Probability of Decrement Due to Death *

Age	Male Members	Female Members
20	0.000351	0.000140
30	0.000391	0.000188
40	0.000543	0.000342
50	0.001458	0.000953
60	0.004053	0.002111
70	0.011977	0.005454
80	0.033554	0.015890
90	0.119209	0.089535

*RP-2014 Employee Mortality Tables for male and female multiplied by 90%, with full generational projection assuming immediate convergence of rates in the mortality projection scale MP-2018, 2D for male and female.

Table 7: Probability of Decrement Due to Termination

Years of Service	Male Members	Female Members
1	0.155507	0.162296
2	0.124963	0.133070
3	0.100839	0.111030
4	0.075417	0.087064
5	0.065169	0.077625
6	0.057971	0.068467
7	0.049227	0.056290
8	0.043267	0.048891
9	0.038586	0.043639
10	0.035246	0.039995

C. Rates of Salary Increase

The rates of salary increase in Table 8 below reflects an inflation rate of 2.30 percent, plus productivity component of 0.75 percent, plus step-rate/promotional component as shown.

Years of Service	Merit, Promotion, Longevity		Total
		General	
1	6.00 %	3.05 %	9.05 %
2	2.50	3.05	5.55
3	1.90	3.05	4.95
4	1.50	3.05	4.55
5	1.40	3.05	4.45
6	1.20	3.05	4.25
7	1.10	3.05	4.15
8-10	1.00	3.05	4.05
11-12	0.90	3.05	3.95
13	0.80	3.05	3.85
14	0.70	3.05	3.75
15	0.60	3.05	3.65
16-17	0.50	3.05	3.55
18	0.40	3.05	3.45
19-20	0.30	3.05	3.35
21-22	0.20	3.05	3.25
23-24	0.10	3.05	3.15
25 or more	0.00	3.05	3.05

D. 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 actuarial value of assets is equal to the market value of assets less a five year phase-in of the excess/(shortfall) between expected investment returns and actual income. The actual calculation is based on the difference between actual market value and the expected actuarial value of assets each year and recognizes the cumulative excess return (or shortfall) over a minimum rate of 20 percent per year. 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 shortfall in investment income of \$3,337 million was partially offset with the prior years' remaining gains, with \$2,819 million remaining. After recognizing 20 percent of the amount (\$564 million) in this year's actuarial assets, \$2,255 million in deferred investment losses remain to be recognized in future valuations. The actuarial value of assets was \$160.2 billion at 08/31/2019.

Expected earnings are determined using the assumed investment rate of return and the beginning of year actuarial value of assets adjusted for receipts and disbursements during the year. The returns are computed net of investment expenses.

E. 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.

The normal cost for the System is deemed to be equal to the average cost of benefits for active members at each valuation date. The normal cost to pay for the benefits earned under the retirement system is 11.65 percent of pay, this amount being inclusive of the amount contributed by the employees. In addition, to the cost of benefits an addition is made to the normal cost to cover annual administrative expenses. It is estimated that administrative expenses will be approximately 0.11 percent of payroll. For fiscal year 2020 the total normal cost is 11.76 percent of pay and the net employer cost is 4.06 percent of pay based on the fiscal year 2020 member contribution rate of 7.70 percent.

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.

From an actuarial perspective, the contribution rate in excess of the System's normal cost should be sufficient to amortize the UAAL over a reasonable period of time. Based on the future increases in the member and employer contribution rates, the contributions in excess of the System's normal cost is sufficient to amortize the System's UAAL over a period of 29.0 years (assuming all actuarial assumptions are met).

The active member valuation data is shown in Table 9 below.

Table 9: Active Member Payroll Valuation Data

Valuation Year	Active Members	Annualized Payroll in Thousands		Average Annual Salary	Annual % Increase in Average Salary
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
2018	872,978		42,105,475	48,232	1.9
2019	884,522		43,779,416	49,495	2.6

The Schedule of retirees, beneficiaries and disabled participants added to and removed from the rolls is shown in Table 10.

Table 10: Retirees, Beneficiaries, and Disabled Participants Added to and Removed from Membership

Valuation as of August 31	Added to Rolls		Removed from Rolls		Rolls - End of Year		Average Annual Benefits	% Increase Average Annual Benefits
	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits		
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
2018	24,317	611,173,964	11,627	219,236,845	420,458	10,014,456,018	23,818	4.1
2019	25,420	642,167,173	11,452	217,977,284	434,426	10,438,645,907	24,029	4.2

The analysis of financial trends is shown in Table 11.

Table 11: Analysis of Financial Experience (Dollars in Billions)*

As of August 31	Investment Gains/(Losses)	Contribution Experience	Assumption Changes	Liability Experience	Net Increase/(Decrease)	Beginning UAAL	Ending UAAL
2010	\$ (1.161)	\$ 0.797	\$ —	\$ (0.705)	\$ 1.253	\$ 21.646	\$ 22.899
2011	(1.958)	0.826	(0.271)	(1.350)	1.163	22.899	24.062
2012	(2.208)	1.258	—	(1.427)	2.039	24.062	26.101
2013	(2.045)	1.911	0.708	(1.829)	2.835	26.101	28.936
2014	1.095	1.157	2.282	0.358	2.702	28.936	31.638
2015	(1.237)	0.912	0.682	(1.501)	1.330	31.638	32.968
2016	(1.504)	0.525	—	(0.460)	2.485	32.968	35.453
2017	0.270	0.415	(0.701)	0.828	0.018	35.453	35.471
2018	0.173	0.371	(10.592)	0.095	10.694	35.471	46.165
2019	(0.564)	0.961	(1.997)	0.200	3.321	46.165	49.486

*Resulting from differences between assumed experience and actual experience. 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:

- active member contributions on deposit
 - the liabilities for future benefits to present annuitants (Retirees and Beneficiaries)
 - 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 solvency test is shown in Table 12.

Table 12: Solvency Test (Dollars in Millions)

Valuation as of August 31	Aggregate Actuarial Accrued Liabilities For			Valuation Assets	Portion of Aggregate Actuarial Accrued Liabilities Covered by Valuation Assets		
	Active Member Contributions (1)	Retirees and Beneficiaries (2)	Active Members (State Financed Portion) (3)		Active Member Contributions (1)	Retirees and Beneficiaries (2)	Active Members (State Financed Portion) (3)
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	36.3
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
2018	37,834	101,911	60,472	154,051	100	100	23.7
2019	39,212	105,702	64,806	160,233	100	100	23.6

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. The schedule of funding progress is shown in Table 13.

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

Table 13: Schedule of Funding Progress (Dollars in Millions)

Valuation as of August 31	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio Assets as a % of AAL	Covered Payroll	UAAL as a % of Covered Payroll
[1]	[2]	[3]	[4]	[5]	[6]	[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	42,376	83.7
2017	146,282	181,753	35,471	80.5	43,164	82.2
2018	154,051	200,216	46,165	76.9	44,956	102.7
2019	160,233	209,720	49,486	76.4	47,414	104.4

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TRS-Care Actuarial Information

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November 14, 2019

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

Subject: Actuary's Certification of the GASB Statement No. 74 Actuarial Valuation as of August 31, 2019 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, 2018. Update procedures were used to roll forward the total OPEB liability to August 31, 2019. 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 actuarial assumptions applicable only to the TRS-Care OPEB valuation have changed since the prior report. These changes are disclosed in the assumptions section of this report.

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

1. Key Actuarial Assumptions and Methods
2. Schedule of Retirants and Beneficiaries Added and Removed from Rolls

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

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Board of Trustees
Teacher Retirement System of Texas
November 14, 2019
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. The assumptions and methods used for financial reporting purposes are in accordance with generally accepted actuarial principles set by the Actuarial Standards of Practice (ASOPs). 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,



Joseph P. Newton, FSA, FCA, EA, MAAA



Mehdi Riazi, FSA, FCA, EA, MAAA



Actuarial Disclosure

The Actuarial Section is based on a valuation as of August 31, 2019.

Funding Objective and Funding Policy

The current funding objective for the TRS-Care OPEB Trust fund is to provide sufficient funding through individual biennial legislative periods. There is no arrangement where the participating employers would make contributions to advance-fund the obligation. However, participating employers and the State are making contributions based on the current funding policy. The Texas Legislature is responsible for establishing and maintaining the funding policy.

There was not an actuarial valuation prepared for funding purposes because the TRS-Care plan is a pay-as-you-go-plan.

The actuarial valuation of TRS-Care for financial reporting purposes was prepared by Gabriel, Roeder, Smith & Company. The valuation was based on information provided by TRS concerning retiree health benefits, member census and financial data. While not auditing the data, the actuary checks for internal consistency.

The actuarial calculations were prepared for purposes of complying with the requirements of GASB Statement No. 74 for financial reporting purposes only. 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.

The TRS-Care OPEB plan is discussed in detail in Note 9 and provides the following information.

- Plan provisions
- Identification of the Plan type
- Number of covered individuals

Table 1: Retirees and Beneficiaries Added to and Removed from Membership

Valuation as of August 31	Added to Rolls		Removed from Rolls		Rolls - End of Year		% Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances*		
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
2018	11,101	79,394,032	48,958	150,243,653	236,362	955,490,192	(3.1)	4,042
2019	14,066	95,931,742	21,253	69,775,594	229,175	839,871,317	(12.1)	3,665

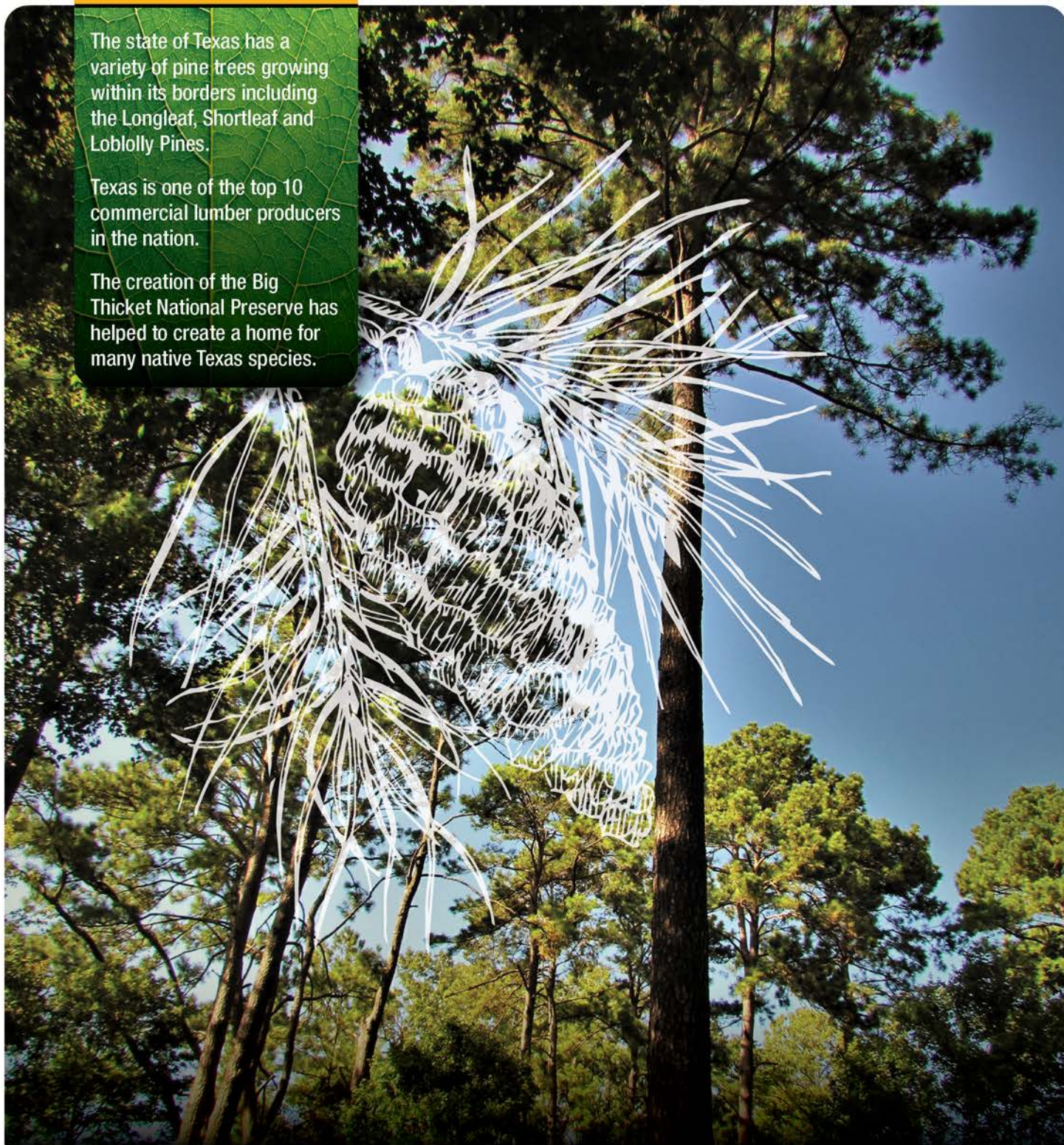
*Expected employer provided claims and expenses (net of retiree premiums). Annual allowances in Column (7) include increases due to health care inflation and the impact of plan changes. As a result, the annual allowances are not equal to the beginning of year allowances plus the "Added to Rolls" allowances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

Pine Tree

The state of Texas has a variety of pine trees growing within its borders including the Longleaf, Shortleaf and Loblolly Pines.

Texas is one of the top 10 commercial lumber producers in the nation.

The creation of the Big Thicket National Preserve has helped to create a home for many native Texas species.



462 SCHOOL DISTRICT LEADERS PROVIDED FEEDBACK THAT HELPED RE-ENGINEER TRS-ACTIVECARE.

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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 Basic Financial Statements, Notes to the 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, and TRS-ActiveCare.

Financial Trends Information

The financial trend schedules assist users in understanding and assessing how the System's financial position has changed over time and include:

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The operating information schedules provide information containing contextual data about the System's benefit operations, resources, and the benefit services it provides and include:

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In addition, a complete list of participating employers has been included. The information was derived from internal sources.

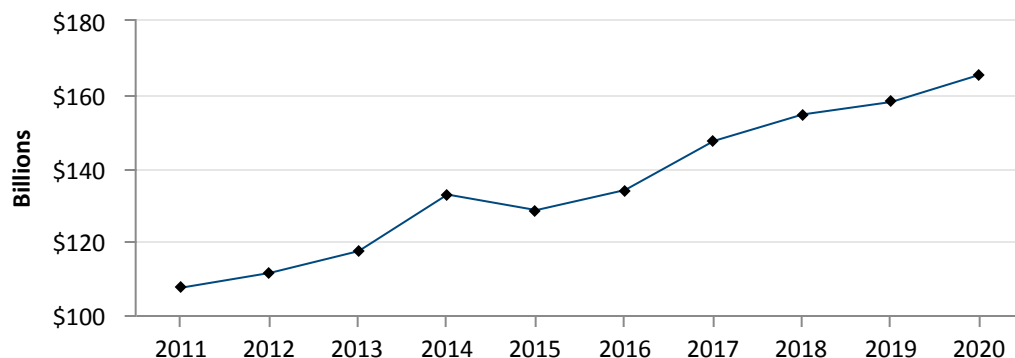
Changes in Fiduciary Net Position Pension Trust Fund

For the Fiscal Years Ended August 31

	2020	2019	2018	2017
Additions				
Member Contributions	\$ 3,999,877,464	\$ 3,482,869,726	\$ 3,360,773,197	\$ 3,242,556,261
Non-Employer Contributing Entity Contributions	1,844,999,393	1,737,852,502	1,715,784,550	1,697,962,608
Employer Contributions	2,016,481,636	1,761,821,902	1,671,257,303	1,588,309,345
Purchase of Service Credit	46,272,689	42,205,185	41,538,371	55,092,741
Contributions from ERS	31,110,870	29,789,821	27,670,302	24,974,328
Net Investment Income	11,068,916,613	7,669,028,874	11,242,813,657	17,079,807,347
Other*	10,266,475	592,671,805	8,108,248	1,299,284
Total Additions	\$ 19,017,925,140	\$ 15,316,239,815	\$ 18,067,945,628	\$ 23,690,001,914
Deductions				
Benefits	\$ 10,975,638,999	\$ 11,256,781,486	\$ 10,176,447,093	\$ 9,778,497,039
Refunds of Contributions	421,366,179	486,460,902	422,335,740	420,421,056
Service Contributions Transferred to ERS	108,003,549	103,044,924	97,333,401	93,609,174
Other Post-Employment Benefit Expense	7,734,365	4,438,264	4,380,304	—
Administrative Expenses, Excluding Investing Activity Expenses	67,135,880	60,485,645	64,926,169	44,189,998
Total Deductions	\$ 11,579,878,972	\$ 11,911,211,221	\$ 10,765,422,707	\$ 10,336,717,267
Net Increase (Decrease)	\$ 7,438,046,168	\$ 3,405,028,594	\$ 7,302,522,921	\$ 13,353,284,647
Beginning Net Position	\$157,978,199,075	\$154,568,901,833	\$147,361,922,120	\$134,008,637,473
Prior Period Adjustments (Note 14)	—	4,268,648	(95,543,208)	—
Beginning Net Position, as Restated	\$157,978,199,075	\$154,573,170,481	\$147,266,378,912	\$134,008,637,473
Ending Net Position	\$165,416,245,243	\$157,978,199,075	\$154,568,901,833	\$147,361,922,120

*Supplemental Appropriation - Non-Employer Contributing Entity included in Other.

Net Position Pension Trust Fund Last Ten Years



(Continued)

2016	2015	2014	2013	2012	2011
\$ 2,943,669,320	\$ 2,576,024,311	\$ 2,357,686,000	\$ 2,252,094,934	\$ 2,188,020,423	\$ 2,243,954,725
1,675,631,248	1,591,482,988	1,530,623,829	1,337,214,693	1,299,077,635	1,484,285,519
1,483,389,348	1,377,972,653	984,552,391	925,693,992	760,837,633	856,219,491
37,389,534	50,089,106	143,534,091	148,400,880	125,971,764	105,177,104
23,950,878	21,205,594	19,714,145	18,885,872	17,423,597	14,379,300
9,193,280,560	(412,759,100)	19,434,430,034	9,834,136,005	7,847,298,290	14,636,935,228
1,993,029	3,733,133	4,143,449	2,629,383	1,867,389	1,576,613
\$ 15,359,303,917	\$ 5,207,748,685	\$ 24,474,683,939	\$ 14,519,055,759	\$ 12,240,496,731	\$ 19,342,527,980
\$ 9,382,696,876	\$ 8,937,328,045	\$ 8,550,916,357	\$ 8,077,729,314	\$ 7,726,105,535	\$ 7,175,255,376
373,418,687	391,341,181	410,600,319	391,292,412	381,231,352	334,268,822
88,854,383	84,059,353	80,163,847	75,513,146	70,985,963	64,772,079
—	—	—	—	—	—
44,402,710	35,556,979	41,904,190	36,264,062	33,073,740	35,849,819
\$ 9,889,372,656	\$ 9,448,285,558	\$ 9,083,584,713	\$ 8,580,798,934	\$ 8,211,396,590	\$ 7,610,146,096
\$ 5,469,931,261	\$ (4,240,536,873)	\$ 15,391,099,226	\$ 5,938,256,825	\$ 4,029,100,141	\$ 11,732,381,884
\$ 128,538,706,212	\$ 132,779,243,085	\$ 117,388,143,859	\$ 111,449,887,034	\$ 107,420,786,893	\$ 95,688,405,009
—	—	—	—	—	—
\$ 128,538,706,212	\$ 132,779,243,085	\$ 117,388,143,859	\$ 111,449,887,034	\$ 107,420,786,893	\$ 95,688,405,009
\$ 134,008,637,473	\$ 128,538,706,212	\$ 132,779,243,085	\$ 117,388,143,859	\$ 111,449,887,034	\$ 107,420,786,893

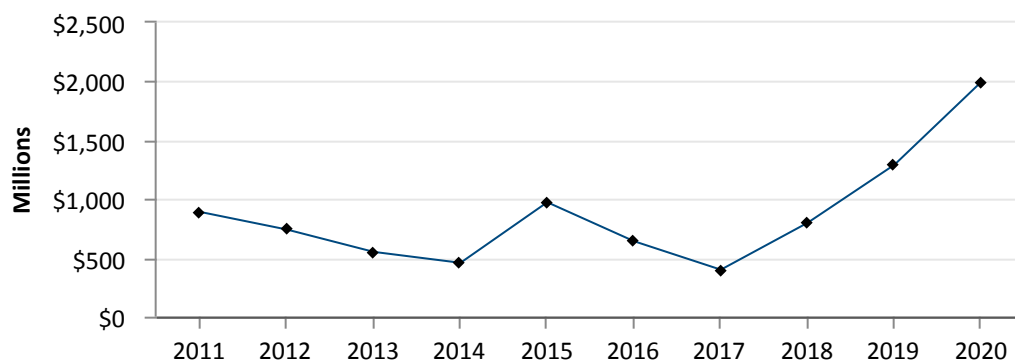
Changes in Fiduciary Net Position**TRS-Care**

For Fiscal Years Ended August 31

	2020	2019	2018	2017
Additions				
Member Contributions	\$ 243,532,120	\$ 227,338,454	\$ 221,325,377	\$ 213,241,179
Non-Employer Contributing Entity - State Contributions	435,768,774	404,936,501	395,588,628	303,760,632
Employer Contributions	324,973,591	305,363,084	296,098,420	215,360,520
Fringe Benefits Paid by State's General Fund on Behalf of TRS Employees	—	—	—	—
Supplemental Appropriation - Non-Employer Contributing Entity	230,756,971	73,641,562	394,600,000	15,559,552
Federal Revenue	186,169,146	220,783,898	103,402,579	101,718,551
Rebate and Discount Income*	423,426,202	356,439,596	284,291,173	291,725,635
Investment Income	25,536,560	25,046,771	10,127,259	4,696,973
Miscellaneous Revenue	17,879	—	803,022	529,020
Total Additions	\$ 1,870,181,243	\$ 1,613,549,866	\$ 1,706,236,458	\$ 1,146,592,062
Deductions				
Health Care Claims	\$ 1,538,211,599	\$ 1,515,397,609	\$ 1,593,381,709	\$ 1,678,892,217
Less: Health Care Premiums Paid by Retirees	(499,057,861)	(517,965,033)	(488,069,004)	(404,027,710)
Health Care Claims Processing and Other	68,252,843	44,868,838	80,585,608	46,931,559
Insurance Premium Payments	51,410,469	71,794,507	83,828,910	61,792,671
Administrative Expenses	7,068,610	6,006,229	6,672,488	4,953,492
Total Deductions	\$ 1,165,885,660	\$ 1,120,102,150	\$ 1,276,399,711	\$ 1,388,542,229
Net Increase (Decrease)	\$ 704,295,583	\$ 493,447,716	\$ 429,836,747	\$ (241,950,167)
Beginning Net Position	\$ 1,292,022,349	\$ 798,574,633	\$ 399,535,986	\$ 641,486,153
Prior Period Adjustments (Note 14)	—	—	(30,798,100)	—
Beginning Net Position, as Restated	\$ 1,292,022,349	\$ 798,574,633	\$ 368,737,886	\$ —
Ending Net Position	\$ 1,996,317,932	\$ 1,292,022,349	\$ 798,574,633	\$ 399,535,986

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

**Net Position
TRS-Care
Last Ten Years**



(Continued)

2016	2015	2014	2013	2012	2011
\$ 208,581,990	\$ 198,196,273	\$ 189,003,903	\$ 180,824,523	\$ 176,751,407	\$ 183,808,580
297,070,920	281,098,358	267,497,910	139,095,786	271,925,242	282,782,431
212,936,351	202,976,470	193,124,772	160,952,396	154,607,926	158,724,010
—	—	139,422	117,770	103,676	108,440
—	768,100,754	36,058,148	102,363,704	—	—
124,739,649	126,806,652	78,589,415	74,511,473	68,633,946	136,887,805
218,995,436	231,569,472	200,859,859	82,074,803	—	—
5,421,446	1,495,680	2,061,745	3,041,001	5,189,934	8,168,640
89,388	—	—	—	—	—
\$ 1,067,835,180	\$ 1,810,243,659	\$ 967,335,174	\$ 742,981,456	\$ 677,212,131	\$ 770,479,906
\$ 1,651,712,836	\$ 1,554,181,197	\$ 1,347,532,839	\$ 1,240,508,361	\$ 1,142,131,410	\$ 992,478,380
(374,736,269)	(369,066,459)	(363,631,292)	(355,685,504)	(363,348,030)	(345,164,271)
48,361,151	47,380,407	45,387,769	43,577,852	44,470,323	44,007,586
69,228,872	59,000,081	27,507,106	1,148,013	101,060	108,286
4,701,677	3,769,680	3,646,546	3,398,109	3,714,018	3,143,922
\$ 1,399,268,267	\$ 1,295,264,906	\$ 1,060,442,968	\$ 932,946,831	\$ 827,068,781	\$ 694,573,903
\$ (331,433,087)	\$ 514,978,753	\$ (93,107,794)	\$ (189,965,375)	\$ (149,856,650)	\$ 75,906,003
\$ 972,919,240	\$ 457,940,487	\$ 551,048,281	\$ 741,013,656	\$ 890,870,306	\$ 814,964,303
—	—	—	—	—	—
\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
\$ 641,486,153	\$ 972,919,240	\$ 457,940,487	\$ 551,048,281	\$ 741,013,656	\$ 890,870,306

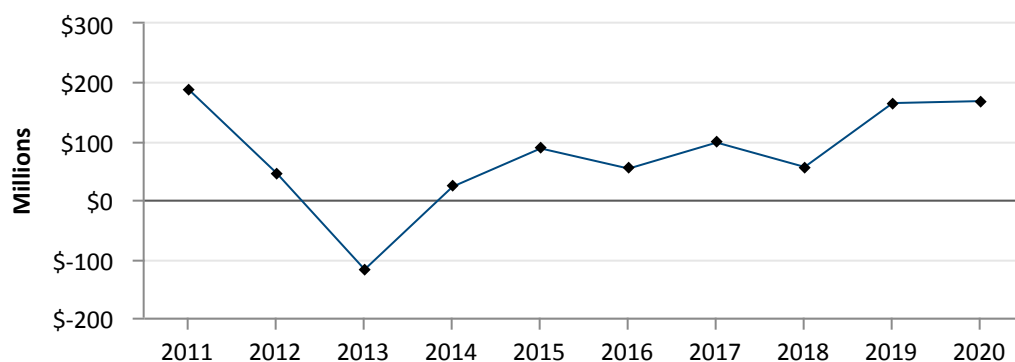
Revenues, Expenses, and Changes in Net Position

TRS-ActiveCare

For the Fiscal Years Ended August 31

	2020	2019	2018	2017
Revenues				
Health Care Premiums	\$ 2,158,997,317	\$ 2,170,132,057	\$ 2,171,125,097	\$ 2,119,959,039
COBRA Premiums and Other	145,208,054	157,307,700	144,543,929	120,049,492
Administrative Fees and Non-Operating Revenue	413,313	685,623	259,417	321,030
Investment Income	7,853,806	10,623,456	6,883,872	4,668,888
Federal Revenue ARRA-COBRA Reimbursements	—	—	—	—
Fringe Benefits Paid by State's General Fund on Behalf of TRS Employees	—	—	—	—
Total Revenues	\$ 2,312,472,490	\$ 2,338,748,836	\$ 2,322,812,315	\$ 2,244,998,449
Expenses				
Health Care Claims	1,932,461,054	1,863,374,439	2,002,142,744	1,846,526,430
Health Care Claims Processing and Other	116,068,297	119,811,563	121,483,408	123,783,747
Premium Payments to HMOs	256,850,839	243,198,667	237,386,929	227,088,895
Administrative Expenses	3,746,187	3,703,320	3,311,679	3,345,442
Total Expenses	\$ 2,309,126,377	\$ 2,230,087,989	\$ 2,364,324,760	\$ 2,200,744,514
Net Increase (Decrease)	\$ 3,346,113	\$ 108,660,847	\$ (41,512,445)	\$ 44,253,935
Beginning Net Position	164,953,231	56,292,384	97,804,829	53,550,894
Ending Net Position	\$ 168,299,344	\$ 164,953,231	\$ 56,292,384	\$ 97,804,829

Net Position
TRS-ActiveCare
Last Ten Years



(Continued)

2016	2015	2014	2013	2012	2011
\$ 2,055,658,822	\$ 1,938,621,262	\$ 1,919,557,855	\$ 1,797,745,785	\$ 1,738,705,410	\$ 1,540,604,828
17,904,885	5,328,003	9,337,610	10,775,898	11,199,707	8,926,063
356,054	236,749	139,608	137,630	136,324	135,917
3,079,039	1,537,408	940,022	746,936	1,697,553	3,387,062
—	—	—	—	29,706	667,746
—	—	79,792	75,664	72,094	67,373
\$ 2,076,998,800	\$ 1,945,723,422	\$ 1,930,054,887	\$ 1,809,481,913	\$ 1,751,840,794	\$ 1,553,788,989
1,768,287,120	1,565,255,957	1,521,834,989	1,785,069,768	1,718,903,645	1,510,090,981
125,802,110	135,073,416	109,925,954	84,903,101	83,346,223	76,960,951
214,529,160	178,192,468	154,913,859	100,905,702	89,706,406	76,270,706
2,644,792	2,225,417	2,569,850	2,351,802	2,176,610	2,207,051
\$ 2,111,263,182	\$ 1,880,747,258	\$ 1,789,244,652	\$ 1,973,230,373	\$ 1,894,132,884	\$ 1,665,529,689
\$ (34,264,382)	\$ 64,976,164	\$ 140,810,235	\$ (163,748,460)	\$ (142,292,090)	\$ (111,740,700)
\$ 87,815,276	\$ 22,839,112	\$ (117,971,123)	\$ 45,777,337	\$ 188,069,427	\$ 299,810,127
\$ 53,550,894	\$ 87,815,276	\$ 22,839,112	\$ (117,971,123)	\$ 45,777,337	\$ 188,069,427

Benefit and Refund Deductions from Net Position by Type**Pension Trust Fund**

For the Fiscal Years Ended August 31

	2020	2019	2018	2017
Benefits				
Service Retirements	\$ 10,272,047,096	\$ 10,503,570,237	\$ 9,495,487,665	\$ 9,059,855,790
Deferred Retirement Option	2,488,283	2,871,239	3,407,936	5,231,060
Partial Lump Sum Option	237,796,738	258,417,662	234,071,031	263,705,342
Disability Retirements	189,250,368	199,708,594	181,817,426	177,627,306
Death and Survivor Benefits:				
Annual Salary	38,560,083	45,133,662	35,735,208	44,398,830
Survivor Annuities	116,051,294	116,094,299	106,201,977	109,519,771
Life Annuities	93,091,163	102,595,155	94,809,551	93,714,871
60 Monthly Payments	15,786,007	17,326,148	16,184,228	15,518,472
Remainder of Contributions	7,221,136	8,011,977	5,281,986	6,204,030
Total Benefits	\$ 10,972,292,168	\$ 11,253,728,973	\$ 10,172,997,008	\$ 9,775,775,472
Refunds				
Death	\$ 5,536,660	6,060,703	5,574,637	6,371,748
Separation	415,829,519	480,400,199	416,761,103	414,049,308
Total Refunds	\$ 421,366,179	\$ 486,460,902	\$ 422,335,740	\$ 420,421,056

Benefit Deductions from Net Position by Type**TRS-Care**

For the Fiscal Years Ended August 31

	2020	2019	2018	2017
Claims				
Medical Claims and Insurance Premiums	\$ 659,834,968	\$ 688,148,610	\$ 840,420,584	\$ 807,831,048
Prescription Drugs**	668,307,637	648,749,351	669,082,905	734,805,874
Total Claims	\$ 1,328,142,605	\$ 1,336,897,961	\$ 1,509,503,489	\$ 1,542,636,922

** Note: For TRS-Care, 2013 and 2014 prescription claim amounts have been revised to reflect claims net of rebates. These two years were reported gross of rebates.

Benefit Deductions from Net Position by Type**TRS-ActiveCare**

For Fiscal Years Ended August 31

	2020	2019	2018	2017
Claims				
Medical Claims and Insurance Premiums	\$ 1,780,181,703	\$ 1,702,719,298	\$ 1,826,632,040	\$ 1,653,483,496
Prescription Drugs	271,480,530	254,168,852	275,730,514	306,703,364
Total Claims	\$ 2,051,662,233	\$ 1,956,888,150	\$ 2,102,362,554	\$ 1,960,186,860

(Continued)

2016	2015	2014	2013	2012	2011
\$ 8,633,505,859	\$ 8,215,765,876	\$ 7,795,690,586	\$ 7,251,369,740	\$ 6,808,592,209	\$ 6,241,946,655
5,166,851	9,643,121	14,974,505	17,223,523	22,361,937	27,822,115
300,420,702	288,923,266	322,033,388	410,323,790	501,152,157	524,925,790
173,464,936	169,318,064	164,299,506	156,308,471	150,238,202	144,865,109
44,952,730	39,574,595	44,846,010	41,219,707	46,859,444	47,295,194
108,509,074	100,150,048	97,822,817	94,563,001	92,126,049	86,898,720
92,087,967	90,563,081	89,547,742	87,044,328	85,816,402	84,893,007
15,523,059	14,443,193	13,415,885	12,659,471	11,816,313	11,564,275
5,491,553	6,730,215	6,012,086	4,496,453	4,659,453	3,293,923
\$ 9,379,122,731	\$ 8,935,111,459	\$ 8,548,642,525	\$ 8,075,208,484	\$ 7,723,622,166	\$ 7,173,504,788
\$ 7,379,576	\$ 5,474,475	\$ 5,455,829	\$ 4,705,228	\$ 5,294,006	\$ 3,984,340
366,039,111	385,866,706	405,144,490	386,587,184	375,937,346	330,284,482
\$ 373,418,687	\$ 391,341,181	\$ 410,600,319	\$ 391,292,412	\$ 381,231,352	\$ 334,268,822

(Continued)

2016	2015	2014	2013	2012	2011
\$ 858,985,138	\$ 805,668,819	\$ 691,283,731	\$ 687,469,016	\$ 687,987,585	\$ 608,461,321
716,536,786	649,457,501	539,842,962	496,229,923	454,143,825	384,017,059
\$ 1,575,521,924	\$ 1,455,126,320	\$ 1,231,126,693	\$ 1,183,698,939	\$ 1,142,131,410	\$ 992,478,380

(Continued)

2016	2015	2014	2013	2012	2011
\$ 1,644,795,868	\$ 1,479,302,696	\$ 1,397,249,236	\$ 1,613,167,792	\$ 1,450,574,875	\$ 1,242,673,156
325,475,512	264,145,729	279,499,612	272,807,678	268,328,770	267,417,825
\$ 1,970,271,380	\$ 1,743,448,425	\$ 1,676,748,848	\$ 1,885,975,470	\$ 1,718,903,645	\$ 1,510,090,981

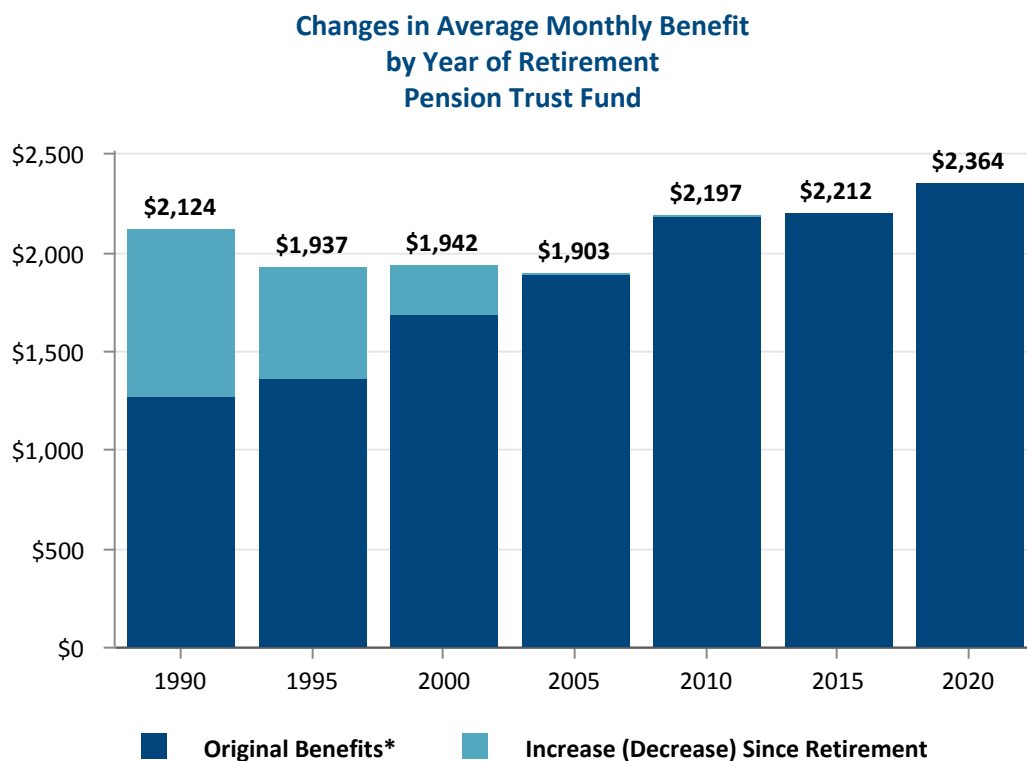
Average Benefit Payments
Pension Trust Fund
Last Ten Fiscal Years

Retirements Effective	Years of Credited Service					
	5-10	11-15	16-20	21-25	26-30	30+
2020						
Average Monthly Benefit*	\$ 515	\$ 966	\$ 1,594	\$ 2,235	\$ 3,214	\$ 4,294
Average Final Average Salary	\$ 39,708	\$ 43,700	\$ 50,048	\$ 53,700	\$ 61,708	\$ 71,273
Number of Retirees	1,551	1,880	2,507	2,994	3,205	2,939
2019						
Average Monthly Benefit*	\$ 480	\$ 939	\$ 1,507	\$ 2,107	\$ 3,076	\$ 4,154
Average Final Average Salary	\$ 37,089	\$ 43,568	\$ 48,060	\$ 51,224	\$ 61,133	\$ 69,764
Number of Retirees	1,755	2,137	2,704	3,449	3,561	3,134
2018						
Average Monthly Benefit*	\$ 480	\$ 905	\$ 1,430	\$ 2,125	\$ 3,001	\$ 4,141
Average Final Average Salary	\$ 36,815	\$ 42,857	\$ 46,291	\$ 51,591	\$ 59,757	\$ 69,063
Number of Retirees	2,071	2,478	3,405	4,246	4,320	4,192
2017						
Average Monthly Benefit*	\$ 446	\$ 867	\$ 1,410	\$ 2,078	\$ 2,959	\$ 4,052
Average Final Average Salary	\$ 34,635	\$ 41,504	\$ 45,942	\$ 50,617	\$ 58,755	\$ 67,598
Number of Retirees	2,211	2,452	3,524	4,331	4,568	4,632
2016						
Average Monthly Benefit*	\$ 444	\$ 837	\$ 1,348	\$ 2,050	\$ 2,894	\$ 4,053
Average Final Average Salary	\$ 33,907	\$ 40,408	\$ 44,703	\$ 50,290	\$ 57,750	\$ 67,429
Number of Retirees	2,184	2,278	3,195	4,300	4,290	4,668
2015						
Average Monthly Benefit*	\$ 424	\$ 825	\$ 1,345	\$ 2,008	\$ 2,852	\$ 3,992
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
2014						
Average Monthly Benefit*	\$ 413	\$ 801	\$ 1,327	\$ 1,964	\$ 2,847	\$ 3,877
Average Final Average Salary	\$ 32,906	\$ 39,263	\$ 43,884	\$ 49,222	\$ 56,835	\$ 65,447
Number of Retirees	2,291	2,285	3,082	4,252	4,429	4,197
2013						
Average Monthly Benefit*	\$ 389	\$ 742	\$ 1,291	\$ 1,939	\$ 2,800	\$ 3,866
Average Final Average Salary	\$ 31,582	\$ 37,078	\$ 43,056	\$ 49,217	\$ 26,453	\$ 65,472
Number of Retirees	2,234	2,380	3,067	4,388	4,675	4,952
2012						
Average Monthly Benefit*	\$ 389	\$ 727	\$ 1,308	\$ 1,925	\$ 2,785	\$ 3,867
Average Final Average Salary	\$ 32,113	\$ 36,522	\$ 43,164	\$ 49,383	\$ 56,755	\$ 66,322
Number of Retirees	2,138	2,226	2,853	4,257	4,372	5,207
2011						
Average Monthly Benefit*	\$ 390	\$ 711	\$ 1,269	\$ 1,872	\$ 2,671	\$ 3,778
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

*Average monthly benefits have been reduced for Partial Lump Sum Option payments of \$524.9, \$501.2, \$410.3, \$322.0, \$288.9, \$300.4, \$263.7, \$234.1, \$258.4, and \$237.8 million in fiscal years 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, and 2020 respectively.

Average Monthly Benefits Pension Trust Fund For Fiscal Years Ended August 31							
	1990	1995	2000	2005	2010	2015	2020
Benefits							
Original Benefits*	\$ 1,274	\$ 1,369	\$ 1,689	\$ 1,892	\$ 2,188	\$ 2,208	\$ 2,365
Increase (Decrease) Since Retirement	850	568	253	11	9	4	(1)
Current Benefits	\$ 2,124	\$ 1,937	\$ 1,942	\$ 1,903	\$ 2,197	\$ 2,212	\$ 2,364
Number of Retirees**	2,314	4,215	8,972	9,559	15,400	19,901	15,093
* Before adjustment for the Partial Lump Sum Option, average original benefits were \$1,827, \$2,068, \$2,367, \$2,318, and \$2,454 for fiscal years 2000, 2005, 2010, 2015, and 2020, respectively.							
** For each of the retirement years shown, number of service retirees currently receiving benefits.							

The following graph of service retiree accounts as of August 31, 2020 reflects benefit increases and decreases since retirement.



Average Benefit Payments TRS-Care Last Ten Fiscal Years		
2020		
Average Benefit Per Participant	\$	5,917
Benefit Payments	\$	1,328,142,605
Average Participants		224,476
2019		
Average Benefit Per Participant	\$	5,818
Benefit Payments	\$	1,336,897,961
Average Participants		229,775
2018		
Average Benefit Per Participant	\$	6,074
Benefit Payments	\$	1,509,503,489
Average Participants		248,515
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

Average Benefit Payments TRS-ActiveCare Last Ten Fiscal Years		
2020		
Average Benefit Per Participant	\$	4,312
Benefit Payments	\$	2,051,662,233
Average Participants		475,749
2019		
Average Benefit Per Participant	\$	4,051
Benefit Payments	\$	1,956,888,150
Average Participants		483,113
2018		
Average Benefit Per Participant	\$	4,267
Benefit Payments	\$	2,102,362,554
Average Participants		492,746
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		465,330
2013		
Average Benefit Per Participant	\$	3,966
Benefit Payments	\$	1,885,975,470
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

Retired Members by Type of Benefit**Pension Trust Fund****For the Fiscal Year Ended August 31, 2020**

Amounts of Monthly Benefits	Number of Retired Members	Type of Retirement*						
		1	2	3	4	5	6	7
\$ 1-200	15,111	6,017	6,933	179	1,883	52	31	16
201-400	43,344	11,909	12,024	614	3,038	922	1,126	13,711
401-600	27,493	14,211	8,702	1,254	2,764	372	190	—
601-800	25,379	15,640	5,571	1,272	2,270	419	207	—
801-1,000	24,770	17,042	3,949	1,154	2,026	434	165	—
1,001-1,200	22,789	16,795	2,687	959	1,853	367	128	—
1,201-1,400	19,527	14,549	2,019	776	1,811	275	97	—
1,401-1,600	19,460	14,586	2,136	701	1,688	283	66	—
1,601-1,800	19,411	14,965	2,041	613	1,497	237	58	—
1,801-2,000	20,396	16,637	1,685	511	1,288	241	34	—
2,001-3,000	103,110	90,728	4,905	1,369	5,134	901	73	—
3,001-4,000	64,528	60,410	981	218	2,473	438	8	—
4,001-5,000	24,949	23,680	215	31	858	160	5	—
Over 5,000	15,007	14,314	88	5	510	89	1	—
Totals	445,274	331,483	53,936	9,656	29,093	5,190	2,189	13,727
*Type of Retirement:								
1 Normal Retirement of Age and Service 5 Survivor Payment, Death in Service								
2 Early Retirement 6 Survivor Payment, After Disability Retirement								
3 Disability Retirement 7 Survivor Payment, After Service Retirement								
4 Survivor Payment, Joint Life or Guarantee								

Retired Members by Type of Benefit**Pension Trust Fund****For the Fiscal Year Ended August 31, 2020**

Amounts of Monthly Benefits	Number of Retired Members	Option Selected**					
		1	2	3	4	5	6
\$ 1-200	15,111	6,551	5,210	1,630	562	1,109	49
201-400	43,344	12,214	9,141	3,177	1,220	2,174	15,418
401-600	27,493	12,254	8,461	3,634	1,241	1,903	—
601-800	25,379	11,150	7,679	3,859	1,162	1,529	—
801-1,000	24,770	10,955	7,347	4,014	1,175	1,279	—
1,001-1,200	22,789	9,534	7,136	3,879	1,016	1,224	—
1,201-1,400	19,527	7,754	6,483	3,570	808	912	—
1,401-1,600	19,460	7,576	6,572	3,555	803	954	—
1,601-1,800	19,411	7,529	6,589	3,636	711	946	—
1,801-2,000	20,396	7,759	7,106	3,817	728	986	—
2,001-3,000	103,110	37,656	37,502	19,581	3,425	4,946	—
3,001-4,000	64,528	24,260	22,471	12,873	1,984	2,940	—
4,001-5,000	24,949	9,811	8,026	5,498	696	918	—
Over 5,000	15,007	5,552	5,217	3,440	332	466	—
Totals	445,274	170,555	144,940	76,163	15,863	22,286	15,467
**Option Selected:							
Option 1 - Life Annuity Option 4 - 5-year Guarantee							
Option 2 - Joint to Survivor Option 5 - 10-year Guarantee							
Option 3 - Joint to Survivor 50% / Joint to Survivor 75% Option 6 - Survivor Benefit							

Health Benefit Payments by Range	
TRS-Care	
For the Fiscal Year Ended August 31, 2020	
Benefit Range	Average Participants
\$ 0	8,227
1 - 5,000	160,933
5,001 - 10,000	27,837
10,001 - 20,000	14,673
20,001 - 30,000	3,896
30,001 - 40,000	2,032
40,001 - 50,000	1,423
50,001 - 100,000	3,256
over 100,000	2,199
Total	224,476

Health Benefit Payments by Range	
TRS-ActiveCare	
For the Fiscal Year Ended August 31, 2020	
Benefit Range	Average Participants
\$ 0	80,364
1 - 5,000	312,236
5,001 - 10,000	50,061
10,001 - 20,000	16,796
20,001 - 30,000	5,264
30,001 - 40,000	2,973
40,001 - 50,000	1,876
50,001 - 100,000	3,752
over 100,000	2,427
Total	475,749

Principal Participating Employers
Pension Trust Fund
For the Fiscal Years Ended August 31

Participating Reporting Entity	2020			2011		
	Covered Employees	Rank	Percentage of Total Covered Employment	Covered Employees	Rank	Percentage of Total Covered Employment
Houston ISD	25,132	1	2.43 %	23,777	1	2.92 %
Dallas ISD	23,364	2	2.26	19,780	2	2.43
UT MD Anderson Cancer Center	22,341	3	2.16	16,254	3	1.99
UT SW Medical Center	17,403	4	1.68	—		—
Cypress Fairbanks ISD	16,901	5	1.64	13,193	4	1.62
Northside ISD	16,113	6	1.56	12,775	5	1.57
UT at Austin	13,760	7	1.33	10,111	8	1.24
Katy ISD	13,032	8	1.26	—		—
UT Medical Branch at Galveston	12,880	9	1.25	9,128	9	1.12
Austin ISD	12,369	10	1.20	12,299	6	1.51
Fort Worth ISD	—		—	10,987	7	1.35
North East ISD	—		—	8,956	10	1.10
All Others	860,201		83.23	678,029		83.15
Total	1,033,496		100.00 %	815,289		100.00 %

Source: Information submitted to TRS by participating employers.

Principal Participating Employers
TRS-Care
For the Fiscal Years Ended August 31

Participating Reporting Entity	2020			2011		
	Covered OPEB Employees	Rank	Percentage of Total Covered OPEB Employment	Covered OPEB Employees	Rank	Percentage of Total Covered OPEB Employment
Houston ISD	25,131	1	3.03 %	23,777	1	3.52 %
Dallas ISD	23,364	2	2.82	19,780	2	2.92
Cypress Fairbanks ISD	16,901	3	2.04	13,193	3	1.95
Northside ISD	16,113	4	1.94	12,775	4	1.89
Katy ISD	13,032	5	1.57	—		—
Austin ISD	12,368	6	1.49	12,299	5	1.82
Fort Worth ISD	12,015	7	1.45	10,987	6	1.62
Fort Bend ISD	11,564	8	1.39	—		—
Nort East ISD	10,442	9	1.26	8,956	7	1.32
Aldine ISD	9,860	10	1.19	8,538	9	1.26
El Paso ISD	—		—	8,860	8	1.31
Arlington ISD	—		—	8,119	10	
All Others	679,040		81.82	548,992		81.19
Total	829,830		100.00 %	676,276		100.00 %

Source: Information submitted to TRS by participating employers.

Public Schools		
Abbott ISD	Avinger ISD	Bovina ISD
Abernathy ISD	Axtell ISD	Bowie ISD
Abilene ISD	Azle ISD	Boyd ISD
Academy ISD	Baird ISD	Boys Ranch ISD
Adrian ISD	Ballinger ISD	Brackett ISD
Agua Dulce ISD	Balmorhea ISD	Brady ISD
Alamo Heights ISD	Bandera ISD	Brazos ISD
Alba-Golden ISD	Bangs ISD	Brazosport ISD
Albany ISD	Banquete ISD	Breckenridge ISD
Aldine ISD	Barbers Hill ISD	Bremond ISD
Aledo ISD	Bartlett ISD	Brenham ISD
Alice ISD	Bastrop ISD	Bridge City ISD
Alief ISD	Bay City ISD	Bridgeport ISD
Allen ISD	Beaumont ISD	Broaddus ISD
Alpine ISD	Beckville ISD	Brock ISD
Alto ISD	Beeville ISD	Bronte ISD
Alvarado ISD	Bellevue ISD	Brookeland ISD
Alvin ISD	Bells ISD	Brookesmith ISD
Alvord ISD	Bellville ISD	Brooks County ISD
Amarillo ISD	Belton ISD	Brownfield ISD
Amherst ISD	Ben Bolt-Palito ISD	Brownsboro ISD
Anahuac ISD	Benavides ISD	Brownsville ISD
Anderson-Shiro CISD	Benjamin ISD	Brownwood ISD
Andrews ISD	Big Sandy ISD - Big Sandy	Bruceville-Eddy ISD
Angleton ISD	Big Sandy ISD - Dallardsville	Bryan ISD
Anna ISD	Big Spring ISD	Bryson ISD
Anson ISD	Birdville ISD	Buckholts ISD
Anthony ISD	Bishop CISD	Buena Vista ISD
Anton ISD	Blackwell CISD	Buffalo ISD
Apple Springs ISD	Blanco ISD	Bullard ISD
Aquilla ISD	Bland ISD	Buna ISD
Aransas County ISD	Blanket ISD	Burkburnett ISD
Aransas Pass ISD	Bloomburg ISD	Burkeville ISD
Archer City ISD	Blooming Grove ISD	Burleson ISD
Argyle ISD	Bloomington ISD	Burnet CISD
Arlington ISD	Blue Ridge ISD	Burton ISD
Arp ISD	Bluff Dale ISD	Bushland ISD
Aspermont ISD	Blum ISD	Bynum CISD
Athens ISD	Boerne ISD	Caddo Mills ISD
Atlanta ISD	Boles ISD	Calallen ISD
Aubrey ISD	Boling ISD	Caldwell ISD
Austin ISD	Bonham ISD	Calhoun County ISD
Austwell-Tivoli ISD	Booker ISD	Callisburg ISD
Avalon ISD	Borden County ISD	Calvert ISD
Avery ISD	Borger ISD	Cameron ISD
	Bosqueville ISD	Campbell ISD

Canadian ISD	Coahoma ISD	Cypress-Fairbanks ISD
Canton ISD	Coldspring-Oakhurst CISD	Daingerfield-Lone Star ISD
Canutillo ISD	Coleman ISD	Dalhart ISD
Canyon ISD	College Station ISD	Dallas ISD
Carlisle ISD	Collinsville ISD	Damon ISD
Carrizo Springs CISD	Colmesneil ISD	Danbury ISD
Carroll ISD	Colorado ISD	Darrouzett ISD
Carrollton-Farmers Branch ISD	Columbia-Brazoria ISD	Dawson ISD - Dawson
Carthage ISD	Columbus ISD	Dawson ISD - Welch
Castleberry ISD	Comal ISD	Dayton ISD
Cayuga ISD	Comanche ISD	De Leon ISD
Cedar Hill ISD	Comfort ISD	Decatur ISD
Celeste ISD	Commerce ISD	Deer Park ISD
Celina ISD	Community ISD	DeKalb ISD
Center ISD	Como-Pickton CISD	Del Valle ISD
Center Point ISD	Comstock ISD	Dell City ISD
Centerville ISD - Centerville	Connally ISD	Denison ISD
Centerville ISD - Groveton	Conroe ISD	Denton ISD
Central Heights ISD	Coolidge ISD	Denver City ISD
Central ISD	Cooper ISD	DeSoto ISD
Channelview ISD	Coppell ISD	Detroit ISD
Channing ISD	Copperas Cove ISD	Devers ISD
Chapel Hill ISD - Mount Pleasant	Corpus Christi ISD	Devine ISD
Chapel Hill ISD - Tyler	Corrigan-Camden ISD	Dew ISD
Charlotte ISD	Corsicana ISD	Deweyville ISD
Cherokee ISD	Cotton Center ISD	D'Hanis ISD
Chester ISD	Cotulla ISD	Diboll ISD
Chico ISD	Coupland ISD	Dickinson ISD
Childress ISD	Covington ISD	Dilley ISD
Chillicothe ISD	Crandall ISD	Dime Box ISD
Chilton ISD	Crane ISD	Dimmitt ISD
China Spring ISD	Cranfills Gap ISD	Divide ISD
Chireno ISD	Crawford ISD	Dodd City ISD
Chisum ISD	Crockett County School District	Donna ISD
Christoval ISD	Crockett ISD	Doss Consolidated CSD
Cisco ISD	Crosby ISD	Douglass ISD
City View ISD	Crosbyton CISD	Dripping Springs ISD
Clarendon ISD	Cross Plains ISD	Driscoll ISD
Clarksville ISD	Cross Roads ISD	Dublin ISD
Claude ISD	Crowell ISD	Dumas ISD
Clear Creek ISD	Crowley ISD	Duncanville ISD
Cleburne ISD	Crystal City ISD	Eagle Mountain-Saginaw ISD
Cleveland ISD	Cuero ISD	Eagle Pass ISD
Clifton ISD	Culberson County-Allamoore ISD	Eanes ISD
Clint ISD	Cumby ISD	Early ISD
Clyde ISD	Cushing ISD	East Bernard ISD

List of Participating Employers

East Central ISD	Fort Elliott CISD	Grand Prairie ISD
East Chambers ISD	Fort Hancock ISD	Grand Saline ISD
Eastland ISD	Fort Sam Houston ISD	Grandfalls-Royalty ISD
Ector County ISD	Fort Stockton ISD	Grandview ISD
Ector ISD	Fort Worth ISD	Grandview-Hopkins ISD
Edcouch-Elsa ISD	Franklin ISD	Granger ISD
Eden CISD	Frankston ISD	Grape Creek ISD
Edgewood ISD - Edgewood	Fredericksburg ISD	Grapeland ISD
Edgewood ISD - San Antonio	Freer ISD	Grapevine-Colleyville ISD
Edinburg CISD	Frenship ISD	Greenville ISD
Edna ISD	Friendswood ISD	Greenwood ISD
El Campo ISD	Friona ISD	Gregory-Portland ISD
El Paso ISD	Frisco ISD	Groesbeck ISD
Electra ISD	Frost ISD	Groom ISD
Elgin ISD	Fruitvale ISD	Groveton ISD
Elkhart ISD	Gainesville ISD	Gruver ISD
Elysian Fields ISD	Galena Park ISD	Gunter ISD
Ennis ISD	Galveston ISD	Gustine ISD
Era ISD	Ganado ISD	Guthrie CSD
Etoile ISD	Garland ISD	Hale Center ISD
Eula ISD	Garner ISD	Hallettsville ISD
Eustace ISD	Garrison ISD	Hallsburg ISD
Evadale ISD	Gary ISD	Hallsville ISD
Evant ISD	Gatesville ISD	Hamilton ISD
Everman ISD	Gause ISD	Hamlin ISD
Excelsior ISD	George West ISD	Hamshire-Fannett ISD
Ezzell ISD	Georgetown ISD	Happy ISD
Fabens ISD	Gholson ISD	Hardin ISD
Fairfield ISD	Giddings ISD	Hardin-Jefferson ISD
Falls City ISD	Gilmer ISD	Harlandale ISD
Fannindel ISD	Gladewater County Line ISD	Harleton ISD
Farmersville ISD	Glasscock CountyISD	Harlingen CISD
Farwell ISD	Glen Rose ISD	Harmony ISD
Fayetteville ISD	Godley ISD	Harper ISD
Ferris ISD	Goldburg ISD	Harrold ISD
Flatonia ISD	Goldthwaite ISD	Hart ISD
Florence ISD	Goliad ISD	Hartley ISD
Floresville ISD	Gonzales ISD	Harts Bluff ISD
Flour Bluff ISD	Goodrich ISD	Haskell CISD
Floydada ISD	Goose Creek CISD	Hawkins ISD
Follett ISD	Gordon ISD	Hawley ISD
Forestburg ISD	Gorman ISD	Hays CISD
Forney ISD	Grady ISD	Hearne ISD
Forsan ISD	Graford ISD	Hedley ISD
Fort Bend ISD	Graham ISD	Hemphill ISD
Fort Davis ISD	Granbury ISD	Hempstead ISD

Henderson ISD	Jacksboro ISD	La Porte ISD
Henrietta ISD	Jacksonville ISD	La Pryor ISD
Hereford ISD	Jarrell ISD	La Vega ISD
Hermleigh ISD	Jasper ISD	La Vernia ISD
Hico ISD	Jayton-Girard ISD	La Villa ISD
Hidalgo ISD	Jefferson ISD	Lackland ISD
Higgins ISD	Jim Hogg County ISD	Lago Vista ISD
High Island ISD	Jim Ned CISD	Lake Dallas ISD
Highland ISD	Joaquin ISD	Lake Travis ISD
Highland Park ISD - Amarillo	Johnson City ISD	Lake Worth ISD
Highland Park ISD - Dallas	Jonesboro ISD	Lamar CISD
Hillsboro ISD	Joshua ISD	Lamesa ISD
Hitchcock ISD	Jourdanton ISD	Lampasas ISD
Holland ISD	Judson ISD	Lancaster ISD
Holliday ISD	Junction ISD	Laneville ISD
Hondo ISD	Karnack ISD	LaPoynor ISD
Honey Grove ISD	Karnes City ISD	Laredo ISD
Hooks ISD	Katy ISD	Lasara ISD
Houston ISD	Kaufman ISD	Latexo ISD
Howe ISD	Keene ISD	Lazbuddie ISD
Hubbard ISD - DeKalb	Keller ISD	Leakey ISD
Hubbard ISD - Hubbard	Kelton ISD	Leander ISD
Huckabay ISD	Kemp ISD	Leary ISD
Hudson ISD	Kenedy County Wide CSD	Lefors ISD
Huffman ISD	Kenedy ISD	Leggett ISD
Hughes Springs ISD	Kennard ISD	Leon ISD
Hull-Daisetta ISD	Kennedale ISD	Leonard ISD
Humble ISD	Kerens ISD	Levelland ISD
Hunt ISD	Kermit ISD	Leveretts Chapel ISD
Huntington ISD	Kerrville ISD	Lewisville ISD
Huntsville ISD	Kilgore ISD	Lexington ISD
Hurst-Euless-Bedford ISD	Killeen ISD	Liberty Hill ISD
Hutto ISD	Kingsville ISD	Liberty ISD
Idalou ISD	Kirbyville CISD	Liberty-Eylau ISD
Industrial ISD	Klein ISD	Lindale ISD
Ingleside ISD	Klondike ISD	Linden-Kildare CISD
Ingram ISD	Knippa ISD	Lindsay ISD
Iola ISD	Knox City-O'Brien CISD	Lingleville ISD
Iowa Park CISD	Kopperl ISD	Lipan ISD
Ira ISD	Kountze ISD	Little Cypress-Mauriceville CISD
Iraan-Sheffield ISD	Kress ISD	Little Elm ISD
Iredell ISD	Krum ISD	Littlefield ISD
Irion County ISD	La Feria ISD	Livingston ISD
Irving ISD	La Gloria ISD	Llano ISD
Italy ISD	La Grange ISD	Lockhart ISD
Itasca ISD	La Joya ISD	Lockney ISD

Lohn ISD	McDade ISD	Mount Vernon ISD
Lometa ISD	McGregor ISD	Muenster ISD
London ISD	McKinney ISD	Muleshoe ISD
Lone Oak ISD	McLean ISD	Mullin ISD
Longview ISD	McLeod ISD	Mumford ISD
Loop ISD	McMullen County ISD	Munday CISD
Loraine ISD	Meadow ISD	Murchison ISD
Lorena ISD	Medina ISD	Nacogdoches ISD
Lorenzo CISD	Medina Valley ISD	Natalia ISD
Los Fresnos CISD	Melissa ISD	Navarro ISD
Louise ISD	Memphis ISD	Navasota ISD
Lovejoy ISD	Menard ISD	Nazareth ISD
Lovelady ISD	Mercedes ISD	Neches ISD
Lubbock ISD	Meridian ISD	Nederland ISD
Lubbock-Cooper ISD	Merkel ISD	Needville ISD
Lueders-Avoca ISD	Mesquite ISD	New Boston ISD
Lufkin ISD	Mexia ISD	New Braunfels ISD
Luling ISD	Meyersville ISD	New Caney ISD
Lumberton ISD	Miami ISD	New Deal ISD
Lyford CISD	Midland ISD	New Diana ISD
Lytle ISD	Midlothian ISD	New Home ISD
Mabank ISD	Midway ISD - Henrietta	New Summerfield ISD
Madisonville CISD	Midway ISD - Woodway	New Waverly ISD
Magnolia ISD	Milano ISD	Newcastle ISD
Malakoff ISD	Mildred ISD	Newton ISD
Malone ISD	Miles ISD	Nixon-Smiley CISD
Malta ISD	Milford ISD	Nocona ISD
Manor ISD	Miller Grove ISD	Nordheim ISD
Mansfield ISD	Millsap ISD	Normangee ISD
Marathon ISD	Mineola ISD	North East ISD
Marble Falls ISD	Mineral Wells ISD	North Hopkins ISD
Marfa ISD	Mission CISD	North Lamar ISD
Marion ISD	Monahans-Wickett-Pyote ISD	North Zulch ISD
Marlin ISD	Montague ISD	Northside ISD - San Antonio
Marshall ISD	Monte Alto ISD	Northside ISD - Vernon
Mart ISD	Montgomery ISD	Northwest ISD
Martins Mill ISD	Moody ISD	Nueces Canyon CISD
Martinsville ISD	Moran ISD	Nursery ISD
Mason ISD	Morgan ISD	Oakwood ISD
Matagorda ISD	Morgan Mill ISD	Odem-Edroy ISD
Mathis ISD	Morton ISD	O'Donnell ISD
Maud ISD	Motley County ISD	Oglesby ISD
May ISD	Moulton ISD	Olfen ISD
Maypearl ISD	Mount Calm ISD	Olney ISD
McAllen ISD	Mount Enterprise ISD	Olton ISD
McCamey ISD	Mount Pleasant ISD	Onalaska ISD

Orange Grove ISD	Port Neches-Groves ISD	Robinson ISD
Orangefield ISD	Post ISD	Robstown ISD
Ore City ISD	Poteet ISD	Roby CISD
Overton ISD	Poth ISD	Rochelle ISD
Paducah ISD	Pottsboro ISD	Rockdale ISD
Paint Creek ISD	Prairie Lea ISD	Rocksprings ISD
Paint Rock ISD	Prairie Valley ISD	Rockwall ISD
Palacios ISD	Prairiland ISD	Rogers ISD
Palestine ISD	Premont ISD	Roma ISD
Palmer ISD	Presidio ISD	Roosevelt ISD
Palo Pinto ISD	Priddy ISD	Ropes ISD
Pampa ISD	Princeton ISD	Roscoe Collegiate ISD
Panhandle ISD	Pringle-Morse CISD	Rosebud-Lott ISD
Panther Creek CISD	Progreso ISD	Rotan ISD
Paradise ISD	Prosper ISD	Round Rock ISD
Paris ISD	Quanah ISD	Round Top-Carmine ISD
Pasadena ISD	Queen City ISD	Royal ISD
Patton Springs ISD	Quinlan ISD	Royse City ISD
Pawnee ISD	Quitman ISD	Rule ISD
Pearland ISD	Rains ISD	Runge ISD
Pearsall ISD	Ralls ISD	Rusk ISD
Peaster ISD	Ramirez Common SD	S&S CISD
Pecos-Barstow-Toyah ISD	Randolph Field ISD	Sabinal ISD
Penelope ISD	Ranger ISD	Sabine ISD
Perrin-Whitt CISD	Rankin ISD	Sabine Pass ISD
Perryton ISD	Raymondville ISD	Saint Jo ISD
Petersburg ISD	Reagan County ISD	Salado ISD
Petrolia ISD	Red Lick ISD	Saltillo ISD
Pettus ISD	Red Oak ISD	Sam Rayburn CISD
Pewitt CISD	Redwater ISD	San Angelo ISD
Pflugerville ISD	Refugio ISD	San Antonio ISD
Pharr-San Juan-Alamo ISD	Ricardo ISD	San Augustine ISD
Pilot Point ISD	Rice CISD	San Benito CISD
Pine Tree ISD	Rice ISD	San Diego ISD
Pittsburg ISD	Richards ISD	San Elizario ISD
Plains ISD	Richardson ISD	San Felipe-Del Rio CISD
Plainview ISD	Richland Springs ISD	San Isidro ISD
Plano ISD	Riesel ISD	San Marcos CISD
Pleasant Grove ISD	Rio Grande City CISD	San Perlita ISD
Pleasanton ISD	Rio Hondo ISD	San Saba ISD
Plemons-Stinnett-Phillips CISD	Rio Vista ISD	San Vicente ISD
Point Isabel ISD	Rising Star ISD	Sands CISD
Ponder ISD	River Road ISD	Sanford-Fritch ISD
Poolville ISD	Rivercrest ISD	Sanger ISD
Port Aransas ISD	Riviera ISD	Santa Anna ISD
Port Arthur ISD	Robert Lee ISD	Santa Fe ISD

List of Participating Employers

Santa Gertrudis ISD	Spearman ISD	Throckmorton ISD
Santa Maria ISD	Splendora ISD	Tidehaven ISD
Santa Rosa ISD	Spring Branch ISD	Timpson ISD
Santo ISD	Spring Creek ISD	Tioga ISD
Savoy ISD	Spring Hill ISD	Tolar ISD
Schertz-Cibolo-Universal City ISD	Spring ISD	Tom Bean ISD
Schleicher County ISD	Springlake-Earth ISD	Tomball ISD
Schulenburg ISD	Springtown ISD	Tornillo ISD
Scurry-Rosser ISD	Spur ISD	Trent ISD
Seagraves ISD	Spurger ISD	Trenton ISD
Sealy ISD	Stafford Municipal School District	Trinidad ISD
Seguin ISD	Stamford ISD	Trinity ISD
Seminole Public Schools	Stanton ISD	Troup ISD
Seymour ISD	Stephenville ISD	Troy ISD
Shallowater ISD	Sterling City ISD	Tulia ISD
Shamrock ISD	Stockdale ISD	Tuloso-Midway ISD
Sharyland ISD	Stratford ISD	Turkey-Quitaque ISD
Shelbyville ISD	Strawn ISD	Tyler ISD
Sheldon ISD	Sudan ISD	Union Grove ISD
Shepherd ISD	Sulphur Bluff ISD	Union Hill ISD
Sherman ISD	Sulphur Springs ISD	United ISD
Shiner ISD	Sundown ISD	Utopia ISD
Sidney ISD	Sunnyvale ISD	Uvalde CISD
Sierra Blanca ISD	Sunray ISD	Valentine ISD
Silsbee ISD	Sweeny ISD	Valley Mills ISD
Silverton ISD	Sweet Home ISD	Valley View ISD - Pharr
Simms ISD	Sweetwater ISD	Valley View ISD - Valley View
Sinton ISD	Taft ISD	Van Alstyne ISD
Sivells Bend ISD	Tahoka ISD	Van ISD
Skidmore-Tynan ISD	Tarkington ISD	Van Vleck ISD
Slaton ISD	Tatum ISD	Vega ISD
Slidell ISD	Taylor ISD	Venus ISD
Slocum ISD	Teague ISD	Veribest ISD
Smithville ISD	Temple ISD	Vernon CISD
Smyer ISD	Tenaha ISD	Victoria ISD
Snook ISD	Terlingua CSD	Vidor ISD
Snyder ISD	Terrell County ISD	Vysehrad ISD
Socorro ISD	Terrell ISD	Waco ISD
Somerset ISD	Texarkana ISD	Waelder ISD
Somerville ISD	Texas City ISD	Walcott ISD
Sonora ISD	Texhoma ISD	Wall ISD
South San Antonio ISD	Texline ISD	Waller ISD
South Texas ISD	Thorndale ISD	Walnut Bend ISD
Southland ISD	Thrall ISD	Walnut Springs ISD
Southside ISD	Three Rivers ISD	Warren ISD
Southwest ISD	Three Way ISD	Waskom ISD

Water Valley ISD	Woodville ISD	Collegiate Edu-Nation
Waxahachie ISD	Wortham ISD	Compass Academy
Weatherford ISD	Wylie ISD - Abilene	Compass Rose Education Inc
Webb CISD	Wylie ISD - Wylie	Comquest Academy
Weimar ISD	Yantis ISD	Corpus Christi Montessori School
Wellington ISD	Yoakum ISD	Crosstimbers Academy
Wellman-Union ISD	Yorktown ISD	Cumberland Academy
Wells ISD	Ysleta ISD	Democracy Prep Public Schools
Weslaco ISD	Zapata County ISD	Dr M L Garza-Gonzalez Charter School
West Hardin County CISD	Zavalla ISD	Draw Academy
West ISD	Zephyr ISD	Eagle Advantage School
West Orange-Cove CISD		East Fort Worth Montessori School
West Oso ISD	Charter Schools	East Texas Advanced Academies
West Rusk County CISD	A Plus Academy	East Texas Charter School
West Sabine ISD	A Plus Unlimited Potential	Ector Success Academy Network
Westbrook ISD	A W Brown Fellowship Charter School	Education Center International Academy
Westhoff ISD	Academy of Accelerated Learning Inc	El Paso Academy East
Westphalia ISD	Academy of Dallas	El Paso Leadership Academy
Westwood ISD	Accelerated Intermediate Academy	Eleanor Kolitz Hebrew Language Academy
Wharton ISD	Alief Montessori School	Elementary School for Education Innovation
Wheeler ISD	Ambassadors Preparatory Academy	Elevate Collegiate Charter School
White Deer ISD	Amigos Por Vida-Friends For Life Ch Sch	Erath Excels Academy
White Oak ISD	Aristoi Classical Academy	Etoile Academy Charter School
White Settlement ISD	Arlington Classics Academy	Evolution Academy Charter School
Whiteface ISD	Arrow Academy	Excellence in Leadership Academy
Whitehouse ISD	Austin Achieve Public Schools	Faith Family Academy Waxahachie
Whitesboro ISD	Austin Discovery School	Fort Worth Academy Fine Arts
Whitewright ISD	Basis San Antonio	Gateway Charter Academy
Whitharral ISD	Beatrice Mayes Institute Charter School	George Gervin Academy
Whitney ISD	Ben Milam International Academy	George I Sanchez Charter School
Wichita Falls ISD	Beta Academy	Golden Rule Charter School
Wildorado ISD	Bexar County Academy	Goodwater Montessori School
Willis ISD	Big Springs Charter School	Great Hearts Academy - San Antonio
Wills Point ISD	Bloom Academy Charter School	Gulf Coast Trades Center
Wilson ISD	Bob Hope School	Harmony School of Excellence - Houston
Wimberley ISD	Brazos River Charter School	Harmony School of Science - Houston
Windham School District	Brazos School for Inquiry & Creativity	Harmony Science Academy - Austin
Windthorst ISD	Bridgeway Preparatory Academy	Harmony Science Academy - El Paso
Wink-Loving CISD	Brooks Academy of Science & Engineering	Harmony Science Academy - Houston
Winnsboro ISD	Burnham Wood Charter School District	Harmony Science Academy - San Antonio
Winona ISD	Calvin Nelms Charter Schools	Harmony Science Academy - Waco
Winters ISD	Carver Center	Henry Ford Academy Alameda School
Woden ISD	Cedars International Academy	Heritage Academy
Wolfe City ISD	Chaparral Star Academy	High Point Academy
Woodsboro ISD	Chapel Hill Academy	Houston Classical Charter School
Woodson ISD	Cityscape Schools Inc	Houston Gateway Charter School

Houston Heights High School	Ranch Academy	Trivium Academy
Idea Public Schools	Rapoport Academy	Two Dimensions Prep Academy
Inspired Academies	Raul Yzaguirre School	Ume Preparatory Academy
Inspired Vision Academy	REACH Network	Universal Academy
International Leadership of Texas	Relay Lab Schools Texas	Uplift Education
Jean Massieu Academy	Reve Preparatory Charter School	Valor Public Schools
Jubilee Academies	Richard Milburn - Killeen	Vanguard Academy
Katherine Anne Porter School	Rise Academy	Varnett Charter School
Kauffman Leadership Acacemy	Rural Schools Innovation Zone	Village Tech Schools
Ki Charter Academy	San Antonio Preparatory Charter School	Vista Del Futuro Charter School
Kipp Texas Public Schools	School Innovation Collaborative	Waco Charter School
La Academia De Estrellas	School of Excellence in Education	Wayside Schools
La Fe Preparatory School	School of Science & Tech-Discovery	Westlake Academy
Leadership Academy Network	School of Science & Technology	Winfree Academy Charter Schools
Leadership Prep School	Seashore Charter Schools	Yellowstone College Preparatory
Legacy Preparatory	Ser-Ninos Charter School	YES Prep Public Schools
Legacy School of Sport Sciences	South Texas Educational Tech	
Life School	Southwest High School	Community and Junior Colleges
Lighthouse Charter School	Southwest Preparatory School	Alamo Community College District
Lubbock Partnership Network	St Anthony School	Alvin Community College
Lumin Education	St Marys Charter School	Amarillo College
Manara Academy	Stepping Stones Charter Elementary	Angelina College
Meadowland Charter District	Tekoa Academy	Austin Community College
Meridian World School LLC	Texans Can Academies	Blinn College
Meyerpark Elementary Charter	Texas College Preparatory Academies	Brazosport College
Midland Academy Charter School	Texas Council for International Studies	Central Texas College
Montessori For All	Texas Education Center	Cisco Junior College
Moody Early Childhood Center	Texas Empowerment Academy	Clarendon College
New Frontiers Public Schools	Texas Preparatory School	Coastal Bend College
Newman International Academy	Texas Serenity Academy	College of the Mainland
North Texas Elementary School of Arts	The Ehrhart School	Collin County Community College
Nova Charter School	The Excel Center	Dallas County Community College District
Nova Charter Southeast	The Gathering Place	Del Mar College
NYOS Charter School	The Lawson Academy	El Paso Community College
Odyssey Academy	The Lone Star Language Academy	Frank Phillips College
Orenda Charter School	The Pro-Vision Academy	Galveston College
Panola Charter School	The Rhodes School	Grayson County College
Pegasus School of Liberal Arts & Science	TLC Academy	Hill College
Pineywoods Academy	Transformation Waco	Houston Community College System
Pioneer Technology & Arts Academy	Treetops International	Howard County Junior College District
Por Vida Academy	Trinity Basin Preparatory	Kilgore College
Premier High Schools	Trinity Charter School	Laredo Community College
Priority Charter Schools	Triumph Public High Schools - El Paso	Lee College
Promesa Academy Charter School	Triumph Public High Schools - Laredo	Lone Star College System
Promesa Public Schools	Triumph Public High Schools - Lubbock	McLennan Community College
Promise Community School	Triumph Public High Schools - Rio Grande	Midland College

Navarro College
 North Central Texas College
 Northeast Texas Community College
 Odessa College
 Panola College
 Paris Junior College
 Ranger Junior College
 San Jacinto College District
 South Plains College
 South Texas College
 Southwest Texas Junior College
 Tarrant County College District
 Temple College
 Texarkana College
 Texas Southmost College
 Trinity Valley Junior College
 Tyler Junior College
 Vernon College
 Victoria College
 Weatherford College
 Western Texas College
 Wharton County Junior College

Senior Colleges and Universities

Angelo State University
 Lamar Institute 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 Service
 Texas A&M Agrilife Research
 Texas A&M Engineering Experiment Station
 Texas A&M Engineering Extension Service
 Texas A&M Forest Service
 Texas A&M International University
 Texas A&M Transportation Institute
 Texas A&M University
 Texas A&M University - Central Texas
 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 - Texarkana
 Texas A&M University Systems Office
 Texas Division of Emergency Management
 Texas Southern University
 Texas State Technical College
 Texas State University - San Marcos
 Texas State University System
 Texas Tech University
 Texas Woman's University
 University of Houston
 University of North Texas
 University of North Texas at Dallas
 University of North Texas System Admin
 University of Texas System
 University of Texas at Arlington
 University of Texas at Austin
 University of Texas at Dallas
 University of Texas at El Paso
 University of Texas at Permian Basin
 University of Texas at Rio Grande Valley
 University of Texas at San Antonio
 University of Texas at Tyler
 West Texas A&M University

Medical Schools

Texas A&M University System HSC
 Texas A&M Vet Medical Diagnostic Lab
 Univ of North Texas HSC at Fort Worth
 Univ of Texas Health Center at Tyler
 Univ of Texas HSC at Houston
 Univ of Texas HSC at San Antonio
 Univ of Texas MD Anderson Cancer Center
 Univ of Texas Medical Branch at Galveston
 Univ of Texas Southwestern Medical Center

Regional Service Centers

Region 01 Education Service Center
 Region 02 Education Service Center
 Region 03 Education Service Center
 Region 04 Education Service Center
 Region 05 Education Service Center
 Region 06 Education Service Center
 Region 07 Education Service Center

Region 08 Education Service Center
 Region 09 Education Service Center
 Region 10 Education Service Center
 Region 11 Education Service Center
 Region 12 Education Service Center
 Region 13 Education Service Center
 Region 14 Education Service Center
 Region 15 Education Service Center
 Region 16 Education Service Center
 Region 17 Education Service Center
 Region 18 Education Service Center
 Region 19 Education Service Center
 Region 20 Education Service Center

Other Education Districts

Anderson County Special Education Co-Op
 Bowie County School District
 Harris County Dept of Education

Other Entities

Teacher Retirement System of Texas

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Wildflowers

Of the abundance of native plant life in Texas, there are thousands that are considered wildflowers.

Wildflowers blossom and grow across every geographic area in the Lone Star State.

There are five species of bluebonnets (front cover) recognized as Texas' state flower.



\$754M



TRS WILL **SAVE \$754 MILLION** OVER THE NEXT THREE YEARS BY SWITCHING HEALTH INSURANCE VENDORS FOR ALL PROGRAMS.

Changes in State Law

The Texas Legislature did not meet in fiscal year 2020. No noteworthy state law developments affecting TRS occurred during the current fiscal year.

Changes in Federal Law

A. Investments

Implementation of Rulemaking Under the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) (Dodd-Frank)

During this fiscal year, TRS continued monitoring the second implementation phase of the new margin requirements for uncleared swaps, which will address initial margin, for example requiring two-way posting and segregation of initial margin. The timetable for complying with these rules has been pushed back due to COVID-19, so the initial-margin regulations should apply to TRS effective September 2022. Ahead of that deadline, TRS will amend some or all of its International Swaps and Derivatives Association agreements to account for the new requirements and also put into place arrangements for third-party custody of initial margin.

B. Health Care Benefits

Federal Patient Protection and Affordable Care Act of 2010 (PPACA)

During this fiscal year, in a continued effort to identify any impact upon the health benefit programs administered by TRS, TRS continued to monitor regulations issued with regard to the PPACA.

TRS continues to allow certain participating employers 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 2020. 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.

TRS also continues to make efforts to ensure that the coverage it offers under TRS-ActiveCare meets the PPACA's minimum value and affordability standards, in order to assist the participating entities' efforts to avoid the PPACA's shared responsibility penalties.

TRS also continues to monitor the litigation related to the constitutionality of the PPACA. In March of 2020, the United States Supreme Court agreed to review the case of California v. Texas (formerly known as Texas v. U.S.) after the Fifth Circuit Court of Appeals determined that the PPACA's individual mandate was unconstitutional, but failed to rule on whether that conclusion renders the remaining provisions of the PPACA invalid. The Supreme Court could hear the case as early as October 2020, but a decision could come as late as June 2021. TRS will continue to follow this litigation and assess its impact on the TRS-Care and TRS-ActiveCare plans and upon TRS operations.

The Further Consolidated Appropriations Act of 2020 repealed Internal Revenue Code Section 4980I (introduced by the PPACA and informally known as "the Cadillac Tax") which would have imposed a 40 percent excise tax on certain high cost group health plans. Its effective date had previously been delayed until 2022, but it is now completely repealed. On the other hand, this Act extended the Patient Centered Outcomes Research Institute Fee for an additional ten years until 2029. This is a fee imposed on group health plans based on total enrollment and the funds raised are to be used for specified medical research. The current fee is \$2.54 per covered life, but increases each year.

High Deductible Health Plans

TRS continues to monitor changes that affect TRS-ActiveCare 1-HD plan (a high deductible health plan). For example, the IRS annually releases cost-of-living increases related to the minimum deductibles and maximum out-of-pocket amounts allowed under a high deductible health plan. TRS ensures TRS-ActiveCare 1-HD plan meets those requirements.

COVID-19

The federal government's response to the COVID-19 pandemic resulted in changes to the health plans offered under TRS-Care and TRS-ActiveCare. The Families First Coronavirus Response Act ("FFCRA") and the Coronavirus Aid, Relief, and Economic Security ("CARES") Act require mandatory coverage, without cost sharing, of COVID-19 diagnostic testing and related services under TRS' health programs in certain circumstances. The CARES Act also requires the rapid coverage of a COVID-19 vaccine when one is developed and approved by federal governmental entities and provides a temporary safe harbor that allows the high deductible health plans of TRS-Care

and TRS-ActiveCare to cover telehealth and other remote health services without a deductible. Guidance from the U.S. Department of Health and Human Services also allows TRS' health programs to extend certain deadlines for participants to provide notice of special enrollment events and COBRA elections, to pay COBRA premiums, and to appeal adverse benefit determinations, among other things.

C. Pension

Tax Laws, Regulations, and Guidance

The Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") went into effect on March 27, 2020. TRS implemented certain provisions of the CARES Act related to Coronavirus Distribution Payments.

During this fiscal year, TRS continued to monitor the status of proposed regulations regarding income tax withholding on certain periodic retirement and annuity payments, the applicability of normal retirement age regulations, and the determination of governmental plan status.

D. Other Developments

Data Privacy

The General Data Protection Act ("GDPR") went into effect on May 25, 2018. This Regulation restricts the use and storage of the personal information of individuals in the European Union and restricts the international transfer of such data. TRS is continuing to implement and apply the GDPR restrictions as it applies to the operations of TRS' subsidiary in the UK.

Market Abuse Regulation

MAR took effect on July 3, 2016, and contains the rules on insider dealing, unlawful disclosure of inside information and market manipulation that applies in the European Union. It affects any firm that trades on an in-scope European Economic Area (EEA) market, regardless of whether the firm is within the EEA. MAR includes compliance and legal provisions that are similar to U.S insider trading laws as well as additional requirements such as "market soundings" that involve the communication of potentially insider information by the sell side to the buy side.

Markets in Financial Instruments Directive II

MiFID II took effect on January 3, 2018 and regulates certain investment services across the EEA. In particular, it requires unbundling of trading costs between research and execution services and fees such that EEA managers must either pay for research themselves or set up a research payment account, where the budget has been agreed with the client. Many managers have determined to pay for research themselves, which has led to a drop in research budgets. Some US managers have adopted a similar approach.

Summary of Benefits

The Teacher Retirement System of Texas (TRS) administers the TRS Pension Trust Fund, 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 and survivor benefits to 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.

TRS also administers two separate health care related trust funds:

- TRS-ActiveCare is the statewide health benefits program for eligible active public education employees of participating employers and their eligible dependents.
- TRS-Care is the statewide health benefits program for eligible retired public education employees and their eligible dependents.

TRS also administers an optional long-term care insurance program for eligible retirees, public school employees, their dependents, and other 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 2020.

A. Service Retirement

Normal Retirement Eligibility

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

- 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.

For members whose membership began on or after September 1, 2007 but prior to September 1, 2014, who had at least five years of service credit as of August 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 the member's age and years of credited service equals or exceeds 80 with at least five years of credited service.

For members who did not have at least five years of service credit as of August 31, 2014, who established TRS membership on or after September 1, 2014, or who had at least five years of service credit as of August 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 the 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

The annual standard annuity is based on the average of the five highest annual creditable salaries multiplied by the years of credited service multiplied by 2.3 percent. For members who are grandfathered, the three highest annual salaries are used in the benefit formula.

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 September 1, 2007, who had at least five years of service credit as of August 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 September 1, 2007 but prior to September 1, 2014, who had at least five years of service credit as of August 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 September 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. These members are still considered early-age retirees.

For members who did not have at least five years of service credit as of August 31, 2014, who established TRS membership on or after September 1, 2014, or who had at least five years of service credit as of August 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 September 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. 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.

B. 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 August 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.

C. Annuity Payment Options

All service and eligible disability retirees may select an optional form of payment that reduces the standard 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 ten year guaranteed period annuities. Selection of a 100 or 75 percent joint and survivor annuity and a five or ten year guaranteed period annuity may not be allowed in certain situations based on the minimum distribution provisions of federal tax law.

D. 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.

E. 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-September 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.

F. Deferred Retirement Option Plan

The TRS Pension Plan permitted eligible members to participate in a Deferred Retirement Option Plan (DROP) by enrolling no later than December 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.

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 for their pension annuity, nor is any compensation earned during DROP participation considered in calculating the standard pension annuity.

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 refundable.

Interest on the DROP account balance prior to September 1, 2014 was computed at an annual rate of five percent. Subsequent to that date, the interest rate changed to two percent.

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.

G. 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.

H. 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 in any of the following situations:

- 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, or
- if the member dies when eligible to retire, or
- would have become eligible without further service before the fifth anniversary of the member's last day of service as a member
- if the member dies while performing qualified military service as defined by applicable federal law
- 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
- when the member is within five years of being eligible to retire when leaving employment.

Benefit Options

- A lump sum payment equal to twice the member's annual rate of compensation or \$80,000, whichever is less, or
- 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, or

- 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, or
- An amount equal to a return of the member's contributions with accumulated interest, or
- 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.

I. 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, or
- 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

A. Health Benefits for Active Public School Employees

TRS-ActiveCare, the statewide health benefits program for eligible full-time and part-time employees of participating employers of public schools, open enrollment charter schools, regional service centers, and other educational districts, went into effect on September 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. Employees can choose from three plan options and in certain areas, employees also have the option of enrolling in a health maintenance organization.

For information on TRS-ActiveCare, please refer to the TRS website.

B. 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 a substantial portion of retired public education employees rely upon. Details of the plan can be found in Note 9.

For information on TRS-Care eligibility, please refer to the TRS website.

C. 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.

THANK YOU

***WE ARE EXTREMELY GRATEFUL TO ALL
OF OUR MEMBERS WHO ALLOW US THE
PRIVILEGE OF EARNING THEIR TRUST
EVERY DAY.***



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