



2018 Comprehensive Annual Financial Report

Employees Retirement System of Texas | A Component Unit of the State of Texas

Fiscal Year Ended August 31, 2018

ERS
Employees Retirement System of Texas

The mission of the Employees Retirement System of Texas is to support the state workforce by offering competitive benefits at a reasonable cost.

Published December 2018

2018
Comprehensive Annual Financial Report

Porter Wilson, Executive Director

Prepared by: Finance Division

A Component Unit of the State of Texas
Fiscal Year Ended August 31, 2018

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INTRODUCTORY SECTION

Highlights of Retirement Programs

As of August 31, 2018

	ERS (Note A)	LECOS (Note A)	JRS II
Retirement Census Data			
Active Members	141,535	37,167	561
Terminated Employees Entitled to Benefits	119,736	19,842	153
Total Retirement Accounts	**261,271**	**57,009**	**714**
Retirees and Beneficiaries	**111,361**	**13,080**	**393**
Service Retirements	5,984	965	16
Disability Retirements	45	1	0
Total Retirements During the Fiscal Year	**6,029**	**966**	**16**
Funded Ratios (Note B)	70.2%	65.6%	91.7%
Plan Fiduciary Net Position as a Percentage of Total Pension Liability (Note C)	57.9%	45.0%	93.0%
Results of Investments - Pension Trust Funds			
Interest, Dividends & Securities Lending Income	$ 649,504,666	$ 22,713,933	$ 10,499,160
Net Appreciation in Fair Value of Investments	1,816,705,791	63,513,356	29,265,166
Other Transactions Summary			
Member Contributions	$ 683,932,829	$ 9,274,814	$ 5,939,830
State Retirement Contributions	697,225,914	26,109,655	12,559,722
Retirement Benefits	2,355,196,596	72,245,745	24,706,173
Member Contributions Withdrawn	123,948,291	3,392,274	159,407
Administrative Expenses	23,549,964	1,850,762	295,903
Investment Expenses	36,613,610	1,312,984	583,388
Money-Weighted Rates of Return	9.42%	9.40%	9.40%

Time Weighted Rates of Return	**1-Year**	**3-Year**	**5-Year**
Investment Pool Trust Fund	9.58%	8.98%	8.33%

ERS - Employees Retirement Fund
LECOS - Law Enforcement and Custodial Officer Supplemental Retirement Fund
JRS II - Judicial Retirement System Plan Two

Note A: The members of the LECOS are also members of the ERS.

Note B: Funded Ratios are based on actuary calculations for funding purposes. The actuarial accrued liability used in the Funded Ratio calculation for ERS and LECOS is based on a total liability, which is based on the benefit provisions in effect for each active member *and a normal cost rate based on the benefits in effect for members hired after August 31, 2013.*

Note C: This calculation reflects market value, changes in single discount rate application, and other adjustments as required by GASB Statement No. 67.

Executive Director's Message

ERS
Employees Retirement System of Texas

200 E. 18th Street Austin, Texas 78701 | P. O. Box 13207, Austin, Texas 78701-3207 | (512) 867-7711| (877) 275-4377 Toll-Free | www.ers.texas.gov

December 20, 2018

The Honorable Greg Abbott, Governor of Texas
The Honorable Glenn Hegar, Texas Comptroller
Sarah Keyton, Legislative Budget Board
John McGeady, Legislative Budget Board
Lisa Collier, First Assistant State Auditor
The Board of Trustees and Members of the Employees Retirement System of Texas

Ladies and Gentlemen:

I am pleased to present the Employees Retirement System of Texas (ERS) Comprehensive Annual Financial Report (CAFR) for the fiscal year ended August 31, 2018. The Legislature's ongoing support of ERS' retirement and health insurance programs, positive investment returns and cost-saving activities in our health plans made it a successful year overall.

The retirement benefits and health coverage offered through ERS are an investment in Texas, funded by both members and taxpayers. Such benefits play an integral role in ensuring Texas has the workforce necessary to serve its citizens and provide critical services Texans rely on daily. ERS contributes to fair compensation for these employees through valuable benefits programs, increasing the state's competitiveness in the employer marketplace. Benefits, including the state's contributions toward health insurance and retirement, account for more than a third of total compensation for the average state employee.

The 85th Texas Legislature continued to help protect the long-term health of state retirement funds by maintaining state and member contributions for Fiscal Years 2018-19. During Fiscal Year 2018, ERS paid approximately $2.4 billion in retirement annuities to more than 100,000 retirees and beneficiaries. Investment income accounts for about two-thirds of the Trust's revenue. The ERS Retirement Trust Fund netted 9.54%, or $ 2.4 billion, in investment earnings. Despite a 9.54% return for Fiscal Year 2018, the retirement plan continues on a downward trend and is currently set to deplete.

ERS investments are highly diversified and designed to withstand market fluctuations. To support appropriate diversification, ERS regularly reviews its full investment portfolio and actively manages assets to achieve the highest risk-adjusted return possible within existing market conditions. During Fiscal Year 2018, the Board approved the Pension Funding Priorities and Guidelines. The adoption of the policy was intended to:

- Enhance communications and provide transparency to stakeholders regarding the Board's positions on plan funding strategy.
- Provide policy guidance to current and future Boards.
- Ensure stakeholders have clear and accurate information about the Trust's funding goals and the needs of the Board in supporting sound fiduciary investment decisions.

This policy laid out a multi-level funding period goal to gradually achieve funding based on sound actuarial principles. These principles will help ERS achieve the following:

1. Avoid trust fund depletion.
2. Meet current statutory standard as of a 31-year funding period.
3. Match the funding period to the average years of service at retirement, once a 31-year funding period is achieved.

ERS continues to respond effectively to the ongoing nationwide challenge of rising health costs. Our initiatives in the Texas Employees Group Benefits Program have helped maintain lower-than-average cost increases while upholding our commitment to valuable benefits and high-quality care and service. We are deeply gratified by our cost-management efforts, which have allowed us to keep costs low for the state and members. In Fiscal Year 2018, average health insurance premiums have increased by less than one-half of 1%, without any reductions in benefits.

We continue to see increased enrollment in the Consumer Directed HealthSelect^{SM} high-deductible health plan, which ERS began offering September 1, 2016 as an alternative to the HealthSelect^{SM} point-of-service plan and the health maintenance organizations. Consumer Directed HealthSelect^{SM} allows participants to have greater control of their health care expenses and to realize the tax benefits of a health savings account.

Thank you for your ongoing support. ERS is proud of its role in supporting this great state, its leadership, and its employees and retirees.

Sincerely,

Porter Wilson

Porter Wilson
Executive Director

Letter of Transmittal

200 E. 18th Street Austin, Texas 78701 | P. O. Box 13207, Austin, Texas 78701-3207 | (512) 867-7711| (877) 275-4377 Toll-Free | www.ers.texas.gov

December 20, 2018

To: The Board of Trustees and Members of the Employees Retirement System of Texas

Ladies and Gentlemen:

I am pleased to submit the Comprehensive Annual Financial Report of the Employees Retirement System of Texas (System) for the year ended August 31, 2018, in compliance with TEX. GOV'T CODE ANN Sec. 2101.011 and in accordance with the requirements established by the Texas Comptroller of Public Accounts.

The System's Financial Staff prepared this report in accordance with generally accepted accounting principles applied on a consistent basis as promulgated by the Governmental Accounting Standards Board (GASB). Its purpose is to provide information as a basis for making management decisions, to determine compliance with legal provisions, and to determine responsible stewardship over the assets contributed by the members and the state. The report has been audited by the State Auditor's Office of Texas. For information regarding the scope of the audit, please see the Independent Auditor's Report in the Financial Section.

The responsibility for the accuracy, completeness, and fair presentation of the information, including all disclosures, rests with the management of the System. We believe that the System's internal accounting controls adequately safeguard assets and provide reasonable assurance of proper recording of financial transactions. Internal accounting controls are designed to provide reasonable, but not absolute, assurance regarding the safeguarding of assets and the reliability of financial records.

Please refer to the Management's Discussion and Analysis in the Financial Section for an overview of the financial activities of the current and prior fiscal years.

SYSTEM'S STRUCTURE AND SERVICES

For financial reporting purposes, the System is considered a Retirement System of the State of Texas. The System's financial activities will be included in the annual financial report for the State of Texas for the fiscal year ended August 31, 2018.

The Employees Retirement Plan was established in 1947 by the Texas Constitution to provide benefits for officers and employees of the state. The System administers retirement and disability annuities and death and survivor benefits for employees of the State of Texas and their beneficiaries and proportional retirement benefits for members of the Proportionate Retirement Program.

The Law Enforcement and Custodial Officer Supplemental (LECOS) Retirement Plan was established in 1979 and is governed by Title 8, Subtitle B of the Texas Government Code. The program provides supplemental retirement benefits to certain certified peace officers or custodial officers specified in statute. Upon retirement, the individual receives an annuity from both plans.

The Judicial Retirement Plan I and Plan II were established to provide benefits for judges. Both Plans were created under Article XVI, Section 67 of the Texas Constitution and governed by Title 8, Subtitle E of the Texas Government Code. Plan I was established in 1949 as a pay-as-you-go pension plan. The Judicial Retirement Plan II is governed by Sections 840.103 and 840.106, Texas Government Code, and was established as a new plan of actuarially funded retirement benefits for judges becoming members of the Judicial Retirement System after August 31, 1985. Although the Texas Judicial Retirement Systems are separate legal entities, the Employees Retirement System of Texas and the Texas Judicial Retirement Systems are a single accounting entity because they are governed by the same Board of Trustees (the Board), directed by the same management, part of the ERS goal of administering comprehensive and actuarially sound retirement programs and supports the objective of retaining proper funding and investment growth for the programs.

Accountability for all fiscal and budgetary matters is the responsibility of the Board. Operating administrative expenses, including capital items, are budgeted annually. The Board must approve any subsequent increases in the budget. Budgetary control is maintained in the financial system with automated edits, and through processes and procedures for approvals, encumbrances, and reporting.

FINANCIAL CONDITION

Investment Performance

The investment portfolio for the pension plans closed the fiscal year with a fair value of $29.01 billion, and had a gross return of 9.58% for the year. The time weighted rate of return for three and five years were 8.98% and 8.33% respectively.

The System's management remains confident in the financial markets and maintains a long term approach to investing the System's assets. The System's investments are highly diversified and are designed to withstand market fluctuations. The System maintains a professional and diversified investment program optimizing the mix of internal management and external advisors, continuing to expand asset classes and reduce investment risk through additional portfolio management tools. Please refer to the Investment Section for additional information on investment policies, strategies, and safeguards.

Funding Status

The Employees Retirement Fund actuarial valuation as of the August 31, 2018 shows that the ratio of the actuarial value of assets to the actuarial accrued liability was 70.2 % for funding purposes. In May, 2018, the ERS Board of Trustees approved the Pension Funding Priorities and Guidelines policy. The main goal of ERS' retirement programs is to fully fund the long-term costs of benefits provided by statute, through disciplined and timely accumulation of contributions and prudent investment of assets. The policy seeks to balance five principle objectives: (1) 100% payment of vested benefits; (s) contribution stability and sound financing; (3) intergenerational equity; (4) workforce parity; and quality of benefit The LECOS Retirement Plan actuarial valuation as of the August 31, 2018 shows that the ratio of the actuarial value of assets to the actuarial accrued liability was 65.6% for funding purposes. The JRS II Retirement Plan actuarial valuation as of the August 31, 2018 shows that the ratio of the actuarial value of assets to the actuarial accrued liability was 91.7% for funding purposes. The System is committed to working with the Legislature to return the retirement plans to an actuarially sound status. Additional information on funding status and progress toward achieving funding goals is presented in the Financial and the Actuarial Sections.

In Fiscal Year 2018, the System implemented new reporting standards in accordance with the statements issued by the Governmental Accounting Standards Board. Specifically, the System implemented GASB Statement No. 82 Omnibus 2017 which modified the presentation of payroll-related measures in Required Supplementary Information by OPEB plans. Additional information on reporting changes is presented in the Financial Section.

MAJOR INITIATIVES

The System continues to analyze and design innovative approaches to provide a quality health care plan and other benefits at a reasonable cost. The change in the Pharmacy Benefit Manager and third-party administrator contracts resulted in significant savings during the fiscal year. For Fiscal Year 2018, pharmacy trend (not including rebates and subsidies) was 6.6% and medical trend was -14.9% resulting in a total combined HealthSelect^{SM} health care cost trend of -9.9%

The System will provide information to the 86th Legislature to work toward returning the retirement trust funds to an actuarially sound status. In addition, the System continues to educate members on the importance of a well-rounded plan for retirement including personal savings. New members are automatically placed in a 401(k) plan unless they chose to "opt-out." Through this program and continued education the market value of the Texa$aver 401(k)/457 program grew to more than $3.3 billion as of August 31, 2018.

AWARDS

Certificate of Achievement for Excellence in Financial Reporting

The Government Finance Officers Association (GFOA) of the United States and Canada awarded the Certificate of Achievement for Excellence in Financial Reporting to the System for its Comprehensive Annual Financial Report for the fiscal year ended August 31, 2017. The Certificate of Achievement is a prestigious national award recognizing excellence in the preparation of state and local government financial reports. To be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report whose contents meet or exceed program standards and satisfy both generally accepted accounting principles and applicable legal requirements. . A Certificate of Achievement is valid for one year. The System has received a Certificate of Achievement for each of the last 29 years. We believe the current report continues to meet the Certificate of Achievement program requirements and it is being submitted it to the GFOA for consideration again this year.

Public Pension Standards Award for Funding and Administration

The Public Pension Coordinating Council (PPCC) gave the 2018 Public Pension Standards Award for Administration to the System in recognition of meeting professional standards for plan administration as set forth in the Public Pension Standards.

ACKNOWLEDGMENTS

The preparation of this report on a timely basis was accomplished with the efficient and dedicated service of the Finance staff and other employees of the System. I would like to express my appreciation for management's support in preparing this report and to all the employees of the System who contributed to its preparation.

Machelle Pharr, CPA
Chief Financial Officer

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Employees Retirement System of Texas

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

August 31, 2017

Christopher P. Morrill

Executive Director/CEO

Public Pension Coordinating Council

Recognition Award for Administration
2018

Presented to

Employees Retirement System of Texas

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

Presented by the Public Pension Coordinating Council, a confederation of

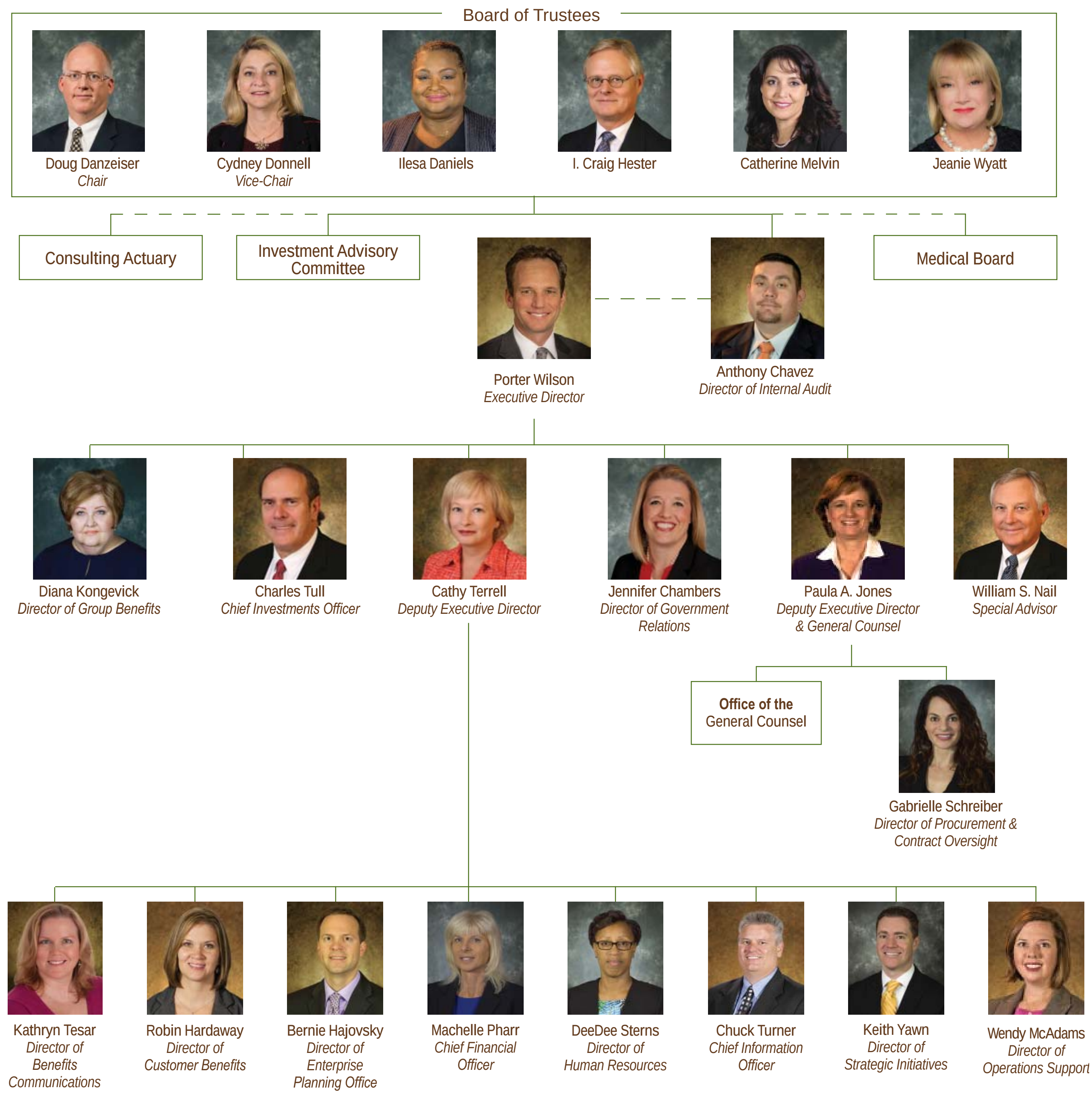
National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle

Alan H. Winkle
Program Administrator

Organizational Chart and Data

As of August 31, 2018



Consultants and Advisors

As of August 31, 2018

Consulting Actuaries

Mitchell L. Bilbe, FSA
Philip S. Dial, FSA
Christopher S. Johnson, FSA
Rudd and Wisdom, Inc.

Ryan Falls, FSA, FCA, EA, MAAA
Joseph Newton, FSA, FCA, EA, MAAA
Dana Woolfrey, FSA, FCA, EA, MAAA
Gabriel, Roeder, Smith & Company

Investment Advisory Committee

Caroline Cooley, Chair
Chief Investment Officer - Diversified Funds,
Crestline Investors, Inc.
Robert G. Alley, CFA, Vice-chair
James R. Hille, CFA, CAIA
Chief Investment Officer,
Texas Christian University Endowment
Mari Kooi
Ken D. Mindell
Senior Vice President and Treasurer,
Rosewood Management Corporation
Mr. Gene L. Needles Jr.
Chairman, President and CEO,
American Beacon Advisors
Laura T. Starks, Ph.D.
Charles E. & Sarah M. Seay Regents Chair in Finance,
The University of Texas at Austin
Lenore M. Sullivan
Margaret "Didi" Weinblatt, Ph.D., CFA

Investment Consultants

Albourne Partners
Aon Hewitt Investment Consulting
Pavilion Financial Corporation
PCA – Pension Consulting Alliance

External Investment Advisors

Domestic Equity
Barrow, Hanley, Mewhinney & Strauss, LLC
Brandywine Global Investment Management, LLC

International Equity
Acadian Asset Management
BlackRock, Inc.
Fisher Investments Institutional Group
Franklin Templeton Institutional, LLC
Lazard Asset Management

Manager of Emerging Managers
Legato Capital Management, LLC

Global Custodian

BNY Mellon Asset Servicing

Group Benefits Advisory Committee

Large State Agency Representatives
Charlene Maresh
Department of Criminal Justice
Harsh Zadoo
Department of Transportation

Mid-sized State Agency Representatives
Megan LaVoie
Office of Court Administration
Gene Snelson II
Animal Health Commission

Small State Agency Representative
Dawn Heitman
State Soil and Water Conservation Board

Four-year Institution of Higher Education Representative
Janet Bezner
Texas State University

Two-year Institution of Higher Education Representative
Missy Kittner
McLennan Community College

Retiree Representatives
James Dobbins, Garland
Gary White, Austin

Health-related Institution Representative
Cynthia Jumper
Texas Tech University Health Sciences Center

Insurance or Benefit Design Consultant Representative
Tom Lussier
The Lussier Group

Medical Board

Ace Alsup, M.D.
William J. Deaton, M.D.
William P. Taylor, M.D.
William M. Loving, M.D

Please refer to pages 100 to 102 in the Investment Section for a schedule of fees and commissions.

Summary of Plan Provisions

Effective since September 1, 2009 (Except as noted below)

The Employees Retirement System of Texas was created by the Texas Legislature in 1947 and is administered in accordance with the Texas Constitution. The System provides a retirement and disability pension system for State employees, law enforcement and custodial officers, elected state officials and two classes of judges. The System administers the trust funds, with a fiduciary obligation to the members and retirees of the System who are its beneficiaries.

The retirement programs complement the Social Security and Medicare programs by providing a retirement annuity with service, disability and survivorship benefits. The Employees Retirement System of Texas Plan (ERS), the Law Enforcement and Custodial Officer Supplemental Retirement Plan (LECOS), and Judicial Retirement System of Texas Plan Two (JRS II) are single employer defined benefit pension plans.

For a complete description of the provision of the law that describes the Retirement Plans, see Vernon's Texas Statutes and Codes Annotated (V.T.S.C.A.), Texas Government Code, Title 8. The following is a summary of the various plan provisions.

ERS	LECOS	JRS II
Membership:		
Employee Class Only: • Employees and appointed officers of every department, commission, board, agency, or institution of the State except those who are included in the coverage of Teacher Retirement System of Texas, JRS I, and JRS II. Elected Class Only: • Persons who hold State offices that are normally filled by statewide election and that are not included in the coverage of JRS I and JRS II. • Members of the Legislature. • District and criminal district attorneys.	• Law enforcement officers recognized as commissioned law enforcement officers by the Commission on Law Enforcement Officer Standards and Education and employed at an agency defined by statute. • Custodial officers certified in accordance with the statutory requirements as having a normal job assignment that requires frequent or infrequent planned contact with inmates of that institution and employed at an agency defined by statute	• Judges, justices and commissioners of the Supreme Court, the Court of Criminal Appeals, the Court of Appeals, District Courts, and certain commissions to a court who commenced service after August 31, 1985.
Service Retirement Eligibility without Reduced Benefits:		
Employee Class Only: Hire date prior to 9-1-2009: • Age 60 with at least five years of service credit, or • Rule-of-80 with at least five years of service credit, or • Age 55 with at least 10 years of service credit as a certified peace officer or custodial officer. Hire date on or after 9-1-2009 and prior to 9-1-2013: • Age 65 with 10 years of service • Rule-of-80, with at least 10 years of service at age 60. • Age 60 with at least 10 years of service credit as a certified peace officer or custodial officer. Hire date on or after 9-1-2013: • Age 65 with 10 years of service. • Rule-of-80, with at least 10 years of service at age 62. • Age 62 with at least 10 years of service credit as a certified peace officer or custodial officer. *Elected Class Only:* • Age 60 with eight years of service credit. • Age 50 with 12 years of service credit.	Hire date prior to 9-1-2009: • 20 years of service credit as a certified peace officer/custodial officer and the member's age is the earlier of either the age of 50 or the age at which the sum of age and years of service credit equals or exceeds the number 80. Hire date on or after 9-1-2009 and prior to 9-1-2013: • 20 years of service credit as a certified peace officer/custodial officer at or over age 55. Hire date on or after 9-1-2013: • 20 years of service credit as a certified peace officer/custodial officer at or over age 57.	• Age 65 with at least 10 years of service credit and currently holding a judicial office, or • Age 65 with at least 12 years of service if not holding office, or • 20 years of service at any age, regardless of whether the member currently holds a judicial office, or • The sum of age and years of service credit equals or exceeds the number 70 and served at least 12 years on an appellate court, regardless of whether the member currently holds a judicial office.

ERS	LECOS	JRS II
Early Service Retirement Eligibility with Reduced Benefits:		
Hire date on or after 9-1-2009 and prior to 9-1-2013: • Rule-of-80, with at least 10 years of service. (5% annuity reduction for each year retired under age 60, up to 25%) • Age 55 with at least 10 years of service credit as a certified peace officer or custodial officer. (5% annuity reduction for each year retired under age 60, up to 25%) Hire date on or after 9-1-2013: • Rule-of-80, with at least 10 years of service. (5% annuity reduction for each year retired under age 62, no cap) • Age 55 with at least 10 years of service credit as a certified peace officer or custodial officer. (5% annuity reduction for each year retired under age 62, no cap)	Hire date prior to 09-01-2009: • 20 years of service credit as a certified peace officer/custodial officer, under the age of 50. Actuarial reduction for those who retire prior to age 50. Hire date on or after 9-1-2009 and prior to 9-1-2013: • 20 years of service credit as a certified peace officer/custodial officer (5% annuity reduction for each year retired under age 55, up to 25%) Hire date on or after 9-1-2013: • 20 years of service credit as a certified peace officer/custodial officer (5% annuity reduction for each year retired under age 57,no cap). Additional actuarial reduction for those that retire prior to age 50.	• Age 60 with 10 years of service credit and currently holding judicial office, or • Age 60 with 12 years of service credit, if not holding office.
Standard Service Retirement without Reduced Benefits:		
Employee Class Only: • Standard monthly annuity is equal to 2.3% of average monthly compensation multiplied by the number of years of service credit. • The average monthly compensation for those hired prior to 9-1-2009 is the average of the highest 36 months of compensation. • The average monthly compensation for those hired on or after 9-1-2009 and prior to 9-1-2013 is the average of the highest 48 months of compensation. • The average monthly compensation for those hired on or after 9-1-2013 is the average of the highest 60 months of compensation. • Minimum standard annuity is $150 per month. • Maximum standard annuity is 100% of the average monthly compensation. *Elected Class Only:* • Standard monthly annuity is 2.3% of the current State salary of a district judge multiplied by the number of years of service credit. • Retirement benefits are automatically adjusted should State judicial salaries change. • Maximum standard annuity is 100% of the State salary being paid to a district judge.	• Standard monthly annuity is equal to 2.8% of average monthly compensation multiplied by the number of years of service credit. • The average monthly compensation for those hired prior to 9-1-2009 is the average of the highest 36 months of compensation. • The average monthly compensation for those hired on or after 9-1-2009 and prior to 9-1-2013 is the average of the highest 48 months of compensation. • The average monthly compensation for those hired on or after 9-1-2013 is the average of the highest 60 months of compensation. • Minimum standard annuity is $150 per month. • Maximum standard annuity is 100% of the average monthly compensation.	• Standard monthly annuity is equal to 50% of the salary for the last position from which the retiring member was elected or appointed. • An additional 10% is paid when a member retires within one year of leaving office or within one year of last assignment as a visiting judge. • The monthly annuity of a member who elects to make contributions after 20 years of service would be based on 50% of the State salary plus 2.3% for each subsequent year with the total, including the additional 10%, not to exceed 90%. • The monthly annuity of a member who elects to make contributions after reaching the Rule of 70 with at least 12 years on an appellate court would be based on 50% of the State salary plus 2.3% for each subsequent year with the total, including the additional 10%, not to exceed 90%.

ERS	LECOS	JRS II
Optional Annuity Plans:		
Employee Class and Elected Class: Members can choose one of the following beneficiary options at retirement. Annuity is reduced for life and is actuarially reduced based on age of member and beneficiary at time of retirement. • Lifetime with 100% to surviving beneficiary; • Lifetime with 75% to surviving beneficiary; • Lifetime with 50% to surviving beneficiary; • Lifetime with five years certain. • Lifetime with 10 years certain; and • One-time partial lump sum of up to three years of standard annuity at retirement (annuity is reduced for life and the reduced annuity is in addition to the calculation of the six beneficiary options listed above). • If beneficiary predeceases member, the annuity paid to the retired member who selected one of the lifetime survivor benefits is increased to the standard amount.	• Same as ERS.	• Same as ERS except for the one-time partial lump sum.
Vesting Requirement:		
Hire date prior to 09-01-2009: • Five or more years of service credit for Employee Class. Hire date on or after 09-01-2009 and prior to 9-1-2013: • 10 or more years of service credit for Employee Class. Hire date on or after 09-01-2013: • 10 or more years of service credit for Employee Class. *Elected Class Only:* • Eight or more years of service credit.	• 20 or more years of service credit as a certified peace officer/custodial officer.	• 12 or more years of service credit.
Vested Benefits after Termination of Employment:		
• Member is entitled to a deferred retirement benefit based on service and compensation prior to termination. • Member must leave accumulated contributions in the System to which the member contributed. • Upon or after leaving State employment, member may apply for a refund of contributions plus accrued interest. A refund cancels membership, terminates the member's rights to benefits, and forfeits their retirement group should they return to state employment.	• Same as ERS.	• Same as ERS.

ERS	LECOS	JRS II
Disability Retirement Eligibility:		
Employee Class Only: • For occupational disability, the member must have at least one month of service and they must make a retirement contribution in the month they become permanently disabled. • For non-occupational disability, at least 10 years of Employee Class service credit, which may include up to five years of purchased military service credit, and be a contributing member at the time of disability. *Elected Class Only:* • For occupational disability, no age or length of service requirement. Also one must be a contributing member at the time of permanent disability. • For non-occupational disability, eight years of Elected Class service (exclusive of military service) or six years of Elected Class service plus two years of military service if purchased before January 1, 1978, and be a contributing member at the time of permanent disability.	• Same as ERS.	• No age requirement. • Seven years of judicial service and currently holding a judicial office.
Disability Retirement Benefits:		
Employee Class Only: • For occupational disability, the benefits are the same as those under the standard service retirement, except the standard annuity is equal to not less than 35% of the average monthly compensation regardless of the years of service credit or age. • For non-occupational disability, the retirement benefits are actuarially reduced from normal retirement eligibility based on age and length of service. • The optional annuity plans available are the same as those under a service retirement except there is no partial lump-sum option. *Elected Class Only:* • For non-occupational retirement is calculated in the same manner as the standard retirement annuity, and is not reduced because of age. • For occupational disability, the amount of a monthly annuity is 18.4% of the state salary of a district judge or 2.3% of the state salary of a district judge times the years of elected service, whichever is greater. • Optional annuity plans available are the same as those under a service retirement except for the partial lump-sum option.	• For occupational disability, the standard annuity is a minimum of 50% of the average monthly compensation regardless of the years of service credit or age. • The standard annuity is increased to 100% of the average monthly compensation if the retired member can prove that their occupational disability makes them incapable of substantial gainful activity solely because of the occupational disability and they are considered totally disabled under federal social security law due to the same condition that qualified them for occupational benefits. • For non-occupational disability, the retirement benefits are actuarially reduced from normal retirement eligibility based on age and length of service. • The optional annuity plans available are the same as those under a service retirement except for the partial lump-sum option.	• Same as standard service retirement benefits without reduction for age.

ERS	LECOS	JRS II
Death Benefits:		
Employee Class and Elected Class: • A contributing member with a minimum of 10 years of service credit may select a death benefit plan or the designated beneficiary can elect a lifetime monthly payment, a 10-year guaranteed monthly payment or a one-time refund of the members retirement account balance at the time of the members death. If the member was age 60 with 5 or more years of service and less than 10 years, and the beneficiary is either the spouse or a minor child, they may eligible to a death benefit plan. • For a contributing member that had less than 10 years of service the designated beneficiary of the active account will receive a one-time refund of the member's retirement account balance at the time of the member's death and The beneficiary(ies) may be eligible for an Additional Death Benefit (ADB). This is an additional 5% of the member's retirement account balance for each full year of state service. The maximum is 100% of the member's retirement account balance. • If an active state employee dies and the death is determined to be an occupational death, the surviving spouse or minor children may be eligible for a one-time death benefit equal to one year of the member's salary. If there is not a surviving spouse or minor children, this occupational death benefit is not payable to anyone else. • If a retired member selected a standard annuity and dies after retiring from the state, the designated beneficiary will receive a one-time refund of the member's retirement account balance if there is any money left in the account. • If a member selected an optional service retirement, and dies, the beneficiary will receive a monthly payment based on the option chosen. • If the member was retired, the designated beneficiary is eligible for a one-time Retiree Lump Sum Death Benefit in the amount of $5,000.	• Members with 10 or more years of certified peace officer/custodial officer service, the death benefits are the same as the Employee Class. • Members with at least 20 years of certified peace officer/custodial officer service, under age of 50 at the time of death, the designated beneficiary is eligible for a lifetime monthly payment, a 10-year guaranteed monthly payment, or a one-time refund of the member's retirement account balance. The designated beneficiary is not eligible for the Partial Lump Sum Option (PLSO) if the deceased member had at least 20 years of certified peace officer/custodial officer service and was under age 50 at the time of death.	A member with at least 10 years of service credit: • May select a death benefit plan or the designated beneficiary can elect either a lifetime annuity payment, a 10-year guaranteed monthly payment or a one-time refund of the retirement account balance at the time of the members death. JRS members are not eligible for a Partial Lump Sum Option (PLSO). A member with less than 10 years of service credit: • The beneficiary is not eligible for a death benefit plan. The beneficiary is eligible for a one-time refund payment of the retirement account balance. • If a member is retired, the designated beneficiary(ies) is eligible for a one-time Retiree Lump Sum Death Benefit in the amount of $5000.

ERS	LECOS	JRS II

Death Benefits (Continued):

Elected Class Only:

- For members with less than 8 years of service credit at the time of death, the designated beneficiary will receive a one-time refund of the member's retirement account balance. If contributing: The beneficiary may be eligible for an Additional Death Benefit (ADB). This is an additional 5% of the member's retirement account balance for each full year of state service. The maximum is 100% of the member's retirement account balance.
- For a contributing member with at least 8 years of service credit and is age 60 or above, at the time of death, the surviving spouse if designated as the beneficiary may be eligible for a lifetime monthly payment, a 10-year guaranteed monthly payment, or a one-time refund of the member's retirement account balance. If there is no surviving spouse, and the surviving minor child(ren) is designated as the beneficiary(ies) they may be eligible for a lifetime monthly payment, a 10-year guaranteed monthly payment, or a one-time refund of the member's retirement account balance. If the surviving spouse/minor child selects the one-time refund, they are eligible for the ADB. This option is not available if they select a monthly payment. If there is no surviving spouse/minor child, the beneficiary may be eligible for a refund of the member's retirement account balance plus the ADB.
- A contributing or non-contributing member with at least 8 years of state service but less than 10 years of state service, the surviving spouse is eligible to receive a monthly payment that is one-half of the monthly standard annuity the member would have received at age 60. This annuity cannot be paid if there is no surviving spouse. The beneficiary would then be eligible for a refund of the member's retirement account balance plus the ADB if contributing.
- If a member is retired, the designated beneficiary(ies) is eligible for a one-time Retiree Lump Sum Death Benefit in the amount of $5,000.

FINANCIAL SECTION

Independent Auditor’s Report

Management’s Discussion and Analysis

Basic Financial Statements

Required Supplementary Information

Other Supplementary Information

State Auditor's Office

Independent Auditor's Report

Employees Retirement System's Board of Trustees
Mr. I. Craig Hester, Chair
Ms. Ilesa Daniels, Vice-Chair
Mr. Doug Danzeiser
Ms. Cydney Donnell
Ms. Catherine Melvin
Ms. Jeanie Wyatt

Report on the Financial Statements

We have audited the accompanying financial statements of the governmental activities and the aggregate remaining fund information of the Employees Retirement System (System), a component unit of the State of Texas, as of and for the year ended August 31, 2018, 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 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

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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.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities and the aggregate remaining fund information of the System, a component unit of the State of Texas, as of August 31, 2018, 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

The System's Financial Statements

As discussed in Note 1, Section 1.A, the financial statements of the System, a component unit of the State of Texas, are intended to present the financial position, the changes in financial position and, where applicable, cash flows of only that portion of the governmental activities and the aggregate remaining fund information of the State of Texas 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, 2018, 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.

In addition, as discussed in Note 1, Section 1.G, Change in Accounting Principle, in fiscal year 2018, the System elected to change its method of accounting related to the fund into which it deposits retired member and state contributions. As a result, the System now deposits all funds for the Texas Group Benefits program, which includes both active and retired members, into the Employees Life, Accident and Health Insurance and Benefit Fund, and it will transfer monies to the State Retiree Health Plan Fund (for retirees) to pay retiree healthcare claims expenditures, if needed. Prior to this change, funds were deposited directly into the State Retiree Health Plan Fund (for retirees). Our opinion is not modified with respect to this matter.

Investments with Values that are not Readily Determined

As discussed in Note 2.A, Figure 8, the financial statements include investments valued at approximately $8.758 billion as of August 31, 2018, 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, Schedule of Changes in Net Pension Liability and Related Ratios–Defined Benefit Plans, Schedule of Employer Contributions–Defined Benefit Plans, Schedule of Changes in Net OPEB Liability and Related Ratios, Schedule of Contributions from Employers and Non-employer Contributing Entities–Other Postemployment Benefit Plan, Schedule of Investment Returns–Annual Money-Weighted Rate of Return, Net of Investment Expense, and Notes to the Required Supplementary Information, 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, which 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 the combining financial statements, supporting schedules, and other supplementary schedules are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The information in the combining financial statements, supporting schedules, and other supplementary schedules, 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 combining financial statements, supporting schedules, and other supplementary schedules, as listed in the table of contents, are fairly stated in all material respects in relation to the basic financial statements as a whole.

The Introductory, Investment, Actuarial, and Statistical 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 them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards,* we have also issued our report dated December 20, 2018, 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

December 20, 2018

We are pleased to provide this overview of the financial activities of the Employees Retirement System of Texas (the System) for the year ended August 31, 2018. Please read it in conjunction with the Basic Financial Statements, which begin after this discussion.

Overview of the Basic Financial Statements

This discussion and analysis is intended to serve as an introduction to the System's financial statements. The Financial Section includes the following exhibits in the Basic Financial Statements Section.

- Exhibits I and II are the government-wide statements of governmental net position and activities. These exhibits exclude the Fiduciary Fund activities and balances.
- Exhibits III and IV are Special Revenue Funds statements for four of the programs presented in the government-wide statements.
- Exhibits V and VI are the Statement of Net Position and the Statement of Revenues, Expenses, and Changes in Net Position for the Employees Life, Accident and Health Insurance and Benefits Fund (Group Benefits Program). Highlights are presented under the heading Financial Analysis on Government-wide Statements below.
- Exhibit VII is a required Statement of Cash Flows for the Proprietary Fund under which the Employees Life, Accident and Health Insurance and Benefits Fund (Group Benefits Program) is reported. This statement reports the transactions for the year on a cash basis. It is similar to Exhibit VI, the Statement of Revenues, Expenses, and Changes in Net Position, except that the focus of this statement is on the change to cash balances with accrued income and expense items eliminated.
- Exhibits VIII and IX, the Statement of Fiduciary Net Position and the Statement of Changes in Fiduciary Net Position, report activities of the defined benefit plans, including the State Retirees Health Plan. These exhibits also report the cafeteria plan and other deferred compensation plans.

Financial Analysis on Government-wide Statements

The government-wide activities of the System are comprised of five programs:

- Social Security Administration,
- Death Benefits for Public Safety Officers,
- Compensation to Victims of Crime,
- Death Benefits for Retirees, and
- Employees Life, Accident and Health Insurance and Benefits

The Employees Life, Accident and Health Insurance and Benefits in Exhibits I and II had significant changes from the prior year. Exhibits V and VI provide additional information on the Employees Life, Accident and Health Insurance and Benefits. The changes in the program are summarized in millions as follows:

	2018	2017	Changes
	$	$	%
Net Position	1,060.69	87.94	1,106.15
Current Liabilities	800.53	986.52	(18.85)
Member and Employer Contributions	3,141.76	2,525.53	24.40
Benefit Payments	2,163.86	2,434.70	(11.12)

The changes in Net Position and Member and Employer Contributions are primarily due to the fact that majority of the funding for the Group Benefits Program were deposited for the Employees Life, Accident and Health Insurance and Benefits Fund. The details of this change in funding arrangement are described in the Change in Accounting Principle section in Note 1.G.

Financial Highlights – Fiduciary Funds

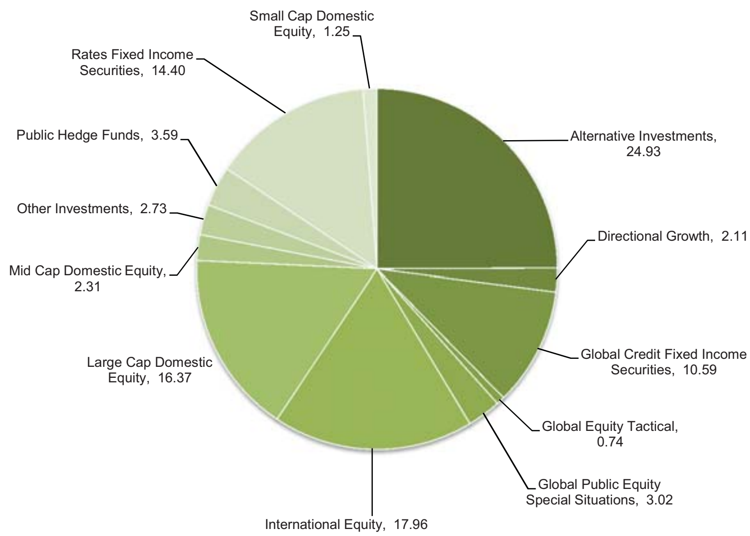
- Net position of the Fiduciary Funds administered by the System totaled $29.58 billion as of August 31, 2018, compared with $28.45 billion as of August 31, 2017. The investment portfolio returned 9.58% for the year. The majority of the increase resulted primarily from improvement in market conditions. The time weighted rate of return for three and five years were 8.98% and 8.33%, respectively.
- The one year money-weighted rates of return for the Fiduciary Funds are summarized as follows:

Fund Name	Rate (%)
Employees Retirement System Fund	9.42
Law Enforcement and Custodial Officer Supplemental Retirement Fund	9.40
Judicial Retirement System Plan Two Fund	9.40
Overall	**9.42**

- The System's management has confidence in the financial markets and maintains a long term approach to investing the System's assets. The System's investments are highly diversified and are designed to withstand market fluctuations.

Asset Allocation

Asset Class	%
Alternative Investments	24.93
Directional Growth	2.11
Global Credit Fixed Income Securities	10.59
Global Equity Tactical	0.74
Global Public Equity Special Situations	3.02
International Equity	17.96
Large Cap Domestic Equity	16.37
Mid Cap Domestic Equity	2.31
Other Investments	2.73
Public Hedge Funds	3.59
Rates Fixed Income Securities	14.40
Small Cap Domestic Equity	1.25



For additional details, please see the *Report on Investment Activity* in the Investment Section.

- Changes in contributions and benefit payments in the Defined Benefit Plans are summarized in millions as follows:

	2018	2017	Changes
	$	$	%
Contributions:			
Retirement & Other	1,532.10	1,533.60	(0.10)
Insurance	398.11	1,204.10	(66.94)
Total (Exh. IX)	**1,930.21**	**2,737.70**	**(29.50)**
Benefit Payments:			
Retirement & Other	2,604.35	2,475.61	5.20
Insurance	735.80	995.82	(26.11)
Total (Exh. IX)	**3,340.15**	**3,471.43**	**(3.78)**

- The decrease in insurance contributions is primarily due to the fact that majority of the funding for the Group Benefits Program were deposited to the Employees Life, Accident and Health Insurance and Benefits Fund. The most recent actuarial valuations of the funded defined benefit plans were completed as of August 31, 2018. The funded ratios are as follows:

Plans	2018	2017
	%	%
Employees Retirement System	70.2	70.1
Law Enforcement and Custodial Officer Supplemental Retirement Fund	65.6	66.0
Judicial Retirement System of Texas Plan Two	91.7	90.8

See Exhibits VIII and IX for more information regarding each of the defined benefit plans and the deferred compensation and cafeteria plans.

Fiduciary Net Position

The amount of changes in fiduciary net position (in

	2018	2017	Changes
	$	$	%
Changes in Fiduciary Net Position (Exh. IX)	1,129.51	2,226.34	(49.27)
Total Net Position	29,575.56	28,446.06	3.97

millions) were as follows:

The decrease in changes in Fiduciary Net Position is due to the facts that the gross time weighted rate return decreased from 12.15% in fiscal year 2017 to 9.58% in fiscal year 2018, and that the majority of the funding for the Group Benefits Program were deposited for the Employees Life, Accident and Health Insurance and Benefits Fund.

Additions

Retirement benefits are financed through the collection of member and State retirement contributions, investment income, legislative appropriations, and contributions transferred from the Teacher Retirement System. Additions in Fiduciary Net Position have been extracted from Exhibit IX, Statement of Changes in Fiduciary Net Position. The additions in millions were

	2018	2017	Changes
	$	$	%
Member Contributions	774.46	974.82	(20.55)
Employer Contributions	1,042.92	1,629.96	(36.02)
Non-Employer Contributing Entity Contributions	16.59	44.43	(62.66)
Net Investment Income	2,565.60	2,981.41	(13.95)
Other Additions	178.63	170.84	4.56
Total Additions (Exh. IX)	**4,578.20**	**5,801.46**	**(21.09)**

as follows:
For the Employees Retirement Fund, member and State retirement contribution rates for fiscal year 2018 were 9.5% and 10.0% respectively. For the Law Enforcement and Custodial Officer Supplemental Retirement Fund (LECOS), both the State and member contributed 0.5% of the covered payroll. For the Judicial Retirement Plan II Fund, member and State retirement contribution rates were 7.5% and 15.663% respectively.

Net investment income is comprised of interest income, dividend income, securities lending income and related fees, and net appreciation or depreciation in fair value of investments, and is net of investment expenses.

Deductions

Benefit payments are the primary expense of a retirement system. Total deductions are comprised of benefit payments, refunds of contributions to members or beneficiaries for reasons of separation from service or death, other death benefit payments, contributions transferred to the Teacher Retirement System, and the cost of administering the System. Deductions in Net Position have been extracted from Exhibit IX, Statement of Changes in Fiduciary Net Position. Changes in deductions are summarized in millions as

	2018	2017	Changes
	$	$	%
Retirement Benefits and Refunds	3,413.99	3,541.24	(3.59)
Administrative Expenses	34.05	33.27	2.34
Other Deductions	0.65	0.61	6.56
Total Deductions (Exh. IX)	**3,448.69**	**3,575.12**	**(3.54)**

follows:

Assets

Investments, both short-term and long-term, are the primary asset of the System's pension and other employee benefit trust funds as shown in the following table. Asset information has been extracted from Exhibit VIII. Changes in assets are summarized in

	2018	2017	Changes
	$	$	%
Cash and Cash Equivalents	80.97	96.99	(16.52)
Securities Lending Collateral	221.95	526.56	(57.85)
Investments	28,827.64	27,487.91	4.87
Receivables	716.85	810.95	(11.60)
Due From Other Funds/ Agencies	163.22	339.95	(51.98)
Capital Assets	5.92	6.40	(7.50)
Total Assets (Exh. VIII)	**30,016.55**	**29,268.76**	**2.55**

millions as follows:

Liabilities

The condensed liabilities have been extracted from Exhibit VIII, Statement of Fiduciary Net Position. Changes in liabilities are summarized in millions as

	2018	2017	Changes
	$	$	%
Accounts Payable	213.14	289.27	(26.32)
Due To Other Funds/ Agencies	2.93	5.19	(43.55)
Compensable Leave	3.47	3.21	8.10
Securities Lending Obligations	220.28	524.21	(57.98)
Other Liabilities	1.17	0.83	40.96
Total Liabilities (Exh. VIII)	**440.99**	**822.71**	**(46.40)**

follows:

Funding Status and Progress

Assets derived from investment asset appreciation and pension contributions in excess of pension benefit payments are accumulated by the System in order to meet future pension benefit obligations. Soundness in the funding of the System is sought through maintaining suitable reserves in the retirement annuity reserve account and the employee savings and state accumulation reserve accounts.

For funding purposes, the latest annual actuarial valuation of the System, as of August 31, 2018, (compared to the August 31, 2017 actuarial valuation) is summarized in millions as follows:

	Unfunded Accrued Actuarial Liability	
Plans	**2018**	**2017**
	$	$
Employees Retirement System	(11,629.3)	(11,258.0)
Law Enforcement and Custodial Officer Supplemental Retirement Fund	(499.6)	(475.9)
Judicial Retirement System of Texas Plan Two	(40.7)	(42.7)

For the Employees Retirement System Fund, the August 31, 2018 actuarial valuation for funding purposes shows an unfunded accrued liability of $11.6 billion. The funded ratio, the ratio of the actuarial value of assets to the actuarial accrued liability, is 70.2% as of August 31, 2018. The valuation shows that the total normal cost is 13.86% of payroll and total contributions are 19.5% of payroll. The total contribution rate exceeds the normal cost by 5.64% of payroll, but is not sufficient to amortize the unfunded accrued liability over a finite period of time. The total contribution to fund the normal cost plus amortize the net liability balance over 31 years is 23.12% of payroll. The actuarial net liability will need to be met over the coming years through improved investment performance, increased contributions, or plan design changes.

The August 31, 2018 actuarial valuation for the Law Enforcement and Custodial Officer Supplemental Retirement Fund shows that the total normal cost rate for fiscal year 2018 is 2.09% of payroll. At August 31, 2018, the unfunded accrued liability is $499.6 million, and the funded ratio is 65.6%. Total contributions are 1.0% of payroll. The total contribution rate is below the normal cost for the current fiscal year by 0.02% and it is not sufficient to amortize the unfunded accrued liability over a finite period of time. For fiscal year 2018, the total contribution rate to fund the normal cost plus amortize the net liability balance over 31 years as a level percentage of payroll is 2.99% of payroll.

For the Judicial Retirement System of Texas Plan II, the August 31, 2018 actuarial valuation shows that the total normal cost is 20.83% of payroll and unfunded accrued liability is $40.7 million. The funded ratio, the ratio of the actuarial value of assets to the actuarial accrued liability is 91.7% as of August 31, 2018. Total contributions are 23.123% of payroll. The total contribution rate exceeds the normal cost by 2.293% of payroll for the current fiscal year, which is sufficient to amortize the unfunded accrued liability in 69 years. The rate needed to fund normal cost plus amortize the unfunded accrued liability over 31 years is 23.84%.

The State Retiree Health Plan is currently funded on a pay-as-you-go basis. For the State Retiree Health Plan, the August 31, 2018 actuarial valuation shows an unfunded accrued liability of $29.6 billion. The funded ratio is 1.27%. The valuation shows that the total normal cost is 10% of payroll. The Actuarially Determined Contribution (ADC) as of August 31, 2018 is 19.4% of payroll. Total contributions are 13.9% of the Actuarially Determined Contribution.

Contributions include health care premiums, State contributions, and retiree drug subsidy payments. Contributions from employers and non-employer contributing entities were $307 million and $16.6 million, respectively. The Medicare Prescription Drug Improvement and Modernization Act of 2003, which was effective January 1, 2006, established prescription drug coverage for Medicare beneficiaries known as Medicare Part D. One of the provisions of Medicare Part D entitled ERS to receive retiree drug subsidy payments from the federal government to offset pharmacy claims paid by ERS on behalf of certain plan participants. The plan received payments in 2018 totaling $74.5 million. The above amounts, along with other additions of $3.3 million plus net investment income of $10.9 million resulted in additions of $412.3 million. These were offset entirely by $735.8 million in benefit payments, which is net of the $203.1 million payment from members, and $5.8 million in administrative expense. The net plan position is $380.4 million.

Contacting the System's Financial Management

This financial report is designed to provide a general overview of the System's finances. If you have questions about this report or need additional financial information, please contact Machelle Pharr, Chief Financial Officer at Machelle.Pharr@ers.texas.gov or Eddie Chan, Assistant Director of Finance at Eddie.Chan@ers.texas.gov.

Exhibit I
Statement of Net Position
August 31, 2018

		Governmental Activities
Assets	**$**	
Current Assets:		
Cash and Cash Equivalents:		
Cash in State Treasury		2,479,268
Total Cash and Cash Equivalents		2,479,268
Securities Lending Collateral		3,966,354
Short-Term Investments		1,083,746,780
Legislative Appropriations		2,917
Receivables		279,415,524
Due from Fiduciary Funds		465,585
Total Current Assets		1,370,076,428
Non-Current Assets:		
Public Equities		167,118
Fixed Income		474,388,047
Alternative Investments		16,632,930
Other Investments		(11,808)
Total Non-Current Assets		491,176,287
Total Assets		**1,861,252,715**
Liabilities		
Current Liabilities:		
Payables		640,641,774
Due to Fiduciary Funds		154,696,794
Unearned Revenue		459
Obligations Under Securities Lending		5,201,463
Total Current Liabilities		800,540,490
Total Liabilities		**800,540,490**
Net Position		
Restricted for:		
Employees Life, Accident and Health Insurance and Benefits		1,060,687,084
Unrestricted		25,141
Total Net Position (Exh. II & III)		**1,060,712,225**

The accompanying Notes to the Basic Financial Statements are an integral part of this exhibit.

Exhibit II

Statement of Activities

Year Ended August 31, 2018

		Program Revenues		Net (Expense) Revenue and Changes in Net Position
	Expenses	**Charges for Services**	**Operating Grants and Contributions**	**Governmental Activities**
Functions/Programs	**$**	**$**	**$**	**$**
Governmental Activities:				
Social Security Administration	85,782	70,482		(15,300)
Death Benefits-Peace Officers, Firemen, etc.	9,431,752	9,431,752		
Compensation to Victims of Crime	4,904,500	4,904,500		
Death Benefits-Retiree $5,000 Lump Sum	10,166,665	10,166,665		
Employees Life, Accident And Health Insurance and Benefits	2,177,769,044	3,141,899,252	8,612,155	972,742,363
Total Governmental Activities	**2,202,357,743**	**3,166,472,651**	**8,612,155**	**972,727,063**
			General Revenues:	
			Transfers	36,500
			Total General Revenues	**36,500**
			Change in Net Position (Exh. IV)	**972,763,563**
			Net Position - Beginning	**87,948,662**
			Net Position - Ending (Exh. I)	**1,060,712,225**

The accompanying Notes to the Basic Financial Statements are an integral part of this exhibit.

Exhibit III
Balance Sheet – Governmental Funds
August 31, 2018

	Non-major Special Revenue Funds Totals (Note 1.E)
Assets	**$**
Current Assets:	
Cash and Cash Equivalents:	
Cash in State Treasury	29,536
Total Cash and Cash Equivalents	29,536
Legislative Appropriations	2,917
Accounts Receivable	2,779
Total Current Assets	35,232
Total Assets	**35,232**
Liabilities & Fund Balances	
Current Liabilities:	
Payables:	
Voucher/Accounts Payable	2,917
Due To Other Funds (Note 5.A)	7,131
Unearned Revenues	43
Total Current Liabilities	10,091
Total Liabilities	**10,091**
Fund Balances:	
Committed	25,141
Total Fund Balances (Exh. IV)	**25,141**
Total Liabilities & Fund Balances	**35,232**
Total Fund Balances - Governmental Funds (above):	25,141
Amounts reported for 'Governmental Activities' in the Statement of Net Position (Exhibit I) are different because:	
An Internal Service Fund is used by the System to account for the assets and liabilities associated with the Group Benefits Program for State employees and employees of certain institutions of higher education.	
The Net Position of the Internal Service Fund (Exhibit V) are included with 'Governmental Activities' in the Statement of Net Position.	1,060,687,084
Net Position of Governmental Activities (Exh. I)	**1,060,712,225**

The accompanying Notes to the Basic Financial Statements are an integral part of this exhibit.

Exhibit IV

Statement of Revenues, Expenditures and Changes in Fund Balances – Governmental Funds

Year Ended August 31, 2018

	Non-major Special Revenue Funds Totals (Note 1.E)
Revenues	$
Legislative Appropriations out of the State's General Revenue Fund:	
Appropriation Revenue:	
For Death Benefits Peace Officers, etc.	9,431,752
For Victims of Crime	4,904,500
For Death Benefits-Retirees	10,166,665
Total Appropriation Revenue	24,502,917
Administration Fees for Social Security Administration	70,482
Total Revenues	**24,573,399**
Expenditures	
Current:	
Death Benefits	24,502,917
Administrative Expenditures:	
Salaries & Wages	56,563
Payroll Related Costs	18,394
Professional Fees & Services	1,454
Travel	525
Materials & Supplies	1,798
Communications & Utilities	1,311
Repairs & Maintenance	1,493
Rentals & Leases	831
Printing & Reproduction	63
Other Expenditures	3,350
Total Administrative Expenditures	85,782
Total Expenditures	**24,588,699**
Deficiency of Revenues Under Expenditures	**(15,300)**
Other Finance Sources	
Transfers In-Retirement Membership Fees (Note 5.B)	36,500
Excess of Revenues Over Expenditures and Other Finance Sources	**21,200**
Fund Balances - Beginning	**3,941**
Fund Balances - Ending (Exh. III)	**25,141**
Net Change in Fund Balances - Governmental Funds:	21,200
Amounts reported for 'Governmental Activities' in the Statement of Activities (Exhibit II) are different because: An Internal Service Fund is used by the System to account for the revenues and expenses associated with the Group Benefits Program for State employees and employees of certain institutions of higher education. The net revenue (expense) of the Internal Service Fund (Exhibit VI) is included in 'Governmental Activities' in the Statement of Activities.	972,742,363
Change in Net Position of Governmental Activities (Exh. II)	**972,763,563**

The accompanying Notes to the Basic Financial Statements are an integral part of this exhibit.

Exhibit V

Statement of Net Position – Proprietary Fund

August 31, 2018

	Internal Service Fund Employees Life, Accident and Health Insurance and Benefits Fund (0973) (U/F 0973)
Assets	$
Current Assets:	
Cash and Cash Equivalents:	
Cash in State Treasury	2,449,732
Total Cash and Cash Equivalents	2,449,732
Securities Lending Collateral	3,966,354
Short-Term Investments	1,083,746,780
Receivables:	
Interest Receivable	2,769,226
Accounts Receivable	276,369,525
Unsettled Sales-Investment Receivables	273,994
Total Receivables	279,412,745
Due From Other Funds (Note 5.A)	465,585
Total Current Assets	1,370,041,196
Non-Current Assets:	
Investments: (Note 2.A)	
Public Equities	167,118
Fixed Income	474,388,047
Alternative Investments	16,632,930
Other Investments	(11,808)
Total Non-Current Assets	491,176,287
Total Assets	**1,861,217,483**
Liabilities	
Current Liabilities:	
Payables:	
Claims Payable:	
Incurred, Self-Funded	32,689,085
Incurred But Not Reported, Self-Funded	588,524,295
Total Claims Payable	621,213,380
Premiums Payable	11,991,448
Administrative and Other Fees Payable	5,971,956
Accounts Payable	44,019
Unsettled Purchases-Investment Payables	1,414,245
Other Payable	3,809
Total Payables	640,638,857
Due To Other Funds (Note 5.A) :	
Payable to Retiree Insurance Plan	153,080,718
Other Interfunds Payable	1,608,945
Total Due To Other Funds	154,689,663
Due to Other Agencies	
Unearned Revenue	416
Obligations Under Securities Lending	5,201,463
Total Current Liabilities	800,530,399
Total Liabilities	**800,530,399**
Net Position	
Restricted For:	
Employee Life, Accident and Health Insurance and Benefits	1,060,687,084
Total Net Position (Exh. VI)	**1,060,687,084**

The accompanying Notes to the Basic Financial Statements are an integral part of this exhibit.

Exhibit VI

Statement of Revenues, Expenses and Changes in Net Position – Proprietary Fund

Year Ended August 31, 2018

	Internal Service Fund Employees Life, Accident and Health Insurance and Benefits Fund (0973) (U/F 0973)
Operating Revenues	$
Contributions to Insurance Program:	
From Employers	2,582,653,170
From Members:	
For Employees	552,332,599
For COBRA	6,778,136
Total Contributions from Members	559,110,735
Total Contributions to Insurance Program	3,141,763,905
Other Operating Revenues:	
COBRA 2% Administration Fee	135,347
Penalty Assessed to Insurance Carrier	2,981,075
Total Other Operating Revenues	3,116,422
Total Operating Revenues	**3,144,880,327**
Operating Expenses	
Employee Benefit Payments:	
For Employees[1]	2,141,516,445
For COBRA	21,816,837
For Health Savings Accounts	524,485
Total Employee Benefit Payments	2,163,857,767
Administrative Expenses:	
Salaries & Wages	6,810,697
Payroll Related Costs	2,275,497
Professional Fees & Services	1,017,204
Travel	50,386
Materials & Supplies	371,837
Communications & Utilities	426,406
Repairs & Maintenance	519,714
Rentals & Leases	181,306
Printing & Reproduction	12,058
Other Operating Expenses	2,215,187
Total Administrative Expenses	13,880,292
Total Operating Expenses	**2,177,738,059**
Operating Income	**967,142,268**
Non-Operating Revenues (Expenses)	
Net Decrease in Fair Value of Investments	(15,417,069)
Interest and Dividends Revenue	20,916,975
Class Action Settlements	897
Securities Lending Activities:	
Loan Premium on Securities Lending	130,277
Broker Rebates	(19,759)
Agent Fees	(11,047)
Net Securities Lending Activity	99,471
Settlement Revenue	
Commission on Futures Contracts	(179)
Total Non-Operating Revenues	**5,600,095**
Change in Net Position	**972,742,363**
Net Position - Beginning	**87,944,721**
Net Position - Ending (Exh. V)	**1,060,687,084**

[1] *The benefit payments are reported net of $157,198,679 pharmacy rebates.*

The accompanying Notes to the Basic Financial Statements are an integral part of this exhibit.

Exhibit VII
Statement of Cash Flows – Proprietary Fund
Year Ended August 31, 2018

	Internal Service Fund Employees Life, Accident and Health Insurance and Benefits Fund (0973)/(U/F 0973)
Cash Flows from Operating Activities:	$
Cash Received from Members	681,104,582
Cash Received from Employers and Non-employer Contributing Entities	2,530,008,527
Cash Payments to Insurance Carriers and Third Party Administrators	(2,135,968,060)
Cash Payments to Employees for Services	(9,787,101)
Cash Payments for Goods and Services	(2,603,940)
Other Cash Received	156,881
Other Cash Payments[1]	(80,184,295)
Net Cash Provided by Operating Activities	**982,726,594**
Cash Flows from Investing Activities:	
Net Purchases of Short-Term Investment Fund	(749,959,267)
Interest on Deposit in State Treasury	1,427,173
Net Cash Used by Investing Activities	**(748,532,094)**
Cash Flows from Non-capital Financing Activities:	
Interest Payment on Loan from Fiduciary Fund	(2,651,690)
Payment of Loan to Fiduciary Fund	(250,000,000)
Net Cash Used by Non-capital Financing Activities	**(252,651,690)**
Net Decrease in Cash and Cash Equivalents	**(18,457,190)**
Cash and Cash Equivalents:	
Beginning of Year	**20,906,922**
End of Year	**2,449,732**
Reconciliation of Operating Income to Net Cash Provided by Operating Activities:	
Operating Income	**967,142,268**
Adjustments to Reconcile Operating Income to Net Cash Provided by Operating Activities:	
Interest Expense on Loan from Fiduciary Fund	2,651,690
Change in Assets and Liabilities:	
Increase in Accounts Receivable	(63,375,368)
Decrease in Due From Other Agencies	40,664
Decrease in Due From Other Funds	2,336,372
Increase in Accounts Payable	3,362,529
Increase in Due To Other Funds	71,197,962
Decrease in Unearned Revenue	(629,523)
Total Adjustments	**15,584,326**
Net Cash Provided by Operating Activities	**982,726,594**

[1] *The Other Cash Payments include $77,679,097 correction on allocation of pharmacy rebates.*

Non-Cash Investing Activities:	
Net Depreciation in Fair Value of Non-Cash Equivalent Investments	(13,480,370)

The accompanying Notes to the Basic Financial Statements are an integral part of this exhibit.

Exhibit VIII
Statement of Fiduciary Net Position
August 31, 2018

	Employees Retirement Fund (0955)	Law Enforcement and Custodial Officer Supplemental Fund (0977)	Judicial Retirement System Plan II (0993)	Excess Benefit Arrangement (5039)
Assets	$	$	$	$
Cash and Short-Term Investments:				
Cash and Cash Equivalents:				
Cash on Hand	824,873	42,587	37,625	
Cash in Bank	23,000			
Cash in State Treasury	32,648,341	2,307,384	1,002,208	
Total Cash and Cash Equivalents	33,496,214	2,349,971	1,039,833	-
Securities Lending Collateral	211,141,428	7,359,804	3,450,815	
Short-Term Investments	656,487,086	22,886,918	10,665,738	
Total Cash and Short-Term Investments	901,124,728	32,596,693	15,156,386	-
Legislative Appropriations				
Investments: (Note 1.G)				
Public Equities	11,731,115,761	409,382,287	191,653,348	
Fixed Income	6,324,571,586	220,709,405	103,325,641	
Alternative Investments	8,314,960,067	290,168,254	135,842,998	
Other Investments	192,197,248	6,707,135	3,139,961	
Total Investments	26,562,844,662	926,967,081	433,961,948	-
Receivables:				
Federal Receivable				
Interest and Dividends Receivable	90,928,975	3,176,770	1,485,586	
Contributions/Accounts Receivable	110,920,188	1,440,527	1,539,913	
Unsettled Sales-Investment Receivables	348,940,291	12,177,015	5,700,700	
Total Receivables	550,789,454	16,794,312	8,726,199	-
Due From Other Funds (Note 5.A)	2,036,988			
Due From Other Agencies (Note 1.G)	8,108,482			
Prepaid Expense	2,478			
Capital Assets:				
Non-Depreciable:				
Land and Land Improvements	874,889			
Construction in Progress	615,034			
Depreciable, Net of Accumulated Depreciation/Amortization of $21,276,854				
Building	3,924,914			
Furniture and Equipment	476,876			
Vehicles	24,965			
Total Capital Assets	5,916,678	-	-	-
Total Assets	**28,030,823,470**	**976,358,086**	**457,844,533**	**-**
Liabilities				
Payables:				
Voucher/Accounts Payable	19,616,411	487,196	268,211	
Unsettled Purchases-Investment Payables	41,735,513	1,456,450	681,840	
Total Payables	61,351,924	1,943,646	950,051	-
Due To Other Funds (Note 5.A)		231,453	53,628	
Due To Other Agencies (Note 1.G)	2,041,387			
Unearned Revenue	1,076,961	42,587	37,625	
Employees Compensable Leave	3,469,211			
Obligations Under Securities Lending	209,549,203	7,312,665	3,423,443	
Funds Held for Others				
Total Liabilities	**277,488,686**	**9,530,351**	**4,464,747**	**-**
Net Position Restricted for Pension and Other Employee Benefits	**27,753,334,784**	**966,827,735**	**453,379,786**	**-**

USAS Funds (U/F) are:

Fund 0955: 0955, 8955; Fund 0977: 0977, 8977; Fund 0993: 0993, 8993; Fund 5039: 5039;
Fund 3973: 0973, 3973; Fund 0946: 0946, 8946; Fund 0945: 0945, 8945; Fund 3944: 0973, 3944; Fund 0943: 0943, 8943;
Fund 0001: 1001; Fund 0001: 2001; Fund 8070: 8070; Fund 0980: 0980; Fund 0973: 4973; Fund 9015: 9015.

The accompanying Notes to the Basic Financial Statements are an integral part of this exhibit.

State Retiree Health Plan (3973)	Total Defined Benefit Plans	Texa$aver 401(k) Trust Fund (0946)	Texa$aver 457 Trust Fund (0945)	Commuter Spending Account Fund (3944)	State Employees Cafeteria Plan Trust Fund (0943)	Total Total Pension and Other Employee Benefit Trust Funds	Total Agency Funds
$	$	$	$		$	$	$
	905,085					905,085	
	23,000	315,706	16,862			355,568	
35,489,325	71,447,258	1,716,787	2,690,005	449,937	3,405,016	79,709,003	66,840
35,489,325	72,375,343	2,032,493	2,706,867	449,937	3,405,016	80,969,656	66,840
	221,952,047					221,952,047	
200,020,530	890,060,272			18,283	13,787,103	903,865,658	
235,509,855	1,184,387,662	2,032,493	2,706,867	468,220	17,192,119	1,206,787,361	66,840
	-					-	219,900
	12,332,151,396					12,332,151,396	
	6,648,606,632					6,648,606,632	
	8,740,971,319					8,740,971,319	
	202,044,344					202,044,344	
-	27,923,773,691	-	-	-	-	27,923,773,691	-
109,688,751	109,688,751					109,688,751	
447,015	96,038,346	3,096	4,834	833	29,193	96,076,302	
24,342,064	138,242,692	132,640	198,727	3,588	5,684,842	144,262,489	3,555
	366,818,006					366,818,006	
134,477,830	710,787,795	135,736	203,561	4,421	5,714,035	716,845,548	3,555
153,080,718	155,117,706					155,117,706	
	8,108,482					8,108,482	
	2,478					2,478	
	874,889					874,889	
	615,034					615,034	
	3,924,914					3,924,914	
	476,876					476,876	
	24,965					24,965	
-	5,916,678	-	-	-	-	5,916,678	-
523,068,403	**29,988,094,492**	**2,168,229**	**2,910,428**	**472,641**	**22,906,154**	**30,016,551,944**	**290,295**
142,173,156	162,544,974	315,706	16,862	455	6,384,833	169,262,830	219,900
	43,873,803					43,873,803	
142,173,156	206,418,777	315,706	16,862	455	6,384,833	213,136,633	219,900
465,585	750,666	51,794	54,595	377	29,065	886,497	
	2,041,387					2,041,387	
	1,157,173		11,826			1,168,999	
	3,469,211					3,469,211	
	220,285,311					220,285,311	
							70,395
142,638,741	**434,122,525**	**367,500**	**83,283**	**832**	**6,413,898**	**440,988,038**	**290,295**
380,429,662	**29,553,971,967**	**1,800,729**	**2,827,145**	**471,809**	**16,492,256**	**29,575,563,906**	**-**

Exhibit IX

Statement of Changes in Fiduciary Net Position – Pension and Other Employee Benefit Trust Funds

Year Ended August 31, 2018

	Employees Retirement Fund (0955)	Law Enforcement and Custodial Officer Supplemental Fund (0977)	Judicial Retirement System Plan II (0993)	Excess Benefit Arrangement (5039)
Additions	$	$	$	$
Contributions:				
Members	683,932,829	9,274,814	5,939,830	
Employers	697,225,914	26,109,655	12,559,722	
Non-Employer Contributing Entity Contributions				
Service Contributions Transferred from Teacher Retirement System (Note 1.G)	97,061,015			
Federal Revenues				
Others - Forfeitures				
Total Contributions	**1,478,219,758**	**35,384,469**	**18,499,552**	**-**
Investment Income:				
From Investing Activities:				
Net Appreciation in Fair Value of Investments	1,816,705,791	63,513,356	29,265,166	
Interest and Dividends	644,736,076	22,547,187	10,422,242	
Class Action Settlements	658,304	23,010	10,598	
Total Investing Activity Income	2,462,100,171	86,083,553	39,698,006	-
Less: Investment Expense	(36,613,610)	(1,312,984)	(583,388)	
Net Income, Investing Activities	2,425,486,561	84,770,569	39,114,618	-
From Securities Lending Activities:				
Loan Premium on Securities Lending	5,726,432	200,166	92,487	
Broker Rebates	(436,648)	(15,194)	(7,163)	
Agent Fees	(521,194)	(18,226)	(8,406)	
Net Income, Securities Lending Activities	4,768,590	166,746	76,918	-
Net Investment Income	**2,430,255,151**	**84,937,315**	**39,191,536**	**-**
Other Additions:				
Other Revenue:				
Warrants Voided by Statute of Limitations	214,384	5,152		
Reimbursements - Third Party				
Sale of Surplus Equipment	105			
Settlement Revenue	1,623			
Rental Income	41,418			
Miscellaneous Revenue	368			
Administration Fees				
Total Other Revenue	257,898	5,152	-	-
Transfer In:				
Interfund Transfers In (Note 1.G):				544,500
Interagency Transfers In (Note 5.C):				272,386
Total Transfers In	-	-	-	816,886
Total Other Additions	**257,898**	**5,152**	**-**	**816,886**
Total Additions	**3,908,732,807**	**120,326,936**	**57,691,088**	**816,886**

USAS Funds (U/F) are:

Fund 0955: 0955, 8955; Fund 0977: 0977, 8977; Fund 0993: 0993, 8993; Fund 5039: 5039;
Fund 3973: 0973, 3973; Fund 0946: 0946, 8946; Fund 0945: 0945, 8945; Fund 3944: 0973,3944; Fund 0943: 0943, 8943.

The accompanying Notes to the Basic Financial Statements are an integral part of this exhibit.

State Retiree Health Plan (3973)	Total Defined Benefit Plans	Texa$aver 401(k) Trust Fund (0946)	Texa$aver 457 Trust Fund (0945)	Commuter Spending Account Fund (3944)	State Employees Cafeteria Plan Trust Fund (0943)	Total Pension and Other Employee Benefit Trust Funds
$	$	$	$		$	$
	699,147,473			140,672	75,167,377	774,455,522
307,028,461	1,042,923,752					1,042,923,752
16,585,270	16,585,270					16,585,270
	97,061,015					97,061,015
74,492,786	74,492,786					74,492,786
					1,488,685	1,488,685
398,106,517	**1,930,210,296**	**-**	**-**	**140,672**	**76,656,062**	**2,007,007,030**
	1,909,484,313					1,909,484,313
10,906,797	688,612,302	76,914	73,333	7,899	199,533	688,969,981
	691,912					691,912
10,906,797	2,598,788,527	76,914	73,333	7,899	199,533	2,599,146,206
	(38,509,982)	(17,842)	(21,373)	(286)	(6,408)	(38,555,891)
10,906,797	2,560,278,545	59,072	51,960	7,613	193,125	2,560,590,315
	6,019,085					6,019,085
	(459,005)					(459,005)
	(547,826)					(547,826)
-	5,012,254	-	-	-	-	5,012,254
10,906,797	**2,565,290,799**	**59,072**	**51,960**	**7,613**	**193,125**	**2,565,602,569**
25,403	244,939					244,939
252,490	252,490			6,264	100,800	359,554
	105					105
2,971,208	2,972,831					2,972,831
	41,418					41,418
	368					368
		390,022	762,936			1,152,958
3,249,101	3,512,151	390,022	762,936	6,264	100,800	4,772,173
	544,500					544,500
	272,386					272,386
-	816,886	-	-	-	-	816,886
3,249,101	**4,329,037**	**390,022**	**762,936**	**6,264**	**100,800**	**5,589,059**
412,262,415	**4,499,830,132**	**449,094**	**814,896**	**154,549**	**76,949,987**	**4,578,198,658**

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Exhibit IX (Concluded)
Statement of Changes in Fiduciary Net Position – Pension and Other Employee Benefit Trust Funds
Year Ended August 31, 2018

	Employees Retirement Fund (0955)	Law Enforcement and Custodial Officer Supplemental Fund (0977)	Judicial Retirement System Plan II (0993)	Excess Benefit Arrangement (5039)
Deductions	$	$	$	$
Benefits:				
Benefits	2,355,196,596	72,245,745	24,706,173	752,700
Health Care Claims[1]				
Less: Payments from Members				
Refunds of Contributions	123,948,291	3,392,274	159,407	
Service Contributions Transferred to Teacher Retirement System (Note 1.G)	23,947,830			
Total Benefits	**2,503,092,717**	**75,638,019**	**24,865,580**	**752,700**
Administrative Expenses:				
Salaries & Wages	10,536,656	1,022,718	144,527	
Payroll Related Costs	3,590,825	382,772	50,405	
Professional Fees & Services	4,596,756	170,359	61,930	
Travel	52,694	4,554	560	
Materials & Supplies	867,335	60,308	9,233	
Communications & Utilities	588,472	64,747	7,553	
Repairs & Maintenance	662,886	50,521	8,906	
Rentals & Leases	332,166	27,684	4,315	
Printing & Reproduction	28,542	2,550	324	
Depreciation	1,010,059			
Amortization	232,237			
Other Operating Expenses	1,051,336	64,549	8,150	
Total Administrative Expenses	**23,549,964**	**1,850,762**	**295,903**	**-**
Other Deductions:				
Loss on Sale of Capital Assets	1,640			
Interfund Transfers Out (Note 1.G):				
Membership Fees	36,500			
Other Transfers	544,500			
Interagency Transfers Out (Note 5.C):				64,186
Total Transfers Out	581,000	-	-	64,186
Total Other Deductions	**582,640**	**-**	**-**	**64,186**
Total Deductions	**2,527,225,321**	**77,488,781**	**25,161,483**	**816,886**
Net Increase/(Decrease)	**1,381,507,486**	**42,838,155**	**32,529,605**	**-**
Net Position Restricted for Pension and Other Employee Benefits:				
Beginning of Year	**26,371,827,298**	**923,989,580**	**420,850,181**	
End of Year (Exh. VIII)	**27,753,334,784**	**966,827,735**	**453,379,786**	**-**

[1] *The health care claims in the State Retiree Health Plan are reported net of $152,917,747 pharmacy rebates.*

	State Retiree Health Plan (3973)	Total Defined Benefit Plans	Texa$aver 401(k) Trust Fund (0946)	Texa$aver 457 Trust Fund (0945)	Commuter Spending Account Fund (3944)	State Employees Cafeteria Plan Trust Fund (0943)	Total Pension and Other Employee Benefit Trust Funds
	$	$	$	$	$	$	$
		2,452,901,214			116,266	73,728,801	2,526,746,281
	938,921,013	938,921,013					938,921,013
	(203,123,120)	(203,123,120)					(203,123,120)
		127,499,972					127,499,972
		23,947,830					23,947,830
	735,797,893	**3,340,146,909**	**-**	**-**	**116,266**	**73,728,801**	**3,413,991,976**
	3,144,800	14,848,701	298,087	329,482	11,490	171,132	15,658,892
	1,050,806	5,074,808	100,364	111,853	3,869	60,736	5,351,630
	402,937	5,231,982	6,233	7,073	219	6,642	5,252,149
	23,189	80,997	1,824	1,777	72	651	85,321
	171,563	1,108,439	11,612	13,548	160	10,906	1,144,665
	196,920	857,692	8,475	10,404	857	9,745	887,173
	240,454	962,767	12,878	15,464	1,562	13,143	1,005,814
	83,614	447,779	5,385	6,336	332	5,342	465,174
	5,565	36,981	371	429	22	219	38,022
		1,010,059					1,010,059
		232,237					232,237
	497,772	1,621,807	36,818	15,360	537	1,247,464	2,921,986
	5,817,620	**31,514,249**	**482,047**	**511,726**	**19,120**	**1,525,980**	**34,053,122**
		1,640					1,640
		36,500					36,500
		544,500					544,500
		64,186					64,186
	-	645,186	-	-	-	-	645,186
	-	**646,826**	**-**	**-**	**-**	**-**	**646,826**
	741,615,513	**3,372,307,984**	**482,047**	**511,726**	**135,386**	**75,254,781**	**3,448,691,924**
	(329,353,098)	**1,127,522,148**	**(32,953)**	**303,170**	**19,163**	**1,695,206**	**1,129,506,734**
	709,782,760	**28,426,449,819**	**1,833,682**	**2,523,975**	**452,646**	**14,797,050**	**28,446,057,172**
	380,429,662	**29,553,971,967**	**1,800,729**	**2,827,145**	**471,809**	**16,492,256**	**29,575,563,906**

Notes to the Basic Financial Statements
August 31, 2018

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Note **Page**

1. Summary of Significant Accounting Policies

The financial statements have been prepared in conformity with generally accepted accounting principles (GAAP) as established by the Governmental Accounting Standards Board (GASB).

1.A The Reporting Entity
(In accordance with GASB Statement 14)

The Texas Constitution under Article XVI, Section 67 authorized the Texas Legislature to establish by law an Employees Retirement System of Texas (the System) to provide benefits for officers and employees of the State. The System was established in 1947 and operates primarily under Vernon's Texas Codes Annotated (V.T.C.A.), Texas Government Code, Title 8, Subtitle B.

The System has the powers, privileges and immunities of a corporation. The System is governed by a Board of Trustees, which is made up of six members responsible for the general administration and operations of the System. The six-member board is composed of three elected members and three members who are appointed respectively by the Governor, the Speaker of the Texas House of Representatives, and the Chief Justice of the Supreme Court of Texas. The Board appoints a person other than a member of the Board to serve at the Board's will as Executive Director to manage a staff of approximately 400 to provide benefits to State and higher education employees, retirees, and beneficiaries. The Texas Legislature has the authority to set the contribution rates for both employee and employer retirement contributions.

Although the Employees Retirement System is a separate legal entity and by statute must prepare a separate annual financial report, it is also a retirement system of the State of Texas financial reporting entity and is included in the State's annual financial report as a blended component unit.

1.B New Accounting Pronouncements

On September 1, 2017, the System adopted GASB Statement No. 85 Omnibus 2017. This Statement establishes accounting and financial reporting requirements for blending component units, goodwill, fair value measurement and application, and postemployment benefits. The subject applicable to the System is related to the presentation of payroll-related measures in Required Supplementary Information by OPEB plans. Covered payroll should be the measure if contributions to the OPEB plan are based on a measure of pay; whereas covered employee payroll should be the measure if contributions to the OPEB plan are not based on a measure of pay.

The System issued audited GASB 75 Allocation Schedules for the current fiscal year to provide the information necessary for employers who participate in the State Retiree Health OPEB plan to comply with the requirements from GASB Statement No. 75 Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. This statement applies to governmental employers who provide postemployment benefits other than pensions and is effective for fiscal years beginning after June 15, 2017.

1.C Basic Financial Statements
(In accordance with GASB Statement 34)

The Basic Financial Statements consist of:

- Government-wide Financial Statements;
- Fund Financial Statements and Combining Financial Statements of the Defined Benefit Plans; and
- Notes to the Basic Financial Statements.

Government-wide financial statements report all assets, liabilities and net position of the System's Governmental Funds and Internal Service Fund. Governmental activities are generally financed through intergovernmental revenues and other non-exchange revenues. Fiduciary activities are excluded from the government-wide financial statements.

Fund financial statements are presented immediately after the government-wide financial statements. These statements present information for Governmental Funds, the Internal Service Fund, and the Fiduciary Funds. Fund financial statements have been prepared using the measurement focus appropriate for each type of fund.

1.D Measurement Focus – Basis of Accounting
(In accordance with GASB Statement 34)

Measurement focus refers to the definition of the resource flows measured. Basis of accounting refers to when revenues and expenses are recognized in the accounts and reported in the financial statements. The government-wide Statement of Net Position and Statement of Activities use the economic resources measurement focus and the accrual basis of accounting.

The government-wide Statement of Activities presents the System's governmental activities by function and distinguishes between program revenues and general revenues. Program revenues are further broken down into charges for services, and operating grants and contributions.

Program revenues of the governmental activities are: appropriations from the State's General Revenue Fund for law enforcement and peace officer death benefits, lump sum retiree death benefits, benefits for victims of crime, insurance premiums received by the Internal Service Fund from employees and the State of Texas, and all investment income deposited or credited to the Internal Service Fund.

Program expenses of the governmental activities are: death benefit expenses of the appropriated Special Revenue Funds, claims expenses, premium payments of the Internal Service Fund, and all administrative expenses. All other revenues and expenses of the governmental activities are considered to be general revenues/expenses.

Special Revenue Funds are accounted for under the modified accrual basis of accounting and current financial resources measurement focus. Under this combination, the financial statements focus on current assets and current liabilities and the changes in net current assets. All revenues reported are recognized based on the criteria of measurability and availability. Special Revenue Funds to be available if the revenues are due at year end and collected within 60 days thereafter. Amounts are defined as measurable if they can be estimated or otherwise determined. Expenditures are recognized when the related liability is incurred. Benefit payments to participants are recorded upon distribution.

Proprietary fund distinguishes operating activities from nonoperating ones. Operating activities generally include providing services and producing or delivering goods. The majority of the operating revenues in the System's proprietary fund are 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.

The System does not have a policy for eliminating internal activities in the Government-wide Statement of Activities because the funds reported in the Government-wide Statement of Activities are distinct programs and do not have activities among each other.

Pension and Other Employee Benefit Trust Funds, and Internal Service Funds are maintained on the full accrual basis of accounting and the economic resources measurement focus. All economic resources, including financial and capital assets and related liabilities, both current and long-term, and the changes therein are reported in the fund's financial statements. 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 when due, pursuant to state law. Benefits and refunds of contributions are recognized when due and payable in accordance with the terms of the plan. Capital assets are depreciated. Agency Funds are used to report resources held by the System in a purely custodial capacity. Assets and offsetting liabilities are accounted for using the full accrual basis. Agency Funds have no revenues, expenditures, expenses, or fund balance and typically involve only the receipt and remittance of resources to individuals, the state or other governments.

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions. These estimates and assumptions affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses/expenditures during the reporting period. Actual results could differ from those estimates.

1.E Basis of Presentation
(In accordance with GASB Statement 34)

Fund Structure
The fund financial statements are organized on the basis of funds, each of which is considered to be a separate accounting entity. The operations of each fund are accounted for with a separate set of self-balancing accounts. These accounts are segregated for the purpose of carrying on specific activities or attaining certain objectives in accordance with applicable statutory guidelines or restrictions. The System's funds fall under three fund categories: Governmental Funds, Proprietary Funds, and Fiduciary Funds. Following is a brief description of each fund category and fund type used by the System.

Governmental Fund Category
Governmental Fund reporting focuses primarily on the sources, uses, and balances of current financial resources and whether current-year revenues were sufficient to pay for current-year services.

For fiscal year 2018, the System continues to report the governmental funds as nonmajor funds. The reporting is based on a statement on page 58 of GASB Statement No. 34, published in June of 1999, "The provisions of this statement need not be applied to immaterial items." The total assets, liabilities, revenues, or expenditures/expenses of the individual governmental funds displayed in Exhibits III and IV are much less than 5% of the funds managed by the System, and the activities in these funds are not the core of the System's business, which is pension and group benefits. Therefore, the System is reporting the governmental funds on Exhibits III and IV as nonmajor funds for fiscal year 2018.

Special Revenue Funds
Special Revenue Funds are used to account for the proceeds from specific revenue sources that are legally

restricted to expenditures for specific purposes. The System displays General Revenue Funds/Accounts of the State of Texas as Special Revenue Funds, except for the Judicial Retirement System Plan One Fund, which is a pension plan not administered through a trust and, therefore, reported as an Agency Fund.

- Social Security Administration Fund – This fund accounts for the expenditures of administration of the Social Security Program.
- Death Benefits Program for Commissioned Peace Officers, Firemen, etc. Fund (General Revenue Fund) – This fund accounts for payments of death benefits and administrative fees, which are funded by an appropriation from the State's General Revenue Fund. Established by V.T.C.A., Texas Government Code, Title 6, Chapter 615.
- Compensation to Victims of Crime – This fund accounts for payments of death benefits to the beneficiaries of victims of crime. It is funded by an appropriation from the Victims of Crime Fund 0469, which was established by Texas Criminal Procedure Code, Article 56.54.
- Lump Sum Retiree Death Benefit Fund (General Revenue Fund) – This fund accounts for the payments of the $5,000 lump sum benefit, which is an additional benefit provided by the System to the beneficiaries of retirees who die while still receiving a retirement annuity.

Proprietary Fund Category

Proprietary Fund reporting focuses on the determination of operating income, changes in net position, financial position, and cash flows.

Internal Service Fund

Internal Service Funds are used to report any activity that provides goods or services, on a cost-reimbursement basis, to other funds, departments, agencies of the reporting entity, or other governments. Employees Life, Accident and Health Insurance and Benefits Fund – This fund accounts for the services provided to State of Texas agencies and higher education institutions that participate in the Texas Employees Group Benefits Program. Established by Chapter 1551, Texas Insurance Code.

Fiduciary Fund Category

The fiduciary funds are not part of the government-wide financial statements.

Pension and Other Employee Benefit Trust Funds

Pension and Other Employee Benefit Trust Funds (Pension Trust Funds) report the resources that are required to be held in trust for the members and beneficiaries of defined benefit pension plans, deferred compensation plans, and other employee benefit plans.

- Employees Retirement System Fund (ERS) – This fund is established by V.T.C.A., Texas Government Code, Title 8, Subtitle B and is used to account for the accumulation of resources for pension benefit payments to qualified State employees or beneficiaries.
- Law Enforcement and Custodial Officer Supplemental Retirement Fund (LECOS) – This fund is established by V.T.C.A., Texas Government Code, Title 8, Subtitle B and is used to account for the payments of benefits as provided by the Commissioned Law Enforcement and Custodial Officer Supplemental Retirement Benefit Act.
- Judicial Retirement System Plan Two Fund (JRS II) – This fund is established by V.T.C.A., Texas Government Code, Title 8, Subtitle E and is used to account for the accumulation of resources for pension benefit payments to eligible judicial employees who commenced service after August 31, 1985.
- Excess Benefit Arrangement (EBA) – This fund is established by V.T.C.A., Texas Government Code, Title 8, Subtitle B and is used to account for the payments of annuities otherwise payable from the Employees Retirement Fund that exceed the limitations on benefits imposed by Internal Revenue Code (IRC) Section 415(b).
- State Retiree Health Plan (SRHP) – The System provides postemployment health care, life and dental insurance benefits through the Group Benefits Program in accordance with Chapter 1551, Texas Insurance Code. The State Retiree Health Plan (SHRP) is a cost-sharing multiple-employer postemployment health care plan that covers retired employees of the State, and other entities as specified by the state legislature.
- Texa$aver 401(k) Trust Fund – This fund is established by V.T.C.A., Article 6252-3g and is used to account for the costs of administering the IRC Section 401(k) deferred compensation plan.
- Texa$aver 457 Trust Fund – This fund is established by V.T.C.A., Article 6252-3g and is used to account for tax-deferred portions of salaries of State employees in accordance with the provisions of IRC Section 457 and the costs of administering the program.
- Commuter Spending Account Fund – This fund is a qualified transportation benefits plan authorized under Section 132 of the Internal Revenue Code. The Commuter Benefits program offers State employees pre-tax deduction for qualified parking expenses or mass transit expenses.
- State Employees Cafeteria Plan Trust Fund (TexFlex) – This fund is established by Chapter 1551, Texas Insurance Code and is used to account for before-tax salary reduction contributions from State employees and employees of higher education institutions, reimbursements for health care and dependent care, and the costs of administering the program.

Agency Funds

Agency Funds are used to account for assets held by a governmental unit in a purely custodial capacity for individuals, other governmental entities, or private organizations. Agency Funds report only the balances of assets and liabilities and do not measure results of operations.

- Judicial Retirement System Plan One Fund (JRS I) (General Revenue Fund) – This fund is established by V.T.C.A., Texas Government Code, Title 8, Subtitle D and is used to account for appropriations received from the State's General Revenue Fund for annuity and refund payments to eligible judicial employees who commenced service prior to September 1, 1985.
- Unappropriated Receipts (General Revenue Fund) – This fund accounts for member contributions received from the Judicial Retirement System Plan One Fund.
- USPS - Direct Deposit Return Money – This fund accounts for direct deposits that are processed through the Uniform Statewide Accounting Payroll System and returned by financial institutions because of death, termination, retirement, incorrect account number, or incorrect routing numbers. The System transfers the funds back to the original issuing funds.
- USPS - Overpayment to Employees – This fund is used to provide a temporary depository for money held in suspense pending final disposition. Items held in the fund are cleared to the various Special Funds or the General Revenue Fund, or refunded to the payer.
- Direct Deposit Correction Account – This fund accounts for monies which had been transmitted for direct deposit but were returned because problems prevented credit from being given to individual depositors. The System transfers the funds back to the original issuing fund.
- Health Savings Account – This fund accounts for the employee and employer contributions to the Health Savings Account that the System has received and pending to be deposited to the bank who administers the employees' Health Savings Account.
- Child Support Employee Deductions - Offset Account – This fund accounts for monies withheld in compliance with state and federal law for child support orders. The orders received by employers require that child support payments be deducted from the paychecks of employees. Texas enacted a statute mandating electronic submittal of child support payments deducted from non-custodial parent payrolls, effective September 1, 2009. This process allows all child support payments from an agency to be paid to the State Disbursement Unit (SDU). Once received by the SDU, the payment is sent to the custodial parent in compliance with the order.

1.F Budgets

Appropriated Budgets

The Texas Legislature appropriates monies out of the State's General Revenue Fund for benefit payments of the Judicial Retirement System Plan One Fund and all Special Revenue Funds other than the Social Security Administration Fund on an 'estimated to be' basis. This type of appropriation means that the System has the authority to increase the appropriations as needed during the time period that the appropriation is allowed to remain open. For benefit payments, expenditures in excess of appropriations received are not a violation of budgetary authority.

The System is required to lapse all unencumbered appropriations by November 1 of each year.

Non-appropriated Budget

The Texas Legislature does not appropriate monies to the System for administrative expenses. A non-appropriated budget for administrative expenses, including capital outlay, is prepared annually and approved by the System's Board of Trustees at the line-item level. The System's management must approve any transfers between line items, and the Board must approve any amendments to the approved budget. Administrative expenses are budgeted in and paid primarily from the Employees Retirement Fund. Expenses are allocated monthly to the other funds based on percentages determined by time sheets and resource requirements used to administer each fund within each division. Expenses are limited by a statutory provision that no expense can be made for more than the State of Texas pays for similar services. Non-appropriated budgets are not lapsed at year-end.

1.G Assets, Liabilities, Fund Balances and Net Position

(In accordance with GASB Statement 34)

Cash and Short-Term Investments

Cash and Cash Equivalents (in accordance with GASB Statement 9), as reported in the Statement of Cash Flows for the Internal Service Fund, are composed of cash on hand, cash in local banks, cash in the State Treasury, and cash equivalents. Cash in local banks is held by Fiduciary Funds. Cash balances of most state funds are pooled and invested by the Treasury

Operations Division at the Comptroller's office. Interest earned is deposited in the specified funds designated by law.

The Statement of Cash Flows for proprietary fund shows the change in cash and cash equivalents during the fiscal year. Both Cash Equivalents and Short-Term Investments are defined as short-term, highly liquid investments that are both (a) readily convertible to known amounts of cash and (b) so near maturity they present insignificant risk of changes in value due to changes in interest rates. Investments with an original maturity of three months or less and that are used for cash management rather than investing activities are considered cash equivalents. Restricted securities held as collateral for Securities Lending are not included as cash equivalents on the Statement of Cash Flows. The petty cash and travel advance accounts, and the Texa$aver and State Employees Cafeteria Plan accounts (Cash in Bank) are maintained at a local commercial bank.

Valuation

Cash Equivalents and Short-Term Investments are reported at fair value.

Investments

Investments of the Employees Retirement System Fund, the Law Enforcement and Custodian Officer Supplemental Retirement Fund, the Judicial Retirement System Plan Two Fund, and the long-term portion of the Employees Life, Accidental and Health Insurance and Benefits Fund are consolidated in the Investments pool Fund. See also *Investment Unit Trust Accounting.*

Valuation

Investments of the Pension Trust Funds and Internal Service Fund are reported at fair value in accordance with GASB Statement 72. Fair value is defined as 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.

Public Equities and Fixed Income

The fair value of investments is based on published market prices and quotations from major investment brokers at current exchange rates, as available. Many factors are considered in arriving at that value. In general, however, corporate bonds are valued based on yields currently available on comparable securities of issuers with similar credit ratings. Public real estate are listed securities (Real Estate Investment Trusts or "REITs" and Real Estate Operating Companies or "REOCs") traded in the public exchange.

Other Investments

Other investments are derivative investments. Derivative investments are either executed on an exchange or in a bilateral deal in an over-the-counter (OTC) market. Options are priced at the mean and settle price and Forwards priced at the last sale price in their respective active markets. In addition, other investments include one commingled equity limited partnership priced at the net asset value per share by the general partner.

Alternative Investments

For alternative investments, the System has established a Valuation Committee that periodically reviews and approves the fair value of these investments. Certain foreign alternative investments in the inception year are reported at cost, which approximates fair value. Fair value at fiscal year-end is based on the fair value of net assets reported in the partnership's most recent capital account statements from the general partner or administrator of the fund, adjusted for any cash flows and material changes in fair value, according to the Valuation Committee guidelines, between the reporting date of partnership's most recent capital account statements and the System's fiscal year end date. The System's alternative investments include private equity, private real estate, private infrastructure, private fixed income and hedge funds.

The general nature of the System's private equity funds is that distributions are received through the liquidation of the underlying assets of the funds. Private equity partnerships have an expected life of approximately seven to fifteen years and are not liquid in nature. The fair value of the net assets is estimated using recent observable information for similar investments, such as discounted cash flows, earning multiples and company comparables.

The System's private real estate investments are limited partnerships. The partnerships participate in both closed-ended and open-ended commingled funds. The System does not directly own buildings. Closed-ended funds typically have a pre-determined life of seven to twelve years (plus possible extensions) and are illiquid in nature. Open-ended funds do not have a pre-determined liquidation date and the System has the ability to sell its interests periodically. The fair value of private real estate is based on the set asset values of limited partner interests in the commingled funds. Each commingled fund is audited annually and the underlying investments may be periodically appraised by an independent third party. Valuation assumptions can be subjective and are based on market and property specific inputs.

The System's hedge fund investments represent ownership interest in limited partnerships or limited liability companies. These types of investments consist of private commingled investment vehicles that issues securities to accredited investors or qualified purchasers. The fair values of hedge funds are based on the net assets of the limited partnerships. These funds' valuations are appraised by an independent administrator and reconciled annually to the audited financial statements. In general, the System's hedge funds are categorized into the following strategies:

- Equity Long/Short hedge funds — This strategy includes long and short investments made primarily in developed market common stocks. Management of each hedge fund has the ability to shift investments from value to growth strategies, from small to large capitalization stocks, and from a net long to a net short position.
- Event-Driven hedge funds — These types of investments include hedge funds that aim to profit from a catalyst. In many instances, these catalysts can be associated with economic, political, corporate, and government-driven events. A majority of these investments are targeted at corporate actions.
- Macro hedge funds — These types of investments include hedge funds that invest in a range of strategies which are based on movements in macroeconomic variables. Management of each hedge fund can use a variety of instruments including fixed income, currency, commodity, or equity securities.
- Multi-Strategy hedge funds — These investments include hedge funds that pursue multiple strategies aimed at diversifying risks and reducing volatility. The System defines multi-strategy funds as having 50% of the funds' exposure to event-driven strategies and the other 50% to relative value strategies.
- Opportunistic hedge funds — These include investments in hedge funds that provide niche and often uncorrelated exposures. Management of such funds can use a variety of instruments including credit, equity, and derivative securities; some of which may be less-liquid in nature.
- Relative Value hedge funds — This strategy seeks to capitalize on the mispricing of related securities or financial instruments.

Private fixed income funds are ownership in limited partnerships which consists of private investment funds that are either commingled or separate. These funds are classified as predominately "credit" instruments that may be liquid or illiquid. The System utilizes a process similar to that of private equity funds in assessing the fair value of the fund. The expected life of the funds is approximately three to ten years, with the option of two one-year extensions. The valuations are reviewed at the end of each reporting period as financial statements or cash flow information becomes available.

The System's private infrastructure investments are in large-scale public systems, services and facilities that are necessary for economic activity. These types of relatively illiquid investments are often made in essential services with high barriers to entry and predictable cash flows and have expected life from ten to twelve years, with the option of one to three-year extension. The fair value of the net assets is estimated using a variety of approaches, which may involve using recent information from comparable companies, replacement cost analysis, and discounted cash flows. Each investment is typically audited annually and appraised periodically by an independent third party.

If the System has investments where no readily ascertainable market value exists, the System's management, in consultation with their investment advisors and the Master Trust Custodian, will determine the fair values for those investments.

Short-Term Investments

The System's short-term investment is Short-Term Investment Fund, which is a 2a-7 like fund and is priced at the Net Asset Value per Share by the custodian bank.

Invested Securities Lending Collateral

The cash collateral from the borrowers in the securities lending program that the System reinvested are valued according to the types of those reinvestments.

Permissible Investments

Eligible securities are as follows:

- Domestic equities, screened to eliminate against any known bankruptcy proceedings, lawsuits, or breach of corporate ethics that might jeopardize the company's economic future or existence.
- Equities of companies domiciled in countries outside of the United States.
- Global fixed income securities, subject to a minimum credit rating of "CCC-, Caa3," or their equivalent as rated by two Nationally Recognized Securities Rating Organizations, as included in the Barclays Capital Universal Index or successor index. Fixed income and short-term securities that downgrade to below the acceptable rating described above will be exchanged or sold within one year, but special exceptions may be permitted and reported to the Board of Trustees.
- Interests in private securities exempted from registration under federal and state securities laws, including certain limited liability securities and vehicles, such as limited partner interests in limited partnerships, trusts and limited liability corporations as deemed appropriate by the System.
- Private equity and private real estate investments must be institutional in quality and meet the parameters specified in the System's investment policy.

- Global publicly traded real estate equities subject to the quality standards set forth in the investment policy.
- Foreign currencies transactions and foreign currency derivatives are permitted as necessary to facilitate the settlement of foreign security transactions, consistent with industry best practices. These transactions are also permitted to settle private market transactions, meet capital calls or exchange distributions back into U.S. dollars.
- Forward, futures and options, subject to the restrictions set forth in the investment policy.

Investment Asset Allocation

The System's policy in regard to the allocation of investment assets is established and may be amended by the Board of Trustees. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension plans (See Figure 14 in Note 3.B for the most recent target asset allocation).

Investment Unit Trust Accounting

In order to provide flexibility of asset allocation and effectively invest in a diversified manner, the Board of Trustees directed that investment unit trust accounting be implemented. The pension funds began the unit trust accounting on September 1, 2006 and the long term portion of the Employees Life, Accident and Health Insurance and Benefits Fund on January 1, 2009. Unit trust accounting involved assigning units to each fund based on the share of the funds' investment fair value to the total fair value of the consolidated investments. The custodian bank prepares consolidated bank statements and fund statements that show the unit trust accounting activity. Investment earnings and appreciation increase the per unit value of all participating funds. Deposits and withdrawals for each fund change the number of units held by each fund. These changes are recorded at the unit value of the transaction date. Investment earnings or losses and fees for the total consolidated fund are allocated to each of the participating funds on a daily basis using the pro rata fair value share.

Capital Assets

Pension Trust Funds are accounted for on a cost of service measurement focus. This means that all capital assets associated with the funds' activities are included in their statements of net position. Purchases of capital assets by these funds are reported at cost or, if donated, at fair market value on the acquisition date. Depreciation of all exhaustible capital assets is charged as an expense against the funds' operations. Accumulated depreciation is reported on the statements of net position.

Depreciation has been provided over the estimated useful lives, using the straight-line method. The capitalization thresholds and estimated useful lives are shown in Figure 1.

Figure 1

Capitalization Thresholds and Useful Lives

Asset Category	Capitalization Threshold	Estimated Useful Life (in Years)
	$	
Land	0	N/A
Building and Improvements	100,000	10 - 40
Computer Software	100,000	5 - 6
Furniture and Equipment	5,000	3 - 10
Motor Vehicles	5,000	7
Internally Generated Computer Software	1,000,000	5 - 6

Accounts Payable

Accounts Payable under the Internal Service Fund include claims incurred but not reported by the participants prior to fiscal year end and payable in future years as estimated by the System's actuary.

Employees Compensable Leave

Under Section 661.062 of Texas Government Code Chapter 661, a State employee is entitled to be paid for all unused vacation time accrued, in the event of the employee's resignation, dismissal, or separation from State employment, provided the employee has had continuous employment with the State for six months.

In Fiduciary Fund types, salary costs related to employees' rights to be compensated for vacation time are accrued as expenses of the period in which the services were rendered. Accumulated compensable leave liabilities are reported in the Statement of Fiduciary Net Position for the Employees Retirement Fund. No liability is recorded for non-vesting accumulating rights to receive sick leave benefits.

Fund Balances – Governmental Funds

Fund balance is the difference between fund assets and liabilities on the governmental fund statements. Committed fund balance reports an amount that has spending limitations that are internally imposed by formal action of the government's highest level of decision-making authority (e.g., legislature). These committed fund balance amounts usually cannot be redeployed for other purposes unless the same decision makers reverse or modify the imposed restrictions by the same type of formal action that was originally used to create the restriction.

Net Position – Restricted for Pension Benefits

The net position of the retirement trust funds consists of up to five reserve accounts, depending on the particular fund.

- The Employee Savings Account represents the accumulation of active and inactive member deposits plus interest.
- The State Accumulation Account represents reserves available to fund the future active member retirement, death, and survivor benefits.
- The Retirement Annuity Reserve Account represents reserves to pay retirement, death, and survivor benefits and post-retirement benefit increases for current retirees.
- The Interest Account represents the interest, dividends, securities lending income, and net appreciation or depreciation received and accrued on the invested assets of the fund. All investment income is transferred to the Employee Savings, State Accumulation, and Retirement Annuity Reserve accounts based on applicable Texas statutes.
- The Expense Account represents reserves to pay all administration and maintenance expenses of the retirement trust funds.

See Note 3.D for the balances of each funded plans' legally required reserves.

Restricted Net Position – Proprietary Fund

(In accordance with GASB Statement 34)

Chapter 1551 of the Texas Insurance Code requires that the System estimate funds needed for an average 60-day period, considering projected claims and administrative expenses for a contingency reserve fund for self-funded coverage. The System is further required to include this amount in its legislative appropriations request. Subject to adequate appropriation from the legislature, the estimated amount must be placed in the contingency reserve fund along with interest on, earnings of, and proceeds from the sale of investments of assets in the contingency reserve fund. This reserve amount is reported as 'Restricted Net Position' in both the government-wide and the proprietary fund Statement of Net Position.

Interfund Activity and Balances

(In accordance with GASB Statement 34)

Activities between the System and agencies of the State of Texas, and activities between the System's funds have been analyzed and classified in accordance with the following criteria.

Interfund Services Provided and Used

This activity represents transactions that would be treated as revenues, expenditures or expenses if they involved organizations external to State government. They are accounted for as revenues by the recipient fund and as expenditures or expenses by the disbursing fund. Contributions for retirement and insurance from other funds within the State of Texas reporting entity are reported as Interfund Services Provided and Used. The accrual of Interfund Services Provided and Used is classified as Accounts Receivable and Accounts Payable on the government-wide and the fund financial statements.

Interfund Reimbursements

This activity represents expenditures or expenses applicable to a particular fund but paid from another fund. The transactions are reported as expenditures or expenses in the reimbursing fund and a reduction of corresponding amounts in the reimbursed fund. Administrative expenses paid by the Employees Retirement System Fund and subsequently reimbursed by the System's other funds are reported as Interfund Reimbursements in the financial statements. The accrual of Interfund Reimbursements is reported on the government-wide Statement of Net Position as Due From External Parties or Due To External Parties and on the fund financial statements as Due From Other Funds or Due To Other Funds.

Interfund Transfers

This activity represents routine transfers of resources. Interfund transfers are reported in the Other Financing Sources (Uses) section for Governmental Funds and as Other Additions or Other Deductions in the Pension Trust Fund financial statements. The accrual of Interfund Transfers is reported on the government-wide Statement of Net Position as Due From External Parties or Due To External Parties and on the fund financial statements as Due From Other Funds or Due To Other Funds. Retirement Membership Fees received by the Employees Retirement System Fund and transferred to other funds of the System are reported as Interfund Transfers. See Note 5.B Interfund Transfers.

Interagency Activity and Balances

(In accordance with GASB Statement 34)

This activity represents routine transfers of funds between the System and other agencies and institutions within the State of Texas financial reporting entity.

At year end, the accrual of transfers from or to the funds of the System are reported as Due To Other Agencies or Due From Other Agencies on the Statements of Net Position. See Note 5.C Interagency Transfers.

Reclassifications

Certain items from the prior year's financial statements have been reclassified for comparative purposes. Such reclassifications had no effect on previously reported net position.

Change in Accounting Principle

The Texas Legislature provides a single appropriation to state agencies,institutions of higher education, and junior colleges who participate in the Texas Group Benefits Program (GBP) biannually. The GBP is funded on a pay-as-you-go basis to provide insurance benefits to both active members and their dependents, as well as retirees and their dependents.

The System reports the insurance benefits for the active members in the Employees Life, Accident and Health Insurance and Benefits Fund, and retirees in the State Retiree Health Plan. The System prepares a blended premium rate for billing efficiency. Prior to January 2018, State contributions associated with billings for retired members were deposited to the State Health Fund. However, this arrangement did not take into account the nature of the blended rate.

Beginning in February 2018, the System deposits all State contributions to the Employees Life, Accident and Health Insurance and Benefits Fund. The System will transfer monies from the Employees Life, Accident and Health Insurance and Benefits Fund to the State Retiree Health Plan based on the System's cash flow projections. This change in accounting principle has no impact on the beginning fund balances of these two funds.

2. Detail Disclosures on Funds

(In accordance with GASB Statements 3, 28, 40, 67, and 72)

2.A Deposits, Investments, and Repurchase Agreements

Deposits

The total carrying amounts of Deposit as of August 31, 2018 are presented in Figure 2. The deposits with the custodian bank are temporary deposits related to unsettled trade or income transactions.

Figure 2
Deposits of Cash in Bank

Deposits	Carrying Value	Bank Balance
	$	$
Fiduciary Funds:		
Cash in Bank (Exh. VIII)	355,568	351,583
Deposits with Custodian Bank	31,287,242	31,287,242
Totals	**31,642,810**	**31,638,825**
Proprietary Funds:		
Deposits with Custodian Bank	37,275	37,275
Totals	**37,275**	**37,275**

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. The System does not have a deposit policy for custodial credit risk. The balance of deposits with custodian bank as of August 31, 2018 represents amounts held in foreign currency and cash balance not yet invested. These deposits were uninsured and uncollateralized and subject to custodial credit risk.

Investments

Policy of Asset Allocation

In its investment policy, the System categorizes investment assets into principal components that align with investment strategies. The System's investment strategies are domestic equities, international securities, global credit, rates, public real estate, and alternative investments. A principal component may include one or more investment asset classes, depending on the investment strategy.

The majority of the investments in the domestic equities component are equity securities that are issued in the United States. Real Estate Investment Trust (REITs), Exchange Traded Funds (ETFs), and international securities are also included in this component to provide liquidity. The International securities component invests in equity securities that are mainly issued overseas. It also includes other investments classes similar to those of the domestic equities component. The rates component invests in domestic and international fixed income securities that have a relatively low risk of default. The global credit component invests in securities that have high risk and long maturity. It also invests in ETFs and hedge funds to provide liquidity and absolute returns. The public real estate component invests mainly in REITs. It also includes domestic and international equities and may include hedge funds to provide liquidity, diversification, and high returns to the component.

Alternative Investments include private equity, private real estate, private infrastructure, private fixed income and hedge funds. The majority of the System's alternative investments are in limited partnerships. The private real estate investments specialize in real estate. Private Infrastructure investments are based on event-driven strategies (e.g., tender offers, mergers, and acquisitions etc.). Hedge fund investments are also based on strategies (e.g., equity long/short, opportunistic, relative value, etc.). Private fixed income funds invest in foreign and domestic fixed income securities.

Fair Value Measurement

The System uses the following valuation techniques to measure fair value of investments:

Market Approach:	Prices and other relevant information generated by market transactions involving identical or similar assets, liabilities, or group of assets and liabilities are used to measure fair value.
Cost Approach:	The amount that would be required currently to replace the present service capacity of an asset is used to measure fair value.
Income Approach:	Future amounts (for example, cash flows, or revenues and expenses) are converted to a single current amount to determine fair value.

The System categorizes their fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and gives the highest priority (Level 1) to unadjusted quoted prices in active markets for identical assets or liabilities and the lowest priority (Level 3) to unobservable inputs.

Level 1:	Unadjusted quoted prices for identical instruments in active markets.
Level 2:	Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.
Level 3:	Valuations derived from valuation techniques in which significant inputs are unobservable. Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy.

U.S. treasury securities, equity securities, Real Estate Investment Trusts, and Exchange Traded Funds classified in Level 1 are valued using prices quoted in active markets for those securities. Debt and debt derivative securities classified in Level 2 are valued using either a bid evaluation or a matrix pricing technique. Bid evaluations may include market quotations, yields, maturities, call features and ratings. Matrix pricing is used to value securities based on the securities relationship to benchmark quoted prices. Index linked debt securities are valued by multiplying the external market price feed by the applicable day's Index Ratio.

Level 2 debt securities also have non-proprietary information from multiple independent sources that were readily available to market participants who are known to be actively involved in the market. Equity and equity derivative securities classified in Level 2 are securities whose values are derived daily from associated traded securities.

Level 3 debt securities use proprietary information or single source pricing. Value of equity securities classified in Level 3 is based on last trade data that is 30 days or more before the fiscal year end. Real assets, if any, classified in Level 3 are real estate investments generally valued using the income approach by internal manager reviews or independent external appraisers.

The System's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability. When inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation.

The fair values of alternative investments are measured at net asset value (NAV) per share (or its equivalent). The valuation method using NAV per share (or its equivalent) is consistent with the Financial Accounting Standards Board's measurement principles for an investment company. The System's investments are summarized in Figure 3.

Custodial Credit Risk

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty, the System will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The System's investment policy limits holding of securities by counterparties to those involved with securities lending and those used as collateral for futures contracts. The System has contracted with The BNY Mellon Asset Servicing to serve as the custodian for the System's investments. Investments are registered in the name of the System or in the name of the System's custodian and are held in the name of the System by the custodian.

Foreign Currency Risk

Foreign currency risk for investments and deposits is the risk that changes in exchange rates will adversely affect the investments and deposits. The System

Figure 3
Fair Value of Investments

	Level 1	Level 2	Level 3	NAV	Total
Fiduciary Funds:	$	$	$	$	
Investments:					
Public Equities:					
Domestic Equities	5,838,229,487		1		5,838,229,488
International Equities	4,986,080,821				4,986,080,821
Exchange Traded Funds (ETFs)	454,940,287				454,940,287
Real Estate Investment Trust (REITs)	1,052,900,800				1,052,900,800
Total Public Equities	**12,332,151,395**	**-**	**1**	**-**	**12,332,151,396**
Fixed Income:					
Exchange Traded Funds (ETFs)	471,898,151				471,898,151
Real Estate Investment Trust (REITs)		35,112,094			35,112,094
U.S. Treasury Securities	3,522,935,040				3,522,935,040
Corporate Obligations		1,458,709,868	571,453		1,459,281,321
Corporate Asset and Mortgage Backed Securities		102,442,897			102,442,897
U.S. Government Agency Obligations		528,799,465			528,799,465
International Obligations		528,137,664			528,137,664
Total Fixed Income	**3,994,833,191**	**2,653,201,988**	**571,453**	**-**	**6,648,606,632**
Other Investments:					
Derivatives	3,932,930				3,932,930
Commingled Funds				198,111,414	198,111,414
Total Other Investments	**3,932,930**	**-**	**-**	**198,111,414**	**202,044,344**
Investments Measured at the Net Asset Value (NAV):					
Equity Long/Short				710,891,490	710,891,490
Event Driven				240,486,584	240,486,584
Macro				252,161,703	252,161,703
Multi-Strategies				222,021,044	222,021,044
Opportunistic				190,368,911	190,368,911
Option Strategies				155,065,497	155,065,497
Private Equity				3,862,065,039	3,862,065,039
Private Real Estate				1,983,127,884	1,983,127,884
Private Infrastructure				566,647,205	566,647,205
Private Fixed Income				372,119,159	372,119,159
Relative Value				186,016,803	186,016,803
Total Investments Measured at the NAV:	**-**	**-**	**-**	**8,740,971,319**	**8,740,971,319**
Total Investments	**16,330,917,516**	**2,653,201,988**	**571,454**	**8,939,082,733**	**27,923,773,691**
					(Exh. VIII)
Securities Lending Collateral:					
Government Repurchase Agreements	221,952,047				221,952,047
Total Securities Lending Collateral	**221,952,047**	**-**	**-**	**-**	**221,952,047**
					(Exh. VIII)
Short-Term Investments:					
U.S. Treasury Securities	357,597,325				357,597,325
Money Market and Bond Funds				512,015,465	512,015,465
Investment in Pool Cash	2,965,626				2,965,626
Deposits	31,287,242				31,287,242
Total Short-Term Investments	**391 ,850,193**	**-**	**-**	**512,015,465**	**903,865,658**
					(Exh. VIII)
Proprietary Fund:					
Investments:					
Public Equities:					
Domestic Equities	167,118				167,118
Fixed Income:					
Exchange Traded Funds (ETFs)	15,315,548				15,315,548
Real Estate Investment Trust (REITs)		1,139,570			1,139,570
U.S. Treasury Securities	334,272,171				334,272,171
Corporate Obligations		47,342,719	18,547		47,361,266
Corporate Asset and Mortgage Backed Securities		8,983,769			8,983,769
U.S. Government Agency Obligations		50,174,911			50,174,911
International Obligations		17,140,812			17,140,812
Total Fixed Income	**349,587,719**	**124,781,781**	**18,547**	**-**	**474,388,047**
Other Investments:					
Derivatives	(11,808)				(11,808)
Total Other Investments	**(11,808)**	**-**	**-**	**-**	**(11,808)**
Investments Measured at the Net Asset Value (NAV):					
Opportunistic				4,555,729	4,555,729
Private Fixed Income				12,077,201	12,077,201
Total Investments Measured at the NAV	**-**	**-**	**-**	**16,632,930**	**16,632,930**
Total Investments	**349,743,029**	**124,781,781**	**18,547**	**16,632,930**	**491,176,287**
					(Exh. V)

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Figure 3
Fair Value of Investments (Concluded)

	Level 1	Level 2	Level 3	NAV	Total
Securities Lending Collateral:					
Government Repurchase Agreements	3,966,354				3,966,354
Total Securities Lending Collateral	**3,966,354**	**-**	**-**	**-**	**3,966,354**
					(Exh. V)
Short-Term Investments:					
U.S. Treasury Securities	4,082,362				4,082,362
Money Market and Bond Funds				1,079,627,143	1,079,627,143
Deposits	37,275				37,275
Total Short-Term Investments	**4,119,637**	**-**	**-**	**1,079,627,143**	**1,083,746,780**
					(Exh. V)

does not have a policy for managing foreign currency risk. The System's investment and deposit exposure to foreign currency risk as of August 31, 2018 is summarized in Figure 4.

Figure 4
Foreign Currency Risk

	Investments			Short-term Investments
	Public Equities (USD)	Alternative Investments (USD)	Investments Total (USD)	Deposits
Fiduciary Funds:	**$**	**$**	**$**	**$**
Australian Dollar	178,863,693	29,649,148	208,512,841	403,687
Brazilian Real	75,606,426		75,606,426	1,099,317
Canadian Dollar	345,822,492		345,822,492	
Chilean Peso	4,744,991		4,744,991	9,956
Chinese Yuan Renminbi	2,236,740		2,236,740	
Colombian Peso	2,921,395		2,921,395	2,006
Czech Koruna	7,555,991		7,555,991	
Danish Krone	69,880,095		69,880,095	
Egyptian Pound	1,662,215		1,662,215	
Euro	1,278,359,854	446,435,802	1,724,795,656	571
Hong Kong Dollar	452,807,183		452,807,183	13,532
Hungarian Forint	819,807		819,807	
Indian Rupee	122,623,975		122,623,975	67,885
Indonesian Rupiah	25,197,186		25,197,186	76,856
Israeli Shekel	3,330,333		3,330,333	
Japanese Yen	770,223,408		770,223,408	10,623
Malaysian Ringgit	16,627,164		16,627,164	6,128
Mexican Peso	40,337,600		40,337,600	32,934
New Taiwan Dollar	102,720,709		102,720,709	86,081
New Zealand Dollar	4,133,568		4,133,568	
Norwegian Krone	41,456,195		41,456,195	114,576
Philippine Peso	4,889,118		4,889,118	2,431
Polish Zloty	11,574,228		11,574,228	749
Pound Sterling	589,992,345	81,691,204	671,683,549	16,119,917
Qatari Riyal	5,735,403		5,735,403	
Singapore Dollar	55,839,753		55,839,753	5,857
South African Rand	57,381,325		57,381,325	86,207
South Korean Won	158,214,994	25,416,101	183,631,095	5,297
Swedish Krona	68,263,854		68,263,854	141,370
Swiss Franc	220,752,174		220,752,174	
Thai Baht	44,939,324		44,939,324	31,581
Turkish Lira	6,195,281		6,195,281	120,442
UAE Diram	5,858,278		5,858,278	
Totals	**4,777,567,097**	**583,192,255**	**5,360,759,352**	**18,438,003**

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The general investment policies of the System require that non-cash interest paying securities in the high yield bond portfolios may not exceed 15% of the market value of the portfolio. Credit risk is managed through diversification and by operating within defined parameters versus a benchmark index. Excluding those securities *issued* by or *explicitly guaranteed* by the U.S. Government, which are not considered to have credit risk, the System's credit quality distribution for securities with credit risk exposure as of August 31, 2018 is summarized in Figure 5. The securities were rated and categorized according to Standard & Poor's rating standards.

The System earns interest on monies held at the custodial agent bank overnight when a domestic security purchase transaction fails to be completed due to the broker not delivering the purchased security on settlement date. When this occurs, the System's money is invested overnight in a Common Trust Fund at the custodial agent bank. The System does not earn any interest on any failed foreign security purchase transactions.

Concentration Risk

Concentration risk is the risk of loss attributable to the magnitude of investment in a single issuer. The System's investment policies stipulate that investments in the securities of any one corporation may not exceed 3% of the market value of the total fund. As of August 31, 2018, the System was not exposed to any concentration risk.

Figure 5
Investment Credit Risk

S & P Rating	U. S Treasury Securities	U.S. Government Agency Obligations	Corporate Obligations	Corporate Asset and Mortgage Backed Securities	International Obligations	Real Estate Investment Trust (REITs)	Exchange Traded Funds (ETFs)	Money Market and Bond Fund	Total
	$	$	$	$	$	$	$	$	$
Fiduciary Funds Investments:									
A			4,938,858						4,938,858
A+				2,802,011			8,364,528		11,166,539
AA				4,538,882					4,538,882
AA+	3,522,935,040	519,142,282							4,042,077,322
AAA				24,956,720					24,956,720
B			171,016,409		100,474,208				271,490,617
B-			107,252,186						107,252,186
B+			214,360,467		110,298,824	2,540,836			327,200,127
BB			299,457,589		74,371,465	6,625,237			380,454,291
BB-			328,772,742		44,745,285				373,518,027
BB+			171,998,476		65,362,361	25,946,021			263,306,858
BBB				2,199,493					2,199,493
BBB-			58,751,937	9,597,543	33,827,463				102,176,943
BBB+					4,906,421				4,906,421
CCC			10,938,372						10,938,372
CCC-			246,994						246,994
CCC+			47,824,988		55,101,677				102,926,665
D					13,461,059				13,461,059
Not Rated		9,657,183	43,722,303	58,348,248	25,588,901		463,533,623		600,850,258
Investments Totals	3,522,935,040	528,799,465	1,459,281,321	102,442,897	528,137,664	35,112,094	471,898,151	-	6,648,606,632
Short-Term Investments:									
AA+	357,597,325								357,597,325
Not Rated								512,015,465	512,015,465
Short-Term Investments Total:	357,597,325	-	-	-	-	-	-	512,015,465	869,612,790
Proprietary Funds	$	$	$	$	$	$	$	$	$
Investments:									
A			160,292						160,292
A+				265,868			271,472		537,340
AA				430,670					430,670
AA+	334,272,171	49,258,593							383,530,764
AAA				2,368,008					2,368,008
B			5,550,372		3,260,910				8,811,282
B-			3,480,891						3,480,891
B+			6,957,112		3,579,770	82,463			10,619,345
BB			9,718,955		2,413,741	215,024			12,347,720
BB-			10,670,385		1,452,217				12,122,602
BB+			5,582,245		2,121,348	842,083			8,545,676
BBB				71,385					71,385
BBB-			1,906,806	311,490	1,097,877				3,316,173
BBB+					159,239				159,239
CCC			355,007						355,007
CCC-			8,016						8,016
CCC+			1,552,169		1,788,336				3,340,505
D					436,881				436,881
Not Rated		916,318	1,419,016	5,536,348	830,493		15,044,076		23,746,251
Investments Totals	334,272,171	50,174,911	47,361,266	8,983,769	17,140,812	1,139,570	15,315,548	-	474,388,047
Short-Term Investments:									
AA+	4,082,362								4,082,362
Not Rated								1,079,627,143	1,079,627,143
Short-Term Investments Total	4,082,362	-	-	-	-	-	-	1,079,627,143	1,083,709,505

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. As of August 31, 2018, the System invested $111,426,666 in asset backed and mortgage backed obligations, which are subject to early principal payment in a period of declining interest rates and could reduce or eliminate the stream of income that would have been received. As a result, the fair value of these investments is highly sensitive to interest rate changes. The System does not have a policy for interest rate risk management. However, interest rate risk is managed through duration, by operating within defined risk parameters versus a benchmark index. As of August 31, 2018, the System's exposure to interest rate risk is summarized in Figure 6.

Securities Lending

Securities lending transactions are governed by the Texas Government Code Section 815.303. The System participates in a securities lending program, administered by the securities lending agent bank, whereby certain securities are transferred to an approved independent broker/dealer (borrower) with a simultaneous agreement to return the collateral for the same securities in the future. The contract with the System's securities lending agent bank requires the bank to indemnify the System for certain losses. In addition, the contract limits the total amount of securities that can be lent to 25% of holdings.

The System is permitted to loan securities under 1) open loans which are generally overnight loans, and 2) term loans with specified expected termination dates. Securities lent include fixed income securities and domestic and international equities. The System's securities lending agent bank lends the securities for initial collateralization in the form of cash or U.S. Government or Agency securities of 102% for domestic securities and 105% for international securities. Cash collateral is invested in repurchase agreements. The policy is to ensure that the difference in maturities between the cash collateral investments and the loan tenor is no more than five days.

The System cannot pledge or sell collateral securities received unless the borrower defaults and, therefore, the System does not establish an asset and a corresponding liability in the balance sheet for the collateral value of securities received. No significant violations of legal or contractual provisions and no borrower or lending agent default losses were reported in fiscal year 2018. The System received net securities lending income totaling $5,111,725 for the fiscal year ended August 31, 2018. The collateral information as of August 31, 2018 is summarized in Figure 7.

Figure 7
Securities Lending Collateral Summary

Investment Type	Underlying Securities Fair Value	Cash Collateral Fair Value
	$	$
Fiduciary Funds:		
Domestic Equities	26,470,313	27,335,750
International Equities	21,672,976	22,709,053
Corporate Obligations	107,295,473	110,535,599
Exchange Traded Funds (ETFs)	13,978,058	14,387,083
International Obligations	45,173,209	46,530,946
Corporate Asset and Mortgage Backed Securities	440,211	453,616
Totals	**215,030,240**	**221,952,047**
		Exh.VIII
Proprietary Fund:		
Corporate Obligations	3,477,722	2,711,452
Exchange Traded Funds (ETFs)	129,523	100,832
International Obligations	1,466,105	1,142,927
Corporate Asset and Mortgage Backed Securities	14,286	11,143
Totals	**5,087,636**	**3,966,354**
		Exh. V

Repurchase Agreements

During the fiscal year 2018, the System invested the cash collaterals from the securities lending program in repurchase agreements. As of August 31, 2018, the System had $225,918,401 balance in these assets.

Alternative Investments

The System makes contingent commitments to investments in entities that manage private equity, private real estate, private infrastructure, private fixed income, and hedge fund portfolios. The categories of these investments as of August 31, 2018 are summarized in Figure 8.

Figure 6
Investment Interest Rate Risk (Note A)

Investment Type	Fiduciary Funds Fair Value	Fiduciary Funds Modified Duration	Proprietary Fund Fair Value	Proprietary Fund Modified Duration
	$		$	
U.S. Treasury Securities	3,880,532,365	3.47	338,354,533	3.75
U.S. Government Agency Obligations	528,799,465	4.93	50,174,911	4.93
Corporate Obligations	1,459,281,321	4.51	47,361,266	4.51
Corporate Asset and Mortgage Backed Securities	102,442,897	2.33	8,983,769	2.31
International Obligations	528,137,664	3.87	17,140,812	3.87
Real Estate Investment Trusts (REITs)	35,112,094	5.35	1,139,570	5.35
Money Market and Bond Funds	512,015,465	0.08	1,079,627,143	0.08
Totals	**7,046,321,271**	**3.57**	**1,542,782,005**	**1.24**

Note A: $487,213,699 in fixed income exchange traded funds, which are also sensitive to interest rate changes, were not included in this figure because a duration calculation for these funds was not available from the custodian bank.

Figure 8
Alternative Investments (Note A)

Currency	No. of Funds	Commitment	Remaining Commitment	Adjusted Funded Amount	Fair Value	Redemption Frequency	Redemption Notice	Redemption Restrictions
		$	$	$	$			
Private Equity:								
US Dollar	102	6,186,102,533	2,351,466,381	3,834,636,152	3,492,762,892	N/A	N/A	N/A
Euro	11	439,976,415	112,803,903	327,172,512	297,842,753	N/A	N/A	N/A
British Pound	2	90,982,500	59,592,376	31,390,124	46,043,293	N/A	N/A	N/A
Korean Won	1	25,602,047	-	25,602,047	25,416,101			
Sub-total	**116**	**6,742,663,495**	**2,523,862,660**	**4,218,800,835**	**3,862,065,039**			
Private Real Estate:								
US Dollar	53	3,355,482,071	1,109,908,625	2,245,573,446	1,811,141,931	N/A, Monthly/ Quarterly	N/A, 45-90 Days	N/A
Euro	3	222,228,500	65,916,627	156,311,873	148,593,049	N/A, Monthly/ Quarterly	N/A, 45-90 Days	N/A
British Pound	1	58,488,750	15,087,462	43,401,288	23,392,904	N/A	N/A	N/A
Sub-total	**57**	**3,636,199,321**	**1,190,912,714**	**2,445,286,607**	**1,983,127,884**			
Private Infrastructure:								
US Dollar	24	1,296,000,000	695,341,114	600,658,886	524,743,050	N/A	N/A	N/A
Australian Dollar	2	61,471,992	34,456,357	27,015,635	29,649,148	N/A	N/A	N/A
British Pound	1	9,098,250	-	9,098,250	12,255,007	N/A	N/A	N/A
Sub-total	**27**	**1,366,570,242**	**729,797,471**	**636,772,771**	**566,647,205**			
Private Fixed Income:								
US Dollar	7	625,000,000	292,675,228	332,324,772	384,196,360	N/A	N/A, 90 Days	N/A
Hedge Funds:								
Emerging Manager Platform								
US Dollar	1	150,000,000	-	150,000,000	-	Varies	Varies	Varies
Equity Long/Short								
US Dollar	3	460,000,000	-	460,000,000	590,244,227	Monthly	30 Days	N/A
US Dollar	1	100,000,000	-	100,000,000	120,647,263	Quarterly	90 Days	25% Investor Gate, 12 Month Lockup
Event Driven								
US Dollar	1	109,554,176	-	109,554,176	130,438,187	Monthly	30 Days	N/A
US Dollar	1	80,000,000	-	80,000,000	110,048,397	Quarterly	60 Days	12 Month Lockup
Macro								
US Dollar	2	130,000,000	-	130,000,000	136,316,627	Daily/Quarterly	2-30 Days	N/A
US Dollar	1	80,000,000	-	80,000,000	115,845,076	Quarterly	60 Days	25% Fund Gate, 24 Month Lockup
Multi-Strategies								
US Dollar	1	80,000,000	-	80,000,000	91,844,131	Quarterly	45 Days	20% Fund Gate
US Dollar	1	120,000,000	-	120,000,000	130,176,913	Quarterly	180 Days	12.5% Fund Gate, 12 Month Lockup
Opportunistic								
US Dollar	1	100,000,000	56,034,401	43,965,599	46,590,186	Annually	N/A	36 Month Lockup
US Dollar	1	150,000,000	-	150,000,000	140,664,321	Quarterly	60 Days	33% Investor Gate
US Dollar	1	40,000,000	12,000,000	28,000,000	3,408,948	Liquidating	Liquidating	Liquidating
US Dollar	1	50,000,000	15,000,000	35,000,000	4,261,185	N/A	N/A	N/A
Options Strategy								
US Dollar	1	150,000,000	-	150,000,000	155,065,497	Monthly	3-30 Days	N/A
Relative Value								
US Dollar	1	100,000,000	-	100,000,000	109,349,182	Quarterly	45 Days	N/A
US Dollar	1	100,000,000	-	100,000,000	76,667,621	Semiannually	90 Days	12.5% Investor Gate
Sub-total	**19**	**1,999,554,176**	**83,034,401**	**1,916,519,775**	**1,961,567,761**			
Total	**226**	**14,369,987,234**	**4,820,282,474**	**9,549,704,760**	**8,757,604,249**			

Note A: Commitment, Remaining Commitment, Adjusted Funded Amount, and Fair Value are reported in US Dollar.

2.B Fund Equity

Fiduciary Net Position Held in Trust for Pension Benefits and Other Purposes

A summary of pension plan and other employee benefit fiduciary net position at August 31, 2018 and 2017 is presented in Figure 9.

2.C Derivative Investment

Derivatives are generally defined as contracts or securities whose value depends on, or derives from, the value of an underlying asset, reference rate, or index.

Futures Contracts

The System purchases and sells futures contracts as a means of adjusting the portfolio mix and as a lower transaction cost substitute for transactions which would otherwise occur in the underlying portfolios.

A futures contract is a contract to buy or sell units of an index or financial instrument at a specified future date at a price agreed upon when the contract is originated. Upon entering into a futures contract, the System pledges to the broker cash or U.S. government securities equal to the minimum "initial margin" requirement of the futures exchange.

The System could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. The System's investment managers seek to control this risk through counterparty credit requirements and the use of Commodity Futures Trading Commission approved futures and exchange traded options. The System anticipates that the counterparties will be able to satisfy their obligations under the contracts.

The System receives or pays a daily "variation margin," which is an amount of cash equal to the daily fluctuation in value of the contract. The accumulated value of the variation margin is the fair value of the futures contract. As of August 31, 2018, the outstanding futures contracts are summarized in Figure 10.

Options

An option is a contract that gives buyers the right, but not the obligations, to buy (call) or sell (put) an asset at a specified future date at a price agreed upon when the option is originated. The option's price is usually a small percentage of the underlying asset's value.

As a writer of financial options, the System receives a premium at the outset of the agreement and bears the risk of an unfavorable change in the price of the financial instrument underlying the option. As a purchaser of financial options, the System pays a premium at the outset of the agreement and the counterparty bears the risk of an unfavorable change in the price of the financial instrument underlying the option. As of August 31, 2018, the outstanding options are summarized in Figure 10.

Figure 9
Net Position - Fiduciary Fund

Fund Type	2018	2017
	$	$
Defined Benefit Plans (Note A)	29,553,971,967	28,426,449,819
Deferred Compensation Plans and Cafeteria Plan:		
Administration - Deferred Compensation Plans	4,627,874	4,357,657
Administration - State Employees Cafeteria Plan	16,492,256	14,797,050
Total Deferred Compensation Plans and Cafeteria Plan	**21,120,130**	**19,154,707**
Commuter Spending Account Fund	471,809	452,646
Net Position Restricted for Pension and Other Benefits	**29,575,563,906**	**28,446,057,172**
	Exh. VIII	

Note A: See Note 3.D Reserves for details of the statutorily required reserve balances of the Defined Benefit Plans.

Figure 10
Summary of Outstanding Derivatives

Derivative	Expiration Date	No. of Contracts	Type	Change in Fair Value Classification	Change in Fair Value Amount	Fair Value Classification	Fair Value Amount	Notional Amount
Option:								
Equity	9/21/2018	937	Put	Investment Revenue	58,733	Investments	(21,335)	(80,068)
Equity	10/19/2018	372	Put	Investment Revenue	8,612	Investments	(7,050)	(15,663)
Total		**1,309**			**67,345**		**(28,385)**	**(95,731)**
Futures:								
US Long Bond	9/2018	90	Short	Investment Revenue	(136,249)	Investments	(136,249)	(12,910,939)
BP Currency (CME)	9/2018	513	Short	Investment Revenue	1,526,207	Investments	1,526,207	(43,092,032)
Euro FX Currency (CME)	9/2018	721	Short	Investment Revenue	2,559,550	Investments	2,559,550	(107,185,663)
Total Futures		**1,324**			**3,949,508**		**3,949,508**	**(163,188,634)**
Total		**2,633**			**4,016,853**		**3,921,122**	**(163,284,364)**

Forward Contracts
The System enters into forward contracts to minimize the short-term impact of foreign exchange rate fluctuations on the asset and liability positions of international equities. The System had no outstanding forward contracts on August 31, 2018.

2.D Leases
(In accordance with GASB Statement 38)

Included in rental expenses/expenditures are assets leased on a long-term basis that have been classified as operating leases. Current year expenses for these leased assets totaled $647,311. In addition, included in rental income are assets leased on a long-term basis that have been classified as operating leases. Current year revenue for these leased assets totaled $41,418. A schedule of future minimum lease payments and rental income on non-cancelable operating leases as of August 31, 2018 is presented in Figure 11.

Figure 11
Non-Cancelable Operating Leases

Fiscal Year	Future Minimum Lease Rental Payments	Future Minimum Lease Rental Revenues
2019	581,631	41,418
2020	458,282	41,418
2021	272,287	41,418
2022	239,635	45,980
2023	246,824	45,980
Total	**1,798,659**	**216,214**

3. Defined Benefit Plans
(In accordance with GASB Statements 67 and 73)

The Employees Retirement System of Texas Plan (ERS), the Law Enforcement and Custodial Officer Supplemental Retirement Plan (LECOS), and Judicial Retirement System of Texas Plan Two (JRS II) are single employer defined benefit pension plans. ERS, LECOS, and JRS II are administered through trust. Each plan provides service retirement, death and disability benefits. Benefit and contribution provisions of each plan are authorized by State law and may be amended by the Texas Legislature.

Member contribution rates of the ERS, LECOS, and JRS II and State contribution rates of the ERS, LECOS, and JRS II are set by State law. The law prohibits any amendment to the plan that would cause the period required to amortize any unfunded actuarial accrued liability to equal or exceed 31 years. Administrative expenses of the ERS, LECOS and JRS II are financed through investment earnings. A description of the benefits, including the key elements of pension formulas is provided in the Summary of Plan Provisions under the Introductory Section of this report.

3.A Plan Descriptions and Contributions

Employees Retirement Plan

Plan Description
There are two classes of membership within this retirement plan: (1) the elected class and (2) the employee class.

Membership in the elected class is limited to persons who hold State offices that are normally filled by statewide election (including legislators) and excludes officials covered by the Judicial Retirement System of Texas Plan Two.

Membership in the employee class includes all employees and appointed officers of the State and excludes independent contractors and their employees and employees covered by the Teacher Retirement System of Texas.

System Employees
System employees are members of the Employees Retirement Plan.

Contributions
Employees are required to contribute a percentage of their monthly gross compensation, including base salary, longevity pay, hazardous duty pay, and benefit replacement pay and excluding overtime pay and emoluments other than housing and utilities. The contribution rate was 9.5% for fiscal year 2018. Legislators and other elected class members are required to contribute 9.5% of their compensation to the System.

For fiscal year 2018 the State contributed 10% of the payroll of members for both the employee class, legislators, and for other elected class members. See Note 3.B Funded Status and Funding Progress.

Law Enforcement and Custodial Officer Supplemental Retirement Plan

Plan Description
The plan covers custodial officers who are certified in accordance with the statutory requirements as having a normal job assignment that requires frequent or infrequent regularly planned contact with inmates managed by the hiring institutions. The plan also covers law enforcement officers who have been commissioned and recognized as commissioned law enforcement officers by the Texas Commission of Law Enforcement.

The monthly benefit amount payable from this fund is equal to the excess of the total benefit over the regular benefit payable to the member from the Employees Retirement System Fund.

Contributions
For fiscal year 2018, both employee members and the State contributed 0.5% of the covered payroll for LECOS members. An additional $17,356,285 was contributed by the State from dedicated court fees. See Note 3.B Funded Status and Funding Progress.

Judicial Retirement System of Texas Plan Two

Plan Description
The plan covers judges, justices and commissioners of the Supreme Court, the Court of Criminal Appeals, the Court of Appeals, District Courts and certain commissions to a court who first became members after August 31, 1985. Members of the Judicial Retirement System of Texas Plan One are excluded from this plan.

Contributions
Members are required to contribute 7.5% of their compensation to the System during fiscal year 2018. Members who accrue 20 years of service credit in the retirement system may cease making contributions, but are considered contributing members for all other purposes; however, the State contribution continues.

For the fiscal year ended August 31, 2018 the State contributed 15.663% of the payroll of members. See Note 3.B Funded Status and Funding Progress.

3.B Funded Status and Funding Progress

Summary of Actuarial Assumptions
The actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, and the actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future. The assumptions are presented in Figure 12.

See Note 1.D, Summary of Significant Accounting Policies, Basis of Accounting, for the System's policies regarding recognition of contributions, benefits paid and refunds paid. See Note 1.G, Summary of Significant Accounting Policies, Assets, Liabilities, Fund Balances and Net Position, for the System's policies regarding investment valuation. See note to the Required Supplementary Information for a summary of the recent changes in the actuarial assumptions.

Net Pension Liability
(In accordance with GASB Statement 67)
Based on the actuarial assumptions listed in Figure 12, the components of the net pension liability as of August 31, 2018 are determined and summarized in Figure 13. The projected cash flows from the employer are based on contributions for the most recent five year period, modified on consideration of subsequent events.

Figure 12
Actuarial Assumptions - Defined Benefit Plans

	Employees Retirement Fund	Law Enforcement and Custodial Officer Supplemental Fund	Judicial Retirement System Plan II
	(In accordance with GASB Statement No. 67)		
Valuation Date	August 31, 2018		
Actuarial Cost Method	Entry Age Normal		
Amortization Method	Level Percent of Payroll, Open		
Remaining Amortization Period	31 Years		
Asset Valuation Method	Marked to Market. Future gains and losses each recognized over closed five-year period, with allowance of direct offsetting of deferrals by subsequent gains or losses.		
Investment Rate of Return	7.5%		
Projected Salary Increases	0.0% – 9.5%	4.5% – 9.5%	3.0%
Inflation Rate	2.50%		
Last Experience Study	5-year period from September 1,2011 to August 31, 2016		
Mortality Rate	2017 State Retirees of Texas (SRT) mortality table. Generational mortality improvements in accordance with ultimate rates from the scale most recently published by Retirement Plans Experience Committee of the Society of Actuaries ("Scale U-MP") and projected from the year 2017. Rates for male LECO members are set forward one year.		

Figure 13
Net Pension Liability ($ in Millions)
(In accordance with GASB Statement No. 67)

	ERS	LECOS	JRS II
	$	$	$
Total Pension Liability	47,944.31	2,149.92	487.77
Plan Fiduciary Net Position	27,753.33	966.83	453.38
Net Pension Liability	20,190.98	1,183.09	34.39
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	57.89%	44.97%	92.95%

The legislature passed House Bill No. 9 in the 84th legislative session during fiscal year 2015 to increase the State contributions for fiscal years 2016 and 2017 and maintained the changes made by the 83rd legislature session in Senate Bill No. 1459, which established proportional decreases to the employee contribution if the State contribution was decreased. The passage of this bill is an indicator that the legislature is committed to increase the funding levels for the pension funds. Projected employer contributions are based on fiscal year 2018 funding levels. See Note 3.A for descriptions of member and State contributions. As of August 31, 2018, the System did not have any investments that represents five percent or more of the pension plan's fiduciary net position. See Note 2.A for the System's policy on concentration risk.

The long-term expected rate of return on the System's pension plan investments was determined using a building-block method in which best estimated 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 rates of return for each major asset class included in the System's target allocation as of August 31, 2018 are summarized in Figure 14.

Figure 14
Target Allocations

Asset Class	Target Allocation	Real Return Arithmetic Basis	Long-term Expected Portfolio Real Rate of Return
	%	%	%
Global Equity	50.00	7.82	3.91
Global Credit	11.00	5.20	0.57
Opportunistic Credit	3.00	6.50	0.20
Intermediate Treasuries	11.00	2.60	0.29
Real Estate	12.00	7.50	0.90
Infrastructure	7.00	7.00	0.49
Hedge Funds	5.00	6.20	0.31
Cash	1.00	2.40	0.02
Totals	**100.00**		**6.69**
Inflation			2.50
Expected Arithmetic Nominal Rate of Return			**9.19**

In August 2017, the System Board of Trustees adopted a long-term rate of return assumption of 7.5% after considering 1) the long-term expected return from the building block method; 2) an analysis of long-term expected return performed by the System investment consultant; and 3) analyses and recommendations of the System pension actuary.

A single discount rate was used to measure the total pension liability as of August 31, 2018. This single discount rate was based on an expected rate of return on pension plan investments and a municipal bond rate, if applicable. Based on the stated assumptions and the projection of cash flows, if the pension plan's fiduciary net position and future contributions were not sufficient to finance the benefit; the long-term expected rate of return on pension plan investments was applied to projected benefit payments through the fiscal year before the fiduciary net position is depleted, and the municipal bond rate was applied to all benefit payments after that fiscal year. The single discount rate, the municipal bond rates, and the year when the fiduciary net positions that projected to be depleted are summarized in Figure 15.

Figure 15
Assumptions for Single Discount Rate

	ERS	LECOS	JRS II
Expected investment rate of return	7.50%	7.50%	7.50%
Municipal bond rate (Note A)	3.69%	3.69%	N/A
Year fiduciary net position depleted	2049	2038	N/A
Single Discount Rate	5.69%	4.48%	7.50%

Note A: The source of the municipal bond rate is the rate for 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."

The sensitivity of the net pension liability to one percentage point increase or decrease to the single discount rate is summarized in Figure 16.

Figure 16
Sensitivity of Net Pension Liability (in Millions)

Net Pension Liability	1% Decrease	Single Discount Rate	1% Increase
	4.69%	5.69%	6.69%
ERS	$26,609.73	$20,190.98	$14,878.32
	3.48%	4.48%	5.48%
LECOS	$1,534.18	$1,183.09	$902.39
	6.50%	7.50%	8.50%
JRS II	$81.92	$34.39	($6.54)

Money-Weighted Rate of Return

The money-weighted rate of return expresses investment performance, net of investment expenses, adjusted for the changing amounts actually invested. For the year ended August 31, 2018, the annual money-weighted rate of return on the defined benefit plans was

9.42%. See Schedule of Investment Returns – Defined Benefit Plans in the Required Supplementary Information section for details.

3.C Retirement Systems Membership

The membership of the retirement plans as of August 31, 2018 is summarized in Figure 17. The System's actuary includes members who retired on August 31 and received their first annuity in September as retirees in the actuarial valuation.

3.D Reserves

The balances of legally required reserves in each funded retirement plan as of August 31, 2018 and 2017 are presented in Figure 18. See Note 1.G, Net Position - Restricted for Pension Benefits, for a description of each reserve account.

3.E Historical Trend Information

Historical trend information is designed to provide information about the ERS, LECOS, and JRS II's progress made in accumulating sufficient assets to pay benefits when due. This information is presented in the Required Supplementary Information immediately after the Notes to the Basic Financial Statements.

4. Other Postemployment Benefits Plan (OPEB)

(In accordance with GASB Statement 74)

4.A Plan Descriptions and Contributions

State Retiree Health Plan

Plan Description

In addition to the pension benefits described in Note 3, the System provides postemployment health care, life and dental insurance benefits through the Group Benefits Program in accordance with Chapter 1551, Texas Insurance Code. This Program is governed by the same Board of Trustees who are also responsible for the System's defined benefit pension plans. See Note 1.A for structure of the Board of Trustees.

The State Retiree Health Plan (SRHP) is a cost-sharing multiple-employer postemployment health care plan with a special funding situation. This plan covers retired employees of the State, and other entities as specified by the State legislature. Benefit and contribution provisions of the State Retiree Health Plan are authorized by State law and may be amended by the Texas Legislature. Participating entities are listed in Figure 19.

Figure 19
Participating Reporting Entities
for the State Retiree Health Plan

	September 1, 2017
State Agencies	116
Universities	27
Junior and Community Colleges	50
Other Entities	8
Total Participating Entities	**201**

The principal participating employer is the state of Texas. State agencies and universities employ 186,779 which is 80.5% of the employees covered by the State Retiree Health Plan.

Figure 17
Retirement Systems Membership

	ERS			
	Employee Class	Elected Class	LECOS	JRS II
Retirees and Beneficiaries Currently Receiving Benefits	110,641	720	13,080	393
Terminated Employees Entitled to But Not Yet Receiving Benefits	119,621	115	19,842	153
Active Employees	141,210	325	37,167	561
Totals	**371,472**	**1,160**	**70,089**	**1,107**

Note: Estimated based on actuarial valuation as of August 31, 2018.

Figure 18
Reserves

				Totals - August 31,	
	ERS	LECOS	JRS II	2018	2017
Net Plan Assets Reserved For:	$	$	$	$	$
Employee Savings	5,897,455,633	51,536,313	78,282,916	6,027,274,862	5,829,098,116
State Accumulation	(672,098,373)	152,623,011	128,600,060	(390,875,302)	(435,431,033)
Annuity Reserves	22,527,977,524	762,668,411	246,496,810	23,537,142,745	22,322,999,976
Total Net Plan Assets Reserved	**27,753,334,784**	**966,827,735**	**453,379,786**	**29,173,542,305**	**27,716,667,059**
	(Exh. VIII)	**(Exh. VIII)**	**(Exh. VIII)**		

Contributions

Figure 20 summarizes the maximum monthly employer contribution toward eligible retirees' health and basic life premium, which is based on a blended rate. Retirees pay any premium over and above the employer contribution. The employer does not contribute toward dental or optional life insurance. Surviving spouses and their dependents do not receive any employer contribution. As the non-employer contributing entity, the State of Texas pays part of the premiums for the junior and community college.

Figure 20
Employer Contribution Rates –
Retiree Health and Basic Life Premium –
Fiscal Year 2018

	September 1, 2017
	$
Retiree Only	621.90
Retiree & Spouse	1,334.54
Retiree & Children	1,099.06
Retiree & Family	1,811.70

Figure 21 summarizes premium contributions by source and claims expenses on a pay-as-you-go basis for the current and prior fiscal years. The System's actuaries have estimated certain health, life, accidental death and dismemberment, and indemnity administrative fees.

Figure 21
Contributions by Source and Claims Expenses - Retirees

	2018	2017
	$	$
Contributions:		
Employers	307,028,461	890,735,173
Non-Employer Contributing Entities	16,585,270	44,433,743
Members (Note A)		195,806,162
Federal Revenues:		
Medicare Part D	1,417,806	1,658,573
Direct Subsidy	16,475,710	22,350,780
Low Income Premium Subsidy	3,655,006	392,423
Low Income Cost Sharing	3,146,387	3,272,497
Catastrophe Reinsurance	49,797,877	45,445,850
Total Federal Revenues	74,492,786	73,120,123
Total Contributions	**398,106,517**	**1,204,095,201**
Claims Expenses	938,921,013	995,815,803
Less: Payments from Members	(203,123,120)	
Benefit Payments	**735,797,893**	**995,815,803**

Note A: In fiscal year 2017, payments from members were reported as contributions. Beginning from fiscal year 2018, payments from members are reported as deduction to benefit payments

4.B Funded Status and Funding Progress

Summary of Actuarial Assumptions

The actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, and the actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future. The assumptions are presented in Figure 22 on next page.

Net OPEB Liability

Figure 23 shows the System's net OPEB liability for the State Retiree Health Plan as of August 31, 2018. Calculations are based on the benefit provided under the terms of the substantive plan in effect at the time of each valuation and on the pattern of sharing of cost between the employer and plan members to that point. The projection of benefits for financial reporting purposes does not explicitly incorporate the potential effect of legal or contractual funding limitations on the pattern of cost sharing between the employer and plan members in the future.

Figure 23
Net OPEB Liability ($ in Millions)

	Amount
	$
Total OPEB Liability	30,018.17
Less: Plan Fiduciary Net Position	(380.43)
Net OPEB Liability	**29,637.74**
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	1.27%

The actuarial calculations reflect a long term perspective. Consistent with that perspective, actuarial methods and assumptions used include techniques that are designed to reduce short term volatility in actuarial accrued liabilities and the actuarial value of assets. The required Schedule of Changes in Net OPEB Liability and Related Ratios immediately following the notes to the financial statements presents the information about the actuarial value of plan assets and the actuarial accrued liability for benefits in fiscal years 2018. Multiyear trend information is presented.

Investment Policy

The State Retiree Health Plan is a pay-as-you-go plan and does not accumulate funds in advance of retirement. The System's Board of Trustees adopted the amendment to the investment policy in August 2017 to require that all fund in this plan be invested in short-term fixed income securities and specify that the expected rate of return on these investments is 2.4%.

Figure 22
Actuarial Assumptions - State Retiree Health Plan

Valuation Date	August 31, 2018
Actuarial Cost Method	Entry Age
Amortization Method	Level Percent of Payroll, Open
Remaining Amortization Period	30 Years
Asset Valuation Method	Not applicable
Actuarial Assumptions:	
Discount Rate	3.96%
Projected Annual Salary Increase	2.50 to 9.50%, including inflation
Annual Healthcare Trend Rate	7.30% for FY2020, 7.40% for FY2021, 7.00% for FY2022, decreasing 0.50% per year to an ultimate rate of 4.50% for FY2027 and later years
Inflation Assumption Rate	2.50%
Ad hoc Postemployment Benefit Changes	None
Mortality Rate	*State Agency Members* • Service Retirees, Survivors and other Inactive Members - 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. • Disability Retirees - RP-2014 Disabled Retiree Mortality with Ultimate MP Projection Scale projected from the year 2014 • Active Members - RP-2014 Active Member Mortality tables with Ultimate MP Projection Scale from the year 2014 *Higher Education Members* • Service Retirees, Survivors and other Inactive Members - Tables based on Teachers Retirement System of Texas experience with Ultimate MP Projection Scale from the year 2018. • Disability Retirees - Tables based on Teachers Retirement System of Texas experience with Ultimate MP Projection Scale from the year 2018 using a 3-year set forward and minimum mortality rates of four per 100 male members and two per 100 female members. • Active Members - Sex Distinct RP-2014 Employee Mortality multiplied by 90% with Ultimate MP Projection Scale from the year 2014

Discount Rate

Because the State Retiree Health Plan does not accumulate funds in advance of retirement, the discount rate that was used to measure the total OPEB liability is the municipal bond rates. The assumption of the discount rate is summarized in Figure 24.

Figure 24
Assumptions for Single Discount Rate - State Retiree Health Plan

Expected investment rate of return	Not applicable because the plan operates on a pay-as-you-go basis.
Municipal bond rate (Note A)	3.96%
Year fiduciary net position depleted	2019
Single Discount Rate	3.96%

Note A: The source of the municipal bond 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 Corp.'s AA.

The sensitivity of the net OPEB liability to one percentage point increase or decrease to the discount rate is summarized in Figure 25.

The initial healthcare trend rate is 7.3% and the ultimate rate is 4.5%. The sensitivity of the net OPEB liability to the changes in the discount rate and healthcare trend rate is summarized in Figure 26.

Figure 25
Sensitivity of Net OPEB Liability to Changes in Discount Rate (in Millions) - State Retiree Health Plan

	1% Decrease	Single Discount Rate	1% Increase
Rate	2.96%	3.96%	4.96%
Net OPEB Liability	$35,186.90	$29,637.74	$25,437.66

Figure 26
Sensitivity of Net OPEB Liability to Changes in Discount and Healthcare Trend Rates (in Millions) - State Retiree Health Plan

	1% Decrease (6.30% decreasing to 3.50%)	Current Healthcare Cost Trend Rates (7.30% decreasing to 4.50%)	1% Increase (8.30% decreasing to 5.50%)
Net OPEB Liability	$25,099.34	$29,637.74	$35,492.30

Money-Weighted Rate of Return

The money-weighted rate of return expresses investment performance, net of investment expenses, adjusted for the changing amounts actually invested. For the year ended August 31, 2018, the annual money-weighted rate of return on the State Retiree Health Plan was 1.84%.

4.C State Retiree Health Plan Membership

The membership of the State Retiree Health Plan includes retirees who retired with at least 10 years of service to eligible entities. These retirees must meet certain age requirements. Surviving spouses and dependents of these retirees are also covered.

The System's actuary includes members who retired on August 31 and received their first annuity in September as retirees in the actuarial valuation. The membership of the State Retiree Health Plan as of August 31, 2018 is summarized in Figure 27.

Figure 27
State Retiree Health Plan Membership

Active Members	231,911
Inactive Members Currently Receiving Benefit Payments	122,350
Inactive Members Entitled to But Not Yet Receiving Benefit Payments	11,564
Total	**365,825**

Note: Estimated based on actuarial valuation as of August 31, 2018

4.D Reserves

The State Retiree Health Plan is a pay-as-you-go plan and has no reserves.

4.E Historical Trend Information

The historical trend information is designed to provide funding progress in the State Retiree Health Plan. This information is presented in the Required Supplementary Information immediately after the Notes to the Basic Financial Statements.

5 Interfund Activity and Transactions

5.A Interfund Receivables and Payables

(In accordance with GASB Statement 38)

At year-end, accruals related to interfund transfers and interfund reimbursements between the System's funds, are reported as Due From Other Funds or Due To Other Funds in the fund financial statements (See Note 1.G).

The majority of the due to other funds balance in the Employees Life, Accident and Health Insurance and Benefits fund are payments from retirees, which are due to the State Retiree Health Plan. Figure 28 presents individual interfund receivable and interfund payable balances at August 31, 2018.

Figure 28
Interfund Receivables and Payables

	Due From Other Funds	Due to Other Funds
Governmental Activities:	$	$
Governmental Funds		7,131
Employees Life, Accident & Health Insurance and Benefits Fund	465,585	154,689,663
Total Governmental Activities	**465,585**	**154,696,794**
Fiduciary Funds:		
Pension & Other Employee Benefit Trust Funds	155,117,706	886,497
Total - Interfund Receivables & Payables	**155,583,291**	**155,583,291**

5.B Interfund Transfers

(In accordance with GASB Statement 38)

Interfund Transfers include transfers of membership fees from the Employees Retirement Fund to other funds of the System and transfers between the Employees Retirement Fund and the Excess Benefit Arrangement Fund for retirement benefit payments (See Note 1.G).

Interfund Transfers between governmental activities and fiduciary funds are reclassified to revenues and expenses in the government-wide Statement of Activities. Figure 29 presents interfund transfers for the year ended August 31, 2018.

Figure 29
Interfund Transfers

	Transfers In	Transfers Out
	$	$
Governmental Activities:		
Non-Major Governmental Fund:		
Social Security Administration	36,500	
Total Governmental Activities	**36,500**	**-**
Fiduciary Funds:		
Pension and Other Employee Benefit Trust Funds	544,500	581,000
Total - Interfund Transfers	**581,000**	**581,000**

5.C Interagency Transfers

Interagency Transfers include transfers between the System's funds and other funds of the State of Texas reporting entity that are for payment of benefits from the Compensation to Victims of Crime fund that are funded by the Office of the Attorney General. (See Note 1.G). Also included in this category is the amount transferred to the Teacher Retirement System for service established in the Employees Retirement Fund and payable from the Excess Benefit Arrangement Fund. Interagency Transfers between Governmental Activities and other funds of the State are reclassified to revenues and expenses in the government-wide Statement of Activities.

6. Contingent Liability

6.A Litigation

The System is a defendant in various lawsuits. Although the outcome of these lawsuits is not presently determinable, in the opinion of the System's attorneys, the resolution of these matters will not have a material adverse effect on the financial condition of the System.

6.B Sick Leave

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. In the event of an employee's death, a payment is made to the employee's estate for one-half of the accumulated leave or 336 hours, whichever is less. Such payments are recognized as expenses/expenditures when paid.

Service credit is given upon retirement at the rate of one month of service for each 160 hours of an employee's accumulated sick leave balance. Additional fractions of 160 hours are counted as full months of service credit. Effective August 28, 1995, accumulated sick leave may also be used to meet service requirements to qualify for retirement at a rate of one month of service for each 160 hours of accrued unused sick leave for employees hired before September 1, 2009. Employees hired after September 1, 2009 will not be able to use accumulated sick leave to meet retirement eligibility. The additional contingent liability for future compensation of sick leave, based on accumulated sick leave balances as of August 31 was not considered material.

7. Risk Management

(In accordance with GASB Statement 10)

7.A Risk Exposure

The System is exposed to the following types of claims for risk of loss:

- Health insurance
- Life insurance
- Accidental death and dismemberment (AD & D) insurance
- Disability insurance
- Dental insurance
- Property and casualty
- Unemployment
- Workers' compensation

7.B Risk Financing

Claims for health, life, accidental death and dismemberment (AD & D), disability, and dental insurance coverages are recorded in the Employees Life, Accident and Health Insurance and Benefits Fund under the Texas Employees Group Benefits Program (GBP). These coverages are provided through a combination of insurance contracts, a self-funded health plan, a self-funded dental indemnity plan, health maintenance organization (HMO) contracts, dental health maintenance organization (DHMO) contracts, and dental discount plan.

The System purchases commercial insurance to cover the risk of loss related to general liability; theft of, damage to, and destruction of assets; and natural disasters. Claims for unemployment and workers compensation are funded by the System on a pay-as-you-go basis, and they are paid out of the Employees Retirement System Fund. These claim expenses are allocated periodically to other funds based on percentages determined by a study of each fund's usage. The risk financing for different coverages is summarized in Figure 30 on next page.

7.C Liabilities

For self-funded coverages of the Internal Service Fund, the System's liabilities are reported when it is both probable that a loss has occurred and the amount of that loss can be reasonably estimated. Liabilities include an amount for claims that have been incurred but not reported. Based on the estimates provided by the System's insurance actuary (Rudd and Wisdom, Inc.), liabilities are reevaluated to consider current settlements, frequency of claims, past experience and economic factors. Changes in the balances of the self-funded claims liabilities for the current and prior fiscal years are presented in Figure 31.

Figure 31
Changes in Self-Funded Claims Liabilities

	2018	2017
	$	$
Beginning Balance	615,895,000	579,594,000
Current-Year Claims and Changes in Estimates	1,960,607,412	2,254,053,910
Claim Payments	(1,955,289,032)	(2,217,752,910)
Ending Balance	**621,213,380**	**615,895,000**

For coverages that are insured (not self-funded), no significant reductions in insurance coverage occurred in the past year. For both self-funded and insured coverages of the Internal Service Fund, the balance of claims that have been incurred but not reported as of August 31, 2018 is $588,524,295.

8. Termination Benefits

(In accordance with GASB Statement 47)

Termination benefits in the form of healthcare continuation under Consolidated Omnibus Budget Reconciliation Act (COBRA) are provided for both

Figure 30
Summary of Risk Financing

Type of Coverage	Plan Name	Self-Funded	Risk Retained with
Health	• HealthSelect	Yes	System
	• Consumer Directed HealthSelect	Yes	System
	• HMOs	No	Insurance Carrier
	• Prescription Drug	Yes	System
	• Vision	Yes	System
Life	N/A	No	Insurance Carrier
Accidental Death and Dismemberment	N/A	No	Insurance Carrier
Disability	N/A	Yes	System
Dental	• DHMOs	No	Insurance Carrier
	• Dental Indemnity Plan	Yes	System
	• Dental Discount Plan	No	Insurance Carrier
Property and Casualty	N/A	No	Insurance Carrier
Unemployment	N/A	Yes	System
Workers' Compensation	N/A	Yes	System

voluntary and involuntary terminations under the Group Benefits Program. The System maintains the COBRA membership in the Group Benefits Program as part of a group without designating the entity where the members worked prior to being eligible for COBRA benefits. The Group Benefits Program has 1,104 COBRA participants.

The COBRA members are eligible to remain in the Group Benefits Program for 18 months, 29 months if disabled, and their dependents are eligible to remain in the program for 36 months. The premium rates are set annually, and are based on the experience of the group.

9. Related Party Transaction

(In accordance with GASB Statement 62)

Lenore Sullivan, one of the System's Investment Advisory Committee Members, was a board member and held shares in Deltic Timber Corp., of which the System did not have any ownership. Potlatch Corp., of which the System owned 62,900 shares, merged with Deltic Timber and became PotlatchDeltic, Corp. on February 21, 2018. After the merger, Mr. Sullivan became a board member of Potlatch Corp. and informed the System of the transaction. The System subsequently liquidated the PotlatchDeltic Corp. position with $332,308 investment gains on March 8, 2018.

Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios – Defined Benefit Plans
(in 000's)

	2014	2015	2016	2017	2018
	$	$	$	$	$
Employees Retirement Fund (Note A)					
Total Pension Liability					
Service Cost	1,139,451	1,231,203	1,146,791	1,457,263	1,445,557
Interest	2,324,180	2,373,849	2,522,626	2,510,128	2,559,723
Changes of Benefit Terms	-	(87,835)	-	-	-
Difference between Expected and Actual Experience	(252,967)	(284,751)	133,557	115,632	91,881
Changes of Assumptions	1,199,067	(3,429,167)	5,301,965	2,219,672	(1,982,914)
Benefit Payments and Refunds	(1,963,481)	(2,049,291)	(2,147,307)	(2,288,825)	(2,406,361)
Net Change in Total Pension Liability	**2,446,250**	**(2,245,992)**	**6,957,632**	**4,013,870**	**(292,114)**
Total Pension Liability - Beginning	**37,064,667**	**39,510,917**	**37,264,925**	**44,222,557**	**48,236,427**
Total Pension Liability - Ending	**39,510,917**	**37,264,925**	**44,222,557**	**48,236,427**	**47,944,313**
Plan Fiduciary Net Position					
Contributions - Employer	482,239	500,395	686,763	700,078	697,189
Contributions - Member	430,595	462,159	674,678	685,461	683,933
Pension Plan Net Investment Income	3,252,417	56,941	1,273,414	2,832,628	2,430,297
Benefit Payments and Refunds	(1,963,481)	(2,049,291)	(2,147,307)	(2,288,825)	(2,406,361)
Pension Plan Administrative Expense	(20,195)	(21,840)	(20,449)	(23,095)	(23,550)
Net Change in Plan Fiduciary Net Position	**2,181,575**	**(1,051,636)**	**467,099**	**1,906,247**	**1,381,508**
Plan Fiduciary Net Position - Beginning	**22,868,542**	**25,050,117**	**23,998,481**	**24,465,580**	**26,371,827**
Plan Fiduciary Net Position - Ending	**25,050,117**	**23,998,481**	**24,465,580**	**26,371,827**	**27,753,335**
Net Pension Liability - Ending	**14,460,800**	**13,266,444**	**19,756,977**	**21,864,600**	**20,190,978**
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	63.40%	64.40%	55.32%	54.67%	57.89%
Covered Payroll (Note B)	5,955,461	6,150,195	6,742,143	6,859,707	6,811,926
Net Pension Liability as a Percentage of Covered Payroll	242.82%	215.71%	293.04%	318.74%	296.41%

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Schedule of Changes in Net Pension Liability and Related Ratios – Defined Benefit Plans (Continued)

(in 000's)

	2014	2015	2016	2017	2018
	$	$	$	$	$
Law Enforcement and Custodial Officer Supplemental Fund (Note A)					
Total Pension Liability					
Service Cost	54,528	57,459	71,429	99,390	79,309
Interest	88,025	87,224	88,410	82,236	91,171
Changes of Benefit Terms	-	-	-	-	-
Difference between Expected and Actual Experience	(76,585)	(9,640)	(21,657)	(17,532)	(21,651)
Changes of Assumptions	68,228	148,114	375,371	(144,398)	(87,015)
Benefit Payments and Refunds	(57,147)	(61,344)	(64,542)	(69,756)	(75,633)
Net Change in Total Pension Liability	**77,049**	**221,813**	**449,011**	**(50,060)**	**(13,819)**
Total Pension Liability - Beginning	**1,465,929**	**1,542,978**	**1,764,791**	**2,213,802**	**2,163,742**
Total Pension Liability - Ending	**1,542,978**	**1,764,791**	**2,213,802**	**2,163,742**	**2,149,923**
Plan Fiduciary Net Position					
Contributions - Employer	27,758	26,728	27,497	26,583	26,110
Contributions - Member	8,180	8,376	9,539	9,583	9,275
Pension Plan Net Investment Income	111,741	1,918	44,831	99,341	84,938
Benefit Payments and Refunds	(57,147)	(61,344)	(64,542)	(69,756)	(75,633)
Pension Plan Administrative Expense	(1,324)	(1,411)	(1,421)	(1,811)	(1,851)
Net Change in Plan Fiduciary Net Position	**89,208**	**(25,733)**	**15,904**	**63,940**	**42,839**
Plan Fiduciary Net Position - Beginning	**780,670**	**869,878**	**844,145**	**860,049**	**923,989**
Plan Fiduciary Net Position - Ending	**869,878**	**844,145**	**860,049**	**923,989**	**966,828**
Net Pension Liability - Ending	**673,100**	**920,646**	**1,353,753**	**1,239,753**	**1,183,095**
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	56.38%	47.83%	38.85%	42.70%	44.97%
Covered Payroll (Note B)	1,496,013	1,506,028	1,725,880	1,746,349	1,689,590
Net Pension Liability as a Percentage of Covered Payroll	44.99%	61.13%	78.44%	70.99%	70.02%

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Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios – Defined Benefit Plans (Concluded)

(in 000's)

	2014	2015	2016	2017	2018
	$	$	$	$	$
Judicial Retirement System Plan II (Note A)					
Total Pension Liability					
Service Cost	17,805	16,244	19,429	20,420	16,056
Interest	28,004	30,785	30,980	31,671	34,440
Changes of Benefit Terms	-	-	-	-	-
Difference between Expected and Actual Experience	(640)	(10,066)	(5,833)	5,091	(1,463)
Changes of Assumptions	(25,924)	35,653	23,397	(56,699)	-
Benefit Payments and Refunds	(16,420)	(19,238)	(21,155)	(23,361)	(24,865)
Net Change in Total Pension Liability	**2,825**	**53,378**	**46,818**	**(22,878)**	**24,168**
Total Pension Liability - Beginning	**383,461**	**386,286**	**439,664**	**486,482**	**463,604**
Total Pension Liability - Ending	**386,286**	**439,664**	**486,482**	**463,604**	**487,772**
Plan Fiduciary Net Position					
Contributions - Employer	12,211	12,457	12,374	12,495	12,560
Contributions - Member	5,195	5,465	5,754	6,017	5,940
Pension Plan Net Investment Income	46,186	820	19,862	44,875	39,192
Benefit Payments and Refunds	(16,420)	(19,238)	(21,155)	(23,361)	(24,866)
Pension Plan Administrative Expense	(267)	(284)	(226)	(295)	(296)
Net Change in Plan Fiduciary Net Position	**46,905**	**(780)**	**16,609**	**39,731**	**32,530**
Plan Fiduciary Net Position - Beginning	**318,385**	**365,290**	**364,510**	**381,119**	**420,850**
Plan Fiduciary Net Position - Ending	**365,290**	**364,510**	**381,119**	**420,850**	**453,380**
Net Pension Liability - Ending	**20,996**	**75,154**	**105,363**	**42,754**	**34,392**
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	94.56%	82.91%	78.34%	90.78%	92.95%
Covered Payroll (Note B)	77,441	77,501	78,261	78,190	78,772
Net Pension Liability as a Percentage of Covered Payroll	27.11%	96.97%	134.63%	54.68%	43.66%

Note A: *Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.*

Note B: *The covered payroll is the annual payroll for the fiscal year as reported by the System. The change in the Total Pension Liability due to the change in the Single Discount Rate is included as an assumption change.*

Required Supplementary Information

Schedule of Employer Contributions – Defined Benefit Plans

Fiscal Year (Note A)	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency/(Excess)	Cover Payroll	Actual Contribution as a % of Covered Payroll
	$	$	$	$	%
Employee Retirement Fund					
2014	727,892,157	482,239,018	245,653,139	5,955,460,705	8.10
2015	737,111,059	500,394,986	236,716,073	6,150,194,660	8.14
2016	679,806,017	686,763,354	(6,957,337)	6,742,143,036	10.19
2017	713,527,832	700,078,188	13,449,644	6,859,706,582	10.21
2018	933,914,990	697,189,414	236,725,576	6,811,925,525	10.23
Law Enforcement and Custodial Officer Supplemental Fund					
2014	40,205,389	27,757,980	12,447,409	1,496,012,750	1.86
2015	38,131,404	26,728,318	11,403,086	1,506,027,764	1.77
2016	43,167,243	27,497,297	15,669,946	1,725,879,688	1.59
2017	45,332,090	26,583,162	18,748,928	1,746,349,412	1.52
2018	53,560,012	26,109,655	27,450,357	1,689,590,272	1.55
Judicial Retirement System Plan II					
2014	13,448,473	12,210,663	1,237,810	77,441,466	15.77
2015	13,107,449	12,457,095	650,354	77,500,736	16.07
2016	12,895,678	12,374,200	521,478	78,260,550	15.81
2017	12,444,384	12,494,828	(50,444)	78,189,668	15.98
2018	12,934,435	12,559,722	374,713	78,772,445	15.94

Note A: Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Required Supplementary Information

Schedule of Changes in Net OPEB Liability and Related Ratios
(in 000's)

	2017 (Note A)	2018
State Retiree Health Plan (Note B)	$	$
Total OPEB Liability		
Service Cost	2,303,979	1,495,979
Interest	1,225,588	1,261,856
Difference between Expected and Actual Experience	(501,666)	(935,689)
Changes of Assumptions	(8,728,822)	(5,924,045)
Benefit Payments and Refunds	(728,548)	(662,723)
Net Change in Total OPEB Liability	**(6,429,469)**	**(4,764,622)**
Total OPEB Liability - Beginning	**41,212,263**	**34,782,794**
Total OPEB Liability - Ending	**34,782,794**	**30,018,172**
Plan Fiduciary Net Position		
Contributions - Employer	892,205	307,029
Contributions - Non-employer Contributing Entity	45,035	16,585
Contributions - Member (Note C)	195,806	
Contributions - Federal Revenues for Medicare Part D Subsidies	1,659	1,418
Contributions - Adjustments	(2,071)	
Net Investment Income	4,517	10,907
Health Care Claims	(995,816)	(938,921)
Payment from Members (Note C)		203,123
Total Benefit Payments	(995,816)	(735,798)
Administrative Expense	(5,629)	(5,818)
Other - Federal Revenues	71,462	73,075
Other Additions	356	3,249
Net Change in Plan Fiduciary Net Position	**207,524**	**(329,353)**
Plan Fiduciary Net Position - Beginning	**502,259**	**709,783**
Plan Fiduciary Net Position - Ending	**709,783**	**380,430**
Net OPEB Liability - Ending	**34,073,011**	**29,637,742**
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	2.0%	1.3%
Covered Employee Payroll	11,745,310	12,047,167
Net OPEB Liability as a Percentage of Covered Employee Payroll	290.1%	246.0%

Note A: The beginning balance and components of OPEB liability for fiscal year 2017 are recalculated based on the correct discount rate defined under GASB Statement No. 74.
Note B: Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.
Note C: In fiscal year 2017, payments from members were reported as contributions from members. Beginning from fiscal year 2018, payments from members are reported as deductions from benefit payments.

Schedule of Contributions from Employers and Non-employer Contributing Entities – Other Postemployment Benefits Plan

Fiscal Year (Note A)	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency/(Excess)	Cover Payroll	Actual Contribution as a % of Covered Payroll
	$	$	$	$	%
State Retiree Health Plan					
2017	2,714,958,093	936,827,489	1,778,130,604	11,745,310,057	7.98
2018	2,332,643,695	325,031,537	2,007,612,158	12,047,166,658	2.70

Note A: Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Required Supplementary Information

Schedule of Investment Returns
– Annual Money-Weighted Rate of Return, Net of Investment Expense (Note A)

	2014	2015	2016	2017	2018
	%	%	%	%	%
Defined Benefit Plans:					
Employees Retirement Fund	14.58	0.23	5.40	11.84	9.42
Law Enforcement and Custodial Officer Supplemental Fund	14.55	0.22	5.39	11.80	9.40
Judicial Retirement System Plan II	14.55	0.23	5.47	11.88	9.40
Overall	14.58	0.23	5.40	11.84	9.42
Other Post-Employment Benefit Plan:					
State Retiree Health Plan	N/A	N/A	N/A	1.03	1.84

Note A: Schedule intended to show information for 10 years. Additional years will be displayed as they become available.

Notes to The Required Supplementary Information

Defined Benefit Plans
The assumptions and methods used for this actuarial valuation were recommended by the actuary and adopted by the Board of Trustees. Additional information on the actuarial assumptions as of the latest actuarial valuation is summarized in Figure 1.

The total pension liability reported in the Schedule of Changes in Net Pension Liability and Related Ratios was provided by the System's actuary. The net pension liability is measured as the total pension liability less the amount of fiduciary net position of the pension plans.

The actuarially determined contributions for the Employees Retirement Fund, the Law Enforcement and Custodial Supplemental Fund, and Judicial Retirement Plan II are calculated as of August 31, 2018, based on the actuarial assumptions described in Figure 1. These contributions are reported in the Schedule of Employer's Contribution – Defined Benefit Plans.

A current actuarial valuation is performed for the majority members in the Employees Retirement Fund, except those who are eligible to retire when combining their service credits from the Teachers Retirement System of Texas and the System. The actuarial valuation for this population is a roll-forward of the valuation that was performed for fiscal year 2017.

Other Postemployment Benefit Plan
The assumptions and methods used for this actuarial valuation were recommended by the actuary and will be presented to the Board of Trustees. Additional information on the actuarial assumptions as of the

Figure 1
Summary of Actuarial Assumptions - Defined Benefit Plans

	Employees Retirement Fund	Law Enforcement and Custodial Officer Supplemental Fund	Judicial Retirement System Plan II
	(In accordance with GASB Statement No. 67)		
Valuation Date	August 31, 2018	August 31, 2018	August 31, 2018
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal
Amortization Method	Level Percent Open	Level Percent Open	Level Percent Open
Remaining Amortization Period	31	31	31
Asset Valuation Method	Marked to Market. Future gains and losses each recognized over closed five-year period, with allowance of direct offsetting of deferrals by subsequent gains or losses.	Marked to Market. Future gains and losses each recognized over closed five-year period, with allowance of direct offsetting of deferrals by subsequent gains or losses.	Marked to Market. Future gains and losses each recognized over closed five-year period, with allowance of direct offsetting of deferrals by subsequent gains or losses.
Actuarial Assumptions:			
Investment Rate of Return	7.50%	7.50%	7.50%
Projected Salary Increases	0.0% – 9.5%	4.5% – 9.5%	3.00%
Inflation Rate	2.50%	2.50%	2.50%
Cost-of-living Adjustments	None – Employee 2.75% – Elected	None	None

Notes to The Required Supplementary Information (Concluded)

latest actuarial valuation is summarized in Figure 2. The following assumptions have been changed since the previous Other Postemployment Benefits (OPEB) valuation:

- Demographic assumptions (including rates of retirement, disability, termination, and mortality, and assumed salary increases) for Higher Education members have been updated to reflect assumptions recently adopted by the Trustees from the Teachers Retirement System of Texas.
- Assumed Expenses, assumed Per Capita Health Benefit Costs and assumed Health Benefit Cost, Retiree Contribution and Expense trends have been updated to reflect recent experience and its effects on our short-term expectations.
- The percentage of current retirees and their spouses not yet eligible to participate in the HealthSelect Medicare Advantage Plan and future retirees and their spouses who will elect to participate in the plan at the earliest date at which coverage can commence
- The percentage of future retirees assumed to be married and electing coverage for their spouse have been updated to reflect recent plan experience and expected trends.
- The discount rate assumption was increased from 3.51% to 3.96% to utilize the updated yield or index rate for 20-year, tax-exempt general obligation municipal bonds rated AA/Aa (or equivalent) or higher in effect on the measurement date.

The only benefit revisions have been adopted since the prior valuation is an increase in the out-of-pocket maximum for both HealthSelect and Consumer Directed HealthSelect for those HealthSelect retirees and dependents for whom Medicare is not primary. These minor benefit changes have been reflected in the fiscal year 2019 Assumed Per Capita Health Benefit Costs.

A current actuarial valuation is performed for the majority members in the Employees Retirement Fund, except those who are eligible to receive insurance coverage when combining their service credits from the Teachers Retirement System of Texas and the System. The actuarial valuation for this population is a roll-forward of the valuation that was performed for fiscal year 2017.

Figure 2
Summary of Actuarial Assumptions - Other Postemployment Benefit Plan

	State Retiree Health Plan (In accordance with GASB Statement No. 74)
Valuation Date	August 31, 2018
Actuarial Cost Method	Entry Age
Amortization Method	Level Percent of Payroll, Open
Amortization Period	30 Years
Asset Valuation Method	Not applicable
Actuarial Assumptions:	
Discount Rate	3.96%
Projected Salary Increases	2.5% to 9.5%, including inflation
Inflation Rate	2.50%
Healthcare Cost and Trend Rate	7.30% for FY2020, 7.40% for FY2021, 7.00% for FY2022, decreasing 0.50% per year to an ultimate rate of 4.50% for FY2027 and later years

Other Supplementary Information - Schedule A-1

Combining Statement of Net Position - Agency Funds

August 31, 2018

	Unappropriated Receipts General Revenue Fund (0001) (U/F 1001)	Judicial Retirement System Plan I Fund (Note A) (0001) (U/F 2001)	USPS - Direct Deposit Return Money (0980) (U/F 9014)	USPS - Overpayments to Employees (0900) (U/F 9015)	Direct Deposit Correction Account (0980) (U/F 0980)	Health Savings Account (0973) (U/F 4973)	Child Support Employee Deductions - Offset Account (8070) (U/F 8070)	Totals
Assets	$	$	$	$	$	$	$	$
Current Assets:								
Cash and Cash Equivalents:								
Cash in State Treasury				170		65,283	1,387	66,840
Total Cash and Cash Equivalents	-	-	-	170	-	65,283	1,387	66,840
Legislative Appropriation		219,900						219,900
Receivables:								
Accounts Receivable	3,555							3,555
Total Current Assets	3,555	219,900	-	170	-	65,283	1,387	290,295
Total Assets	**3,555**	**219,900**	**-**	**170**	**-**	**65,283**	**1,387**	**290,295**
Liabilities								
Current Liabilities:								
Accounts Payable		219,900						219,900
Funds Held For Others	3,555			170		65,283	1,387	70,395
Total Current Liabilities	3,555	219,900	-	170	-	65,283	1,387	290,295
Total Liabilities	**3,555**	**219,900**	**-**	**170**	**-**	**65,283**	**1,387**	**290,295**

Note A: Judicial Retirement System Plan I Fund (JRSI) is used to account for appropriations received from the State's General Revenue Fund for annuity and refund payments to eligible judicial employees who commenced service prior to September 1, 1985. Unappropriated Receipts General Revenue Fund accounts for member contributions received from the JRSI Fund.

Other Supplementary Information – Schedule A-2

Combining Statement of Changes in Assets and Liabilities - Agency Funds

Year Ended August 31, 2018

	Beginning Balances	Additions	Deductions	Ending Balances
	$	$	$	$
Unappropriated Receipts General Revenue Fund (0001) (U/F 1001)				
Assets				
Cash in State Treasury		50,497	50,497	-
Accounts Receivable	3,555			3,555
Total Assets	**3,555**	**50,497**	**50,497**	**3,555**
Liabilities				
Fund Held for Others	3,555	50,497	50,497	3,555
Total Liabilities	**3,555**	**50,497**	**50,497**	**3,555**
Judicial Retirement System Plan I Fund (Note A) (0001) (U/F 2001)				
Assets				
Legislative Appropriations	266,408	24,876,724	24,923,232	219,900
Total Assets	**266,408**	**24,876,724**	**24,923,232**	**219,900**
Liabilities				
Accounts Payable	266,408	26,019,609	26,066,117	219,900
Funds Held For Others		72,743	72,743	-
Total Liabilities	**266,408**	**26,092,352**	**26,138,860**	**219,900**
USPS - Direct Deposit Return Money (0980) (U/F 9014)				
Assets				
Cash in State Treasury		2,560	2,560	-
Total Assets	**-**	**2,560**	**2,560**	**-**
Liabilities				
Funds Held For Others		2,560	2,560	-
Total Liabilities	**-**	**2,560**	**2,560**	**-**
USPS - Overpayments to Employees (0900) (U/F 9015)				
Assets				
Cash in State Treasury		447	277	170
Total Assets	**-**	**447**	**277**	**170**
Liabilities				
Funds Held For Others		447	277	170
Total Liabilities	**-**	**447**	**277**	**170**
Direct Deposit Correction Account (0980) (U/F 0980)				
Assets				
Cash in State Treasury		1,261,690	1,261,690	-
Total Assets	**-**	**1,261,690**	**1,261,690**	**-**
Liabilities				
Funds Held For Others		1,261,690	1,261,690	-
Total Liabilities	**-**	**1,261,690**	**1,261,690**	**-**
Health Savings Account (0973) (U/F 4973)				
Assets				
Cash in State Treasury	55,780	1,620,629	1,611,126	65,283
Total Assets	**55,780**	**1,620,629**	**1,611,126**	**65,283**
Liabilities				
Vouchers Payable		1,516,155	1,516,155	-
Funds Held For Others	55,780	1,531,867	1,522,364	65,283
Total Liabilities	**55,780**	**3,048,022**	**3,038,519**	**65,283**
Child Support Employee Deductions - Offset Account (0807) (U/F 8070)				
Assets				
Cash in State Treasury	1,276	17,365	17,254	1,387
Total Assets	**1,276**	**17,365**	**17,254**	**1,387**
Liabilities				
Vouchers Payable		15,978	15,978	-
Funds Held For Others	1,276	17,365	17,254	1,387
Total Liabilities	**1,276**	**33,343**	**33,232**	**1,387**

Note A: Judicial Retirement System Plan I Fund (JRSI) is used to account for appropriations received from the State's General Revenue Fund for annuity and refund payments to eligible judicial employees who commenced service prior to September 1, 1985. Unappropriated Receipts General Revenue Fund accounts for member contributions received from the JRSI Fund.

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Other Supplementary Information – Schedule A-2 (Concluded)

Combining Statement of Changes in Assets and Liabilities - Agency Funds

Year Ended August 31, 2018

	Beginning Balances	Additions	Deductions	Ending Balances
All Agency Funds				
Assets				
Cash in State Treasury	57,056	2,953,188	2,943,404	66,840
Legislative Appropriations	266,408	24,876,724	24,923,232	219,900
Accounts Receivable	3,555			3,555
Total Assets	**327,019**	**27,829,912**	**27,866,636**	**290,295**
Liabilities				
Vouchers Payable		15,978	15,978	
Accounts Payable	266,408	26,019,609	26,066,117	219,900
Funds Held For Others	60,611	2,934,609	2,924,825	70,395
Total Liabilities	**327,019**	**28,970,196**	**29,006,920**	**290,295**

Other Supplementary Information – Schedule 1

Revenues, Expenses and Changes in Statutory Account Balances

(Non-GAAP Presentation) - Employees Retirement Fund

Year Ended August 31, 2018

	Employee Savings Account	State Accumulation Account	Retirement Annuity Reserve Account	Interest Account	Expense Account	Totals
Operating Revenues	**$**	**$**	**$**	**$**	**$**	**$**
Contributions to Retirement System:						
Member Contributions	675,905,502					675,905,502
Employer Contributions		696,688,283				696,688,283
Service Contributions from						
Teacher Retirement System			97,061,015			97,061,015
Membership Fees					537,631	537,631
Penalty Interest		8,027,327				8,027,327
Investment Income:						
Net Appreciation in Fair Value of Investments				1,816,705,791		1,816,705,791
Interest and Dividends				649,504,666		649,504,666
Class Action Settlements				659,927		659,927
Rental Income					41,418	41,418
Warrants Voided By Statute of Limitations		214,384				214,384
Sale of Surplus Equipment					105	105
Miscellaneous					368	368
Total Operating Revenues	**675,905,502**	**704,929,994**	**97,061,015**	**2,466,870,384**	**579,522**	**3,945,346,417**
Operating Expenses						
Retirement System Benefits Paid:						
Retirement Benefits			2,350,064,084			2,350,064,084
Death Benefits:						
Active Members		3,610,691				3,610,691
Retirees			1,521,821			1,521,821
Member Contributions Withdrawn	123,948,291					123,948,291
Service Contributions to						
Teacher Retirement System			23,947,830			23,947,830
Administrative Expenses					58,921,278	58,921,278
Depreciation Expense					1,242,296	1,242,296
Total Operating Expenses	**123,948,291**	**3,610,691**	**2,375,533,735**	**-**	**60,163,574**	**2,563,256,291**
Income (Loss) Before Non-Operating Expenses and Operating Transfers	**551,957,211**	**701,319,303**	**(2,278,472,720)**	**2,466,870,384**	**(59,584,052)**	**1,382,090,126**
Non-Operating Revenues (Expenses)						
Loss on Disposal of Fixed Assets					(1,640)	(1,640)
Income (Loss) Before Operating Transfers	**551,957,211**	**701,319,303**	**(2,278,472,720)**	**2,466,870,384**	**(59,585,692)**	**1,382,088,486**
Operating Transfers In (Out)						
Distribution of Interest	110,102,623	710,836,400	1,585,764,669	(2,406,703,692)		
Establishment of Benefit Reserves	(469,994,995)	(1,371,930,838)	1,841,925,833			
Distribution of Interest for Administrative Expenses				(60,166,692)	60,166,692	
Member Accounts-Escheated	(3,703,919)	3,703,919				
Membership Fees Transferred Out					(36,500)	(36,500)
Excess Benefit Arrangement Transfers					(544,500)	(544,500)
Net Operating Transfers	**(363,596,291)**	**(657,390,519)**	**3,427,690,502**	**(2,466,870,384)**	**59,585,692**	**(581,000)**
Net Income (Loss)	**188,360,920**	**43,928,784**	**1,149,217,782**	**-**	**-**	**1,381,507,486**
Account Balances - Beginning	**5,709,094,713**	**(716,027,157)**	**21,378,759,742**	**-**	**-**	**26,371,827,298**
Account Balances - Ending	**5,897,455,633**	**(672,098,373)**	**22,527,977,524**	**-**	**-**	**27,753,334,784**

Note A: As required by Texas Government Code Chapter 815.322, the System moved funds from the State Accumulation Account to the Retirement Annuity Reserve Account based on the actuarial determined present value of future benefits to be paid to retirees. Fund balance is sufficient to pay the future annuities to the current population of retirees.

Other Supplementary Information – Schedule 2

Revenues, Expenses and Changes in Statutory Account Balances

(Non-GAAP Presentation) - Law Enforcement and Custodial Officer Supplemental Retirement Fund

Year Ended August 31, 2018

	Employee Savings Account	State Accumulation Account	Retirement Annuity Reserve Account	Interest Account	Expense Account	Totals
Operating Revenues	**$**	**$**	**$**	**$**	**$**	**$**
Contributions to Retirement System:						
Member Contributions	9,274,303					9,274,303
State Retirement Contributions		26,109,655				26,109,655
Penalty Interest		511				511
Investment Income:						
Net Appreciation in Fair Value of Investments				63,513,356		63,513,356
Interest and Dividends				22,713,933		22,713,934
Class Action Settlements				23,010		23,010
Warrants Voided By Statute of Limitations		5,152				5,152
Total Operating Revenues	**9,274,303**	**26,115,318**	**-**	**86,250,299**	**-**	**121,639,921**
Operating Expenses						
Retirement System Benefits Paid:						
Retirement Benefits			72,228,136			72,228,136
Refunds of Retirement Contributions	3,392,274					3,392,274
Death Benefits:						
Active Members		17,558				17,558
Retirees			51			51
Administrative Expenses					3,163,746	3,163,746
Total Operating Expenses	**3,392,274**	**17,558**	**72,228,187**	**-**	**3,163,746**	**78,801,765**
Income (Loss) Before Operating Transfers	**5,882,029**	**26,097,760**	**(72,228,187)**	**86,250,2990**	**(3,163,746)**	**42,838,155**
Operating Transfers In (Out)						
Distribution of Interest	1,010,172	27,708,246	54,368,135	(83,086,553)		
Establishment of Benefit Reserves	(2,381,850)	(75,220,428)	77,602,278			
Distribution of Interest for Administrative Expenses				(3,163,746)	3,163,746	
Member Accounts-Escheated	(20)	20				
Net Operating Transfers	**(1,371,698)**	**(47,512,162)**	**131,970,413**	**(86,250,299)**	**3,163,746**	
Net Income (Loss)	**4,510,331**	**(21,414,402)**	**59,742,226**	**-**	**-**	**42,838,155**
Account Balances - Beginning	**47,025,982**	**174,037,413**	**702,926,185**	**-**	**-**	**923,989,580**
Account Balances - Ending	**51,536,313**	**152,623,011**	**762,668,411**	**-**	**-**	**966,827,735**

Other Supplementary Information – Schedule 3

Revenues, Expenses and Changes in Statutory Account Balances

(Non-GAAP Presentation) - Judicial Retirement System Plan Two Fund

Year Ended August 31, 2018

	Employee Savings Account	State Accumulation Account	Retirement Annuity Reserve Account	Interest Account	Expense Account	Totals
Operating Revenues	$	$	$	$	$	$
Contributions to Retirement System:						
Member Contributions	5,939,393					5,939,393
Employer Contributions		12,559,721				12,559,721
Penalty Interest		438				438
Investment Income:						
Net Appreciation in Fair Value of Investments				29,265,166		29,265,166
Interest and Dividends				10,499,160		10,499,160
Class Action Settlements				10,598		10,598
Total Operating Revenues	**5,939,393**	**12,560,159**	**-**	**39,774,924**	**-**	**58,274,476**
Operating Expenses						
Retirement System Benefits Paid:						
Retirement Benefits			24,706,173			24,706,173
Member Contributions Withdrawn	159,407					159,407
Administrative Expenses					879,291	879,291
Total Operating Expenses	**159,407**	**-**	**24,706,173**	**-**	**879,291**	**25,744,870**
Income (Loss) Before Operating Transfers	**5,779,986**	**12,560,159**	**(24,706,173)**	**39,774,924**	**(879,291)**	**32,529,605**
Operating Transfers In (Out)						
Distribution of Interest	1,347,360	20,006,027	17,542,246	(38,895,634)		
Establishment of Benefit Reserves	(1,821,851)	(10,524,838)	12,346,688			
Distribution of Interest for Administrative Expenses				(879,291)	879,291	
Net Operating Transfers	**(474,490)**	**9,481,190**	**29,888,934**	**(39,774,924)**	**879,291**	
Net Income (Loss)	**5,305,495**	**22,041,349**	**5,182,761**	**-**	**-**	**32,529,605**
Account Balances - Beginning	**72,977,418**	**106,558,713**	**241,314,049**	**-**	**-**	**420,850,181**
Account Balances - Ending	**78,282,914**	**128,600,062**	**246,496,810**	**-**	**-**	**453,379,786**

Other Supplementary Information – Schedule 4

Administrative and Investment Expenses/Expenditures
Statutory Administrative Funds and Accounts

Year Ended August 31, 2018

	Administrative Expenses (Note A)	
	Non-Investment	Investment
Personnel Services	$	$
Salaries and Wages	22,127,483	15,003,193
Payroll Related Costs:		
Retirement Contributions	2,073,933	1,048,498
Retirement Membership Fees	945	227
Employees Insurance Contributions	2,540,247	769,768
Retirees Insurance Contributions	1,310,606	309,600
Social Security Contributions	1,628,500	747,149
Unemployment Compensation	16,739	3,955
Total Payroll Related Costs	7,570,970	2,879,197
Total Personnel Services	**29,698,453**	**17,882,390**
Professional Fees and Services		
Actuarial Services	955,287	
Audit Services	434,193	
Investment Consulting Fees		1,939,637
Investment Advisors		10,224,874
Group Benefits Advisors	1,914	
Medical Board Member Fees	37,300	
Legal Services	160,338	607,347
Computer Programming Services	3,982,006	326,010
Other Professional Services	641,971	395,756
Total Professional Fees and Services	**6,213,009**	**13,493,624**
Other Services and Charges		
Travel	124,310	534,003
Materials and Supplies:		
Postage	561,203	
General Office and Other Supplies	211,612	62
Subscriptions	23,235	23,562
Furniture and Equipment	424,899	53,589
Computer Software	296,407	
Total Materials and Supplies	1,517,356	77,213
Communications and Utilities:		
Electricity, Gas and Water	248,386	
Telephone and Telegraph	754,454	
Electronic Communication Services	171,026	5,592,215
Total Communications and Utilities	1,173,866	5,592,215
Repairs and Maintenance:		
Land and Building	135,646	
Furniture and Equipment	8,455	
Computer Software and Equipment	1,382,920	
Total Repairs and Maintenance	1,527,021	-
Rentals and Leases:		
Computer Software and Equipment	195,811	
Office Equipment	324,546	
Space	126,954	
Total Rentals and Leases	647,311	-
Printing and Reproduction Services	50,143	-
Depreciation	1,242,296	
Interest Expense	764,135	

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Other Supplementary Information – Schedule 4

Administrative and Investment Expenses/Expenditures

Statutory Administrative Funds and Accounts (Concluded)

Year Ended August 31, 2018

	Administrative Expenses (Note A)	
	Non-Investment	Investment
Other Services and Charges (continued)	**$**	**$**
Bad Debt Expense		
Other Operating Expenses/Expenditures:		
Membership Fees	45,782	55,542
Employee Training	181,057	57,428
Insurance - Building and Vehicle	30,541	
Fees and Other Charges	1,051,215	100,101
Investment Banking		1,420,771
Tenure Awards	1,926	30
Witness Fees	200	
Temporary Employment Agencies	473,059	24,340
Cleaning Services	150,575	
Advertising Services	(1)	1,238
Freight/Delivery Services	4,808	
Purchased Contracted Services	1,147,913	3,358
Prompt Payment Interest	206	
SORM Assessment	49,204	4,536
Third Party Administrator Fee - Cafeteria Plan	1,233,913	
Total Other Operating Expenses/Expenditures	4,370,398	1,667,344
Total Other Services and Charges	**11,416,836**	**7,870,775**
Total Expenses/Expenditures	**47,328,298**	**39,246,789**
Method of Finance:		
State Employees Retirement System (S.E.R.S.) Trust Account (0955)	23,549,964	36,613,610
Law Enforcement and Custodial Officer Supplement Retirement Trust Fund (0977)	1,850,762	1,312,984
Judicial Retirement System Plan Two Trust Fund (0993)	295,903	583,388
Texa$aver 401(k) Trust Fund (0946)	482,047	17,842
Texa$aver 457 Trust Fund (0945)	511,726	21,373
Commuter Spending Account Fund (3944)	19,120	286
State Employees Cafeteria Plan Trust Fund (0943)	1,525,980	6,408
State Retiree Health Plan (3973)	5,817,620	
Total Fiduciary Funds	**34,053,122**	**38,555,891**
Employees Life, Accident, Health Insurance and Benefits Trust Account (0973)	13,189,394	690,898
Total Proprietary Fund	**13,189,394**	**690,898**
Social Security Administration Trust Account (0929)	85,782	
Total Governmental Fund	**85,782**	**-**
Total Method of Finance	**47,328,298**	**39,246,789**

Note A: $68,332,377 management fees for Alternative Investments were accrued during fiscal year 2018. The unpaid balances were reported as part of the fair value of Investments. Details of the management fees are listed in the Investment Section.

Other Supplementary Information – Schedule 5

Professional and Consulting Fees

Year Ended August 31, 2018

Nature of Service	**Totals**
	$
Actuarial Services - Retirement	256,177
Actuarial Services - Insurance	699,110
Audit Fees - Financial	257,250
Audit Fees - Insurance Carrier	165,264
Audit Fees - Other	11,680
Investment Consulting Fees	1,939,637
Investment Advisors	10,224,874
Group Benefits Advisors	1,914
Medical Board	37,300
Legal Services	767,685
Computer Programming Services	4,308,016
Educational Services	135,602
Other Professional Services	555,827
Other Consulting Services	346,297
Total Professional and Consulting Fees	**19,706,633**
Method of Finance:	
State Employees Retirement System (S.E.R.S.) Trust Account (0955)	17,382,467
Law Enforcement and Custodial Officer Supplement Retirement Trust Fund (0977)	616,134
Judicial Retirement System Plan Two Trust Fund (0993)	265,926
Texa$aver 401(k) Trust Fund (0946)	6,363
Texa$aver 457 Trust Fund (0945)	7,230
Commuter Spending Account Fund (3944)	220
State Employees Cafeteria Plan Trust Fund (0943)	6,698
State Retiree Health Plan (3973)	402,937
Total Fiduciary Funds	**18,687,975**
Employees Life, Accident, Health Insurance and Benefits Trust Account (0973)	1,017,204
Total Proprietary Fund	**1,017,204**
Social Security Administration Fund (0929)	1,454
Total Governmental Fund	**1,454**
Total Method of Finance	**19,706,633**

INVESTMENT SECTION

Report on Investment Activity

Fiscal Year 2018

Overview

The System's investment portfolio for the pension plans closed the fiscal year with a fair value of $29.01 billion and earned a net return of 9.54% for the fiscal year, compared to the global policy benchmark return of 7.94%. The fund returned 8.27% for the five years ended August 31, 2018, compared to the policy benchmark of 7.91%. The fund returned 7.02% for the ten years ended August 31, 2018, which outperformed the policy benchmark of 6.72%. The fiscal year-end asset allocation stood at 25.0% in fixed income, 43.7% in global public equity, 9.7% in global real estate, 13.3% in private equity, 2.0% in infrastructure, 3.6% in absolute return funds, and 2.7% in cash.

During fiscal year 2018, the Investments Division ("Division") continued to work with the Executive Director, Board of Trustees, Investment Advisory Committee, and other divisions within the System to build a premier and competitive investment organization in the best interest of the Trust and its beneficiaries. The Division increased economies of scale, reduced investment management costs, and pursued new sources of investment return. The Division's staff implemented a legislative mandate to report private market profit share in the Comprehensive Annual Financial Report. The Division's staff also implemented a legislative governance requirement for asset class investments committee meetings and Board approval for investments exceeding certain thresholds.

The Division's staff collaborated with the Group Benefits Division by co-sponsoring the investment product line-up with regard to the investment program in the Texa$aver plan. The Division supported the Operations Support Division in the request for the proposal process of the System's Space Planning Project. The Division also supported legislative initiatives and assisted in the System's building redevelopment project.

The Division hosted the ERS / TRS Annual Emerging Manager's Conference and the Real Estate Emerging Managers (REEM) Conference, and launched the ERS Emerging Manager Open House with over 120 managers in attendance. The Division's staff also conducted in-house educational conferences and promoted strategic outreach to the Board of Trustees and Investment Advisory Committee with primers on public equity, infrastructure, and fixed income. The Division also designed and worked with strategic industry associations to plan educational events for pension trustees and stakeholders.

The Division's management remained committed to developing a career path program and to attract and retain excellent investment professionals by succession planning and career growth opportunities. The Division continued to expand the internship program to include outreach to diversity candidates along with active collaboration with the University of Texas graduate programs and the University of Washington.

The Division's management continued to recognize the importance of optimizing the mix of internally managed and externally advised portfolios. The Division's staff refreshed the select pool and initiated searches to refine the mix of internal and external management. At the same time, the Division's management leveraged external relationships for stronger resources. The Division's staff completed evaluation on the system architecture of the Division and continued to implement recommendations.

The Division adjusted the portfolio from a strategy perspective to further align the portfolio's investment objectives to the future market environment. The Division implemented a new asset allocation for the Trust over the next four years to provide the best risk adjusted returns to meet pension obligations. In addition, two new fixed income Exchange Traded Funds were created allowing investors for the first time to target either aggressive or defensive high yield securities for their investment portfolios. The Division's staff also developed a platform for Hedge Fund emerging managers.

Domestic Equity

Fiscal year 2018 was a three-staged performance for the United States equity markets. The equity rally resumed in a big way after Congress took up President Trump's tax reform initiative in mid-September. This event followed the stalled rally from the close of fiscal year 2017. Good economic news and solid corporate earnings aided the rally, which gained steam as it became apparent that the tax reform could actually be accomplished. President Trump signed the tax bill into law during a brief lull over the holidays. The market shot up after the brief lull based on expectations of what a cut in the top corporate tax rate from 35% to 21% would do for earnings. The S&P 500 gained 7.5% from the end of December to the date that the markets peaked on January 26th. The S&P 500 gained 16.2% from the beginning of the fiscal year to January 26th. This concluded the first stage of performance for fiscal year 2018.

The stock market had two primary concerns from late January until early May. The first concern was how the economy would handle the Federal Reserve's upcoming interest rate hikes. The second concern was the fear of a potential trade war erupting from President Trump's imposition of tariffs. Volatility, which was benign, spiked as markets bottomed intra-day on February 9th. The S&P 500 lost 11.8% from the peak in late January to the nadir on May 9th. Economic news was mostly positive and earnings remained robust, but markets bounced around as participants fretted. This concluded the second stage of performance for fiscal year 2018.

Most of these concerns worked their way out by early May. Small capitalization stocks grinded higher in fiscal year 2018 as investors perceived the stocks to be less affected by a potential trade war. These stocks also stood to benefit more from domestic strength and tax reform. Small cap indices broke through previous highs in mid-May. Concerns abated by mid-May regarding tariffs that were already been imposed on steel and aluminum imports. The markets resumed their upward march at this point, which continued to the end of the fiscal year. This concluded the final stage of performance for fiscal year 2018.

All of the tracked domestic indices hit multiple new all-time highs in fiscal year 2018 with the Dow Jones being the only index that did not subsequently break its January high. All indices ended the fiscal year well into positive territory as the Dow Jones, S&P 500, NASDAQ, and S&P 600 Small cap finished with a gain of 18.3%, 17.3%, 26.1%, and 30.7%, respectively. The S&P 500 finished the fiscal year with a gain of 19.65% on a total return basis of dividends reinvested back into the index.

Eight of the eleven S&P 500 economic sectors finished the fiscal year with positive returns. Information Technology, Discretionary, and Energy were the top performers with a gain of 31.1%, 30.5%, and 18.6%, respectively. Utilities, Staples, and Telecom Services were the laggards with a negative return of 2.7%, 1.8%, and 1.8%, respectively.

International Equity

Global markets continued an upward momentum and peaked at the end of January, declined afterward, and finished approximately where it was at the beginning of the fiscal year. The Morgan Stanley Capital International (MSCI) ACWI ex U.S. returned 0.6%, MSCI Europe lost 0.2%, MSCI Pacific returned 4.7%, and MSCI Emerging Markets lost 2.9% - all on a U.S. Dollar basis. One of the defining themes of the fiscal year was a carryover from fiscal year 2017 as the United States President delivered the significant corporate tax cuts and brought trade issues to the forefront of his administration. Trade issues dominated headlines for most of the fiscal year and defined the relationship between the United States and China, the economies that drive global markets.

Trade issues defined emerging markets during the fiscal year. The United States President's administration sought to close a hulking trade deficit, but the Chinese government refused to budge on the White House's demands. The United States and China implemented tariffs of 25% on more than $50 billion worth of each other's exports and more tariffs are in the works. United States tariffs targeted intermediate inputs and capital equipment while Chinese tariffs targeted the United States agricultural sector. According to the American Chamber of Commerce in Shanghai, nearly two thirds of more than 430 United States firms in China said their businesses were hurt by the duties the United States President placed on billions of dollars of Chinese imports. Nearly half of these firms say production costs climbed and noticed a decreased demand for their goods. China began to exhibit some stress from trade anxieties in the summer. The Chinese government quadrupled approvals for infrastructure projects in July to boost cooling data in fixed investments. Investments were a key growth engine for China and contributed more than a third of the economic growth rate in China for the fiscal year. The statistics bureau indicated that infrastructure investments would probably stabilize and accelerate in the second half of the year as the government moved to pump up the economy in the face of a protracted trade conflict.

Crude oil climbed out of the $40-$60 per barrel range and reached just short of $80 per barrel in late spring and early summer. The performance of Emerging markets and crude oil were closely aligned in the past. This is not the case in this fiscal year, which was a testament to the seriousness of the trade issues that overshadowed confident corporate outlooks.

Japan finished the fiscal year again with strong economic indicators and a robust domestic economy. Japan, as an export-led economy and beneficiaries of global trade, also saw weakness in the second half of the fiscal year as trade issues dominated headlines. Improvements in corporate governance slowed down and share buybacks were disappointingly low as the Japanese fiscal year ended in March.

Europe dealt with the reality of “Brexit” and rising right wing populism that manifested in various European Union member state elections during the fiscal year. Britain and the European Union reached a historic deal on “Brexit” terms in January that allowed them to open up talks on future relationships after the split. European citizens living in the United Kingdom and vice versa will have their rights to live, work, and study protected as some of the agreed upon terms. The German Chancellor led a coalition of fundamentally centrist parties, following a secured win over right wing populist parties. The coalition governed in Berlin for the third time in four terms, but with a much diminished parliamentary majority.

Energy was the best performing sector with a return of 15.9%. The repeating worst performer was Telecom Services, which lost 11.9%. The losses in Telecom Services was largely expected given the global pause between 4G and 5G deployment is likely to last for a couple years.

Real Estate

The global real estate equity markets, as measured by the FTSE EPRA/NAREIT Developed Index, posted a modest return of 6.3% for fiscal year 2018 that ended on August 31, 2018. This followed a flat return (+0.9%) in fiscal year 2017. The real estate sector significantly underperformed the broader equities market (MSCI World Index), which returned 13.4% in U.S. Dollar terms. Global bond yields increased during the fiscal year, which consequently weighed on global real estate markets. The United States 10-year Treasury yield increased from 2.12% in the beginning of the fiscal year to 2.86% at the end of the fiscal year. The United States Federal Reserve raised interest rates three times during the fiscal year. Many of the themes from fiscal year 2017 continued to affect the real estate market in fiscal year 2018. The continued themes were concerns of rising interest rates, quarter-end tapering in the Eurozone, and elections and geopolitical tensions in the Middle East. An increased trade tension between the United States and China was a new theme to affect the real estate market in fiscal year 2018. The fear that faster-than-expected interest rate hikes and higher inflation could derail the global economic recovery and drove a global equity markets sell-off in February. Solid economic data and company earnings supported a steady increase in the global equity market since the February sell-off, despite the escalated trade tensions between the United States and China. Investors began to focus on the rising risk of emerging market weakness later in the fiscal year.

Foreign currencies were primarily weak relative to the value of the U.S. Dollar. Continental Europe was the best performer with a gain of 10.9% in U.S. Dollar terms and 14.7% in local currency. North America gained 7.2%, followed by the United Kingdom (+5.9%) and Asia (+3.3%). The Middle East (-7.7%) was the only region that posted negative returns.

In the Asian market, Japan was the best performer with a gain of 6.5% in U.S. Dollar terms and 7.2% in local currency terms. Japan’s physical real estate market remained buoyant during the fiscal year as office vacancies were very low. The Japanese REITs (+7.3%) slightly outperformed the developers (+5.4%) during the fiscal year. Australia posted a strong return of 16.4% in local currency, but the Australian Dollar was weak against the U.S. Dollar. The Australian sector finished with a gain of 5.6% in U.S. Dollar terms for the fiscal year. The fundamentals of the Office and Industrial sectors remained solid. Retail fundamentals remained challenged while the negative sentiment on the sector eased moderately due to improved growth. The Residential sector continued to slow down. Hong Kong (-0.3%) finished the fiscal year relatively flat, following a strong return of +21.2% in the previous fiscal year. Investors turned cautious because of higher interest rates and the fear of a faster-than-expected slowdown in China, despite housing market fundamentals remained strong. Singapore (-0.8%) also posted a flat return, following a strong return of 21.3% in the previous fiscal year. The physical market continued to show improving fundamentals, despite higher interest rates and potential government tightening policies toward the residential market being an overhang for the stocks.

Continental Europe posted the best performance for the fiscal year. Austria (+33.6%), Germany (+24.4%), and Sweden (+13.1%) were the star performers. Netherlands (-7.7%) and Finland (-2.4%) were negatively affected by deteriorating retail sentiment toward weaker quality assets. The monetary policy remained accommodative for the near term while the European Central Bank indicated a tapering of the quarter-end program later in the fiscal year. Eurozone economic data showed improved growth momentum. Valuation supported the United Kingdom with a gain of 5.9%. Interest in the United Kingdom’s physical market remained solid, despite a perceived late real estate cycle and the overhang of the “Brexit” negotiations.

The United States REITs, as measured by the FTSE EPRA / NAREIT United States Index, recovered nicely with a return of 7.0% for the fiscal year 2018 that ended on August 31, 2018. Fiscal year 2018 followed a disappointing return in fiscal year 2017 (-3.1%). REITs significantly underperformed in February, but clawed back some of the underperformance. However, the United States REITs significantly underperformed the broader equities market (MSCI World Index), which gained 13.4% in U.S. Dollar terms.

The implementation of tax cuts and a pro-business friendly agenda positively benefited economic growth, which increased the expectation of higher long-term interest rates. Investor expectations of higher rates dictated equity fund flows into more cyclical stocks, which was why the more interest rate sensitive REIT subsectors generally underperformed versus the shorter lease duration REIT names. Investors seemed to stick with what worked in the prior fiscal year as the more cyclical subsectors outperformed, which directly benefitted from tax cuts, increased consumption, and economic growth. The subsectors outperformed, despite the fact that many of the cyclical REIT subsectors faced increasing supply deliveries. Along these lines, many of the short duration subsectors led the way as Lodging/Resorts (+20.6%), Self-Storage (+14.8%), and Industrials (+8.8%) exhibited robust absolute and relative performance. The Retail subsector was up 10.7% this fiscal year, compared to being down 23.3% for fiscal year 2017. This was primarily due to extremely low expectations and Brookfield's privatization of General Growth Properties (GGP).

Decreased foreign capital investment and in-line leasing results negatively affected the relative performance of the Office (+5.8%) subsector in fiscal year 2018. Elevated investor expectations, concerns regarding the shortage of skilled labor, and rising construction costs weighed on the Residential (+3.0%) subsector throughout most of the fiscal year. Equity capital flows favored technology companies to subsequently weigh on the Diversified (+5.1%) subsector because of the expectation of tax reform, which negatively affected the Data Center REITs for most of the year. Tenant credit issues in the skilled nursing sector and increased supply deliveries in the senior housing sector caused the Healthcare (-3.0%) subsector to underperform. The REIT sector experienced volatility many times throughout the fiscal year, despite solid quarterly earnings results from REITs, late cycle fears, decreased foreign investment, instability on Capitol Hill, and geo-political concerns

Private Real Estate

The System committed a total of $707 million across twelve investments. The twelve investments comprise of two "top-ups" to existing commitments, seven "re-ups" with managers that the System already had investments, one co-investment, one club investment, and one new investment. All of these new commitments were for non-core investment strategies with the exception of $12 million. All of these were equity investments with the exception of one $100 million commitment to a debt fund. These commitments exceeded the commitment target of $525, but were below the upper range of $757 million set forth in the tactical plan for fiscal year 2018. The System committed these new investments to domestic, international, and global focused funds.

Co-investments typically focused on investments, lower management fees, and stronger governance structures. Since inception of the program to the end of fiscal year 2018, the System's private real estate program had approximately $175.8 million in total co-investment commitments. The System expects to make additional commitments in co-investments during fiscal year 2019 as opportunities become available and meet risk/return parameters with a strong "hands on" property management, which can drive performance, create value for the System, and complement the existing portfolio of investments.

From program inception through August 31, 2018, to the System closed on 55 funds and four co-investments with commitments totaling $3.8 billion. The System continued to play an active role in monitoring and steering each investment and holds Advisory Boards on all investments, excluding six funds. Since inception of the program to date, total capital called is approximately $3.0 billion. As of August 31, 2018, the Private Real Estate portfolio Net Asset Value was approximately $2.0 billion. General partners returned approximately $2.2 billion in the form of income, realized gains, or return of capital. For the fiscal year, the private real estate program called in approximately $360 million in capital. For the fiscal year, general partners returned approximately $522 million in the form of income, realized gains, or a return of capital. These transactions resulted in net distributions of $162 million for fiscal year 2018. The System carefully monitored the pace of capital calls and distributions from all investments to insure the Private Real Estate portfolio was within an acceptable range of the target allocation.

The System's target allocation for real estate was 12% of the System's total assets, which was a 2% increase from the 10% target for the previous year. The System will implement the increase in equal phases in to the Private Real Estate portfolio over the next two fiscal years. The Private Real Estate portfolio represents approximately 6.9% of the System's total assets, which is below the interim target allocation of 7.8% for the fiscal year. The System will continue to add prudently to the portfolio in order to achieve the 9% target allocation for fiscal year 2019 and maintain an appropriate vintage year exposure.

Private Equity

The System closed on fourteen deals in fiscal year 2018, which three were co-investments. The commitments of these fourteen deals reached a total of $677 million. The System's target for commitments for fiscal year 2018 was $1.0 billion with a range of $750 million to $1.25 billion.

As of August 31, 2018, the Private Equity portfolio Net Asset Value was $3.9 billion compared to $3.4 billion as of August 31, 2017. Since inception, the System closed on 93 funds and 36 co-investments with commitments totaling $7.8 billion (adjusted for currency exchange rates). In addition, The System holds Limited Partnership Advisory Committee seats on 59 active funds and two fund Limited Partnership Advisory Observer seats.

Fixed Income

Economy

The United States economy continued to expand at a robust pace. Corporate profits remained strong and businesses continued to invest in capex. The tax reform legislation passed in the beginning of 2018 gave a boost to business, which helped propel Gross Domestic Product growth. The United States economy grew at an annualized rate of 4.2% in the most recent quarter. Monthly job gains remained strong and the unemployment rate declined from 4.3% to 3.9% over the past year. Wage growth increased from a yearly rate of 2.5% to 2.9%. Inflation increased to the Federal Reserve's stated target rate of 2%. As the economy appeared to be hitting on all cylinders, investors will continue to monitor the impact of rising trade tensions, rising interest rates, and global geopolitical developments.

Interest Rates

The Federal Reserve raised the Federal Funds rate three times by a total of 75 basis points in fiscal year 2018, which brought the target rate to a range of 175 basis points to 200 basis points. The yield curve widened and flattened as the Federal Reserve continued to raise interest rates. The fiscal year began with a yield of 2.12% on the 10 year Treasury yield spread, which subsequently widened 74 basis points to close at 2.86% for fiscal year 2018. The 10 year-2 year yield curve flattened 60 basis points to end at 23 basis points for fiscal year 2018. The Federal Reserve expects to continue the reduction of its balance sheet and raise interest rates going forward.

Index Performance

High Yield was the top performer with a return of 3.4% in fiscal year 2018. The absolute performance in High Yield illustrated the considerable yield and spread compression over the past couple of years. The High Yield index finished the fiscal year at a spread of 338 basis points with a compression of 40 basis points. Although this was not an all-time tight level for the index, the level implied limited spread compression potential going forward. Emerging Markets began a sell-off in early 2018 as rates, currencies, and idiosyncratic risks weighed on issuers. The Emerging Markets U.S. Dollar Aggregate index was the worst performer with a return of -1.60% in fiscal year 2018. The longer dated United States Treasury Index outperformed versus the Intermediate Treasury Index and the yield curve flattened during the fiscal year. The United States Treasury Index returned -0.47% compared to the -0.68% return for the Intermediate Treasury Index.

Private Infrastructure

Private Infrastructure closed on six deals in fiscal year 2018 of which four funds are investments and two are co-investments). The System had total commitments of $468 million during fiscal year 2018, $38 million of which was additional commitments to an existing investment. The System targeted total commitments for fiscal year 2018 of $400 million with a range from $280 million to $520 million. Since inception, the System closed on fourteen co-investments and thirteen funds with commitments totaling $1.37 billion, which is adjusted for currency exchange rates. The System holds a Limited Partnership Advisory Committee seat on twelve funds and an observer seat on one fund. As of the end of the fiscal year 2018, the Infrastructure portfolio Net Asset Value was $566.6 million, or 1.95% of the System's assets. In comparison, the Infrastructure portfolio Net Asset Value was $463.8 million at the end of fiscal year 2017.

Hedge Funds

Hedge Funds experienced a strong performance in fiscal year 2018. The Absolute Return Portfolio ended the fiscal year with an estimated gain of 5.56% while the benchmark's returned 5.49%. Performance during the fiscal year was affected by an assortment of macro and country-specific factors. These factors include natural disasters in the United States, heightened global political rhetoric pertaining mainly to populism and trade wars, ongoing tensions between the United States and North Korea, and diverging global central bank monetary policies. A brief revival of volatility within a number of markets took place in the latter part of the first quarter of 2018. However, volatility, as measured by the Chicago Board Options Exchange Volatility (VIX) Index, quickly returned to subdued levels.

Fiscal year 2018 started off in a volatile fashion. Hurricanes in the United States, geopolitical tensions from the denuclearization in North Korea, and the uncertainty in United States monetary policy caused a brief equity market sell-off in early September, 2017. However, Investors increased their risk appetite and equity markets resumed their upward trend through the end of September in response to the facts that North Korean tensions defused, the hurricanes had less of an impact than originally anticipated, and developments regarding a United States tax reform bill progressed as September approached.

The fourth quarter of 2017 concluded a strong calendar year for global risk assets. Positive U.S. corporate earnings and strong U.S. economic data coupled with historically low volatility during the fourth quarter prompted a continued rise in global equity markets. Global central banks remained accommodative through their interest rate policies and ongoing quantitative easing efforts. The VIX Index recorded its lowest level on record with a reading of 9.14 on November 3rd. Short term U.S. Treasury rates in the fixed income markets persistently increased during the quarter as they did for most of calendar year 2017. This increase resulted in a flattening of the U.S. Treasury yield curve despite decent economic growth in the United States. Separately, Jerome "Jay" Powell was named new chairman of the United States Federal Reserve to replace Janet Yellen who served as the chairperson for one four-year term.

Hedge fund performance was strong across all strategies during the final four months of 2017 and all strategies within the Absolute Return Portfolio were positive contributors. From an attribution standpoint, overweight to Event Driven and Relative Value strategies drove the portfolio's performance. On an individual basis and from a portfolio standpoint, Global Macro and Opportunistic strategies delivered the highest returns with a positive impact. A new allocation focused on bank capital relief and specialty lending opportunities generated strong performance within the Opportunistic strategies. In Global Macro, an allocation to a systematic manager generated positive performance from trending markets within the energies and stock market indices. The only detractor during the period was a relative value multi-strategy manager. This particular strategy had challenges over the past year given the low volatility environment, expensive valuations, trending equity, and credit markets. These conditions made it difficult to find attractive relative value short positions to pair with long exposures. Significant spread widening in some large merger arbitrage deals caused additional mark to market losses for this allocation.

Key Portfolio Statistics

STATISTICS	2018	2017
Contributions to Pool	1,203,600,000	1,210,700,000
Withdrawals from Pool	(2,314,400,000)	(2,203,800,000)
Interest & Dividends	677,705,505	613,217,219
Securities Lending Net Income	5,111,724	5,553,319
Net Appreciation in Fair Value	1,909,484,313	2,391,543,267

Basis of Presentation: Master custodian and the System's financial records. The time weighted method is used to calculate the rates of return.

Outline of Investment Policies

Fiscal Year 2018

Background

The Board of Trustees' investment policies are governed by the Texas Government Code and the Texas State Constitution. As fiduciaries of the System's funds, the Board of Trustees practices the following duties of care:

- Manage the assets for the exclusive benefit of the Plan Beneficiaries;
- Establish prudent investment policies defining investment objectives and strategies;
- Seek to maximize investment returns while maintaining the safety of principal;
- Diversify the assets to reduce risk of loss;
- Monitor investment performance;
- Efficiently manage the costs associated with implementation of its investment program; and
- Establish committees as necessary and prudent to fulfill its duties to the funds.

Investments shall be made in securities that are considered prudent investments, exercising the judgment and care, under the circumstances prevailing at the time of the investment, that persons of ordinary prudence, discretion, and intelligence exercise in the management of their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income from the disposition and the probable safety of their capital. However, the Board of Trustees shall not participate in individual investment selections unless it is specifically provided for herein because that responsibility has been delegated to the Executive Director and the System's investment staff, with oversight by the Board of Trustees.

Every investment will be subject to strict due diligence. Notwithstanding the performance of such due diligence, the determination of whether prudence has been exercised with respect to an investment decision shall be made by taking into consideration the investment of all the assets of the trust or all the assets of the collective investment vehicle, as applicable, over which the Board of Trustees has management and control, rather than considering the prudence of a single investment of the trust or collective vehicle, as applicable.

A staff of trained professional personnel in accordance with Trustee policies and Constitutional and Statutory regulations invests State contributions, member contributions, and investment income. To assist the staff with investment recommendations and decisions, the Trustees have employed nationally recognized investment managers and have appointed an Investment Advisory Committee composed of prominent members of the financial and business community of Texas. In addition, the System retains an independent consultant to evaluate and analyze the investment results of the System.

The System's Executive Director is authorized to approve from time to time variances from the policies set forth herein in furtherance of such compliance or in the best interest of the System and consistent with both the System's fiduciary responsibilities and the purpose and scope of this policy.

Diversification

The assets of the System's funds will be broadly diversified in order to minimize the risk of large losses in individual investments. Investments are restricted by the Texas Constitution to securities such as, but not limited to, cash equivalents, bonds, common stocks, and limited partner interests. The System's funds will have beneficial ownership of:

- No more than 3% of the Funds' assets at market value in the securities of any one corporation;
- No more than 5% of any class of voting securities of any one public corporation; and
- No more than 15% of an advisor's high yield bond portfolio based on market values, in combined Deferred Interest, Contingent Interest and Pay-In-Kind bonds.

Permissible Investments

The Board of Trustees will consider investment instruments appropriate for the System's funds and deemed to be prudent based on:

- Their consistency with investment policy and portfolio objectives;
- Their application to the portfolio's diversification;
- Staff and/or advisor competency in evaluating and trading the securities;
- Consideration of their liquidity within the portfolio; and
- The cost of including them in the program

Eligible Securities

- Except as described in the Fixed Income Policies and Procedures for the credit portfolio, global fixed income securities, subject to a minimum credit rating of “CCC-, Caa3,” or their equivalent as rated by two Nationally Recognized Securities Rating Organizations (NRSROs), and included in the Barclays Capital Universal Index or successor index. Fixed income and short-term securities that downgrade to below the acceptable rating described above will be exchanged or sold within one year, but special exceptions may be permitted and reported to the Board of Trustees.

- Cash and Cash equivalents as set forth in the Eligible Securities List for Cash and Cash Equivalents.
- Interests in private securities exempted from registration under federal and state securities laws, including certain limited liability securities and vehicles, such as limited partner interests in limited partnerships, trusts and limited liability corporations as deemed appropriate by The System's Investments and Legal staff.
- Private equity and private real estate investments must be institutional in quality and meet the parameters specified in the System's investment policy.
- Global publicly traded real estate equities subject to the quality standards set forth in the investment policy.
- Foreign currencies transactions and foreign currency derivatives are permitted as necessary to facilitate the settlement of foreign security transactions, consistent with industry best practices. These transactions are also permitted to settle private market transactions, meet capital calls or exchange distributions back into U.S. dollars.
- Forward, futures and options, subject to the restrictions set forth in the investment policy.

Proxies and Bond Indenture Changes

All proxies and bond exchanges shall be voted to consider only those factors that relate to the economic value of the System's investment, and such votes should be cast in accordance with the System's best interest and investment objectives for the funds.

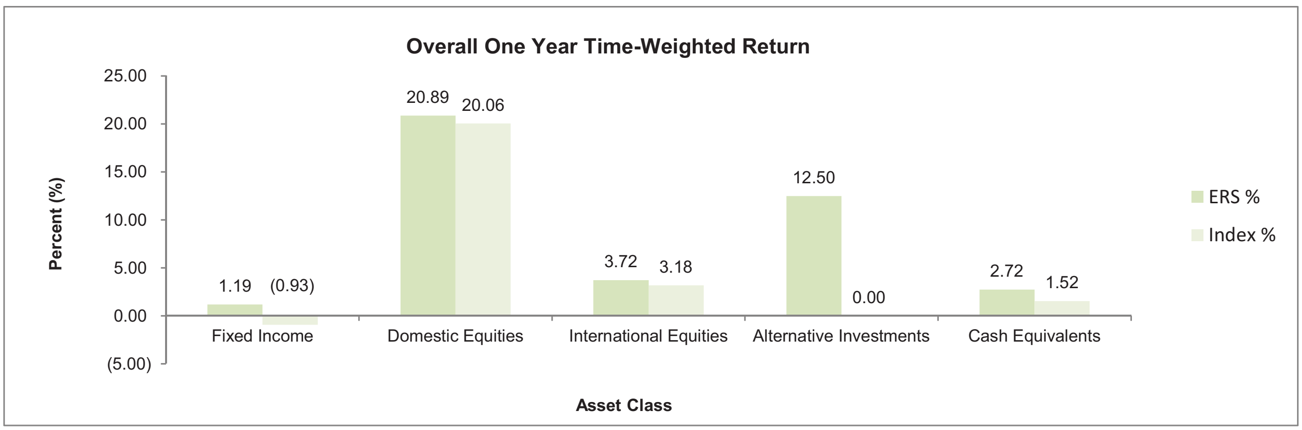
Basis of Presentation: Texas Statute and the System's Investment Policy

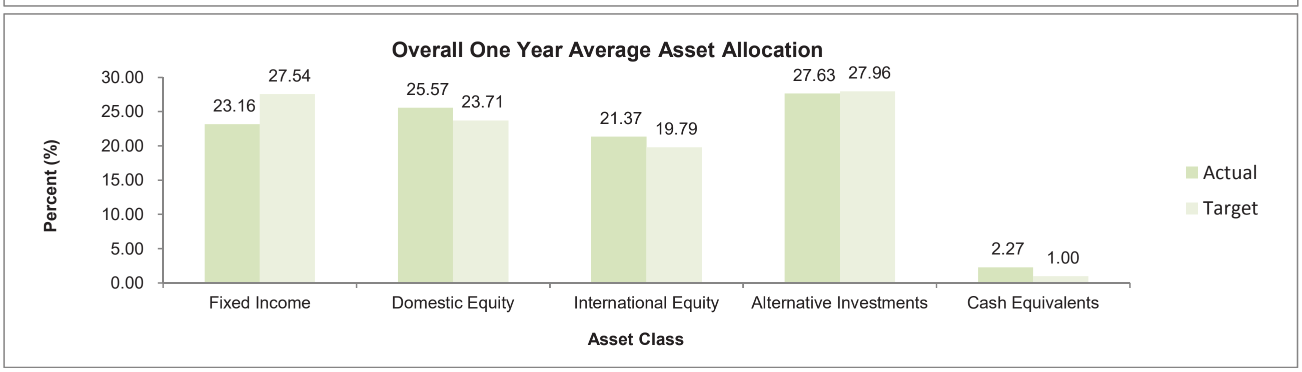
Time-Weighted Rates of Return and Asset Allocations

Investment Pool

August 31, 2018

	Time-Weighted Rates of Return (Note A)							
	2014	2015	2016	2017	2018	3 Year (2016-2018)	5 Year (2014-2018)	10 Year (2009-2018)
	%	%	%	%	%	%	%	%
Fixed Income								
ERS	3.85	1.29	5.14	3.49	1.19	3.26	2.98	3.88
Index	6.28	1.13	6.50	1.34	(0.93)	2.26	2.82	3.90
Domestic Equities								
ERS	24.34	1.55	8.48	15.81	20.89	14.95	13.91	10.77
Index	24.86	0.49	12.54	15.87	20.06	16.12	14.46	10.96
International Equities								
ERS	16.28	(9.86)	1.44	19.38	3.72	7.90	5.66	4.00
Index	17.75	(12.35)	2.92	18.88	3.18	8.08	5.43	3.44
Alternative Investments								
ERS	15.70	7.89	6.76	11.26	12.50	10.14	10.77	8.03
Index	NA	NA	NA	NA	NA	NA	NA	NA
Cash Equivalents								
ERS	0.61	2.71	0.76	1.91	2.72	1.80	1.74	(6.93)
Index	0.05	0.03	0.23	0.62	1.52	0.79	0.49	0.36
ERS Overall								
ERS	14.70	0.49	5.32	12.15	9.58	8.98	8.33	7.14
Index	15.00	(1.03)	7.23	11.08	7.94	8.74	7.91	6.72
Change in CPI	1.97	0.21	0.87	1.74	2.89	1.83	1.53	1.38





Note A: The Time-Weighted Rate of Return measures the gross of fees performance of the total investment portfolio, considering income and market impact, including realized and unrealized gains, and eliminates the effect of timing of cash flows due to contributions and withdrawals which are not controllable by the investment managers. The 5-year return is used to smooth market swings and to maintain consistency with the long-term nature of the fund. The Time-Weighted Rate of Return is calculated as follows:

Ending Market Value / (Beginning Market Value + Net Cash Flows)

The indices used for comparison are net of fees. The names of the index are listed as follows:

Fixed Income Securities Portfolio:	*Barclays Capital Universal and Floating Fixed Income*
Domestic Equities Portfolio:	*S&P 1500/ S&P 1500 Blend*
International Equities Portfolio:	*MSCI EAFE/MSCI ACWI ex US Blended Index (i.e., Europe, Australia and Far East Index excluding securities unavailable to foreign investors)*
Cash Equivalents Portfolio:	*91-Day U.S. Treasury Bill*

Basis of Presentation: Master custodian records.

Broker Commissions

Year Ended August 31, 2018

Domestic Equity

Brokerage Firm	No. of Shares Traded	Commissions	Commission Per Share
		$	$
Baird, Robert W & Co., Inc.	4,953,956	99,079	0.020
Barclays Capital	8,681,493	165,150	0.019
Bloomberg Tradebook, LLC	3,623,548	72,471	0.020
BMO Capital Markets Corp.	3,900,482	78,010	0.020
BNP Paribus	31,000	216	0.007
BNY Mellon Clearing	9,958,638	229,229	0.023
Cantor Fitzgerald	1,882,144	36,643	0.019
Capital Institutional Services, Inc.	465,096	12,543	0.027
Citigroup Global Markets, Inc.	6,191,483	94,504	0.015
Cowen & Co., LLC	3,799,380	75,988	0.020
Credit Suisse	3,883,526	71,165	0.018
Daiwa Securities	339,000	2,046	0.006
Deutsche Bank	4,487,344	87,173	0.019
Goldman Sachs	6,893,137	119,469	0.017
HSBC	371,033	1,899	0.005
ICBC Financial Services LLC	416,594	20,830	0.050
Instinet LLC	1,539,456	17,190	0.011
Investment Technology Group, Inc.	595,494	5,981	0.010
ITG, Inc.	120,056	1,199	0.010
Jefferies & Co, Inc.	21,107,372	424,189	0.020
JP Morgan Securities, LLC	7,784,053	138,304	0.018
Macquarie Securities (USA), Inc.	3,015,429	59,817	0.020
Merrill Lynch & Co., Inc.	21,708,027	316,052	0.015
Morgan Stanley Dean Witter & Co.	6,983,672	136,521	0.020
National Financial Services, LLC.	7,796,863	154,168	0.020
Raymond James & Associates, Inc.	6,119,565	184,660	0.030
RBC Capital Markets	4,459,769	89,195	0.020
Sanford C Bernstein & Co., Inc.	2,317,929	51,867	0.022
SG Americas Securities, LLC	52,930	526	0.010
Societe Generale	41,749	291	0.007
Stifel, Nicolaus & Co., Inc.	3,126,382	62,528	0.020
UBS	5,184,309	102,801	0.020
Wells Fargo Securities, LLC	2,428,974	48,579	0.020
	154,259,883	**2,960,283**	**0.019**

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Broker Commissions (Concluded)

Year Ended August 31, 2018

International Equity

Brokerage Firm	No. of Shares Traded	Commissions	Commission Per Share
		$	$
Banesto Banco de Emisiones, SA	554,433	6,943	0.013
Barclays Capital	6,579,200	116,470	0.018
BMO Nesbitt Burns	2,559,310	40,144	0.016
BNP Paribus	7,058,685	150,128	0.021
BNY Mellon Clearing	9,299,246	180,632	0.019
Bradesco SA	1,455,800	13,809	0.009
Brasil Plural SA	136,400	1,182	0.009
Caceis Bank	8,664,906	196,304	0.023
Celfin Capital SA	12,471	56	0.004
Citigroup Global Markets, Inc.	215,317,177	519,284	0.002
Clearstream Banking AG	106,036	10,880	0.103
CLSA Singapore PTE Ltd.	35,830,719	283,811	0.008
Convencao SA	18,200	566	0.031
Credicorp Capital Colombia SA	25,091	252	0.010
Credit Lyonnais Securities	130,506,245	349,220	0.003
Credit Suisse	25,446,607	259,822	0.010
Daiwa Securities	134,336,137	461,102	0.003
Deutsche Bank	64,272,060	411,515	0.006
Euroclear Bank SA	164,528	8,576	0.052
Goldman Sachs	6,245,792	26,483	0.004
HSBC	87,162,628	247,614	0.003
ICICI Brokerage Services Limited	284,846	2,308	0.008
Instinet LLC	14,422,630	16,826	0.001
Investec Securities Limited	392,178	13,316	0.034
Investment Technology Group, Inc.	765,965	8,482	0.011
Itau BBA USA Securities, Inc.	55,600	13	0.000
ITG, Inc.	15,296,074	7,563	0.000
Jefferies & Co, Inc.	34,165,376	507,653	0.015
JP Morgan Securities, LLC	119,374,243	499,169	0.004
KEB Salomon Smith Barney Securities	469,968	13,755	0.029
Kepler Cheuvreux	13,228,111	179,516	0.014
Macquarie Securities (USA), Inc.	79,910,825	530,571	0.007
Merrill Lynch & Co., Inc.	94,554,577	349,122	0.004
Mitsubishi Securities	3,404,400	190,153	0.056
Mizuho Securities USA, Inc.	13,848,859	99,869	0.007
Morgan Stanley Dean Witter & Co.	84,276,149	259,369	0.003
Nomura Securities Co. Ltd.	1,312,709	5,444	0.004
Nordea Bank	52,172	932	0.018
Parel	8,076,958	105,159	0.013
Redburn Partners, LLP	19,880,255	352,567	0.018
S. G. Warburg & Co., Ltd.	200,079	970	0.005
Sanford C Bernstein & Co., Inc.	1,271,129	56,437	0.044
SG Americas Securities, LLC	3,760,587	18,329	0.005
SG SEC (London) LTD, London	1,664,990	10,105	0.006
SG Securities HK LTD	10,676,156	4,617	0.000
Socgen-Crosby	274,954	949	0.003
Societe Generale	5,295,774	46,405	0.009
The Depository Trust Company	112,400	1,716	0.015
UBS	44,116,847	277,279	0.006
Woori Investment & Securities Co.	29,697	2,198	0.074
XP Investimentos	70,551	485	0.007
	1,306,996,730	**6,846,070**	**0.005**

Basis of Presentation: Master custodian records.

Fees for Alternative Investments

Year Ended August 31, 2018

Investment Type	Management Fees (Note A)	Profit Share (Note B)	Other Fees
	$	$	$
Private Equity	29,073,306	18,417,554	7,754,374
Private Real Estate	16,423,581	9,722,873	3,447,552
Private Infrastructure	5,032,685	300,747	2,520,759
Private Fixed Income	269,562		521,030
Hedge Funds	17,533,243	33,004,994	
Totals	**68,332,377**	**61,446,168**	**14,243,715**

Note A: These amounts are management fees that the System paid to external entities in the current fiscal year. Any unpaid accruals of management fees as of August 31, 2018 were reported as part of the fair value of Investments.

Note B: These amounts are the profit that the System shared with, and were paid to, external entities in the current fiscal year when the target investment returns of the underlying investments were surpassed.

Investment Advisory and Service Fees

Year Ended August 31, 2018

Advisory Service	Asset Value	Fees	Basis Points
	$	$	
Domestic Equity Advisors	950,269,751	2,734,590	28.78
International Equity Advisors	1,927,795,917	8,827,227	45.79
Total	**2,878,065,668**	**11,561,817**	**40.17**

Other Investment Services	Fees
	$
Custodian Fees	1,321,019
Security Lending Agent Fees	558,873
Investment Consultant Fees	1,939,638
Investment Banking Fees:	99,931
Total	**3,919,461**

Directed Commissions

Consistent with the System's Investment Policy as adopted by the Board of Trustees, and in order to maximize the System's resources including commission dollars generated through trade activity, directed commissions are sometimes used to fund a portion of budgeted investment program expenses. Trade activity in excess of the level required to support research products used by the System's investment staff is directed toward the payment of budgeted items. Directed Commissions totaled $426,326 during fiscal year 2018.

Basis of Presentation: Master custodian records.

List of Largest Assets Held (Note A)

Year Ended August 31, 2018

Ten Largest Stock Holdings

No. of Shares	Description	Fair Value
1,870,000	Vanguard FTSE All World ex-US Small -Cap ETF	214,152,400
835,800	Apple, Inc.	190,253,154
1,478,989	Microsoft Corporation	166,134,834
81,776	Amazon.com, Inc.	164,591,373
827,300	JP Morgan Chase & Company	94,792,034
526,042	Facebook, Inc.	92,441,361
7,518,341	BP PLC	83,811,100
2,658,954	Bank of America Corporation	82,241,447
1,573,884	Samsung Electronics Company, LTD	81,939,532
64,149	Alphabet, Inc. - Class C	78,145,670

Ten Largest Fixed Income Security Holdings

Par Value	Description	Fair Value
2,918,100	Xtrackers USD High Yield Corporate Bond ETF	145,292,199
2,950,000	Xtrackers High Beta High Yield ETF	144,963,000
2,750,000	Xtrackers Low Beta High Yield ETF	135,272,500
94,000,000	U.S. Treasury Note 2.375% due on 08/15/24, Rating AA+	91,899,939
90,000,000	U.S. Treasury Note 2.500% due on 05/15/24, Rating AA+	88,717,296
66,280,000	U.S. Treasury Note 3.375% due on 11/15/2019, Rating AA+	66,932,945
65,000,000	U.S. Treasury Note 2.250% due on 07/31/2021, Rating AA+	64,203,073
60,000,000	U.S. Treasury Note 2.125% due on 08/31/2020, Rating AA+	59,421,113
60,000,000	U.S. Treasury Note 2.000% due on 09/30/2020, Rating AA+	59,236,201
55,975,000	U.S. Treasury Note 2.625% due on 11/15/2020, Rating AA+	55,934,887

Note A: The investment portfolio listing is available for review at the System's office or the listing will be mailed upon request.

Basis of Presentation: System's financial records.

Investment Summary at Fair Value

August 31, 2018

	Pooled Pension Trust Funds (Note A)				Investment Pool	
	Fund 0955	Fund 0977	Fund 0993	Fund 0973	Fair Value	% Total
Type of Investment	$	$	$	$	$	
Public Equities:						
Domestic Equities	6,953,629,820	242,661,732	113,602,701	167,118	7,310,061,371	24.21%
Foreign Equities	4,777,485,941	166,720,555	78,050,647		5,022,257,143	16.64%
Total Public Equities	11,731,115,761	409,382,287	191,653,348	167,118	12,332,318,514	40.85%
Fixed Income:					-	
U.S. Government	3,854,263,971	134,502,764	62,967,783	384,447,083	4,436,181,601	14.69%
Domestic Obligations	1,967,909,961	68,674,405	32,150,097	72,800,151	2,141,534,614	7.09%
Foreign Obligations	502,397,654	17,532,236	8,207,761	17,140,813	545,278,464	1.81%
Total Fixed Income	6,324,571,586	220,709,405	103,325,641	474,388,047	7,122,994,679	23.59%
Alternative Investments	8,314,960,067	290,168,254	135,842,998	16,632,930	8,757,604,249	29.01%
Other Investments	192,197,248	6,707,135	3,139,961	(11,808)	202,032,536	0.67%
Short-term Investments:						
Investment in Pool Cash	2,899,100	78,572	(12,046)		2,965,626	0.01%
Other Short-term Investment	653,587,986	22,808,346	10,677,784	1,083,746,780	1,770,820,896	5.87%
Total Short-term Investments	656,487,086	22,886,918	10,665,738	1,083,746,780	1,773,786,522	5.88%
Total Before Securities Lending Collateral (Notes B & C)	**27,219,331,748**	**949,853,999**	**444,627,686**	**1,574,923,067**	**30,188,736,500**	**100.00%**
Securities Lending Collateral	211,141,428	7,359,804	3,450,815	3,966,354	225,918,401	
Total Pension Investment Pool Trust Fund (0888)	**27,430,473,176**	**957,213,803**	**448,078,501**	**1,578,889,421**	**30,414,654,901**	
Cash Equivalents:						
Cash in State Treasury-Pension Funds	32,648,341	2,307,384	1,002,208	2,449,732		
Total Investments	**27,463,121,517**	**959,521,187**	**449,080,709**	**1,581,339,153**		

Note A: The Pension Investment Pool Trust Fund (Fund 0888) includes the Employees Retirement Fund (Fund 0955), the Law Enforcement and Custodial Officer Supplemental Retirement Fund (Fund 0977), the Judicial Retirement System Plan Two Fund (Fund 0993), and the long-term investments from the Employees Life, Accident and Health Insurance and Benefits Fund (Fund 0973).

Note B: Fair value of investments adjusted to comply with the CFA Institute Standards:

	Fair Value				
	Fund 0955	*Fund 0977*	*Fund 0993*	*Fund 0973*	*Total*
	$	*$*	*$*	*$*	*$*
Total Fair Value of Investments Before Securities Lending Collateral, as above	*27,219,331,748*	*949,853,999*	*444,627,686*	*1,574,923,067*	*30,188,736,500*
Unsettled Sales-Investment Receivables	*348,940,291*	*12,177,015*	*5,700,700*	*273,994*	*367,092,000*
Unsettled Purchases-Investment Payables	*(41,735,513)*	*(1,456,450)*	*(681,840)*	*(1,414,245)*	*(45,288,048)*
Accrued Interest and Dividends/Tax Reclaims Receivable/Prepaid Fees	*90,780,864*	*3,167,624*	*1,483,135*	*2,623,219*	*98,054,842*
Securities Lending Fees Payables/ Miscellaneous Payables	*(406,577)*	*(14,188)*	*(6,642)*	*(3,809)*	*(431,216)*
Total Fair Value of Investments, Adjusted to Comply with the CFA Institute Standards	***27,616,910,813***	***963,728,000***	***451,123,039***	***1,576,402,226***	***30,608,164,078***

Note C: The investment portfolio listing is available for review at the System's office or the listing will be mailed upon request.

Basis of Presentation: System's financial records in accordance with the CFA Institute Standards.

ACTUARIAL SECTION

Pension Plans:

State Retirees Health Plan:

GRS Retirement Consulting

P: 469.524.0000 | F: 469.524.0003 | www.grsconsulting.com

December 3, 2018

Board of Trustees
Employees Retirement System of Texas
200 East 18th Street
Austin, TX 78701

Subject: Actuarial Certification for Funded Programs as of August 31, 2018

Members of the Board,

At the request of the Employees Retirement System of Texas (ERS), Gabriel Roeder Smith & Company (GRS) has performed the actuarial valuations of the Employees Retirement Fund (ERF), including separate actuarial valuations of the Law Enforcement and Custodial Officer Supplemental Retirement Fund (LECOSRF) and the Judicial Retirement System of Texas Plan Two (JRS-2). The information in the Actuarial Section is based on our annual actuarial valuation reports for the three programs, with the most recent valuations conducted as of August 31, 2018, and is intended to be used in conjunction with the full reports.

This letter and the schedules listed below represent GRS' certification of the funded status as required for the financial report for the fiscal year ended August 31, 2018 for ERF, LECOSRF and JRS-2. GRS prepared the *Actuarial Balance Sheets* and the supporting schedules in the Actuarial Section for the Defined Benefit Plans. GRS prepared the *Schedule of Changes in Net Pension Liability and Related Ratios – Defined Benefit Plans* and the *Schedule of Employer Contributions – Defined Benefit Plans* of the Required Supplementary Information and the *Notes to the Required Supplementary Information* for the Defined Benefit Plans presented in the Financial Section of this report. GRS also prepared the *Retired Members by Type of Benefit* schedule in the Statistical Section. Full actuarial valuation reports have also been provided to ERS.

Data

The valuation was based upon information as of August 31, 2018, furnished by ERS staff, concerning system benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by ERS staff.

Actuarial Assumptions and Methods

The assumptions and methods applied in this actuarial valuation were adopted by the Board of Trustees on August 23, 2017 based on the experience investigation that covered the five-year period from September 1, 2011 through August 31, 2016. We believe the assumptions are internally consistent and are reasonable, based on the actual experience of ERF, LECOSRF and JRS-2, and meet the parameters set by Actuarial Standards of Practice issued by the Actuarial Standards Board. The actuarial assumptions and

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

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December 3, 2018
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methods used to develop the *Schedules of Changes in the Employers' Net Pension Liability and Related Ratios* and the *Schedule of Employer Contributions*, noted above, meet the parameters set forth in the disclosures presented in the Financial Section by Government Accounting Standards Board Statement No. 67.

The actuarial valuation as of August 31, 2018 incorporates the significant across-the-board pay increases budgeted by the State Legislature when they are granted for the current biennium. Specifically, employees were assumed to receive no across-the-board increase on September 1, 2018.

For financial reporting purposes, a blended discount rate, calculated under the methods prescribed by GASB Statement No. 67, was used to determine the actuarial present value of projected benefit payments. For ERF and LECOSRF, the blended discount rate differs from the discount rate used for funding purposes. Other than the difference in the discount rate, all actuarial methods and assumptions are the same for both funding and financial reporting purposes.

The results of the actuarial valuation are dependent upon 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. A review of the impact of a different set of assumptions on the funded status of ERF, LECOSRF and JRS-2 is outside the scope of this actuarial valuation.

The current actuarial assumptions are outlined in the section titled "Summary of Actuarial Methods and Assumptions – Pension Plans."

Benefits

There were no changes to the plan provisions of ERF, LECOSRF or JRS-2 during the past year. The current benefit provisions are outlined in the section titled "Summary of Plan Provisions."

Adoption of the Funding Policy

The Board of Trustees of ERS approved the Pension Funding Priorities and Guidelines on May 23, 2018. For the Board, adoption of this policy was intended to:

- enhance communications and provide transparency to the Legislature and plan members and retirees regarding Board of Trustees' positions on plan funding strategy;
- provide policy guidance to current and future Boards; and
- ensure that legislators, elected officials and other stakeholders have clear and accurate information about the Trust's funding goals and the needs of the Board in supporting sound fiduciary investment decisions in accordance with Texas Government Code Section 815.106.

This policy also stated that the main objective of ERS' retirement programs is to fully fund the long-term cost of benefits provided by statute, through disciplined and timely accumulation of contributions and prudent investment of assets to deliver earned benefits on a continuing basis. In support of this

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December 3, 2018
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objective, the policy laid out a multi-level funding period goal to gradually achieve funding on sound actuarial principles:

1. Avoid trust fund depletion of the pre-funded plans,
2. Meet current statutory standard of a 31-year funding period for unfunded liabilities, per Texas Government Code Sections 811.006 and 840.106, and
3. Match funding period to the average years of service at retirement (currently 22.1 years for ERF) once a 31-year funding period is achieved.

Funding Policy and Objectives – Employees Retirement Fund

The member contribution rates are established by State statute and the State contribution rate is set by State statute and legislative appropriation. Members contribute 9.50% of payroll, the State is scheduled to contribute 9.50% of payroll through direct appropriations, and state agencies contribute an additional 0.50% of payroll, resulting in total contributions of 19.50% of payroll for the current biennium. The long-term State contribution rates are subject to future legislative appropriations.

The unfunded actuarial accrued liability (UAAL) of ERF increased from $11.3 billion as of August 31, 2017 to $11.6 billion as of August 31, 2018. Additionally, the funded ratio of ERF—actuarial value of assets divided by the actuarial accrued liability—increased from 70.1% to 70.2% as of August 31, 2018. This increase was primarily due to asset gains exceeding a net liability loss. The funded status is one of many metrics used to show trends and develop future expectations about the health of a retirement 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 valuation shows that the total normal cost for funding purposes is 13.86% of payroll. The total contribution rate is currently 19.50% of payroll. Thus, the total contribution rate for the current fiscal year exceeds the normal cost by 5.64% of payroll which will be available to amortize the unfunded liability. As the number of members eligible for the newest benefit provisions increases over time, the normal cost rate is expected to decrease, and the amount available to amortize the unfunded liability will increase as a percentage of payroll. However, the projected contributions are not expected to be sufficient to eliminate the unfunded liability over a finite period of time. Assuming the market value of assets earns 7.5% per year, ERF is projected to remain solvent until the year 2096, after which the funding would revert to a pay-as-you-go status. **As a result, the first level of the Board's funding period goal is not currently being realized.**

The second level of the Board's funding period goal is to fund the sum of the normal cost and the amount necessary to amortize any unfunded actuarial accrued liability over a period that does not exceed 30 years by one or more years. Section 811.006 of the Texas Government Code defines actuarially sound as a retirement system that is receiving a total contribution rate sufficient to cover the normal cost, administrative expenses, and amortize the UAAL over a period of 31 years, or less. Section 811.006 also limits the modifications to ERF that would, essentially, increase benefits or lower contributions to the trust unless the current level of benefits and contributions are considered actuarially sound. Based on the

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Board of Trustees
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actuarial valuation as of August 31, 2018, the Actuarially Sound Contribution (ASC) rate for ERF is 23.12% of payroll. **Based on the total contribution rate of 19.50% of payroll, the second level of the Board's funding period goal is also not currently being realized.**

As noted, the ASC is currently calculated based on a 31-year open amortization period. This means that the ASC will always be calculated with the same 31-year period and the UAAL would never completely be eliminated. We recommend that the Board seek a plan funding strategy that meets the third level of the Board's funding period goal or meets an ultimate goal of eliminating the UAAL by a certain date.

Funding Policy and Objectives – Law Enforcement and Custodial Officer Supplemental Retirement Fund

The member contribution rates are established by State statute and the State contribution rate is set by State statute and legislative appropriation. For the fiscal year beginning September 1, 2018, members contribute 0.50% of payroll and the State contributes 0.50% of payroll. LECOSRF also receives a portion of the court fees collected under Section 133.102 of the Local Government Code. The contribution from this source is expected to be approximately $18.1 million for fiscal year 2019 and all subsequent years based on a four-year average of the actual contributions. It should be noted that level dollar contributions from court fees in future years will result in total contributions that are not expected to remain level as a percent of payroll over time. For fiscal year 2019, the contribution from court fees is expected to be approximately 1.07% of payroll.

The unfunded actuarial accrued liability (UAAL) of LECOSRF increased from $476 million as of August 31, 2017 to $500 million as of August 31, 2018. Additionally, the funded ratio of LECOSRF—actuarial value of assets divided by the actuarial accrued liability—decreased from 66.0% to 65.6% as of August 31, 2018. This decrease was of less magnitude than anticipated due to a combination of asset gains and liability gains. The funded status is one of many metrics used to show trends and develop future expectations about the health of a retirement 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 valuation shows that the total normal cost for funding purposes is 2.09% of payroll. The approximate total contribution rate is currently 2.07% of payroll. Thus, the total contribution rate for the current fiscal year is less than the normal cost by 0.02% of payroll and no payment will be available to amortize the unfunded liability. As the number of members eligible for the newest benefit provisions increases over time, the normal cost rate is expected to decrease. However, the projected contributions are not expected to exceed the normal cost in any year and will not be sufficient to eliminate the unfunded liability over a finite period of time. Assuming the market value of assets earns 7.5% per year, LECOSRF is projected to remain solvent until the year 2045, after which the funding would revert to a pay-as-you-go status. **As a result, the first level of the Board's funding period goal is not currently being realized.**

The second level of the Board's funding period goal is to fund the sum of the normal cost and the amount necessary to amortize any unfunded actuarial accrued liability over a period that does not exceed 30 years by one or more years. Section 811.006 of the Texas Government Code defines actuarially sound as a

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Board of Trustees
December 3, 2018
Page 5

retirement system that is receiving a total contribution rate sufficient to cover the normal cost, administrative expenses, and amortize the UAAL over a period of 31 years, or less. Section 811.006 also limits the modifications to LECOSRF that would, essentially, increase benefits or lower contributions to the trust unless the current level of benefits and contributions are considered actuarially sound. Based on the actuarial valuation as of August 31, 2018, the Actuarially Sound Contribution (ASC) rate for LECOSRF is 2.99% of payroll in addition to the expected annual contributions from court fees of $18.1 million. **Based on the current approximate total contribution rate of 2.07% of payroll, the second level of the Board's funding period goal is also not currently being realized.**

As noted, the ASC is currently calculated based on a 31-year open amortization period. This means that the ASC will always be calculated with the same 31-year period and the UAAL would never completely be eliminated. We recommend that the Board seek a plan funding strategy that meets the third level of the Board's funding period goal or meets an ultimate goal of eliminating the UAAL by a certain date.

Funding Policy and Objectives – Judicial Retirement System Plan Two

The member contribution rates are established by State statute and the State contribution rate is set by State statute and legislative appropriation. For the fiscal year beginning September 1, 2018, members accruing benefits contribute 7.50% of payroll and the State contributes 15.663% of payroll. Since some active JRS-2 members have elected to cease contributing to the plan as well as cease accruing additional benefits, the effective member contribution rate for the fiscal year beginning September 1, 2018 is 7.46% of payroll. This State contribution rate is subject to future legislative appropriations.

The unfunded actuarial accrued liability (UAAL) of JRS-2 decreased from $42.8 million as of August 31, 2017 to $40.7 million as of August 31, 2018. Additionally, the funded ratio of JRS-2—actuarial value of assets divided by the actuarial accrued liability—increased from 90.8% to 91.7% as of August 31, 2018. This increase was primarily due to actuarial gains on both assets and liabilities. The funded status is one of many metrics used to show trends and develop future expectations about the health of a retirement 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 valuation shows that the total normal cost for funding purposes is 20.83% of payroll. The total contribution rate is 23.123% of payroll for the current fiscal year. The total contribution rate for the current fiscal year exceeds the normal cost by 2.293% of payroll, which is sufficient to amortize the UAAL over 69 years on an actuarial value of assets basis. As a result, the current contribution rates are expected to eliminate the UAAL for JRS-2 in 69 years based on the current benefit provisions and actuarial assumptions. **Further, the first level of the Board's funding period goal is currently being realized.**

The second level of the Board's funding period goal is to fund the sum of the normal cost and the amount necessary to amortize any unfunded actuarial accrued liability over a period that does not exceed 30 years by one or more years. Section 840.106 of the Texas Government Code defines actuarially sound as a retirement system that is receiving a total contribution rate sufficient to cover the normal cost,

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Board of Trustees
December 3, 2018
Page 6

administrative expenses, and amortize the UAAL over a period of 31 years, or less. Section 840.106 also limits the modifications to JRS-2 that would, essentially, increase benefits or lower contributions to the trust unless the current level of benefits and contributions are considered actuarially sound. Based on the actuarial valuation as of August 31, 2018, the Actuarially Sound Contribution (ASC) rate for JRS-2 is 23.84% of payroll. **Based on the total contribution rate of 23.123% of payroll, the second level of the Board's funding period goal is not currently being realized.**

As noted, the ASC is currently calculated based on a 31-year open amortization period. This means that the ASC will always be calculated with the same 31-year period and the UAAL would never completely be eliminated. We recommend that the Board seek a plan funding strategy that meets the third level of the Board's funding period goal or meets an ultimate goal of eliminating the UAAL by a certain date.

Certification

All of our work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of, where applicable, the Governmental Accounting Standards Board, the Internal Revenue Code and ERISA.

The signing actuaries are independent of the plan sponsor. Mr. Falls, Mr. Newton and Ms. Woolfrey are Enrolled Actuaries, Fellows of the Society of Actuaries, and Members of the American Academy of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries. Finally, each of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

R. Ryan Falls, FSA, EA, MAAA
Senior Consultant & Actuary

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

Dana Woolfrey, FSA, EA, MAAA
Consultant & Actuary

Thomas J. Bevins, ASA, MAAA
Actuary

GRS Retirement Consulting

Actuarial Balance Sheet –
Employees Retirement Fund
August 31, 2018 (With Comparative Totals at August 31, 2017)

ACTUARIAL BALANCE SHEET		August 31, 2018		August 31, 2017
Assets:				
Actuarial Value Assets	$	27,359,943,116	$	26,371,827,298
Present Value of Future Normal Cost				
Member		4,693,253,926		4,506,215,731
Employer		1,812,731,694		1,791,941,399
Total		6,505,985,620		6,298,157,130
Total	**$**	**33,865,928,736**	**$**	**32,669,984,428**
Liabilities:				
Present Value of Benefits				
Active Members				
- service retirement	$	19,275,714,515	$	18,996,374,108
- disability		165,410,881		159,942,672
- death before retirement		246,210,737		241,281,528
- termination		1,622,955,302		1,560,128,128
Total		21,310,291,435		20,957,726,436
Inactive Members		1,656,980,223		1,591,456,326
Annuitants		22,527,977,524		21,378,759,742
Total	**$**	**45,495,249,182**	**$**	**43,927,942,504**
Unfunded Accrued Liability (UAL)	**$**	**11,629,320,446**	**$**	**11,257,958,076**
SUMMARY OF ACTUARIAL VALUATION RESULTS				
Total Contribution Rate		19.50%		19.50%
Normal Cost				
- dollars	$	952,997,927	$	948,073,569
- percent of payroll		13.86%		13.95%
Contribution Available to Amortize UAL		5.64%		5.55%
Accrued Liability	$	38,989,263,562	$	37,629,785,374
Amortization Period in Years		Never		Never
Funded Ratio		70.2%		70.1%
Valuation Payroll	$	6,875,886,920	$	6,796,226,304
Active Members		141,535		141,629

Actuarial Balance Sheet –

Law Enforcement and Custodial Officers Supplemental Retirement Fund

August 31, 2018 (With Comparative Totals at August 31, 2017)

ACTUARIAL BALANCE SHEET		August 31, 2018		August 31, 2017
Assets:				
Actuarial Value Assets	$	953,054,283	$	923,989,580
Present Value of Future Normal Cost				
Member		60,070,754		59,641,277
Employer		188,756,978		189,085,908
Total		248,827,732		248,727,185
Total	**$**	**1,201,882,015**	**$**	**1,172,716,765**
Liabilities:				
Present Value of Benefits				
Active Members				
- service retirement	$	899,980,280	$	908,044,629
- disability		5,081,802		5,111,458
- death before retirement		6,673,095		6,857,252
- termination		13,723,029		13,590,041
Total		925,458,206		933,603,380
Inactive Members		13,358,913		12,074,277
Annuitants		762,668,410		702,926,185
Total	**$**	**1,701,485,529**	**$**	**1,648,603,842**
Unfunded Accrued Liability (UAL)	**$**	**499,603,514**	**$**	**475,887,077**

SUMMARY OF ACTUARIAL VALUATION RESULTS				
Total Contribution Rate		1.00%		1.00%
Estimated Contribution from Court Fees	$	18,100,000	$	18,800,000
Normal Cost				
- dollars	$	35,205,167	$	36,299,648
- percent of payroll		2.09%		2.11%
Contribution Available to Amortize UAL		-0.02%		-0.02%
Accrued Liability	$	1,452,657,797	$	1,399,876,657
Amortization Period in Years		Never		Never
Funded Ratio		65.6%		66.0%
Valuation Payroll	$	1,684,457,747	$	1,720,362,464
Active Members		37,167		38,206

Actuarial Balance Sheet –

Judicial Retirement System of Texas Plan Two Fund

August 31, 2018 (With Comparative Totals at August 31, 2017)

ACTUARIAL BALANCE SHEET	August 31, 2018	August 31, 2017
Assets:		
Actuarial Value Assets	$ 447,077,710	$ 420,850,181
Present Value of Future Normal Cost		
Member	31,204,882	30,666,801
Employer	52,193,934	49,992,889
Total	83,398,816	80,659,690
Total	**$ 530,476,526**	**$ 501,509,871**
Liabilities:		
Present Value of Benefits		
Active Members		
- service retirement	$ 267,690,585	$ 246,762,309
- disability	2,891,604	2,811,567
- death before retirement	31,290,493	30,209,524
- termination	12,138,660	11,742,954
Total	314,011,342	291,526,354
Inactive Members	10,662,210	11,422,977
Annuitants	246,496,810	241,314,049
Total	**$ 571,170,362**	**$ 544,263,380**
Unfunded Accrued Liability (UAL)	**$ 40,693,836**	**$ 42,753,509**
SUMMARY OF ACTUARIAL VALUATION RESULTS		
Total Contribution Rate	23.12%	23.09%
Normal Cost		
- dollars	$ 16,678,998	$ 16,318,181
- percent of payroll	20.83%	20.57%
Contribution Available to Amortize UAL	2.29%	2.52%
Accrued Liability	$ 487,771,546	$ 463,603,690
Amortization Period in Years	69	63
Funded Ratio	91.7%	90.8%
Valuation Payroll	$ 80,072,000	$ 79,330,000
Active Members	561	557

Summary of Actuarial Methods and Assumptions – Pension Plans

In August 2017, the Board of Trustees of the System adopted the actuarial methods and assumptions for the Employees Retirement System (ERS), the Law Enforcement and Custodial Officer Supplemental Retirement Fund (LECOSRF), and the Judicial Retirement Plan II Fund (JRS II) with assistance from the System's actuary and based on the actuarial experience study that covered the fiscal years from 2012 to 2016. This actuarial valuation also incorporates the most significant across-the-board pay increases budgeted by the State Legislature when they are granted for the current biennium.

The System relies on the services of qualified actuaries to perform periodic valuations of the assets and liabilities of the pension funds. Gabriel, Roeder, Smith and Company has been the pension actuary for the System since June 2013. The actuarial methods used for the three funds are summarized in Figure 1.

Actuarial Cost Method

The Entry Age Normal Actuarial Cost Method was used for the actuarial valuation. Actuarial gains and losses resulting from differences between actual and assumed experience are recognized as they occur each year. These gains or losses increase or decrease the unfunded actuarial accrued liability.

The normal cost rate is based on the benefits payable to each individual member. As the number of members eligible for the newest benefit provisions increases over time, the normal cost rate is expected to decrease, and the amount available to amortize the unfunded liability will increase as a percentage of payroll. The calculation of the years required to amortize the unfunded actuarial accrued liability uses an open group projection. The total contribution rate is set by statute; the variable from year to year is the funding period.

Actuarial Valuation of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Offsetting unrecognized gains and losses are immediately recognized, with the shortest remaining bases recognized first and the net remaining bases continue to be recognized on their original time frame. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of investment-related expenses. The actuarial value of assets was reset to be equal to the market value of assets as of August 31, 2017 and the new method will be applied prospectively.

For actuarial assumptions, the members of the System are segregated into four groups – Regular State Employees, Law Enforcement and Custodial Officer (LECO) Members, Elected Class, and Judicial Class. The economic assumptions for these groups are summarized in Figure 1.

Pension Liability for GASB Statement 67 Reporting

The calculation of the liability associated with the benefits to satisfy the reporting requirements of GASB Statement No. 67 is not applicable for purposes of funding the plan. A calculation of the plan's liability for other purposes may produce significantly different results. The Schedule of Employer Contribution in the Required Supplementary Information section provides a comparison of the actuarial determined contribution to actual contribution.

Figure 1
Economic Assumptions for Employee Classes

	Employee Class & Supplemental Benefits for CPO/CO's	Elected Class	Judicial Class
Investment Rate of Return	7.5% per year, compounded annually.		
Administrative Expenses (As a percentage of payroll per year, compounded annually)	ERS Fund: 0.33% LECOS Fund: 0.08%	0.33%	0.33%
Salary Increase:	• Include 2.5% annual increase for inflation plus increases for merit, promotion and longevity. • See Table 1 on next page for rates of salary increase for sample ages.	• Includes 2.5% annually for inflation plus 0.50% for real wage growth (productivity). • No salary increase for legislators.	• Includes 2.5% annually for inflation plus 0.50% for real wage growth (productivity).
Payroll Growth	3.0% per year, compounded annually.		
Post-retirement Increase	N/A	2.75% per year, compounded annually	N/A

Summary of Actuarial Methods and Assumptions – Pension Plans

Table 1
Economic Assumption –
Rates of Merit, Promotion and Longevity Salary Increases
For Regular State Employees and LECO Members, Male and Female (Note A)

	Years of Service – Non-CPO/CO							Years of Service – CPO/CO					
Age	**0**	**1**	**2-4**	**5-9**	**10-14**	**15-19**	**20+**	**0**	**1**	**2-4**	**5-8**	**9-17**	**18+**
20	6.80%	5.25%	4.75%	4.30%				7.0%	5.0%	3.5%	2.5%	2.25%	2.0%
30	5.90	5.25	4.75	3.00	2.50%	2.00%		7.0	5.0	3.5	2.5	2.25	2.0
40	4.90	4.75	4.00	3.00	2.50	1.90	1.80%	7.0	5.0	3.5	2.5	2.25	2.0
50	3.90	3.70	3.20	2.70	2.20	1.70	1.60	7.0	5.0	3.5	2.5	2.25	2.0
60	2.90	2.70	2.30	2.00	1.60	1.40	1.30	7.0	5.0	3.5	2.5	2.25	2.0

Note A: No salary increases are assumed where no rates are shown.

The demographic assumptions are summarized in Tables 2 to 8.

Table 2
Demographic Assumption –
Annual Rates of Termination from Active Employment before Retirement (Note B)

	Male and Female Regular State Employees			Male and Female LECO Members
Eligibility Service	**Entry age 35 or younger**	**Entry age over 35**	**Eligibility Service**	**All entry ages**
0	25.25%	19.63%	0	23.00%
5	10.86	8.16	5	8.81
10	5.67	5.11	10	4.96
15	3.64	3.29	15	2.90
20	1.92	1.00	19+	0.00
25+	0.85	1.00		

Elected and Judicial Class: 4 per 100 members not eligible for service retirement

Note B: Entry age is the determined as a member's current age minus their current years of State service, which is generally the age at which the member was hired with the State.

Table 3
Demographic Assumption –
Mortality Rates for Active Members (Notes C & D)

Age	Females	Males
20	0.0162%	0.0406%
30	0.0218	0.0452
40	0.0396	0.0628
50	0.1102	0.1686
60	0.2442	0.4688
65	0.3696	0.8277

Note C: It is assumed that 1.0% of Regular State Employee and LECO Member deaths are occupational. It is also assumed that there are no occupational deaths of members in the Elected and Judicial Classes

Note D: The base rates indicated above are based on the RP-2014 Active Member Mortality Tables. Additionally, generational mortality improvements are projected from the year 2014 based on the Ultimate MP scale.

Summary of Actuarial Methods and Assumptions – Pension Plans

Table 4
Demographic Assumption –
Mortality Rates for Service Retirees and Beneficiaries (Note E)

Age	Females (All)	Males (Non-LECO)	Males (LECO)
50	0.1215%	0.1825%	0.2035%
55	0.2150	0.3145	0.3507
60	0.3804	0.5421	0.6045
65	0.6730	0.9344	1.0418
70	1.1908	1.6105	1.7957
75	2.1069	2.7757	3.0950
80	3.7277	4.7842	5.3345

Table 5
Demographic Assumption –
Mortality Rates for Disability Retirees (Note F)

Age	Females	Males
50	1.1907%	2.0395%
55	1.4479	2.3369
60	1.6999	2.6604
65	2.0860	3.1685
70	2.8203	4.0346
75	4.1045	5.4287
80	6.1036	7.6616

Note E: The base rates indicated above are based on the 2017 State Retirees of Texas Mortality Tables. Rates shown for male LECO Members are based on the same base rates with ages set forward one year. Additionally, generational mortality improvements are projected from the year 2017 based on the Ultimate MP scale.

Note F: The base rates indicated above are based on the RP-2014 Disabled Retiree Mortality Tables. Additionally, generational mortality improvements are projected from the year 2014 based on the Ultimate MP scale.

Table 6
Demographic Assumption –
Disability Retirement Rates (Note G)

	Regular State Employees, Elected Class and Judicial Class		LECO Members
Age	Males	Females	Females & Males
30	0.0275%	0.0135%	0.0092%
40	0.0749	0.0896	0.0586
50	0.1484	0.2072	0.1774
60	0.3740	0.5583	0.3150

Note G: It is assumed that 99% of Regular State Employee disability retirements are non-occupational and 1% of Regular State Employee disability retirements are occupational. Similarly, it is assumed that 95% of LECO Member disability retirements are non-occupational, 4.5% of LECO Member disability retirements are non-total occupational, and 0.5% of LECO Member disability retirements are total occupational. It is also assumed that there are no occupational disability retirements in the Elected and Judicial Classes. The rates do not apply before the member is eligible for the benefit.

Table 7

Demographic Assumption –
Percentage of Members Electing Various Benefit Options (Notes H & I)

	Option Selection Percentage		
	Standard	Option 1	Option 4
Male Member			
Disability	50%	50%	0%
Service Retirement			
Non-LECO Members	100%	0%	0%
LECO Members	60%	40%	0%
Death Benefit Plan	0%	85%	15%
Female Member			
Disability	75%	25%	0%
Service Retirement	100%	0%	0%
Death Benefit Plan	0%	70%	30%

Note H: Descriptions of Options 1 and 4 are presented in the Summary of Plan Provisions in the Introductory Section.
Note I: Males are assumed to be two years older than females

Table 8

Demographic Assumption –
Service Retirement Rate (Note J and K)

Regular State Employees – Males & Females

Age	Eligibility A Rule of 80	Eligibility B Other Age/ Service
<50	50%	
50	40	
51	35	
52	30	
53	28	
54	27	
55	26	
56	25	
57	24	
58	23	
59	22	
60	21	18%
61	20	12
62	33	20
63-64	27	18
65-74	27	27
75	100	100

LECO Members Males & Females (Note L)

Age	Eligibility C 20 yrs CPO/CO	Age	Eligibility D Age 55 & 10 yrs CPO/CO
<48	3%		
48	4	**55**	20%
49	5	**56**	18
50	60	**57**	16
51-61	33	**58-61**	14
62-74	50	**62-74**	27
75	100	**75**	100

Elected Class

Age	Male & Female
50-61	10%
62-74	20
75	100

Judicial Class (Note M)

	Male & Female	
Age	Unreduced	Reduced
50-64	20%	10%
65-69	20	N/A
70-74	25	N/A
75	100	N/A

Note J: No service retirements are assumed where no rates are shown.
Note K: Service retirement rates are determined by the first set of eligibility requirements satisfied. Adjustments are made to individuals depending on their age of first eligibility.
Eligibility A: Age plus eligibility service is greater than or equal to 80 ("Rule of 80")
Eligibility B: Regular State Employee retirement eligibility other than Rule of 80
Eligibility C: 20 years of CPO/CO service
Eligibility D: Age 55 and 10 years of CPO/CO service
Note L: LECO Members are assumed to follow retirement patterns for Eligibility A or B if either is satisfied prior to satisfying Eligibility C or D.
Note M: Judicial Class members are assumed to retire when they have accrued a standard retirement annuity of 90% of salary.

Active Member Valuation Data

Valuation Year August 31	Number (Note A)	Actual Annual Payroll	Average Pay (Note B)	Change in Average Pay
		$	$	%
Employees Retirement Fund:				
2009	141,223	5,603,756,283	40,202	1.9
2010	142,490	5,878,680,811	41,022	2.0
2011	137,293	5,926,331,865	41,620	1.5
2012	132,669	5,720,722,855	42,188	1.4
2013	133,669	5,713,759,137	42,564	0.9
2014	134,162	5,955,460,705	44,374	4.3
2015	142,409	6,150,194,660	44,990	1.4
2016	146,390	6,742,143,036	46,495	3.3
2017	141,629	6,859,706,582	47,986	3.2
2018	141,535	6,811,925,525	48,581	1.2
Law Enforcement and Custodial Officer Supplemental Retirement Fund:				
2009	37,819	1,379,532,687	36,687	(0.9)
2010	39,052	1,494,510,816	37,979	3.5
2011	36,806	1,520,864,574	39,454	3.9
2012	37,404	1,457,492,314	39,444	0.0
2013	37,415	1,429,059,562	39,469	0.1
2014	37,084	1,496,012,750	41,584	5.4
2015	38,526	1,506,027,764	41,957	0.9
2016	39,066	1,725,879,688	44,634	6.4
2017	38,206	1,746,349,412	45,029	0.9
2018	37,167	1,689,590,272	45,321	0.6
Judicial Retirement Plan Two Fund:				
2009	533	66,463,534	127,519	(0.1)
2010	539	67,204,906	127,560	0.0
2011	546	67,927,624	127,573	0.0
2012	541	68,373,289	127,130	(0.3)
2013	545	68,781,009	127,550	0.3
2014	554	77,441,466	142,820	12.0
2015	563	77,500,736	142,721	(0.1)
2016	548	78,260,550	142,770	0.0
2017	557	78,189,668	142,424	(0.2)
2018	561	78,772,445	142,731	0.2

Note A: Number of active contributing members as of August 31, excluding those who retired August 31 because they were included as retirees in the actuarial valuation.

Note B: The average rate of salary is based on the salary for the month of August

Retirees and Beneficiaries Added to and Removed from the Annuity Payrolls

Valuation Year August, 31	Added to Rolls		Removed from Rolls		Other Beneficiaries		Rolls end of Year		Increase	Average
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	Annual Benefits	Annual Benefit
		$		$		$		$	%	$
Employees Retirement Fund:										
2009	4,433	85,551,288	1,849	30,235,704	460	8,045,532	75,722	1,377,430,308	4.8	18,191
2010	4,870	100,938,168	1,828	30,584,136	547	9,281,208	79,311	1,457,065,548	5.8	18,372
2011	5,808	123,585,132	2,237	35,797,140	548	8,145,660	83,430	1,552,999,200	6.6	18,614
2012	5,928	124,604,412	2,128	35,049,012	569	7,965,072	87,799	1,650,519,672	6.3	18,799
2013	5,287	108,395,484	2,418	36,921,000	699	8,999,592	91,367	1,730,993,748	4.9	18,946
2014	6,231	132,027,948	2,331	38,751,696	573	11,250,312	95,840	1,835,520,312	6.0	19,152
2015	6,042	134,725,212	2,506	40,066,764	627	10,129,440	100,003	1,940,308,200	5.7	19,402
2016	5,668	132,332,424	2,555	42,411,504	642	10,458,660	103,758	2,040,687,780	5.2	19,668
2017	5,967	141,001,272	2,869	48,060,288	674	11,351,772	107,530	2,144,980,536	5.1	19,948
2018	6,029	151,352,376	2,912	49,203,420	714	11,816,892	111,361	2,258,946,384	5.3	20,285
Law Enforcement and Custodial Officer Supplemental Retirement Fund:										
2009	561	3,954,780	169	1,361,916	51	44,760	6,647	37,814,736	7.5	5,689
2010	635	3,604,140	147	1,163,112	40	(120,456)	7,175	40,135,308	6.1	5,594
2011	695	3,915,084	186	1,536,500	44	22,352	7,728	42,536,244	6.0	5,504
2012	895	5,069,712	195	1,439,820	49	202,200	8,477	46,368,336	9.0	5,470
2013	744	3,771,816	183	1,336,200	51	230,952	9,089	49,034,904	5.8	5,395
2014	1,071	5,376,924	194	1,238,712	58	225,252	10,024	53,398,368	8.9	5,327
2015	959	4,989,900	197	1,336,440	59	332,088	10,845	57,383,916	7.5	5,291
2016	803	4,540,728	205	1,149,108	72	305,328	11,515	61,080,864	6.4	5,304
2017	876	5,132,832	214	1,106,412	71	310,464	12,248	65,417,748	7.1	5,341
2018	966	6,151,404	205	1,094,460	71	287,868	13,080	70,762,560	8.2	5,410
Judicial Retirement Plan Two Fund:										
2009	36	2,220,108	1	70,656	0	16,308	152	8,876,549	32.3	58,398
2010	12	737,508	2	119,556	2	122,491	164	9,616,992	8.3	58,640
2011	43	2,792,244	1	29,580	2	152,880	208	12,532,536	30.3	60,253
2012	8	441,948	4	250,680	3	167,892	215	12,891,696	2.9	59,961
2013	43	2,571,696	5	278,964	1	68,580	254	15,253,008	18.3	60,051
2014	14	1,024,752	7	348,120	6	249,000	267	16,178,640	6.1	60,594
2015	57	4,365,012	9	467,832	7	403,020	322	20,478,840	26.6	63,599
2016	10	555,060	5	319,908	4	289,548	331	21,003,540	2.6	63,455
2017	48	3,177,144	8	448,908	7	383,532	378	24,115,308	14.8	63,797
2018	16	1,032,864	6	481,368	5	309,336	393	24,976,140	3.6	63,553

Schedule of Funding Progress – Defined Benefit Plans

Actuarial Valuation Date August 31	(a) Actuarial Value of Assets	[Note A] (b) Actuarial Accrued Liability (AAL)	(c) (Overfunded) Unfunded AAL (UAAL) (b) - (a)	(b) Funded Ratio (a)/(b)	[Note B] (e) Covered Payroll	(f) UAAL As A Percentage Of Covered Payroll (c)/(e)
	(000's)	(000's)	(000's)	%	(000's)	%
Employees Retirement Fund:						
2009	23,509,622	26,191,650	2,682,028	89.8	5,814,417	46.1
2010	23,628,567	27,668,876	4,040,309	85.4	5,930,141	68.1
2011	23,997,445	28,398,213	4,400,768	84.5	5,795,185	75.9
2012	24,272,514	29,377,069	5,104,555	82.6	5,676,509	89.9
2013	24,667,639	31,886,026	7,218,387	77.4	5,959,473	121.1
2014	25,431,922	32,924,737	7,492,815	77.2	6,171,443	121.4
2015	25,850,542	33,868,360	8,017,818	76.3	6,659,647	120.4
2016	26,557,130	35,303,165	8,746,035	75.2	6,806,457	128.5
2017	26,371,827	37,629,785	11,257,958	70.1	6,796,226	165.7
2018	27,359,943	38,989,263	11,629,320	70.2	6,875,887	169.1
Law Enforcement and Custodial Officer Supplemental Retirement Fund:						
2009	780,808	870,179	89,371	89.7	1,464,483	6.1
2010	802,897	930,747	127,850	86.3	1,507,950	8.5
2011	830,522	960,953	130,431	86.4	1,475,432	8.8
2012	832,451	1,015,668	183,217	82.0	1,498,979	12.2
2013	843,017	1,197,164	354,147	70.4	1,627,699	21.8
2014	883,595	1,206,770	323,175	73.2	1,609,491	20.1
2015	909,249	1,262,311	353,062	72.0	1,750,709	20.2
2016	933,534	1,312,392	378,858	71.1	1,743,679	21.7
2017	923,990	1,399,877	475,887	66.0	1,720,362	27.7
2018	953,054	1,452,658	499,604	65.6	1,684,458	29.7
Judicial Retirement System Plan Two Fund:						
2009	248,279	255,569	7,290	97.1	67,968	10.7
2010	264,515	281,760	17,245	93.9	68,755	25.1
2011	283,936	300,163	16,227	94.6	69,655	23.3
2012	300,433	315,199	14,766	95.3	68,778	21.5
2013	318,026	359,059	41,033	88.6	77,854	52.7
2014	348,431	386,286	37,855	90.2	79,123	47.8
2015	372,615	404,011	31,396	92.2	80,352	39.1
2016	395,457	425,865	30,408	92.9	78,238	38.9
2017	420,850	463,604	42,754	90.8	79,330	53.9
2018	447,078	487,772	40,694	91.7	80,072	50.8

Note A: For ERS and LECOS, the actuarial accrued liability along with funded ratio are based on a total liability, which is based on the benefit provisions in effect for each active member and a normal cost rate that is based on the benefits in effect for new members after plan changes in August 31, 2009 and August 31, 2013.

Note B: Covered payroll is the expected payroll for the fiscal year following the valuation date.

Solvency Test

Funding Objective

The System's funding objective is to meet long term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will pay all promised benefits when due – the ultimate test of financial soundness.

Evaluation of Funding Objective

A short-term solvency test is one way of evaluating a system's progress under its funding program. In a short-term solvency test, the plan's present assets are compared with:

1. Active member contributions on deposit;
2. The liabilities for future benefits to present retirees; and
3. The liabilities for service already rendered by active members.

In a system that has been following the level contribution rate of payroll financing principle, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retirees (liability 2) will be fully covered by present assets except in rare circumstances. In addition, the liabilities for service already rendered by active members (liability 3) will be partially covered by the remainder of present assets. Generally, if the system has been using level contribution rate financing, the funded portion of liability 3 will increase over time. Following is a summary of the solvency test:

	Aggregate Accrued Liabilities For						
Valuation Year August 31,	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Members (Employer Financed Portion)	Valuation Assets	Portion of Accrued Liabilities Covered by Assets (1)	(2)	(3)
	$	$	$	$	%	%	%
Employees Retirement Fund (Note A):							
2009	4,460,644,477	12,648,155,181	9,798,979,599	23,509,621,791	100	100	65.3
2010	4,719,703,277	13,407,823,189	10,284,288,042	23,628,566,500	100	100	53.5
2011	4,943,684,166	14,325,177,797	9,781,265,638	23,997,444,804	100	100	48.3
2012	5,075,213,967	15,243,956,208	9,657,986,616	24,272,514,483	100	100	40.9
2013	5,201,006,487	16,148,245,090	10,536,774,798	24,667,639,104	100	100	31.5
2014	5,213,640,470	17,113,870,539	10,597,226,202	25,431,922,496	100	100	29.3
2015	5,235,063,313	18,080,000,823	10,553,295,814	25,850,542,024	100	100	24.0
2016	5,509,428,282	19,017,977,910	10,775,759,170	26,557,130,705	100	100	18.8
2017	5,709,094,713	21,378,759,742	10,541,930,919	26,371,827,298	100	96.7	0.0
2018	5,897,455,633	22,527,977,524	10,563,830,405	27,359,943,116	100	95.3	0.0
Law Enforcement and Custodial Officer Supplemental Retirement Fund (Note A):							
2009	-	334,638,616	572,463,018	780,807,727	-	100	77.9
2010	7,315,238	367,991,489	591,296,971	802,897,017	100	100	72.3
2011	13,897,600	400,877,467	578,021,779	830,522,385	100	100	71.9
2012	19,540,552	447,451,269	577,263,635	832,451,079	100	100	63.3
2013	24,432,912	482,687,108	690,043,817	843,016,798	100	100	48.7
2014	29,508,062	533,252,341	644,009,518	883,594,932	100	100	49.8
2015	34,455,599	578,926,025	648,929,765	909,249,614	100	100	45.6
2016	41,480,394	618,987,770	651,924,337	933,534,062	100	100	41.9
2017	47,025,982	702,926,185	649,924,490	923,989,580	100	100	26.8
2018	51,536,313	762,668,410	638,453,074	953,054,283	100	100	21.7
Judicial Retirement Plan Two Fund (Note A):							
2009	51,733,112	85,844,874	117,990,788	248,279,312	100	100	93.8
2010	57,347,421	92,253,133	132,159,921	264,515,185	100	100	87.0
2011	57,768,713	120,798,133	121,595,978	283,935,401	100	100	86.7
2012	63,677,503	122,570,887	128,950,762	300,433,111	100	100	88.5
2013	64,435,226	147,052,378	147,571,031	318,025,658	100	100	72.2
2014	69,364,268	153,382,909	163,539,195	348,430,575	100	100	76.9
2015	67,427,634	194,524,402	142,058,536	372,615,005	100	100	77.9
2016	73,450,388	196,779,287	155,635,632	395,457,335	100	100	80.5
2017	72,977,421	241,314,049	149,312,220	420,850,181	100	100	71.4
2018	78,282,916	246,496,810	162,991,820	447,077,710	100	100	75.0

Note A: The actuarial accrued liability for ERS and LECOS is based on a total liability which is based on the benefit provisions in effect for each active member and a normal cost rate which is based on the benefits in effect for members hired after August 31, 2013.

Analysis of Financial Experience

Actual financial experience will not coincide exactly with assumed financial experience because the future cannot be predicted with 100 percent precision. The assumed experience should be changed to reflect observed reality when an actuarial investigation reveals that the difference between actual and assumed experience in the various risk areas to be material and persistent.

If the differences between actual and assumed experience is financially favorable or unfavorable, such differences are called actuarial gains or losses. In the actuarial valuation of the System, actuarial gains and losses are recognized immediately, with actuarial gains decreasing the unfunded actuarial accrued liability and actuarial losses increasing the unfunded actuarial accrued liability. A general description of actuarial gains and losses for age and service retirements, disability retirements, death-in-service benefits, and withdrawal from employment is summarized as follows:

Age and Service Retirement:

If members retire at younger (older) ages or with final average pay that is higher (lower) than assumed, there is a loss (gain).

Disability Retirement:

If disability claims are more (less) than assumed, there is a loss (gain).

Death-in-Service Benefit:

If survivor claims are more (less) more than assumed, there is a loss (gain).

Withdrawal from Employment:

If withdrawals are less (more) less than assumed, there is a loss (gain).

The gains and losses in actuarial accrued liabilities resulting from differences between assumed experience and actual experience are summarized as follows:

	Increase/(Decrease) in Unfunded Accrued Liability for Year (in Millions)					
	ERS		LECOS		JRS II	
Type of Activity	**2018**	**2017**	**2018**	**2017**	**2018**	**2017**
Contribution Income and Interest on Unfunded Actuarial Accrued Liability If contributions are received in excess of both the normal cost and interest on the unfunded actuarial accrued liability, there is a decrease. If less, an increase.	440.5	359.8	38.0	35.2	1.1	1.3
Components of (Gain)/Loss						
Investment Income If there is greater investment income than assumed on the actuarial value of assets, there is a gain. If less income, a loss.	(98.3)	1,216.0	(3.4)	42.8	(1.6)	(1.1)
Active Member Demographics Combined (gain)/loss from age and service retirements, disability retirements, death-in-service benefits, and withdrawal from employment	10.3	20.9	(14.5)	(9.8)	(2.6)	3.4
Pay Increases If there are smaller pay increases than assumed, there is a gain. If greater increases occur, a loss.	75.4	98.2	(4.0)	0.9	0.4	0.0
Death After Retirement If retirees live longer than assumed, there is a loss. If not as long, a gain.	(30.5)	(35.7)	(1.1)	(2.7)	0.1	0.7
Other Miscellaneous (gains)/losses resulting from data adjustments, timing of financial transactions, valuation methods, etc.	(26.0)	(4.4)	8.7	3.3	0.5	1.4
Increase/(Decrease) in Unfunded Accrued Liability During Year from Financial Experience	**371.4**	**1,654.8**	**23.7**	**69.7**	**(2.1)**	**5.7**
Non-Recurring Items Adjustments for plan amendments, changes in actuarial assumptions, increase in Service Retirement Formula, legislative action, etc.		857.1		27.3		6.6
Composite Increase/(Decrease) During Year	**371.4**	**2,511.9**	**23.7**	**97.0**	**(2.1)**	**12.3**

Actuary’s Certification Letter – State Retiree Health Plan

Section I - Certification of GASB No. 74 Actuarial Valuation

At the request of the Employees Retirement System of Texas (ERS), we have performed an actuarial valuation of the Other Post-Employment Benefits provided under the Texas Employees Group Benefits Program (GBP) for the twelve-month period ending August 31, 2018 (GBP OPEB). The purpose of this report is to present the results of our valuation and provide the information necessary to determine financial statement entries consistent with the Governmental Accounting Standards Board Statement No. 74 Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans (GASB No. 74).

Actuarial computations under GASB No. 74 are for purposes of fulfilling governmental plan financial accounting requirements. The calculations reported herein have been made on a basis consistent with our understanding of GASB No. 74 and the GBP. The information presented in this report is solely for purposes of compliance with GASB No. 74. This report does not provide any advice with respect to the manner in which the benefits are funded (i.e., pay-as-you go funding as opposed to prefunding the benefits).

We have based our valuation on current and former employee data as of August 31, 2018 provided by ERS and the Teachers Retirement System (TRS) and plan provisions provided by ERS. We have used the actuarial methods and assumptions described in Section VIII of this report. The actuarial valuation has been performed on the basis of the plan benefits described in Section IX.

To the best of our knowledge, all current active and retired employees eligible to participate in the plan as of the valuation date and all other individuals who have a vested benefit under the plan have been included in the valuation. Furthermore, to the best of our knowledge and belief, all plan benefits have been considered in the development of costs.

ERS and TRS remain solely responsible for the accuracy and comprehensiveness of the respective data provided. However, to the best of our knowledge, no material biases exist with respect to any imperfections in the data provided by these sources. To the extent that any imperfections exist in the data records, we have relied on best estimates provided by ERS and TRS. We have not audited the data provided, but have reviewed it for reasonableness and consistency relative to previously provided information.

To the best of our knowledge, the actuarial information supplied in this report is complete and accurate. In our opinion, each of the assumptions used is reasonably related to the experience of the plan and to reasonable expectations and represents our best estimate of anticipated experience under the plan solely with respect to that individual assumption. All of our work conforms to generally accepted actuarial principles and practices and to the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Rudd and Wisdom, Inc. prepared and presented in Sections V and VI of this report the information that is required to be included in the notes to the Financial Statements and the Required Supplementary Information.

The undersigned individuals are members of the American Academy of Actuaries who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Mitchell L. Bilbe, F.S.A.
Member of American Academy of Actuaries

Philip S. Dial, F.S.A.
Member of American Academy of Actuaries

Christopher S. Johnson, F.S.A.
Member of American Academy of Actuaries

Summary of Results for FY 2018

Actuarial Valuation Results as of August 31, 2018		
	($ thousands)	As a % of Payroll
1. Number of Members (actual count, not in thousands)		
a. Actives	231,911	
b. Deferred Vesteds	11,564	
c. Retirees and Nominees	122,350	
d. Total Number of Members	365,825	
2. Payroll of Active Members for FY 2018	$ 12,047,167	
3. Actuarial Present Value of Projected Benefit Payments		
a. Actives	$29,526,857	
b. Deferred Vesteds	1,662,387	
c. Retirees and Nominees	12,776,545	
d. Total	$ 43,965,789	364.9%
4. Total OPEB Liability		
a. Actives	$15,579,240	
b. Deferred Vesteds	1,662,387	
c. Retirees and Nominees	12,776,545	
d. Total	**$30,018,172**	**249.2%**
5. Fiduciary Net Position	**$ 380,430**	**3.2%**
6. Net OPEB Liability [4.d – 5]	**$29,637,742**	**246.0%**
7. Actuarially Determined Contribution for FYE August 31, 2018		
a. Norma Cost	$ 1,206,106	10.0%
b. Amortization of Net OPEB Liability	1,126,538	9.4%
c. Total ADC for FYE August 31, 2018	**$ 2,332,644**	**19.4%**

Summary of Actuarial Methods and Assumptions – State Retiree Health Plan

Consistency with Assumptions Used for Retirement Plan Valuations

Most of the employees and retirees covered by the Group Benefits Program are also covered by either the System or Teacher Retirement System (TRS) retirement plans that are subject to periodic actuarial valuations. Where appropriate, assumptions were utilized that were previously adopted by the System and TRS Boards for use in performing the retirement plan valuations. However, certain aspects of the OPEB valuation process require the use of assumptions that are unique to OPEB; for example, the discount rate assumption and the health benefit cost trend assumption as discussed below.

Changes in Actuarial Assumptions

Since the last valuation was prepared for this plan, demographic assumptions (including rates of retirement, disability, termination, and mortality, and assumed salary increases) for Higher Education members have been updated to reflect assumptions recently adopted by the Teacher Retirement System (TRS) Trustees. These new assumptions were adopted to reflect an experience study on the TRS retirement plan performed by the TRS retirement plan actuary.

In addition, assumed Expenses, assumed Per Capita Health Benefit Costs and assumed Health Benefit Cost, Retiree Contribution and Expense trends have been updated to reflect recent experience and its effects on our short-term expectations. Furthermore, (a) the percentage of current retirees and their spouses not yet eligible to participate in the HealthSelect Medicare Advantage Plan and future retirees and their spouses who will elect to participate in the plan at the earliest date at which coverage can commence and (b) the percentage of future retirees assumed to be married and electing coverage for their spouse have been updated to reflect recent plan experience and expected trends.

Lastly, the discount rate assumption was increased from 3.51% to 3.96% as a result of requirements by GASB No. 74 to utilize the yield or index rate for 20-year, tax-exempt general obligation municipal bonds rated AA/Aa (or equivalent) or higher in effect on the measurement date.

Discount Rate Assumptions

In accordance with Paragraph No. 48 of GASB No. 74, the discount rate should be the single rate that reflects the following:

(a) the long-term expected rate of return on OPEB plan investments that are expected to be used to finance the payment of benefits, to the extent that (i) the OPEB plan's fiduciary net position (i.e., plan assets) is projected to be sufficient to make projected benefit payments and (ii) OPEB plan assets are expected to be invested using a strategy to achieve that return, and

(b) a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale), to the extent that the conditions in (a) are not met.

For each future period, if the amount of the OPEB plan's fiduciary net position is projected to be greater than or equal to the benefit payments that are projected to be made in that period and OPEB plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, the actuarial present value of benefit payments projected to be made in the period should be determined using the long-term expected rate of return on those investments. Per Paragraph No. 52 of GASB No. 74, the long-term expected rate of return should be based on the nature and mix of current and expected OPEB plan investments over a period representative of the expected length of time between (1) the point at which a plan member begins to provide service to the employer and (2) the point at which all benefits to the plan member have been paid. For this purpose, the long-term expected rate of return should be determined net of OPEB plan investment expense but without reduction for OPEB plan administrative expense. The municipal bond rate discussed in (b) above should be used to calculate the actuarial present value of all other benefit payments. The discount rate is the single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the actuarial present values determined using the long-term rate of return and the municipal bond rate applied to the appropriate periods as described above.

For this plan, the amount that the participating employers contribute to the OPEB plan each year is limited to the anticipated cost of providing benefits incurred during that year. As a result, the GBP is not expected to accumulate funds. (Although there are some accumulated funds as of August 31, 2018, such funds provide less than a full year's benefit payments and are expected to be depleted shortly.) Since no plan assets are expected to accumulate, the discount rate assumption must be based solely on the municipal bond rate discussed in (b) above. The assumed discount rate for the fiscal year ending August 31, 2018 is 3.96% based upon the Bond Buyer Index of

Summary of Actuarial Methods and Assumptions – State Retiree Health Plan (Continued)

general obligation bonds with 20 years to maturity with an average credit quality that is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA rating.

Health Benefit Cost Trend

For purposes of this valuation, the health benefit cost trend represents the expected annual rate of increase in health benefit costs, excluding the effects of changes in demographics and changes in plan provisions.

The health benefit cost trend has exceeded the rate of price increases in the general economy, as measured by changes in the Consumer Price Index (CPI), for many decades. Although this pattern is expected to continue for the foreseeable future, many economists anticipate that the degree to which the health benefit cost trend exceeds general inflation will eventually abate. These economists believe that the health benefit cost trend will reach an ultimate level that still exceeds general inflation, but not by as wide a margin as in past decades.

The health benefit cost trend assumption used in this report begins with our short term expectations of expected health benefit cost increases in the next year and gradually declines to a rate that exceeds the assumed rate of general price inflation by 2.0%.

Changes in Plan Provisions

Under Q/A #4.107 of GASB's Implementation Guide No. 2017-2, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans, any plan changes that have been adopted and communicated to plan members by the time the valuation is prepared must be included in the valuation. Accordingly, this valuation reflects the benefit changes that will become effective January 1, 2019, since these changes were communicated to plan members in advance of the preparation of this report. The only benefit change for fiscal year 2019 for HealthSelect retirees and dependents for whom Medicare is not primary is an increase in the out-of-pocket maximum for both HealthSelect and Consumer Directed HealthSelect (CDHP) from $6,550 to $6,650 for individuals and from $13,100 to $13,300 for families in order to remain consistent with Internal Revenue Service maximums. This minor benefit change is provided for in the fiscal year 2019 Assumed Per Capita Health Benefit Costs. There are no benefit changes for HealthSelect retirees and dependents for whom Medicare is Primary.

High-Cost Plan Excise Tax

Consistent with the prior valuation, the effects of the High-Cost Plan Excise Tax imposed by the ACA under Internal Revenue Code Section 4980I (sometimes referred to as the "Cadillac Tax") have been included in this valuation. The Excise Tax becomes effective in 2020, but the plan is not expected to be subject to the tax until 2068 based on current plan provisions, assumptions and participant demographics. The Net OPEB Liability is increased by the $197 million present value of the estimated Excise Taxes in future years, and the associated increase to the Actuarial determined Contributions is $7 million.

Medicare Part D

The Medicare Prescription Drug Improvement and Modernization Act of 2003 introduced a prescription drug benefit under Medicare (Medicare Part D) as well as a federal subsidy to sponsors of retiree healthcare benefit plans that provide a prescription drug benefit that is at least actuarially equivalent to the basic coverage provided under Medicare Part D (the Retiree Drug Subsidy).

For purposes of GASB No. 74, the valuation of future OPEB may not reflect the anticipated receipt of future federal government subsidy payments under the Medicare Part D Prescription Drug Program as required under GASB Technical Bulletin No. 2006-1. The Bulletin requires that Retiree Drug Subsidy payments to an employer be reported by the employer as revenue, rather than being netted against the employer's OPEB cost for prescription drug coverage.

The System implemented an Employer Group Waiver Plan plus Commercial Wrap (EGWP plus Wrap) on January 1, 2013 in order to provide the plan with the benefit of increased subsidies and discounts available under such an arrangement. The Retiree Drug Subsidy has been significantly reduced as a result of the implementation of the EGWP plus Wrap. The Retiree Drug Subsidies are excluded from this valuation in accordance with GASB Technical Bulletin No. 2006-1.

The projected cost of the EGWP plus Wrap reflects the subsidies which are expected to be provided by the Federal government under Medicare Part D and the discounts expected to be provided by drug manufacturers as required under the ACA.

Economic Assumptions

Administrative Expenses

The expenses to administer the GBP health benefits are (i) $189.24 ($180.24 for medical plus $9.00 for prescription drugs) per year per covered member for external HealthSelect administrative expenses for fiscal year 2019 and (ii) the Patient-Centered

Summary of Actuarial Methods and Assumptions – State Retiree Health Plan (Concluded)

Outcomes Research Institute (PCORI) fees payable under the ACA are $3.34 per year per covered member for fiscal year 2019. The ACA fees per covered member are the same regardless of whether the member covers dependents. Under the terms of the ACA, the PCORI fee will not be assessed after August 31, 2019.

Stop-loss Reinsurance
Stop-loss reinsurance is not purchased for the Group Benefits Program.

Discount Rate
Equal to the municipal bond rate of 3.96%.

Health Benefit Cost Trend
The Annual Rate of Increase in Per Capita Health Benefit Cost assumptions are shown below.

Fiscal Year	Annual Rate of Increase
	%
2020	7.30
2021	7.40
2022	7.00
2023	6.50
2024	6.00
2025	5.50
2026	5.00
2027 and beyond	4.50

Trend Rate for Retiree Contributions
The portions of retiree contributions attributable to non-life insurance benefits for both HealthSelect and HealthSelect Medicare Advantage Plan are assumed to increase from their amounts in fiscal year 2019 at the rates shown below.

Fiscal Year	Annual Rate of Increase
	%
2020	0.00
2021	0.00
2022	7.00
2023	6.50
2024	6.00
2025	5.50
2026	5.00
2027 and beyond	4.50

Expense Trend Rate
Internal and external administrative expenses are assumed to increase 2.50% per annum.

Trend Rate for the Opt-Out Credit
The monthly benefit of $60 in fiscal year 2019 is not assumed to increase in the future.

Health Coverage by Governmental Plans
There has been no consideration of anticipated changes in laws concerning health costs covered by governmental programs. However, presently enacted changes in the law that take effect in future periods that will affect future benefit coverages are considered. The proportion of health benefits which are currently covered by governmental programs has been assumed to remain constant in the future.

Active Member Valuation Data – State Retiree Health Plan

Valuation Year August 31,	Number (Note A)	Actual Annual Payroll	Average Pay	Change in Average Pay
		$	$	%
2011	227,786	10,376,487,000	45,554	2.2%
2012	225,075	10,268,696,000	45,623	0.2%
2013	226,181	10,478,117,000	46,326	1.5%
2014	228,805	10,963,773,000	47,918	3.4%
2015	230,023	11,176,584,000	48,589	1.4%
2016	235,108	11,786,869,000	50,134	3.2%
2017	230,199	11,745,310,000	51,022	1.8%
2018	231,911	12,047,167,000	51,947	1.8%

Note A: Includes return-to-work retirees and employees who have not yet satisfied the 90-day waiting period.

Retirees and Nominees Added and Removed– State Retiree Health Plan

Valuation Year August 31,	Added to Rolls		Removed from Rolls		Rolls End of Year		Increase/ (Decrease) Annual Benefits	Average Annual Benefit
	No.	Annual Benefits	No.	Annual Benefits	No. (Note A)	Annual Benefits		
		$		$		$	%	$
2011	6,882	4,711,974	2,780	1,903,413	90,213	646,197,287	0.4	7,163
2012	7,869	76,049,400	2,707	26,161,612	95,375	696,085,075	7.7	7,298
2013	7,790	47,110,385	3,111	18,813,916	100,054	724,381,544	4.1	7,240
2014	7,950	150,776,296	3,234	61,334,659	104,770	813,823,181	12.3	7,768
2015	7,880	86,944,401	3,339	36,841,035	109,311	863,926,547	6.2	7,903
2016	7,431	88,326,138	3,312	39,366,999	113,430	912,885,686	5.7	8,048
2017	8,046	149,945,106	3,596	67,014,989	117,880	995,815,803	9.1	8,448
2018	8,228	(104,727,144)	3,758	(47,832,354)	122,350	938,921,013	-5.7	7,674

Note A: Includes retirees who receive the Opt-Out Credit in lieu of health benefits.

Schedule of Funding Progress – State Retiree Health Plan

Actuarial Valuation Date August 31	(a) Actuarial Value of Assets	(b) Actuarial Accrued Liability (AAL)	(c) (Overfunded) Unfunded AAL (UAAL) (b) - (a)	(b) Funded Ratio (a)/(b)	(e) Covered Payroll	(f) UAAL As A Percentage Of Covered Payroll (c)/(e)
	(000's)	(000's)	(000's)	%	(000's)	%
2009	0	21,992,356	21,992,356	0.0	10,045,849	218.9
2010	0	22,329,556	22,329,556	0.0	10,437,333	214.0
2011	0	21,502,434	21,502,434	0.0	10,376,487	207.2
2012	0	20,823,410	20,823,410	0.0	10,268,696	202.8
2013	0	23,030,469	23,030,469	0.0	10,478,117	219.8
2014	0	24,701,904	24,701,904	0.0	10,963,773	225.3
2015	0	25,740,698	25,740,698	0.0	11,176,584	230.3
2016	0	27,091,372	27,091,372	0.0	11,786,869	229.8
2017	709,783	34,782,794	34,073,011	2.04	11,745,310	290.1
2018	380,430	30,018,172	29,637,742	1.27	12,047,167	246.0

STATISTICAL SECTION

Summary of Statistical Section

Governmental Activities:

Net Position

Changes in Net Position

Governmental Funds:

Fund Balances

Changes in Fund Balances

Changes in Net Position:

Proprietary Fund

Defined Benefit Plans

Deferred Compensation Plan and Cafeteria Plan

Benefit and Refund Payments — Defined Benefit Plans

Average Benefit Payments — Employee Class

Retired Members by Type of Benefit

Contribution Rates

Other Statistical Information:

Defined Benefit Plans

Other Programs

List of Participating Reporting Entities for State Retiree Health Plan

Summary of Statistical Section

This section contains additional historical perspective, context, and detail to assist financial statement users in understanding the System's economic condition and benefit offerings.

Financial Trends

The following statistical information provides trends to assist in understanding changes over time in financial performance of the benefit offerings:

- Net Position – Governmental Activities
- Changes in Net Position – Governmental Activities
- Fund Balances – Governmental Funds
- Changes in Fund Balances – Governmental Funds
- Changes in Net Position – Proprietary Fund
- Changes in Net Position – Defined Benefit Plans
- Changes in Net Position – Deferred Compensation Plans and Cafeteria Plan

Operating Information

The following statistical information provides benefit and member data to assist in understanding of the System's operations and benefit offerings:

- Benefit and Refund Payments – Defined Benefit Plans
- Average Benefit Payments – Employee Class
- Retired Members by Type of Benefit
- Contribution Rates
- Other Information: Defined Benefit Plans
- Other Information: Other Programs
- List of Participating Reporting Entities for State Retiree Health Plan

Net Position – Governmental Activities

Last Ten Fiscal Years (in 000's)
(Accrual Basis of Accounting)

This schedule provides ten year trend information for restricted and unrestricted assets. The information source of this schedule is Exhibit I.

	Fiscal Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Governmental Activities:	$	$	$	$	$	$	$	$	$	$
Restricted	282,484	136,599	227,985	284,814	325,412	379,311	440,466	498,874	87,945	1,060,687
Unrestricted	59	45	8	18	-	5	17	22	4	25
Total Governmental Activities	**282,543**	**136,644**	**227,993**	**284,832**	**325,412**	**379,316**	**440,483**	**498,896**	**87,949**	**1,060,712**

Changes in Net Position – Governmental Activities

Last Ten Fiscal Years (in 000's)
(Accrual Basis of Accounting)

This schedule provides trend information for the last ten fiscal years for expenses, program revenues, general revenues, and net revenues. The information source of this schedule is Exhibits II and VI.

	Fiscal Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Expenses	$	$	$	$	$	$	$	$	$	$
Governmental Activities:										
Social Security Administration	61	101	102	105	92	156	178	139	152	85
Death Benefits:										
Peace Officers, Firemen, etc.	1,866	4,164	2,784	2,141	5,444	5,738	2,162	7,281	8,826	9,432
Compensation to Victims of Crime	2,000	1,250	1,750	1,000	2,000	1,625	1,000	2,000	3,500	4,905
Retiree $5,000 Lump Sum	7,367	7,910	7,885	8,628	9,108	8,846	9,286	10,080	10,893	10,167
Employees Life, Accident and Health Insurance and Benefits::										
Claims Expenses	1,632,962	1,828,422	1,776,296	1,826,996	1,934,325	2,047,749	2,242,195	2,455,030	2,434,697	2,163,858
Administration	9,062	8,118	9,437	9,401	9,356	24,535	36,692	19,390	14,977	13,911
Total Expenses	**1,653,318**	**1,849,965**	**1,798,254**	**1,848,271**	**1,960,325**	**2,088,649**	**2,291,513**	**2,493,920**	**2,473,045**	**2,202,358**
Program Revenues										
Governmental Activities:										
Charges for Services:										
Administration Fees	64	85	66	74	75	70	71	71	70	70
Appropriations:										
Administration	28									
Death Benefits:										
Peace Officers, Firemen, etc.	1,838	4,164	2,784	2,141	5,444	5,738	2,162	7,281	8,826	9,432
Compensation to Victims of Crime	2,000	1,250	1,750	1,000	2,000	1,625	1,000	2,000	3,500	4,905
Retiree $5,000 Lump Sum	7,367	7,911	7,885	8,628	9,108	8,846	9,289	10,075	10,893	10,167
Insurance Contributions:										
Employer	1,108,150	1,233,781	1,414,732	1,434,186	1,527,002	1,631,916	1,834,956	1,992,220	1,963,388	2,582,653
Member	381,820	416,690	444,731	444,786	460,944	482,566	495,723	521,361	562,140	559,111
Other	161	157	209	192	179	141	121	120	125	135
Operating Grants and Contributions:										
Membership Fee Revenue										
Investment Income	48,100	36,671	12,758	13,188	(5,885)	10,913	6,298	19,492	13,569	5,631
Other	1,385	3,357	4,688	875	2,039	647	2,945	1,386	1,782	2,981
Total Program Revenues	**1,550,913**	**1,704,066**	**1,889,603**	**1,905,070**	**2,000,906**	**2,142,462**	**2,352,565**	**2,554,006**	**2,564,293**	**3,175,085**
General Revenues										
Transfers				40		90	115	(1,673)	64	37
Total General Revenues	**-**	**-**	**-**	**40**	**-**	**90**	**115**	**(1,673)**	**64**	**37**
Net Revenue Governmental Activities	**(102,405)**	**(145,899)**	**91,349**	**56,839**	**40,581**	**53,903**	**61,167**	**58,413**	**91,312**	**972,764**

Fund Balances – Governmental Funds

Last Ten Fiscal Years (in 000's)
(Modified Accrual Basis of Accounting)

This schedule provides information on the modified accrual basis of accounting for the last ten fiscal years for committed Social Security Administration Funds and Total Governmental Funds. The information source of this schedule is Exhibit III. Please see Note 1.D for the System's descriptions for modified accrual basis of accounting.

	Fiscal Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Governmental Funds:	$	$	$	$	$	$	$	$	$	$
Committed:										
Social Security Administration Fund	59	45	8	18		5	17	22	4	25
Total Governmental Funds	**59**	**45**	**8**	**18**	**-**	**5**	**17**	**22**	**4**	**25**

Changes in Fund Balances – Governmental Funds

Last Ten Fiscal Years (in 000's)
(Modified Accrual Basis of Accounting)

This schedule provides trend information on the modified accrual basis of accounting for Revenues, Expenditures, and net change in Fund Balances. This information is obtained from Exhibit IV. Please see Note 1.D for the System's descriptions for modified accrual basis of accounting.

	Fiscal Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenues	$	$	$	$	$	$	$	$	$	$
Appropriations for (Note A):										
Administration	28									
Death Benefits:										
Public Employee Survivors	1,838	4,164	2,784	2,141	5,444	5,738	2,162	7,281	8,826	9,432
Victims of Crime	2,000	1,250	1,750	1,000	2,000	1,625	1,000	2,000	3,500	4,904
Retiree $5,000 Lump Sum	7,367	7,911	7,885	8,628	9,108	8,847	9,289	10,075	10,893	10,167
Administration Fees	64	85	66	74	75	70	71	71	70	70
Total Revenues	**11,297**	**13,410**	**12,485**	**11,843**	**16,627**	**16,280**	**12,522**	**19,427**	**23,289**	**24,573**
Expenditures										
Death Benefits:										
Public Employee Survivors	1,866	4,164	2,784	2,141	5,444	5,738	2,162	7,281	8,826	9,432
Victims of Crime	2,000	1,250	1,750	1,000	2,000	1,625	1,000	2,000	3,500	4,904
Retiree $5,000 Lump Sum	7,367	7,910	7,885	8,628	9,108	8,846	9,286	10,080	10,893	10,167
Administrative Expenditures	61	101	102	105	92	156	178	139	152	86
Total Expenditures	**11,294**	**13,425**	**12,521**	**11,874**	**16,644**	**16,365**	**12,626**	**19,500**	**23,371**	**24,589**
Excess of Revenues Over (Under)										
Expenditures	**3**	**(15)**	**(36)**	**(31)**	**(17)**	**(85)**	**(104)**	**(72)**	**(82)**	**(15)**
Other Financing Sources (Uses)										
Transfers In - Retirement Membership Fees				40		90	115	77	64	36
Net Change in Fund Balances	**3**	**(15)**	**(36)**	**9**	**(17)**	**5**	**11**	**5**	**(18)**	**21**

Note A: Include lapsed appropriations.

Changes in Net Position – Proprietary Fund

Last Ten Fiscal Years (in 000's)

This schedule provides trend information on Operating Revenues, Operating Expenses and the resulting Operating Income or Loss. It also provides non-operating revenue and expense information and the resulting change in net position. The information source of this schedule is Exhibit VI.

	Fiscal Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	$	$	$	$	$	$	$	$	$	$
Operating Revenues										
Insurance Contributions:										
Employer	1,108,150	1,233,781	1,414,731	1,434,186	1,527,002	1,631,916	1,834,956	1,992,220	1,963,388	2,582,653
Member	381,820	416,690	444,731	444,786	460,944	482,566	495,723	521,360	562,140	559,111
Federal Revenues-COBRA Stimulus		2,268	1,312	27						
Other	1,254	1,087	3,089	835	2,199	604	1,856	1,480	1,905	3,116
Total Operating Revenues	**1,491,224**	**1,653,826**	**1,863,863**	**1,879,834**	**1,990,145**	**2,115,086**	**2,332,535**	**2,515,060**	**2,527,433**	**3,144,880**
Operating Expenses										
Benefit Payments:										
Employee	1,609,991	1,797,659	1,743,897	1,792,645	1,900,026	2,017,586	2,213,193	2,428,066	2,408,452	2,141,516
COBRA	22,971	30,763	32,398	34,351	34,299	30,163	29,003	26,963	25,972	21,817
Health Savings Account									273	525
Administrative and Other Expenses	9,062	8,118	9,437	9,401	9,356	24,535	36,692	19,390	15,060	13,880
Total Operating Expenses	**1,642,024**	**1,836,540**	**1,785,732**	**1,836,397**	**1,943,681**	**2,072,284**	**2,278,888**	**2,474,419**	**2,449,757**	**2,177,738**
Operating Income (Loss)	**(150,800)**	**(182,714)**	**78,131**	**43,437**	**46,464**	**42,802**	**53,647**	**40,641**	**77,676**	**967,142**
Non-Operating Revenues (Expenses)										
Net Appreciation (Depreciation) in Fair Value of Investments	20,359	20,789	4,273	5,395	(17,215)	1,284	(3,195)	7,771	(830)	(15,417)
Investment Income	27,741	15,882	8,485	7,794	11,331	9,629	9,493	11,721	14,482	21,017
Other	292	158	496	204	18	184	1,210	25	1	
Total Non-Operating Revenues (Expenses)	**48,392**	**36,829**	**13,254**	**13,393**	**(5,866)**	**11,097**	**7,508**	**19,517**	**13,653**	**5,600**
Transfer Out								(1,750)		
Change in Net Position	**(102,408)**	**(145,885)**	**91,385**	**56,830**	**40,598**	**53,899**	**61,155**	**58,408**	**91,329**	**972,742**

Changes in Net Position – Defined Benefit Plans

Last Ten Fiscal Years (in 000's)

This schedule provides summarized trend information on additions and deductions for each of the defined benefit plans. This information source of this schedule is Exhibit IX.

	Fiscal Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	$	$	$	$	$	$	$	$	$	$
Employees Retirement Fund (ERS)										
Additions										
Member Contributions	353,299	410,134	425,811	411,066	422,588	430,595	462,160	674,678	685,462	683,933
Employer Contributions	363,023	400,252	414,084	347,121	375,737	482,329	500,510	686,841	700,142	697,226
Investment Income (Net of Expenses)	(1,616,258)	1,203,796	2,414,830	1,614,670	2,097,577	3,252,362	56,905	1,273,373	2,832,594	2,430,255
Other Additions	57,329	61,741	64,970	71,255	75,637	80,324	84,203	89,035	93,506	97,318
Total Additions	**(842,607)**	**2,075,923**	**3,319,695**	**2,444,112**	**2,971,539**	**4,245,610**	**1,103,778**	**2,723,927**	**4,311,704**	**3,908,732**
Deductions										
Retirement Benefits	1,433,011	1,505,585	1,593,537	1,712,821	1,819,779	1,933,694	2,041,389	2,146,522	2,257,219	2,374,013
Death Benefits	2,224	3,086	4,142	3,654	3,283	3,053	4,730	5,082	3,664	5,132
Refunds	70,958	65,334	79,535	88,060	86,668	106,809	87,167	84,445	120,944	123,948
Administrative and Other Expenses	17,690	19,083	19,000	18,024	18,911	20,480	22,127	20,779	23,630	24,132
Total Deductions	**1,523,883**	**1,593,088**	**1,696,214**	**1,822,559**	**1,928,641**	**2,064,036**	**2,155,413**	**2,256,828**	**2,405,457**	**2,527,225**
Change in Net Position	**(2,366,490)**	**482,835**	**1,623,481**	**621,553**	**1,042,898**	**2,181,574**	**(1,051,635)**	**467,099**	**1,906,247**	**1,381,507**
Law Enforcement and Custodial Officer Supplemental Retirement Fund (LECOS)										
Additions										
Member Contributions		7,473	7,604	7,287	7,185	8,180	8,377	9,539	9,583	9,275
Employer Contributions	20,657	27,799	24,228	(3)	7,117	27,758	26,728	27,497	26,583	26,110
Investment Income (Net of Expenses)	(51,743)	40,054	81,881	51,909	71,885	111,741	1,919	44,831	99,341	84,937
Other Additions		6	2	1			4	4	1	5
Total Additions	**(31,086)**	**75,332**	**113,715**	**59,194**	**86,187**	**147,679**	**37,028**	**81,871**	**135,508**	**120,327**
Deductions										
Retirement Benefits	38,641	41,001	42,914	46,868	50,848	55,222	59,211	62,698	66,800	72,228
Death Benefits			106	6	6	6	9	22	18	18
Refunds		162	694	1,220	1,531	1,919	2,128	1,826	2,938	3,392
Administrative and Other Expenses	434	595	937	844	805	1,324	1,412	1,421	1,811	1,851
Total Deductions	**39,075**	**41,758**	**44,651**	**48,938**	**53,190**	**58,471**	**62,760**	**65,967**	**71,567**	**77,489**
Change in Net Position	**(70,161)**	**33,574**	**69,064**	**10,256**	**32,997**	**89,208**	**(25,732)**	**15,904**	**63,941**	**42,838**
Judicial Retirement System of Texas Plan Two (JRS II)										
Additions										
Member Contributions	4,223	4,121	4,291	4,170	4,268	5,195	5,465	5,754	6,017	5,940
Employer Contributions	11,356	11,511	11,933	4,150	4,549	12,211	12,457	12,374	12,495	12,560
Investment Income (Net of Expenses)	(16,421)	13,586	30,189	41,181	28,753	46,186	820	19,862	44,875	39,191
Other Additions			2		1		2			
Total Additions	**(842)**	**29,218**	**46,415**	**49,501**	**37,571**	**63,592**	**18,744**	**37,990**	**63,387**	**57,691**
Deductions										
Retirement Benefits	8,023	9,289	11,722	12,782	14,586	16,166	19,158	20,825	22,988	24,706
Death Benefits				21			26	31		
Refunds	206	118	48	179	285	254	56	299	374	159
Administrative and Other Expenses	239	277	286	230	228	267	284	226	294	296
Total Deductions	**8,468**	**9,684**	**12,056**	**13,212**	**15,099**	**16,687**	**19,524**	**21,381**	**23,656**	**25,161**
Change in Net Position	**(9,310)**	**19,534**	**34,359**	**36,289**	**22,472**	**46,905**	**(780)**	**16,609**	**39,731**	**32,530**

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Changes in Net Position – Defined Benefit Plans (Concluded)

Last Ten Fiscal Years (in 000's)

	Fiscal Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	$	$	$	$	$	$	$	$	$	$
Excess Benefit Arrangement										
Additions										
Other Additions	328	294	342	506	569	493	457	540	746	817
Total Additions	**328**	**294**	**342**	**506**	**569**	**493**	**457**	**540**	**746**	**817**
Deductions										
Retirement Benefits	279	251	297	436	488	422	392	448	668	753
Administrative and Other Expenses	49	43	45	70	81	71	65	92	78	64
Total Deductions	**328**	**294**	**342**	**506**	**569**	**493**	**457**	**540**	**746**	**817**
Change in Net Position	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
State Retiree Health Plan										
Additions										
Member Contributions	114,360	126,073	135,133	134,993	141,008	155,276	169,075	183,284	195,806	
Employer Contributions	447,765	478,348	444,895	483,636	535,905	605,512	612,769	663,986	890,735	307,028
Non-Employer Contributing Entity Contributions (Note A)		N/A	N/A	N/A	N/A	N/A	N/A	N/A	44,433	16,585
Federal Revenues	35,784	40,988	38,207	39,612	50,874	63,362	86,054	69,186	73,120	74,493
Early Retirees Reinsurance Program			30,176	40,724						
Investment Income (Net of Expenses)	1,056	609	436	329	236	255	324	1,137	4,517	10,907
Other Additions	775	1					3,969	5,961	357	3,249
Total Additions	**599,740**	**646,019**	**648,847**	**699,294**	**728,023**	**824,405**	**872,191**	**923,554**	**1,208,968**	**412,262**
Deductions										
Healthcare Benefits	596,858	643,389	646,197	696,085	724,381	813,823	863,926	912,886	995,815	938,921
Less: Payments from Members (Note B)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	(203,123)
Administrative and Other Expenses	2,882	2,630	2,650	3,209	3,642	10,582	8,265	10,668	5,629	5,817
Total Deductions	**599,740**	**646,019**	**648,847**	**699,294**	**728,023**	**824,405**	**872,191**	**923,554**	**1,001,444**	**741,615**
Change in Net Position	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**207,524**	**(329,353)**

Note A: To comply with the reporting requirements under GASB Statement 74, the System begins report the contributions from non-employer contributing entity in Fiscal Year 2017. These contributions are the portion of the insurance premiums that the State of Texas pays for the retirees from the junior and community colleges and were reported as part of the employer contributions before Fiscal Year 2017.

Note B: Beginning from fiscal year 2018, contributions from members are reported as payments from members to be in compliance with the reporting requirements under GASB Statement 74.

Changes in Net Position –
Deferred Compensation Plans and Cafeteria Plan

Last Ten Fiscal Years (in 000's)

This schedule provides summarized trend information on additions and deductions for the Tex$aver 401(k) and 457 plans, the Commuter Spending Account, and the state employees' cafeteria plan (TexFlex). The information source of this schedule is Exhibit IX.

	Fiscal Year									
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
	$	$	$	$	$	$	$	$	$	$
Texa$aver 401(k) Plan										
Additions										
Investment Income (Net of Expenses)	476	42	43	26	27	(7)	7	18	(7)	59
Other Additions	215	1,439	830	607	550	398	188	50	565	390
Total Additions	**691**	**1,481**	**873**	**633**	**577**	**391**	**195**	**68**	**558**	**449**
Deductions										
Administrative and Other Expenses	457	513	615	596	759	590	529	433	479	482
Total Deductions	**457**	**513**	**615**	**596**	**759**	**590**	**529**	**433**	**479**	**482**
Change in Net Position	**234**	**968**	**258**	**37**	**(182)**	**(199)**	**(334)**	**(365)**	**79**	**(33)**
Texa$aver 457 Plan										
Additions										
Contributions	7									
Investment Income (Net of Expenses)	122	13	13	12	11	(2)	6	17	18	52
Other Additions	405	589	513	486	520	507	581	587	719	763
Total Additions	**534**	**602**	**526**	**498**	**531**	**505**	**587**	**604**	**737**	**815**
Deductions										
Administrative and Other Expenses	656	669	510	452	330	334	265	233	269	512
Total Deductions	**656**	**669**	**510**	**452**	**330**	**334**	**265**	**233**	**269**	**512**
Change in Net Position	**(122)**	**(67)**	**16**	**46**	**201**	**171**	**322**	**371**	**468**	**303**
Commuter Spending Account Fund (CSA)										
Additions										
Contributions								73	129	141
Investment Income (Net of Expenses)								1	4	7
Other Additions										6
Transfers In								1,750	-	-
Total Additions	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,824**	**133**	**154**
Deductions										
Reimbursement Account Claims								43	114	116
Administrative and Other Expenses								1,276	72	19
Total Deductions	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,319**	**186**	**135**
Change in Net Position	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**505**	**(53)**	**19**
State Employees Cafeteria Plan (TexFlex)										
Additions										
Contributions	83,244	90,290	96,033	95,986	95,578	83,214	83,092	80,953	79,559	76,656
Investment Income (Net of Expenses)	45	25	20	19	20	9	20	34	72	193
Other Additions	83	105	104	76	92	113	398	194	92	101
Total Additions	**83,372**	**90,420**	**96,157**	**96,081**	**95,690**	**83,336**	**83,510**	**81,181**	**79,723**	**76,950**
Deductions										
Reimbursement Account Claims	80,161	87,912	93,737	92,093	92,799	78,720	77,744	81,179	69,697	73,729
Administrative and Other Expenses	2,220	2,217	2,725	2,485	2,365	2,460	3,662	1,815	1,619	1,526
Total Deductions	**82,381**	**90,129**	**96,462**	**94,578**	**95,164**	**81,180**	**81,406**	**82,994**	**71,316**	**75,255**
Change in Net Position	**991**	**291**	**(305)**	**1,503**	**526**	**2,156**	**2,104**	**(1,813)**	**8,407**	**1,695**

Note A: The System implemented the Commuter Spending Accounts on January 1, 2016.

Benefit and Refund Payments – Defined Benefit Plans
Last Ten Fiscal Years (in 000's)

This schedule provides trend information on benefit and refund payments by types from the defined benefit plans. This information is obtained from the System's detailed records for refunds and benefit payments

	Fiscal Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	$	$	$	$	$	$	$	$	$	$
Employees Retirement Fund:										
Type of Benefit										
Retirement Benefits:										
Service:										
Retirees	1,324,897	1,394,889	1,476,597	1,585,066	1,649,308	1,799,608	1,906,043	2,013,347	2,120,153	2,232,174
Survivors	20,651	20,765	21,188	21,410	59,425	21,370	21,835	21,396	21,493	21,686
Disability	30,402	30,301	28,854	28,376	27,980	27,386	26,797	26,148	25,640	25,166
Partial Lump Sum Option	45,301	46,362	51,885	60,687	63,641	63,359	62,438	58,351	59,262	61,250
Proportional	11,760	13,270	15,013	17,282	19,425	21,971	24,276	27,280	30,671	33,737
Total Retirement Benefits	**1,433,011**	**1,505,587**	**1,593,537**	**1,712,821**	**1,819,779**	**1,933,694**	**2,041,389**	**2,146,522**	**2,257,219**	**2,374,013**
Death Benefits:										
Active Members:										
Occupational	100	76	189	117	86	32	116	132	43	209
Non-Occupational	1,275	1,526	2,308	1,920	1,999	1,453	2,909	3,317	2,053	3,401
Retiree	850	1,484	1,645	1,617	1,198	1,568	1,705	1,633	1,568	1,522
Total Death Benefits	**2,225**	**3,086**	**4,142**	**3,654**	**3,283**	**3,053**	**4,730**	**5,082**	**3,664**	**5,132**
Refunds:										
Resignation	67,405	61,235	74,640	84,004	82,026	102,175	80,876	78,206	115,416	117,908
Death	3,553	4,099	4,895	4,056	4,642	4,634	6,291	6,239	5,528	6,040
Total Refunds	**70,958**	**65,334**	**79,535**	**88,060**	**86,668**	**106,809**	**87,167**	**84,445**	**120,944**	**123,948**
Law Enforcement and Custodial Officer Supplemental Retirement Fund:										
Type of Benefit										
Retirement Benefits:										
Service	35,174	37,580	39,509	42,670	46,561	50,261	54,747	58,444	62,571	67,822
Disability	1,168	1,161	1,128	1,093	1,088	1,053	1,022	1,008	990	922
Partial Lump Sum Option	2,300	2,260	2,277	3,105	3,199	3,907	3,442	3,247	3,239	3,484
Total Retirement Benefits	**38,642**	**41,001**	**42,914**	**46,868**	**50,848**	**55,221**	**59,211**	**62,699**	**66,800**	**72,228**
Death Benefits:										
Active Members:										
Non-Occupational			106	6	6	6	9	21	18	18
Total Death Benefits	**-**	**-**	**106**	**6**	**6**	**6**	**9**	**21**	**18**	**18**
Refunds:										
Resignation		162	686	1,205	1,513	1,895	2,097	1,772	2,892	3,355
Death			9	15	18	24	31	54	46	37
Total Refunds	**-**	**162**	**695**	**1,220**	**1,531**	**1,919**	**2,128**	**1,826**	**2,938**	**3,392**
Judicial Retirement System of Texas Plan Two:										
Type of Benefit										
Retirement Benefits:										
Service	6,134	7,149	8,923	9,942	11,346	12,670	15,389	16,841	18,550	19,947
Disability	493	358	570	358	358	358	358	395	442	422
Proportional	1,396	1,782	2,229	2,482	2,882	3,138	3,411	3,589	3,996	4,337
Total Retirement Benefits	**8,023**	**9,289**	**11,722**	**12,782**	**14,586**	**16,166**	**19,158**	**20,825**	**22,988**	**24,706**
Death Benefits:										
Active Members:										
Non-Occupational				21				5		
Annuity Death Refund							27	26		
Total Death Benefits	**-**	**-**	**-**	**21**	**-**	**-**	**27**	**31**	**-**	**-**
Refunds:										
Resignation	206	118	47	117	210	228	56	224	215	159
Death				62	75	26		75	159	
Total Refunds	**206**	**118**	**47**	**179**	**285**	**254**	**56**	**299**	**374**	**159**

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Benefit and Refund Payments – Defined Benefit Plans (Concluded)

Last Ten Fiscal Years (in 000's)

	Fiscal Year									
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
	$	$	$	$	$	$	$	$	$	$
Excess Benefit Arrangement:										
Type of Benefit										
Retirement Benefits:										
Service	279	251	297	436	488	422	392	448	668	753
Total Retirement Benefits	**279**	**251**	**297**	**436**	**488**	**422**	**392**	**448**	**668**	**753**
State Retiree Health Plan:										
Type of Benefit										
Insurance Benefits:										
Accrued Claims	50,800	55,675	53,835	50,148	36,356	22,706	9,848	(5,601)	20,769	(27,916)
Life Claims	20,839	24,430	24,663	29,722	37,349	41,763	45,740	46,994	55,347	54,426
Prescriptions Drugs	175,831	182,620	171,191	201,279	217,332	241,583	253,591	279,144	255,976	289,856
Administrative Fees	16,794	17,391	18,872	15,061	15,775	19,077	18,721	19,338	20,744	19,802
HMO Payments	35,036	31,606	32,349	73,491	98,107	110,232	139,696	156,418	188,633	179,537
Health	285,591	318,593	330,801	310,261	301,785	358,696	373,469	391,327	426,911	393,907
Dental	11,967	13,074	14,486	16,123	17,677	19,766	22,861	25,266	27,436	29,309
Total Insurance Benefits	**596,858**	**643,389**	**646,197**	**696,085**	**724,381**	**813,823**	**863,926**	**912,886**	**995,816**	**938,921**

Average Benefit Payments – Employee Class

Last Ten Fiscal Years

This schedule provides ten years of information for service retirements. It shows the average monthly benefit, the average final salary and the number of retired members. The information source of this schedule is the System's member records.

Retirement Effective Dates (Note A)		Years of Credited Service					
September 30, 2008 to August 31, 2018		**5-10**	**10-15**	**15-20**	**20-25**	**25-30**	**30+**
- Period 9/30/08 to 8/31/09:							
Average Monthly Benefit	$	469.79	843.86	1,333.18	1,873.88	2,601.79	3,524.95
Average Final Average Salary	$	3,078.45	3,238.35	3,509.19	3,887.10	4,292.64	4,867.74
Number of Retired Members		176	421	475	631	541	399
- Period 9/30/09 to 8/31/10:							
Average Monthly Benefit	$	461.93	900.71	1,358.19	1,915.53	2,658.46	3,740.74
Average Final Average Salary	$	3,102.63	3,460.31	3,604.99	3,950.64	4,427.84	5,123.87
Number of Retired Members		195	455	523	680	641	530
- Period 9/30/10 to 8/31/11:							
Average Monthly Benefit	$	535.41	863.61	1,437.11	2,051.70	2,824.05	3,716.95
Average Final Average Salary	$	3,524.88	3,321.25	3,763.19	4,255.19	4,673.30	5,105.32
Number of Retired Members		241	585	582	785	757	631
- Period 9/30/11 to 8/31/12:							
Average Monthly Benefit	$	516.40	862.89	1,422.00	2,072.84	2,852.65	3,696.96
Average Final Average Salary	$	3,404.97	3,298.25	3,680.62	4,252.76	4,720.68	5,058.20
Number of Retired Members		227	547	671	816	745	560
- Period 9/30/12 to 8/31/13:							
Average Monthly Benefit	$	544.30	951.36	1,504.49	2,081.81	2,919.33	3,762.09
Average Final Average Salary	$	3,496.88	3,566.77	3,883.87	4,248.21	4,832.03	5,144.21
Number of Retired Members		287	601	720	865	813	556
- Period 9/30/13 to 8/31/14:							
Average Monthly Benefit	$	509.09	920.69	1,476.34	2,007.29	2,904.09	3,857.38
Average Final Average Salary	$	3,359.01	3,518.48	3,828.07	4,141.86	4,842.10	5,344.39
Number of Retired Members		340	625	711	886	733	541
- Period 9/30/14 to 8/31/15:							
Average Monthly Benefit	$	589.87	979.79	1,475.71	2,071.68	2,995.32	4,075.23
Average Final Average Salary	$	3,759.71	3,716.03	3,833.56	4,293.37	4,947.51	5,625.34
Number of Retired Members		256	596	660	884	832	611
- Period 9/30/15 to 8/31/16:							
Average Monthly Benefit	$	571.43	954.38	1,499.39	2,107.85	3,146.70	4,342.07
Average Final Average Salary	$	3,478.64	3,714.90	3,888.31	4,337.44	5,198.88	5,915.96
Number of Retired Members		212	593	606	813	830	604
- Period 9/30/16 to 8/31/17:							
Average Monthly Benefit	$	591.62	970.28	1,538.34	2,158.92	3,165.00	4,389.51
Average Final Average Salary	$	3,614.83	3,776.64	4,019.90	4,383.26	5,180.74	6,051.63
Number of Retired Members		259	698	662	824	811	623
- Period 9/30/17 to 8/31/18:							
Average Monthly Benefit	$	615.37	984.18	1,634.69	2,249.61	3,225.48	4,565.70
Average Final Average Salary	$	3,623.74	3,818.67	4,229.32	4,638.50	5,323.73	6,217.18
Number of Retired Members		151	692	628	830	820	640
Five Year Average -							
Period 9/30/13 to 8/31/18:							
Average Monthly Benefit	$	567.64	962.43	1,523.49	2,116.98	3,090.98	4,258.41
Average Final Average Salary	$	3,551.27	3,712.66	3,956.35	4,355.23	5,103.75	5,846.57
Average Number of Retired Members		244	641	653	847	805	604
Ten Year Average -							
Period 9/30/08 to 8/31/18:							
Average Monthly Benefit	$	540.37	928.56	1,473.97	2,066.06	2,949.93	3,995.19
Average Final Average Salary	$	3,454.90	3,565.09	3,836.80	4,252.26	4,877.22	5,482.51
Average Number of Retired Members		234	581	624	801	752	570

Note A: This schedule includes service retirements of the employee class as of December 8, 2018. It does not include disability retirements or the elected state official class. This schedule does not include Partial Lump Sum (PLSO) payments.

Retired Members by Type of Benefit

August 31, 2018

This schedule provides the average amount of monthly benefit, the number of retirees and the type of retirement for ERS, LECOS, and JRS2. The information source of this schedule is the System's pension actuary.

Average Amount of Monthly Benefit	Number of Retirees	Type of Retirement		Option Selected (Note B)					
		Service	Disability	Life	Option 1	Option 2	Option 3	Option 4	Option 5
Employees Retirement Fund (Note A)									
$									
0-300	7,164	6,935	229	4,810	1,362	406	138	249	199
301-600	12,684	12,026	658	8,974	2,096	612	243	358	401
601-900	13,856	13,157	699	9,752	2,196	798	293	321	496
901-1,200	12,901	12,531	370	8,841	2,097	965	257	287	454
1,201-1,500	12,646	12,471	175	8,276	2,169	1,101	260	224	616
1,501-2,000	16,846	16,730	116	10,794	2,677	1,775	315	351	934
2,001-2,500	12,210	12,182	28	7,336	2,000	1,589	220	304	761
2,501-3,000	8,362	8,354	8	4,696	1,448	1,202	158	232	626
3,001-4,000	8,774	8,769	5	4,878	1,618	1,155	129	238	756
4,001-10,999	5,918	5,917	1	2,903	1,454	761	74	132	594
Total	**111,361**	**109,072**	**2,289**	**71,260**	**19,117**	**10,364**	**2,087**	**2,696**	**5,837**
Law Enforcement And Custodial Officer Supplemental Retirement Fund (Note A)									
$									
0-200	419	419	0	270	101	25	5	5	13
201-400	6,561	6,517	44	3,672	1,595	716	79	91	408
401-600	3,869	3,850	19	2,047	772	573	45	77	355
601-800	1,164	1,162	2	494	300	174	15	20	161
801-1,000	634	633	1	246	204	96	10	6	72
1,001-1,200	266	265	1	89	99	36	0	3	39
1,201-1,400	93	87	6	33	28	12	1	1	18
1,401-1,600	41	31	10	17	16	2	1	1	4
1,601-1,800	15	10	5	10	3	0	0	1	1
1,801-9,999	18	12	6	9	5	0	0	1	3
Total	**13,080**	**12,986**	**94**	**6,887**	**3,123**	**1,634**	**156**	**206**	**1,074**
Judicial Retirement Plan Two Fund (Note A)									
$									
0-2,000	22	22	0	9	11	1	1	0	0
2,001-2,500	8	8	0	5	3	0	0	0	0
2,501-3,000	7	7	0	0	2	2	1	0	2
3,001-3,500	6	6	0	2	1	2	0	0	1
3,501-4,000	18	18	0	10	5	2	0	1	0
4,001-4,500	40	40	0	15	18	5	0	1	1
4,501-5,000	46	46	0	23	17	3	0	3	0
5,001-5,500	64	64	0	22	24	6	1	0	11
5,501-6,000	52	52	0	23	20	5	0	1	3
6,001-6,500	50	49	1	29	14	5	1	0	1
6,501-7,000	31	31	0	11	10	5	0	2	3
7,001-9,999	49	49	0	29	11	7	0	0	2
Total	**393**	**392**	**1**	**178**	**136**	**43**	**4**	**8**	**24**

Note A: These calculations are based on actuarial estimates.

Note B:
Life - standard annuity.
Option 1 - a reduced annuity for the lifetime of the member, then pays the same amount throughout the life of the nominee.
Option 2 - a reduced annuity for the lifetime of the member, then pays one-half of that amount throughout the life of the nominee.
Option 3 - a reduced annuity to the member or the nominee for a guaranteed period of 5 years, and for the lifetime of the member.
Option 4 - a reduced annuity to the member or the nominee for a guaranteed period of 10 years, and for the lifetime of the member.
Option 5 - a reduced annuity for the lifetime of the member, then pays three-fourths of that amount throughout the life of the nominee.

Contribution Rates

Last Ten Fiscal Years

This schedule provides the amounts contributed by the employer for the defined benefit plans including ERS, LECOS, JRS2 and the State Retiree Health Plan. The rates are determined by the General Appropriations Act. Employer contribution rates are also listed for the Group Benefits Program. Those rates are set by the System's Board of Trustees and incorporated into the system's records

	Fiscal Year									
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Defined Benefit Plans	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Employees Retirement Fund										
Employee Class:		Blended (Note A)								
Employee (Note A)	6.00	6.48	6.50	6.50	6.50	6.60	6.90	9.50	9.50	9.50
Employer (Note B)	6.45	6.78	6.95	6.00	6.50	8.00	8.00	10.00	10.00	10.00
Elected Class:										
Legislators	8.00	8.00	8.00	8.00	8.00	8.00	8.00	9.50	9.50	9.50
Employer	6.45	6.45	6.45	6.00	6.50	8.00	8.00	10.00	10.00	10.00
Other Elected Class (Note A)	6.00	6.48	6.50	6.50	6.50	6.60	6.90	9.50	9.50	9.50
Employer (Note B)	6.45	6.78	6.95	6.00	6.50	8.00	8.00	10.00	10.00	10.00
Law Enforcement and Custodial Officer Supplemental Retirement Fund (Note C)										
Employee		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Employer	1.59	1.59	1.59	0.00	0.50	0.50	0.50	0.50	0.50	0.50
Judicial Retirement System Plan Two Fund										
Employee	6.00	6.00	6.00	6.00	6.00	6.60	6.90	7.20	7.50	7.50
Employer	16.83	16.83	16.83	6.00	6.50	15.663	15.663	15.663	15.663	15.663
State Retiree Health Plan (Note D)										
Group Benefits Program	$	$	$	$	$	$	$	$	$	$
Employee Only:										
State Contribution Monthly Rate	360.54	385.38	411.04	438.30	470.38	503.14	537.66	576.54	617.30	621.90
HealthSelect Monthly Premium	360.54	385.38	411.04	438.30	470.38	503.14	537.66	576.54	617.30	621.90
Employee & Children:										
State Contribution Monthly Rate	498.49	532.90	569.30	606.20	650.62	696.00	743.80	797.66	854.10	860.48
HealthSelect Monthly Premium	636.44	680.42	727.56	774.10	830.86	888.86	949.94	1,018.78	1,090.90	1,099.06
Employee & Spouse:										
State Contribution Monthly Rate	566.57	605.70	647.38	689.04	739.58	791.16	845.54	906.78	970.98	978.22
HealthSelect Monthly Premium	772.60	826.02	883.72	939.78	1,008.78	1,079.18	1,153.42	1,237.02	1,324.66	1,334.54
Employee & Family:										
State Contribution Monthly Rate	704.52	753.22	805.64	856.94	919.82	984.02	1,051.68	1,127.90	1,207.78	1,216.80
HealthSelect Monthly Premium	1,048.50	1,121.06	1,200.24	1,275.58	1,369.26	1,464.90	1,565.70	1,679.26	1,798.26	1,811.70

Note A: For Fiscal Year 2010, members contributed 6.45% from September, 2009 through December, 2009. Members contributed 6.5% from Jan. to August, 2010.

Note B: For Fiscal Year 2010, employer contributed 6.45% from September, 2009 through December, 2009. Employer contributed 6.95% from Jan. to August, 2010.

Note C: Fiscal Year 2010 is the first year that members contributed 0.5% to the Law Enforcement and Custodial Officer Supplemental Retirement Fund. Beginning in Fiscal Year 2018, an additional amount equivalent to 1.07% of payroll is contributed by employer from dedicated court fees.

Note D: The State Retiree Health Plan is a pay-as-you-go plan. The monthly rates as shown above are the same for active and retired members of the Group Benefits Program.

Statistical Information – Defined Benefit Plans

(All items expressed as numbers unless otherwise indicated)

This schedule provides member census information for active, non-contributing, and various retirement for ERS, LECOS, and JRS2 and the State Retiree Health Plan. The member records for retiree and actives are from the System's actuarial records and the refunds are obtained from the System's records.

	Fiscal Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Employees Retirement Fund										
Active Contributing Members	141,223	142,490	137,293	132,669	133,669	134,162	142,409	146,390	141,629	141,535
Non-Contributing Members	72,585	78,737	84,900	90,190	96,015	96,507	101,122	108,873	112,192	119,736
Retirees and Beneficiaries	75,722	79,311	83,430	87,799	91,367	95,840	100,003	103,758	107,530	111,361
Service Retirements	4,338	4,803	5,734	5,860	5,174	6,180	5,982	5,605	5,908	5,984
Disability Retirements	95	67	74	68	113	51	60	63	58	45
Law Enforcement and Custodial Officer Supplemental Retirement Fund (Notes A)										
Active Contributing Members	37,819	39,052	36,806	37,404	37,415	37,084	38,526	39,066	38,206	37,167
Non-Contributing Members	39	2,978	5,785	7,129	10,187	11,311	12,962	15,203	17,100	19,842
Retirees and Beneficiaries	6,647	7,175	7,728	8,477	9,089	10,024	10,845	11,515	12,248	13,080
Service Retirements	559	635	695	895	741	1,071	959	803	876	965
Disability Retirements	2				3					1
Judicial Retirement System of Texas Plan Two										
Active Contributing Members	533	539	546	541	545	554	563	548	557	561
Non-Contributing Members	134	130	134	143	152	139	148	166	158	153
Retirees and Beneficiaries	152	164	208	215	254	267	322	331	378	393
Service Retirements	36	12	43	8	43	14	57	9	48	16
Disability Retirements								1		
State Retiree Health Plan (Note B)										
Retirees	83,494	86,111	90,213	95,375	100,054	104,770	109,311	113,430	117,880	122,350
Dependents	32,067	32,408	32,412	35,549	35,830	36,933	38,130	38,910	39,880	41,061

Note A: The source of the retirement systems membership is the System's actuary. The System's actuary includes members who retired on August 31 and received their first annuity in September as retirees in the actuarial valuation.

Note B: The members of the LECOS are also members of the ERS.

Note C: Due to GASB 43, retiree and active member data under the Group Benefit Program is shown separately beginning with Fiscal Year 2007 data. The data in the table is for retired members and their dependents.

Statistical Information – Other Programs

(All items expressed as numbers unless otherwise indicated)

This schedule provides ten year historical trend information for members of the Texa$aver 457 and 401(k) deferred compensation plans, the Commuter Spending Accounts, the cafeteria plan, and the Group Benefits Program. It also provides death benefit program information. Participant counts, current market values, and death benefit payments are from the System's records. Group Benefit Program member counts are from the System's insurance actuary.

	Fiscal Year									
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
457 Deferred Compensation Plan (Note A)										
Texa$aver 457 Plan (Note A):										
Total Participants	16,727	18,479	21,153	23,219	24,689	26,902	29,129	31,515	33,131	34,023
Participants Currently Deferring	10,295	11,649	13,293	14,189	14,385	20,030	16,685	17,052	19,803	18,591
Current Market Value of Plan Assets (in millions)	$ 274.0	334.5	380.6	442.6	494.7	591.1	603.7	669.7	759.0	869.0
Original 457 Plan (Notes A & B):										
Total Participants	2,278	1,293	734	657	598	580	513	468	440	424
Participants Currently Deferring	74	63	57	53	38	32	22	17	15	14
Texa$aver 401(k) Deferred Compensation Plan										
Total Participants	80,735	96,250	109,613	121,516	135,237	151,034	165,513	181,249	195,737	206,617
Participants Currently Deferring	52,347	69,311	64,704	66,910	69,692	89,774	82,851	92,527	95,813	95,392
Current Market Value of Plan Assets (in millions)	$ 1,085.0	1,249.5	1,315.5	1,527.2	1,593.8	1,853.9	1,836.2	1,984.7	2,193.6	2,449.0
Deferrals (in millions)	$ 168.0	108.2	107.3	105.5	145.7	152.2	160.3	182.3	159.3	135.1
Commuter Spending Account (CSA)										
Reimbursement Accounts:										
Parking								14	26	26
Transit								127	120	134
Participant Contributions (Note C)										
Cafeteria Plan										
Reimbursement Accounts:										
Health Care	43,001	46,556	48,807	47,591	46,942	46,173	46,609	48,010	47,799	46,337
Dependent Care	3,261	3,549	3,686	3,747	3,747	3,785	3,880	3,825	3,713	3,636
Total Redirected (in millions)	$ 80.2	87.5	93.7	92.8	91.9	78.9	78.5	80.3	78.7	75.8
Premium Conversion:										
Participants	223,980	228,121	222,295	218,587	219,357	221,876	222,789	226,864	223,026	223,233
Premiums Redirected (in millions)	$ 410.3	457.4	482.4	487.5	500.9	509.2	522.1	548.3	504.5	505.8
Tax Savings (in millions):										
Employees	$ 92.9	103.6	109.2	110.4	113.5	115.3	118.3	124.2	132.1	131.7
State of Texas	$ 31.4	35.0	36.9	37.3	38.3	39.0	39.9	41.9	44.6	44.5
Group Benefits Program (Note D)										
Membership:										
Active	230,285	234,057	239,138	237,041	226,181	228,805	230,023	235,108	230,199	231,911
Dependents	198,420	197,979	183,626	172,695	171,023	169,282	166,772	168,161	166,266	164,685
COBRA (Note E)	2,178	2,544	2,213	2,460	1,674	1,144	1,167	984	723	1,104
Total Membership	430,883	434,580	424,977	412,196	398,878	399,231	397,962	404,253	397,188	397,700
Death Benefit Programs										
Lump Sum Payments	6	18	14	9	23	29	8	14	21	17
Monthly Payments to Guardians	100	103	107	99	111	112	114	114	111	122
Victims of Violent Crime	8	5	13	5	11	8	4	4	7	10

Note A: In fiscal year 2001, a new Texa$aver 457 Plan was established with different investment options. The original 457 Plan only offers life insurance products.
Note B: Data for the original 457 Plan is as of June 30, 2018.
Note C: The System implemented the Commuter Spending Accounts on January 1, 2016. During fiscal year 2018, the participant contributions to the reimbursement accounts were immaterial for reporting in this schedule.
Note D: In fiscal year 2007, the Group Benefits Program was separated into two funds (Active and Retiree) due to the implementation of GASB 43. Retired members and their dependents were moved to a fiduciary fund named the State Retiree Health Plan.
Note E: Starting in fiscal year 2006, the COBRA membership includes the beneficiaries of the COBRA group plan.

Listing of Participating Reporting Entities for State Retiree Health Plan

This schedule provides a list of state agencies, universities, junior and community colleges, and other entities participating in the plan. The source of the data is from the System's records.

State Agencies

Attorney General
Board of Law Examiners
Bond Review Board
Cancer Prevention and Research Institute of Texas
Commission on Jail Standards
Commission on State Emergency Communications
Comptroller – Judiciary Section
Comptroller - State Energy Conservation Office
Comptroller of Public Accounts
Court of Appeals - First Court of Appeals District
Court of Appeals - Second Court of Appeals District
Court of Appeals - Third Court of Appeals District
Court of Appeals - Fourth Court of Appeals District
Court of Appeals - Fifth Court of Appeals District
Court of Appeals - Sixth Court of Appeals District
Court of Appeals - Seventh Court of Appeals District
Court of Appeals - Eighth Court of Appeals District
Court of Appeals - Ninth Court of Appeals District
Court of Appeals - Tenth Court of Appeals District
Court of Appeals - Eleventh Court of Appeals District
Court of Appeals - Twelfth Court of Appeals District
Court of Appeals - Thirteenth Court of Appeals District
Court of Appeals - Fourteenth Court of Appeals District
Court of Criminal Appeals
Credit Union Department
Department of Agriculture
Department of Family and Protective Services
Department of Information Resources
Department of Public Safety
Department of Savings and Mortgage Lending
Department of State Health Services
District Courts - Comptroller's Judiciary Section
Employees Retirement System of Texas
Executive Council of Physical and Occupational Therapy Examiners
General Land Office
Governor - Executive
Governor - Fiscal
Health and Human Services Commission
Health Professions Council
House of Representatives
Legislative Budget Board
Legislative Reference Library
Office of Capital and Forensic Writs
Office of Consumer Credit Commissioner
Office of Court Administration
Office of Injured Employee Counsel
Office of Public Insurance Counsel
Office of Public Utility Counsel
Parks and Wildlife Department
Public Utility Commission of Texas
Railroad Commission of Texas
Secretary of State
Senate
Soil and Water Conservation Board
State Auditor
State Bar of Texas
State Board of Dental Examiners
State Board of Podiatric Medical Examiners
State Board of Veterinary Medical Examiners
State Commission on Judicial Conduct
State Law Library
State Office of Administrative Hearings
State Office of Risk Management
State Pension Review Board
State Preservation Board
State Prosecuting Attorney
State Securities Board
Sunset Advisory Commission
Supreme Court
Teacher Retirement System of Texas
Texas Alcoholic Beverage Commission
Texas Animal Health Commission
Texas Board of Architectural Examiners
Texas Board of Chiropractic Examiners
Texas Board of Nursing
Texas Board of Professional Engineers
Texas Board of Professional Geoscientists
Texas Board of Professional Land Surveying
Texas Commission on Environmental Quality
Texas Commission on Fire Protection
Texas Commission on Law Enforcement
Texas Commission on the Arts
Texas Department of Banking
Texas Department of Criminal Justice
Texas Department of Housing and Community Affairs
Texas Department of Insurance
Texas Department of Licensing and Regulation
Texas Department of Motor Vehicles
Texas Department of Transportation
Texas Education Agency
Texas Emergency Services Retirement System
Texas Ethics Commission
Texas Facilities Commission
Texas Funeral Service Commission
Texas Higher Education Coordinating Board
Texas Historical Commission
Texas Juvenile Justice Department
Texas Legislative Council
Texas Lottery Commission
Texas Medical Board
Texas Military Department
Texas Optometry Board
Texas Public Finance Authority
Texas Racing Commission
Texas Real Estate Commission
Texas School for the Blind and Visually Impaired
Texas School for the Deaf
Texas State Board of Examiners of Psychologists
Texas State Board of Pharmacy

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Listing of Participating Reporting Entities for State Retiree Health Plan (Concluded)

Texas State Board of Plumbing Examiners
Texas State Board of Public Accountancy
Texas State Library and Archives Commission
Texas Treasury Safekeeping Trust Company
Texas Veterans Commission
Texas Water Development Board
Texas Workforce Commission

Universities

Angelo State University
Lamar Institute of Technology
Lamar State College - Orange
Lamar State College - Port Arthur
Lamar University
Midwestern State University
Sam Houston State University
Stephen F. Austin State University
Sul Ross State University
Texas Southern University
Texas State Technical College System
Texas State University
Texas State University System
Texas Tech University
Texas Tech University Health Sciences Center
Texas Tech University Health Sciences Center - El Paso
Texas Tech University System
Texas Woman's University
University of Houston
University of Houston - Clear Lake
University of Houston - Downtown
University of Houston - Victoria
University of Houston System
University of North Texas
University of North Texas at Dallas
University of North Texas Health Science Center at Fort Worth
University of North Texas System

Junior and Community Colleges

Alamo Community College
Alvin Community College
Amarillo College
Angelina College
Austin Community College
Blinn College
Brazosport College
Central Texas College
Cisco Junior College
Clarendon College
Coastal Bend College
College of the Mainland
Collin County Community College District
Dallas County Community College
Del Mar College
El Paso Community College
Frank Phillips College
Galveston College
Grayson County College
Hill College
Houston Community College
Howard College and Southwest Collegiate Institute for the Deaf are a part of the Howard County Junior College District
Kilgore College
Laredo Junior College
Lee College
Lone Star College System
McLennan Community College
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
South Plains College
South Texas Community College
Southwest Texas Counties Junior College
Tarrant County College District
Temple College
Texarkana College
Texas Southmost College
Trinity Valley Community College
Tyler Junior College
Vernon Regional Junior College
Victoria College
Weatherford College
Western Texas College
Wharton County Junior College

Other Entities

Community Supervision & Corrections Departments
Texas Cooperative Inspection Program
Texas County and District Retirement System
Texas Municipal Retirement System
Texas Turnpike Authority
University of Texas Medical Branch at Galveston
University of Texas Mental Sciences Institute
Windham School District

The principal participating employer is the state of Texas. State agencies and universities employ 186,779 which is 80.5% of the employees covered by the State Retiree Health Plan.

ERS SUPPORTS THE STATE WORKFORCE BY OFFERING COMPETITIVE BENEFITS AT A REASONABLE COST.

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