



2019 Comprehensive Annual Financial Report

Employees Retirement System of Texas | A Component Unit of the State of Texas
Fiscal Year Ended August 31, 2019



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

2019 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, 2019

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INTRODUCTORY SECTION

Highlights of Retirement Programs

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Certificate of Achievement

Public Pension Standards Award

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Summary of Plan Provisions



Highlights of Retirement Programs

As of August 31, 2019

	ERS (Note A)	LECOS (Note A)	JRS II
Retirement Census Data			
Active Members	141,865	36,296	573
Terminated Employees Entitled to Benefits	125,935	22,207	187
Total Retirement Accounts	267,800	58,503	760
Retirees and Beneficiaries			
	115,155	13,981	472
Service Retirements	5,970	1,019	83
Disability Retirements	64	1	0
Total Retirements During the Fiscal Year	6,034	1,020	83
Funded Ratios (Note B)	70.5%	65.3%	87.5%
Plan Fiduciary Net Position as a Percentage of Total Pension Liability (Note C)	47.70%	36.16%	70.37%
Results of Investments - Pension Trust Funds			
Interest, Dividends & Securities Lending Income	\$ 677,858,407	\$ 23,533,924	\$ 11,214,908
Net Appreciation in Fair Value of Investments	117,824,156	4,031,397	2,205,534
Other Transactions Summary			
Member Contributions	\$ 694,788,598	\$ 9,098,121	\$ 6,462,797
State Retirement Contributions	712,647,639	25,864,146	13,100,263
Retirement Benefits	2,473,907,002	78,484,750	29,006,848
Member Contributions Withdrawn	142,303,194	3,768,394	213,797
Administrative Expenses	27,751,616	2,167,482	362,663
Investment Expenses	38,815,128	1,384,565	621,320
Money-Weighted Rates of Return	2.80%	2.79%	2.86%
Time Weighted Rates of Return			
Investment Pool Trust Fund	1-Year 3.04%	3-Year 8.19%	5-Year 6.03%

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 actuarial 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



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, 2019

PORTER WILSON
EXECUTIVE DIRECTOR

ILESA DANIELS
CHAIR

I. CRAIG HESTER
VICE-CHAIR

BOARD OF TRUSTEES
BRIAN BARTH
JAMES KEE PH.D.
CATHERINE MELVIN

The Honorable Greg Abbott, Governor of Texas
The Honorable Glenn Hegar, Texas Comptroller
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 honored to present the Employees Retirement System of Texas (ERS) Comprehensive Annual Financial Report (CAFR) for the fiscal year ended August 31, 2019. We provide this annual report as a resource for understanding of the structure and financial status of the plans.

The retirement benefits and health coverage offered through ERS are an investment in Texas, funded by both members and taxpayers. These benefits play an increasingly critical role in ensuring Texas has the workforce necessary to fulfill the mission of state government and provide crucial services Texans rely on daily. 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 86th Texas Legislature maintained the state contribution rates for the state employee, judicial, and law enforcement and custodial officer plans. This contribution level is not considered sound funding and the financial status of these plans continues to decline. All the plans currently have a funding gap that grows each year, as there are not enough projected assets to meet the projected liability.

Judges in the Judicial Retirement System Plan 2 (JRS 2) will now contribute 9.5% of their salary, equal to member rates for the ERS plan, as a result of legislation. The legislature also implemented a tiered salary arrangement for judges. Elected officials' retirement benefits did not increase and will be based on the judicial salary in the first tier. Members in the Law Enforcement and Custodial Officer Supplemental (LECOS) plan continue to contribute an additional 0.5% of their salary, making their full retirement contribution 10% of pay.

The ERS Board of Trustees reviewed the return assumption for the three pre-funded plans in May 2019 with ERS' new general investment consultant, NEPC. Based on the asset allocation approved by the Board, they deemed the current 7.5% to be a reasonable return assumption. In 2020, the System will conduct an experience study to review all the actuarial assumptions.

During Fiscal Year 2019, ERS paid approximately \$2.58 billion in retirement annuities to more than 115,000 retirees and beneficiaries. For Fiscal Year 2019, the ERS Retirement Trust Fund netted 2.8%, or \$758.9 million, in investment earnings. The Investments section of the CAFR includes a list of commissions and fees paid to investment managers, as required by S.B. 322 passed by the 86th Legislature. S.B. 322 also requires a comprehensive report by an investment consultant to review the plan's investment policy, compliance, asset allocation, investment fees and governance process.

The Honorable Greg Abbott, Governor of Texas
The Honorable Glenn Hegar, Texas Comptroller
John McGeady, Legislative Budget Board
Lisa Collier, First Assistant State Auditor
The Board of Trustees and Members of the Employees Retirement System of Texas
December 20, 2019
Page 2

The 86th Texas Legislature passed S.B. 2224, requiring all public pension plans to create a pension funding policy that targets attaining a 100% funded ratio. ERS will submit copies of its policy to the Texas Pension Review Board and the Texas State Legislature, the sponsoring governmental entity, in compliance with the new law.

The Texas Employees Group Benefits Program continues to benefit from cost-saving activities undertaken in prior years and ongoing active management of the plans. During Fiscal Year 2019, ERS tracked positive financial performance of the HealthSelect of Texas® and Consumer Directed HealthSelectSM medical plans, with a projected cost trend of 4.7%. ERS implemented a mental health virtual visit program that provides convenient and expanded access for mental health services to HealthSelect of Texas®, Consumer Directed HealthSelect and HealthSelect Medicare Advantage Plan participants. ERS continued to see growth in utilization of all virtual visits, which increased by 67% in the first six months of Fiscal Year 2019 compared to the same period in Fiscal Year 2018.

ERS continues to respond effectively to the ongoing nationwide challenge of rising health costs. ERS launched the Changing the Script program, a comprehensive and collaborative approach aimed at reducing opioid utilization. The result was reduced utilization of short-acting opioid drugs by 35% and long-acting opioid drugs by 70% in one year. Changing the Script does much more than reduce costs. The program has the potential to prevent opioid addiction and its devastating effects. Additionally, ERS launched the unique breast cancer screening mobile mammography initiative through collaboration with the University of Texas MD Anderson Cancer Center. Not only are the screenings convenient; MD Anderson provides them to HealthSelect of Texas and Consumer Directed HealthSelect participants at no cost to members or the plan. ERS anticipates building on these initiatives and launching additional programs, as we increase employers' and participants' awareness of them.

Thank you for your ongoing support. ERS is proud of its role in supporting this great state, its leadership, and its employees and retirees. We look forward to working with you to address the precarious financial condition of the retirement programs, so they may continue to serve the State of Texas and the dedicated public servants who devote their careers to it.

Sincerely,



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, 2019

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

PORTER WILSON
EXECUTIVE DIRECTOR

Ladies and Gentlemen:

Ilesa Daniels
CHAIR

I am pleased to submit the Employees Retirement System of Texas (ERS) Comprehensive Annual Financial Report (CAFR) for the fiscal year ended August 31, 2019 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.

I. CRAIG HESTER
VICE-CHAIR

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.

BOARD OF TRUSTEES
BRIAN BARTH
JAMES KEE PH.D.
CATHERINE MELVIN

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, 2019.

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 closed the fiscal year with a fair value of \$28.53 billion, and had a gross return of 3.04% for the year. The time weighted rate of return for three and five years were 8.19% and 6.03% 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, 2019 shows that the ratio of the actuarial value of assets to the actuarial accrued liability was 70.5% for funding purposes. 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; (2) 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, 2019 shows that the ratio of the actuarial value of assets to the actuarial accrued liability was 65.3% for funding purposes. The JRS II Retirement Plan actuarial valuation as of the August 31, 2019 shows that the ratio of the actuarial value of assets to the actuarial accrued liability was 87.5% for funding purposes. Judges in Plan 1 and Plan 2 will now contribute 9.5% of their salary equal to the member rates for the ERS plan as a result of legislation enacted by the 86th Legislature. The legislature also implemented a tiered salary arrangement for judges. Elected officials' retirement benefits did not increase and will be based on the judicial salary in the first tier. 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.

The System evaluated new reporting standards issued by the Governmental Accounting Standards Board to assess applicability. Specifically, the System evaluated GASB Statement no. 83 Certain Asset Retirement Obligations which established criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for asset retirement obligations. Because the System does not have any asset retirement obligations, this statement is not applicable. In addition, the System evaluated GASB Statement No. 88 Certain Disclosures Related to Debt, including Direct Borrowing and Direct Placements which clarifies which liabilities governments should include when disclosing information related to debt and establishes criteria for reporting related to debt, including direct borrowings and direct placements. Because the System has not issued any debts, this statement is not applicable. Additional information on reporting changes is presented in the Financial Section.

MAJOR INITIATIVES

The System will provide information consistent with its funding policy to the Texas Legislature on the status of the state employee, judicial and supplemental law enforcement and custodial officer plans. The current contribution levels are not considered sound funding and the financial status of these plans continue to decline. In Fiscal Year 2020, the System will conduct an experience study to review all the actuarial assumptions.

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, 2019.

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 2019, pharmacy trend (not including rebates and subsidies) was 7.2% and medical trend was 4.2% resulting in a total combined HealthSelectSM health care cost trend of 5.0%. During 2019 the System launched the Changing the Script program, a comprehensive and collaborate approach aimed at reducing opioid utilization. The System also collaborated with the University of Texas MD Anderson Cancer Center to launch a unique breast cancer screening mobile mammography initiative.

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, 2018. 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 30 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 Administration

The Public Pension Coordinating Council (PPCC) gave the 2019 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, 2018

Christopher P. Morrill

Executive Director/CEO



Public Pension Coordinating Council

***Recognition Award for Administration
2019***

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

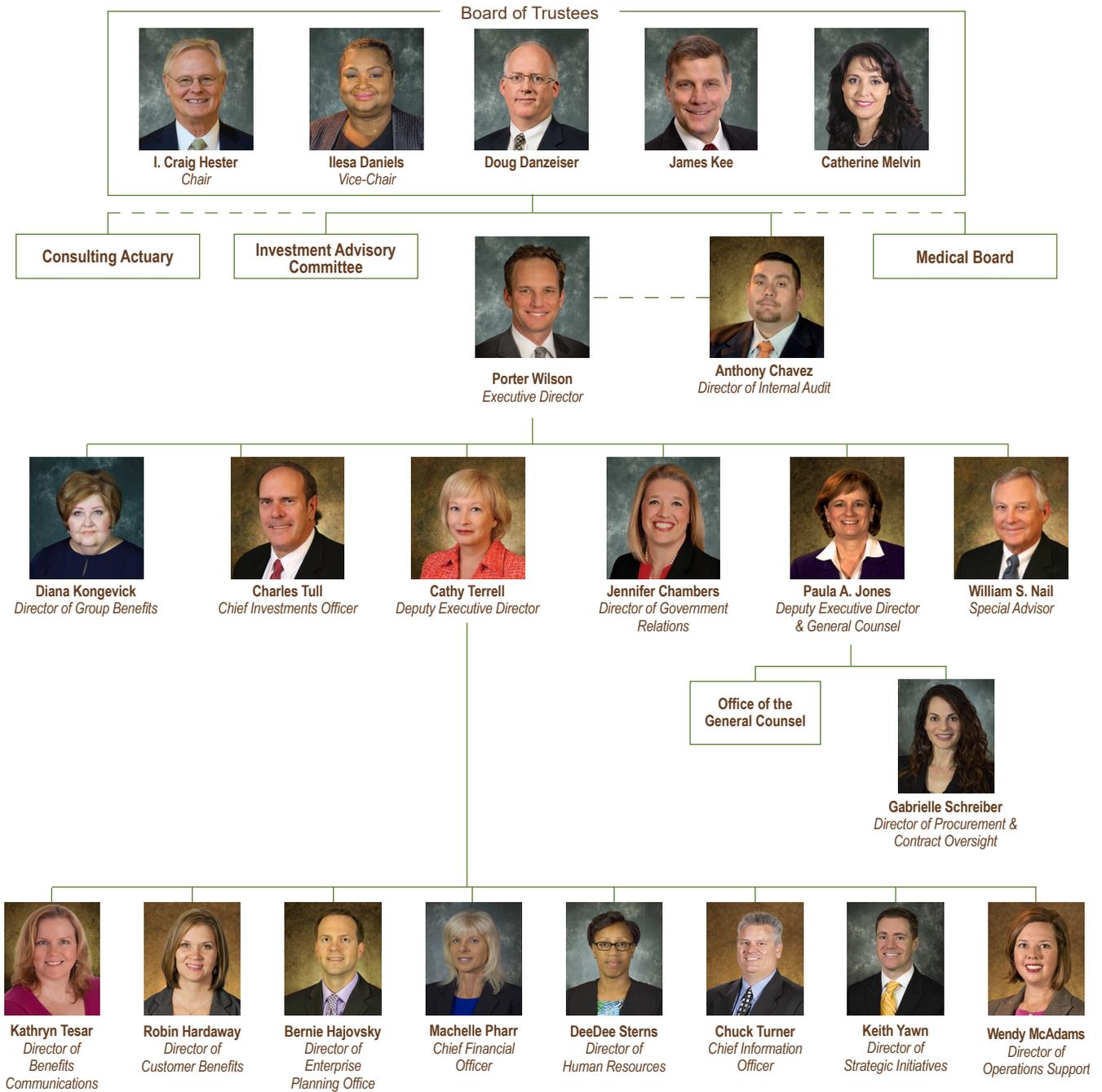
National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

A handwritten signature in cursive script that reads "Alan H. Winkle".

Alan H. Winkle
Program Administrator

Organizational Chart and Data

As of August 31, 2019



Consultants and Advisors

As of August 31, 2019

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

Robert G. Alley, CFA, Chair
Gene L. Needles Jr., Vice-Chair
*Chairman, President and CEO,
American Beacon Advisors*
Caroline Cooley
*Chief Investment Officer – Diversified Funds,
Crestline Investors, Inc*
Laurie L. Dotter
James R. Hille, CFA, CAIA
*Chief Investment Officer,
Texas Christian University Endowment*
Ken D. Mindell
*Senior Vice President and Treasurer,
Rosewood Management Corporation*
Margaret “Didi” Weinblatt, Ph.D., CFA

Investment Consultants

Albourne Partners
CBRE Caledon Capital Management Inc.
Meketa Investment Group
Mercer Alternatives Limited
NEPC, LLC

External Investment Advisors

Domestic Equity

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

International Equity

Acadian Asset Management
Axiom International Investors, LLC
BlackRock, Inc.
EAM Investors, LLC
Fisher Investments Institutional Group
Franklin Templeton Institutional, LLC
Global Alpha Capital Management Limited
Kayne Anderson Rudnick Investment Management, LLC
Lazard Asset Management
Quantitative Management Associates, LLC

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 M. Loving, M.D.
William P. Taylor, M.D.

Please refer to pages 103 to 104 in the Investment Section for a schedule of fees and commission.

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 Texas 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 credit, or
- Rule-of-80, with at least 10 years of service credit at age 60, or
- 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 credit, or
- Rule-of-80, with at least 10 years of service credit at age 62, or
- 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 currently holding a judicial 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.

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 credit. (5% annuity reduction for each year retired under age 62, no cap), or
- 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 and an 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 currently holding a judicial office.

Effective 9-1-2019

- Reduction percentages for early retirement from 50%:

Age 60: 40%
Age 61: 41.7%
Age 62: 43.6%
Age 63: 45.6%
Age 64: 47.7%

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:

Prior to 9-1-2019

- 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.

Prior to 9-1-2019

- 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%.

Effective 9-1-2019

- Standard monthly annuity is between 40%-47.7% (depending on age) of the state salary paid to a judge to the last court they held judicial office based on Texas Gov't Code Section 839.102.
- An additional 10% is paid when a member retires 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

Standard Service Retirement without Reduced Benefits (Continued):*Elected Class Only (continued):*

Effective 9-1-2019

- Standard monthly annuity is 2.3% of the current State base 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 base salary being paid to a district judge.

District Attorneys Only:

Effective 9-1-2019

- Standard monthly annuity is 2.3% of the salary being paid to a district judge based on the same number of years of contributing service.
- Maximum standard annuity is 100% of the State base salary being paid to a district judge based on the same number of years of contributing service.

plus 2.3% for each 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%.

Optional Annuity Plans:*Employee Class and Elected Class:*

Members can choose one of the following beneficiary options at retirement and still receive a lifetime annuity that is actuarially reduced for life and is actuarially reduced based on age of member and beneficiary at time of retirement.

- Option 1: Lifetime with 100% to surviving beneficiary;
- Option 2: Lifetime with 50% to surviving beneficiary;
- Option 3: Lifetime with five years certain (if retiree dies before receiving 60 payments, the surviving beneficiary gets the remaining 60 payments);
- Option 4: Lifetime with 10 years certain (if retiree dies before receiving 120 payments, the surviving beneficiary gets the remaining 120 payments);
- Option 5: Lifetime with 75% to surviving beneficiary; and
- One-time partial lump sum of up to three years of standard annuity at retirement if the annuity is not age reduced (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:*Employee Class Only:*

Hire date prior to 09-01-2009:

- Five or more years of service credit.

Hire date on or after 09-01-2009 and prior to 9-1-2013:

- 10 or more years of service credit.

Hire date on or after 09-01-2013:

- 10 or more years of service credit.

Elected Class Only:

- Eight or more years of service credit.

- 20 or more years of service credit as a certified peace officer/custodial officer.

- 10 or more years of service credit if currently hold a judicial office
- 12 or more years of service credit if not currently holding a judicial office.

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.

Disability Retirement Eligibility:*Employee Class Only:*

- For occupational disability, the member must have at least one month of service credit 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.

- Same as ERS Employee Class Only.

- At least seven years of service credit.

Elected 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, eight years of Elected Class service credit (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.

Disability Retirement Benefits:*Employee Class Only:*

- For occupational disability, the benefits are the same as those under the standard service retirement, except the standard

- 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.

- Same as standard service retirement benefits.

Disability Retirement Benefits (Continued):

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 credit.
- 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 disability, the 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 base salary of a district judge or 2.3% of the State base 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.

- 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.

Death Benefits:*Non-Retiree Employee Class:*

- 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.

A contributing member with less than 10 years of service credit:

- For a contributing member that had less than 10 years of service credit, 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.

A contributing member with at least 10 years of service credit:

- May select a death benefit plan: a lifetime monthly payment, a 10-year guaranteed monthly payment or a one-time refund of the retirement account balance at the time of the death. If the member was age 60 with five or more years of service credit and less than 10 years, and the beneficiary is either the spouse or a minor child, they may be eligible for a death benefit plan.

- Same as ERS except beneficiary(ies) of deceased members with at least 20 years of certified peace officer/custodial officer service, under age of 50 at the time of death, are not eligible for a one-time partial lump sum of up to three years of the monthly payment.

- Same as ERS except not eligible for a one-time partial lump sum of up to three years of the monthly payment.

Death Benefits (Continued):*Non-Retiree Employee Class
(continued):*

- If a one-time refund of the member's retirement account balance is selected, 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 a lifetime monthly payment or a 10-year guaranteed monthly payment is selected, the beneficiary(ies) are eligible for a one-time partial lump sum of up to three years of monthly payment.

Retiree Employee Class:

- If a member selected an optional service retirement and dies, the beneficiary will receive a monthly payment based on the option chosen.
- 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 the member was retired, the designated beneficiary is eligible for a one-time Retiree Lump Sum Death Benefit in the amount of \$5,000. If retired under the Proportionate Retirement Program with less than five years of service credit, this payment will be reduced proportionately

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.

Death Benefits (Continued):*Elected Class Only (Continued):*

- 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 selected an optional service retirement and dies, the beneficiary will receive a monthly payment based on the option chosen.
- 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 is retired, the designated beneficiary(ies) is eligible for a one-time Retiree Lump Sum Death Benefit in the amount of \$5,000. If retired under the Proportionate Retirement Program with less than five years of service credit, this payment will be reduced proportionately.



FINANCIAL SECTION

Independent Auditor's Report

Management's Discussion and Analysis

Basic Financial Statements

Required Supplementary Information

Other Supplementary Information





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

Independent Auditor's Report

Employees Retirement System's Board of Trustees

Ms. Ilesa Daniels, Chair
Mr. I. Craig Hester, Vice-Chair
Mr. Brian Barth
Dr. James Kee
Ms. Catherine Melvin

Report on the Financial Statements

We have audited the accompanying financial statements of the governmental activities that include the proprietary fund and the aggregate remaining fund information, consisting of the fiduciary funds of the Employees Retirement System (System), a component unit of the State of Texas, as of and for the year ended August 31, 2019, and the related notes to the financial statements, which collectively comprise the Systems' 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 entity's internal control. Accordingly, we express no such opinion. An audit also includes

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evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities that include the proprietary fund and the aggregate remaining fund information, consisting of the fiduciary funds of the System, a component unit of the State of Texas, as of August 31, 2019, 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 that include the proprietary fund and the aggregate remaining fund information, consisting of the fiduciary funds of the State that are 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, 2019, the changes in its financial position, or where applicable, its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Investments with Values That Are Not Readily Determined

As discussed in Note 2.A, Figure 8, the financial statements include investments valued at approximately \$9.4 billion as of August 31, 2019, 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 who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the System's basic financial statements. The information in the combining financial statements, supporting schedules, and other supplementary schedules, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The information in 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 it.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we will issue our report dated December 20, 2019, 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, CPA, CFE, CIDA
First Assistant State Auditor

December 20, 2019

Management's Discussion and Analysis

Year Ended August 31, 2019

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, 2019. 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:

	2019	2018	Changes
	\$	\$	%
Net Position	2,033.43	1,060.69	91.71
Current Liabilities	708.10	800.53	(11.55)
Member and Employer Contributions	3,092.00	3,141.76	(1.58)
Benefit Payments	2,212.81	2,163.86	2.26

The change in Net Position is primarily due to increase in interest revenues from the fixed income investments and savings generated from third party administrator and pharmacy benefit manager contracts.

Financial Highlights – Fiduciary Funds

- Net position of the Fiduciary Funds administered by the System totaled \$28.83 billion as of August 31, 2019, compared with \$29.58 billion as of August 31, 2018. The investment portfolio returned 3.04% for the year. The majority of the decrease resulted primarily from the downturn in market conditions. The time weighted rate of return for three and five years were 8.19% and 6.03%, respectively.
- The one year money-weighted rates of return for the Fiduciary Funds are summarized as follows:

Fund Name	Rate (%)
Employees Retirement System Fund	2.80
Law Enforcement and Custodial Officer Supplemental Retirement Fund	2.79
Judicial Retirement System Plan Two Fund	2.86
Overall	2.80

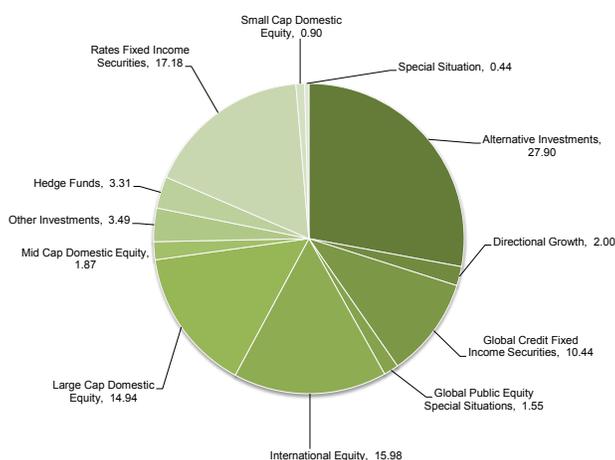
- The System's management has confidence in the financial markets and maintains a long term approach to investing the System's assets. The System's investments are highly diversified and are designed to withstand market fluctuations.

Management's Discussion and Analysis (Continued)

Year Ended August 31, 2019

Asset Allocation

Asset Class	%
Alternative Investments	27.90
Directional Growth	2.00
Global Credit Fixed Income Securities	10.44
Global Public Equity Special Situations	1.55
International Equity	15.98
Large Cap Domestic Equity	14.94
Mid Cap Domestic Equity	1.87
Other Investments	3.49
Hedge Funds	3.31
Rates Fixed Income Securities	17.18
Small Cap Domestic Equity	0.90
Special Situation	0.44



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:

	2019	2018	Changes
	\$	\$	%
Contributions:			
Retirement & Other	1,564.75	1,532.10	2.13
Insurance	510.86	398.11	28.32
Total (Exh. IX)	2,075.61	1,930.21	7.53
Benefit Payments:			
Retirement & Other	2,754.79	2,604.35	5.78
Insurance	828.75	735.80	12.63
Total (Exh. IX)	3,583.54	3,340.15	7.29

- The increase 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, 2019. The funded ratios are as follows:

Plans	2019	2018
	%	%
Employees Retirement System	70.5	70.2
Law Enforcement and Custodial Officer Supplemental Retirement Fund	65.3	65.6
Judicial Retirement System of Texas Plan Two	87.5	91.7

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 millions) were as follows:

	2019	2018	Changes
	\$	\$	%
Changes in Fiduciary Net Position (Exh. IX)	(741.46)	1,129.51	(165.64)
Total Net Position	28,834.11	29,575.56	(2.51)

The decrease in changes in Fiduciary Net Position is due to the facts that the gross time weighted rate return decreased from 9.58% in fiscal year 2018 to 3.04% in fiscal year 2019.

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 as follows:

	2019	2018	Changes
	\$	\$	%
Member Contributions	782.95	774.46	1.10
Employer Contributions	1,152.90	1,042.92	10.55
Non-Employer Contributing Entity Contributions	20.18	16.59	21.64
Net Investment Income	801.77	2,565.60	(68.75)
Other Additions	195.76	178.63	9.59
Total Additions (Exh. IX)	2,953.56	4,578.20	(35.49)

For the Employees Retirement Fund, member and State retirement contribution rates for fiscal year 2019 were 9.5% and 10.0% respectively. For the Law Enforcement and Custodial Officer Supplemental Retirement Fund (LECOS), both the State and

Management's Discussion and Analysis (Continued)

Year Ended August 31, 2019

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 follows:

	2019	2018	Changes
	\$	\$	%
Retirement Benefits and Refunds	3,654.95	3,413.99	7.06
Administrative Expenses	38.76	34.05	13.83
Other Deductions	1.31	0.65	101.54
Total Deductions (Exh. IX)	3,695.02	3,448.69	7.14

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 millions as follows:

	2019	2018	Changes
	\$	\$	%
Cash and Cash Equivalents	110.53	80.97	36.51
Securities Lending Collateral	154.22	221.95	(30.52)
Investments	28,203.99	28,827.64	(2.16)
Receivables	1,450.79	716.85	102.38
Due From Other Funds/ Agencies	44.16	163.22	(72.94)
Capital Assets	14.84	5.92	150.68
Total Assets (Exh. VIII)	29,978.53	30,016.55	(0.13)

Liabilities

The condensed liabilities have been extracted from Exhibit VIII, Statement of Fiduciary Net Position.

Changes in liabilities are summarized in millions as follows:

	2019	2018	Changes
	\$	\$	%
Accounts Payable	991.40	213.14	365.14
Due To Other Funds/ Agencies	7.08	2.93	141.64
Compensable Leave	3.45	3.47	(0.58)
Securities Lending Obligations	141.65	220.28	(35.70)
Other Liabilities	0.84	1.17	(28.21)
Total Liabilities (Exh. VIII)	1,144.42	440.99	159.51

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, 2019, (compared to the August 31, 2018 actuarial valuation) is summarized in millions as follows:

Plans	Unfunded Accrued Actuarial Liability	
	2019	2018
	\$	\$
Employees Retirement System	(11,741.24)	(11,629.32)
Law Enforcement and Custodial Officer Supplemental Retirement Fund	(514.51)	(499.60)
Judicial Retirement System of Texas Plan Two	(66.78)	(40.69)

For the Employees Retirement System Fund, the August 31, 2019 actuarial valuation for funding purposes shows an unfunded accrued liability of \$11.7 billion. The funded ratio, the ratio of the actuarial value of assets to the actuarial accrued liability, is 70.5% as of August 31, 2019. The valuation shows that the total normal cost is 13.76% of payroll and total contributions are 19.5% of payroll. The total contribution rate exceeds the normal cost by 5.74% 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 23.26% 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.

Management's Discussion and Analysis (Concluded)

Year Ended August 31, 2019

The August 31, 2019 actuarial valuation for the Law Enforcement and Custodial Officer Supplemental Retirement Fund shows that the total normal cost rate for fiscal year 2019 is 2.08% of payroll. At August 31, 2019, the unfunded accrued liability is \$514.51 million, and the funded ratio is 65.3%. Total contributions are 1.0% of payroll. The total contribution rate and approximately \$17.1 million from court fees are below the normal cost for the current fiscal year by 0.04%. It is not sufficient to amortize the unfunded accrued liability over a finite period of time. For fiscal year 2019, 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 3.14% of payroll.

For the Judicial Retirement System of Texas Plan II, the August 31, 2019 actuarial valuation shows that the total normal cost is 23.14% of payroll and unfunded accrued liability is \$66.78 million. The funded ratio, the ratio of the actuarial value of assets to the actuarial accrued liability is 87.5% as of August 31, 2019. Total contributions are 25.053% of payroll. The total contribution rate exceeds the normal cost by 1.913% of payroll for the current fiscal year, and it is not sufficient to amortize the unfunded accrued liability over a finite period of time. The rate needed to fund normal cost plus amortize the unfunded accrued liability over 31 years is 27.84%.

The State Retiree Health Plan is currently funded on a pay-as-you-go basis. For the State Retiree Health Plan, the August 31, 2019 actuarial valuation shows an unfunded accrued liability of \$34.6 billion. The funded ratio is 0.5%. The valuation shows that the total normal

cost is 12.5% of payroll. The Actuarially Determined Contribution (ADC) as of August 31, 2019 is 21.8% of payroll. Total contributions are 15.7% 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 \$401.3 million and \$20.2 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 2019 totaling \$89.4 million. The above amounts, along with other additions of \$0.1 million plus net investment income of \$3.3 million resulted in additions of \$514.3 million. These were offset entirely by \$828.8 million in benefit payments, which is net of the \$209.8 million payment from members, and \$6.0 million in administrative expense. The net plan position is \$59.9 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 Mabelle Pharr, Chief Financial Officer at Mabelle.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, 2019

	Governmental Activities
Assets	\$
Current Assets:	
Cash and Cash Equivalents:	
Cash on Hand	33,846
Cash in State Treasury	138,738,636
Total Cash and Cash Equivalents	138,772,482
Securities Lending Collateral	13,760,417
Short-Term Investments	1,115,168,120
Legislative Appropriations	2,833
Receivables	253,310,938
Due from Fiduciary Funds	1,486,388
Due from Other Agencies	2,174,276
Total Current Assets	1,524,675,454
Non-Current Assets:	
Public Equities	7,323,933
Fixed Income	1,148,854,738
Alternative Investments	60,703,173
Total Non-Current Assets	1,216,881,844
Total Assets	2,741,557,298
Liabilities	
Current Liabilities:	
Payables	661,227,844
Due to Fiduciary Funds	32,050,818
Unearned Revenue	33,890
Obligations Under Securities Lending	14,811,396
Total Current Liabilities	708,123,948
Total Liabilities	708,123,948
Net Position	
Restricted for:	
Employees Life, Accident and Health Insurance and Benefits	2,033,429,139
Unrestricted	4,211
Total Net Position (Exh. II & III)	2,033,433,350

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

Exhibit II
Statement of Activities
Year Ended August 31, 2019

	Program Revenues			Net (Expense)
	Expenses	Changes for Services	Operating Grants and Contributions	Revenue and Changes in Net Position
Functions/Programs	\$	\$	\$	\$
Governmental Activities:				
Social Security Administration	94,555	73,625		(20,930)
Death Benefits-Peace Officers, Firemen, etc.	7,831,046	7,831,046		
Compensation to Victims of Crime	2,000,000	2,000,000		
Death Benefits-Retiree \$5,000 Lump Sum	9,810,826	9,810,826		
Employees Life, Accident And Health Insurance and Benefits	2,225,963,239	3,092,137,993	106,567,301	972,742,055
Total Governmental Activities	2,245,699,666	3,111,853,490	106,567,301	
			Change in Net Position (Exh. IV)	972,721,125
			Net Position - Beginning	1,060,712,225
			Net Position - Ending (Exh. I)	2,033,433,350

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

Exhibit III
Balance Sheet – Governmental Funds
 August 31, 2019

		Non-major Special Revenue Funds Totals (Note 1.E)
Assets	\$	
Current Assets:		
Cash and Cash Equivalents:		
Cash in State Treasury		20,497
Total Cash and Cash Equivalents		20,497
Legislative Appropriations		2,833
Due From Other Funds (Note 5.A)		3,244
Total Current Assets		26,574
Total Assets		26,574
Liabilities & Fund Balances		
Current Liabilities:		
Payables:		
Voucher/Accounts Payable		2,833
Due To Other Funds (Note 5.A)		19,486
Unearned Revenues		44
Total Current Liabilities		22,363
Total Liabilities		22,363
Fund Balances:		
Committed		4,211
Total Fund Balances (Exh. IV)		4,211
Total Liabilities & Fund Balances		26,574
Total Fund Balances - Governmental Funds (above):		4,211
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.		2,033,429,139
Net Position of Governmental Activities (Exh. I)		2,033,433,350

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, 2019

	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.	7,831,046
For Victims of Crime	2,000,000
For Death Benefits-Retirees	9,810,826
Total Appropriation Revenue	19,641,872
Administration Fees for Social Security Administration	73,625
Total Revenues	19,715,497
Expenditures	
Current:	
Death Benefits	19,641,872
Administrative Expenditures:	
Salaries & Wages	61,739
Payroll Related Costs	19,652
Professional Fees & Services	2,825
Travel	699
Materials & Supplies	2,877
Communications & Utilities	1,431
Repairs & Maintenance	1,444
Rentals & Leases	782
Printing & Reproduction	118
Other Expenditures	2,988
Total Administrative Expenditures	94,555
Total Expenditures	19,736,427
Deficiency of Revenues Under Expenditures	(20,930)
Fund Balances - Beginning	25,141
Fund Balances - Ending (Exh. III)	4,211
Net Change in Fund Balances - Governmental Funds:	(20,930)
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.	972,742,055
Change in Net Position of Governmental Activities (Exh. II)	972,721,125

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, 2019

	Internal Service Fund
	Employees Life, Accident and
	Health Insurance and Benefits
	Fund (0973) (U/F 0973)
Assets	\$
Current Assets:	
Cash and Cash Equivalents:	
Cash on Hand	33,846
Cash in State Treasury	138,718,139
Total Cash and Cash Equivalents	138,751,985
Securities Lending Collateral	13,760,417
Short-Term Investments	1,115,168,120
Receivables:	
Interest Receivable	11,036,950
Accounts Receivable	237,003,837
Unsettled Sales-Investment Receivables	5,270,151
Total Receivables	253,310,938
Due From Other Funds (Note 5.A)	1,483,144
Due From Other Agencies (Note 1.G)	2,174,276
Total Current Assets	1,524,648,880
Non-Current Assets:	
Investments: (Note 2.A)	
Public Equities	7,323,933
Fixed Income	1,148,854,738
Alternative Investments	60,703,173
Total Non-Current Assets	1,216,881,844
Total Assets	2,741,530,724
Liabilities	
Current Liabilities:	
Payables:	
Claims Payable:	
Incurred, Self-Funded	52,674,779
Incurred But Not Reported, Self-Funded	582,486,393
Total Claims Payable	635,161,172
Premiums Payable	12,018,770
Administrative and Other Fees Payable	5,974,191
Accounts Payable	27,694
Unsettled Purchases-Investment Payables	8,039,246
Other Payable	3,938
Total Payables	661,225,011
Due To Other Funds (Note 5.A) :	
Payable to State Retiree Health Plan	28,557,248
Other Interfunds Payable	3,474,084
Total Due To Other Funds	32,031,332
Unearned Revenue	33,846
Obligations Under Securities Lending	14,811,396
Total Current Liabilities	708,101,585
Total Liabilities	708,101,585
Net Position	
Restricted For:	
Employee Life, Accident and Health Insurance and Benefits	2,033,429,139
Total Net Position (Exh. VI)	2,033,429,139

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, 2019

	Internal Service Fund
	Employees Life, Accident and
	Health Insurance and Benefits
	Fund (0973) (U/F 0973)
Operating Revenues	\$
Contributions to Insurance Program:	
From Employers	2,529,623,805
From Members:	
For Employees	555,346,990
For COBRA	7,026,433
Total Contributions from Members	562,373,423
Total Contributions to Insurance Program	3,091,997,228
Other Operating Revenues:	
COBRA 2% Administration Fee	140,765
Penalty Assessed to Insurance Carrier	14,815,461
Total Other Operating Revenues	14,956,226
Total Operating Revenues	3,106,953,454
Operating Expenses	
Employee Benefit Payments:	
For Employees ¹	2,186,649,478
For COBRA	25,281,856
For Health Savings Accounts	873,854
Total Employee Benefit Payments	2,212,805,188
Administrative Expenses:	
Salaries & Wages	6,401,935
Payroll Related Costs	2,146,273
Professional Fees & Services	1,378,796
Travel	59,832
Materials & Supplies	510,459
Communications & Utilities	395,002
Repairs & Maintenance	420,591
Rentals & Leases	163,351
Printing & Reproduction	25,273
Other Operating Expenses	1,564,776
Total Administrative Expenses	13,066,288
Total Operating Expenses	2,225,871,476
Operating Income	881,081,978
Non-Operating Revenues (Expenses)	
Net Increase in Fair Value of Investments	33,360,177
Interest Revenue	58,173,989
Securities Lending Activities:	
Loan Premium on Securities Lending	217,674
Broker Rebates	(77,745)
Agent Fees	(13,993)
Net Securities Lending Activity	125,936
Commission on Futures Contracts	(25)
Total Non-Operating Revenues	91,660,077
Change in Net Position	972,742,055
Net Position - Beginning	1,060,687,084
Net Position - Ending (Exh. V)	2,033,429,139

¹ The benefit payments are reported net of \$177,015,315 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, 2019

	<u>Internal Service Fund</u> <u>Employees Life, Accident and</u> <u>Health Insurance and Benefits</u> <u>Fund (0973)/(U/F 0973)</u>
Cash Flows from Operating Activities:	\$
Cash Received from Members	469,548,277
Cash Received from Employers and Non-employer Contributing Entities	2,578,815,775
Cash Received from Pharmacy Rebates	139,340,145
Cash Payments to Insurance Carriers and Third Party Administrators	(2,365,914,257)
Cash Payments for Goods and Services	(14,612,914)
Other Cash Received	1,414,928
Net Cash Provided by Operating Activities	808,591,954
Cash Flows from Investing Activities:	
Net Purchases of Short-Term Investment Fund	(675,801,979)
Interest on Deposit in State Treasury	3,512,278
Net Cash Used by Investing Activities	(672,289,701)
Net Increase in Cash and Cash Equivalents	136,302,253
Cash and Cash Equivalents:	
Beginning of Year	2,449,732
End of Year	138,751,985
Reconciliation of Operating Income to Net Cash Provided by Operating Activities:	
Operating Income	881,081,978
Adjustments to Reconcile Operating Income to Net Cash Provided by Operating Activities:	
Change in Assets and Liabilities:	
Decrease in Accounts Receivable	39,365,688
Increase in Due From Other Agencies	(2,174,276)
Increase in Due From Other Funds	(1,017,559)
Increase in Accounts Payable	13,961,024
Decrease in Due To Other Funds	(122,658,331)
Increase in Unearned Revenue	33,430
Total Adjustments	(72,490,024)
Net Cash Used by Operating Activities	808,591,954
Non-Cash Investing Activities:	
Net Appreciation in Fair Value of Non-Cash Equivalent Investments	33,360,177

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

Exhibit VIII
Statement of Fiduciary Net Position
August 31, 2019

	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	905,327	8,057		
Cash in Bank	23,000			
Cash in State Treasury	82,520,589	6,661,408	1,835,239	
Total Cash and Cash Equivalents	83,448,916	6,669,465	1,835,239	-
Securities Lending Collateral	146,719,484	5,054,587	2,448,259	
Short-Term Investments	540,191,993	18,612,921	8,957,516	
Total Cash and Short-Term Investments	770,360,393	30,336,973	13,241,014	-
Legislative Appropriations				
Investments: (Note 1.G)				
Public Equities	10,281,445,198	354,664,038	171,640,185	
Fixed Income	6,905,103,547	238,195,299	115,274,967	
Alternative Investments	8,900,484,307	307,027,042	148,586,191	
Other Investments	175,440,139	6,051,903	2,928,827	
Total Investments	26,262,473,191	905,938,282	438,430,170	-
Receivables:				
Federal Receivable				
Interest and Dividends Receivable	98,388,227	3,398,949	1,642,117	
Contributions/Accounts Receivable	114,030,447	1,412,478	1,558,284	
Unsettled Sales-Investment Receivables	1,011,420,400	34,889,496	16,884,823	
Total Receivables	1,223,839,074	39,700,923	20,085,224	-
Due From Other Funds (Note 5.A)	6,609,578	51,448	13,939	
Due From Other Agencies (Note 1.G)	8,746,281			
Prepaid Claims Expense	10,025			
Capital Assets:				
Non-Depreciable:				
Land and Land Improvements	874,889			
Construction in Progress	9,525,420			
Depreciable, Net of Accumulated Depreciation/Amortization of \$20,570,680				
Building	3,936,003			
Furniture and Equipment	482,064			
Vehicles	21,356			
Total Capital Assets	14,839,732	-	-	-
Total Assets	28,286,878,274	976,027,626	471,770,347	-
Liabilities				
Payables:				
Voucher/Accounts Payable	23,667,907	554,610	339,787	
Unsettled Purchases-Investment Payables	768,026,540	26,493,492	12,821,565	
Total Payables	791,694,447	27,048,102	13,161,352	-
Due To Other Funds (Note 5.A)	2,785,773	617,094	151,013	
Due To Other Agencies (Note 1.G)	2,236,438			
Unearned Revenue	733,427	91,462	16,170	
Employees Compensable Leave	3,452,624			
Obligations Under Securities Lending	134,751,408	4,648,323	2,249,563	
Funds Held for Others				
Total Liabilities	935,654,117	32,404,981	15,578,098	-
Net Position Restricted for Pension and Other Employee Benefits	27,351,224,157	943,622,645	456,192,249	-

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.

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

State Retiree Health Plan (3973)	Total Defined Benefit Plans	TexaSaver 401(k) Trust Fund (0946)	TexaSaver 457 Trust Fund (0945)	Commuter Spending Account Fund (3944)	State Employees Cafeteria Plan Trust Fund (0943)	Total Pension and Other Employee Benefit Trust Funds	Total Agency Funds
\$	\$	\$	\$	\$	\$	\$	\$
	913,384					913,384	
	23,000	64,061	18,198			105,259	
9,923,903	100,941,139	1,851,785	3,099,635	476,820	3,140,486	109,509,865	76,098
9,923,903	101,877,523	1,915,846	3,117,833	476,820	3,140,486	110,528,508	76,098
	154,222,330					154,222,330	
12,064,448	579,826,878			20,761	17,294,846	597,142,485	
21,988,351	835,926,731	1,915,846	3,117,833	497,581	20,435,332	861,893,323	76,098
	-					-	205,825
	10,807,749,421					10,807,749,421	
	7,258,573,813					7,258,573,813	
	9,356,097,540					9,356,097,540	
	184,420,869					184,420,869	
-	27,606,841,643	-	-	-	-	27,606,841,643	-
145,014,445	145,014,445					145,014,445	
141,870	103,571,163	3,665	6,132	985	37,607	103,619,552	
16,206,790	133,207,999	49,666	199,224	6,779	5,496,766	138,960,434	2,446
	1,063,194,719					1,063,194,719	
161,363,105	1,444,988,326	53,331	205,356	7,764	5,534,373	1,450,789,150	2,446
28,705,936	35,380,901	9,232	10,103	191	8,244	35,408,671	
	8,746,281					8,746,281	
	10,025					10,025	
	874,889					874,889	
	9,525,420					9,525,420	
	3,936,003					3,936,003	
	482,064					482,064	
	21,356					21,356	
-	14,839,732	-	-	-	-	14,839,732	-
212,057,392	29,946,733,639	1,978,409	3,333,292	505,536	25,977,949	29,978,528,825	284,369
150,950,522	175,512,826	64,062	18,198	432	8,460,139	184,055,657	205,825
	807,341,597					807,341,597	
150,950,522	982,854,423	64,062	18,198	432	8,460,139	991,397,254	205,825
1,170,406	4,724,286	46,369	36,631	449	36,473	4,844,208	33
	2,236,438					2,236,438	
	841,059		2,735			843,794	
	3,452,624					3,452,624	
	141,649,294					141,649,294	
152,120,928	1,135,758,124	110,431	57,564	881	8,496,612	1,144,423,612	284,369
59,936,464	28,810,975,515	1,867,978	3,275,728	504,655	17,481,337	28,834,105,213	-

Exhibit IX

Statement of Changes in Fiduciary Net Position – Pension and Other Employee Benefit Trust Funds Year Ended August 31, 2019

	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	694,788,598	9,098,121	6,462,797	
Employers	712,647,639	25,864,146	13,100,263	
Non-Employer Contributing Entity Contributions				
Service Contributions Transferred from Teacher Retirement System (Note 1.G)	102,787,422			
Federal Revenues				
Others - Forfeitures				
Total Contributions	1,510,223,659	34,962,267	19,563,060	-
Investment Income:				
From Investing Activities:				
Net Appreciation in Fair Value of Investments	117,824,156	4,031,397	2,205,534	
Interest and Dividends	674,823,015	23,428,603	11,164,668	
Class Action Settlements	2,000,715	69,417	33,065	
Total Investing Activity Income	794,647,886	27,529,417	13,403,267	-
Less: Investment Expense	(38,815,128)	(1,384,565)	(621,320)	
Net Income, Investing Activities	755,832,758	26,144,852	12,781,947	-
From Securities Lending Activities:				
Loan Premium on Securities Lending	5,164,235	179,206	85,435	
Broker Rebates	(1,802,373)	(62,555)	(29,793)	
Agent Fees	(326,470)	(11,330)	(5,402)	
Net Income, Securities Lending Activities	3,035,392	105,321	50,240	-
Net Investment Income	758,868,150	26,250,173	12,832,187	-
Other Additions:				
Other Revenue:				
Warrants Voided by Statute of Limitations	164,259	3,096	524	
Reimbursements - Third Party				
Sale of Surplus Equipment	9,035			
Settlement Revenue				
Rental Income	41,418			
Miscellaneous Revenue	3,925			
Administration Fees				
Total Other Revenue	218,637	3,096	524	-
Transfer In:				
Interfund Transfers In (Note 1.G):				695,849
Interagency Transfers In (Note 5.C):				257,502
Total Transfers In	-	-	-	953,351
Total Other Additions	218,637	3,096	524	953,351
Total Additions	2,269,310,446	61,215,536	32,395,771	953,351

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	TexaSaver 401(k) Trust Fund (0946)	TexaSaver 457 Trust Fund (0945)	Commuter Spending Account Fund (3944)	State Employees Cafeteria Plan Trust Fund (0943)	Total Pension and Other Employee Benefit Trust Funds
\$	\$	\$	\$	\$	\$	\$
	710,349,516			140,410	72,456,065	782,945,991
401,284,833	1,152,896,881					1,152,896,881
20,182,872	20,182,872					20,182,872
	102,787,422					102,787,422
89,389,367	89,389,367					89,389,367
					950,282	950,282
510,857,072	2,075,606,058	-	-	140,410	73,406,347	2,149,152,815
	124,061,087					124,061,087
3,329,727	712,746,013	89,959	99,201	11,788	342,393	713,289,354
	2,103,197					2,103,197
3,329,727	838,910,297	89,959	99,201	11,788	342,393	839,453,638
(6,228)	(40,827,241)	(18,636)	(23,576)	(30)	(6,769)	(40,876,252)
3,323,499	798,083,056	71,323	75,625	11,758	335,624	798,577,386
	5,428,876					5,428,876
	(1,894,721)					(1,894,721)
	(343,202)					(343,202)
-	3,190,953	-	-	-	-	3,190,953
3,323,499	801,274,009	71,323	75,625	11,758	335,624	801,768,339
	186,022					186,022
18,143	67,327	311,840	104,160			483,327
67,327	9,035					9,035
		51,590	12,897			64,487
	41,418					41,418
	3,925					3,925
		122,408	778,677			901,085
85,470	307,727	485,838	895,734	-	-	1,689,299
	695,849					695,849
	257,502					257,502
-	953,351	-	-	-	-	953,351
85,470	1,261,078	485,838	895,734	-	-	2,642,650
514,266,041	2,878,141,145	557,161	971,359	152,168	73,741,971	2,953,563,804

- to next page

Exhibit IX (Concluded)
Statement of Changes in Fiduciary Net Position –
Pension and Other Employee Benefit Trust Funds
Year Ended August 31, 2019

	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	2,473,907,002	78,484,750	29,006,848	796,809
Health Care Claims ¹				
Less: Payments from Members				
Refunds of Contributions	142,303,194	3,768,394	213,797	
Service Contributions Transferred to Teacher Retirement System (Note 1.G)	26,307,593			
Total Benefits	2,642,517,789	82,253,144	29,220,645	796,809
Administrative Expenses:				
Salaries & Wages	11,091,025	1,138,547	164,458	
Payroll Related Costs	3,960,461	420,488	56,656	
Professional Fees & Services	5,995,024	246,114	78,661	
Travel	81,682	6,964	983	
Materials & Supplies	1,566,626	101,119	17,023	
Communications & Utilities	572,997	62,014	8,658	
Repairs & Maintenance	728,895	54,416	9,919	
Rentals & Leases	345,177	27,653	5,087	
Printing & Reproduction	63,121	5,458	748	
Depreciation	820,233			
Other Operating Expenses	2,526,375	104,709	20,470	
Total Administrative Expenses	27,751,616	2,167,482	362,663	-
Other Deductions:				
Loss on Sale of Capital Assets	455,819			
Interfund Transfers Out (Note 1.G):				
Other Transfers	695,849			
Interagency Transfers Out (Note 5.C):				156,542
Total Transfers Out	695,849	-	-	156,542
Total Other Deductions	1,151,668	-	-	156,542
Total Deductions	2,671,421,073	84,420,626	29,583,308	953,351
Net Increase/(Decrease)	(402,110,627)	(23,205,090)	2,812,463	-
Net Position Restricted for Pension and Other Employee Benefits:				
Beginning of Year	27,753,334,784	966,827,735	453,379,786	
End of Year (Exh. VIII)	27,351,224,157	943,622,645	456,192,249	-

¹ The benefit payments in the State Retiree Health Plan are reported net of \$170,548,616 pharmacy rebates.

State Retiree Health Plan (3973)	Total Defined Benefit Plans	TexaSaver 401(k) Trust Fund (0946)	TexaSaver 457 Trust Fund (0945)	Commuter Spending Account Fund (3944)	State Employees Cafeteria Plan Trust Fund (0943)	Total Pension and Other Employee Benefit Trust Funds
\$	\$	\$	\$	\$	\$	\$
	2,582,195,409			115,532	71,300,679	2,653,611,620
1,038,587,696	1,038,587,696					1,038,587,696
(209,836,664)	(209,836,664)					(209,836,664)
	146,285,385					146,285,385
	26,307,593					26,307,593
828,751,032	3,583,539,419	-	-	115,532	71,300,679	3,654,955,630
3,029,887	15,423,917	302,514	331,839	2,078	147,334	16,207,682
1,015,919	5,453,524	102,255	113,313	697	52,409	5,722,198
646,500	6,966,299	11,943	12,217	242	7,318	6,998,019
28,348	117,977	2,263	2,068	13	807	123,128
241,424	1,926,192	17,034	19,187	226	10,621	1,973,260
186,887	830,556	7,841	9,511	132	7,423	855,463
199,076	992,306	11,004	11,788	220	7,275	1,022,593
77,251	455,168	5,572	5,469	79	3,434	469,722
12,676	82,003	623	711	6	398	83,741
	820,233					820,233
570,239	3,221,793	28,863	16,673	97	1,215,192	4,482,618
6,008,207	36,289,968	489,912	522,776	3,790	1,452,211	38,758,657
	455,819					455,819
	695,849					695,849
	156,542					156,542
-	852,391	-	-	-	-	852,391
-	1,308,210	-	-	-	-	1,308,210
834,759,239	3,621,137,597	489,912	522,776	119,322	72,752,890	3,695,022,497
(320,493,198)	(742,996,452)	67,249	448,583	32,846	989,081	(741,458,693)
380,429,662	29,553,971,967	1,800,729	2,827,145	471,809	16,492,256	29,575,563,906
59,936,464	28,810,975,515	1,867,978	3,275,728	504,655	17,481,337	28,834,105,213



Notes to the Basic Financial Statements

August 31, 2019

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Notes to the Basic Financial Statements

August 31, 2019

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

GASB Statement No. 83 *Certain Asset Retirement Obligations* establishes criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for asset retirement obligations, effective for reporting periods beginning after June 15, 2018. Because the System does not have any asset retirement obligations, this statement is not applicable.

GASB Statement No. 88 *Certain Disclosures Related to Debt, including Direct Borrowing and Direct Placements* establishes criteria for reporting related to debt, including direct borrowings and direct placements, effective for reporting periods beginning after June

15, 2018. This pronouncement also clarifies which liabilities governments should include when disclosing information related to debt. Because the System has not issued any debts, this statement is not applicable.

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.

Notes to the Basic Financial Statements (Continued)

August 31, 2019

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 are considered 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 2019, 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 2019.

Special Revenue Funds

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

Notes to the Basic Financial Statements (Continued)

August 31, 2019

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.
- 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.
- TexaSaver 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.
- TexaSaver 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.

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.

Notes to the Basic Financial Statements (Continued)

August 31, 2019

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

Notes to the Basic Financial Statements (Continued)

August 31, 2019

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.

Notes to the Basic Financial Statements (Continued)

August 31, 2019

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.

Notes to the Basic Financial Statements (Continued)

August 31, 2019

- 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 13 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.

Unsettled Sales - Investment Receivables and Unsettled Purchases - Investment Payables

The System reports Unsettled Sales - Investment Receivables to account for sales of investments that traded before fiscal year and settled after fiscal year end. Likewise, the System reports Unsettled Purchases - Investment Payables to account for purchases of investments that are traded before fiscal year end and settled after fiscal year end.

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. Donated capital assets are reported at fair value on the acquisition date. If donated capital assets are received in a service concession arrangement, they are reported at acquisition value. 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-

Notes to the Basic Financial Statements (Continued)

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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.

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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, 2019 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)	105,259	105,259
Deposits with Custodian Bank	13,214,341	13,214,341
Totals	13,319,600	13,319,600

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, 2019 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

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 hedge funds, domestic and international equities 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 private equity investments are in private equity limited partnerships. The private real estate investments are in limited partnerships that specialize in real estate. Private Infrastructure investments are limited partnerships based on event-driven strategies (e.g., tender offers, mergers, and acquisitions etc.). Hedge fund investments are in hedge fund limited partnership. Private fixed income funds are limited partnerships that 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.

Notes to the Basic Financial Statements (Continued)

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- 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 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, 2019 is summarized in Figure 4 on page 60.

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. 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, 2019 is summarized in Figure 5 on page 61. The securities were rated according to categories from Standard & Poor's, Moody's, or Fitch ratings, whichever is lower. A withdrawn rating signifies the removal of a rating on either an obligation or an issuer due to inadequate information, bankruptcy, reorganization, liquidation, or maturity of obligation.

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.

Notes to the Basic Financial Statements (Continued)

August 31, 2019

**Figure 3
Fair Value of Investments**

	Level 1	Level 2	Level 3	NAV	Total
Fiduciary Funds:					
Investments:					
Public Equities:					
Domestic Equities	4,976,413,584		306,147		4,976,719,731
International Equities	4,418,366,470		1,070,118		4,419,436,588
Exchange Traded Funds (ETFs)	208,360,490				208,360,490
Real Estate Investment Trust (REITs)	1,203,232,612				1,203,232,612
Total Public Equities	10,806,373,156	-	1,376,265	-	10,807,749,421
Fixed Income:					
U.S. Treasury Securities	4,267,929,001				4,267,929,001
U.S. Government Agency Obligations		544,290,708			544,290,708
Corporate Obligations		1,520,312,825	525,437		1,520,838,262
Corporate Asset and Mortgage Backed Securities		74,183,473			74,183,473
International Obligations		510,158,309			510,158,309
Exchange Traded Funds (ETFs)	297,291,086				297,291,086
Real Estate Investment Trust (REITs)		43,882,974			43,882,974
Total Fixed Income	4,565,220,087	2,692,828,289	525,437	-	7,258,573,813
Other Investments:					
Commingled Funds	-			184,420,869	184,420,869
Total Other Investments	-	-	-	184,420,869	184,420,869
Investments Measured at the Net Asset Value (NAV):					
Equity Long/Short				649,963,709	649,963,709
Event Driven				242,815,288	242,815,288
Macro				220,921,699	220,921,699
Multi-Strategies				263,383,109	263,383,109
Opportunistic				179,261,320	179,261,320
Option Strategies				159,550,440	159,550,440
Private Equity				4,095,571,471	4,095,571,471
Private Real Estate				2,150,080,362	2,150,080,362
Private Infrastructure				826,701,277	826,701,277
Private Fixed Income				360,307,904	360,307,904
Relative Value				207,540,961	207,540,961
Total Investments Measured at the NAV:	-	-	-	9,356,097,540	9,356,097,540
Total Investments	15,371,593,243	2,692,828,289	1,901,702	9,540,518,409	27,606,841,643
					(Exh. VIII)
Securities Lending Collateral:					
Government Repurchase Agreements	154,222,330				154,222,330
Total Securities Lending Collateral	154,222,330	-	-	-	154,222,330
					(Exh. VIII)
Short-Term Investments:					
U.S. Treasury Securities	147,629,256				147,629,256
Money Market and Bond Funds				432,788,348	432,788,348
Investment in Pool Cash	3,510,540				3,510,540
Deposits	13,214,341				13,214,341
Total Short-Term Investments	164,354,137	-	-	432,788,348	597,142,485
					(Exh. VIII)
Proprietary Fund:					
Investments:					
Public Equities:					
Domestic Equities	7,323,158		99		7,323,257
International Equities			676		676
Total Public Equities	7,323,158	-	775	-	7,323,933
Fixed Income:					
U.S. Treasury Securities	749,302,411				749,302,411
U.S. Government Agency Obligations		95,558,839			95,558,839
Corporate Obligations		186,807,272	64,563		186,871,835
Corporate Asset and Mortgage Backed Securities		12,514,841			12,514,841
International Obligations		62,685,311			62,685,311
Exchange Traded Funds (ETFs)	36,529,414				36,529,414
Real Estate Investment Trust (REITs)		5,392,087			5,392,087
Total Fixed Income	785,831,825	362,958,350	64,563	-	1,148,854,738
Investments Measured at the Net Asset Value (NAV):					
Opportunistic				16,430,616	16,430,616
Private Fixed Income				44,272,557	44,272,557
Total Investments Measured at the NAV	-	-	-	60,703,173	60,703,173
Total Investments	793,154,983	362,958,350	65,338	60,703,173	1,216,881,844
					(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	13,760,417				13,760,417
Total Securities Lending Collateral	13,760,417	-	-	-	13,760,417
					(Exh. V)
Short-Term Investments:					
U.S. Treasury Securities	818,675				818,675
Money Market and Bond Funds			1,114,349,445	1,114,349,445	
Total Short-Term Investments	818,675	-	-	1,114,349,445	1,115,168,120
					(Exh. V)

**Figure 4
Foreign Currency Risk**

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, 2019, the System was not exposed to any concentration risk.

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, 2019, the System invested \$86,698,314 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. U.S. Government Agency Obligations are implicitly guaranteed by the US government. 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, 2019, the System's exposure to interest rate risk is summarized in Figure 6.

	Investments		Investments Total (USD)	Short-term Investments
	Public Equities (USD)	Alternative Investments (USD)		Deposits (USD)
Fiduciary Funds:	\$	\$	\$	\$
Australian Dollar	180,103,803	31,992,294	212,096,097	1,524,287
Brazilian Real	94,703,685		94,703,685	18,221
Canadian Dollar	324,855,973		324,855,973	10,631
Chilean Peso	4,072,355		4,072,355	
Chinese Yuan Renminbi	18,356,411		18,356,411	
Colombian Peso	89,246		89,246	1,790
Czech Koruna	3,702,440		3,702,440	
Danish Krone	48,014,964		48,014,964	
Egyptian Pound	2,272,059		2,272,059	761,608
Euro	1,068,655,690	385,333,199	1,453,988,889	4,075,497
Hong Kong Dollar	394,410,957		394,410,957	1,133,378
Hungarian Forint	6,169,110		6,169,110	3,173
Indian Rupee	88,132,094		88,132,094	1,982,378
Indonesian Rupiah	30,968,785		30,968,785	2,012
Israeli Shekel	12,703,099		12,703,099	144,020
Japanese Yen	646,679,590		646,679,590	93,455
Malaysian Ringgit	9,857,510		9,857,510	4,095
Mexican Peso	39,750,543		39,750,543	1,700,654
New Taiwan Dollar	107,096,489		107,096,489	157,384
New Zealand Dollar	1,851,264		1,851,264	22,429
Norwegian Krone	26,432,413		26,432,413	(33)
Pakistan Rupee	859,422		859,422	
Philippine Peso	11,479,194		11,479,194	3,281
Polish Zloty	14,089,981		14,089,981	193,726
Pound Sterling	494,401,904	90,893,924	585,295,829	80,417
Qatari Riyal	10,190,758		10,190,758	
Russian Ruble	613,955		613,955	
Singapore Dollar	70,282,502		70,282,502	165,104
South African Rand	51,337,224		51,337,224	15
South Korean Won	120,105,314	22,128,799	142,234,113	443,866
Swedish Krona	84,096,754		84,096,754	222,907
Swiss Franc	236,033,989		236,033,989	5,658
Thai Baht	31,867,161		31,867,161	40,033
Turkish Lira	16,182,889		16,182,889	
UAE Diram	4,886,252		4,886,252	
Total for Investments	4,255,305,779	530,348,216	4,785,653,996	12,789,986

Figure 6 – Investment Interest Rate Risk

Investment Type	Fiduciary Funds		Proprietary Fund	
	Fair Value	Modified Duration	Fair Value	Modified Duration
U.S. Treasury Securities	\$ 4,415,558,257	3.71	\$ 750,121,086	3.83
U.S. Government Agency Obligations	544,290,708	4.03	95,558,839	4.03
Corporate Obligations	1,520,838,262	4.15	186,871,835	4.15
Corporate Asset and Mortgage Backed Securities	74,183,473	2.03	12,514,841	2.03
International Obligations	510,158,309	3.47	62,685,311	3.47
Real Estate Investment Trusts (REITs)	43,882,974	5.03	5,392,087	5.03
Totals	7,108,911,983	3.80	1,113,143,999	3.86

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Figure 5
Fixed Income Investment Credit Risk

Standard & Poors/ Moody's/ Fitch Ratings	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)	Total
Fiduciary Funds	\$	\$	\$	\$	\$	\$	\$	\$
Investments:								
AAA/Aaa/AAA	4,116,772,933	6,219,382		49,687,369				4,172,679,684
AA+/Aa1/AA+	151,156,068	527,097,357		7,849,928				686,103,353
AA/Aa2/AA				4,418,091				4,418,091
A+/A1/A+		4,654,461		2,563,541			7,762,223	14,980,225
BBB-/Baa3/BBB-					29,797,432			29,797,432
BBB/Baa2/BBB			4,566,851	1,732,192				6,299,043
BB+/Ba1/BB+			44,392,154	7,932,352	41,822,734	37,460,767		131,608,007
BB-/Ba3/BB-			295,407,247		12,609,747			308,016,994
BB/Ba2/BB			179,290,039		32,603,804	6,422,207	20,486,711	238,802,761
B+/B1/B+			363,936,252		81,278,093			445,214,345
B-/B3/B-			284,852,033		120,204,668			405,056,701
B/B2/B			162,599,580		98,593,964			261,193,544
CCC+/Caa1/CCC			96,888,603		32,015,854			128,904,457
CCC/Caa2/CCC			33,807,764		36,750,813			70,558,577
CC/Ca/CCC					765,656			765,656
D/C/DDD			12,416,861		23,715,544			36,132,405
Not Rated		6,319,508	42,155,414				269,042,152	317,517,074
Withdrawn Rating			525,464					525,464
Investments Totals	4,267,929,001	544,290,708	1,520,838,262	74,183,473	510,158,309	43,882,974	297,291,086	7,258,573,813
Short-Term Investments:								
AAA/Aaa/AAA	98,385,194							98,385,194
AA+/Aa1/AA+	49,244,062							49,244,062
Short-Term Investments Total:	147,629,256	-	-	-	-	-	-	147,629,256
Proprietary Funds	\$	\$	\$	\$	\$	\$	\$	\$
Investments:								
AAA/Aaa/AAA	722,764,574	1,091,911		8,723,403				732,579,888
AA+/Aa1/AA+	26,537,837	92,540,274		1,378,179				120,456,290
AA/Aa2/AA				775,666				775,666
A+/A1/A+		817,164		450,070			953,777	2,221,011
BBB-/Baa3/BBB-					3,661,337			3,661,337
BBB/Baa2/BBB			561,148	212,842				773,990
BB+/Ba1/BB+			5,454,652	974,681	5,138,936	4,602,963		16,171,232
BB-/Ba3/BB-			36,297,939		1,549,413			37,847,352
BB/Ba2/BB			22,030,126		4,006,167	789,124	2,517,289	29,342,706
B+/B1/B+			44,718,388		9,986,983			54,705,371
B-/B3/B-			35,000,975		14,770,056			49,771,031
B/B2/B			19,979,299		12,114,658			32,093,957
CCC+/Caa1/CCC			11,905,113		3,933,924			15,839,037
CCC/Caa2/CCC			4,154,103		4,515,728			8,669,831
CC/Ca/CCC					94,080			94,080
D/C/DDD			1,525,712		2,914,029			4,439,741
Not Rated		1,109,490	5,179,814				33,058,348	39,347,652
Withdrawn Rating			64,566					64,566
Investments Totals	749,302,411	95,558,839	186,871,835	12,514,841	62,685,311	5,392,087	36,529,414	1,148,854,738
Short-Term Investments:								
AAA/Aaa/AAA	545,593							545,593
AA+/Aa1/AA+	273,082							273,082
Short-Term Investments Total:	818,675	-	-	-	-	-	-	818,675

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

Notes to the Basic Financial Statements (Continued)

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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 2019. The System received net securities lending income totaling \$3,316,889 for the fiscal year ended August 31, 2019. The collateral information as of August 31, 2019 is summarized in Figure 7.

Repurchase Agreements

During the fiscal year 2019, the System invested the cash collaterals from the securities lending program in repurchase agreements. As of August 31, 2019, the System had \$167,982,747 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, 2019 are summarized in Figure 8

**Figure 7
Securities Lending Collateral Summary**

Investment Type	Underlying Securities Fair Value	Cash Collateral Fair Value
	\$	\$
Fiduciary Funds:		
Domestic Equities	7,767,306	8,704,449
International Equities	12,241,918	14,252,166
Corporate Obligations	63,733,255	70,427,324
Exchange Traded Funds - Equities (ETFs)	9,361,512	10,425,438
Exchange Traded Funds - Fixed Income (ETFs)	384,853	428,136
International Obligations	21,197,927	23,421,212
Real Estate Investment Trust (REITs) - Equity	678,222	785,106
U.S. Treasury Securities	23,193,356	25,778,499
Totals	138,558,349	154,222,330
		Exh.VIII
Proprietary Fund:		
Domestic Equities	13,591	13,724
International Obligations	2,604,679	2,455,687
Corporate Obligations	7,831,175	7,384,222
Exchange Traded Funds - Fixed Income (ETFs)	47,289	44,890
U.S. Treasury Securities	4,071,960	3,861,894
Totals	14,568,694	13,760,417
		Exh. V

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, 2019 and 2018 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

**Figure 9
Net Position - Fiduciary Fund**

Fund Type	2019	2018
	\$	\$
Defined Benefit Plans (Note A)	28,810,975,515	29,553,971,967
Deferred Compensation Plans and Cafeteria Plan:		
Administration - Deferred Compensation Plans	5,143,706	4,627,874
Administration - State Employees Cafeteria Plan	17,481,337	16,492,256
Total Deferred Compensation Plans and Cafeteria Plan	22,625,043	21,120,130
Commuter Spending Account Fund	504,655	471,809
Net Position Restricted for Pension and Other Benefits	28,834,105,213	29,575,563,906
		Exh. VIII

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

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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	121	7,064,384,950	2,791,412,514	4,272,972,436	3,755,444,843	N/A	N/A	N/A
Euro Dollar	18	728,493,196	392,290,894	336,202,302	257,250,448	N/A	N/A	N/A
British Pound	3	94,992,300	44,251,394	50,740,906	60,747,381	N/A	N/A	N/A
Korean Won	1	23,528,519	-	23,528,519	22,128,799			
Sub-total	143	7,911,398,965	3,227,954,802	4,683,444,163	4,095,571,471			
Private Real Estate:								
US Dollar	59	3,835,111,143	1,411,685,068	2,423,426,075	2,008,448,516	N/A, Monthly/ Quarterly	N/A, 45-90 Days	N/A
Euro Dollar	3	210,338,750	54,996,441	155,342,309	125,864,223	N/A, Monthly/ Quarterly	N/A, 45-90 Days	N/A
British Pound	1	51,542,480	10,875,998	40,666,482	15,767,623	N/A	N/A	N/A
Sub-total	63	4,096,992,373	1,477,557,507	2,619,434,866	2,150,080,362			
Private Infrastructure:								
US Dollar	27	1,588,128,261	756,849,625	831,278,636	778,111,535	N/A	N/A	N/A
Australian Dollar	2	57,268,750	30,144,701	27,124,049	31,992,294	N/A	N/A	N/A
British Pound	1	8,524,950	-	8,524,950	14,378,920	N/A	N/A	N/A
Euro Dollar	1	110,125,000	107,702,250	2,422,750	2,218,528			
Sub-total	31	1,764,046,961	894,696,576	869,350,385	826,701,277			
Private Fixed Income:								
US Dollar	7	675,000,000	314,027,213	360,972,787	404,580,461	N/A	N/A, 90 Days	N/A
Hedge Funds:								
Equity Long/Short								
US Dollar	3	460,000,000	-	460,000,000	594,045,085	Monthly	30 Days	N/A
US Dollar	1	100,000,000	-	100,000,000	55,918,624	Quarterly	90 Days	25% Investor Gate, 12 Month Lockup
Event Driven								
US Dollar	1	109,554,176	-	109,554,176	138,535,837	Monthly	30 Days	N/A
US Dollar	1	80,000,000	-	80,000,000	104,279,451	Quarterly	60 Days	12 Month Lockup
Macro								
US Dollar	1	100,000,000	-	100,000,000	104,474,339	Quarterly	30 Days	N/A
US Dollar	1	105,000,000	-	105,000,000	116,447,360	Quarterly	60 Days	25% Fund Gate, 24 Month Lockup
Multi-Strategies								
US Dollar	1	120,000,000	-	120,000,000	121,427,871	Quarterly	180 Days	12.5% Fund Gate, 12 Month Lockup
US Dollar	1	16,345,085	-	16,345,085	16,335,547	N/A	N/A	N/A
US Dollar	1	150,000,000	24,380,309	125,619,691	125,619,691	Varies	Varies	Varies
Opportunistic								
US Dollar	1	100,000,000	48,207,268	51,792,732	45,542,352	Annually	N/A	36 Month Lockup
US Dollar	1	150,000,000	-	150,000,000	144,906,928	Quarterly	60 Days	33% Investor Gate
US Dollar	1	5,000,000	-	5,000,000	5,242,656	Quarterly	60 Days	33% Investor Gate
Options Strategy								
US Dollar	1	150,000,000	-	150,000,000	159,550,440	Monthly	3-30 Days	N/A
Relative Value								
US Dollar	1	100,000,000	-	100,000,000	72,177,448	Quarterly	45 Days	N/A
US Dollar	1	100,000,000	-	100,000,000	61,192,145	Semiannually	90 Days	12.5% Investor Gate
US Dollar	1	70,000,000	-	70,000,000	74,171,368	Quarterly	60 Days	50% Investor Gate
Sub-total	18	1,915,899,261	72,587,577	1,843,311,684	1,939,867,142			
Total	262	16,363,337,560	5,986,823,675	10,376,513,885	9,416,800,713			

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

Notes to the Basic Financial Statements (Continued)

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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. The System had no outstanding futures contracts on August 31, 2019.

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. The System had no outstanding options contracts on August 31, 2019.

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, 2019.

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 \$633,855. 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, 2019 is presented in Figure 10.

Figure 10
Non-Cancelable Operating Leases

Fiscal Year	Future Minimum Lease Rental Payments	Future Minimum Lease Rental Revenues
2020	474,690	41,418
2021	339,978	41,418
2022	335,930	45,980
2023	272,977	45,980
2024	232,655	45,980
Total	1,656,230	220,776

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.

Notes to the Basic Financial Statements (Continued)

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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 2019. Legislators and other elected class members are required to contribute 9.5% of their compensation to the System.

For fiscal year 2019, 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 2019, both employee members and the State contributed 0.5% of the covered payroll for LECOS members. An additional \$17,104,306 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 2019. Effective September 1, 2019, the member contribution rate is 9.5%. 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, 2019 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 11.

Figure 11
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, 2019		
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.		

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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 11, the components of the net pension liability as of August 31, 2019 are determined and summarized in Figure 12. The projected cash flows from the employer are based on contributions for the most recent five year period, modified on consideration of subsequent events. The legislature passed House Bill No. 9 in the 84th legislative session during fiscal year 2015 to increase State contributions and maintain 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 indicates that the legislature is committed to funding the state pension obligations. Projected employer contributions are based on fiscal year 2019 funding levels. See Note 3.A for descriptions of member and State contributions. As of August 31, 2019, 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, 2019 are summarized in Figure 13.

Figure 13
Target Allocations

Asset Class	Target	Real Return	Long-term
	Allocation	Arithmetic	Expected
	%	Basis	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. The System Board of Trustees reviewed the long-term rate of return assumption in May 2019 and determined, based on the modeling performed by the investment consultants, that the long-term assumption continues to be reasonable. A formal review of the assumption will occur as part of the next asset allocation and experience study.

A single discount rate was used to measure the total pension liability as of August 31, 2019. 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

Figure 12
Net Pension Liability
(In accordance with GASB Statement No. 67)

	ERS	LECOS	JRS II
	\$	\$	\$
Total Pension Liability	57,336,383,016	2,609,355,304	648,298,037
Plan Fiduciary Net Position	27,351,224,157	943,622,645	456,192,249
Net Pension Liability	29,985,158,859	1,665,732,659	192,105,788
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	47.70%	36.16%	70.37%

Notes to the Basic Financial Statements (Continued)

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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 14.

Figure 14
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)	2.63%	2.63%	2.63%
Year fiduciary net position depleted	2047	2037	2045
Single Discount Rate	4.42%	3.29%	5.45%

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 15.

Figure 15
Sensitivity of Net Pension Liability

Net Pension Liability	1% Decrease	Single Discount Rate	1% Increase
	3.42%	4.42%	5.42%
ERS:	\$38,393,839,690	\$29,985,158,859	\$23,133,904,587
	2.29%	3.29%	4.29%
LECOS:	\$2,131,715,522	\$1,665,732,659	\$1,298,658,527
	4.45%	5.45%	6.45%
JRS II:	\$262,668,068	\$192,105,788	\$132,115,210

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, 2019, the annual money-weighted rate of return on the defined benefit plans was 2.80%. 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, 2019 is summarized in Figure 16. 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, 2019 and 2018 are presented in Figure 17. 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.

Figure 16
Retirement Systems Membership

	ERS		LECOS	JRS II
	Employee Class	Elected Class		
Retirees and Beneficiaries Currently Receiving Benefits	114,415	740	13,981	472
Terminated Employees Entitled to By Not Yet Receiving Benefits	125,804	131	22,207	187
Active Employees	141,538	327	36,296	573
Totals	381,757	1,198	72,484	1,232

Note: Estimated based on actuarial valuation as of August 31, 2019.

Figure 17
Reserves

	ERS			Totals - August 31,	
	LECOS	JRS II	2019	2018	
Net Plan Assets Reserved For:	\$	\$	\$	\$	\$
Employee Savings	6,044,422,496	54,737,312	70,242,530	6,169,402,338	6,027,274,862
State Accumulation	(2,379,205,893)	59,769,499	77,881,171	(2,241,555,223)	(390,875,302)
Annuity Reserves	23,686,007,554	829,115,834	308,068,548	24,823,191,936	23,537,142,745
Total Net Plan Assets Reserved	27,351,224,157	943,622,645	456,192,249	28,751,039,051	29,173,542,305
	(Exh. VIII)	(Exh. VIII)	(Exh. VIII)		

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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 18.

Figure 18
Participating Reporting Entities
for the State Retiree Health Plan

	September 1, 2018
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 188,156 which is 80.4% of the employees covered by the State Retiree Health Plan.

Contributions

Figure 19 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 summarizes premium contributions by source and claims expenses on a pay-as-you-go basis for the

Figure 19
Employer Contribution Rates –
Retiree Health and Basic Life Premium –
Fiscal Year 2019

	September 1, 2018
	\$
Retiree Only	624.82
Retiree & Spouse	1,340.82
Retiree & Children	1,104.22
Retiree & Family	1,820.22

Figure 20
Contributions by Source and Claims Expenses - Retirees

	2019	2018
	\$	\$
Contributions:		
Employers	401,284,833	307,028,461
Non-Employer Contributing Entities	20,182,872	16,585,270
Federal Revenues:		
Medicare Part D	1,479,713	1,417,806
Direct Subsidy	15,347,037	16,475,710
Low Income Premium Subsidy	156,121	3,655,006
Low Income Cost Sharing	2,515,870	3,146,387
Catastrophe Reinsurance	69,890,626	49,797,877
Total Federal Revenues	89,389,367	74,492,786
Total Contributions	510,857,072	398,106,517
Claims Expenses	1,038,587,696	938,921,013
Less: Payments from Members	(209,836,664)	(203,123,120)
Benefit Payments	828,751,032	735,797,893

current and prior fiscal years. The System's actuaries have estimated certain health, life, accidental death and dismemberment, and indemnity administrative fees.

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 21.

Net OPEB Liability

Figure 22 shows the System's net OPEB liability for the State Retiree Health Plan as of August 31, 2019. Calculations are based on the benefit provided under the terms of the substantive plan in effect at the time of each

Notes to the Basic Financial Statements (Continued)

August 31, 2019

Figure 21
Actuarial Assumptions - State Retiree Health Plan

Valuation Date	August 31, 2019
Actuarial Cost Method	Entry Age
Amortization Method	Level Percent of Payroll, Open
Remaining Amortization Period	30 Years
Asset Valuation Method	Not applicable because the plan operates on a pay-as-you-go basis
Last Experience Study	State Agency Members: 5-year period from September 1, 2011 to August 31, 2016 Higher Education Members: 7-year period from September 1, 2010 to August 31, 2017
Actuarial Assumptions:	
Discount Rate	2.97%
Projected Annual Salary Increase	2.50 to 9.50%, including inflation
Annual Healthcare Trend Rate	<u>HealthSelect</u> 7.30% for FY21, 7.40% for FY22, 7.00% for FY23, decreasing 50 basis points per year to an ultimate rate of 4.50% for FY28 and later years <u>HealthSelect Medicare Advantage</u> 10.80% for FY21, 7.40% for FY22, 7.00% for FY23, decreasing 50 basis points per year to an ultimate rate of 4.50% for FY28 and later years
Inflation Assumption Rate	2.50%
Ad hoc Postemployment Benefit Changes	None
Mortality Rate	<u>State Agency Members</u> <ul style="list-style-type: none"> • Service Retirees, Survivors and other Inactive Members (Regular, Elected, CPO/CO and JRS I and II Employee Classes): 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 (Regular, Elected, CPO/CO and JRS I and II Employee Classes): 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 <u>Higher Education Members</u> <ul style="list-style-type: none"> • Service Retirees, Survivors and other Inactive Members: Tables based on TRS experience with Ultimate MP Projection Scale from the year 2018. • Disability Retirees: Tables based on TRS experience with Ultimate MP Projection Scale from the year 2018 using a 3-year set forward and minimum mortality rates of 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

Figure 22
Net OPEB Liability

	Amount
	\$
Total OPEB Liability	34,622,611,079
Less: Plan Fiduciary Net Position	(59,936,464)
Net OPEB Liability	34,562,674,615
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	0.17%

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.

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 year 2019. 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%.

Notes to the Basic Financial Statements (Continued)

August 31, 2019

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 23.

Figure 23
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)	2.97%
Year fiduciary net position depleted	2020
Single Discount Rate	2.97%
<i>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.</i>	

The sensitivity of the net OPEB liability to one percentage point increase or decrease to the discount rate is summarized in Figure 24.

Figure 24
Sensitivity of Net OPEB Liability to Changes in Discount Rate (in Thousands) - State Retiree Health Plan

	1% Decrease	Single Discount Rate	1% Increase
Rate	1.97%	2.97%	3.97%
Net OPEB Liability	\$41,244,021	\$34,562,675	\$29,421,621

The initial healthcare trend rate is 7.3% for HealthSelect and 10.8% for HealthSelect Medicare Advantage and the ultimate rate is 4.5% for both. The sensitivity of the net OPEB liability to the changes in the discount rate and healthcare trend rate is summarized in Figure 25.

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, 2019, the annual money-weighted rate of return on the State Retiree Health Plan was 2.32%.

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, 2019 is summarized in Figure 26.

Figure 26
State Retiree Health Plan Membership

Active Members	233,887
Inactive Members Currently Receiving Benefit Payments	127,044
Inactive Members Entitled to But Not Yet Receiving Benefit Payments	12,114
Total	373,045

Note: Estimated based on actuarial valuation as of August 31, 2019

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).

Figure 25
Sensitivity of Net OPEB Liability to Changes in Discount and Healthcare Trend Rates (in Thousands)
- State Retiree Health Plan

	1% Decrease (HealthSelect: 6.30% decreasing to 3.50%; HealthSelect Medicare Advantage: 9.80% to 3.50%)	Current Healthcare Cost Trend Rates (HealthSelect: 7.30% decreasing to 4.50%; HealthSelect Medicare Advantage: 10.80% to 4.50%)	1% Increase (HealthSelect: 8.30% decreasing to 5.50%; HealthSelect Medicare Advantage: 11.80% to 5.50%)
Net OPEB Liability	\$29,021,972	\$34,562,675	\$41,803,104

Notes to the Basic Financial Statements (Continued)

August 31, 2019

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 27 presents individual interfund receivable and interfund payable balances at August 31, 2019.

Figure 27
Interfund Receivables and Payables

	Due From Other Funds	Due to Other Funds
Governmental Activities:	\$	\$
Governmental Funds	3,244	19,486
Employees Life, Accident & Health Insurance and Benefits Fund	1,483,144	32,031,332
Total Governmental Activities	1,486,388	32,050,818
Fiduciary Funds:		
Pension & Other Employee Benefit Trust Funds	35,408,671	4,844,208
Agency Funds		33
Total - Interfund Receivables & Payables	36,895,059	36,895,059

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 28 presents interfund transfers for the year ended August 31, 2019.

Figure 28
Interfund Transfers

	Transfers In	Transfers Out
	\$	\$
Fiduciary Funds:		
Pension and Other Employee Benefit Trust Funds	695,849	695,849
Total - Interfund Transfers	695,849	695,849

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.

6.C Incentive Compensation Plan

An Incentive Compensation Plan was adopted in December 2006 and amended subsequently to enable the System to remain competitive in its efforts to attract, retain, and motivate talented employees who are specialized in investments and other functions that support investment decisions. The purpose of the Plan is to provide the opportunity for Plan participants to earn performance incentive pay based on the System's investment performance and the participant's job performance.

Payments can only be earned following years in which the System earns a positive return, and plan participants must be employed by the System on the designated dates in the Plan in order to earn and receive payment. The Board of Trustees may cancel or modify the Plan at any time. The performance incentive pay is paid over the subsequent 2 years. The remaining

Notes to the Basic Financial Statements (Continued)

August 31, 2019

liability for the incentive pay plan as of August 31, 2019 will not exceed \$7.3 million.

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 29.

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 30.

Figure 30
Changes in Self-Funded Claims Liabilities

	2019	2018
	\$	\$
Beginning Balance	621,213,380	615,895,000
Current-Year Claims and Changes in Estimates	2,017,932,081	1,960,607,412
Claim Payments	(2,003,984,289)	(1,955,289,032)
Ending Balance	635,161,172	621,213,380

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, 2019 is \$582,486,393.

Figure 29
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
	• DHMOs	No	Insurance Carrier
	• Dental Indemnity Plan	Yes	System
Dental	• Dental Discount Plan	No	Insurance Carrier
	N/A	No	Insurance Carrier
Property and Casualty	N/A	No	Insurance Carrier
Unemployment	N/A	Yes	System
Workers' Compensation	N/A	Yes	System

Notes to the Basic Financial Statements (Concluded)

August 31, 2019

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 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 1,137 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.

Required Supplementary Information

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

	2014	2015	2016	2017	2018	2019
	\$	\$	\$	\$	\$	\$
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	1,346,986
Interest	2,324,180	2,373,849	2,522,626	2,510,128	2,559,723	2,694,083
Changes of Benefit Terms	-	(87,835)	-	-	-	-
Difference between Expected and Actual Experience	(252,967)	(284,751)	133,557	115,632	91,881	(578,195)
Changes of Assumptions	1,199,067	(3,429,167)	5,301,965	2,219,672	(1,982,914)	8,469,458
Benefit Payments and Refunds	(1,963,481)	(2,049,291)	(2,147,307)	(2,288,825)	(2,406,361)	(2,540,262)
Net Change in Total Pension Liability	2,446,250	(2,245,992)	6,957,632	4,013,870	(292,114)	9,392,070
Total Pension Liability - Beginning	37,064,667	39,510,917	37,264,925	44,222,557	48,236,427	47,944,313
Total Pension Liability - Ending	39,510,917	37,264,925	44,222,557	48,236,427	47,944,313	57,336,383
Plan Fiduciary Net Position						
Contributions - Employer	482,239	500,395	686,763	700,078	697,189	712,648
Contributions - Member	430,595	462,159	674,678	685,461	683,933	694,788
Pension Plan Net Investment Income	3,252,417	56,941	1,273,414	2,832,628	2,430,297	758,467
Benefit Payments and Refunds	(1,963,481)	(2,049,291)	(2,147,307)	(2,288,825)	(2,406,361)	(2,540,262)
Pension Plan Administrative Expense	(20,195)	(21,840)	(20,449)	(23,095)	(23,550)	(27,752)
Net Change in Plan Fiduciary Net Position	2,181,575	(1,051,636)	467,099	1,906,247	1,381,508	(402,111)
Plan Fiduciary Net Position - Beginning	22,868,542	25,050,117	23,998,481	24,465,580	26,371,827	27,753,335
Plan Fiduciary Net Position - Ending	25,050,117	23,998,481	24,465,580	26,371,827	27,753,335	27,351,224
Net Pension Liability - Ending	14,460,800	13,266,444	19,756,977	21,864,600	20,190,978	29,985,159
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	63.40%	64.40%	55.32%	54.67%	57.89%	47.70%
Covered Payroll (Note B)	5,955,461	6,150,195	6,742,143	6,859,707	6,811,926	6,947,625
Net Pension Liability as a Percentage of Covered Payroll	242.82%	215.71%	293.04%	318.74%	296.41%	431.59%

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Required Supplementary Information

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

(in 000's)

	2014	2015	2016	2017	2018	2019
	\$	\$	\$	\$	\$	\$
Law Enforcement and Custodial Officer Supplemental Fund (Note A)						
Total Pension Liability						
Service Cost	54,528	57,459	71,429	99,390	79,309	71,926
Interest	88,025	87,224	88,410	82,236	91,171	96,085
Changes of Benefit Terms	-	-	-	-	-	-
Difference between Expected and Actual Experience	(76,585)	(9,640)	(21,657)	(17,532)	(21,651)	(54,147)
Changes of Assumptions	68,228	148,114	375,371	(144,398)	(87,015)	427,818
Benefit Payments and Refunds	(57,147)	(61,344)	(64,542)	(69,756)	(75,633)	(82,250)
Net Change in Total Pension Liability	77,049	221,813	449,011	(50,060)	(13,819)	459,432
Total Pension Liability - Beginning	1,465,929	1,542,978	1,764,791	2,213,802	2,163,742	2,149,923
Total Pension Liability - Ending	1,542,978	1,764,791	2,213,802	2,163,742	2,149,923	2,609,355
Plan Fiduciary Net Position						
Contributions - Employer	27,758	26,728	27,497	26,583	26,110	25,864
Contributions - Member	8,180	8,376	9,539	9,583	9,275	9,098
Pension Plan Net Investment Income	111,741	1,918	44,831	99,341	84,938	26,250
Benefit Payments and Refunds	(57,147)	(61,344)	(64,542)	(69,756)	(75,633)	(82,250)
Pension Plan Administrative Expense	(1,324)	(1,411)	(1,421)	(1,811)	(1,851)	(2,167)
Net Change in Plan Fiduciary Net Position	89,208	(25,733)	15,904	63,940	42,839	(23,205)
Plan Fiduciary Net Position - Beginning	780,670	869,878	844,145	860,049	923,989	966,828
Plan Fiduciary Net Position - Ending	869,878	844,145	860,049	923,989	966,828	943,623
Net Pension Liability - Ending	673,100	920,646	1,353,753	1,239,753	1,183,095	1,665,732
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	56.38%	47.83%	38.85%	42.70%	44.97%	36.16%
Covered Payroll (Note B)	1,496,013	1,506,028	1,725,880	1,746,349	1,689,590	1,682,633
Net Pension Liability as a Percentage of Covered Payroll	44.99%	61.13%	78.44%	70.99%	70.02%	99.00%

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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	2019
	\$	\$	\$	\$	\$	\$
Judicial Retirement System Plan II (Note A)						
Total Pension Liability						
Service Cost	17,805	16,244	19,429	20,420	16,056	16,415
Interest	28,004	30,785	30,980	31,671	34,440	36,103
Changes of Benefit Terms	-	-	-	-	-	(1,019)
Difference between Expected and Actual Experience	(640)	(10,066)	(5,833)	5,091	(1,463)	26,592
Changes of Assumptions	(25,924)	35,653	23,397	(56,699)	-	111,655
Benefit Payments and Refunds	(16,420)	(19,238)	(21,155)	(23,361)	(24,865)	(29,220)
Net Change in Total Pension Liability	2,825	53,378	46,818	(22,878)	24,168	160,526
Total Pension Liability - Beginning	383,461	386,286	439,664	486,482	463,604	487,772
Total Pension Liability - Ending	386,286	439,664	486,482	463,604	487,772	648,298
Plan Fiduciary Net Position						
Contributions - Employer	12,211	12,457	12,374	12,495	12,560	13,100
Contributions - Member	5,195	5,465	5,754	6,017	5,940	6,463
Pension Plan Net Investment Income	46,186	820	19,862	44,875	39,192	12,832
Benefit Payments and Refunds	(16,420)	(19,238)	(21,155)	(23,361)	(24,866)	(29,220)
Pension Plan Administrative Expense	(267)	(284)	(226)	(295)	(296)	(363)
Net Change in Plan Fiduciary Net Position	46,905	(780)	16,609	39,731	32,530	2,812
Plan Fiduciary Net Position - Beginning	318,385	365,290	364,510	381,119	420,850	453,380
Plan Fiduciary Net Position - Ending	365,290	364,510	381,119	420,850	453,380	456,192
Net Pension Liability - Ending	20,996	75,154	105,363	42,754	34,392	192,106
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	94.56%	82.91%	78.34%	90.78%	92.95%	70.37%
Covered Payroll (Note B)	77,441	77,501	78,261	78,190	78,772	79,711
Net Pension Liability as a Percentage of Covered Payroll	27.11%	96.97%	134.63%	54.68%	43.66%	241.00%

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
2019	946,266,489	712,647,639	233,618,850	6,947,624,737	10.26
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
2019	54,853,838	25,864,146	28,989,692	1,682,633,066	1.54
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
2019	13,056,631	13,100,263	(43,632)	79,710,813	16.43

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	2019
State Retiree Health Plan (Note B)	\$	\$	\$
Total OPEB Liability			
Service Cost	2,303,979	1,495,979	1,206,106
Interest	1,225,588	1,261,856	1,221,955
Difference between Expected and Actual Experience	(501,666)	(935,689)	(89,009)
Changes of Assumptions	(8,728,822)	(5,924,045)	3,006,228
Benefit Payments and Refunds	(728,548)	(662,723)	(740,841)
Net Change in Total OPEB Liability	(6,429,469)	(4,764,622)	4,604,439
Total OPEB Liability - Beginning	41,212,263	34,782,794	30,018,172
Total OPEB Liability - Ending	34,782,794	30,018,172	34,622,611
Plan Fiduciary Net Position			
Contributions - Employer	892,205	307,029	401,285
Contributions - Non-employer Contributing Entity	45,035	16,585	20,183
Contributions - Member (Note C)	195,806		
Contributions - Federal Revenues for Medicare Part D Subsidies	1,659	1,418	1,480
Contributions - Adjustments	(2,071)		
Net Investment Income	4,517	10,907	3,323
Health Care Claims	(995,816)	(938,921)	(1,038,588)
Payment from Members (Note C)		203,123	209,837
Total Benefit Payments	(995,816)	(735,798)	(828,751)
Administrative Expense	(5,629)	(5,818)	(6,008)
Other - Federal Revenues	71,462	73,075	87,909
Other Additions	356	3,249	85
Net Change in Plan Fiduciary Net Position	207,524	(329,353)	(320,494)
Plan Fiduciary Net Position - Beginning	502,259	709,783	380,430
Plan Fiduciary Net Position - Ending	709,783	380,430	59,936
Net OPEB Liability - Ending	34,073,011	29,637,742	34,562,675
Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	2.04%	1.27%	0.17%
Covered Employee Payroll	11,745,310	12,047,167	12,320,028

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
2019	2,687,207,910	422,947,418	2,264,260,492	12,320,028,164	3.43

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	2019
	%	%	%	%	%	%
Defined Benefit Plans:						
Employees Retirement Fund	14.58	0.23	5.40	11.84	9.42	2.80
Law Enforcement and Custodial Officer Supplemental Fund	14.55	0.22	5.39	11.80	9.40	2.79
Judicial Retirement System Plan II	14.55	0.23	5.47	11.88	9.40	2.86
Overall	14.58	0.23	5.40	11.84	9.42	2.80
Other Post-Employment Benefit Plan:						
State Retiree Health Plan	N/A	N/A	N/A	1.03	1.84	2.32

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, 2019, based on the actuarial assumptions described in Figure 1. These contributions are reported in the Schedule of Employer's Contribution – Defined Benefit Plans.

Other Postemployment Benefit Plan

The assumptions and methods used for this actuarial valuation are the same as those used for defined benefit plans where appropriate. Additional information

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, 2019	August 31, 2019	August 31, 2019
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal
Amortization Method	Level Percentage of Payroll, Open	Level Percentage of Payroll, Open	Level Percentage of Payroll, Open
Remaining Amortization Period	31 years	31 years	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.	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 2.5% – Elected	None	None

Required Supplementary Information

Notes to The Required Supplementary Information (Concluded)

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

- Assumed Per Capita Health Benefit Costs and assumed Health Benefit Cost and Retiree Contribution 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 male retirees assumed to be married and electing coverage for their spouse.
- The percentages of future retirees and future

retiree spouses assumed to use tobacco have been updated to reflect recent plan experience and expected trends.

- The discount rate assumption was changed from 3.96% as of August 31, 2018 to 2.97% as of August 31, 2019 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.

The valuation reflects the benefit change that will become effective January 1, 2020. The change to 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 \$6,650 to \$6,750 for individuals and from \$13,300 to \$13,500 for families in order to remain consistent with Internal Revenue Service maximums.

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, 2019
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	2.97%
Projected Salary Increases	2.5% to 9.5%, including inflation
Inflation Rate	2.50%
Healthcare Cost and Trend Rate	<u>HealthSelect</u> 7.30% for FY21, 7.40% for FY22, 7.00% for FY23, decreasing 50 basis points per year to an ultimate rate of 4.50% for FY28 and later years
	<u>HealthSelect Medicare Advantage</u> 10.80% for FY21, 7.40% for FY22, 7.00% for FY23, decreasing 50 basis points per year to an ultimate rate of 4.50% for FY28 and later years"



Other Supplementary Information - Schedule A-1

Combining Statement of Net Position - Agency Funds

August 31, 2019

	Unappropriated Receipts General Revenue Fund (0001) (U/F 1001)	Judicial Retirement System Plan I Fund (Note A) (0001) (U/F 2001)	USPS - Overpayments to Employees (0900) (U/F 9015)	Direct Deposit Correction Account (0980) (U/F 0980)	USPS - Direct Deposit Return Money (0980) (U/F 9014)	Health Deductions - 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						76,098		76,098
Total Cash and Cash Equivalents	-	-	-	-	-	76,098	-	76,098
Legislative Appropriation		205,825						205,825
Receivables:								
Accounts Receivable	2,446							2,446
Total Current Assets	2,446	205,825	-	-	-	76,098	-	284,369
Total Assets	2,446	205,825	-	-	-	76,098	-	284,369
Liabilities								
Current Liabilities:								
Accounts Payable		205,825						205,825
Due To Other Funds						33		33
Funds Held For Others	2,446					76,065		78,511
Total Current Liabilities	2,446	205,825	-	-	-	76,098	-	284,369
Total Liabilities	2,446	205,825	-	-	-	76,098	-	284,369

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, 2019

	Beginning Balances	Additions	Deductions	Ending Balances
	\$	\$	\$	\$
Unappropriated Receipts General Revenue Fund (0001) (U/F 1001)				
Assets				
Cash in State Treasury		31,815	31,815	-
Accounts Receivable	3,555		1,109	2,446
Total Assets	3,555	31,815	32,924	2,446
Liabilities				
Fund Helds for Others	3,555	31,815	32,924	2,446
Total Liabilities	3,555	31,815	32,924	2,446
Judicial Retirement System Plan I Fund (Note A) (0001) (U/F 2001)				
Assets				
Legislative Appropriations	219,900	24,876,724	24,890,799	205,825
Total Assets	219,900	24,876,724	24,890,799	205,825
Liabilities				
Accounts Payable	219,900	24,112,486	24,126,561	205,825
Funds Held For Others		70,440	70,440	-
Total Liabilities	219,900	24,182,926	24,197,001	205,825
USPS - Overpayments to Employees (0900) (U/F 9015)				
Assets				
Cash in State Treasury	170	4,930	5,100	-
Total Assets	170	4,930	5,100	-
Liabilities				
Funds Held For Others	170	2,473	2,643	-
Total Liabilities	170	2,473	2,643	-
Direct Deposit Correction Account (0980) (U/F 0980)				
Assets				
Cash in State Treasury		808,291	808,291	-
Total Assets	-	808,291	808,291	-
Liabilities				
Funds Held For Others		808,291	808,291	-
Total Liabilities	-	808,291	808,291	-
USPS - Direct Deposit Return Money (0980) (U/F 9014)				
Assets				
Cash in State Treasury		7,420	7,420	-
Total Assets	-	7,420	7,420	-
Liabilities				
Funds Held For Others		7,420	7,420	-
Total Liabilities	-	7,420	7,420	-
Health Savings Account (0973) (U/F 4973)				
Assets				
Cash in State Treasury	65,283	2,210,600	2,199,785	76,098
Total Assets	65,283	2,210,600	2,199,785	76,098
Liabilities				
Vouchers Payable		2,127,239	2,127,239	-
Due to Other Funds		33		33
Funds Held For Others	65,283	2,145,317	2,134,535	76,065
Total Liabilities	65,283	4,272,589	4,261,774	76,098
Child Support Employee Deductions - Offset Account (0807) (U/F 8070)				
Assets				
Cash in State Treasury	1,387	14,557	15,944	-
Total Assets	1,387	14,557	15,944	-
Liabilities				
Vouchers Payable		14,557	14,557	-
Funds Held For Others	1,387	14,557	15,944	-
Total Liabilities	1,387	29,114	30,501	-

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, 2019

	Beginning Balances	Additions	Deductions	Ending Balances
All Agency Funds				
Assets				
Cash in State Treasury	66,840	3,077,613	3,068,355	76,098
Legislative Appropriations	219,900	24,876,724	24,890,799	205,825
Accounts Receivable	3,555		1,109	2,446
Total Assets	290,295	27,954,337	27,960,263	284,369
Liabilities				
Vouchers Payable		14,557	14,557	-
Accounts Payable	219,900	24,112,486	24,126,561	205,825
Due to Other Funds		33		33
Funds Held For Others	70,395	3,080,313	3,072,197	78,511
Total Liabilities	290,295	27,207,389	27,213,315	284,369

Other Supplementary Information – Schedule 1
Revenues, Expenses and Changes in Statutory Account Balances
(Non-GAAP Presentation) - Employees Retirement Fund
Year Ended August 31, 2019

	Employee Savings Account	State Accumulation Account	Retirement Annuity Reserve Account	Interest Account	Expense Account	Totals
Operating Revenues	\$	\$	\$	\$	\$	\$
Contributions to Retirement System:						
Member Contributions	686,970,463					686,970,463
Employer Contributions		712,172,364				712,172,364
Service Contributions from Teacher Retirement System			102,787,422			102,787,422
Membership Fees					475,275	475,275
Penalty Interest		7,818,135				7,818,135
Investment Income:						
Net Appreciation in Fair Value of Investments				117,824,156		117,824,156
Interest and Dividends				677,858,407		677,858,407
Class Action Settlements				2,000,715		2,000,715
Fees for Administering Programs						
Rental Income					41,418	41,418
Warrants Voided By Statute of Limitations		164,259				164,259
Sale of Surplus Equipment					9,035	9,035
Recycling Revenue					3,762	3,762
Miscellaneous					163	163
Total Operating Revenues	686,970,463	720,154,758	102,787,422	797,683,278	529,653	2,308,125,574
Operating Expenses						
Retirement System Benefits Paid:						
Retirement Benefits			2,470,463,072			2,470,463,072
Death Benefits:						
Active Members		1,909,323				1,909,323
Retirees			1,534,607			1,534,607
Member Contributions Withdrawn	142,303,194					142,303,194
Service Contributions to Teacher Retirement System			26,307,593			26,307,593
Administrative Expenses					65,746,511	65,746,511
Depreciation Expense					820,233	820,233
Total Operating Expenses	142,303,194	1,909,323	2,498,305,272	-	66,566,744	2,709,084,533
Income (Loss) Before Non-Operating Expenses and Operating Transfers	544,667,269	718,245,435	(2,395,517,850)	797,683,278	(66,037,091)	(400,958,959)
Non-Operating Revenues (Expenses)						
Loss on Disposal of Fixed Assets					(455,819)	(455,819)
Income (Loss) Before Operating Transfers	544,667,269	718,245,435	(2,395,517,850)	797,683,278	(66,492,910)	(401,414,778)
Operating Transfers In (Out)						
Distribution of Interest	113,042,025	(1,053,106,562)	1,670,559,056	(730,494,519)		
Establishment of Benefit Reserves	(506,743,354)	(1,376,245,470)	1,882,988,824			
Distribution of Interest for Administrative Expenses				(67,188,759)	67,188,759	
Member Accounts-Escheated	(3,999,077)	3,999,077				
Excess Benefit Arrangement Transfers					(695,849)	(695,849)
Net Operating Transfers	(397,700,406)	(2,425,352,955)	3,553,547,880	(797,683,278)	66,492,910	(695,849)
Net Income (Loss)	146,966,863	(1,707,107,520)	1,158,030,030	-	-	(402,110,627)
Account Balances - Beginning	5,897,455,633	(672,098,373)	22,527,977,524	-	-	27,753,334,784
Account Balances - Ending	6,044,422,496	(2,379,205,893)	23,686,007,554	-	-	27,351,224,157

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, 2019

	Employee Savings Account	State Accumulation Account	Retirement Annuity Reserve Account	Interest Account	Expense Account	Totals
Operating Revenues	\$	\$	\$	\$	\$	\$
Contributions to Retirement System:						
Member Contributions	9,098,121					9,098,121
State Retirement Contributions		25,864,146				25,864,146
Investment Income:						
Net Appreciation in Fair Value of Investments				4,031,397		4,031,397
Interest and Dividends				23,533,924		23,533,924
Class Action Settlements				69,417		69,417
Warrants Voided By Statute of Limitations		3,096				3,096
Total Operating Revenues	9,098,121	25,867,242	-	27,634,738	-	62,600,101
Operating Expenses						
Retirement System Benefits Paid:						
Retirement Benefits			78,469,591			78,469,591
Refunds of Retirement Contributions	3,768,394					3,768,394
Death Benefits:						
Active Members		15,159				15,159
Administrative Expenses					3,552,047	3,552,047
Total Operating Expenses	3,768,394	15,159	78,469,591	-	3,552,047	85,805,191
Income (Loss) Before Operating Transfers	5,329,727	25,852,083	(78,469,591)	27,634,738	(3,552,047)	(23,205,090)
Operating Transfers In (Out)						
Distribution of Interest	1,081,409	(34,680,464)	57,681,746	(24,082,691)		
Establishment of Benefit Reserves	(3,210,137)	(84,025,131)	87,235,268			
Distribution of Interest for Administrative Expenses				(3,552,047)	3,552,047	
Net Operating Transfers	(2,128,728)	(118,705,595)	144,917,014	(27,634,738)	3,552,047	-
Net Income (Loss)	3,200,999	(92,853,512)	66,447,423	-	-	(23,205,090)
Account Balances - Beginning	51,536,313	152,623,011	762,668,411	-	-	966,827,735
Account Balances - Ending	54,737,312	59,769,499	829,115,834	-	-	943,622,645

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, 2019

	Employee Savings Account	State Accumulation Account	Retirement Annuity Reserve Account	Interest Account	Expense Account	Totals
Operating Revenues	\$	\$	\$	\$	\$	\$
Contributions to Retirement System:						
Member Contributions	6,262,749					6,262,749
Employer Contributions		13,100,263				13,100,263
Penalty Interest		200,048				200,048
Investment Income:						
Net Appreciation in Fair Value of Investments				2,205,534		2,205,534
Interest and Dividends				11,214,908		11,214,908
Class Action Settlements				33,065		33,065
Warrants Voided by Statute of Limitations		524				524
Total Operating Revenues	6,262,749	13,300,835	-	13,453,507	-	33,017,091
Operating Expenses						
Retirement System Benefits Paid:						
Retirement Benefits			28,980,156			28,980,156
Death Benefits:						
Active Members		26,692				26,692
Member Contributions Withdrawn	213,797					213,797
Administrative Expenses					983,983	983,983
Total Operating Expenses	213,797	26,692	28,980,156	-	983,983	30,204,628
Income (Loss) Before Operating Transfers	6,048,952	13,274,143	(28,980,156)	13,453,507	(983,983)	2,812,463
Operating Transfers In (Out)						
Distribution of Interest	1,260,361	(9,296,789)	20,505,952	(12,469,524)		
Establishment of Benefit Reserves	(15,349,697)	(54,696,245)	70,045,942			
Distribution of Interest for Administrative Expenses				(983,983)	983,983	
Net Operating Transfers	(14,089,336)	(63,993,034)	90,551,894	(13,453,507)	983,983	-
Net Income (Loss)	(8,040,384)	(50,718,891)	61,571,738	-	-	2,812,463
Account Balances - Beginning	78,282,914	128,600,062	246,496,810	-	-	453,379,786
Account Balances - Ending	70,242,530	77,881,171	308,068,548	-	-	456,192,249

Other Supplementary Information – Schedule 4

Administrative and Investment Expenses/Expenditures

Statutory Administrative Funds and Accounts

Year Ended August 31, 2019

	Administrative Expenses (Note A)	
	Non-Investment	Investment
Personnel Services	\$	\$
Salaries and Wages	22,268,399	15,436,541
Payroll Related Costs:		
Retirement Contributions	2,109,530	1,073,695
Retirement Membership Fees	917	241
Employees Insurance Contributions	2,542,439	754,319
Retirees Insurance Contributions	1,499,897	353,982
Social Security Contributions	1,648,978	783,763
Unemployment Compensation	14,779	3,487
Total Payroll Related Costs	7,816,540	2,969,487
Total Personnel Services	30,084,939	18,406,028
Professional Fees and Services		
Actuarial Services	1,098,397	
Audit Services	703,529	
Investment Consulting Fees		2,361,685
Investment Advisors		11,454,415
Group Benefits Advisors	2,990	
Medical Board Member Fees	45,900	
Architectural Services	52,072	
Legal Services	157,207	1,022,753
Computer Programming Services	4,149,658	451,814
Other Professional Services	2,109,285	76,841
Total Professional Fees and Services	8,319,038	15,367,508
Other Services and Charges		
Travel	172,343	489,096
Materials and Supplies:		
Postage	889,109	
General Office and Other Supplies	196,849	251
Subscriptions	26,760	22,187
Furniture and Equipment	762,606	90,814
Computer Software	610,004	
Total Materials and Supplies	2,485,328	113,252
Communications and Utilities:		
Electricity, Gas and Water	222,100	
Telephone and Telegraph	702,517	
Electronic Communication Services	194,435	5,794,788
Total Communications and Utilities	1,119,052	5,794,788
Repairs and Maintenance:		
Land and Building	174,455	
Furniture and Equipment	13,420	
Computer Software and Equipment	1,256,753	
Total Repairs and Maintenance	1,444,628	-
Rentals and Leases:		
Computer Software and Equipment	233,056	
Office Equipment	266,181	
Space	134,618	
Total Rentals and Leases	633,855	-
Printing and Reproduction Services	109,132	-
Depreciation	820,233	

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Other Supplementary Information – Schedule 4

Administrative and Investment Expenses/Expenditures

Statutory Administrative Funds and Accounts (Concluded)

Year Ended August 31, 2019

	Administrative Expenses (Note A)	
	Non-Investment	Investment
Other Services and Charges (continued)	\$	\$
Other Operating Expenses/Expenditures:		
Membership Fees	44,336	55,949
Employee Training	182,542	69,884
Insurance - Building and Vehicle	32,802	
Fees and Other Charges	856,197	61,956
Investment Banking		1,169,856
Tenure Awards	6,366	67
Temporary Employment Agencies	371,125	22,843
Cleaning Services	162,839	
Advertising Services	3,191	394
Freight/Delivery Services	5,559	
Purchased Contracted Services	3,180,549	8,949
Prompt Payment Interest	3,025	
SORM Assessment	5,241	1,226
Third Party Administrator Fee - Cafeteria Plan	1,191,636	
Total Other Operating Expenses/Expenditures	6,045,408	1,391,124
Total Other Services and Charges	12,829,979	7,788,260
Total Expenses/Expenditures	51,233,956	41,561,796
Method of Finance:		
State Employees Retirement System (S.E.R.S.) Trust Account (0955)	27,751,616	38,815,128
Law Enforcement and Custodial Officer Supplement Retirement Trust Fund (0977)	2,167,482	1,384,565
Judicial Retirement System Plan Two Trust Fund (0993)	362,663	621,320
TexaSaver 401(k) Trust Fund (0946)	489,912	18,636
TexaSaver 457 Trust Fund (0945)	522,776	23,576
Commuter Spending Account Fund (3944)	3,790	30
State Employees Cafeteria Plan Trust Fund (0943)	1,452,211	6,769
State Retiree Health Plan (3973)	6,008,207	6,228
Total Fiduciary Funds	38,758,657	40,876,252
Employees Life, Accident, Health Insurance and Benefits Trust Account (0973)	12,380,744	685,544
Total Proprietary Fund	12,380,744	685,544
Social Security Administration Trust Account (0929)	94,555	
Total Governmental Funds	94,555	-
Total Method of Finance	51,233,956	41,561,796

Note A: \$ 79,440,477 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, 2019

Nature of Service	Totals
	\$
Actuarial Services - Retirement	423,211
Actuarial Services - Insurance	675,186
Audit Fees - Financial	301,300
Audit Fees - Insurance Carrier	324,957
Audit Fees - Other	77,272
Investment Consulting Fees	2,361,685
Investment Advisors	11,454,415
Group Benefits Advisors	2,990
Medical Board	45,900
Architectural Services	52,072
Legal Services	1,179,960
Computer Programming Services	4,601,472
Educational Services	95,068
Other Professional Services	2,002,019
Other Consulting Services	89,039
Total Professional and Consulting Fees	23,686,546
Method of Finance:	
State Employees Retirement System (S.E.R.S.) Trust Account (0955)	20,562,387
Law Enforcement and Custodial Officer Supplement Retirement Trust Fund (0977)	744,763
Judicial Retirement System Plan Two Trust Fund (0993)	313,229
TexaSaver 401(k) Trust Fund (0946)	11,980
TexaSaver 457 Trust Fund (0945)	12,265
Commuter Spending Account Fund (3944)	243
State Employees Cafeteria Plan Trust Fund (0943)	7,332
State Retiree Health Plan (3973)	652,728
Total Fiduciary Funds	22,304,927
Employees Life, Accident, Health Insurance and Benefits Trust Account (0973)	1,378,795
Total Proprietary Fund	1,378,795
Social Security Administration Fund (0929)	2,824
Total Governmental Funds	2,824
Total Method of Finance	23,686,546

INVESTMENT SECTION

Report on Investment Activity

Outline of Investment Policies

Time-weighted Rates of Return and Asset Allocations

Broker Commissions

Fees for Alternative Investments

Investment Advisory and Service Fees

List of Largest Assets Held

Investment Summary at Fair Value



Report on Investment Activity

Fiscal Year 2019

Overview

The System's investment portfolio for pension plans closed the fiscal year with a fair value of \$28.53 billion, and received a net return of 3.00% for the year compared to the global policy benchmark return of 3.06%. Over the longer term, the fund returned 5.99% for the 5 years ended August 31, 2019, compared to the policy benchmark of 5.57%. For the 10 years ended August 31, 2019, the fund returned 8.09%, outperforming the policy benchmark of 7.89%. The fiscal year-end asset allocation stood at 27.62% in fixed-income, 37.24% in global public equity, 10.68% in global real estate, 14.32% in private equity, 2.90% in infrastructure, 3.31% in absolute return funds, 0.44% in special situation, and 3.49% in cash.

During Fiscal Year 2019, 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. Management completed a transition from a rules-based investment policy to a principles-based policy. In addition, the System transitioned to new consultants for the general investment plan and the Infrastructure asset class. Staff also reviewed policy benchmarks and delivered education about best practices to the Board and Investment Advisory Committee.

The Investments Division hosted the ERS/TRS Annual Emerging Manager's Conference with over 900 managers in attendance. Staff also conducted in-house educational conferences and promoted strategic outreach to the Board 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.

Leaders of the Division remain committed to developing a career path program and to attracting and retaining excellent investment professionals by succession planning and career growth opportunities. In addition, the Division continued to expand the internship program to include outreach to diversity candidates along with active collaboration with university graduate programs in Texas.

Management continued to recognize the importance of optimizing the mix of internally managed and

externally advised portfolios. Staff refreshed the select pool by adding 10 international small cap managers and initiated searches to refine the mix of internal and external management, and at the same time leveraged external relationships for stronger resources. Staff continued to expand existing core competencies for innovative investment management by exploring new investment alternatives.

The Division adjusted the portfolio from a strategy perspective to further align the portfolio's investment objectives to the future market environment. The Division also developed a platform for Hedge Fund emerging managers and introduced an Opportunistic Credit asset class as part of a newly developed asset allocation. In conjunction with Investment Advisory Committee asset class experts, Staff held 41 Asset Class Investment Committee Meetings.

Domestic Equity

Fiscal Year 2019 was more eventful than the S&P500 Index's 1% overall price change reflects. Drama in the markets centered almost exclusively on trade and Federal Reserve interest rate policy.

Early in the fiscal year, October and December were historically bad months for domestic markets, as U.S.-China trade tensions, concerns about rising interest rates, and weak corporate earnings all contributed to poor returns. The S&P 500 was off about 20% from the beginning of the fiscal year, but the market troughed on December 24.

As the calendar rolled into 2019, the fortunes of the market reversed dramatically. In January, Federal Reserve Chairman Powell said that the Agency was listening sensitively to the message that markets were sending and would be taking those downside risks into account as policy is made going forward. The new dovish language from the Federal Reserve, coupled with strong economic data and earnings, catapulted the S&P 500 up almost 8% in January. February, March, and April all continued the theme of strong market performance on the back of dovish Federal Reserve commentary and optimism around a trade resolution with China. After the four-month rally to start the calendar year, the S&P 500 exited April at an all-time high.

Volatility returned in May as trade talks with China fell through. The early summer months brought better market performance as it became apparent that the Federal Reserve would deliver a rate cut in July, sending the S&P 500 to all-time high level. The rate cut came in July, but so did measured commentary

Report on Investment Activity (Continued)

Fiscal Year 2019

from Chairman Powell, who avoided committing to a sustained series of cuts. Federal Reserve uncertainty came with ongoing negative trade rhetoric with China and heightened concerns about an economic slowdown. These factors caused domestic markets to retreat modestly at the end of the fiscal year.

U.S. equity markets did see some divergence in Fiscal Year 2019. The tech-heavy NASDAQ was down almost 2%, trailing the S&P 500 and the Dow Jones Industrial Average. The small-cap S&P 600 was off over 16%, as recession fears tended to hit smaller companies harder. Rate-sensitive Utilities and Real Estate were the top performing sectors, with Energy the worst performer by a wide margin.

International Equity

In Fiscal Year 2019, global markets continued their downward momentum through the end of December, bottomed sharply, and then recovered through April before a volatile decline that finished the year in negative territory. MSCI ACWI ex US fell (-5.97%), MSCI Europe (5.87%), MSCI Pacific (6.10%), and MSCI Emerging Markets declined (-6.78%) (all in U.S. Dollar basis). Many of the defining themes of the year carried over from prior Fiscal Year 2018, such as concerns over increased nationalism and international trade wars, historically depressed monetary policy, and a looming global slowdown. Trade relations between the United States and China once again dominated headlines for most of the year as markets struggled in the face of uncertainty in two of the world's largest economies.

Trade issues continued to define emerging market equities this year. The U.S. administration persisted in its mission to close the massive trade deficit, but negotiations made little progress as the Chinese government had so far refused to meet the White House's demands. Throughout the year, the two countries took turns levying new and raising existing tariffs in retaliation for levying new and raising existing tariffs. At the close of the year, the US had announced an additional 10% tariffs on \$300 billion worth of Chinese imports to add to the existing 25% tariffs on \$250 billion worth of Chinese goods. China has applied duties of its own on \$185 billion worth of American goods, ranging from 5-20%. Along with trade woes, oil prices whipped emerging markets up and down at various points throughout the year while commodities and foreign exchange rates were a drag on performance almost the entire period.

Crude oil continued its ascent in September, peaking at over \$86 per barrel in the beginning of October before crashing back down to nearly \$50 by the end of December. Along with equities, prices recovered through the end of April, almost reaching \$75 per barrel before a volatile decline to end the year down more than 20% at just over \$60. In the past, emerging markets performance and that of crude had been closely aligned. This link held particularly true this year as emerging market equities experienced both the strongest post-December recovery through April and the largest decline from that point to end the year as the laggard of the group.

After years of slow and steady growth evidenced by strong economic indicators and a robust domestic economy, Japan saw a shift in momentum as its export-led economy, usually the beneficiary of global trade, was hurt by slowing growth in China, looming trade issues, and a challengingly strong domestic currency. Financials presented an ongoing headwind as Japanese Banks continued to struggle in the negative interest rate environment. Improvements in corporate governance continued to be a focus within the region, but the rate of change was slow and share buybacks were disappointingly low as the Japanese fiscal year closed out in March.

European markets signaled a flight to safety in Fiscal Year 2019 as a clear divergence in returns among defensive and cyclical sectors emerged. The region again spent the year haunted by the overhang of Brexit and rising nationalism that manifested in various European Union member state elections. After a series of unsuccessful attempts to ratify a Brexit Withdrawal Agreement and multiple deadline extensions, Theresa May resigned as U.K. Prime Minister, and Boris Johnson, former Foreign Secretary and a strong Brexit proponent, was elected in her place on promises to deliver Brexit by the October 31st deadline. Eurozone economic data continued to slow throughout the year on softening global demand and uncertainty surrounding the region's outlook. Employment numbers were the one exception, with unemployment reaching 10-year historic lows. At the close of the year, investors focused on possible fiscal stimulus as the European Central Bank and Bank of England have little room to move monetary policy.

At the sector level, the utilities sector was the best performer in Fiscal Year 2019, returning (11.3%). Energy, the best performer in Fiscal Year 2018 (with a 15.9% return), flipped to become the worst performer this year, returning (-9.9%). This outcome was

Report on Investment Activity (Continued)

Fiscal Year 2019

expected, given the over 20% decline in oil prices and investors' proclivity to lean into defensive sectors at this point in the economic cycle.

Real Estate

Following a modest return for the Fiscal Year 2018 (+6.3%), the global real estate equity markets, as measured by the FTSE EPRA/NAREIT Developed Index, posted another positive return of +9.1% for the Fiscal Year 2019 ended August 31, 2019, significantly outperforming the broader equities market MSCI World Index return of +0.9% for the same period. Reversing the interest rate trend in Fiscal Year 2018, the U.S. Federal Reserve raised interest rates three times while global bond yields had been declining over the period. Since the trade friction between the U.S. and China started in June 2018, the conflicts intensified and resulted in increased tariffs. The trade tension also spread out to Europe and Canada, as well as Mexico. Trade issues were starting to hit corporate earnings and business sentiment. Global economic data started showing deterioration and some emerging market currencies plummeted significantly. Global central banks turned dovish and global bond yields declined. The U.S. 10-year Treasury yield hit a record low and German yields turned negative and hit its lowest on record.

Middle East (essentially only Israel) was the best performer, up 46.3% in U.S. Dollar terms and 43.5% in local currency. Asia was 12.7%, followed by North America (+11.8%). Continental Europe (-2.4%) lagged driven by a weaker Euro Dollar relative to the U.S. Dollar. The U.K. (-10.2%) was the worst performer, affected by Brexit woes. The British pound declined significantly over the period.

In the Asia market, Japan was the best performer, up 21.3% in U.S. Dollar terms and +16.2% in local currency terms. While physical real estate market fundamentals remain solid, Japan also benefited from fund inflows as investors view Japan as a relative safe haven amid an uncertain global environment. JREIT (+28.1%) outperformed the developers (+10.6%) during the period. Australia also posted decent returns, up 12.1% in U.S. Dollar terms and +21.0% in local currency terms. The economic data deteriorated and the Reserve Bank of Australia cut interest rates twice from 1.50% to 1.25% during the period. The authority also eased the macro-prudent measures toward the property market. While the Australia general election result was surprising, the policies of the new government removed some of the negative overhang surrounding the residential market. Following a -0.8%

return in the previous fiscal year, Singapore also did well, up 15.9% in U.S. Dollar terms and +17.3% in local currency terms. The Singapore government eased some of the measures toward the property sector. Japan, Australia, and Singapore markets were perceived as yield markets and they tended to do well amid an uncertain environment of slower global economic growth and rising political risk. Hong Kong had done well until recent months when rising social unrest caused the market to sell off, ending the fiscal year down 1.4% in U.S. Dollar terms and -1.6% in local currency. Despite strong property market fundamentals, sentiment turned negative as protests persisted longer than expected and worried about the impact to the economy.

The European market had an eventful fiscal year with general elections and Brexit as the main focus. The economic data deteriorated in recent months and the European central bank warned about the rising risk of recession. Continental Europe was up 3.1% in local currency terms but down 2.4% in U.S. Dollar terms as the Euro Dollar was weak against the U.S. Dollar. Sweden (+25.8% U.S. Dollar, +35.0% local currency) and Switzerland (+20.8% U.S. Dollar, +23.6% local currency) posted strong performance, helped by solid fundamentals in the local market as well as overall strong earnings results. France (-19.6% U.S. Dollar, -15.1% local currency) was one of the worst performers. The "Yellow Vest" movement has exacerbated the weakening economic trend. The Purchasing Managers' Index data reached the lowest level in more than four years. Italy (-9.3% U.S. Dollar, -4.1% local currency) also suffered. The political uncertainty and budgetary issues continued to be negatives. Italy's Prime Minister resigned. Germany's (-8.0% U.S. Dollar, -2.8% local currency) economic data deteriorated in recent months and some fear that the country might fall into a recession. Sentiment turned more negative, which was driven by the proposed rent control bill in Berlin. Brexit continued to be a dark cloud over the U.K. (-10.2% U.S. Dollar, -4.2% local currency) and impacted sentiment and returns. Theresa May resigned and Boris Johnson took office, causing some to fear a hard Brexit.

Following fairly underwhelming returns in Fiscal Years 2017 and 2018 (-3.1% and +7.0%, respectively), the U.S. as measured by the FTSE EPRA / NAREIT United States Index recovered nicely, posting a strong return of +11.7% for the Fiscal Year 2019 ended August 31, 2019. Notably, U.S. REITs significantly outperformed the broader equities market (MSCI World Index), which finished +0.9% in Fiscal Year 2019 after materially underperforming the broader market in the prior fiscal year.

Report on Investment Activity (Continued)

Fiscal Year 2019

Fiscal Year 2019 was quite the reversal from the prior fiscal year where the implementation of tax cuts and a perceived pro-business friendly agenda had increased the expectation of higher long-term interest rates, which positively impacted general equity fund flows at the expense of fund flows into the REIT space. Specifically, investor expectations of higher rates had dictated equity fund flows into more cyclical stocks, which was why the more interest rate sensitive REIT subsectors had generally underperformed versus the shorter lease cyclical REIT names.

Over the course of the Fiscal Year 2019, underwhelming earnings growth in the general equities space, trade war fears reversing any positive impact from the prior year tax cuts, views on lower future interest rates, and global growth fears weighed on investor sentiment and consequently benefited the REIT sector. Along these lines, many of the more perceived defensive subsectors led the way as Self-Storage (+28.6%), Residential (+27.0%), and Healthcare (+24.3%) materially outperformed. Although the macro headlines and specifically trade war uncertainty should have weighed on the Industrial (+28.7%) subsector, it was the top performing REIT sector due to strong earnings results and resilient sector fundamentals. The Diversified (+10.1%) subsector, led by the Data Center stocks, underperformed on a relative basis due to concerns about supply/demand dynamics and reduced pricing power in key markets.

Lastly, despite relatively strong fundamentals on the leasing front, the Office (+1.1%) subsector had notable weak relative performance results for the fiscal year as concerns on the broader economy offset satisfying earnings results and undemanding valuations. Similarly, the Retail (-3.8%) and Lodging/Resorts (-14.5%) subsectors also materially underperformed on slowing earnings growth and fears that an economic slowdown could negatively impact fundamentals even further.

Private Real Estate

During Fiscal Year 2019, the System committed \$675.35 million across nine investments, comprising five “re-up” investments to managers that the System already has commitments, two co-investment commitments, and two investments with two new managers. All of these new commitments were for non-core investment strategies and all were equity investments. These commitments exceeded the commitment target of \$550 million, but were below the upper range of \$825 million set forth in the Fiscal Year

2019 tactical plan. These commitments were committed to domestic, international, and global focused funds.

Co-investments typically have focused investments, lower management fees, and stronger governance structures. From inception through the end of Fiscal Year 2019, the System's Private Real Estate Portfolio has total co-investment commitments of approximately \$240 million in five co-investments. The System expects to make additional co-investments in Fiscal Year 2020 as opportunities become available and meet risk and return parameters together with a strong “hands on” property management that can drive performance and create value for the System and complement the existing portfolio of investments.

As of August 31, 2019, private real estate commitments totaled approximately \$4.1 billion to 63 funds, including five co-investments. The System continues to play an active role in monitoring and steering each investment. The System is on the Advisory Board on all but seven fund investments. Since inception, approximately \$3.4 billion in capital has been called and the net asset value of the System's private real estate portfolio stands at approximately \$2.1 billion.

The System has also received back approximately \$2.7 billion as income, realized gains, or a return of principal. In Fiscal Year 2019, approximately \$450 million in equity capital was called for the System's portfolio and \$463 million was returned as income, realized gains, or a return of principal resulting in net distributions of \$13 million. The System is carefully monitoring the pace of capital calls and distributions from all of the System's investments to ensure the Private Real Estate Portfolio is within an acceptable range of the target allocation

Private Equity

For Fiscal Year 2019, Private Equity closed on 29 deals, including 11 co-investments, with commitments totaling \$1.33 billion versus a goal of \$1.45 billion and a range of \$1.0 - \$1.8 billion.

As of August 31, 2019, the Private Equity portfolio Net Asset Value was \$4.1 billion, compared to \$3.9 billion at fiscal year ended August 31, 2018. Since inception, Private Equity has closed on 109 funds and 48 co-investments with commitments totaling \$7.7 billion (adjusted for currency exchange rates). In addition, the System has obtained Limited Partner Advisory Committee seats on 63 active funds and four fund Limited Partner Advisory Observer seats.

Report on Investment Activity (Continued)

Fiscal Year 2019

Fixed Income

Economy

The Federal Reserve began the year in a hiking cycle as the economy was performing very well. Amidst the Fed's hiking, we saw the 10 year Treasury yield top out at 3.24%. As the market entered the latter months of the year, the economy began to slow as trade tensions with China ratcheted up. The manufacturing sector began to soften and companies began to hold back more capital expenditure amidst the increased trade uncertainty. As a response, the Federal Reserve began easing monetary policy with a rate cut in July. Treasury yields fell sharply in August, declining 52 basis points to close the fiscal year at 1.50%. The spread between 10 year and 2 year Treasuries briefly dipped below zero, which is historically a precursor to a recession coming in 18-24 months. Aside from trade tensions, the economy appears to be on decent footing. The labor market remains strong, with unemployment at historic lows; fundamentals in the manufacturing and services sectors also appear to be okay.

Bond Markets

Bonds have rallied significantly as the Federal Reserve had shifted to more accommodative monetary policy. Investment Grade Corporate bonds returned a very impressive 13.94% and 13.33% for the fiscal year. The aggregate U.S. Treasury Index returned 8.63% and 10.38% for the fiscal year. Agencies underperformed Treasuries as prepayment risk increased on the back of the rally in rates. High Yield returned 11%, but performance was more modest for the fiscal year, at 6.56%, as credit spreads widened.

Private Infrastructure

For Fiscal Year 2019, Private Infrastructure closed on four deals with commitments totaling \$280 million. These deals include two fund investments and two co-investments. The total commitment target for fiscal year 2019 was \$450 million with a commitment range of +/- 30% (\$315-\$585 million).

Since inception, Private Infrastructure has closed on 16 co-investments and 15 funds with commitments totaling \$1.6 billion (adjusted for currency exchange rates). The System holds a Limited Partner Advisory Committee seat on 14 funds and an observer seat on one fund. As of August 31, 2019 the Infrastructure portfolio Net Asset Value was \$826.7 million, or 2.9% of system assets, compared to \$566.6 million, or 1.95% of system assets, at fiscal year-ended August 31, 2018.

Hedge Funds

Fiscal Year 2019 was a challenging period for hedge funds. The Absolute Return Portfolio ended the year with an estimated +2.80% while the stated policy benchmark returned +6.43% over the same period. Global growth concerns and elevated geopolitical risks between a numbers of nations influenced performance and caused multiple volatility spikes during the fiscal year. The ebb and flow of trade tariff negotiations between the U.S. and China as well as Brexit negotiations between the U.K. and the European Union caused heightened geopolitical uncertainty that affected a number of markets. Furthermore, persistent U.S. Federal Reserve interest rate hikes through year end of 2018 increased the Absolute Return Portfolio's benchmark return and served as a headwind to the portfolio's relative performance. Despite the challenges during Fiscal Year 2019, the Absolute Return Portfolio outperformed many of its peer benchmarks including the Hedge Fund Research, Inc. (HFRI) Fund of Funds Diversified Index (+1.18%) and the HFRX Global Hedge Fund Index (-1.12%).

September was a relatively calm month to start the fiscal year, a lower than expected imposition of tariffs on Chinese goods by the U.S. led to an equity market rally. In Europe, Italy's decision to increase its targeted budget deficit initially led to a decline in European markets, but most European indices were able to recover by month-end. Furthermore, the U.S. Federal Reserve increased interest rates for a 3rd time in 2019, a move that was anticipated by most market participants. Hedge fund performance was strong during this period.

A weakening of global growth expectations, concerns about continued U.S. interest rate increases, and ongoing geopolitical uncertainty caused heightened volatility and a flight to quality movement in the fourth quarter of 2018. Hedge fund performance was challenged in the fourth quarter with the exception of Opportunistic (+01 bps), all strategies within the Absolute Return Portfolio were negative contributors. Exposures to Global Macro and Event Driven were notable detractors. Performance was negatively impacted from broad based deleveraging and the selling of risky assets. Further, heightened volatility due to the equity market selloff led to spread widening in credit markets and in merger arbitrage spreads. It is common for Event Driven to underperform during these conditions. Attribution from a systematic manager was particularly challenging, and the System's Hedge fund team completed a full redemption from the manager in early first quarter of 2019. Attribution from the portfolio's

Report on Investment Activity (Continued)

Fiscal Year 2019

Equity Long/Short was the next largest detractor. Performance was challenged due to the equity market selloff and further fears around an economic recession, which was being forecasted by a dramatic flattening of the U.S. yield curve.

Global markets reversed in the first quarter of 2019, and a risk-on sentiment prevailed for much of the period. Within the U.S., strong corporate earnings, a conclusion to the government shutdown, and a dovish stance by the U.S. Federal Reserve caused equity markets to rise. Positive trade developments between the U.S. and China helped to further fuel the rally. Despite the risk-on sentiment, investors were still wary of global economic concerns, which maintained a strong bid for U.S. Treasury bonds. Additionally, in December 2018 through quarter one of 2019, we saw an inversion in the U.S. yield curve where the yield of U.S. 2-year Treasury was above the yield of the U.S. 5-year Treasury.

Performance was strong during the first quarter of 2019 and all strategies were positive contributors. To no surprise, Relative Value and Event Driven led the way for the Absolute Return Portfolio as these are the portfolio's largest strategy allocations. Relative Value captured a compression in developed market and emerging market global credit spreads. In comparison, Event Driven took advantage of the increase in U.S. merger arbitrage activity. A developed markets discretionary strategy within Global Macro also did well due to attribution from a U.S. steepened trade. This manager was also able to capture moves in both equity and credit markets.

The instability of rhetoric surrounding the U.S./China trade tensions and conflicting economic data between U.S. and global growth projections caused back and forth price action and heightened volatility in a number of markets during the second quarter of 2019. The quarter started out positive, with optimism that trades deal between the U.S. and China would be struck. Additionally, strong U.S. economic data in April helped risk assets rally. However, market volatility in May posed challenges for a number of strategies. Heightened trade tariff tensions between the U.S. and China, along with a collapse in Brexit talks, led to elevated volatility and a decline in a number of global equity indices. Nevertheless, dovish rhetoric from G10 central banks and projections of a U.S. interest rate cut saw risk assets reverse in June and rally through quarter-end.

Hedge fund performance during the second quarter of 2019 was positive across all strategies, but couldn't keep pace with the strategic policy benchmark. Although performance of the Absolute Return Portfolio was positive for the month, choppy conditions in May posed challenges for a handful of managers. Despite the challenges in May, Global Macro was one of the top performers for the quarter, as a core discretionary strategy was able to capture moves in equity and interest rate markets. Additionally, the Absolute Return Portfolio's Relative Value managers were able to navigate the volatility in spreads successfully and produced strong performance for the second quarter of 2019.

Weakening global growth figures and continued geopolitical turmoil caused a risk-off environment in July and August of 2019. In the U.S., an 'insurance' interest rate cut by the U.S. Federal Reserve, the imposition of additional tariffs by the U.S. on Chinese goods, led to an equity market sell-off in late July that continued through August. In late August, the U.S. Treasuries 2-year/10-year curve inverted for the first time since mid-2007. The ominous recessionary signal further emphasized the decline in risk assets and the flight to safe haven securities that occurred during the month. In Europe, weak economic growth led to continued monetary policy commitments by the European Central Bank. Furthermore, Boris Johnson's election as the new Prime Minister of the U.K. led to a meaningful increase in the risk of a hard Brexit.

Performance during the final two months of the fiscal year was volatile. July's performance was led by Relative Value, Event Driven, and Equity Long/Short. Given that the market volatility in July occurred late in the month, these managers were still able to report profits. In turn, August's performance was relatively flat. From a strategy perspective, Global Macro was the most additive given tactical trading on the U.S. yield curve by a core allocation. However, a sharp widening in high yield and corporate spreads, as well as widening in some emerging markets related to the Argentina election, posed challenges for Relative Value and Event Driven.

Separately, the System's policy benchmark will be decreased from T-bills + 4% to T-bills + 3.50% starting in Fiscal Year 2020. The reason for the decrease was to have the benchmark better reflect the current market environment taking into consideration higher U.S. interest rates, the length of the present economic cycle, and the beta constraint within the Absolute Return Portfolio.

Report on Investment Activity (Concluded)

Fiscal Year 2019

Key Portfolio Statistics

STATISTICS	2019	2018
Contributions to Pool	1,246,000,000	1,203,600,000
Withdrawals from Pool	(2,558,000,000)	(2,314,400,000)
Interest & Dividends	709,416,286	677,606,034
Securities Lending Net Income	3,190,953	5,012,254
Net Appreciation in Fair Value	124,061,087	1,909,484,313

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 2019

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 Beneficiaries;
- Adopt a long-term asset allocation;
- 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 the Trust; and
- Exercise reasonable care consistent with ERS' fiduciary duty, and maintain the integrity of the investment program.

Investments shall be made in securities that are prudent as determined using a prudent person standard. Every investment will be subject to strict due diligence. Investment decisions respecting individual assets will be evaluated not in isolation but in the context of the Trust as a whole and as a part of an overall investment strategy having risk and return objectives reasonably suited to the Trust.

Roles and Responsibilities

The Board of Trustees is responsible for formulating, adopting, and overseeing the investment policies of the Trust. The Board shall (i) invest the funds as a single Trust without distinction as to their source and (ii) hold securities purchased with such funds collectively for the proportionate benefit of the pension plans. Separate investment objectives, investment guidelines, investment strategy and accounting will be used for Texas Employees Group Benefits Program assets.

The Board of Trustees will approve alternative investments over 0.6% of the total market value of the System's assets as reported in the most recent Comprehensive Annual Financial Report pursuant to Texas Government Code Section 815.3016.

In accordance with Texas Government Code § 815.301(b), the Executive Director is delegated full authority and responsibility by the Board of Trustees to perform the responsibilities of the Board of Trustees and in the implementation and administration of the Trust subject to the Board of Trustees' policies,

rules, regulations, and directives consistent with constitutional and statutory limitations. The Executive Director will establish procedures and controls for efficient implementation of the Trust by the System staff. The Executive Director may delegate to another employee of the System any right, power or duty assigned to the Executive Director pursuant to Texas Government Code § 815.202(f).

Asset Allocation

The Board of Trustees has adopted the asset allocation to improve the long-term expected return and the return relative to the risk taken of the Trust. This framework for the asset allocation between return seeking and risk reduction/liquidity assets provides broader diversification and improved returns in disparate economic regimes. This framework is segregated into asset classes that are geared to seek returns and those that provide both risk reduction and liquidity as needed. In addition, the Board of Trustees has established specific sub-targets with minimums and maximums around target allocations.

Risk Management

The following statements represent the core values and beliefs that form the basis of the risk philosophy for the Trust in a long-term perspective.

- The System's investment program is structured to address systematic risk (or market risk) and non-systematic risk (risks associated with an asset class or portfolio).
- Risk management recognizes that some risks are quantitative or statistically measurable while others are not.
- Risk reporting should be timely, relevant, and understandable.

Risk management is a primary responsibility for the System's staff and investment results will be reviewed in the context of risk-adjusted returns. The Risk Management framework is established through (1) the adoption of the investment policies and the strategic asset allocation, (2) adoption of individual asset class benchmarks, and (3) reasonable risk limits within the investment policies for the implementation of the investment program. The goal is not to eliminate risk but to strive to achieve a balance between risk and return. The System's Chief Investment Officer is responsible for reporting and effectively communicating risk management results to the Board of Trustees on a regular basis.

Outline of Investment Policies (Concluded)

Fiscal Year 2019

Permissible Investments

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

- Compliance with the definition of "securities" set forth in Texas Government Code § 815.301(f);
- their consistency with Policy and portfolio objectives;
- their application to the portfolio's diversification;
- the System's staff and/or advisor competency in evaluating, managing and trading the securities;
- Consideration of their liquidity within the portfolio; and
- the costs.

Securities will be screened by the System's staff to ensure that they meet the above standards, and any non-routine transactions will be reviewed by the System's Office of General Counsel.

Proxy Voting

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.

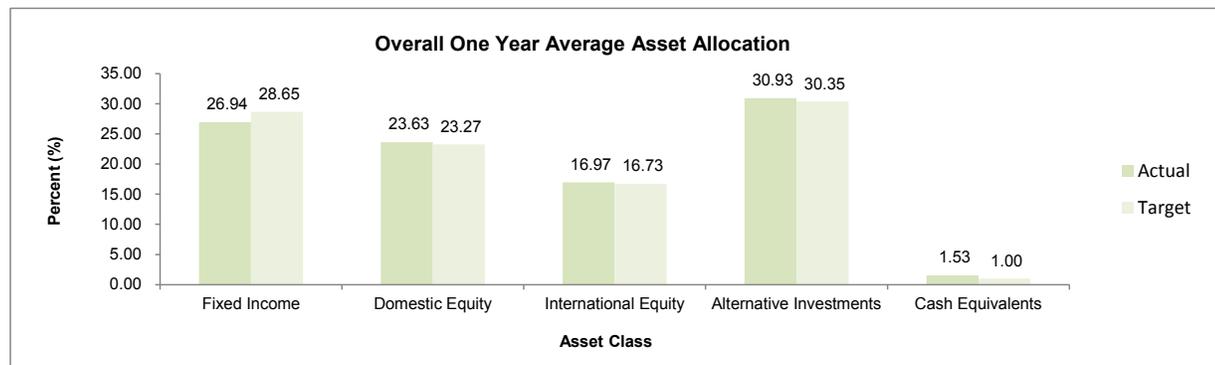
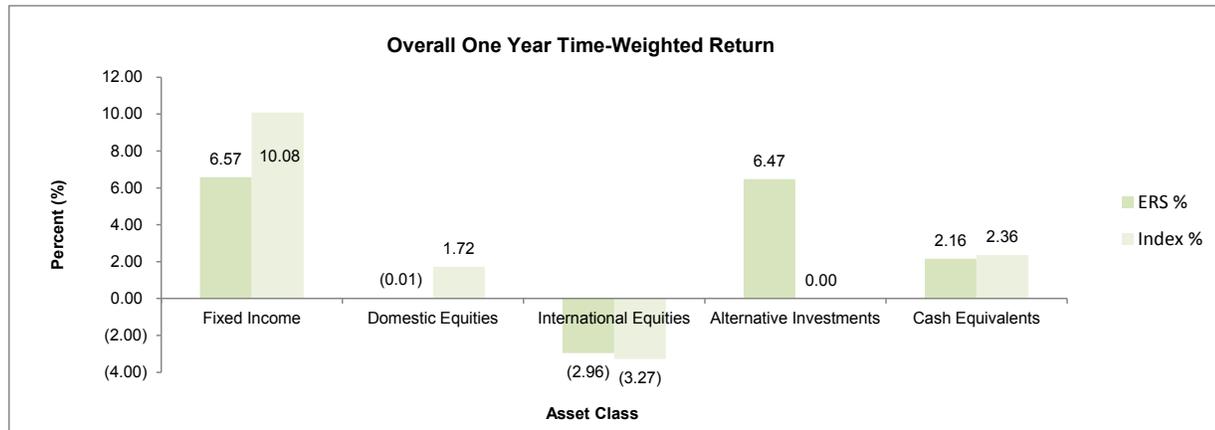
Basis of Presentation: Texas Statute and the System's Investment Policy

Time-Weighted Rates of Return and Asset Allocations

Investment Pool

August 31, 2019

	Time-Weighted Rates of Return (Note A)						5 Year	10 Year
	2015	2016	2017	2018	2019	3 Year (2017-2019)	(2015-2019)	(2010-2019)
	%	%	%	%	%	%	%	%
Fixed Income								
ERS	1.29	5.14	3.49	1.19	6.57	3.73	3.52	3.95
Index	1.13	6.50	1.34	(0.93)	10.08	3.39	3.55	4.31
Domestic Equities								
ERS	1.55	8.48	15.81	20.89	(0.01)	11.87	9.05	13.04
Index	0.49	12.54	15.87	20.06	1.72	12.27	9.86	13.42
International Equities								
ERS	(9.86)	1.44	19.38	3.72	(2.96)	6.31	1.90	5.27
Index	(12.35)	2.92	18.88	3.18	(3.27)	5.87	1.37	4.71
Alternative Investments								
ERS	7.89	6.76	11.26	12.50	6.47	10.03	8.94	11.50
Index	NA	NA	NA	NA	NA	NA	NA	NA
Cash Equivalents								
ERS	2.71	0.76	1.91	2.72	2.16	2.27	1.85	0.77
Index	0.03	0.23	0.62	1.52	2.36	1.50	0.95	0.52
ERS Overall								
ERS	0.49	5.32	12.15	9.58	3.04	8.19	6.03	8.20
Index	(1.03)	7.23	11.08	7.94	3.06	7.31	5.57	7.89
Change in CPI	0.21	0.87	1.74	3.01	1.81	2.19	1.53	1.78



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:

$$\text{Ending Market Value} / (\text{Beginning Market Value} + \text{Net Cash Flows})$$

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, 2019

Domestic Equity

Brokerage Firm	No. of Shares Traded	Commissions	Commission Per Share
		\$	\$
Baird, Robert W & Co., Inc.	4,179,077	83,582	0.020
Barclays Capital	4,942,794	87,943	0.018
BMO Capital Markets Corp.	4,065,144	81,303	0.020
BNP Paribas	206,551	2,779	0.013
BNY Mellon Clearing	6,086,304	124,226	0.020
Cantor Fitzgerald	2,279,588	45,592	0.020
Capital Institutional Services, Inc.	365,996	10,685	0.029
Citigroup Global Markets, Inc.	7,232,915	104,936	0.015
Cowen & Co., LLC	3,526,464	70,529	0.020
Credit Suisse	5,887,079	117,502	0.020
Deutsche Bank	3,798,440	73,926	0.019
Goldman Sachs	7,088,040	133,905	0.019
ICBC Financial Services LLC	1,574,843	78,742	0.050
Instinet LLC	405,642	4,056	0.010
Investment Technology Group, Inc.	590,900	5,909	0.010
Jefferies & Co, Inc.	29,050,648	580,582	0.020
JP Morgan Securities, LLC	8,923,434	167,369	0.019
Macquarie Securities (USA), Inc.	3,005,423	60,108	0.020
Merrill Lynch & Co., Inc.	9,351,828	182,085	0.019
Morgan Stanley & Co., Inc.	5,680,748	114,354	0.020
National Financial Services, LLC	5,125,946	98,190	0.019
Parel	21,701	193	0.009
Raymond James & Associates, Inc.	5,328,438	159,853	0.030
RBC Capital Markets	1,676,848	33,537	0.020
Sanford C Bernstein & Co., Inc.	1,171,826	23,437	0.020
Stifel, Nicolaus & Co., Inc.	3,224,627	64,493	0.020
UBS	4,954,327	91,916	0.019
Wells Fargo Securities, LLC	3,223,200	63,264	0.020
	132,968,771	2,664,996	0.020

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Broker Commissions (Concluded)

Year Ended August 31, 2019

International Equity

Brokerage Firm	No. of Shares Traded	Commissions	Commission
		\$	Per Share \$
Banesto Banco de Emisiones, SA	1,069,039	15,829	0.015
Barclays Capital	2,593,679	61,430	0.024
BMO Nesbitt Burns	1,546,193	23,418	0.015
BNP Paribas	4,395,744	67,566	0.015
BNY Mellon Clearing	4,435,636	93,755	0.021
Bradesco SA	928,500	10,259	0.011
Brasil Plural SA	802,000	5,906	0.007
Caceis Bank	6,666,973	134,392	0.020
Calyon Securities	2,261,338	15,981	0.007
Citigroup Global Markets, Inc.	65,360,959	214,832	0.003
Clearstream Banking AG	68,069	5,598	0.082
CLSA	22,450,556	181,503	0.008
Credit Lyonnais Securities	145,842,407	235,085	0.002
Credit Suisse	29,419,676	135,416	0.005
Daiwa Securities	78,168,771	314,228	0.004
Deutsche Bank	33,416,807	250,741	0.008
Euroclear Bank SA	44,000	1,541	0.035
Fidelity Clearing Canada	3,501,933	53,325	0.015
HSBC	33,414,292	133,449	0.004
IM Trust SA Corredores de Bolsa	400,302	2,088	0.005
Instinet LLC	3,513,512	27,103	0.008
Investec Securities Limited	272,850	5,324	0.020
Investment Technology Group, Inc.	1,694,472	24,935	0.015
ITG, Inc.	71,000	1,069	0.015
Jefferies & Co, Inc.	18,235,315	405,567	0.022
JP Morgan Securities, LLC	179,690,128	400,079	0.002
KEB Salomon Smith Barney Securities	52,606	2,768	0.053
Kepler Cheuvreux	10,359,669	119,619	0.012
Macquarie Securities (USA), Inc.	59,177,783	259,862	0.004
Merrill Lynch & Co., Inc.	34,360,425	218,224	0.006
Mitsubishi Securities	3,202,250	167,299	0.052
Mizuho Securities USA, Inc.	13,658,705	141,058	0.010
Morgan Stanley & Co., Inc.	34,529,135	152,244	0.004
Nomura Securities Co. Ltd.	9,453	514	0.054
Nordea Bank	679	98	0.144
Parel	6,574,610	75,527	0.011
Redburn Partners, LLP	13,141,920	247,114	0.019
S. G. Warburg & Co., Ltd.	851,083	11,534	0.014
Sanford C Bernstein & Co., Inc.	1,288,975	31,575	0.024
SG SEC (London) LTD, London	205,057	2,098	0.010
Societe Generale	5,465,071	61,579	0.011
The Depository Trust Company	82,000	1,243	0.015
UBS	67,703,974	345,888	0.005
XP Investimentos	277,671	5,745	0.021
	891,205,217	4,664,408	0.005

Basis of Presentation: Master custodian records.

Fees for Alternative Investments

Year Ended August 31, 2019

Investment Type	Asset Value	Management Fees (Note A)	Profit Share (Note B)	Other Fees
	\$	\$	\$	
Private Equity	4,095,571,471	32,483,346	24,650,159	13,117,048
Private Real Estate	2,150,080,362	21,675,245	11,264,110	7,940,679
Private Infrastructure	826,701,277	6,128,598	3,698,635	3,767,506
Private Fixed Income	404,580,462	660,740	147,448	520,649
Hedge Funds (Note C)	1,780,316,701	18,037,662	16,649,388	
Public Equity	854,530,277	1,674,354	2,209,939	
Total	10,111,780,550	80,659,945	58,619,679	25,345,882

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, 2019 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.

Note C: The amounts reported are for the period from July 1, 2018 to June 30, 2019.

Investment Advisory and Service Fees

Year Ended August 31, 2019

Advisory Service	Asset Value	Fees	Basis Points	Other Investment Services	Fees
	\$	\$			\$
Domestic Equity Advisors	371,589,228	907,348	24.42	Custodian Fees	1,106,498
International Equity Advisors	1,907,858,974	8,190,730	42.93	Security Lending Agent Fees	357,194
Total	2,279,448,202	9,098,078	39.91	Investment Consultant Fees	2,361,685
				Investment Banking Fees:	63,383
				Total	3,888,760

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 \$550,288 during fiscal year 2019.

Basis of Presentation: Master custodian records.

List of Largest Assets Held (Note A)

Year Ended August 31, 2019

Ten Largest Stock Holdings

No. of Shares	Description	Fair Value
1,310,003	Microsoft Corporation	180,597,014
775,000	Apple, Inc	161,773,500
72,000	Amazon.com, Inc	127,892,880
1,591,800	Utilities Select Sector SPDR-ETF	99,614,844
508,800	Facebook, Inc	94,468,896
763,123	JP Morgan Chase & Company	83,836,693
64,715	Alphabet, Inc	76,887,892
373,217	Alibaba Group Holding Limited	65,324,172
3,464,874	Bain Capital Specialty Finance (BCSF)	64,585,251
541,915	Chevron Corporation	63,794,234

Ten Largest Fixed Income Security Holdings

Par Value	Description	Fair Value
2,950,000	Xtrackers USD High Yield Corporate Bond ETF	143,016,000
2,750,000	Xtrackers Low Beta High Yield ETF	139,012,500
74,000,000	U.S. Treasury Note 2.375% 08/15/2024, Rating AA+	77,387,813
60,000,000	U.S. Treasury Note 3.125% 11/15/2028, Rating AA+	68,306,250
65,000,000	U.S. Treasury Note 2.250% 07/31/2021, Rating AA+	65,865,820
60,000,000	U.S. Treasury Note 2.375% 05/15/2029, Rating AA+	64,659,375
60,000,000	U.S. Treasury Note 2.500% 05/15/2024, Rating AA+	62,948,438
55,000,000	U.S. Treasury Note 2.625% 02/15/2029, Rating AA+	60,388,281
55,000,000	U.S. Treasury Note 2.375% 05/15/2027, Rating AA+	58,635,156
55,975,000	U.S. Treasury Note 2.625% 11/15/2020, Rating AA+	56,574,108

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, 2019

Type of Investment	Pooled Pension Trust Funds (Note A)				Investment Pool	
	Fund 0955	Fund 0977	Fund 0993	Fund 0973	Fair Value	% Total
	\$	\$	\$	\$	\$	
Public Equities:						
Domestic Equities	4,734,368,756	163,314,622	79,036,352	7,323,257	4,984,042,987	16.34%
Foreign Equities	4,216,165,625	145,438,924	70,385,382	676	4,431,990,607	14.53%
Exchange Traded Funds	198,213,974	6,837,499	3,309,018		208,360,491	0.68%
Real Estate Investment Trust	1,132,696,843	39,072,993	18,909,433		1,190,679,269	3.90%
Total Public Equities	10,281,445,198	354,664,038	171,640,185	7,323,933	10,815,073,354	35.45%
Fixed Income:						
U.S. Treasury Securities	4,060,093,960	140,055,148	67,779,897	749,302,411	5,017,231,416	16.45%
U.S. Government Agency Obligations	517,785,421	17,861,289	8,643,997	95,558,839	639,849,546	2.10%
Corporate Obligations	1,446,778,106	49,907,397	24,152,758	186,871,835	1,707,710,096	5.60%
Corporate Asset and Mortgage Backed Securities	70,570,966	2,434,384	1,178,124	12,514,841	86,698,315	0.28%
Exchange Traded Funds	282,813,922	9,755,820	4,721,343	36,529,414	333,820,499	1.09%
Real Estate Investment Trust	41,746,007	1,440,051	696,915	5,392,087	49,275,060	0.16%
Foreign Obligations	485,315,165	16,741,210	8,101,933	62,685,311	572,843,619	1.88%
Total Fixed Income	6,905,103,547	238,195,299	115,274,967	1,148,854,738	8,407,428,551	27.56%
Alternative Investments	8,900,484,307	307,027,042	148,586,191	60,703,173	9,416,800,713	30.87%
Other Investments	175,440,139	6,051,903	2,928,827		184,420,869	0.60%
Short-term Investments:						
Investment in Pool Cash	3,417,437	96,592	(3,489)		3,510,540	0.01%
Other Short-term Investment	536,774,556	18,516,329	8,961,005	1,115,168,120	1,679,420,010	5.51%
Total Short-term Investments	540,191,993	18,612,921	8,957,516	1,115,168,120	1,682,930,550	5.52%
Total Before Securities Lending Collateral (Notes B & C)	26,802,665,184	924,551,203	447,387,686	2,332,049,964	30,506,654,037	100.00%
Securities Lending Collateral	146,719,484	5,054,587	2,448,259	13,760,417	167,982,747	
Total Pension Investment Pool Trust Fund (0888)	26,949,384,668	929,605,790	449,835,945	2,345,810,381	30,674,636,784	
Cash Equivalents:						
Cash in State Treasury-Pension Funds	82,520,589	6,661,408	1,835,239	138,718,139		
Total Investments	27,031,905,257	936,267,198	451,671,184	2,484,528,520		

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	26,802,665,184	924,551,203	447,387,686	2,332,049,964	30,506,654,037
Unsettled Sales-Investment Receivables	1,011,420,400	34,889,496	16,884,823	5,270,151	1,068,464,870
Unsettled Purchases-Investment Payables	(768,026,540)	(26,493,492)	(12,821,565)	(8,039,246)	(815,380,843)
Accrued Interest and Dividends/Tax Reclaims Receivable/Prepaid Fees	98,138,181	3,385,327	1,638,258	8,681,944	111,843,710
Securities Lending Fees Payables/Miscellaneous Payables	(1,099,031)	(37,912)	(18,347)	(3,938)	(1,159,228)
Total Fair Value of Investments, Adjusted to Comply with the CFA Institute Standards	27,143,098,194	936,294,622	453,070,855	2,337,958,875	30,870,422,546

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.



Pension Plans:

Actuary's Certification Letter

Actuarial Balance Sheets

Summary of Actuarial Methods and Assumptions

Active Member Valuation Data

Retirees and Beneficiaries Added to and Removed from the Annuity Payrolls

Schedule of Funding Progress — Defined Benefit Plans

Solvency Test

Analysis of Financial Experience

State Retirees Health Plan:

Actuary's Certification Letter

Actuarial Valuation Results

Summary of Actuarial Methods and Assumptions

Active Member Valuation Data

Retirees and Nominees Added to and Removed

Schedule of Funding Progress — State Retiree Health Plan



Actuary's Certification Letter – Pension Plans



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December 3, 2019

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, 2019

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, 2019, 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, 2019 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, 2019, 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

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Actuary's Certification Letter – Pension Plans (Continued)

Board of Trustees
December 3, 2019
Page 2

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, 2019 incorporates the notable 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 increases on September 1, 2019 or September 1, 2020.

House Bill 2384 restructured the compensation and retirement benefits for State judges which prompted a change to the long term growth assumption for the State base salary of a district judge from 2.75% to 2.50%.

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, LECOSRF, and JRS-2, 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

As noted, House Bill 2384 restructured the compensation and retirement benefits for State judges. In addition to this legislation impacting members of JRS-2, this restructuring impacted the compensation used to determine benefits upon retirement for Elected Class members in ERF. There were no other 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."

Board 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



Actuary's Certification Letter – Pension Plans (Continued)

Board of Trustees
December 3, 2019
Page 3

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 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 once a 31-year funding period is achieved, and closed.

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 \$11.6 billion as of August 31, 2018 to \$11.7 billion as of August 31, 2019. However, the funded ratio of ERF—actuarial value of assets divided by the actuarial accrued liability—increased from 70.2% to 70.5% as of August 31, 2019. This increase in the funded ratio was due to the absence of across-the-board pay increases budgeted by the State Legislature for the current biennium. 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 13.76% 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 5.74% 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 7.50% per year, ERF is projected to remain solvent until the year 2075, 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.**



Actuary's Certification Letter – Pension Plans (Continued)

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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. Further, Section 811.006 of the Texas Government Code 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 expected to amortize any unfunded actuarial accrued liability over a period that does not exceed 30 years by one or more years. In this context, the Actuarially Sound Contribution (ASC) rate is the contribution rate that meets this standard. Based on the actuarial valuation as of August 31, 2019, the ASC rate for ERF is 23.26% 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.**

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, 2019, 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 \$17.1 million for fiscal year 2020 and all subsequent years. 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 2020, the contribution from court fees is expected to be approximately 1.04% of payroll.

The unfunded actuarial accrued liability (UAAL) of LECOSRF increased from \$500 million as of August 31, 2018 to \$515 million as of August 31, 2019. Additionally, the funded ratio of LECOSRF—actuarial value of assets divided by the actuarial accrued liability—decreased from 65.6% to 65.3% as of August 31, 2019. This decrease was smaller than expected due to 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 2.08% of payroll. The approximate total contribution rate is currently 2.04% of payroll. Thus, the total contribution rate for the current fiscal year is less than the normal cost by 0.04% 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 7.50% per year, LECOSRF is projected to remain solvent until the year 2043, after which the funding would revert to a pay-as-you-go status. **As a**



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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. Further, Section 811.006 of the Texas Government Code 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 expected to amortize any unfunded actuarial accrued liability over a period that does not exceed 30 years by one or more years. In this context, the Actuarially Sound Contribution (ASC) rate is the contribution rate that meets this standard. Based on the actuarial valuation as of August 31, 2019, the ASC rate for LECOSRF is 3.14% of payroll in addition to the expected annual contributions from court fees of \$17.1 million. **Based on the current approximate total contribution rate of 2.04% of payroll, the second level of the Board's funding period goal is also not currently being realized.**

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, 2019, members accruing benefits contribute 9.50% 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, 2019 is 9.39% of payroll. This State contribution rate is subject to future legislative appropriations.

The unfunded actuarial accrued liability (UAAL) of JRS-2 increased from \$40.7 million as of August 31, 2018 to \$66.8 million as of August 31, 2019. Additionally, the funded ratio of JRS-2—actuarial value of assets divided by the actuarial accrued liability—decreased from 91.7% to 87.5% as of August 31, 2019. This deterioration in plan funding levels was primarily due to the new judicial salary schedule, as enacted by House Bill 2384. 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 23.14% of payroll. The total contribution rate is 25.053% of payroll for the current fiscal year. The total contribution rate for the current fiscal year exceeds the normal cost by 1.913% of payroll, which is not sufficient to amortize the UAAL over a finite period of time. Assuming the market value of assets earns 7.50% per year, JRS-2 is projected to remain solvent until the year 2076, 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.**



Actuary's Certification Letter – Pension Plans (Concluded)

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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. Further, Section 840.106 of the Texas Government Code 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 expected to amortize any unfunded actuarial accrued liability over a period that does not exceed 30 years by one or more years. In this context, the Actuarially Sound Contribution (ASC) rate is the contribution rate that meets this standard. Based on the actuarial valuation as of August 31, 2019, the ASC rate for JRS-2 is 27.84% of payroll. **Based on the total contribution rate of 25.053% of payroll, the second level of the Board's funding period goal is not currently being realized.**

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.

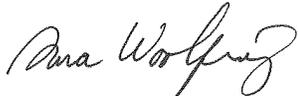
The signing actuaries are independent of the plan sponsor. Mr. Falls, Mr. Newton and Ms. Woolfrey are Enrolled Actuaries and Fellows of the Society of Actuaries, and all of the undersigned are Members of the American Academy of Actuaries, and meet the Qualification Standards of the American Academy of 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



Dana Woolfrey, FSA, EA, MAAA
Consultant & Actuary



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



Thomas J. Bevins, ASA, MAAA
Actuary



Actuarial Balance Sheet – Employees Retirement Fund

August 31, 2019 (With Comparative Totals at August 31, 2018)

ACTUARIAL BALANCE SHEET

	<u>August 31, 2019</u>	<u>August 31, 2018</u>
Assets:		
Actuarial Value Assets	\$ 28,060,120,223	\$ 27,359,943,116
Present Value of Future Normal Cost		
Member	4,718,694,315	4,693,253,926
Employer	<u>1,768,371,175</u>	<u>1,812,731,694</u>
Total	<u>6,487,065,490</u>	<u>6,505,985,620</u>
Total	\$ 34,547,185,713	\$ 33,865,928,736

Liabilities:

Present Value of Benefits		
Active Members		
- service retirement	\$ 18,826,885,220	\$ 19,275,714,515
- disability	164,793,909	165,410,881
- death before retirement	241,503,386	246,210,737
- termination	<u>1,645,020,068</u>	<u>1,622,955,302</u>
Total	20,878,202,583	21,310,291,435
Inactive Members	1,724,214,031	1,656,980,223
Annuitants	<u>23,686,007,554</u>	<u>22,527,977,524</u>
Total	\$ 46,288,424,168	\$ 45,495,249,182
Unfunded Accrued Liability (UAL)	\$ <u>11,741,238,455</u>	\$ <u>11,629,320,446</u>

SUMMARY OF ACTUARIAL VALUATION RESULTS

Total Contribution Rate	19.50%	19.50%
Normal Cost		
- dollars	\$ 961,077,754	\$ 952,997,927
- percent of payroll	13.76%	13.86%
Contribution Available to Amortize UAL	5.74%	5.64%
Accrued Liability	\$ 39,801,358,678	\$ 38,989,263,562
Amortization Period in Years	Never	Never
Funded Ratio	70.5%	70.2%
Valuation Payroll	\$ 6,984,576,697	\$ 6,875,886,920
Active Members	141,865	141,535

Actuarial Balance Sheet – Law Enforcement and Custodial Officers Supplemental Retirement Fund

August 31, 2019 (With Comparative Totals at August 31, 2018)

ACTUARIAL BALANCE SHEET	<u>August 31, 2019</u>	<u>August 31, 2018</u>
Assets:		
Actuarial Value Assets	\$ 968,129,751	\$ 953,054,283
Present Value of Future Normal Cost		
Member	58,033,991	60,070,754
Employer	180,310,577	188,756,978
Total	<u>238,344,568</u>	<u>248,827,732</u>
Total	\$ 1,206,474,319	\$ 1,201,882,015
Liabilities:		
Present Value of Benefits		
Active Members		
- service retirement	\$ 850,915,208	\$ 899,980,280
- disability	4,852,577	5,081,802
- death before retirement	6,227,199	6,673,095
- termination	13,583,538	13,723,029
Total	<u>875,578,522</u>	<u>925,458,206</u>
Inactive Members	16,285,415	13,358,913
Annuitants	829,115,833	762,668,410
Total	\$ 1,720,979,770	\$ 1,701,485,529
Unfunded Accrued Liability (UAL)	\$ <u>514,505,451</u>	\$ <u>499,603,514</u>
SUMMARY OF ACTUARIAL VALUATION RESULTS		
Total Contribution Rate	1.00%	1.00%
Estimated Contribution from Court Fees	\$ 17,100,000	\$ 18,100,000
Normal Cost		
- dollars	\$ 34,203,347	\$ 35,205,167
- percent of payroll	2.08%	2.09%
Contribution Available to Amortize UAL	-0.04%	-0.02%
Accrued Liability	\$ 1,482,635,202	\$ 1,452,657,797
Amortization Period in Years	Never	Never
Funded Ratio	65.3%	65.6%
Valuation Payroll	\$ 1,644,391,700	\$ 1,684,457,747
Active Members	36,296	37,167

Actuarial Balance Sheet –
Judicial Retirement System of Texas Plan Two Fund
 August 31, 2019 (With Comparative Totals at August 31, 2018)

ACTUARIAL BALANCE SHEET	<u>August 31, 2019</u>	<u>August 31, 2018</u>
Assets:		
Actuarial Value Assets	\$ 467,787,034	\$ 447,077,710
Present Value of Future Normal Cost		
Member	52,490,999	31,204,882
Employer	<u>70,807,534</u>	<u>52,193,934</u>
Total	<u>123,298,533</u>	<u>83,398,816</u>
Total	\$ 591,085,567	\$ 530,476,526
Liabilities:		
Present Value of Benefits		
Active Members		
- service retirement	\$ 306,898,474	\$ 267,690,585
- disability	3,693,678	2,891,604
- death before retirement	8,636,983	31,290,493
- termination	<u>16,287,061</u>	<u>12,138,660</u>
Total	335,516,196	314,011,342
Inactive Members	14,277,536	10,662,210
Annuitants	<u>308,068,547</u>	<u>246,496,810</u>
Total	\$ 657,862,279	\$ 571,170,362
Unfunded Accrued Liability (UAL)	\$ <u>66,776,712</u>	\$ <u>40,693,836</u>

SUMMARY OF ACTUARIAL VALUATION RESULTS

Total Contribution Rate	25.053%	23.123%
Normal Cost		
- dollars	\$ 21,063,555	\$ 16,678,998
- percent of payroll	23.14%	20.83%
Contribution Available to Amortize UAL	1.913%	2.293%
Accrued Liability	\$ 534,563,746	\$ 487,771,546
Amortization Period in Years	Never	69
Funded Ratio	87.5%	91.7%
Valuation Payroll	\$ 91,026,600	\$ 80,072,000
Active Members	573	561

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. No plan provision change took place in fiscal year 2019. 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%
Inflation	2.50%	Legislators: 0.00% Others: 2.50%	2.50%
Salary Increase:	<ul style="list-style-type: none"> See Table 1 on next page for real wage growth, which is included in the merit, promotion and longevity salary increases. 	<ul style="list-style-type: none"> No real wage growth. No increase in merit, promotion, and longevity except for District Attorneys. See Table 2 on next page for the salary structure for District Attorneys. 	<ul style="list-style-type: none"> No real wage growth See Table 2 on next page for the salary structure for judges.
Payroll Growth per Year, Compounded Annually	3.00%		2.50%
Post-retirement Increase	N/A	2.50% 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)

Age	Years of Service – Non-CPO/CO							Years of Service – CPO/CO					
	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.

Table 2
Economic Assumption –
Rates of Merit, Promotion and Longevity Salary Increases
For District Attorneys in the Elected Class and Judges, Male and Female

Age	Years of Eligibility Service		
	Less than 4	4 or more, but less than 8	8 or more
All	State base salary	110% of State base salary	120% of State base salary

The demographic assumptions are summarized in Tables 3 to 9.

Table 3
Demographic Assumption –
Annual Rates of Termination from Active Employment before Retirement (Note B)

Eligibility Service	Male and Female Regular State Employees		Eligibility Service	Male and Female LECO Members
	Entry age 35 or younger	Entry age over 35		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.

Summary of Actuarial Methods and Assumptions – Pension Plans

Table 4
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.

Table 5
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 6
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 7
Demographic Assumption –
Disability Retirement Rates (Note G)

Age	Regular State Employees, Elected Class and Judicial Class		LECO Members
	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.

Summary of Actuarial Methods and Assumptions – Pension Plans

Table 8
Demographic Assumption –
Percentage of Members Electing Various Benefit Options (Notes H & I)

	<u>Option Selection Percentage</u>		
	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 9
Demographic Assumption –
Service Retirement Rate (Note J and K)

**Regular State Employees –
Males & Females**

Age	<u>Eligibility A Rule of 80</u>	<u>Eligibility B Other Age/ Service</u>
<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	<u>Eligibility C 20 yrs CPO/CO</u>	Age	<u>Eligibility D Age 55 & 10 yrs CPO/CO</u>
<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	<u>Male & Female</u>
50-61	10%
62-74	20
75	100

Judicial Class (Note M)

Age	<u>Male & Female</u>	
	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:				
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
2019	141,865	6,947,624,737	49,220	1.3
Law Enforcement and Custodial Officer Supplemental Retirement Fund:				
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
2019	36,296	1,682,633,066	45,305	0.0
Judicial Retirement Plan Two Fund:				
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
2019	573	79,710,813	142,600	(0.1)

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 Annual Benefits	Average Annual Benefit
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits		
	\$		\$		\$		\$		%	\$
Employees Retirement Fund:										
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
2019	6,034	155,789,472	2,910	49,004,268	670	11,670,672	115,155	2,377,402,260	5.2	20,645
Law Enforcement and Custodial Officer Supplemental Retirement Fund:										
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
2019	1,020	6,720,840	179	981,720	60	284,784	13,981	76,786,464	8.5	5,492
Judicial Retirement Plan Two Fund:										
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
2019	83	6,458,064	6	424,044	2	122,124	472	31,132,284	24.6	65,958

Schedule of Funding Progress – Defined Benefit Plans

Actuarial Valuation Date August 31	(a) Actuarial Value of Assets (000's)	[Note A] (b) Actuarial Accrued Liability (AAL) (000's)	(c) (Overfunded) Unfunded AAL (UAAL) (b) - (a) (000's)	(b) Funded Ratio (a)/(b) %	[Note B] (e) Covered Payroll (000's)	(f) UAAL As A Percentage Of Covered Payroll (c)/(e) %
Employees Retirement Fund:						
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
2019	28,060,120	39,801,359	11,741,239	70.5	6,984,577	168.1
Law Enforcement and Custodial Officer Supplemental Retirement Fund:						
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
2019	968,130	1,482,635	514,505	65.3	1,644,392	31.3
Judicial Retirement System Plan Two Fund:						
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
2019	467,787	534,564	66,777	87.5	91,027	73.4

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:

Valuation Year August 31,	Aggregate Accrued Liabilities For				Valuation Assets	Portion of Accrued Liabilities Covered by Assets		
	(1)	(2)	(3)	(1)		(2)	(3)	
	Active Member Contributions	Retirees and Beneficiaries	Active Members (Employer Financed Portion)	%		%	%	
	\$	\$	\$	\$				
Employees Retirement Fund (Note A):								
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	
2019	6,044,422,496	23,686,007,554	10,070,928,628	28,060,120,223	100	92.9	0.0	
Law Enforcement and Custodial Officer Supplemental Retirement Fund (Note A):								
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	
2019	54,737,312	829,115,833	598,782,057	968,129,751	100	100	14.1	
Judicial Retirement Plan Two Fund (Note A):								
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	
2019	70,242,531	308,068,547	156,252,668	467,787,034	100	100	57.3	

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:

Type of Activity	Increase/(Decrease) in Unfunded Accrued Liability for Year (in Millions)					
	ERS		LECOS		JRS II	
	2019	2018	2019	2018	2019	2018
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.	448.0	440.5	39.4	38.0	0.7	1.1
Components of (Gain)/Loss						
<u>Investment Income</u>						
If there is greater investment income than assumed on the actuarial value of assets, there is a gain. If less income, a loss.	147.7	(98.3)	5.1	(3.4)	2.4	(1.6)
<u>Active Member Demographics</u>						
Combined (gain)/loss from age and service retirements, disability retirements, death-in-service benefits, and withdrawal from employment	9.5	10.3	(8.3)	(14.5)	2.3	(2.6)
<u>Pay Increases</u>						
If there are smaller pay increases than assumed, there is a gain. If greater increases occur, a loss.	100.8	75.4	(3.6)	(4.0)	0.6	0.4
<u>Death After Retirement</u>						
If retirees live longer than assumed, there is a loss. If not as long, a gain.	(18.3)	(30.5)	0.1	(1.1)	(0.1)	0.1
<u>Other</u>						
Miscellaneous (gains)/losses resulting from data adjustments, timing of financial transactions, valuation methods, etc.	(0.7)	(26.0)	6.7	8.7	(1.0)	0.5
Increase/(Decrease) in Unfunded Accrued Liability During Year from Financial Experience	687.0	371.4	39.4	23.7	4.9	(2.1)
Non-Recurring Items						
Adjustments for plan amendments, changes in actuarial assumptions, increase in Service Retirement Formula, legislative action, etc.	(575.1)	0.0	(24.5)	0.0	21.2	0.0
Composite Increase/(Decrease) During Year	111.9	371.4	14.9	23.7	26.1	(2.1)

Actuary's Certification Letter – State Retiree Health Plan



EMPLOYEES RETIREMENT SYSTEM OF TEXAS
GROUP BENEFITS PROGRAM
FY19 GASB No. 74 ACTUARIAL VALUATION

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, 2019 (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, 2019 provided by ERS, former employee data as of August 31, 2019 provided by 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 the following schedules in the Actuarial Section of the ERS CAFR for the State Retiree Health Plan: (a) Active Member Valuation Data, (b) Retirees and Nominees Added and Removed and (c) Schedule of Funding Progress.

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.
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Actuarial Valuation Results – State Retiree Health Plan



EMPLOYEES RETIREMENT SYSTEM OF TEXAS
GROUP BENEFITS PROGRAM
FY19 GASB No. 74 ACTUARIAL VALUATION

Summary of Results for FY2019

Actuarial Valuation Results as of August 31, 2019		
	(\$ thousands)	As a % of Payroll
1. Number of Members (actual count, not in thousands)		
a. Actives	233,887	
b. Deferred Vested	12,114	
c. Retirees and Nominees	127,044	
d. Total Number of Members	373,045	
2. Payroll of Active Members for FY2019	\$12,320,028	
3. Actuarial Present Value of Projected Benefit Payments		
a. Actives	\$37,747,331	
b. Deferred Vested	2,121,126	
c. Retirees and Nominees	14,270,779	
d. Total	\$54,139,235 ¹	439.4%
4. Total OPEB Liability		
a. Actives	\$18,230,706	
b. Deferred Vested	2,121,126	
c. Retirees and Nominees	14,270,779	
d. Total	\$34,622,611	281.0%
5. Fiduciary Net Position	\$59,936	0.5%
6. Net OPEB Liability [4.d - 5]	\$34,562,675	280.5%
7. Actuarially Determined Contribution for FYE August 31, 2019		
a. Normal Cost	\$1,539,978	12.5%
b. Amortization of Net OPEB Liability	1,147,229	9.3%
c. Total ADC for FYE August 31, 2019	\$2,687,208 ¹	21.8%

¹ Adjusted due to rounding error caused by rounding individual components.

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.

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. Unfunded net OPEB liability is amortized over 30 years as a level percentage of projected payroll.

Changes in Actuarial Assumptions

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

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

Assumed Per Capita Health Benefits Costs and Health Benefit Cost and Retiree Contribution trends have been updated since the previous valuation to reflect recent health plan experience and its effects on our short-term expectations.

The discount rate was changed from 3.96% to 2.97% as a result of requirements by GASB No. 74 to reflect the yield or index rate for 20-year, tax-exempt general obligation bonds rated AA/Aa (or equivalent) or higher in effect on the measurement date.

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, 2019, 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,

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

2019 is 2.97% based upon the Bond Buyer Index of 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, 2020, since these changes were communicated to plan members in advance of the preparation of this report.

The only benefit change for Fiscal Year 2020 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 \$6,650 to \$6,750 for individuals and from \$13,300 to \$13,500 for families in order to remain consistent with Internal Revenue Service maximums. This minor benefit change is provided for in the Fiscal Year 2020 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 2022, but the plan is not expected to be subject to the tax until 2072 based on current plan provisions, assumptions and participant demographics. The Net OPEB Liability is increased by the \$251 million present value of the estimated Excise Taxes in future years, and the associated increase to the Actuarial Determined Contributions is \$8 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 payments under the Medicare Part D Prescription Drug Retiree Drug Subsidy (RDS) Program as required under GASB Technical Bulletin No. 2006-1. The Bulletin requires that RDS 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.

ERS 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 RDS has been significantly reduced as a result of the implementation of the EGWP plus Wrap. The impact of RDS payments 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 directly related to the payment of BP health benefits are \$180.24 for medical for

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

HealthSelect plus \$9.00 for prescription drugs for HealthSelect and HealthSelect Medicare Advantage per year per covered member for fiscal year 2020. The expenses per covered member are the same regardless of whether the member covers dependents.

Stop-loss Reinsurance

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

Discount Rate

Equal to the municipal bond rate of 2.97%.

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	
	HealthSelect	HealthSelect Medicare
	%	%
2021	7.30	10.80
2022	7.40	7.40
2023	7.00	7.00
2024	6.50	6.50
2025	6.00	6.00
2026	5.50	5.50
2027	5.00	5.00
2028 and beyond	4.50	4.50

Trend Rate for the Opt-Out Credit

The monthly benefit of \$60 in fiscal year 2020 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.

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 2020 at the rates shown below.

Fiscal Year	Annual Rate of Increase
	%
2021	0.00
2022	7.40
2023	7.00
2024	6.50
2025	6.00
2026	5.50
2027	5.00
2028 and beyond	4.50

Expense Trend Rate

The expenses directly related to the payment of GBP Health benefits are contractually guaranteed at the current rate through fiscal year 2023. They are assumed to increase 2.50% per annum thereafter.

Active Member Valuation Data – State Retiree Health Plan

Valuation Year August 31,	Number of Members (Note A)			Actual Annual Payroll			Average Pay			% Change in Average Pay				
	Not		Total	Not		Total	Not		Overall	Not		Overall		
	Medicare Eligible	Medicare Eligible		Medicare Eligible	Medicare Eligible		Medicare Eligible	Medicare Eligible		Medicare Eligible	Medicare Eligible		Medicare Eligible	Medicare Eligible
			\$			\$			\$			%	%	%
2010			234,057			10,437,333,000			44,593					2.2
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	218,237	11,962	230,199	10,940,126,454	805,183,603	11,745,310,057	50,130	67,312	51,022					1.8
2018	219,333	12,578	231,911	11,201,279,203	845,887,455	12,047,166,658	51,070	67,251	51,947	1.9		-0.1		1.8
2019	220,937	12,950	233,887	11,440,052,736	879,975,428	12,320,028,164	51,780	67,952	52,675	1.4		1.0		1.4

Note A: Includes return-to-work retirees and employees who have not yet satisfied the 90-day waiting period. Active members are reported by the eligibility of Medicare since the implementation of GASB Statement 74 in Fiscal year 2017.

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 \$		
2010	5,579	99,196,641	2,962	52,665,433	86,111	643,388,726	7.8	7,472
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
2019	8,435	179,098,524	3,741	79,431,841	127,044	1,038,587,696	10.6	8,175

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 (000's)	(b) Actuarial Accrued Liability (AAL) (000's)	(c) (Overfunded) Unfunded AAL (UAAL) (b) - (a) (000's)	(b) Funded Ratio (a)/(b) %	(e) Covered Payroll (000's)	(f)
						UAAL As A Percentage Of Covered Payroll (c)/(e) %
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
2019	59,936	34,622,611	34,562,675	0.17	12,320,028	280.5

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									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Governmental Activities:	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Restricted	136,599	227,985	284,814	325,412	379,311	440,466	498,874	87,945	1,060,687	2,033,429
Unrestricted	45	8	18	-	5	17	22	4	25	4
Total Governmental Activities	136,644	227,993	284,832	325,412	379,316	440,483	498,896	87,949	1,060,712	2,033,433

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									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Expenses	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Governmental Activities:										
Social Security Administration		101	102	105	92	156	178	139	152	94
Death Benefits:										
Peace Officers, Firemen, etc.		4,164	2,784	2,141	5,444	5,738	2,162	7,281	8,826	7,831
Compensation to Victims of Crime		1,250	1,750	1,000	2,000	1,625	1,000	2,000	3,500	2,000
Retiree \$5,000 Lump Sum		7,910	7,885	8,628	9,108	8,846	9,286	10,080	10,893	9,811
Employees Life, Accident and Health Insurance and Benefits::										
Claims Expenses		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		8,118	9,437	9,401	9,356	24,535	36,692	19,390	14,977	13,911
Total Expenses	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	2,245,699
Program Revenues										
Governmental Activities:										
Charges for Services:										
Administration Fees		85	66	74	75	70	71	71	70	73
Appropriations:										
Death Benefits:										
Peace Officers, Firemen, etc.		4,164	2,784	2,141	5,444	5,738	2,162	7,281	8,826	7,831
Compensation to Victims of Crime		1,250	1,750	1,000	2,000	1,625	1,000	2,000	3,500	2,000
Retiree \$5,000 Lump Sum		7,911	7,885	8,628	9,108	8,846	9,289	10,075	10,893	9,811
Insurance Contributions:										
Employer		1,233,781	1,414,732	1,434,186	1,527,002	1,631,916	1,834,956	1,992,220	1,963,388	2,529,624
Member		416,690	444,731	444,786	460,944	482,566	495,723	521,361	562,140	562,373
Other		157	209	192	179	141	121	120	125	141
Operating Grants and Contributions:										
Investment Income		36,671	12,758	13,188	(5,885)	10,913	6,298	19,492	13,569	91,752
Other		3,357	4,688	875	2,039	647	2,945	1,386	1,782	14,815
Total Program Revenues	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	3,218,420
General Revenues										
Transfers				40	90	115	(1,673)	64	37	-
Total General Revenues				40	-	90	(1,673)	64	37	-
Net Revenue Governmental Activities	(145,899)	91,349	56,839	40,581	53,903	61,167	58,413	91,312	972,764	972,721

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									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Governmental Funds:	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Committed:										
Social Security Administration Fund	45	8	18		5	17	22	4	25	4
Total Governmental Funds	45	8	18	-	5	17	22	4	25	4

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									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Revenues	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Appropriations for (Note A):										
Administration										
Death Benefits:										
Public Employee Survivors	4,164	2,784	2,141	5,444	5,738	2,162	7,281	8,826	9,432	7,831
Victims of Crime	1,250	1,750	1,000	2,000	1,625	1,000	2,000	3,500	4,904	2,000
Retiree \$5,000 Lump Sum	7,911	7,885	8,628	9,108	8,847	9,289	10,075	10,893	10,167	9,810
Administration Fees	85	66	74	75	70	71	71	70	70	74
Total Revenues	13,410	12,485	11,843	16,627	16,280	12,522	19,427	23,289	24,573	19,715
Expenditures										
Death Benefits:										
Public Employee Survivors	4,164	2,784	2,141	5,444	5,738	2,162	7,281	8,826	9,432	7,831
Victims of Crime	1,250	1,750	1,000	2,000	1,625	1,000	2,000	3,500	4,904	2,000
Retiree \$5,000 Lump Sum	7,910	7,885	8,628	9,108	8,846	9,286	10,080	10,893	10,167	9,810
Administrative Expenditures	101	102	105	92	156	178	139	152	86	95
Total Expenditures	13,425	12,521	11,874	16,644	16,365	12,626	19,500	23,371	24,589	19,736
Excess of Revenues Over (Under)										
Expenditures	(15)	(36)	(31)	(17)	(85)	(104)	(72)	(82)	(15)	(21)
Other Financing Sources (Uses)										
Transfers In - Retirement Membership Fees			40		90	115	77	64	36	
Net Change in Fund Balances	(15)	(36)	9	(17)	5	11	5	(18)	21	(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									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Operating Revenues										
Insurance Contributions:										
Employer	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	2,529,624
Member	416,690	444,731	444,786	460,944	482,566	495,723	521,360	562,140	559,111	562,373
Federal Revenues-COBRA Stimulus	2,268	1,312	27							
Other	1,087	3,089	835	2,199	604	1,856	1,480	1,905	3,116	14,956
Total Operating Revenues	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	3,106,953
Operating Expenses										
Benefit Payments:										
Employee	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	2,186,649
COBRA	30,763	32,398	34,351	34,299	30,163	29,003	26,963	25,972	21,817	25,282
Health Savings Account								273	525	874
Administrative and Other Expenses	8,118	9,437	9,401	9,356	24,535	36,692	19,390	15,060	13,880	13,066
Total Operating Expenses	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	2,225,871
Operating Income (Loss)	(182,714)	78,131	43,437	46,464	42,802	53,647	40,641	77,676	967,142	881,082
Non-Operating Revenues (Expenses)										
Net Appreciation (Depreciation)										
in Fair Value of Investments	20,789	4,273	5,395	(17,215)	1,284	(3,195)	7,771	(830)	(15,417)	33,360
Investment Income	15,882	8,485	7,794	11,331	9,629	9,493	11,721	14,482	21,017	58,300
Other	158	496	204	18	184	1,210	25	1		
Total Non-Operating Revenues (Expenses)	36,829	13,254	13,393	(5,866)	11,097	7,508	19,517	13,653	5,600	91,660
Transfer Out							(1,750)			
Change in Net Position	(145,885)	91,385	56,830	40,598	53,899	61,155	58,408	91,329	972,742	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									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Employees Retirement Fund (ERS)										
Additions										
Member Contributions	410,134	425,811	411,066	422,588	430,595	462,160	674,678	685,462	683,933	694,788
Employer Contributions	400,252	414,084	347,121	375,737	482,329	500,510	686,841	700,142	697,226	712,648
Investment Income (Net of Expenses)	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	758,868
Other Additions	61,741	64,970	71,255	75,637	80,324	84,203	89,035	93,506	97,318	103,006
Total Additions	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	2,269,310
Deductions										
Retirement Benefits	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	2,496,771
Death Benefits	3,086	4,142	3,654	3,283	3,053	4,730	5,082	3,664	5,132	3,444
Refunds	65,334	79,535	88,060	86,668	106,809	87,167	84,445	120,944	123,948	142,303
Administrative and Other Expenses	19,083	19,000	18,024	18,911	20,480	22,127	20,779	23,630	24,132	28,903
Total Deductions	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	2,671,421
Change in Net Position	482,835	1,623,481	621,553	1,042,898	2,181,574	(1,051,635)	467,099	1,906,247	1,381,507	(402,111)
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	9,098
Employer Contributions	27,799	24,228	(3)	7,117	27,758	26,728	27,497	26,583	26,110	25,864
Investment Income (Net of Expenses)	40,054	81,881	51,909	71,885	111,741	1,919	44,831	99,341	84,937	26,250
Other Additions	6	2	1			4	4	1	5	3
Total Additions	75,332	113,715	59,194	86,187	147,679	37,028	81,871	135,508	120,327	61,215
Deductions										
Retirement Benefits	41,001	42,914	46,868	50,848	55,222	59,211	62,698	66,800	72,228	78,470
Death Benefits		106	6	6	6	9	22	18	18	15
Refunds	162	694	1,220	1,531	1,919	2,128	1,826	2,938	3,392	3,768
Administrative and Other Expenses	595	937	844	805	1,324	1,412	1,421	1,811	1,851	2,167
Total Deductions	41,758	44,651	48,938	53,190	58,471	62,760	65,967	71,567	77,489	84,420
Change in Net Position	33,574	69,064	10,256	32,997	89,208	(25,732)	15,904	63,941	42,838	(23,205)
Judicial Retirement System of Texas Plan Two (JRS II)										
Additions										
Member Contributions	4,121	4,291	4,170	4,268	5,195	5,465	5,754	6,017	5,940	6,463
Employer Contributions	11,511	11,933	4,150	4,549	12,211	12,457	12,374	12,495	12,560	13,100
Investment Income (Net of Expenses)	13,586	30,189	41,181	28,753	46,186	820	19,862	44,875	39,191	12,832
Other Additions		2		1		2				1
Total Additions	29,218	46,415	49,501	37,571	63,592	18,744	37,990	63,387	57,691	32,396
Deductions										
Retirement Benefits	9,289	11,722	12,782	14,586	16,166	19,158	20,825	22,988	24,706	28,980
Death Benefits			21			26	31			27
Refunds	118	48	179	285	254	56	299	374	159	213
Administrative and Other Expenses	277	286	230	228	267	284	226	294	296	363
Total Deductions	9,684	12,056	13,212	15,099	16,687	19,524	21,381	23,656	25,161	29,583
Change in Net Position	19,534	34,359	36,289	22,472	46,905	(780)	16,609	39,731	32,530	2,813

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Changes in Net Position – Defined Benefit Plans (Concluded)

Last Ten Fiscal Years (in 000's)

	Fiscal Year									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Excess Benefit Arrangement										
Additions										
Other Additions	294	342	506	569	493	457	540	746	817	953
Total Additions	294	342	506	569	493	457	540	746	817	953
Deductions										
Retirement Benefits	251	297	436	488	422	392	448	668	753	797
Administrative and Other Expenses	43	45	70	81	71	65	92	78	64	156
Total Deductions	294	342	506	569	493	457	540	746	817	953
Change in Net Position	-	-	-							
State Retiree Health Plan										
Additions										
Member Contributions	126,073	135,133	134,993	141,008	155,276	169,075	183,284	195,806		
Employer Contributions	478,348	444,895	483,636	535,905	605,512	612,769	663,986	890,735	307,028	401,285
Non-Employer Contributing Entity Contributions (Note A)	N/A	44,433	16,585	20,183						
Federal Revenues	40,988	38,207	39,612	50,874	63,362	86,054	69,186	73,120	74,493	89,389
Early Retirees Reinsurance Program		30,176	40,724							
Investment Income (Net of Expenses)	609	436	329	236	255	324	1,137	4,517	10,907	3,324
Other Additions	1					3,969	5,961	357	3,249	85
Total Additions	646,019	648,847	699,294	728,023	824,405	872,191	923,554	1,208,968	412,262	514,266
Deductions										
Healthcare Benefits	643,389	646,197	696,085	724,381	813,823	863,926	912,886	995,815	938,921	1,038,588
Less: Payments from Members (Note B)	N/A	(203,123)	(209,837)							
Administrative and Other Expenses	2,630	2,650	3,209	3,642	10,582	8,265	10,668	5,629	5,817	6,008
Total Deductions	646,019	648,847	699,294	728,023	824,405	872,191	923,554	1,001,444	741,615	834,759
Change in Net Position	-	207,524	(329,353)	(320,493)						

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 TexSaver 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									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
TexaSaver 401(k) Plan										
Additions										
Investment Income (Net of Expenses)	42	43	26	27	(7)	7	18	(7)	59	71
Other Additions	1,439	830	607	550	398	188	50	565	390	486
Total Additions	1,481	873	633	577	391	195	68	558	449	557
Deductions										
Administrative and Other Expenses	513	615	596	759	590	529	433	479	482	490
Total Deductions	513	615	596	759	590	529	433	479	482	490
Change in Net Position	968	258	37	(182)	(199)	(334)	(365)	79	(33)	67
TexaSaver 457 Plan										
Additions										
Investment Income (Net of Expenses)	13	13	12	11	(2)	6	17	18	52	75
Other Additions	589	513	486	520	507	581	587	719	763	896
Total Additions	602	526	498	531	505	587	604	737	815	971
Deductions										
Administrative and Other Expenses	669	510	452	330	334	265	233	269	512	523
Total Deductions	669	510	452	330	334	265	233	269	512	523
Change in Net Position	(67)	16	46	201	171	322	371	468	303	448
Commuter Spending Account Fund (CSA)										
Additions										
Contributions							73	129	141	140
Investment Income (Net of Expenses)							1	4	7	12
Other Additions									6	
Transfers In							1,750			
Total Additions	-	-	-	-	-	-	1,824	133	154	152
Deductions										
Reimbursement Account Claims							43	114	116	115
Administrative and Other Expenses							1,276	72	19	4
Total Deductions	-	-	-	-	-	-	1,319	186	135	119
Change in Net Position	-	-	-	-	-	-	505	(53)	19	33
State Employees Cafeteria Plan (TexFlex)										
Additions										
Contributions	90,290	96,033	95,986	95,578	83,214	83,092	80,953	79,559	76,656	73,406
Investment Income (Net of Expenses)	25	20	19	20	9	20	34	72	193	336
Other Additions	105	104	76	92	113	398	194	92	101	
Total Additions	90,420	96,157	96,081	95,690	83,336	83,510	81,181	79,723	76,950	73,742
Deductions										
Reimbursement Account Claims	87,912	93,737	92,093	92,799	78,720	77,744	81,179	69,697	73,729	71,301
Administrative and Other Expenses	2,217	2,725	2,485	2,365	2,460	3,662	1,815	1,619	1,526	1,452
Total Deductions	90,129	96,462	94,578	95,164	81,180	81,406	82,994	71,316	75,255	72,753
Change in Net Position	291	(305)	1,503	526	2,156	2,104	(1,813)	8,407	1,695	989

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									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Employees Retirement Fund:										
Type of Benefit										
Retirement Benefits:										
Service:										
Retirees	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	2,351,834
Survivors	20,765	21,188	21,410	59,425	21,370	21,835	21,396	21,493	21,686	21,232
Disability	30,301	28,854	28,376	27,980	27,386	26,797	26,148	25,640	25,166	24,654
Partial Lump Sum Option	46,362	51,885	60,687	63,641	63,359	62,438	58,351	59,262	61,250	62,846
Proportional	13,270	15,013	17,282	19,425	21,971	24,276	27,280	30,671	33,737	36,205
Total Retirement Benefits	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	2,496,771
Death Benefits:										
Active Members:										
Occupational	76	189	117	86	32	116	132	43	209	51
Non-Occupational	1,526	2,308	1,920	1,999	1,453	2,909	3,317	2,053	3,401	1,858
Retiree	1,484	1,645	1,617	1,198	1,568	1,705	1,633	1,568	1,522	1,535
Total Death Benefits	3,086	4,142	3,654	3,283	3,053	4,730	5,082	3,664	5,132	3,444
Refunds:										
Resignation	61,235	74,640	84,004	82,026	102,175	80,876	78,206	115,416	117,908	137,749
Death	4,099	4,895	4,056	4,642	4,634	6,291	6,239	5,528	6,040	4,554
Total Refunds	65,334	79,535	88,060	86,668	106,809	87,167	84,445	120,944	123,948	142,303
Law Enforcement and Custodial Officer Supplemental Retirement Fund:										
Type of Benefit										
Retirement Benefits:										
Service	37,580	39,509	42,670	46,561	50,261	54,747	58,444	62,571	67,822	73,632
Disability	1,161	1,128	1,093	1,088	1,053	1,022	1,008	990	922	883
Partial Lump Sum Option	2,260	2,277	3,105	3,199	3,907	3,442	3,247	3,239	3,484	3,955
Total Retirement Benefits	41,001	42,914	46,868	50,848	55,221	59,211	62,699	66,800	72,228	78,470
Death Benefits:										
Active Members:										
Non-Occupational		106	6	6	6	9	21	18	18	15
Total Death Benefits	-	106	6	6	6	9	21	18	18	15
Refunds:										
Resignation	162	686	1,205	1,513	1,895	2,097	1,772	2,892	3,355	3,732
Death		9	15	18	24	31	54	46	37	36
Total Refunds	162	695	1,220	1,531	1,919	2,128	1,826	2,938	3,392	3,768
Judicial Retirement System of Texas Plan Two:										
Type of Benefit										
Retirement Benefits:										
Service	7,149	8,923	9,942	11,346	12,670	15,389	16,841	18,550	19,947	23,753
Disability	358	570	358	358	358	358	395	442	422	358
Proportional	1,782	2,229	2,482	2,882	3,138	3,411	3,589	3,996	4,337	4,869
Total Retirement Benefits	9,289	11,722	12,782	14,586	16,166	19,158	20,825	22,988	24,706	28,980
Death Benefits:										
Active Members:										
Non-Occupational			21				5			27
Annuity Death Refund						27	26			
Total Death Benefits	-	-	21	-	-	27	31	-	-	27
Refunds:										
Resignation	118	47	117	210	228	56	224	215	159	138
Death			62	75	26		75	159		76
Total Refunds	118	47	179	285	254	56	299	374	159	214

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Benefit and Refund Payments – Defined Benefit Plans (Concluded)

Last Ten Fiscal Years (in 000's)

	Fiscal Year									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Excess Benefit Arrangement:										
Type of Benefit										
Retirement Benefits:										
Service	251	297	436	488	422	392	448	668	753	797
Total Retirement Benefits	251	297	436	488	422	392	448	668	753	797
State Retiree Health Plan:										
Type of Benefit										
Insurance Benefits:										
Accrued Claims	55,675	53,835	50,148	36,356	22,706	9,848	(5,601)	20,769	(27,916)	4,781
Life Claims	24,430	24,663	29,722	37,349	41,763	45,740	46,994	55,347	54,426	58,278
Prescriptions Drugs	182,620	171,191	201,279	217,332	241,583	253,591	279,144	255,976	289,856	308,940
Administrative Fees	17,391	18,872	15,061	15,775	19,077	18,721	19,338	20,744	19,802	19,776
HMO Payments	31,606	32,349	73,491	98,107	110,232	139,696	156,418	188,633	179,537	201,752
Health	318,593	330,801	310,261	301,785	358,696	373,469	391,327	426,911	393,907	411,988
Dental	13,074	14,486	16,123	17,677	19,766	22,861	25,266	27,436	29,309	33,073
Total Insurance Benefits	643,389	646,197	696,085	724,381	813,823	863,926	912,886	995,816	938,921	1,038,588

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, 2009 to August 31, 2019	5-10	10-15	15-20	20-25	25-30
- Period 9/30/09 to 8/31/10:						
Average Monthly Benefit	\$ 461.53	900.75	1,358.94	1,915.31	2,650.53	3,730.87
Average Final Average Salary	\$ 3,100.21	3,452.01	3,611.19	3,946.28	4,415.85	5,109.27
Number of Retired Members	196	445	515	668	638	526
- Period 9/30/10 to 8/31/11:						
Average Monthly Benefit	\$ 539.79	862.88	1,435.48	2,052.43	2,820.63	3,720.57
Average Final Average Salary	\$ 3,555.76	3,316.43	3,763.89	4,253.34	4,669.98	5,118.87
Number of Retired Members	236	579	573	778	753	626
- Period 9/30/11 to 8/31/12:						
Average Monthly Benefit	\$ 512.34	865.74	1,423.87	2,068.38	2,859.43	3,698.04
Average Final Average Salary	\$ 3,361.14	3,321.63	3,685.35	4,247.41	4,730.38	5,066.65
Number of Retired Members	226	541	667	811	741	558
- Period 9/30/12 to 8/31/13:						
Average Monthly Benefit	\$ 545.80	953.76	1,506.01	2,081.09	2,917.96	3,758.34
Average Final Average Salary	\$ 3,508.31	3,575.87	3,881.79	4,245.60	4,830.84	5,144.14
Number of Retired Members	284	595	711	862	807	554
- Period 9/30/13 to 8/31/14:						
Average Monthly Benefit	\$ 509.81	919.98	1,478.64	2,007.74	2,909.89	3,872.98
Average Final Average Salary	\$ 3,377.09	3,522.68	3,832.76	4,143.21	4,849.30	5,369.85
Number of Retired Members	331	615	701	879	725	535
- Period 9/30/14 to 8/31/15:						
Average Monthly Benefit	\$ 578.70	951.20	1,449.50	1,985.69	2,942.82	4,040.02
Average Final Average Salary	\$ 3,728.35	3,672.11	3,801.69	4,193.73	4,897.61	5,605.15
Number of Retired Members	266	644	728	1,023	897	635
- Period 9/30/15 to 8/31/16:						
Average Monthly Benefit	\$ 561.57	927.38	1,469.88	2,047.07	3,102.59	4,307.64
Average Final Average Salary	\$ 3,480.78	3,664.65	3,855.20	4,284.12	5,156.01	5,891.07
Number of Retired Members	223	644	679	935	901	620
- Period 9/30/16 to 8/31/17:						
Average Monthly Benefit	\$ 585.55	955.19	1,518.44	2,095.94	3,116.47	4,368.94
Average Final Average Salary	\$ 3,604.47	3,761.35	3,990.84	4,317.52	5,130.43	6,040.96
Number of Retired Members	267	746	711	925	862	635
- Period 9/30/17 to 8/31/18:						
Average Monthly Benefit	\$ 614.45	984.18	1,631.07	2,251.22	3,222.89	4,568.27
Average Final Average Salary	\$ 3,629.29	3,816.02	4,217.70	4,638.18	5,319.51	6,223.42
Number of Retired Members	149	686	623	825	808	641
- Period 9/30/18 to 8/31/19:						
Average Monthly Benefit	\$ 589.98	1,030.16	1,681.07	2,378.83	3,251.96	4,661.67
Average Final Average Salary	\$ 3,700.51	3,958.41	4,382.76	4,843.33	5,327.01	6,298.80
Number of Retired Members	132	753	603	827	831	602
Five Year Average -						
Period 9/30/14 to 8/31/19:						
Average Monthly Benefit	\$ 541.82	971.27	1,543.88	2,140.83	3,123.52	4,387.17
Average Final Average Salary	\$ 3,625.44	3,145.51	4,035.06	4,436.93	5,160.75	4,887.33
Average Number of Retired Members	207	695	669	907	860	627
Ten Year Average -						
Period 9/30/09 to 8/31/19:						
Average Monthly Benefit	\$ 546.46	940.35	1,496.26	2,088.48	2,992.12	4,088.71
Average Final Average Salary	\$ 3,497.91	3,629.44	3,903.32	4,314.18	4,952.82	5,608.67
Average Number of Retired Members	231	625	651	853	796	593

Note A: This schedule includes service retirements of the employee class as of October 29, 2019. 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, 2019

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	7,194	6,959	235	4,762	1,401	435	137	248	211
301-600	12,746	12,108	638	9,007	2,117	632	230	347	413
601-900	14,156	13,469	687	10,007	2,254	809	284	304	498
901-1,200	13,202	12,851	351	9,075	2,160	981	244	282	460
1,201-1,500	13,011	12,843	168	8,595	2,219	1,113	248	219	617
1,501-2,000	17,586	17,471	115	11,361	2,800	1,823	304	346	952
2,001-2,500	12,756	12,729	27	7,714	2,116	1,631	215	301	779
2,501-3,000	8,674	8,664	10	4,934	1,514	1,203	159	230	634
3,001-4,000	9,253	9,248	5	5,175	1,738	1,199	129	233	779
4,001-10,999	6,577	6,576	1	3,221	1,660	823	75	138	660
Total	115,155	112,918	2,237	73,851	19,979	10,649	2,025	2,648	6,003
Law Enforcement And Custodial Officer Supplemental Retirement Fund (Note A)									
\$									
\$ 0-200	427	427	0	278	102	25	5	5	12
201-400	6,831	6,787	44	3,855	1,649	738	77	93	419
401-600	4,277	4,260	17	2,294	862	614	43	81	383
601-800	1,236	1,233	3	536	314	189	17	21	159
801-1,000	682	681	1	259	226	102	9	6	80
1,001-1,200	319	318	1	104	120	42	0	4	49
1,201-1,400	119	113	6	38	43	14	1	2	21
1,401-1,600	47	38	9	19	18	2	0	1	7
1,601-1,800	18	13	5	11	4	1	0	1	1
1,801-9,999	25	20	5	9	11	0	0	1	4
Total	13,981	13,890	91	7,403	3,349	1,727	152	215	1,135
Judicial Retirement Plan Two Fund (Note A)									
\$									
\$ 0-2,000	28	28	0	11	13	2	1	0	1
2,001-2,500	10	10	0	5	5	0	0	0	0
2,501-3,000	9	9	0	1	3	2	1	0	2
3,001-3,500	7	7	0	2	2	2	0	0	1
3,501-4,000	20	20	0	10	7	2	0	1	0
4,001-4,500	41	41	0	15	19	5	0	1	1
4,501-5,000	49	49	0	25	18	3	0	3	0
5,001-5,500	64	64	0	21	25	5	1	0	12
5,501-6,000	59	59	0	25	24	6	0	1	3
6,001-6,500	57	56	1	31	17	6	1	0	2
6,501-7,000	40	40	0	13	14	7	0	3	3
7,001-9,999	88	88	0	53	16	11	0	4	4
Total	472	471	1	212	163	51	4	13	29

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									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Defined Benefit Plans	%	%	%	%	%	%	%	%	%	%
Employees Retirement Fund										
Employee Class:	Blended (Note A)									
Employee (Note A)	6.48	6.50	6.50	6.50	6.60	6.90	9.50	9.50	9.50	9.50
Employer (Note B)	6.78	6.95	6.00	6.50	8.00	8.00	10.00	10.00	10.00	10.00
Elected Class:										
Legislators	8.00	8.00	8.00	8.00	8.00	8.00	9.50	9.50	9.50	9.50
Employer	6.45	6.45	6.00	6.50	8.00	8.00	10.00	10.00	10.00	10.00
Other Elected Class (Note A)	6.48	6.50	6.50	6.50	6.60	6.90	9.50	9.50	9.50	9.50
Employer (Note B)	6.78	6.95	6.00	6.50	8.00	8.00	10.00	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	0.50
Employer	1.59	1.59	0.00	0.50	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	6.60	6.90	7.20	7.50	7.50	7.50
Employer	16.83	16.83	6.00	6.50	15.663	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	385.38	411.04	438.30	470.38	503.14	537.66	576.54	617.30	621.90	624.82
HealthSelect Monthly Premium	385.38	411.04	438.30	470.38	503.14	537.66	576.54	617.30	621.90	624.82
Employee & Children:										
State Contribution Monthly Rate	532.90	569.30	606.20	650.62	696.00	743.80	797.66	854.10	860.48	864.52
HealthSelect Monthly Premium	680.42	727.56	774.10	830.86	888.86	949.94	1,018.78	1,090.90	1,099.06	1,104.22
Employee & Spouse:										
State Contribution Monthly Rate	605.70	647.38	689.04	739.58	791.16	845.54	906.78	970.98	978.22	982.82
HealthSelect Monthly Premium	826.02	883.72	939.78	1,008.78	1,079.18	1,153.42	1,237.02	1,324.66	1,334.54	1,340.82
Employee & Family:										
State Contribution Monthly Rate	753.22	805.64	856.94	919.82	984.02	1,051.68	1,127.90	1,207.78	1,216.80	1,222.52
HealthSelect Monthly Premium	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	1,820.22

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 (Note A)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Employees Retirement Fund										
Active Contributing Members	142,490	137,293	132,669	133,669	134,162	142,409	146,390	141,629	141,535	141,865
Non-Contributing Members	78,737	84,900	90,190	96,015	96,507	101,122	108,873	112,192	119,736	125,935
Retirees and Beneficiaries	79,311	83,430	87,799	91,367	95,840	100,003	103,758	107,530	111,361	115,155
Service Retirements	4,803	5,734	5,860	5,174	6,180	5,982	5,605	5,908	5,984	5,970
Disability Retirements	67	74	68	113	51	60	63	58	45	64
Law Enforcement and Custodial Officer Supplemental Retirement Fund (Note B)										
Active Contributing Members	39,052	36,806	37,404	37,415	37,084	38,526	39,066	38,206	37,167	36,296
Non-Contributing Members	2,978	5,785	7,129	10,187	11,311	12,962	15,203	17,100	19,842	22,207
Retirees and Beneficiaries	7,175	7,728	8,477	9,089	10,024	10,845	11,515	12,248	13,080	13,981
Service Retirements	635	695	895	741	1,071	959	803	876	965	1,019
Disability Retirements				3					1	1
Judicial Retirement System of Texas Plan Two										
Active Contributing Members	539	546	541	545	554	563	548	557	561	573
Non-Contributing Members	130	134	143	152	139	148	166	158	153	187
Retirees and Beneficiaries	164	208	215	254	267	322	331	378	393	472
Service Retirements	12	43	8	43	14	57	9	48	16	83
Disability Retirements							1			
State Retiree Health Plan										
Retirees	86,111	90,213	95,375	100,054	104,770	109,311	113,430	117,880	122,350	127,044
Dependents	32,408	32,412	35,549	35,830	36,933	38,130	38,910	39,880	41,061	42,024

Note A: The source of the retirement systems and State Retiree Health Plan membership is the System's actuaries. The System's actuaries include 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.

Statistical Information – Other Programs

(All items expressed as numbers unless otherwise indicated)

This schedule provides ten year historical trend information for members of the TexaSaver 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									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
457 Deferred Compensation Plan (Note A)										
TexaSaver 457 Plan (Note A):										
Total Participants	18,479	21,153	23,219	24,689	26,902	29,129	31,515	33,131	34,023	34,102
Participants Currently Deferring	11,649	13,293	14,189	14,385	20,030	16,685	17,052	19,803	18,591	18,281
Current Market Value of Plan Assets (in millions) \$	334.5	380.6	442.6	494.7	591.1	603.7	669.7	759.0	869.0	896.2
Original 457 Plan (Notes A & B):										
Total Participants	1,293	734	657	598	580	513	468	440	424	401
Participants Currently Deferring	63	57	53	38	32	22	17	15	14	12
TexaSaver 401(k) Deferred Compensation Plan										
Total Participants	96,250	109,613	121,516	135,237	151,034	165,513	181,249	195,737	206,617	220,430
Participants Currently Deferring	69,311	64,704	66,910	69,692	89,774	82,851	92,527	95,813	95,392	99,909
Current Market Value of Plan Assets (in millions) \$	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	2,478.1
Deferrals (in millions) \$	108.2	107.3	105.5	145.7	152.2	160.3	182.3	159.3	135.1	141.9
Commuter Spending Account (CSA)										
Reimbursement Accounts:										
Parking							14	26	26	29
Transit							127	120	134	129
Participant Contributions (Note C)										
Cafeteria Plan										
Reimbursement Accounts:										
Health Care	46,556	48,807	47,591	46,942	46,173	46,609	48,010	47,799	46,337	44,584
Dependent Care	3,549	3,686	3,747	3,747	3,785	3,880	3,825	3,713	3,636	3,574
Total Redirected (in millions) \$	87.5	93.7	92.8	91.9	78.9	78.5	80.3	78.7	75.8	73.0
Premium Conversion:										
Participants	228,121	222,295	218,587	219,357	221,876	222,789	226,864	223,026	223,233	224,699
Premiums Redirected (in millions) \$	457.4	482.4	487.5	500.9	509.2	522.1	548.3	504.5	505.8	509.7
Tax Savings (in millions):										
Employees	\$ 103.6	109.2	110.4	113.5	115.3	118.3	124.2	132.1	131.7	132.0
State of Texas	\$ 35.0	36.9	37.3	38.3	39.0	39.9	41.9	44.6	44.5	44.6
Group Benefits Program (Note D)										
Membership:										
Active	234,057	239,138	237,041	226,181	228,805	230,023	235,108	230,199	231,911	233,887
Dependents	197,979	183,626	172,695	171,023	169,282	166,772	168,161	166,266	164,685	163,172
COBRA (Note E)	2,544	2,213	2,460	1,674	1,144	1,167	984	723	1,104	1,137
Total Membership	434,580	424,977	412,196	398,878	399,231	397,962	404,253	397,188	397,700	398,196
Death Benefit Programs										
Lump Sum Payments	18	14	9	23	29	8	14	21	17	13
Monthly Payments to Guardians	103	107	99	111	112	114	114	111	122	116
Victims of Violent Crime	5	13	5	11	8	4	4	7	10	4

Note A: In fiscal year 2001, a new TexaSaver 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. The source of the membership is the System's actuary.

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 188,156 which is 80.4% of the employees covered by the State Retiree Health Plan.

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