



2019 COMPREHENSIVE ANNUAL FINANCIAL REPORT

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM
FOR THE FISCAL YEARS ENDED DECEMBER 31, 2019 & 2018



City of Austin Employees' Retirement System

2019 Annual Report

For the fiscal years ended December 31, 2019 & 2018

Comprehensive Annual Financial Report

Prepared by
City of Austin Employees' Retirement System
6850 Austin Center Boulevard
Building 2, Suite 320
Austin, Texas 78731

Our Mission:

The mission of the City of Austin Employees' Retirement System is to provide reliable retirement benefits.

We Value:

Accessibility

Accountability

Cooperation

Ethical Behavior

Fairness

Innovation

Integrity

Open Communication

Respect

Responsiveness

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INTRODUCTORY SECTION



May 20, 2020

Board of Trustees
City of Austin Employees' Retirement System
Austin, Texas

Ladies and Gentlemen:

It is our pleasure to submit to you the Comprehensive Annual Financial Report (CAFR) of the City of Austin Employees' Retirement System (COAERS or System) for the year ended December 31, 2019. The management of COAERS assumes full responsibility for the accuracy, completeness, and fair presentation of information as well as all disclosures in this report. As management, we assert that, to the best of our knowledge and belief, this financial report is complete and reliable in all material respects.

Plan Profile and Demographic Highlights

COAERS was established in 1941 and has provided retirement benefits to eligible City of Austin employees since that time. Though originally created by City ordinance, COAERS is now governed by State law and administered by an eleven-member Board of Trustees.

The Plan provides retirement, disability and death benefits to eligible employees of the City of Austin. Both the City of Austin, as the employer, and its employees make contributions to COAERS. Retirement benefits are determined by a formula that considers final average compensation, as defined, multiplied by the number of years of creditable service. Disability retirement is available pursuant to specific criteria established by statute. A death benefit of \$10,000 is payable upon the death of a retired member of COAERS. Vesting occurs at five years of creditable service.

Additional information concerning current COAERS plan provisions is contained in the Membership and Benefits Overview report in this section.

Audited Financial Statements and Summary

The financial statements included in this CAFR have been prepared by the management of COAERS in accordance with Generally Accepted Accounting Principles (GAAP) and presented in accordance with guidelines established by the Governmental Accounting Standards Board (GASB). The governing statute requires an annual audit of COAERS' accounts by a Certified Public Accountant. The Board of Trustees has retained KPMG LLP as independent external auditor.

KPMG's 2019 financial audit was conducted in accordance with Generally Accepted Auditing Standards (GAAS) and resulted in an unmodified opinion on the financial statements. The Financial Section contains KPMG's audit opinion letter and additional information including Management's Discussion and Analysis (MD&A) that provides a narrative introduction, overview, and analysis of the basic financial statements. The MD&A complements this letter of transmittal and should be read in conjunction with it.

Internal Controls

The concept of reasonable assurance recognizes first, that the cost of a control should not exceed the benefits likely to be derived, and second, that the valuation of costs and benefits requires estimates and judgments by management. A framework of internal controls has been established by the management of COAERS to provide reasonable assurance that assets are properly safeguarded, that financial records are fairly and accurately maintained, and that the governing statute and policies are correctly followed.

Recognizing, however, that even sound internal controls have their inherent limitations, the Board of Trustees has also authorized an "extended audit" since 1997. This annual review of internal controls and compliance with operating policies and procedures, is currently conducted by RSM US LLP. Audit findings are reported and actions of management to implement recommendations are reviewed with the Board of Trustees.

Investments

Essential to the mission of COAERS is the responsibility to ensure that System assets will be sufficient over the long term to fulfill its liabilities. A key foundation of this duty is the prudent pursuit of investment returns by the Fund, which over the long term provide for the majority of the retirement and other benefits promised to current and future members.

Investments are made with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims. Funds of COAERS are invested solely in the interest of the membership and their beneficiaries, and for the exclusive purpose of providing benefits to such membership and their beneficiaries while defraying reasonable expenses of administering COAERS.

The Board of Trustees has established an Investment Policy Statement, Investment Implementation Policy, and other guidelines which provide for the delegation of investment authority to Staff and professional investment advisors. COAERS employs professional staff to provide ongoing management to the Fund and assist the Board in devising and implementing strategic investment decisions. The Board also retains RVK, Inc. to provide independent investment consulting services and long-range asset liability analysis.

The investments of the Fund are strategically allocated to maximize returns relative to risk by using a highly diversified and cost-effective portfolio structure. COAERS has consistently followed a conservative investment philosophy that employs a long-term time horizon, which is consistent with the nature of the System's liabilities.

During 2019, the return on Fund investments totaled 20.66% net of fees, a result that placed it in the top quartile of its peers according to RVK and surpassed the potential returns of a passive mix of index funds

by a wide margin. Additional information regarding the investments of the pension trust funds can be found in the Investment Section of this report.

Funding Overview

COAERS is funded by investment income and employer and employee contributions. City employees provide regular contributions equal to 8% of base compensation. The City of Austin contributes 18% of base compensation. Contributions by the City of Austin consist of the statutory base contribution amount of 8% plus an additional 10% pursuant to a supplemental funding plan first established in 2005 and amended in 2010. Using the Entry Age Normal (EAN) actuarial cost method, COAERS' normal cost is determined as a percentage of payroll. The excess of the total contribution rate over the normal cost rate is used to amortize COAERS' unfunded actuarial accrued liability (UAAL), if any, and the number of years needed to amortize COAERS' UAAL is determined using a level percentage of payroll method. In consultation with its actuary, the Board adopted the use of the Individual EAN method for actuarial valuations. Because COAERS is a two-tier system, the use of the Individual EAN method means that the normal cost will decline over time and the percentage of pay contributed toward the unfunded liability will increase over time. To better model how this financing will pay off the unfunded liabilities of COAERS, the Board has also adopted the use of an open group projection in the determination of COAERS' funding period.

In 2019, the Board initiated an Actuarial Experience Study with its actuary, GRS. Based on the findings and recommendations of GRS, the Board adopted new actuarial assumptions used for the December 31, 2019 actuarial valuation. Most notably, the Board reduced its nominal investment return assumption from 7.50% to 7.00% to better forecast possible future investment returns.

For the December 31, 2019 actuarial valuation, assumption changes increased the amortization period; however, higher than assumed payroll growth and strong investment performance mitigated the increase resulting in an amortization period of 40 years. The overall funded position of COAERS was impacted by the assumption changes as well. The current funded position is now 63.5%, down from 67.6% in 2018. The actuarial accrued liability and the actuarial value of assets of COAERS, as of December 31, 2019, amounted to \$4.488 billion and \$2.849 billion, respectively. A detailed discussion of funding is provided in the Actuarial Section of this report.

Major Initiatives

In 2019, COAERS continued its work towards meeting the goals set out in its 2018-2020 Strategic Plan. COAERS' first strategic priority is to maintain a sustainable retirement system; 2019 efforts in support of this goal included conducting the Actuarial Experience Study, and reviews of existing contribution and benefit policies as well as the Board-approved Funding Policy. COAERS also advanced its second strategic priority of responsibly managing the risks of the system through the development of an Investment Risk Framework and an organizational risk management system. Next, COAERS increased its efforts to enhance our customer's experience by conducting additional onsite departmental meetings to promote the System's benefits and enhance connections with members; educational resources were expanded to include digital media, and social media sites were created to provide timely and relevant communication to System members. Finally, the Board reviewed and updated its policies related to benefits administration and created a benefits administration procedure to provide greater guidance to the membership.

Awards

For the twenty-first consecutive year, COAERS was awarded a Certificate of Achievement for Excellence in Financial Reporting for its Comprehensive Annual Financial Report for the fiscal year ended December 31, 2018, by the Government Finance Officers' Association of the United States and Canada (GFOA). COAERS is pleased to have achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized Comprehensive Annual Financial Report. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. We believe that our current Comprehensive Annual Financial Report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

For 2019, COAERS also earned the Public Pension Coordinating Council Recognition Award for Administration. This is the ninth consecutive year that COAERS has met the administrative standards. This award is in recognition of meeting professional standards for plan administration as set forth by the Council. The standards reflect minimum expectations for public retirement system administration, serving as a benchmark by which to measure public defined benefit plans.

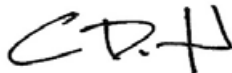
Acknowledgments

This report reflects the combined efforts of COAERS Staff under the leadership of the Board of Trustees. We express our gratitude to the staff, advisors, and members of the Board who have contributed to the preparation of this report and to the continued successful operation of the City of Austin Employees' Retirement System.

Respectfully Submitted,



Michael Benson
2019 Board Chair



Christopher D. Hanson
Executive Director



Donna Durow Boykin CPA, CGMA
Chief Financial Officer



Government Finance Officers Association

**Certificate of
Achievement
for Excellence
in Financial
Reporting**

Presented to

**City of Austin
Employees' Retirement System
Texas**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

December 31, 2018

Christopher P. Morill

Executive Director/CEO



Public Pension Coordinating Council

***Recognition Award for Administration
2019***

Presented to

City of Austin Employees' Retirement System

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

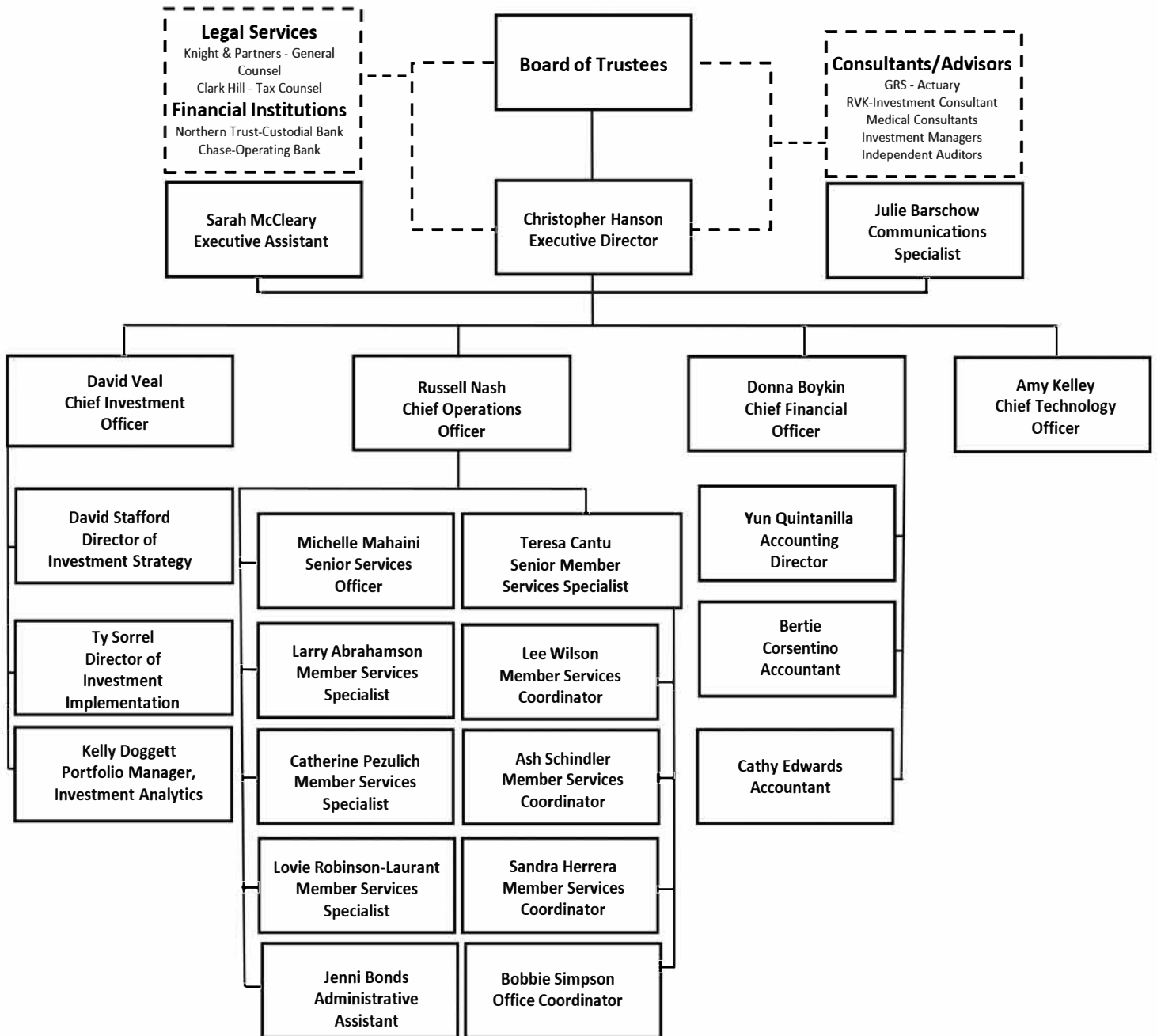
National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

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

Alan H. Winkle
Program Administrator

City of Austin Employees' Retirement System Organizational Chart

December 31, 2019



COAERS 2019 BOARD OF TRUSTEES

Place	Trustee	Title
1	Leslie Pool	City Council Member
2	Ed Van Eenoo	City Manager Designee
3	Stephanie Beach	Council Appointed Citizen
4	Frank Merriman	Council Appointed Citizen
5	Randy Spencer	Board Appointed Citizen
6	Michael Benson, 2019 Chair	Active Elected Member
7	Amy Hunter	Active Elected Member
8	Chris Noak	Active Elected Member
9	Yuejiao Liu	Active Elected Member
10	Eyna Canales-Zarate, 2019 Vice-Chair	Retired Elected Member
11	Anthony B. Ross, Sr.	Retired Elected Member

PROFESSIONAL SERVICE PROVIDERS

Investment Consultant

RVK Inc.

General Counsel

The Knight Law Firm

Custodial Bank

The Northern Trust Company

Tax Counsel

Clark Hill PLC

Independent Auditors

KPMG LLP
RSM US LLP

Investments Counsel

Jackson Walker LLP
DLA Piper LLP

Actuary

GRS

Operating Bank

JPMorgan Chase Bank

A list of investment managers can be found in the Investment Section of this report.

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

MEMBERSHIP AND BENEFITS OVERVIEW

INTRODUCTION

This is a general overview of the City of Austin Employees' Retirement System (COAERS) membership and benefits. In the event of any inconsistency between this general overview and state or federal law as modified, interpreted, and applied from time to time, the state or federal law will govern and control.

COAERS is an IRS tax-qualified 401(a) defined benefit plan governed by Texas state law.

Membership Requirements

City of Austin regular employees working 30 or more hours per week become Members of COAERS on the date of employment as mandated by Statute. Members do not include:

- Temporary employees
- Part-time employees working less than 30 hours per week
- Civil service employees of the Fire Department and the Police Department
- The Mayor and members of the City Council

Contributions

Employee: Members of COAERS contribute 8% of their base pay, calculated on a 40-hour work week. Contributions are made through payroll deduction each pay period (every two weeks). Overtime and special pay are not included.

Employer: By State Statute, the employer contributes an amount equal to 8% of the employee's base compensation or a higher rate established by the employer. The current employer contribution, established by a City Council Resolution, is 18% of compensation. The employer contribution will remain at this level until the Resolution is amended or repealed.

RETIREMENT BENEFITS

Retirement Eligibility

Members are eligible for retirement when they meet one of the following age and service requirements for the membership group to which they belong:

Group A Members (Normal Retirement)

- Age 62,
- Age 55 with 20 years of Creditable Service, or
- Any age with 23 years Creditable Service

Group B Members (Normal Retirement)

- Age 65 with 5 years of Creditable Service (excluding Supplementary Service Credit), or
- Age 62 with 30 years of Creditable Service (excluding Supplementary Service Credit)

Group B Members (Early Retirement – Reduced Benefits)

- Age 55 with at least 10 years of Creditable Service (excluding Supplementary Service Credit)

Vesting

Members become vested with COAERS when they have five years of Creditable Service. Members who leave active membership before attaining retirement eligibility must have five years of Creditable Service to be considered vested. Verified service credit with a participating proportionate retirement system(s) or in the limited proportionate service arrangement between COAERS and the Travis County Healthcare District may also be combined with COAERS service credit in determining vested status and eligibility to receive a future benefit. The member is not entitled to receive the employer contribution at any time. Instead, vesting means that a member is entitled to receive a lifetime benefit as long as their contributions are on deposit in the System upon reaching retirement eligibility. COAERS may refer to vested members as having a “Deferred” or “Deferred Reciprocal” status.

Creditable Service

Creditable Service is a combination of membership Service and other types of Creditable Service described below.

Current Active-Contributing/Vested Members, as of October 1, 1995, were granted service credit for the period between their date of hire and their date of participation, up to six months. All members hired after October 1, 1995 become members on their date of hire or on their date of regular employment at 30 or more hours per calendar week.

Types of Creditable Service

Membership Service – The employment period during which a member makes payroll contributions to the System is considered the “Membership Service” period.

Reinstated Membership Service (Prior City of Austin Service) – When members leave City employment, withdraw their deposits, and later return to City employment or employment with a participating proportionate system, they may purchase and reinstate the earlier time with the City. To purchase this service, they must become a member of COAERS or another proportionate system. The cost to purchase prior service credit is based on the amount previously withdrawn, plus interest, as required by law.

Non-Contributory Service Credit – Members may purchase service credit for the following non-contributory categories:

- Non-contributory service, such as temporary or part-time service (less than 30 hours per week)
- Approved leave of absence
- Workers’ compensation leave because of an injury sustained in the course and scope of employment with the employer

Credit for Federal Active Duty Military Service

Prior Federal Active Duty Military Service – Members may establish up to 48 months Creditable Service for prior military service. Military service eligible for purchase is full-time active duty service

in the armed forces of the United States performed before the first day of the most recent period of active membership in COAERS. Military service in the reserves, a service academy, or for less than 90 consecutive days is not eligible for purchase. To purchase prior military service, members must present an original DD214 showing honorable discharge.

Military Leave of Absence – Members may establish Creditable Service for an authorized leave of absence from employment for military service. The member may establish such Creditable Service during the authorized leave of absence by continuing to make retirement contributions during the period of service. Alternatively, if the Member returns to employment within the applicable period (that varies from 14 to 90 days, depending on the length of service) after the completion of the military service, the member and the employer may secure such Creditable Service by making a lump-sum payment within five years of the date the member returns to employment and Active-Contributing Member status.

Supplementary Service Credit (Previously known as Permissive Time) – Group A members may purchase up to five years of Creditable Service to advance their retirement eligibility date and/or increase the amount of their monthly annuity upon retirement. Group B members may purchase up to five years of Creditable Service only to increase the amount of their annuity but not to advance their retirement eligibility. Only vested active-contributing or inactive members are eligible to purchase Supplementary Service Credit, provided they have five years of membership service. Age, salary, earliest retirement date, and a combination of actuarial data determine the cost. There may be federal limitations on certain purchases.

Sick Leave Conversion – Retiring members may convert sick leave hours to increase Creditable Service time. Employees eligible to be paid by the City of Austin for up to 720 hours of sick leave upon retirement cannot convert the eligible hours to Creditable Service. Converted sick leave hours cannot be used to reach retirement eligibility. Sick leave must be converted in pay period (80-hour) increments. Both the member and the employer must pay the current contribution rate at the time of retirement to convert hours.

Proportionate Service

In 1991 the Texas Legislature established a Proportionate Retirement Program for the benefit of members of participating public retirement systems. A member of two or more of the following participating retirement systems may be eligible for proportionate benefits:

- City of Austin Employees' Retirement System
- City of Austin Police Retirement System
- El Paso City Employees' Pension Fund
- El Paso Firemen and Policemen's Pension Fund
- Employees Retirement System of Texas
- Judicial Retirement System of Texas I & II
- Texas Municipal Retirement System
- Texas County and District Retirement System
- Teacher Retirement System of Texas
- Other Texas retirement systems covering municipal employees who have qualified plans and have elected to participate in the Proportionate Retirement Program

Participating systems recognize service from other participating systems upon proper notice. A member with service credit in more than one participating retirement system may be eligible to retire in another system based on the combined service of two or more systems in order to satisfy the length of service requirements used to determine eligibility for service retirement.

Members must qualify for retirement eligibility independently in each system. Retirement benefits will be paid separately from each system and will be determined based on the actual amount of Creditable Service earned in and the benefit structure of each plan. Military service may only be used once in determining the amount of the member's combined service credit. Proportionate participation is generally based on funded service.

A limited proportionate service arrangement was also established in 2007 for individuals who have membership in COAERS and a retirement system within the Travis County Healthcare District (District) organization. This arrangement, effective with employees transitioning into the District effective March 1, 2009, is similar to the general proportionate program except that it applies only between these two retirement systems. Participation in the District retirement system can be used to establish retirement eligibility with COAERS.

Calculation of Retirement Benefits

Factors used to calculate COAERS retirement benefits:

Total Creditable Service – Total years and months of Creditable Service, including:

- Regular membership service
- Reinstated membership service
- Military service purchased
- Non-contributory service purchased
- Supplementary service purchased
- Converted sick leave
- Up to one six-month probationary period granted at retirement to Active-Contributing/Vested Members hired on or before October 1, 1995
- Note: Proportionate service is only used to reach eligibility; it is not used to calculate retirement benefits.

Multiplier for Group A Members – 3.0%

Multiplier for Group B Members – 2.5%

Average Final Compensation – The average base salary for the highest 36 months of contributory service during the last 10 years of salary prior to retirement.

Important Dates in the Retirement Process

Members must apply for retirement no later than the 15th day of the month in which they are terminating employment. The last date of that month is the member's actual retirement date. The first day of the following month marks the beginning of the member's "retired" status; the first monthly benefit payment is issued on the last business day of that month.

Retirement Options

COAERS provides several options for payment of monthly benefits. All payment options are actuarially equivalent to the basic Member Only Life Annuity benefit.

The options that include benefits to a survivor are calculated according to the ages of both the member and the surviving beneficiary. The member's benefits are reduced if an option is chosen that provides survivor benefits. This reduction is applied to the member's basic Life Annuity benefit according to the option the member chooses. Some restrictions may apply to non-spouse survivor benefits.

If the member is married, spousal consent is required. A member cannot change options or the survivor beneficiary after retirement. Even if a Retiree and the beneficiary spouse later divorce, the survivor beneficiary cannot be changed. Only the survivor beneficiary named at retirement will receive survivor benefits.

Life Annuity – A basic monthly benefit payable for the life of the Retiree.

Option I: 100% Joint and Survivor – A reduced monthly benefit payable throughout the Retiree's life. At the Retiree's death, the survivor beneficiary will continue to receive the Retiree's benefit for the remainder of his/her life.

Option II: 50% Joint and Survivor – A reduced monthly benefit payable throughout the Retiree's life. At the Retiree's death, the survivor beneficiary will continue to receive 50% of the Retiree's benefit for the remainder of his/her life.

Option III: 66 $\frac{2}{3}$ Joint and Survivor – A reduced monthly benefit payable throughout the Retiree's life. At the Retiree's death, the survivor beneficiary will continue to receive 66 $\frac{2}{3}$ % of the Retiree's benefit for the remainder of his/her life.

Option IV: Joint and 66 $\frac{2}{3}$ Last Survivor – A reduced monthly benefit payable until the death of either the Retiree or the survivor beneficiary. After death of the Retiree or the survivor beneficiary, the last survivor of the two will receive 66 $\frac{2}{3}$ % of the Retiree's benefit for the remainder of his/her life.

Option V: Fifteen Year Certain and Life Annuity (180 payments) – A monthly benefit payable to the Retiree. If the Retiree's death occurs before 180 payments are made, the Retiree's beneficiary, spouse (if applicable), or estate will receive remaining monthly payments until all 180 payments have been made. If the Retiree is still living after receiving 180 payments, payments to the retiree will continue until the Retiree's death.

Option VI: Actuarial Equivalent of Life Annuity – This option allows members to develop their own benefit payment plan with the assistance and approval of the System's actuary. Members have flexibility to design a retirement benefit that is most appropriate for the needs of both the member and the member's beneficiary, subject to limitations established in Board policy. All options are subject to approval by the Board of Trustees.

A “Pop-up” benefit is provided for Retirees choosing Options I, II, or III as well as Retirees who selected any Joint and Survivor option other than Joint and Last Survivor option. The “Pop-up” increases the Retiree’s benefits to the Member Only Life Annuity level if the survivor beneficiary predeceases the Retiree. Benefits are increased only after COAERS is properly notified of the death of the survivor.

Lump-Sum Payments

Backward DROP Program – The Backward Deferred Retirement Option Program (Back DROP) allows a member to receive a lump-sum payment in addition to receiving a monthly annuity.

Members who have already reached retirement eligibility, excluding proportionate service, and who continue to work and contribute to COAERS beyond retirement eligibility, may elect to receive a lump-sum amount and have their retirement calculated as though they had retired at an earlier date. The Back DROP period can be no earlier than:

- The day of first retirement eligibility,
- The date of the last purchase of Creditable Service of any type other than Sick Leave Conversion, or
- 60 months (in one-month increments) prior to the retirement date.

The lump-sum amount is 90% of the sum of the monthly annuity payments and is based on the Member Only Life Annuity benefit the participant would have received had the Member retired at the earlier date. The lump-sum amount may be rolled over to other qualified plans, paid in one lump-sum to the Member, or a combination of both.

Cost-of-living adjustments, interest, and Member or employer contributions do not increase the amount credited to the Back DROP.

Partial Lump-Sum Payment – As an alternative to the Back DROP, a member may select a retirement option and request a one-time, lump-sum payment to be paid at the same time as the member’s first annuity payment. The member’s annuity amount will be actuarially reduced for the lump-sum payment. The partial lump sum amount cannot exceed the equivalent of 60 monthly annuity payments.

IRS Section 415 Restoration of Retirement Income Plan

Certain highly compensated members may have their retirement annuity limited because of Section 415(b)(1) of the Internal Revenue Code. A plan amendment, effective January 1, 2000, provides for COAERS to pay a benefit that exceeds the limitation imposed by the Internal Revenue Code from a separate, non-qualified, and unfunded “Restoration of Retirement Income Plan.” Additional details are made available to affected members during the retirement process.

Retirees Returning to Work

The retirement allowance of a retired member who resumes employment with an employer within 90 days after retirement and has not attained age 55, or who resumes employment after retirement as a regular full-time employee of an employer is subject to suspension. Suspension also occurs if a retired member resumes employment with an employer in a position that is not required to participate in another retirement system maintained by an employer, and works for, or is compensated by, an employer for more than 1,508 hours in any rolling 12-month period after the member resumes employment with the employer.

DISABILITY RETIREMENT BENEFITS

Disability Retirement Requirements

Members may apply for disability retirement benefits if:

- They are mentally or physically incapacitated for the performance of all employment duties, AND
- The incapacity is likely to be permanent.

Disability Retirement Eligibility

Active-Contributing members with less than five years Creditable Service may only apply for disability retirement if the disability is a result of an on-the-job accident or injury. Active-Contributing members with five or more years of Creditable Service may apply for disability retirement even if the disability is not job related. Members who are already eligible to retire may not apply for disability retirement.

Members are considered to remain in the same membership category in effect on the date of termination for 90 days following termination. Members are allowed to apply for disability retirement for up to 90 days following termination for inability to perform all employment duties.

Disability Retirees are periodically required to provide proof of continued disability and are annually required to provide employment and income documentation to the COAERS Board of Trustees.

Disability Retirement Options

A Member approved for disability retirement may choose a Member Only Life Annuity benefit or a benefit described in Options I, II, III, or IV. Disability Retirees are not eligible for any type of lump-sum payment.

DEATH AND SURVIVOR BENEFITS

Retired Members

Upon the death of a Retiree, a death benefit of \$10,000 is paid by COAERS to the designated beneficiary(ies) of the deceased. This \$10,000 death benefit is paid to the beneficiary(ies) in addition to any of the following benefits that are applicable:

If the Retired member chose the Member Only Life Annuity option, the monthly benefit stops the month following the death of the Retiree. However, if death occurs before the Retiree's accumulated deposits have been paid out, the Retiree's remaining deposits will be paid in a lump-sum to the Retiree's designated beneficiary(ies), spouse (if applicable), or estate.

If the Retired member chose an option providing benefits to a survivor beneficiary, upon the Retiree's death, such benefits will be paid to the designated survivor. If the survivor beneficiary does not survive the Retiree, monthly benefits cease. However, if the survivor beneficiary does not survive the Retiree, and the Retiree's deposits have not been paid out, the Retiree's remaining deposits will be paid in a lump-sum to the Retiree's designated beneficiary(ies), spouse (if applicable), or estate.

Active Members

Not Eligible to Retire

Upon the death of an Active member who was not yet eligible for retirement, the designated beneficiary(ies) is entitled to a lump-sum payment of the member's accumulated deposits (contributions and interest) plus a death benefit from COAERS equal to the member's deposits (excluding any purchases for non-contributory time, prior military service purchases, or Supplementary Service Credit).

Eligible to Retire

If the Active member was eligible for retirement prior to death and had not yet retired:

- A surviving spouse may choose any retirement option that would have been available to the member, except for member Only Life Annuity, and receive the \$10,000 death benefit. Alternatively, a surviving spouse may choose to receive a one-time lump-sum payment of the member's accumulated deposits and a death benefit from COAERS equal to the Member's deposits (excluding any purchases for Non-contributory time, prior military service purchases, or Supplementary Service Credit).
- If there is no spouse, the deceased member's designated beneficiary may elect to receive payments under Option V, Fifteen Year Certain and Life Annuity, and receive the \$10,000 death benefit. The non-spouse beneficiary may otherwise choose to receive a one-time lump-sum payment as described above.
- The \$10,000 death benefit is not paid to beneficiaries electing a one-time lump-sum payment.

Inactive Vested Members

Beneficiaries of Inactive Vested members receive the same death benefits as beneficiaries of Active members as described above.

OTHER INFORMATION

Compliance with Applicable Law

Article 6243n of Vernon's Texas Civil Statutes, the Internal Revenue Code, and other state and federal laws are applicable to the operation and management of, and the benefits provided by, the System. Such laws place restrictions and limitations on retirement systems, including COAERS, and directly or indirectly affect member benefits and options. Deposits or retirement benefits may not be transferred or assigned except pursuant to a Qualified Domestic Relations Order (QDRO). All QDROs are subject to approval and must meet all statutory requirements. In addition, funds actually due and payable to a Member, beneficiary, or alternate payee may be subject to IRS levy. The Internal Revenue Code also sets limits which affect purchases of service credit, final average salary, and monthly benefits for certain individuals.

Determining Interest on Members' Contributions

The Board of Trustees annually determines the amount of interest paid on Members' accumulated deposits, taking into consideration the average yield of the 10-year U.S. Treasury note during the 12-month period ending on October 31st and recommendations of the System's actuary. Retirement interest is accrued on the last day of the calendar year based on the amount that each Member had in the System on the first day of the calendar year. The money must remain on deposit for the entire calendar year in order to accrue interest.

Prohibition on COAERS Loans and Withdrawals

Plan provisions do not allow Active Members to make a partial withdrawal of deposits or to receive loans from their retirement funds.

Request for Hearing

A Member or Beneficiary directly affected by a decision of the Executive Director of the City of Austin Employees' Retirement System may appeal to the Board of Trustees. The Member or Beneficiary must appeal the decision within 30 days of notification of denial by the Executive Director or his/her designee.

FINANCIAL SECTION



KPMG LLP
Suite 1900
111 Congress Avenue
Austin, TX 78701-4091

Independent Auditors' Report

Audit & Risk Committee of the Board of Trustees
The City of Austin Employees' Retirement System:

We have audited the accompanying financial statements of the City of Austin Employees' Retirement System (COAERS), which comprise the statements of fiduciary net position as of December 31, 2019 and 2018, and the related statements of changes in fiduciary net position for the years then ended, and the related notes to financial statements, which collectively comprise COAERS' 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 U.S. generally accepted accounting principles; 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.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. 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 auditors' 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 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 opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the City of Austin Employees' Retirement System as of December 31, 2019 and 2018, and the changes in fiduciary net position for the years then ended in accordance with U.S. generally accepted accounting principles.



Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the Management's Discussion and Analysis, the Schedule of Changes in Net Pension Liability and Related Ratios, the Schedule of Contributions, and the Schedule of Investment Returns on pages 27-30 and 58-59 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.

Supplementary and Other Information

Our audit was conducted for the purpose of forming opinion on the financial statements as a whole. The Introductory Section on pages 1-23; Other Supplementary Information – Investment, General & Administrative, and Consultant Expenses on page 60; the Investment Section on pages 61-78; the Actuarial Section on pages 79-128; and the Statistical Section on pages 129-148 are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The Other Supplementary Information – Investment, General & Administrative, and Consultant Expenses 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 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 Other Supplementary Information – Investment, General & Administrative, and Consultant Expenses is fairly stated, in all material respects, in relation to the financial statements as a whole.

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

KPMG LLP

Austin, Texas
May 20, 2020

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Management's Discussion and Analysis (unaudited)

December 31, 2019 and 2018

This section of the City of Austin Employees' Retirement System's (COAERS, or, the System) financial report presents our discussion and analysis of the System's financial performance during fiscal years 2019 and 2018. We encourage readers to consider the information presented here in conjunction with our financial statements that follow.

Financial Highlights

- Net position held in trust by the System increased by \$466.6 million, or 19.0%, in 2019, and decreased by \$189.1 million, or 7.1%, in 2018. All changes primarily correlate with investment returns.
- Contributions increased by \$12.0 million, or 6.8%, in 2019, and by \$8.1 million, or 4.9%, in 2018. The 2019 increases were primarily due to an increase in the payroll base -- a \$7.1 million increase in the City's funding, and an increase of \$3.1 million in employee and City contributions based on payroll; there was also a \$1.8 million increase in employee creditable service purchases. The 2018 increase was due to a \$3.1 million increase in the City's supplemental funding, an increase of \$5.0 million in employee and City contributions based on payroll, and a small increase in employee creditable service purchases.
- The amount of benefits paid to retired members and beneficiaries, and refunded to terminating employees, increased approximately \$15.2 million, or 7.5% during 2019, and by approximately \$12.6 million, or 6.6%, during 2018. This is the result of increases in the number of System retirees and the average annuity payment. Benefit payments exceeded employee and City contributions by \$31.0 million in 2019, and by \$27.8 million in 2018.
- The System's time-weighted rate of return on investments for the year ended December 31, 2019, was 21.0% gross of fees, and 20.7% net of fees, on a market value basis, which was an increase from the return of -5.6% gross of fees, and -5.9% net of fees, for the year ended December 31, 2018. The actuarial investment return assumption is 7.0%.

Overview of the Financial Statements

This discussion and analysis is intended to assist the reader in a better understanding of the purpose and meaning of each of the key components of COAERS' financial statements, which are comprised of the following:

- Statement of Fiduciary Net Position
- Statement of Changes in Fiduciary Net Position
- Notes to the Financial Statements

Collectively, this information presents the net position held in trust for pension benefits as of the end of each year, and summarizes the changes in net position held in trust for pension benefits for the year. The information available in each of these components is briefly summarized below:

- **Financial Statements**
The *Statement of Fiduciary Net Position* presents the System's assets and liabilities and the resulting net position, which is held in trust for pension benefits. This statement reflects a year-end comparison of the Plan's investments, at fair value, along with cash and short-term investments, receivables and other assets and liabilities, to the previous year.

The *Statement of Changes in Fiduciary Net Position* provides a view of current year additions to and deductions from the plan.

Continued

CITY OF AUSTIN EMPLOYEES' RETIREMENT
SYSTEM Management's Discussion and Analysis
(unaudited) December 31, 2019 and 2018

These two statements report the System's net fiduciary position held in trust for pension benefits (net position restricted for pensions), the difference between assets and liabilities, as one way to measure COAERS' financial position. Over time, increases and decreases in net position are one indicator of whether its financial health is improving or deteriorating.

- **Notes to the Financial Statements** provide important background and detailed information about COAERS, the plan, and the financial statements.

Financial Analysis

Summary of Fiduciary Net Position
December 31, 2019, 2018, 2017

Assets	2019	2018	2017
Cash and receivables	\$ 23,062,058	37,896,037	21,968,064
Investments	2,911,507,641	2,442,224,464	2,629,928,427
Invested securities lending collateral	-	112,048,978	148,922,849
Capital assets, net	5,468,035	6,798,711	4,347,529
Total assets	<u>2,940,037,734</u>	<u>2,598,968,190</u>	<u>2,805,166,869</u>
 Liabilities			
Total liabilities	<u>11,984,658</u>	<u>137,564,753</u>	<u>154,708,753</u>
Net position restricted for pensions	<u>\$ 2,928,053,076</u>	<u>2,461,403,437</u>	<u>2,650,458,116</u>

Assets. As shown in the table above, assets increased \$341.1 million in 2019, and decreased \$206.2 million in 2018, due primarily to the changes in the value of investments.

- During 2019, there was a \$14.8 million decrease in the net amount of cash and receivables, primarily attributable the (\$19.1) million receivable for investment sales pending, the reversal of a similar amount booked in December 2018; this was somewhat offset by a \$3.1 million increase in interest and dividends receivable, a \$0.8 million increase in retirement contributions due from the City, and a \$0.4 million increase in cash. In 2018, there was a \$15.9 million increase in the net amount of cash and receivables at year-end; this resulted from a \$3.2 million decrease in the amount of cash, and a \$19.2 million increase in receivables which included a \$19.9 million increase in trades pending settlement.
- In 2019, investments increased by \$469.3 million, and in 2018, investments decreased by \$187.7 million, reflective of the changes in the financial markets.
- The 2019 decrease in invested securities lending collateral is due to the termination of COAERS' participation in securities lending programs effective 9/30/2019; in 2018, the decrease was \$36.9 million.
- In 2019, the net decrease in capital assets reflects the sale of COAERS' building, and tenant improvements for new leased facility. In 2018, increases in capital assets reflect the continued development of the new pension administration system.

Continued

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Management's Discussion and Analysis (unaudited)

December 31, 2019 and 2018

Liabilities. Liabilities decreased \$125.6 million in 2019, and in 2018, decreased \$17.1 million. These fluctuations were primarily due to changes in trades pending settlement and in securities lending collateral. See further discussion in footnote 3.

Summary of Changes in Fiduciary Net Position Years ended December 31, 2019, 2018, 2017

	2019	2018	2017
Additions:			
Contributions	\$ 187,395,797	175,384,645	167,251,257
Investment income	507,269,478	(151,570,946)	382,719,865
Investment expenses	5,164,777	5,671,206	5,899,840
Net investment income (depreciation)	502,104,701	(157,242,152)	376,820,025
Other income	1,748,804	49	-
Total additions	691,249,302	18,142,542	544,071,282
Deductions:			
Benefit payments and contribution refunds	218,381,375	203,172,854	190,543,262
General and administrative expenses	6,218,288	4,024,367	2,778,290
Total deductions	224,599,663	207,197,221	193,321,552
Net increase (decrease) in net position	466,649,639	(189,054,679)	350,749,730
Net position restricted for pensions:			
Beginning of year	2,461,403,437	2,650,458,116	2,299,708,386
End of year	\$ 2,928,053,076	2,461,403,437	2,650,458,116

Additions. Additions needed to fund benefits are accumulated through contributions and returns on invested funds. Contributions from COAERS members and the City of Austin for 2019 and 2018 totaled \$187.4 million and \$175.4 million, respectively. The 2019 contributions represent an increase of \$12.0 million, or approximately 6.8% above 2018; 2018 contributions represent an increase of \$8.1 million, or approximately 4.9% above 2017. The increase in 2019 was due to an increase in base salaries on which employee and employer contributions are made. The increase in 2018 was also due to an increase in base salaries on which employee and employer contributions are made.

In 2019, COAERS had a net investment income on the market value of its securities of \$502.1 million, an increase of \$659.3 million from 2018. In 2018, the net investment loss on the market value of securities was \$157.2 million, a decrease of \$534.0 million from 2017. In 2019, interest, dividends and net securities lending income generated income of \$41.7 million, a increase from the 2018 income of \$41.3 million. Investment managers' fees are based primarily on assets under management, and, in some cases, also on their cumulative performance; in 2019, fees decreased by \$0.5 million; in 2018, fees decreased by \$0.4 million compared to 2017. The total rate of return (net of fees) for the System's investment portfolio in 2019 was 20.66%; in 2018 it was -5.91%.

Deductions. The expenses paid by COAERS include benefit payments, refunds of member contributions, and administrative expenses.

Continued

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Management's Discussion and Analysis (unaudited)

December 31, 2019 and 2018

Benefits paid in 2019 were \$214.1 million, an increase of \$15.1 million from payments made in 2018, which is consistent with an increase in the number of retirees to 6,703 in 2019. Refunds to terminating employees increased by \$0.1 million. Administrative expenses in 2019 were \$6.2 million, an increase of \$2.2 million, or 54.5% over 2018, primarily due to staffing increases, enhancements in information technology, professional services, and depreciation.

Benefits paid in 2018 were \$199.0 million, an increase of \$12.5 million from payments made in 2017, which is consistent with the 2018 increase in the number of retirees to 6,414, from 6,225 in 2017. Refunds to terminating employees increased by \$0.1 million. Administrative expenses in 2018 were \$4.0 million, an increase of 1.2% from those of 2017.

Overall Analysis. Overall, as of December 31, 2019, net position increased by \$466.6 million, or 19%, from the prior year; over the five-year period ending December 31, 2019, net position increased by 32.5%.

Request for Information

This financial report is designed to provide a general overview of the finances of the City of Austin Employees' Retirement System for all parties with an interest. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to Chief Financial Officer, City of Austin Employees' Retirement System, 6850 Austin Center Boulevard, Suite 320, Austin, Texas 78731.

Concluded

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Statement of Fiduciary Net Position

December 31, 2019

	Retirement Plan	Restoration Plan	Total
Assets			
Cash and cash equivalents (note 3)	\$ 7,086,687	20,000	7,106,687
Receivables			
Interest and dividends receivable	9,606,928	-	9,606,928
Trades pending settlement	1,285,541	-	1,285,541
Employer contributions receivable	3,471,426	-	3,471,426
Employee contributions receivable	1,542,856	-	1,542,856
Other	48,620	-	48,620
Total receivables	15,955,371	-	15,955,371
Investments, at fair value (note 3):			
US Equities	1,016,976,595	-	1,016,976,595
DM Equities	509,929,038	-	509,929,038
EM Equities	243,233,927	-	243,233,927
Fixed income	576,971,414	-	576,971,414
Real assets	359,998,520	-	359,998,520
Multi-asset	148,150,648	-	148,150,648
Short-term investment funds	56,247,499	-	56,247,499
Total investments	2,911,507,641	-	2,911,507,641
Capital assets, net (note 7)	5,468,035	-	5,468,035
Total assets	2,940,017,734	20,000	2,940,037,734
Liabilities			
Payables			
Accrued expenses	1,539,377	-	1,539,377
Trades pending settlement	7,573,828	-	7,573,828
Refunds and death benefits payable	2,871,453	-	2,871,453
Total liabilities	11,984,658	-	11,984,658
Net position restricted for pensions	\$ 2,928,033,076	20,000	2,928,053,076

See accompanying notes to financial statements.

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Statement of Fiduciary Net Position

December 31, 2018

	Retirement Plan	Restoration Plan	Total
Assets			
Cash and cash equivalents (note 3)	\$ 6,652,734	20,000	6,672,734
Receivables			
Interest and dividends receivable	6,545,436	-	6,545,436
Trades pending settlement	20,376,995	-	20,376,995
Employer contributions receivable	2,944,533	-	2,944,533
Employee contributions receivable	1,308,682	-	1,308,682
Other	47,657	-	47,657
Total receivables	31,223,303	-	31,223,303
Investments, at fair value (note 3):			
US Equities	789,247,176	-	789,247,176
DM Equities	411,011,871	-	411,011,871
EM Equities	205,969,980	-	205,969,980
Fixed income	539,699,840	-	539,699,840
Real assets	243,188,632	-	243,188,632
Multi-asset	233,584,945	-	233,584,945
Short-term investment funds	19,522,020	-	19,522,020
Total investments	2,442,224,464	-	2,442,224,464
Invested securities lending collateral (note 3)	112,048,978	-	112,048,978
Capital assets, net (note 7)	6,798,711	-	6,798,711
Total assets	2,598,948,190	20,000	2,598,968,190
Liabilities			
Payables			
Accrued expenses	1,649,710	-	1,649,710
Trades pending settlement	21,498,778	-	21,498,778
Securities lending transactions (note 3)	112,048,978	-	112,048,978
Refunds and death benefits payable	2,367,287	-	2,367,287
Total liabilities	137,564,753	-	137,564,753
Net position restricted for pensions	\$ 2,461,383,437	20,000	2,461,403,437

See accompanying notes to financial statements.

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Statement of Changes in Fiduciary Net Position

Year ended December 31, 2019

	Retirement Plan	Restoration Plan	Total
Additions:			
Contributions:			
Employer contributions (note 6)	\$ 123,609,683	159,829	123,769,512
Employee contributions (note 6)	63,626,285	-	63,626,285
	<u>187,235,968</u>	<u>159,829</u>	<u>187,395,797</u>
Investment income:			
Net appreciation in fair value of investments	465,500,228	-	465,500,228
Interest	13,264,554	-	13,264,554
Dividends	28,083,724	-	28,083,724
Less investment expense other than from securities lending	(5,056,457)	-	(5,056,457)
Net gain from investing, other than from securities lending	<u>501,792,049</u>	<u>-</u>	<u>501,792,049</u>
Securities lending activity:			
Securities lending income	420,972	-	420,972
Less: Securities lending expense	(108,320)	-	(108,320)
Net income from securities lending	<u>312,652</u>	<u>-</u>	<u>312,652</u>
Net investment appreciation	<u>502,104,701</u>	<u>-</u>	<u>502,104,701</u>
Gain on sale of assets	1,744,037	-	1,744,037
Other income	<u>4,767</u>	<u>-</u>	<u>4,767</u>
Total additions	<u>691,089,473</u>	<u>159,829</u>	<u>691,249,302</u>
Deductions:			
Retirement annuities	205,414,880	159,829	205,574,709
Contributions refunded to terminating employees	4,265,174	-	4,265,174
DROP disbursements	4,117,013	-	4,117,013
Retiree lump-sum annuity	1,171,041	-	1,171,041
Death benefits	<u>3,253,438</u>	<u>-</u>	<u>3,253,438</u>
Total benefit payments, including refunds of member contributions	218,221,546	159,829	218,381,375
General and administrative expenses	<u>6,218,288</u>	<u>-</u>	<u>6,218,288</u>
Total deductions	<u>224,439,834</u>	<u>159,829</u>	<u>224,599,663</u>
Net increase in net position	466,649,639	-	466,649,639
Net position restricted for pensions:			
Beginning of year	<u>2,461,383,437</u>	<u>20,000</u>	<u>2,461,403,437</u>
End of year	<u>\$ 2,928,033,076</u>	<u>20,000</u>	<u>2,928,053,076</u>

See accompanying notes to financial statements.

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Statement of Changes in Fiduciary Net Position

Year ended December 31, 2018

	<u>Retirement Plan</u>	<u>Restoration Plan</u>	<u>Total</u>
Additions:			
Contributions:			
Employer contributions (note 6)	\$ 116,485,749	185,569	116,671,318
Employee contributions (note 6)	58,713,327	-	58,713,327
	<u>175,199,076</u>	<u>185,569</u>	<u>175,384,645</u>
Investment income:			
Net decrease in fair value of investments	(193,028,247)	-	(193,028,247)
Interest	14,143,935	-	14,143,935
Dividends	26,656,166	-	26,656,166
Less investment expense other than from securities lending	(5,492,158)	-	(5,492,158)
	<u>(157,720,304)</u>	<u>-</u>	<u>(157,720,304)</u>
Net loss from investing, other than from securities lending			
	<u>(157,720,304)</u>	<u>-</u>	<u>(157,720,304)</u>
Securities lending activity:			
Securities lending income	657,200	-	657,200
Less: Securities lending expense	(179,048)	-	(179,048)
	<u>478,152</u>	<u>-</u>	<u>478,152</u>
Net income from securities lending			
	<u>478,152</u>	<u>-</u>	<u>478,152</u>
Net investment depreciation	(157,242,152)	-	(157,242,152)
	<u>(157,242,152)</u>	<u>-</u>	<u>(157,242,152)</u>
Other income	49	-	49
	<u>49</u>	<u>-</u>	<u>49</u>
Total additions	<u>17,956,973</u>	<u>185,569</u>	<u>18,142,542</u>
Deductions:			
Retirement annuities	192,718,935	185,569	192,904,504
Contributions refunded to terminating employees	4,140,909	-	4,140,909
DROP disbursements	2,767,441	-	2,767,441
Retiree lump-sum annuity	727,000	-	727,000
Death benefits	2,633,000	-	2,633,000
	<u>202,987,285</u>	<u>185,569</u>	<u>203,172,854</u>
Total benefit payments, including refunds of member contributions			
	<u>202,987,285</u>	<u>185,569</u>	<u>203,172,854</u>
General and administrative expenses	4,024,367	-	4,024,367
	<u>4,024,367</u>	<u>-</u>	<u>4,024,367</u>
Total deductions	<u>207,011,652</u>	<u>185,569</u>	<u>207,197,221</u>
Net decrease in net position	(189,054,679)	-	(189,054,679)
Net position restricted for pensions:			
Beginning of year	2,650,438,116	20,000	2,650,458,116
	<u>2,650,438,116</u>	<u>20,000</u>	<u>2,650,458,116</u>
End of year	\$ 2,461,383,437	20,000	2,461,403,437
	<u><u>2,461,383,437</u></u>	<u><u>20,000</u></u>	<u><u>2,461,403,437</u></u>

See accompanying notes to financial statements.

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

(1) Plan Description

Plan administration. The City of Austin Employees' Retirement System (COAERS, or, the System) administers the City of Austin Employees' Retirement (the Plan), a single-employer defined benefit pension plan that provides pensions for eligible employees of the City of Austin.

The System was created under Article 6243n, Vernon's Texas Civil Statutes (the Pension Statute), as amended.

The Pension Statute grants the authority to establish and amend the benefit terms to the Texas State Legislature.

Management of the Plan is vested in the eleven-member COAERS Board of Trustees, which is composed of:

- 4 active members elected by the active membership
- 2 retired members elected by the retired membership
- 2 City Council Appointed Citizen Members
- 1 Board Appointed Citizen Member
- 1 City Manager of the City of Austin or Designee
- 1 City Council Member

Plan membership. Participating employees include all regular, full-time employees who work at least 30 hours per week, except for civil service firefighters and civil service police officers. At December 31, 2019, 2018, and 2017, membership consisted of the following:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Inactive plan members or beneficiaries currently receiving benefits	6,703	6,414	6,225
Inactive plan members entitled to but not yet receiving benefits	3,057	2,851	2,657
Active plan members	<u>10,149</u>	<u>9,838</u>	<u>9,612</u>
Total plan members	<u>19,909</u>	<u>19,103</u>	<u>18,494</u>

Benefits provided. The System provides service retirement, death, disability, and withdrawal benefits. Benefits vest with five years of creditable service.

Membership in the System is comprised of two benefit tiers: Group A and Group B.

Group A members continue under the plan originated in 1941. Participants may retire at age 62, at age 55 with 20 years of service, or at any age with 23 years of service. Prior to October 1, 1999, the monthly benefit was equal to 2.6% of the highest 36-month average annual salary of the last ten years multiplied by years and months of service. Effective October 1, 1999, the monthly benefit multiplier was increased to 2.7%. Effective April 1, 2000, the monthly benefit multiplier was increased to 2.98%. Effective January 1, 2002, the monthly benefit multiplier was increased to 3.0%. Effective January 1, 2001, the System approved a 3.5% ad hoc retiree increase and a 2.5% increase effective January 1, 2002.

Continued

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

Group B members are employees who were hired on and after January 1, 2012, with the following provisions:

- Normal retirement eligibility at age 65 with 5 years of service credit; or at age 62 with 30 years of service credit;
- Early reduced retirement eligibility at age 55 with 10 years of service credit;
- An annuity formula multiplier of 2.5%;
- The purchase of nonqualified permissive service (supplementary service credit) for annuity calculations only, not for eligibility purposes.

The following apply to both Group A and Group B:

- Effective in 2002, a Member may elect to retroactively participate in the System's Backward DROP (Deferred Retirement Option Program). This program benefits retiring employees by allowing a lump-sum payment in lieu of additional creditable service time after reaching retirement eligibility. The Member would receive a lump-sum payment equal to 90% of the sum of the monthly annuities the participant would have received if the member had retired at the DROP entry date. While the nomenclature used in the Pension Statute resembles that of an arrangement requiring additional disclosures under GASB 67, the COAERS Backward Drop benefit is technically different.
- The lump-sum death benefit payable upon the death of a retiree is \$10,000.
- There is no guaranteed cost of living increase.

Contributions. Prior to October 1, 1999, active member contributions to the Plan were 7%. Effective October 1, 1999, active member contributions increased to 8%. Currently, all Participants are required to contribute 8% of their base compensation to the Plan. The City of Austin (the City) also contributes 8% of base compensation. The benefit and contribution provisions of this plan are governed by state law. Amendments may be made by the Legislature of the State of Texas. Should the Plan fully terminate at some future time, the retirement allowance of a member would be determined by reference to the member's average final compensation as if the member had attained normal retirement age on that date.

Pursuant to the 2005 COAERS Supplemental Funding Plan and beginning in October 2006, the City contributed an additional 4% subsidy for their 2010 fiscal year ended September 30, 2010. An Amended Supplemental Funding Plan (ASFP), adopted by the City Council in October 2010, incrementally increased the supplemental contribution to the Plan from 6% of base compensation to 10% of base compensation effective October 1, 2012 for fiscal year 2012-13, and each fiscal year thereafter.

Under the terms of the Plan, the System's employees obtain membership in the Plan on the same basis as City employees. Accordingly, the System contributes 8% of base employee compensation to the Plan, plus a 10% subsidy, as described above, for its 23 current employees; System employees also contribute 8% of their base compensation to the Plan. Since there is only one Plan, all actuarial calculations are provided on an aggregate basis. The System's annual pension cost for its employees and related contributions made for the past three years are:

		Annual pension cost	Contributions made
2019	\$	406,210	406,210
2018		283,937	283,937
2017		232,567	232,567

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CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

The System participates in the Proportionate Retirement Program through which a member of the System may meet requirements for service retirement eligibility by combining COAERS membership service with service credit from the following participating entities: City of Austin Police Retirement System, The El Paso City Employees' Pension Fund and Firemen and Policemen's Pension Fund, Employees' Retirement System of Texas, Judicial Retirement System of Texas I & II, Texas Municipal Retirement System, Texas County and District Retirement System, Teacher Retirement System of Texas, or any other Texas retirement systems covering municipal employees who have qualified plans and have elected to participate in the Proportionate Retirement Program. A limited proportionate service arrangement was established in 2007 between COAERS and individuals who have membership in a retirement system within the Travis County Healthcare District.

Restoration Plan

On November 23, 1999, the Board adopted a resolution to establish a "Restoration of Retirement Income Plan for Certain Participants in the City of Austin Employees' Retirement System" (Restoration Plan).

This Restoration Plan is effective as of January 1, 2000, and is intended to be a "qualified governmental excess benefit arrangement" within the meaning of Section 415(m) of the Internal Revenue Code, and shall be construed, interpreted and administered in accordance with such provision. The Restoration Plan shall be administered as an unfunded plan which is not intended to meet the qualification requirements of Section 401 of the Internal Revenue Code. Eligible members are those who are members in the Plan whose pension or pension-related benefits under the Plan are limited due to the provision of Section 415 of the Internal Revenue Code.

All benefits payable under this Restoration Plan shall be paid by the City of Austin Employees' Retirement System from contributions provided by the employer and not from the Fund or any other trust unless such trust is maintained solely for the purpose of providing benefits from this Restoration Plan. No contribution receivable is due for the years ended December 31, 2019 and 2018, for this Restoration Plan. Assets remaining in this plan as of December 31, 2019 and 2018, were \$20,000.

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CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

The Restoration Plan's annual pension cost and related contributions for the past three years are:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Annual pension cost	\$ 159,829	185,569	211,083
Contributions made	\$ 159,829	185,569	211,083

At December 31, 2019, 2018, and 2017, membership in the Restoration Plan included the following:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Retirees and beneficiaries currently receiving benefits	16	16	18

Other Information

The System is required by the Pension Statute to maintain two separate funds in its internal accounting records. The first fund, defined in the statute as "Fund 1", shall be maintained to account for all accumulated deposits (contributions and interest) of Members who have not withdrawn from the System. The second fund, defined as "Fund 2", shall be maintained to account for all other net assets of the System less the amount held in "Fund 3"; this third fund is maintained to account for accumulated contributions by the employer for the Internal Revenue Code Section 415 Restoration Plan as adopted by Board Resolution on November 23, 1999. At December 31, 2019, the balances of Fund 1, Fund 2, and Fund 3 were \$573,063,331, \$2,354,969,745, and \$20,000, respectively. At December 31, 2018, the balances of Fund 1, Fund 2, and Fund 3 were \$550,236,700, \$1,911,146,737, and \$20,000, respectively.

(2) Summary of Significant Accounting Policies and System Asset Matters

The System is not included in any other governmental "reporting entity" as defined by the Governmental Accounting Standards Board (GASB). The System has no component units and is not a component unit of any other entity.

(a) Basis of Accounting

The System's financial statements are prepared using the economic resources measurement focus and the accrual basis of accounting. Contributions are recognized when due pursuant to formal commitments, as well as statutory or contractual requirements; accordingly, contributions are recognized as revenues in the period in which the employer reports compensation for their employees. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

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CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

(b) Cash and Cash Equivalents

Cash and cash equivalents include demand deposit accounts and money market checking accounts. As of December 31, 2019 and 2018, the book balances of the demand deposit accounts totaled \$7,106,687 and \$6,672,434, respectively.

(c) Method Used to Value Investments

Plan investments are reported at fair value. Fair value is the amount at which an investment could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. Refer to Note 5(c) for more detail regarding the System's policy on accounting for investments.

(d) Contributions Receivable

The employee and City contributions for the years ended December 31, 2019 and 2018 that were not deposited with the System by year-end and are shown as contributions receivable.

(e) Capital Assets

Capital assets are recorded at cost. The System capitalizes all computers and electronic equipment purchased as well as any other assets greater than \$1,000. Depreciation is computed using the straight-line method over the assets' estimated useful lives – Furniture and Equipment are scheduled with a useful life from three to twelve years, and, prior to its sale, the building was scheduled with a 40-year life.

(f) System Expenses

Substantially, all System administrative costs are the responsibility of the System. The administrative costs are funded through the investment income.

(g) Use of Estimates

The preparation of financial statements in conformity with United States Generally Accepted Accounting Principles (GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

(h) Reclassification

Reclassification of certain prior year investment amounts has been made to conform with current-year presentation.

(3) Deposit and Investment Risk Disclosure

Deposit and investment resources are exposed to risks that have the potential to result in losses that could impact delivery of System services. The Board has adopted an Investment Policy Statement and Investment Implementation Policy to set forth the factors involved in the management of investment assets for the

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CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

Implementation Policy to set forth the factors involved in the management of investment assets for the System. This policy is incorporated by reference into every investment management agreement. The document is designed to mitigate risk by requiring that investing be done in compliance with policy guidelines by qualifying the broker and financial institution with whom the System will transact, and by establishing sufficient collateralization, portfolio diversification, and limiting maturity. The System's Board, in accordance with the power and authority conferred under the Texas Statutes, has employed The Northern Trust Company as the master custodian of the assets of the System. The following summary of total investments by type as of December 31, 2019 and 2018, presents the System's investment mixes.

	2019	2018
Summary of investments by type:		
Global equities:		
US equities	\$ 1,439,916,386	1,148,033,726
Developed markets equities	330,223,174	258,195,301
	<u>1,770,139,560</u>	<u>1,406,229,027</u>
Fixed income:		
Commercial mortgage-backed securities	-	10,409,964
Corporate bonds	229,673,712	209,431,437
Government agencies	-	1,393,027
Government bonds	252,107,428	63,818,127
Government mortgage-backed securities	95,190,274	93,795,192
Other fixed income:		
NT Collective Aggregate Bond Index Fund - Non-Lending	-	160,852,093
	<u>576,971,414</u>	<u>539,699,840</u>
Real assets:		
Real estate equity		
US REITs	144,864,034	-
Real estate fund	142,896,881	243,188,632
	<u>287,760,915</u>	<u>243,188,632</u>
Infrastructure equity		
US equities	39,387,899	-
Developed markets equities	32,849,706	-
	<u>72,237,605</u>	<u>-</u>
Multi-asset:		
Strategic partnership	148,150,648	121,525,284
Risk parity	-	112,059,661
Cash and Equivalents	<u>56,247,499</u>	<u>19,522,020</u>
Investments at fair value on balance sheet	<u>2,911,507,641</u>	<u>2,442,224,464</u>
Receivables and pending trades, net	<u>3,318,641</u>	<u>5,423,653</u>
Total investments (per investment consultant)	<u>\$ 2,914,826,282</u>	<u>2,447,648,117</u>

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CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

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 its deposits or will not be able to recover collateral securities that are in the possession of an outside party. While the Investment Policy Statement addresses investment risk, COAERS' operating bank account deposits in excess of Federal Deposit Insurance Corporation (FDIC) insured amounts are backed by US government, treasury and agency securities, repurchase agreements, and pledged securities held as collateral.

As of December 31, 2019 and 2018, the System's operating bank balances of \$7,106,687, and \$6,672,434, respectively, were not exposed to custodial credit risk.

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, the System will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial risk if the securities are uninsured, are not registered in the name of the System, and are held by the counterparty, its trust or agent, but not in the System's name. The System's investment securities are not exposed to custodial credit risk because all securities are held by the System's custodial bank in the System's name. In September 2019, the Board of Trustees voted to terminate the Securities Lending Authorization Agreement with Northern Trust. At December 31, 2018, the System was not materially exposed to credit risk through security lending.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer. The System is authorized to invest in the following as of December 31, 2019:

(a) Global Equity Investments

The aggregate exposure to the global equity asset class should be no less than 45% and may not exceed 65% of the portfolio:

- Domestic equity investments should total no less than 20%, and no more than 45%, of the investment portfolio measured at fair value.
- Developed market investments should total no less than 10%, and no more than 19% of total value of the System's investments at fair value.
- Emerging market equity investments should total no less than 3%, and no more than 15% of the investment portfolio measured at fair value.

No single company's securities shall represent more than 6% of the market value of any manager's portfolio.

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CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

(b) Fixed Income Investments

Fixed income investment should be no less than 15% and no more than 32% of the investment portfolio measured at fair value. No single issuer's securities shall represent more than 6% of the Portfolio at market. This restriction also applies to asset-backed securities, non-agency mortgage-backed securities (including commercial mortgage-backed securities) and taxable municipal securities. This restriction does not apply to any agency mortgage-backed securities (including agency commercial mortgage-backed securities). The total holdings of a federal agency-issued mortgage-backed security of the same coupon and maturity series of the same agency, (i.e., issuance by issuance as identified by the same CUSIP), shall not exceed 20% of the Portfolio at market (such securities include, but are not limited to, those issued by Government National Mortgage Association (GNMA), Federal National Mortgage Association (FNMA), and Federal Home Loan Mortgage Corporation (FHLMC)). The direct debt of the U.S. government (Treasury bonds, TIPS, bills and notes) and its agencies (including any mortgage-backed securities issued or guaranteed by GNMA, FNMA and FHLMC) shall not be restricted as a percentage of the Portfolio.

Fixed income portfolios will be invested in publicly traded fixed income securities unless otherwise authorized by the Board. Fixed income Managers may be exempted from the requirement to not have cash exceed 5% of the Portfolio value to allow the use of "barbell" strategies in constructing a fixed income Portfolio.

SEC Rule 144(a) fixed income securities are allowable but private placement bonds are not.

(c) Real Assets Investments

The aggregate exposure to Real Assets classes should total no less than 10%, and no more than 20% of the portfolio:

- Total investments in Real Estate Equity, while not exposed to concentration of credit risk, should be no less than 5% and no more than 15% of the investment portfolio measured at fair value.
- Infrastructure investments should total no more than 10% of the investment portfolio measured at fair value.

(d) Multi-Asset Investments

The aggregate exposure to Multi-Asset classes should total no less than 5%, and no more than 14% of the portfolio:

- Strategic Partnership investments should total no less than 2.5%, and no more than 10% of the investment portfolio.
- Other Multi-Asset investments should total no less than 2.5%, and no more than 9% of the investment portfolio measured at fair value.

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CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

(e) Cash

Cash investments should total no more than 10.0% of the investment portfolio measured at fair value.

(f) Other Investment Information

As of December 31, 2019 and 2018, the following was the composition of the System's portfolio:

	2019	2018
US equities	49.46%	47.01%
Developed markets equities	11.34%	10.57%
Fixed income:		
Commercial mortgage-backed securities	-	0.42%
Corporate bonds	7.89%	8.58%
Government agencies	-	0.06%
Government bonds	8.66%	2.61%
Government mortgage-backed securities	3.27%	3.84%
Other fixed income:		
NT Collective Aggregate Bond Index Fund - Non-Lending	-	6.59%
Real estate equity		
US REITs	4.97%	-
Real estate institutional mutual fund	4.91%	9.96%
Infrastructure equity		
US equities	1.35%	-
International equities	1.13%	-
Strategic partnership	5.09%	4.97%
Multi-asset	-	4.59%
Short-term investment funds	1.93%	0.80%
	<u>100.00%</u>	<u>100.00%</u>

The asset allocation policy noted in footnote 3 (a to d) is based on the type of portfolio managers. The composition percentages in this table reflect the classification of investments for GASB 40 presentation purposes. Certain amounts have been reclassified from international to U.S. equities as they are denominated in U.S. dollars.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The System does not have a formal policy regarding interest rate risk, i.e., maturities of investments by type, but its Investment Policy requires fixed income managers to disclose their credit exposure and portfolio duration in their quarterly reports. The System monitors credit exposure using segmented time distribution. Mortgage obligations are sensitive to changes in prepayments, which may arise from a change in duration.

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CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

As of December 31, 2019, the System had the following investments and maturities:

Investment type	Fair value	Less than 1 year	1 to 6 years	6 to 10 years	10+ years
Corporate bonds	\$ 229,673,712	1,949,978	94,429,647	56,138,464	77,155,623
Government bonds	252,107,428	31,310,320	59,210,984	54,731,934	106,854,190
Government mortgage-backed securities	95,190,274	-	109,535	3,065,435	92,015,304
	<u>\$ 576,971,414</u>	<u>33,260,298</u>	<u>153,750,166</u>	<u>113,935,833</u>	<u>276,025,117</u>

As of December 31, 2018 the System had the following investments and maturities:

Investment type	Fair value	Less than 1 year	1 to 6 years	6 to 10 years	10+ years
Commercial mortgage-backed securities	\$ 10,409,964	-	-	-	10,409,964
Corporate bonds	209,431,437	1,870,773	147,113,746	35,884,630	24,562,288
Government agencies	1,393,027	-	928,098	464,929	-
Government bonds	63,818,127	-	39,569,284	1,325,208	22,923,635
Government mortgage-backed securities	93,795,192	19,067	99,510	4,098,736	89,577,879
Other fixed income:					
NT Collective Aggr Bond Index Fund	160,852,093	2,107,162	64,019,133	69,488,105	25,237,693
	<u>\$ 539,699,840</u>	<u>3,997,002</u>	<u>251,729,771</u>	<u>111,261,608</u>	<u>172,711,459</u>

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to the System. To control credit risk, credit quality guidelines are incorporated into the Investment Policy, as follows:

- Fixed income securities shall not be rated lower than investment grade (Baa3 by Moody's or BBB- by Standard & Poor's or Fitch) by any of the three designated rating agencies unless authorization is granted to a Manager by the Board or the mandate provided to a Manager specifies otherwise.
- Split-rated securities in which the middle rating is below investment grade shall not comprise more than 5% of the market value of any manager's portfolio unless specific authority has been granted.
- The issues of individual entities rated AAA to Aa3 (Moody's) or AA- (Standard & Poor's or Fitch) may have a 7% position at market value.
- Issues of individual entities rated below Aa3 (Moody's) or AA- (Standard & Poor's or Fitch) may have a 3% position at market value.

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CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

- The ratings criteria and percentage limit requirements do not apply to direct obligations of the US government and its agencies (including GNMA, FNMA and FHLMC) as defined in the Permissible Investments section of Investment Implementation Policy, but the securities issued by any one issuer shall not otherwise, in the aggregate, exceed the foregoing limitations.
- If specific managers are given latitude to invest in securities issued by non-US entities, the same quality restrictions apply.
- Money market instruments shall have a minimum quality rating comparable to an A3 (Moody's) or A- (Standard & Poor's or Fitch) bond rating and commercial paper shall be rated A1/P1 unless held in a diversified short-term commingled fund.

The quality ratings of investments in fixed income securities as described by nationally recognized statistical rating organizations at December 31, 2019, are as follows:

Standard & Poor's Quality Rating	Total fair value	Corporate bonds	US govt & agencies
AAA	\$ 105,911,667	10,721,393	95,190,274
AA	18,228,137	18,228,137	-
A	80,700,270	80,700,270	-
BBB	119,270,893	119,270,893	-
BB	753,019	753,019	-
Total credit risk of debt securities	\$ 324,863,986	229,673,712	95,190,274
US govt. & agencies*	252,107,428		
Total	\$ 576,971,414		

The quality ratings of investments in fixed income securities as described by nationally recognized statistical rating organizations at December 31, 2018, are as follows:

Standard & Poor's Quality Rating	Total fair value	Commercial mortgage- backed	Corporate bonds	US govt & agencies	Municipal bonds	NT Collective Aggregate Bond Index Fund
AAA	\$ 223,669,139	10,409,964	1,628,565	93,795,192	-	117,835,418
AA	14,020,683	-	6,569,337	464,929	2,355,485	4,630,932
A	90,297,718	-	71,735,218	-	1,700,375	16,862,125
BBB	151,950,033	-	129,498,317	928,098	-	21,523,618
Total credit risk of debt securities	\$ 479,937,573	10,409,964	209,431,437	95,188,219	4,055,860	160,852,093
US govt & agencies*	59,762,267					
Total	\$ 539,699,840					

* Obligations of the US government or obligations explicitly guaranteed by the US government are not considered to have credit risk and do not have purchase limitations.

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CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit.

The System's currency risk exposure, or exchange rate risk, primarily resides within the System's international equity investment holdings. The System's Investment Policy is to allow its external managers to decide what action to take regarding their respective portfolio.

The System's exposure to foreign currency risk includes the following international securities (all equity) as of December 31, 2019 and December 31, 2018:

Currency	2019		2018	
		Fair value		Fair value
UK Pound Sterling	\$	106,097,087		82,171,014
Euro		75,639,786		50,374,907
Japanese Yen		59,895,013		48,326,006
Swiss Franc		38,032,542		29,336,097
Hong Kong Dollar		22,928,004		17,479,777
Canadian Dollar		20,531,858		7,879,825
Danish Krone		16,287,492		10,923,407
Australian Dollar		15,795,221		7,155,936
Singapore Dollar		3,579,299		1,184,630
Swedish Krona		1,986,950		1,839,134
Israeli Shekel		809,010		525,820
New Zealand Dollar		781,723		361,122
Norwegian Krone		708,895		637,626
Total securities subject to foreign currency risk	\$	<u>363,072,880</u>		<u>258,195,301</u>

Foreign Currency Options

The System periodically invests in foreign currency options in order to hedge the value of a portion of its investments denominated in foreign currencies. Financial options are an agreement giving one party the right, but not the obligation, to buy or sell a specific amount of an asset for a specified price on or before a specified expiration date. The foreign currency options held by the System entitle the System to convert the value of certain foreign equities into US dollars at an agreed rate. At December 31, 2019 and 2018, the System held no foreign currency options.

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CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

Securities Lending

In September 2019, the Board of Trustees voted to terminate the Securities Lending Authorization Agreement with Northern Trust as it was no longer aligned with the current COAERS investment strategy. At December 31, 2019, COAERS no longer participated in securities lending programs.

Prior to the termination of the program, the System was authorized under its Investment Policy to participate in securities lending programs through Northern Trust Investments under which, for an agreed-upon fee, System-owned investments were loaned to a borrowing financial institution. Under this agreement, when the loan closed, the borrowed securities were returned to the System and the collateral was returned to the borrower. The lending agreement required securities on loan to be collateralized by cash, US government securities, or irrevocable letters of credit with a total market value of at least 102% of the loaned System securities. For global securities pledged as collateral, total market value could not be less than 105%. The System could not sell or pledge the non-cash collateral unless a default of the securities lending agreement had occurred.

Cash collateral could be invested in a short-term investment pool or in term loans. The term loans could be terminated on demand by either lender or borrower. At December 31, 2018, System investments in possession of a borrowing financial institution were collateralized by cash and irrevocable letters of credit. The cash collateral was invested in a short-term investment pool with an average weighted maturity approximating the maturity of the security loans. There were no significant violations of legal or contractual provisions, and no borrower or lending agent default for fiscal years 2018.

As of December 31, 2018, the System owned the following securities that were in possession of a borrowing financial institution:

	2018	
	Fair value of loaned securities	Cash collateral received
US equities	\$ 67,884,525	69,250,921
International equities	2,018,066	2,126,002
US corporate fixed	8,591,351	8,771,436
US government fixed	31,321,864	31,900,619
Total	<u>\$ 109,815,806</u>	<u>112,048,978</u>

Cash collateral received from borrowers of securities is invested in accordance with COAERS' securities lending agreement. As of December 31, 2018, cash collateral was invested in the following categories:

	2018
Investment Category	
Cash and other liquid assets	16,235,897
Asset-backed securities	16,213,487
Commercial paper	11,294,537
Repurchase agreements	12,123,699
Certificates of deposit	8,403,673
US government & agencies	717,114
Domestic corporate fixed-income securities	47,060,571
Total cash collateral received	<u>112,048,978</u>

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CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

(4) Fair Value Measurement

In accordance with GASB 72, COAERS categorizes the fair value measurements of its investments within a fair value hierarchy as established by generally accepted accounting principles. Fair value measurements are classified as Level 1, Level 2 or Level 3, based on the inputs utilized to establish fair value:

Level 1 inputs are based on quoted prices (unadjusted) in active markets for identical assets or liabilities in active markets that an entity can access at the measurement date.

Level 2 inputs (other than quoted prices included within Level 1) are observable for similar assets or liabilities, but not traded in active markets.

Level 3 inputs are developed by the reporting entity based on unobservable inputs for an asset or liability.

For investments in certain entities that calculate net asset value and do not have a readily determinable fair value, fair value reporting is permitted based on the NAV per share (or its equivalent) as a practical expedient, where certain conditions are met. These investments are not included in the leveling hierarchy.

The categorization of investments described above is based solely upon the objectivity of the inputs used, to reflect their relative reliability in the measurement of an investment's fair value, and does not reflect the level of risk associated with the investment.

All equities securities, which include Domestic Fixed Income Collective Trusts, U.S. Denominated, International, Emerging Markets, Real Estate, and Infrastructure, are classified in Level 1 of the fair value hierarchy as these are valued using daily quoted prices in active markets for those investments.

The investments classified in level 2 of the fair value hierarchy have available prices but are not traded in an active market. Short-term investment funds, domestic fixed income, and securities lending collateral, all fall into this category based on this criteria. Additionally, the short-term investment fund is a highly liquid instrument that is priced based on the fair values of its underlying investments which are less liquid than equities such as bonds or real estate.

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CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

COAERS' investments and securities lending collateral reinvested have the following fair value measurements as of December 31, 2019 and 2018, respectively.

Investments at fair value:	2019				
	Fair value measurements using				
	Total	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Net asset value (NAV)
Cash & Equivalents					
Short-term investment funds	\$ 56,247,499	-	56,247,499	-	-
Fixed income					
Corporate bonds	229,673,712	-	229,673,712	-	-
Government bonds	252,107,428	-	252,107,428	-	-
Government mortgage-backed securities	95,190,274	-	95,190,274	-	-
	576,971,414	-	576,971,414	-	-
Global equities					
US equities					
US equities	622,471,159	622,471,159	-	-	-
US equity collective trust	453,161,357	453,161,357	-	-	-
	1,075,632,516	1,075,632,516	-	-	-
Developed markets equities					
Developed markets equities	330,223,174	330,223,174	-	-	-
Developed markets equity mutual fund	121,049,943	121,049,943	-	-	-
	451,273,117	451,273,117	-	-	-
Emerging markets equities					
Emerging markets collective trust	112,794,470	112,794,470	-	-	-
Emerging markets equity mutual fund	130,439,457	130,439,457	-	-	-
	243,233,927	243,233,927	-	-	-
Real assets					
Real estate equity					
US REITS	144,864,034	144,864,034	-	-	-
Real estate institutional mutual fund	142,896,881	142,896,881	-	-	-
	287,760,915	287,760,915	-	-	-
Infrastructure equity					
US equities	39,387,899	39,387,899	-	-	-
International equities	32,849,706	32,849,706	-	-	-
	72,237,605	72,237,605	-	-	-
Multi-asset					
Strategic partnership collective funds	148,150,648	148,150,648	-	-	-
Total investments by fair value level	2,911,507,641	2,278,288,728	633,218,913	-	-
Total investments	\$ 2,911,507,641				
Invested securities lending collateral	-	-	-	-	-

Continued

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

2018					
Fair value measurements using					
Investments at fair value:	Total	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Net asset value (NAV)
Short-term investment funds	\$ 19,522,020	-	19,522,020	-	-
Fixed income					
Commercial mortgage-backed securities	10,409,964	-	10,409,964	-	-
Corporate bonds	209,431,437	-	209,431,437	-	-
Government agencies	1,393,027	-	1,393,027	-	-
Government bonds	63,818,127	-	63,818,127	-	-
Government mortgage-backed securities	93,795,192	-	93,795,192	-	-
Domestic fixed income collective trust	160,852,093	160,852,093	-	-	-
	539,699,840	160,852,093	378,847,747	-	-
Global equities					
US equities					
US equities	606,989,897	606,989,897	-	-	-
US equity collective trust	237,535,669	237,535,669	-	-	-
	844,525,566	844,525,566	-	-	-
Developed markets equities					
Developed markets equities	258,195,301	258,195,301	-	-	-
International equity mutual fund	97,538,181	97,538,181	-	-	-
	355,733,482	355,733,482	-	-	-
Emerging markets equities					
Emerging markets collective trust	104,136,169	104,136,169	-	-	-
Emerging markets equity mutual fund	101,833,810	101,833,810	-	-	-
	205,969,979	205,969,979	-	-	-
Real assets					
Real estate	243,188,632	243,188,632	-	-	-
Multi-asset					
Strategic partnership collective funds	121,525,284	121,525,284	-	-	-
Total investments by fair value level	2,330,164,803	1,931,795,036	398,369,767	-	-
Investments measured at NAV:					
Multi-asset					
Risk Parity limited partnership	112,059,661	-	-	-	112,059,661
Total investments	2,442,224,464				
Invested securities lending collateral	\$ 112,048,978	-	112,048,978	-	-

Investments measured at the net asset value (NAV)				
2018	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Risk parity limited partnership	112,059,661	-	Weekly and LBD	5 business days

The risk parity investment with AQR Capital Management is a limited partnership, multi-asset fund that delivers exposure to a risk parity asset allocation strategy. This institutional commingled vehicle is structured as Delaware limited partnership that offers liquidity on a weekly basis with notice.

Continued

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

(5) Pension Plan Investments

(a) Investment Policy

The Board has the authority to establish the investment policy and the asset allocation policy. The general investment objective is to obtain a reasonable long-term total return consistent with the degree of risk assumed, while emphasizing the preservation of capital.

(b) Asset Allocation

The System's strategic asset allocation targets as of December 31, 2019 and 2018, as adopted by the Board of Trustees, are as follows:

	<u>2019</u>	<u>2018</u>
US equities	32.0%	32.0%
Developed markets equities	15.0%	15.0%
Emerging markets equities	8.0%	8.0%
Fixed income	20.0%	20.0%
Real estate	10.0%	10.0%
Infrastructure	5.0%	5.0%
Strategic partnership	5.0%	5.0%
Multi-Asset	4.0%	-
Risk parity	-	5.0%
Cash & equivalents	1.0%	0.0%
	<u>100.0%</u>	<u>100.0%</u>

During 2019, the Board approved a new asset allocation and continued restructuring the fund which involved the termination of certain existing investment managers and the hiring of new ones.

(c) Method Used to Value Investments

- The System's equity and fixed income investments are reported at fair value based on independent pricing services.
- Short-term cash investments are reported at cost, which approximates fair value.
- International securities are reported at fair value in US dollars converted at current exchange rates.
- Investments that do not have an established market are valued based on the net asset value provided by independent audits.
- The System's portfolio includes the Mellon Dynamic US Equity Fund, Mellon Dynamic Global ex-USA Equity Strategy Fund, Legal & General Investment Management America Russell 2000 Index Fund, Legal & General Investment Management America S&P 500 Index Fund, Loomis Sayles Investment Grade Intermediate Corporate Bond Trust Fund, and Prudential US Corporate Bond Fund. The investments are held as shares of the respective collective investment trust, and pricing of securities and financial instruments is according to each funds' established framework to ensure a fair, accurate and consistent valuation.

Continued

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

- The System's exposure to international emerging markets comes through two funds: one managed by Legal & General Investment Management America and Baillie Gifford Overseas. These investments are commingled arrangements where assets are pooled with other institutional investors and then unitized with the value of the units determined by the fair value of the entire pool.
- The System also invests in the Northern Trust Investments MSCI World ex US Small Cap Index Fund that may hold units of participation in any equity collective fund established and maintained by the Trustee or any of its affiliates. The Trustee values its securities at fair value; any securities for which no current market quotation is readily available are valued at fair value as determined in good faith by the Trustee.
- The System's real estate commingled fund is an open-end investment fund that includes properties that are valued monthly; all properties within this fund are appraised externally by nationally recognized appraisers.
- The System's strategic partnership with BlackRock Institutional Trust Company invests in BlackRock managed funds. Each fund's net asset value is based on the market value of the fund's assets on the valuation date minus the Fund's liabilities on the valuation date. The fund's unit value is calculated by dividing the Fund's net asset value on the valuation date by the number of units of the Fund that are outstanding on the valuation date.
- Investment income is recognized in the period earned and purchases and sales of investments are recorded on a trade-date basis. Net appreciation/depreciation in Plan investments includes both realized and unrealized gains and losses.

(d) Rate of Return

For the year ended December 31, 2019, the annual money-weighted rate of return on System investments net of pension plan investment expense was 20.86%, an increase from -5.8% at December 31, 2018. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

(e) Concentrations

If the pension plan held investments (other than those issued or explicitly guaranteed by the U.S. government, commingled funds, and other pooled investments) in any one organization representing 5% or more of the pension plan's fiduciary net position, the pension plan should disclose this information. At December 31, 2019 and 2018, there are no holdings that exceeded this disclosure trigger.

(6) Contributions and Funding Policy

As of December 31, 2019 and 2018, the System's contribution policy, as guided by state law, requires contributions equal to 8% of base compensation by the participants and by the City.

While the contribution requirements are not actuarially determined, state law requires that each plan of benefits adopted by the System must be approved by a qualified actuary. The actuary certifies that the contribution commitment by the participants and the City provides an adequate financing arrangement.

Continued

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

Using the entry age actuarial cost method, the System's normal cost is determined as a percentage of payrolls. The excess of the total contribution rate over the normal cost rate is used to amortize the System's unfunded actuarial accrued liability, if any exists, and the number of years needed to amortize the System's unfunded actuarial accrued liability is determined using a level percentage of payroll method.

The funding objective of the System is for contribution rates to be sufficient to cover the normal cost of the Plan and to amortize any unfunded actuarial accrued liabilities over a period not to exceed 25 years.

In 2005, the City of Austin City Council approved a Supplemental Funding Plan (SFP) relating to the System. The basic elements of this plan provided for an initial 1% contribution from the City beginning in October 2006, and increasing 1% each year until reaching a cap of 4%. This additional funding would continue as long as necessary and in an amount necessary, up to 4%, to sustain a 25-year funding period. While compliance with the SFP continued into 2010, the negative impact of 2008 capital markets on the Plan rendered the effect of SFP, the contributions of which had reached the 4% maximum, inadequate to achieve the System's funding goal.

An Amended Supplemental Funding Plan, adopted by the City Council in October 2010, increased the total employer contribution to the System to 14% of base compensation effective October 1, 2010. The Amended Supplemental Funding Plan also increases future employer contributions as follows: 16% of base compensation effective October 1, 2011 for fiscal year 2011-12; and 18% of base compensation effective October 1, 2012 for fiscal year 2012-13, and each fiscal year thereafter.

Continued

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

(7) Capital Assets

The following summarizes the capital asset account balances as of December 31, 2019 and December 31, 2018, and changes to the accounts during the years then ended:

	Balance December 31, 2017	Net Change	Balance December 31, 2018	Net Change	Balance December 31, 2019
Capital assets not being depreciated:					
Land	\$ 249,964	-	249,964	(249,964)	-
Capital assets being depreciated:					
Building	1,198,925	26,098	1,225,023	(1,225,023)	-
Furniture and fixtures	498,916	6,100,896	6,599,812	58,896	6,658,708
Work in Progress	3,384,724	(3,384,724)	-	-	-
Total capital assets being depreciated	5,082,565	2,742,270	7,824,835	(1,166,127)	6,658,708
Less accumulated depreciation:					
Building	649,761	29,973	679,734	(679,734)	-
Furniture and fixtures	335,239	261,115	596,354	594,319	1,190,673
Total accumulated depreciation	985,000	291,088	1,276,088	(85,415)	1,190,673
Total capital assets, net of accumulated depreciation	\$ 4,347,529	2,451,182	6,798,711	(1,330,676)	5,468,035

(8) Federal Income Taxes

The Plan is a Public Employee Retirement System and is exempt from federal income taxes. A favorable determination letter from the Internal Revenue Service was issued in February 2014.

(9) Risk Management

The System is exposed to various risks of loss related to torts, errors and omission, violation of civil rights, theft of, damage to, and destruction of assets, and natural disaster. These risks are covered by insurance purchased by the System. This coverage is in compliance with the workers' compensation laws of the State of Texas with no accident or aggregate deductibles. Business personal property is insured with a \$2,500 deductible with contents coverage of \$400,000. Automobile limits are set at \$1,000,000 per occurrence. Insurance coverage by major category of risk has remained relatively constant as compared to the prior fiscal year. Insurance settlements have not exceeded insurance coverage for any of the past three years. The System obtains Workers Compensation and Employers Liability coverage through Texas Mutual Insurance Company.

The System maintains a pension and welfare fund fiduciary responsibility insurance policy with an aggregate limit of liability of \$20,000,000, and officers and directors liability coverage of \$5,000,000.

Continued

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

(10) Net Pension Liability

The net pension liability is measured as the total pension liability, less the amount of the pension plan's fiduciary net position. In actuarial terms, this will be the accrued liability less the market value of assets. The Schedule of Net Pension Liability presents multi-year trend information (beginning with FY 2014) to illustrate changes in the plan fiduciary net positions over time, relative to the total pension liability. The components of COAERS' net pension liability at December 31, were as follows:

Schedule of Net Pension Liability

FY Ending December 31	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability
2019	\$4,487,884,062	2,928,033,076	1,559,850,986	65.24%

In addition to the above, this information is presented in the Required Supplementary Information section beginning on page 58.

(a) *Actuarial Methods and Assumptions Used to Determine Total Pension Liability*

The total pension liability was determined by an actuarial valuation as of December 31, 2019, using the following actuarial assumptions:

Summary of Actuarial Assumptions

Valuation date: December 31, 2019

Notes Members and employers contribute based on statutorily fixed or negotiated rates. A funding period is solved for through open group projections. The actuarially determined contribution is determined by applying the contribution rate from the funding valuation based on the Board's Funding Policy to the calendar year payroll following the valuation date. In other words, the contribution rate determined by the December 31, 2018 valuation is used to determine the actuarially determined contribution amount for the period January 1, 2019 through December 31, 2019.

The assumptions and methods, summarized below, were adopted by the Board of Trustees based on the experience investigation that covered experience through December 31, 2018. These assumptions first applied for actuarial valuation as of December 31, 2019.

Continued

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

Methods and Assumptions Used to Determine Total Pension Liability:

Actuarial Cost method	Entry Age Normal
Inflation	2.50%
Salary increases	3.50% to 5.75%
Investment Rate of Return	7.00%
Retirement Age	Experience-based table of rates that are gender specific. Last updated for December 31, 2019 valuation pursuant to an experience study December 31, 2018.
Mortality	The PubG-2010 Healthy Retiree Mortality Table (for General employees) for males and females with full generational projection assuming immediate convergence of rates in the mortality projection scale MP-2018, 2D for male and female. Mortality improvement is projected from the mortality table's base year of 2010.

Other Information:

Notes There were no benefit changes during the year.

The Plan does not require regular ad hoc post-employment benefits, and none have been made since 2002.

(b) Single Discount Rate

The Single Discount Rate of 7.00% used to measure the total pension liability, was based on the expected rate of return on pension plan investments. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made in accordance with the Supplemental Funding Plan. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Long-Term Expected Real Rate of Return

Asset Class	2019	2018
US equities	5.07%	5.30%
Developed market equities	6.43%	6.62%
Emerging markets equities	7.26%	7.14%
Fixed income	2.88%	3.58%
Real estate	5.27%	5.27%
Infrastructure	7.29%	6.65%
Risk parity	-	5.73%
Multi-asset	5.39%	5.74%
Strategic partnerships	5.39%	5.39%
Cash & equivalents	2.23%	2.96%

Continued

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Notes to Financial Statements

December 31, 2019 and 2018

(c) Sensitivity of the Net Pension Liability to Changes in the Discount Rate

Regarding the sensitivity of the net pension liability to changes in the Single Discount Rate, the following presents the plan's net pension liability, calculated using a Single Discount Rate of 7.00%, as well as what the plan's net pension liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

**Sensitivity of Net Pension Liability to the
Single Discount Rate Assumption**

1% Decrease 6.00%	Current Single Discount Rate Assumption 7.00%	1% Increase 8.00%
\$ 2,127,420,047	\$ 1,559,850,986	\$ 1,090,316,052

(11) Subsequent Events

In March 2020, the World Health Organization declared the outbreak of COVID-19, a novel strain of Coronavirus, a global pandemic. This outbreak is causing major disruptions to businesses and markets worldwide as the virus spreads. The extent of the effect on COAERS' operational and financial performance will depend on future developments, including the duration, spread and intensity of the pandemic, and governmental, regulatory and private sector responses, all of which are uncertain and difficult to predict. COAERS is unable to estimate the financial effect of the pandemic at this time. The COAERS Board of Trustees has adopted a resolution to enter into a line of credit if funds are needed to ensure continuation of business operations and payment of benefits, and COAERS is unable to access sufficient funds from accounts held at its custodial bank or its operating account. The financial statements do not reflect any adjustments as a result of the pandemic. COAERS has evaluated its subsequent events through May 20, 2020, the date on which the financial statements were available to be issued.

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Required Supplementary Information

December 31, 2019

Schedule of Changes in the Net Pension Liability and Related Ratios

Fiscal year ending December 31,	2019	2018	2017	2016	2015	2014
Total Pension Liability						
Service Cost	\$ 117,635,215	\$ 111,438,032	\$ 107,767,510	\$ 107,111,330	\$ 93,506,590	\$ 89,235,267
Interest on the Total Pension Liability	295,341,490	281,403,651	266,257,048	251,684,051	236,843,912	222,709,911
Benefit Changes	-	-	-	-	-	-
Difference between Expected and Actual Experience	23,671,597	1,882,436	22,754,618	19,913,690	13,413,789	33,911,010
Assumption Changes	279,897,169	-	-	-	123,493,165	-
Benefit Payments	(213,956,372)	(198,846,376)	(186,286,855)	(175,218,095)	(165,464,616)	(157,563,807)
Refunds	(4,265,174)	(4,140,909)	(4,045,324)	(3,910,786)	(4,052,436)	(4,154,419)
Net Change in Total Pension Liability	498,323,925	191,736,834	206,446,997	199,580,190	297,740,404	184,137,962
Total Pension Liability - Beginning	3,989,560,137	3,797,823,303	3,591,376,306	3,391,796,116	3,094,055,712	2,909,917,750
Total Pension Liability - Ending (a)	\$ 4,487,884,062	\$ 3,989,560,137	\$ 3,797,823,303	\$ 3,591,376,306	\$ 3,391,796,116	\$ 3,094,055,712
Plan Fiduciary Net Position						
Employer Contributions	\$ 123,609,683	\$ 116,485,749	\$ 110,846,582	\$ 104,272,794	\$ 100,484,694	\$ 93,331,482
Employee Contributions	63,626,285	58,713,327	56,193,592	60,801,253	54,065,793	50,489,091
Pension Plan Net Investment Income	503,853,505	(157,242,103)	376,820,025	171,640,015	(47,607,661)	99,704,100
Benefit Payments	(213,956,372)	(198,846,376)	(186,286,855)	(175,218,096)	(165,464,616)	(157,563,807)
Refunds	(4,265,174)	(4,140,909)	(4,045,324)	(3,910,786)	(4,052,436)	(4,154,419)
Pension Plan Administrative Expense	(6,218,288)	(4,024,367)	(2,778,290)	(2,700,916)	(2,421,331)	(2,631,218)
Other	-	-	-	-	-	-
Net Change in Plan Fiduciary Net Position	466,649,639	(189,054,679)	350,749,730	154,884,264	(64,995,557)	79,175,229
Plan Fiduciary Net Position - Beginning	2,461,383,437	2,650,438,116	2,299,688,386	2,144,804,122	2,209,799,679	2,130,624,450
Plan Fiduciary Net Position - Ending (b)	\$ 2,928,033,076	\$ 2,461,383,437	\$ 2,650,438,116	\$ 2,299,688,386	\$ 2,144,804,122	\$ 2,209,799,679
Net Pension Liability - Ending (a) - (b)	1,559,850,986	1,528,176,700	1,147,385,187	1,291,687,920	1,246,991,994	884,256,033
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	65.24 %	61.70 %	69.79 %	64.03 %	63.24 %	71.42 %
Covered Payroll	\$ 686,720,461	\$ 647,143,050	\$ 615,814,344	\$ 579,293,294	\$ 558,248,300	\$ 518,508,233
Net Pension Liability as a Percentage of Covered Payroll	227.14 %	236.14 %	186.32 %	222.98 %	223.38 %	170.54 %

Notes to Schedule:

- 1) Schedule will be built out to 10 years.
- 2) Covered payroll is imputed from the actual employer contributions during the calendar year.
- 3) Changes in assumptions include decrease in investment return assumption from 7.5% to 7%, decrease in inflation assumption from 2.75% to 2.5%, change in salary increased from 4-6.25% to 3.5-5.75%, and change in mortality tables to the PubG-2010 Healthy Retiree Mortality Table.

See accompanying Independent Auditors' report

CITY OF AUSTIN EMPLOYEES' RETIREMENT SYSTEM

Required Supplementary Information

December 31, 2019

Schedule of Contributions

FY Ending December 31	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2014	\$ 94,627,753	\$ 93,331,482	\$ 1,296,271	\$ 518,598,233	18.00%
2015	98,419,175	100,484,694	(2,065,519)	558,248,300	18.00%
2016	114,931,790	104,272,793	10,658,997	579,293,294	18.00%
2017	120,761,193	110,846,582	9,914,611	615,814,344	18.00%
2018	125,092,752	116,485,749	8,607,003	647,143,050	18.00%
2019	133,017,753	123,609,683	9,408,070	686,720,461	18.00%

Note: Schedule will be built out to 10 years.

Schedule of Investment Returns

Year	Annual Return *
2019	20.86%
2018	-5.80%
2017	16.84%
2016	8.30%
2015	-1.89%
2014	5.02%

** Annual money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of investment expenses*

See accompanying Independent Auditors' report

OTHER SUPPLEMENTARY INFORMATION

Investment Expenses

	2019	2018
Custodial & Transaction Fees		
The Northern Trust Company	\$ 99,525	132,700
Transition and other fees	70,898	254,792
	170,423	387,492
 Investment Manager Fees		
1607 Capital Partners	863,555	894,415
Agincourt Capital Management	394,197	575,005
BlackRock	303,014	99,987
CoreCommodity Management	-	31,835
Doubleline Capital	98,892	-
Harvest Fund Advisors	-	175,954
Hoisington Investment Mgmt. Co.	171,511	-
INTECH Investment Management	40,573	47,120
Legal & General	203,791	255,074
Loomis, Sayles & Co.	95,280	-
Mellon Capital	610,130	317,475
Mondrian Investment Partners	-	528,440
Northern Trust Investments	559,495	586,516
PGIM	33,569	-
Sprucegrove Investment Mgmt.	-	255,662
Walter Scott & Partners	787,039	736,290
Prior-year accrual-to-actual variance	(82,660)	82,401
	4,078,386	4,586,174

Note: These expenses are presented on an accrual basis; list does not reflect fees directly charged against commingled funds.

Other Investment-related Costs

Investment Consultant Fees	250,000	290,000
Investment Systems	202,886	126,762
Investment Legal Counsel	155,422	34,268
Investment Research	92,990	66,462
Investment Staff Continuing Education	35,129	-
Commissions & Other Transaction Costs	30,000	-
Due Diligence Site Visits	20,161	-
Memberships and Licenses	17,830	-
Subscriptions	3,230	1,000
	807,648	518,492
 Total	\$ 5,056,457	5,492,158

General & Administrative Expenses

	2019	2018
Actuary	\$ 149,753	68,285
Attorney	93,159	98,914
Auditing	141,100	87,000
Computer services	704,537	306,836
Consultants	94,265	46,581
Administrative	3,980,796	2,740,616
Depreciation	734,295	383,958
Insurance	152,922	156,794
Member communications	90,374	58,561
Continuing education & site visits	77,087	76,822
Total	\$ 6,218,288	4,024,367

Consultant Expenses

Actuary		
GRS Retirement Consulting Group	\$ 149,753	68,285
 Attorney		
Clark Hill Strasburger	22,364	6,320
Strasburger & Price	-	5,080
Fletcher Farley Shipman & Salinas	-	3,408
The Knight Law Firm	70,795	84,106
	93,159	98,914
 Auditing		
KPMG	120,100	63,000
RSM US	21,000	24,000
	141,100	87,000
 Computer Services		
Levi Ray & Shoup	170,619	202,270
mindSHIFT Technologies	12,435	35,825
Whitehat Virtual Technologies	41,161	6,384
DNN Corporation	-	4,893
Palo Alto	13,736	-
Darktrace	37,200	-
Crowdstrike	1,339	-
LexisNexis	8,000	-
KnowBe4	16,196	-
Flexential Colorado	94,769	35,182
Freeit Data Solutions	51,006	-
Sikich	11,096	12,096
Other	246,982	10,186
	704,537	306,836
 Other Consultants		
CBIZ Human Capital Services	10,000	3,000
Jonathan Decherd MD	1,566	4,169
Harold Skaggs MD	4,698	3,411
Hillco Partners	48,000	36,000
McLagan Partners	30,000	-
	94,265	46,581
 Total	\$ 1,182,814	607,616

See accompanying Independent Auditors' report

INVESTMENT SECTION



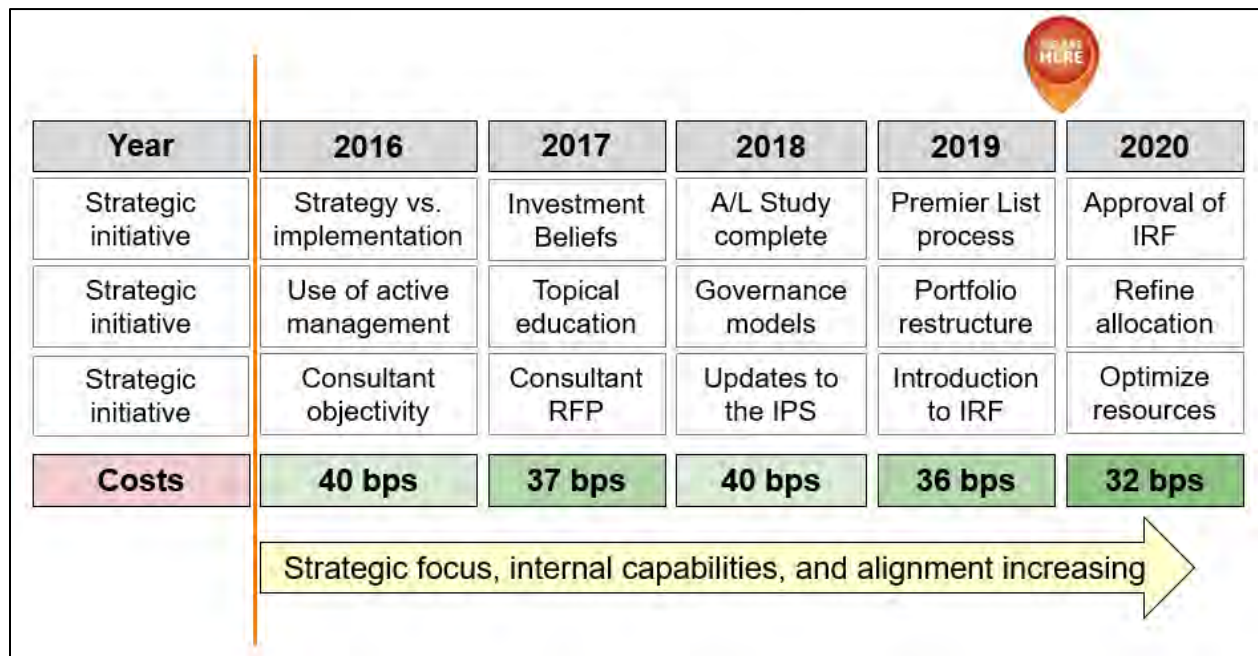
City of Austin Employees' Retirement System

April 2020

Fellow COAERS Members:

I am proud to update you on the progress toward our strategic goal of becoming a best-in-class investment program by developing what is known internally as the “Austin model” for investment management. The Austin model seeks to contribute meaningfully to the sustainability of the valuable benefit we share by sharpening the focus of the investment program on the key drivers of long-term value.

As the graphic below indicates, this effort is a five-year initiative that is very near completion. It seeks to build on a long tradition of strong stewardship at COAERS that is grounded in bedrock fiduciary principles.



During 2019 this continuing commitment to best-in-class stewardship of the Fund led us to undertake several important strategic initiatives with respect to the investment program.

- The innovative new “Premier List” process for the selection and monitoring of managers was fully implemented across all asset classes. This effort led to the restructuring of mandates with assets totaling nearly half of the Fund, including 16 new mandates with 10 different firms.
- The restructuring noted above allowed continued focus on optimizing the Fund’s overall level of investment management expenses. Careful scrutiny of the value provided by every manager as well as the enhanced negotiating leverage provided by the Premier List process has allowed the total dollars spent on the investment program to decline even as the Fund’s assets have grown in recent years.
- The fixed income portfolio was restructured from a “core bonds” approach to one with individual mandates for corporate bonds, mortgages, and Treasuries. This move enhanced diversification for the fund overall by allowing more focused management of Treasuries as the Fund’s strategic

Continued

hedge against equity market downturns. As a result, the Fund is now far better positioned to manage the risks it faces while generating strong compound returns.

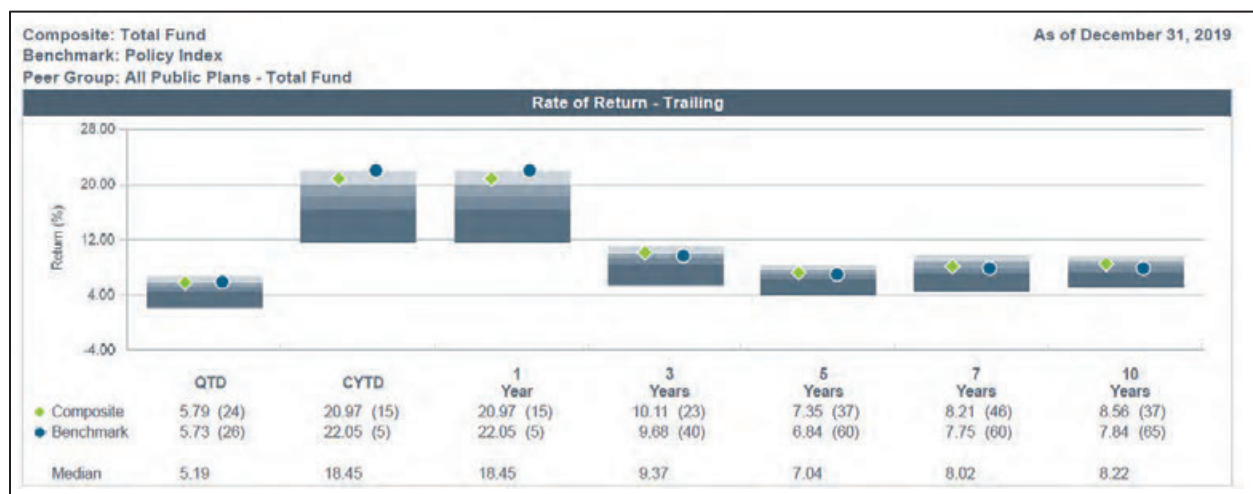
- A portion of the reduction in external fees has been selectively reinvested in enhancing our internal capabilities. This year marked the hiring of two highly capable new team members (Ty Sorrel as Director of Investment Implementation and Kelly Doggett as Portfolio Manager – Investment Analytics) and a move to access a more diverse array of trusted research providers.

Sound investment processes are most important in volatile markets, and calendar year 2019 marked a remarkable rebound from what was a dreadful 2018. Recall that during 2018 it was T-bills and cash, with only 2% returns for the year, that were the best performing major assets. Quite the opposite was true during 2019, when equity markets saw particularly strong gains (i.e. 18-31%) as shown in the table below.

Index	Asset Class	1 Year	3 Year	5 Year	10 Year
MSCI AC World IMI	Global All-Cap Equities	26.4%	12.1%	8.3%	8.9%
MSCI USA	US Equity	30.9%	14.6%	11.0%	12.9%
MSCI World ex-US	DM Equity	22.5%	9.3%	5.4%	5.3%
MSCI Emerging Markets	EM Equity	18.4%	11.6%	5.6%	3.7%
BB Global Aggregate	Global Agg Bond	6.8%	4.3%	2.3%	2.5%
BB Corporate Credit	US Investment Grade Credit	14.5%	5.9%	4.6%	5.5%
BB U.S. MBS	US Mortgages	6.4%	3.2%	2.6%	3.2%
BB U.S. Treasury Bonds	US Treasury Bonds	6.9%	3.3%	2.4%	3.1%
BB U.S. Treasury Bills	US Treasury Bills	2.2%	1.6%	1.0%	0.5%
FTSE All Equity REIT	US Real Estate Investment Trusts	28.7%	10.3%	8.4%	12.6%
S&P Global Infrastructure Net TR	Infrastructure	25.8%	10.3%	5.6%	6.8%

As a result, the Fund ended the year at \$2.914 billion, up +20.66% net of fees for the full year 2019 to mark the best yearly performance in a decade. This figure marks a new record level for the Fund and an increase of **more than half a billion dollars** from \$2.448 billion at the end of 2018.

In addition, three-year returns on Fund investments totaled +9.80% net of fees, above both the Passive Index and the Policy Index. What is particularly noteworthy about this figure is that RVK ranks this performance in the **top quartile of peers** as shown in the chart below, which is a significant achievement and the first such ranking since the aftermath of the 2008-09 financial crisis.



Continued

In addition, strong implementation allowed the Fund to deliver 211 basis points of excess return above its Passive Benchmark during 2019. This figure equates to more than **\$50 million of value added** versus what could have been generated in a passive mix of index funds, which we believe is a strong testament to the value that well-aligned and professional management of the Fund can contribute.

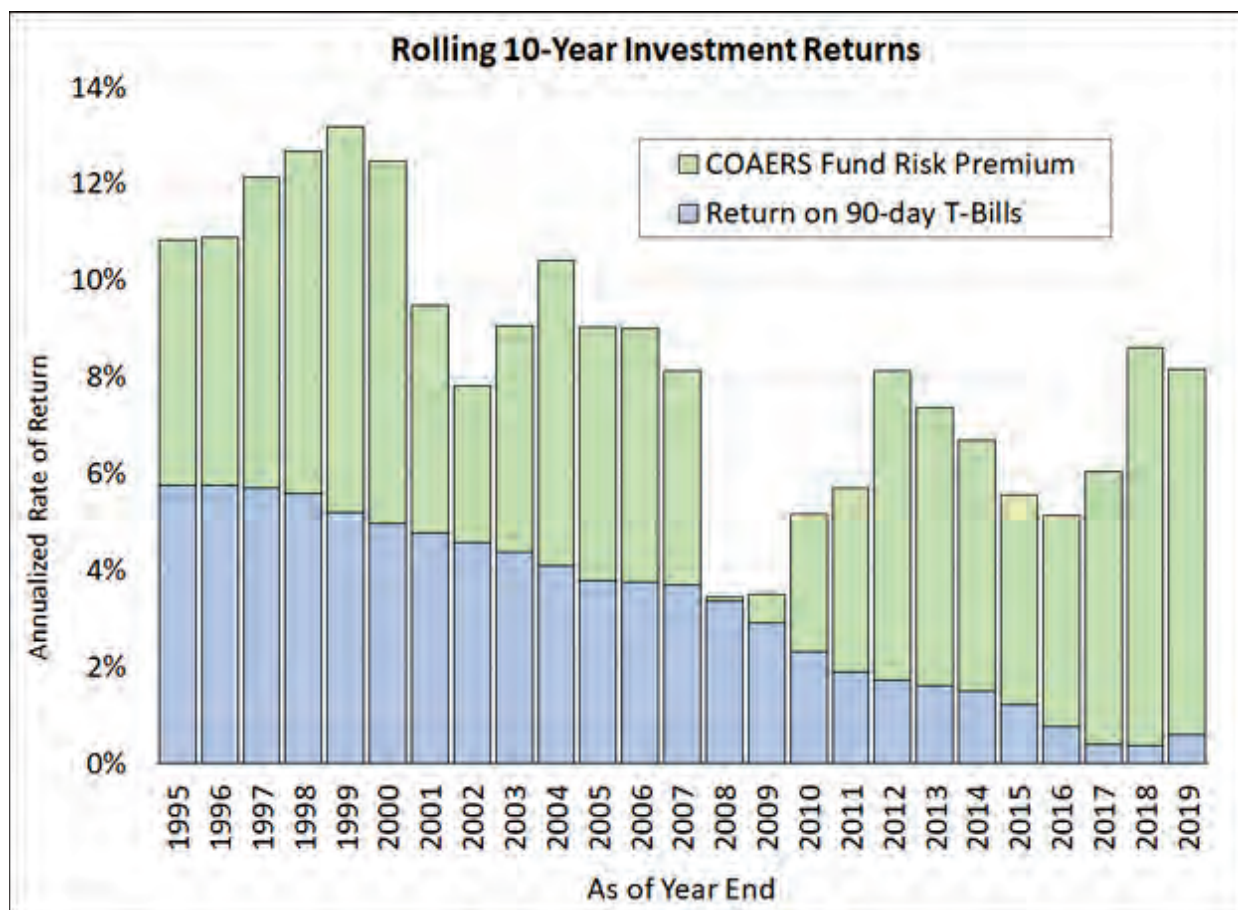
During the year, the Fund remained well diversified across a wide range of assets as shown in the allocation table below. Diversification is often called “the only free lunch” in finance since it represents the only way to reduce the risk of a portfolio without decreasing its expected return. At the end of 2019, all of the allocations were within the designated strategic ranges with the exception of the new Asset Allocation sleeve, which was below minimum at that particular date while pending contracting with potential managers.

STRATEGIC ASSET ALLOCATION				
ASSET CLASS/SUB-ASSET CLASS	12/31/19	Minimum^s	Target	Maximum^s
GLOBAL EQUITIES	61.3%	45.0%	55.0%	65.0%
US Equity	35.0%	20.0%	32.0%	45.0%
Intl Developed Markets	18.0%	10.0%	15.0%	19.0%
Intl Emerging Markets	8.3%	3.0%	8.0%	15.0%
FIXED INCOME	20.3%	15.0%	20.0%	32.0%
US Treasuries	8.7%	4.0%	8.0%	20.0%
US Mortgages	3.7%	2.0%	4.0%	8.0%
US Credit	7.9%	4.0%	8.0%	12.0%
REAL ASSETS	12.4%	10.0%	15.0%	20.0%
Real Estate	9.9%	5.0%	10.0%	15.0%
Infrastructure	2.5%	0.0%	5.0%	10.0%
MULTI-ASSET	5.1%	5.0%	9.0%	14.0%
Strategic Partnership	5.1%	2.5%	5.0%	10.0%
Asset Allocation	0.0%	2.5%	4.0%	9.0%
CASH & EQUIVALENTS	0.9%	-10.0%	1.0%	10.0%

Over the last 10 years, returns for the Fund have compounded at +8.17% annually net of fees. These strong gains, which are above the System’s actuarially assumed rate of return, come despite the low levels of interest rates prevailing since the 2008-2009 global financial crisis. Even this absolute level of realized return is relatively low compared to the 1980s and 1990s (when double-digit returns were common for diversified portfolios) due to the extremely low interest rate environment that has prevailed in the new millennium and particularly since the 2008-09 global financial crisis.

The following table illustrates the pressure that low interest rates have exerted on long-term returns for the Fund and others like it, as well as the strong relative performance of the portfolio. It shows that over the long-term, the Fund has earned an average of 4-5% annually above the risk-free return that owning US Treasury bills would have provided. For the period ending in 2019, returns for the Fund were 7.6% over the meager 0.6% return of risk-free investments, which should be viewed as exceptionally healthy compensation for bearing investment risk.

Continued



In this way, effective diversification across stocks, bonds, and other assets continues to deliver steady growth in the Fund’s principal balance in order to meet its obligations to both current and future generations. These results are one more example of how the Fund continues to be managed in a highly professional and principled manner amid an increasingly volatile and unpredictable market environment. This high level of stewardship will only continue to improve in the years ahead as we remain committed to providing best-in-class results that enhance the long-term sustainability of the System.

Sincerely,

David T. Veal, CFA, CAIA, FRM
Chief Investment Officer

Concluded



Memorandum

To Board of Trustees
From RVK, Inc.
Subject 2019 Comprehensive Annual Financial Report ("CAFR")
Date April 20, 2020

Dear Trustees:

This letter serves to provide an overview of the capital markets and the City of Austin Employees' Retirement System (the "System") portfolio positioning for the fiscal year ended December 31, 2019.

The 2019 fiscal year experienced a broad rally throughout all major asset classes, extending the longest bull market in history. Global public equity markets led the way with all major equity indices experiencing double digit returns. Equity markets were driven by a de-escalation of the US-China trade war, with bilateral negotiations between the two nations resulting in an announced "Phase One" trade agreement late in the fiscal year—including a partial rollback of existing tariffs. Markets reacted positively to speculation around the prospects of this agreement throughout the fourth quarter with much tied to its successful implementation in 2020. U.S. equity markets, as measured by the S&P 500 Index, returned 31.5% in 2019 as a result of positive sentiment surrounding global trade, U.S. economic news that included an expansion of non-farm payrolls, a decrease in year-over-year unemployment rate from 3.9% to 3.5%, falling interest rates, and steady consumer spending. Large cap growth equities led the surge in US markets, particularly "FAANG" stocks within the information technology sector. International equity markets posted strong results but lagged their U.S. counterparts as a result of geopolitical risks surrounding trade tariffs as well as underwhelming growth estimates from developed countries such as Germany and Japan. Developed non-U.S. equity markets, as measured by the MSCI EAFE Index, returned 22.0% in 2019, while emerging markets, as measured by the MSCI EM Index, gained 18.4%.

In a pivot from their hawkish tone in 2018, Jerome Powell and Federal Open Market Committee ("FOMC") decreased the federal funds three times over the course of the fiscal year, from a range of 2.25%-2.50% down to 1.50%-1.75%. These rate cuts were prompted by a softening in global economic indicators as well as trade tensions that were especially prominent during the first half of the fiscal year.

The World Bank Global Economic Prospects report cited weakness in global trade and investment as key factors contributing to the global growth slowdown realized in 2019—much of it directly related to trade tensions between the U.S. and China. The report found that 2019 global GDP growth forecasts fell by 0.2% from June's estimate to 2.4%. Emerging market economies, the traditional engine for global growth, saw 2019 growth estimates fall 0.5% over the prior period, to 3.5%.

RVKInc.com

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Multiple rate cuts during the first three quarters of the fiscal year provided strong tailwinds for U.S. bond markets as the Bloomberg U.S. Aggregate Bond Index returned 8.7%. Both investment grade and high yield corporate credit outperformed the broad index. Internationally, the Bloomberg Global Aggregate Index gained 6.8% during the year. Emerging markets debt outperformed the broad index, primarily a result of the risk-on sentiment throughout most of 2019. The price of oil increased from \$45 a barrel to \$61 a barrel during the year, leading the Bloomberg Commodity Index to return 7.7%. Private real estate assets measured by the NCREIF ODCE Index (Gross) returned 5.3% in 2019. However, they were outperformed by public U.S. REITs as measured by the Wilshire U.S. REIT Index, which returned 25.8%.

The market value of the System's investments increased from \$2.45 billion to \$2.91 billion in the year ended December 31, 2019. The System's current actuarial assumed rate of return is 7.0%, which represents the System's long-term return goal. The System's overall net of fees investment return over the past year was 20.7% while the System's three-year annualized return was 9.8%. The five-year annualized return for the System was 7.0% and the System's ten-year annualized return was 8.2%.

At the end of the fiscal year 2019, all major asset classes were within the strategic rebalancing ranges outlined within the System's Investment Policy Statement.

During the fiscal year, the Board reduced the actuarial assumed rate of return, conducted an asset allocation study, updated the System's policies in accordance with target allocation and allowable allocation band changes, and made several changes to the current and proposed manager lineup with the assistance of Staff, RVK and the System's actuary, GRS. Additionally, there were several operational items completed in 2019, such as the discontinuation of the securities lending program, as well as the framework put in place to use a custody bank RFP in 2020. Staff, the Board, and RVK will continue to monitor the portfolio, recommending changes aimed at improving potential return and/or diversification as deemed necessary.

The System's investment policies, goals, and objectives, as well as the performance of its assets and transaction costs are regularly monitored by Staff, the Board, and by RVK. These evaluations include analysis of the investment management firms and the custodial bank that serve the System.

The System's publicly traded assets managed through separate accounts, commingled vehicles, and mutual funds are held in custody at Northern Trust and BlackRock Trust Company. Market values and returns referenced above are based upon statements prepared by Northern Trust. Their statements are, to the best of our knowledge, reliable and accurate. Investment performance is calculated using a time-weighted rate of return methodology (net of fees) based upon market values and cash flows.



We look forward to continuing to work with Staff and the Board to monitor, review, and best position the System's portfolio to meet its long-term goals and objective.

Sincerely,

A handwritten signature in blue ink, which appears to read "Rebecca A. Gratsinger".

Rebecca Gratsinger
Chief Executive Officer
RVK, Inc.

OUTLINE OF INVESTMENT POLICIES

INVESTMENT RESPONSIBILITIES

The COAERS Board of Trustees has the fiduciary duty of overseeing the Fund and the associated investment process. To assist in the fulfillment of its duties in this regard, the Board will select, engage, monitor, and evaluate a number of parties including the Professional Staff, Investment Consultant, Investment Managers, and Global Custodian.

To establish long-term goals of the investment program, provide a framework for the investment process, and to guide the efforts of parties; the Board has adopted two key policies:

- The Investment Policy Statement, which sets out specific duties and responsibilities for each party as a means to achieve the objectives of the Fund, and the Board requires compliance from all parties
- The Investment Implementation Policy, which provides the basis for selecting, contracting, monitoring, and retaining investment managers.

The major elements of these documents, which are reviewed annually and are available in their entirety upon request, are summarized in this section.

INVESTMENT GOALS

The purpose of the COAERS Trust Fund (the Fund) is to accumulate the financial reserves necessary to provide for the retirement or pensioning of eligible COAERS members and their beneficiaries. To this end, the Fund will be structured and managed to maximize, net of fees and expenses, the probability of:

1. Achieving a long-term, annualized absolute rate of return that:
 - Meets or exceeds the assumed actuarial rate of return for the System;
 - Ranks in the top quartile of peer comparisons consistently;
2. Achieving a long-term, risk-adjusted relative rate of return that:
 - Meets or exceeds the Passive Index (i.e. the Reference Portfolio); and
 - Meets or exceeds the Policy Index (i.e. the Strategic Benchmark).
3. Achieving these strategic objectives via fiduciary best practices that:
 - Ensure proper diversification of asset classes and factor exposures;
 - Maintain appropriate long-term risk and return expectations; and
 - Adapt the asset allocation to changing market conditions.

The Board, with consultation, advice and assistance from the System's Staff and Investment Consultant, will use the Fund's Strategic Asset Allocation process and its effective implementation as the primary tools to achieve these goals. A primary emphasis of the management of the Fund is consistency of growth by seeking to avoid both the permanent impairment of capital and the risk of inadequate long term returns.

INVESTMENT BELIEFS

The COAERS Board of Trustees, in fulfilling its responsibility of ensuring that these assets are invested in a manner consistent with high fiduciary standards, has adopted the following investment beliefs to guide its asset allocation and investment implementation decisions.

Continued

- The Fund is a permanent entity with long-lived liabilities and, as such, it should strive to be a thoughtful, analytical, and patient investor that is focused on achieving successful outcomes.
- Clear governance and decision-making structures that promote decisiveness, simplicity, efficiency and accountability are effective and add value to the Fund.
- Strategic asset allocation is the most critical aspect of the investment process, with the level of risk assumed by the Fund driven primarily by its allocation to equity investments.
- To the extent possible, investment decision-making should be driven by data and analysis, including the findings of relevant research on financial markets and investment management.
- The Fund should seek to be well compensated for the investment risks it chooses to bear, risks that should be articulated at the time of investment and revisited regularly.
- Diversification across asset classes and risk factors is integral to the Fund's design and, as a result, investments that may improve the risk/return profile of the fund will be considered.
- Equities are the most prudent investment vehicle for long-term growth of real values, and the associated drawdown risk should be carefully managed in light of the Fund's liabilities.
- Costs can significantly reduce net returns and therefore must be carefully measured and managed when making decisions regarding investment strategy and implementation.
- Implementation should occur passively and in public markets unless a high likelihood of success on a risk-adjusted, net-of-fees basis can be expected from other approaches.

ASSET ALLOCATION

Asset allocation refers to process by which the Fund is allocated among various types of investments that have in common certain fundamental and risk-based characteristics. The Board, in conjunction with advice from Staff and the Investment Consultant, is responsible for establishing and reviewing the Strategic Asset Allocation (SAA) process for the Fund. This oversight includes the selection of well-aligned strategic advisors, the use of a diverse range of forecasting approaches, the determination of appropriate risk budgets, and appropriate levels of delegated authority.

Asset/Liability studies provide the primary basis for changes to the target allocations of the SAA and are conducted at least every five years. Relevant policies are amended when a proposed investment strategy is adopted. The Board may review its target allocations more frequently if necessary due to material changes in either the liability structure of the plan or the capital markets.

Based on its determination of the appropriate risk tolerance of the Fund and its long term return expectations, the Board in consultation with the Staff and Investment Consultant establishes the following SAA parameters as percentages of the Fund's asset classes and sub-asset classes:

- Strategic Target Allocations that represent neutral weights to asset classes and sub-asset classes selected to play a distinct and purposeful a distinct and purposeful role within the Fund.
- Tactical Rebalancing Ranges allow for routine fluctuations in market values of portfolio investments and establish parameters for management of the Fund's risk exposures by Staff.
- Strategic Rebalancing Ranges establish the outer bounds for the allocation of the Fund and to allow for flexibility during times of market stress or dislocation.

Continued

Rebalancing activities ensure that the long-term investment objectives of the System are achieved by allowing Investment Staff the flexibility to adjust for market movements and to incorporate current market conditions into the asset allocation. The Board has chosen to adopt a rebalancing policy that allows Investment Staff to rebalance the portfolio between major asset classes as well as within the sub-asset classes, a framework that is governed by the Board approved ranges rather than fixed time periods.

MANAGER SELECTION

The Board believes that developing long-term relationships with a small group of high potential managers allows for a more thoughtful and robust evaluation of potential candidates than starting every search from scratch. As such, the Investment Staff is required to develop and maintain a “Premier List” of 3-4 viable managers (including at least one passive index option) for potential inclusion within each allocation of the Fund. Doing so is intended to allow for (1) ongoing competitive benchmarking of existing managers and (2) rapid, effective replacement of any Manager deemed no longer able to accomplish its mandate.

The Premier List for each allocation is presented to the Investment Committee for ongoing review at least annually. Investment Staff proposes candidates for the Premier List to the Investment Committee for potential recommendation to the Board, with all proposals including a proposed neutral and maximum allocation. Since manager retention decisions have the same potential impact on returns as do the initial selection of the Manager, Investment Staff shall also propose any removals from the Premier List to the Investment Committee for potential recommendation to the Board.

PERMISSIBLE INVESTMENTS

The investment vehicles listed below are currently specifically permitted under the Investment Implementation Policy. They are categorized according to asset class to indicate how they are classified for purposes of the SAA guidelines. Unless given authorization in writing, managers are allowed to invest only in the security types listed below for the asset classes for which they have been hired and, when included in the Investment Policy or the IMA, the assigned benchmark.

Equities

- Common Stocks
- Preferred Stocks
- Exchange Traded Funds (ETFs)
- Equity Futures

Fixed Income

- Domestic and Yankee Bonds
- Mortgages and Mortgage-Backed Securities
- Asset-Backed Securities
- Global Corporate Bonds
- Global Sovereign Debt
- Fixed Income Futures
- Interest Rate Futures

Real Assets

- Real Estate Investment Trusts
- Commodity Futures

Cash

- Cash-Equivalent Securities
- Money Market Funds, Bank STIF/STEP Funds
- Foreign Currency

1. The above assets can be held in commingled funds as well as separate accounts. If held in a fund, the prospectus, organizational document, or Declaration of Trust takes precedence over COAERS policies solely to the extent of any conflict unless provided otherwise in a written agreement.
2. SEC Rule 144(a) fixed income securities are allowable but private placement bonds are not.
3. No investment may be made that is prohibited by the Internal Revenue Service, the Department of Labor, or other federal or state law.

Continued

4. For purposes of definition, cash equivalent securities are any fixed income investment with less than one year to maturity or reset date.
5. The following portfolio concentration limitations will apply:
 - The securities representing equity of any one company shall not exceed 6% of the market value of any manager's Portfolio.
 - Fixed income securities of any issuer may not exceed 6% of the Portfolio at market. This restriction also applies to asset-backed securities, non-agency mortgage-backed securities (including commercial mortgage-backed securities) and taxable municipals.
 - The total holdings of a federal agency-issued mortgage-backed security of the same coupon and maturity series of the same agency shall not exceed 20% of the Portfolio at market.
 - The direct debt of the US government (Treasury bonds, bills and notes) shall not be restricted as a percentage of the Portfolio.
6. Quantitative or Enhanced Index strategies may deviate from the concentration limitations above provided a pre-established process and relative position limitation is followed. Managers of passive index strategies may also deviate from these limitations to the extent the underlying index does.
7. Derivatives are permissible for the purpose of equitizing cash (e.g., an overlay program, reducing cash exposure, or in Portfolio transitions and rebalancing activities).
8. Equity managers may invest in depository receipts as long as the underlying security is permissible within these guidelines and the investment does not expose the Fund to any greater risk than the risk from holding the underlying security.
9. Domestic equity managers are allowed to invest in dollar-denominated, SEC registered stock of foreign domiciled companies traded on the NYSE, AMEX or OTC markets. Concentration restrictions for these securities are the same as for any other equity security.
10. Managers may be hired to invest primarily in closed-end and open-end funds as approved by the Board. In such accounts, closed-end and open-end funds are permissible holdings.
11. Managers may be authorized to manage portfolios that gain exposure to asset classes by investing in futures and other derivative instruments.
12. Investment vehicles such as limited partnerships are allowed but are subject to Board approval.

Concluded

City of Austin Employees'
Retirement System Asset Allocation
as of 12/31/2019

ASSET CLASS/SUB-ASSET CLASS/MANAGER	12/31/2019 VALUE	% OF FUND	ASSET ALLOCATION		VARIANCE FROM TARGET	
			TARGET %	TARGET AMOUNT	AMOUNT	%
Global Equity	\$ 1,788,087,220	61.34%	55.00%	\$ 1,603,154,455	\$ 184,932,765	6.34%
US Equities	1,021,393,552	35.04%	32.00%	932,744,410	88,649,142	3.04%
MELLON CAPITAL - DYNAMIC US EQUITY	171,072,192	5.87%				
INTECH - US ENHANCED INDEX STRATEGY	55,465,273	1.90%				
LGIMA - S&P 500 INDEX FUND	139,175,174	4.77%				
NTI - SCIENTIFIC BETA US 4F MBMS EW INDEX	254,354,991	8.73%				
NTI - SCIENTIFIC BETA US 6F MBMS EW HFI INDEX	258,411,931	8.87%				
LGIMA - RUSSELL 2000 INDEX FUND	142,913,992	4.90%				
Developed Market Equities	523,459,725	17.96%	15.00%	437,223,942	86,235,783	2.96%
MELLON CAPITAL - DYNAMIC GLOBAL EX-US EQUITY	55,894,162	1.92%				
WALTER SCOTT - INTERNATIONAL EQUITIES	201,162,006	6.90%				
1607 CAPITAL - INTERNATIONAL EQUITIES	142,083,457	4.87%				
NTI - SCIENTIFIC BETA DM 4F MBMS EW INDEX	59,161,481	2.03%				
NT MSCI WORLD EX-US SMALL CAP INDEX	65,158,619	2.24%				
Emerging Market Equities	243,233,943	8.34%	8.00%	233,186,103	10,047,840	0.34%
BAILLIE GIFFORD - EMERGING MARKET EQUITIES FUND	130,439,457	4.48%				
LGIMA - SCIENTIFIC BETA EM 4F MBMS INDEX FUND	112,794,486	3.87%				
Fixed Income	\$ 591,272,469	20.28%	20.00%	\$ 582,965,256	\$ 8,307,212	0.28%
US Treasuries	253,641,269	8.70%	8.00%	233,186,103	20,455,166	0.70%
AGINCOURT - 1-3 YEAR TREASURIES	62,937,312	2.16%				
AGINCOURT - 10 YEAR TREASURIES	53,213,718	1.83%				
AGINCOURT - 1-5 YEAR TIPS	30,048,954	1.03%				
HOISINGTON - MACROECONOMIC FIXED INCOME	107,441,285	3.69%				
US Mortgages	107,957,488	3.70%	4.00%	116,593,051	(8,635,563)	-0.30%
DOUBLELINE CAPITAL - AGENCY MBS	107,957,488	3.70%				
US Credit	229,673,712	7.88%	8.00%	233,186,103	(3,512,391)	-0.12%
LOOMIS SAYLES - US INVESTMENT GRADE CREDIT FUND	114,290,379	3.92%				
PRUDENTIAL - US INVESTMENT GRADE CREDIT FUND	115,383,333	3.96%				
Real Assets	\$ 360,991,082	12.38%	15.00%	\$ 437,223,942	\$ (76,232,860)	-2.62%
Real Estate Equity	288,531,325	9.90%	10.00%	291,482,628	(2,951,303)	-0.10%
FIDELITY - US REITS INDEX	145,634,445	5.00%				
PRINCIPAL GLOBAL - US PROPERTY ACCOUNT	142,896,881	4.90%				
Infrastructure Equity	72,459,756	2.49%	5.00%	145,741,314	(73,281,558)	-2.51%
FIDELITY - GLOBAL INFRASTRUCTURE INDEX	72,459,756	2.49%				
Multi-Asset	\$ 148,868,390	5.11%	9.00%	\$ 262,334,365	\$ (113,465,975)	-3.89%
Multi-Asset	148,868,390	5.11%	5.00%	145,741,314	3,127,076	0.11%
BLACKROCK - STRATEGIC PARTNERSHIP	148,868,390	5.11%				
Asset Allocation	0	0.00%	4.00%	116,593,051	(116,593,051)	-4.00%
Cash & Equivalents	\$ 25,607,121	0.88%	1.00%	\$ 29,148,263	\$ (3,541,142)	-0.12%
Cash & Equivalents	25,607,121	0.88%				
AGINCOURT - 1-3M TREASURY BILLS	19,705,443	0.68%				
NT - GOVT SHORT-TERM INVESTMENT FUND	5,901,678	0.20%				
TOTAL INVESTMENTS	\$ 2,914,826,282	100.00%	100.00%	\$ 2,914,826,282		

Asset Allocation

Reconciliation to Statement of Net Position:

Interest and dividends receivable	9,606,928
Trades pending settlement (net)	(6,288,287)
Investments	2,911,507,641
Total investments (per global custodian)	2,914,826,282

Schedule of Investment Results

		Balance 12/31/2018	Balance 12/31/2019	CY 2019		CY 2019		
				Gross Return (%)	Mgmt Fees (Cash Basis)	Net Return (%)		
		\$	\$	29.6 %	\$ 986,283	1 Year	3 Years	5 Years
US EQUITY		\$ 798,243,789	\$ 1,021,393,552			29.5 %	13.3 %	10.0 %
	Intech - Enhanced S&P 500 SMA	\$ 84,279,899	\$ 55,465,273	31.6 %	\$ 45,831	31.6 %	14.7 %	10.8 %
	<i>S&P 500 Index</i>			31.5 %		31.5 %	15.3 %	11.7 %
	LGIMA - S&P 500 Index Fund	\$ -	\$ 139,175,174	11.1 %	\$ 1,143	11.1 %	N/A	N/A
	<i>S&P 500 Index</i>			11.1 %		11.1 %	15.3 %	11.7 %
	LGIMA - Russell 2000 Index Fund	\$ 113,752,598	\$ 142,913,992	25.6 %	\$ 12,747	25.6 %	N/A	N/A
	<i>Russell 2000 Index</i>			25.5 %		25.5 %	8.6 %	8.2 %
	Mellon Capital - Dynamic US Equity Fund	\$ 123,783,071	\$ 171,072,192	38.2 %	\$ 503,846	37.7 %	N/A	N/A
	<i>S&P 500 Index</i>			31.5 %		31.5 %	15.3 %	11.7 %
	NTI - Sci Beta US MBMS 4F Index SMA	\$ 236,051,282	\$ 254,354,991	28.6 %	\$ 210,060	28.5 %	12.9 %	N/A
	<i>Russell 1000 Index</i>			31.4 %		31.4 %	15.1 %	11.5 %
	NTI - Sci Beta US MBMS 6F HFI Index SMA	\$ 240,376,940	\$ 258,411,931	28.0 %	\$ 212,656	27.9 %	N/A	N/A
	<i>Russell 1000 Index</i>			31.4 %		31.4 %	15.1 %	11.5 %
DM EQUITY		\$ 417,364,919	\$ 523,459,725	25.8 %	\$ 1,666,781	25.4 %	11.8 %	7.6 %
	1607 Capital - International Equities SMA	\$ 113,875,197	\$ 142,083,457	25.5 %	\$ 775,659	24.8 %	11.9 %	7.1 %
	<i>90% MSCI EAFE/10% MSCI EM Index</i>			21.7 %		21.7 %	9.8 %	5.7 %
	Mellon - Dynamic Global ex-US Equity Fund	\$ -	\$ 55,894,162	11.8 %	\$ 15,257	11.8 %	N/A	N/A
	<i>MSCI ACW Ex US Index</i>			11.7 %		11.7 %	9.9 %	5.5 %
	NTI Sci Beta DM MBMS 4F Index SMA	\$ 49,186,718	\$ 59,161,481	20.3 %	\$ 84,985	20.1 %	N/A	N/A
	<i>MSCI EAFE Index</i>			22.0 %		22.0 %	9.6 %	5.7 %
	NT - MSCI World ex-US Small Cap Index Fund	\$ 97,513,377	\$ 65,158,619	25.8 %	\$ 35,639	25.7 %	N/A	N/A
	<i>MSCI World ex US Small Cap Index</i>			25.4 %		25.4 %	10.4 %	8.2 %
	Walter Scott - International Equities SMA	\$ 156,789,628	\$ 201,162,006	28.9 %	\$ 755,241	28.3 %	15.1 %	10.1 %
	<i>MSCI EAFE Index</i>			22.0 %		22.0 %	9.6 %	5.7 %
EMI EQUITY		\$ 205,970,612	\$ 243,233,943	18.6 %	\$ 920,919	18.0 %	11.6 %	5.4 %
	Baillie Gifford - Emerging Markets Fund	\$ 101,833,810	\$ 130,439,457	29.1 %	\$ 735,930	28.1 %	18.6 %	N/A
	<i>MSCI Emerging Markets Index</i>			18.4 %		18.4 %	11.6 %	5.6 %
	LGIMA - Sci Beta DM MBMS 4F Index Fund	\$ 104,136,802	\$ 112,794,486	8.3 %	\$ 184,989	8.1 %	N/A	N/A
	<i>MSCI Emerging Markets Index</i>			18.4 %		18.4 %	11.6 %	5.6 %
US TREASURIES		\$ 544,799,322	\$ 253,641,269	8.7 %	\$ 621,361	8.6 %	N/A	N/A
	Agincourt Capital - 1-3Y Treasuries SMA	\$ -	\$ 62,937,312	2.4 %	\$ 9,912	2.4 %	N/A	N/A
	<i>BB Barc U.S. Agg Tsy 1-3Y Index</i>			2.4 %		2.4 %	1.9 %	1.4 %
	Agincourt Capital - 10Y Treasuries SMA	\$ -	\$ 53,213,718	6.5 %	\$ 8,636	6.4 %	N/A	N/A
	<i>BB Barc US Tsy Bellwether 10Y Index</i>			6.3 %		6.3 %	3.6 %	2.3 %
	Agincourt Capital - 1-5Y TIPS SMA	\$ -	\$ 30,048,954	N/A	\$ -	N/A	N/A	N/A
	<i>BB Barc US TIPS 1-5Y Index</i>			N/A		5.1 %	2.1 %	1.8 %
	Hoisington - Macroeconomic Fixed Income SMA	\$ -	\$ 107,441,285	14.5 %	\$ 91,206	14.4 %	N/A	N/A
	<i>BB Barc US Agg Treasury Bonds Index</i>			4.9 %		4.9 %	3.3 %	2.4 %
	Agincourt Capital - US Core Bonds SMA	\$ 383,927,730	\$ -	6.4 %	\$ 495,453	6.3 %	2.6 %	3.1 %
	<i>70% BB US Agg/30% BB Int Govt & Credit Index</i>			5.8 %		5.8 %	2.2 %	2.8 %
	NTI - US Agg Bond Index Fund	\$ 160,871,591	\$ -	3.0 %	\$ 16,154	3.0 %	1.8 %	2.5 %
	<i>BB Barc US Aggregate Index</i>			3.0 %		3.0 %	1.9 %	2.6 %
US MORTGAGES		\$ -	\$ 107,957,488	1.4 %	\$ 44,977	1.4 %	N/A	N/A
	DoubleLine Capital - Agency MBS SMA	\$ -	\$ 107,957,488	1.4 %	\$ 44,977	2.0 %	N/A	N/A
	<i>BB Barc Aggregate US MBS Index</i>			1.7 %		1.7 %	3.3 %	2.6 %
US CREDIT		\$ -	\$ 229,673,712	4.4 %	\$ 71,713	4.4 %	N/A	N/A
	Loomis Sayles - US Investment Grade Credit Fund	\$ -	\$ 114,290,379	3.9 %	\$ 38,145	3.9 %	N/A	N/A
	<i>BB Barc US Credit Index</i>			3.5 %		3.5 %	5.8 %	4.4 %
	Prudential - US Investment Grade Credit Fund	\$ -	\$ 115,383,333	4.9 %	\$ 33,569	4.9 %	N/A	N/A
	<i>BB Barc US Credit Index</i>			3.5 %		3.5 %	5.8 %	4.4 %
REAL ESTATE EQUITY		\$ 243,188,632	\$ 288,531,325	9.1 %	\$ 1,934,197	8.3 %	8.3 %	9.5 %
	Principal Global - US Property Account Fund	\$ 243,188,632	\$ 142,896,881	7.0 %	\$ 1,934,197	6.2 %	7.6 %	9.1 %
	<i>NCREIF ODCE Index</i>			5.3 %		4.4 %	6.1 %	8.0 %
	Fidelity US REITS SMA	\$ -	\$ 145,634,445	N/A	\$ -	N/A	N/A	N/A
	<i>Fidelity REITs Completion Index</i>			N/A		N/A	N/A	N/A
INFRASTRUCTURE EQUITY		\$ -	\$ 72,459,756	N/A	\$ -	N/A	N/A	N/A
	Fidelity Global Infrastructure SMA	\$ -	\$ 72,459,756	N/A	\$ -	N/A	N/A	N/A
	<i>Dow Jones Brookfield Glb Infrastructure</i>			N/A		28.7 %	11.1 %	5.8 %
STRATEGIC PARTNERSHIP		\$ 121,525,284	\$ 148,868,390	22.1 %	\$ 199,370	22.0 %	N/A	N/A
	BlackRock - Multi-Asset Strategic Partnership SMA	\$ 121,525,284	\$ 148,868,390	22.1 %	\$ 199,370	22.0 %	N/A	N/A
	<i>BlackRock SP Custom Index</i>			21.3 %		21.3 %	N/A	N/A
MULTI-ASSET		\$ 112,059,661	-	23.89 %	\$ 323,917	15.9 %	8.4 %	5.0 %
	AQR - GRP EL Fund, LP	\$ 112,059,661	\$ -	23.9 %	\$ 323,917	15.9 %	8.4 %	5.0 %
	<i>S&P Risk Parity Index (10% Vol)</i>			15.4 %		10.3 %	6.2 %	4.4 %
CASH & EQUIVALENTS		\$ 4,495,897	\$ 25,607,121	2.3 %	\$ 45,003	2.3 %	6.3 %	N/A
	Agincourt Capital - 1-3M T-Bills SMA	\$ -	\$ 19,705,443	1.4 %	\$ 3,921	1.4 %	N/A	N/A
	<i>BB Barc US Agg Tsy 1-3M</i>			1.4 %		1.4 %	1.6 %	1.0 %
	NT - Government Short Term Investment Fund	\$ 4,495,897	\$ 5,901,677	2.2 %	\$ 41,082	2.2 %	1.5 %	1.0 %
	<i>BB Barc U.S. Agg Tsy 1-3M</i>			2.2 %		2.2 %	1.6 %	1.0 %
Total Fund		\$ 2,447,648,117	\$ 2,914,826,282	21.0 %	\$ 6,814,520	20.7 %	9.8 %	7.0 %
	<i>*Policy Index</i>			22.1 %		22.1 %	9.7 %	6.8 %

Calculated using time-weighted rate of return based on market rate of return.

* Historical Composition of Policy Benchmarks as of Year End:

YE 2019: 32% MSCI USA, 15% MSCI WORLD xUS, 8% MSCI EM, 8% BB US, 4% BB US MBS, 8% BB US Credit, 10% FTSE NAREIT Eq REITs, 5% S&P Gbl Infra, 9% BlackRock Custom, 1% BB US TBILL 1-3 MO

YE 2018: 32% Russell 3000, 15% MSCI ACWI xUS, 3% MSCI ACWI, 8% MSCI EM, 22% BB Global Agg, 10% FTSE NAREIT Equity REITs, 5% S&P Global Infra, 5% BlackRock Custom

TOP TEN DIRECT HOLDINGS - STOCKS

Shares	Stock		Fair Value	% of Fund
22,083	EQUINIX INC COM PAR \$0.001	\$	12,889,847	0.44%
109,872	PARGESA HLDGS SA CHF20 (BR)		9,128,107	0.31%
105,199	WELLTOWER INC COM REIT		8,603,174	0.30%
142,600	ADR TAIWAN SEMICONDUCTOR MANUFACTURING		8,285,060	0.28%
38,438	PUB STORAGE COM		8,185,756	0.28%
20,040	KEYENCE CORP NPV		7,097,673	0.24%
14,100	LVMH MOET HENNESSY LOUIS VUITTON SE EURO.30		6,555,648	0.22%
53,925	DIGITAL RLTY TR INC COM		6,456,980	0.22%
45,200	DAIKIN INDUSTRIES NPV		6,425,949	0.22%
19,400	ADIDAS AG		6,310,830	0.22%
Top 10 Direct Holdings - Stocks		\$	79,939,024	2.74%
Total COAERS Investment Portfolio 12-31-2019		\$	2,914,826,282	100.00%

Full listing available upon request.

TOP TEN DIRECT HOLDINGS - BONDS

Par	Bond		Fair Value	% of Fund
38,000,000	UNITED STATES OF AMERICA TBOND 1.75% 11-15-2029	\$	37,456,719	1.29%
31,363,000	UNITED STATES TREAS NTS DTD 658 1.375% DUE 08-31-2020 REG		31,310,320	1.07%
27,890,000	UNITED STATES TREAS BDS 2.25% DUE 08-15-2046		27,173,140	0.93%
25,050,000	UNITED STATES TREAS BDS DTD 00247 2.5% DUE 02-15-2046 REG		25,638,088	0.88%
22,000,000	UNITED STATES OF AMER TREAS BONDS DTD 05/15/2016 2.5% DUE 05-15-2046 REG		22,516,484	0.77%
18,675,000	UNITED STATES TREAS NTS INFL IDX 0.625% 04-15-2023		19,647,290	0.67%
16,450,000	UNITED STATES TREAS NTS DTD 04/30/2015 1.75% DUE 04-30-2022 REG		16,511,688	0.57%
13,925,000	UNITED STATES 2.5% TREAS NTS 01-31-2024		14,383,546	0.49%
13,000,000	US TREAS SEC STRIPPED INT PMT GENERIC TINT PMT 08-15-2028 REG		10,940,072	0.38%
20,000,000	UNITED STATES TREAS BD STRIPPED PRIN PMT 05-15-2045		10,835,360	0.37%
Top 10 Direct Holdings - Bonds		\$	216,412,705	7.42%
Total COAERS Investment Portfolio 12-31-2019		\$	2,914,826,282	100.00%

Full listing available upon request.

BROKER COMMISSIONS OVER \$5,000

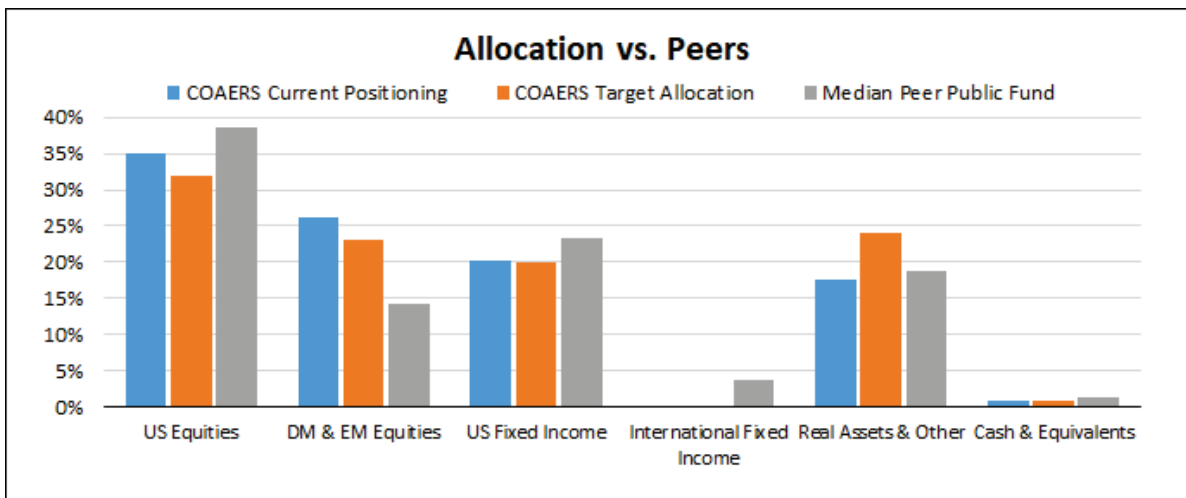
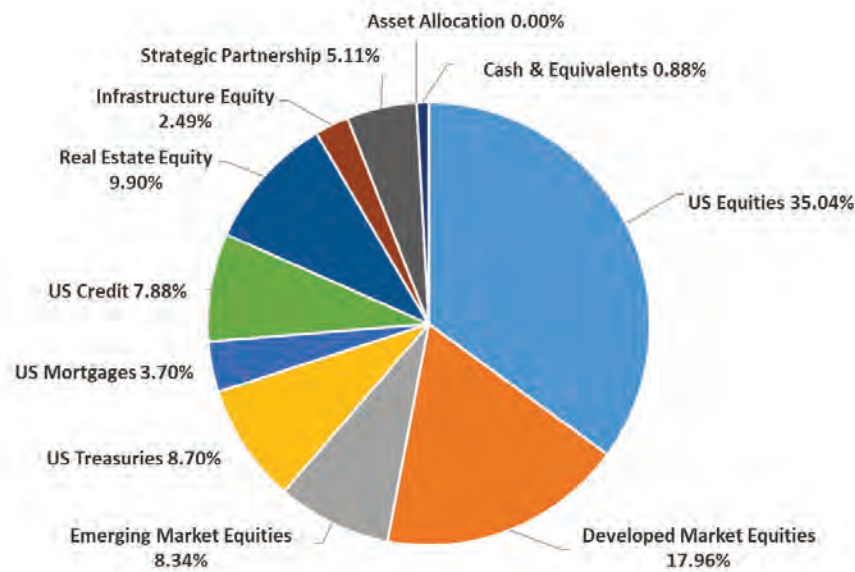
Broker Name	# of Shares Traded	Commission Paid	Cost per Share
BANK OF AMERICA CORPORATION	3,478,719	\$ 23,308	\$ 0.011
CITIGROUP GLOBAL MARKETS INC	3,701,347	7,395	0.002
CREST DEPOSITORY LIMITED	740,333	5,028	0.011
GOLDMAN SACHS NEW YORK	2,094,232	13,072	0.005
INVESTEC BANK PLC	487,703	5,623	0.021
J.P. MORGAN SECURITIES PLC	826,061	10,709	0.011
MORGAN STANLEY & CO. LLC	7,275,807	8,389	0.008
NUMIS SECURITIES INC.	1,564,954	15,331	0.016
PERSHING SECURITIES AUSTRALIA PTY	2,650,600	9,805	0.006
COMBINED -89 Brokers with Commissions < \$5,000	416,814,385	57,086	0.018
Total Broker Commissions	439,634,141	\$ 155,746	\$ 0.017

TOTAL MANAGER FEES AND BROKER COMMISSIONS

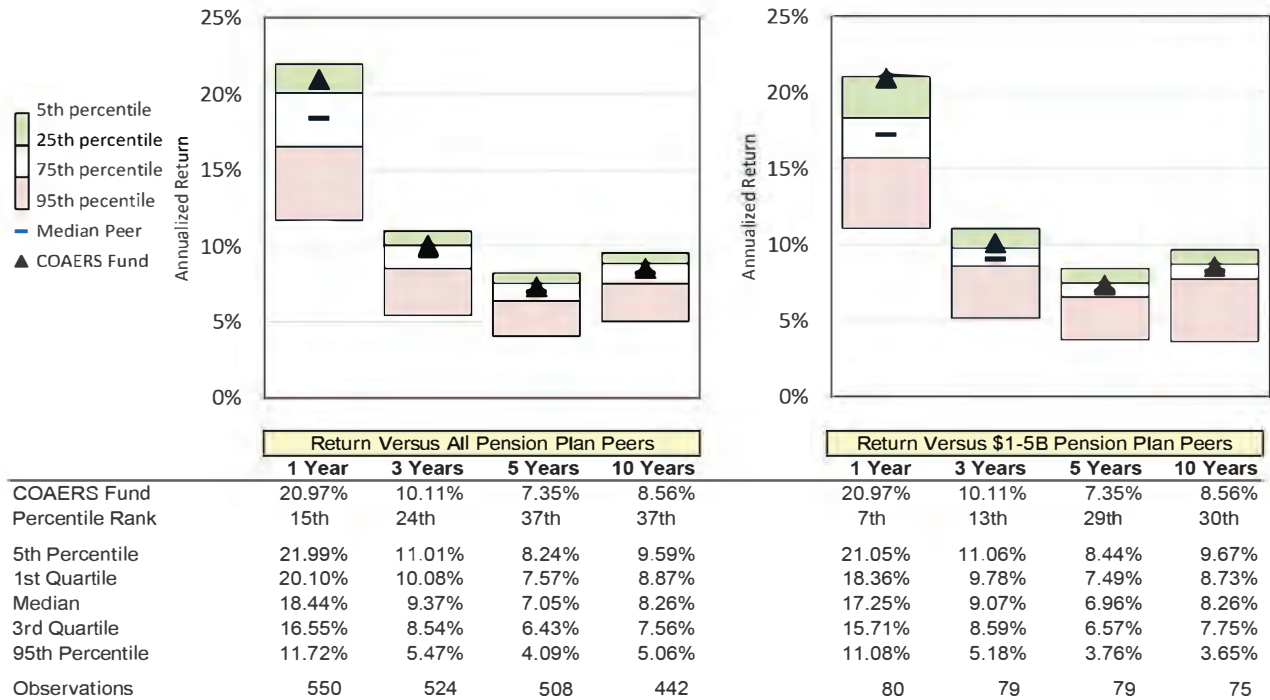
Asset Class	Manager Fees	Commissions Paid	Total Cost
Global Equities			
US Equities	\$ 986,283	\$ 33,409	\$ 1,019,691
Developed Market Equities	1,666,781	106,976	1,773,758
Emerging Market Equities	920,919	-	920,919
Fixed Income			
US Treasuries	621,361	-	621,361
US Mortgages	44,977	-	44,977
US Credit	71,713	-	71,713
Real Assets			
Real Estate	1,934,197	15,361	1,949,558
Infrastructure	-	-	-
Multi-Asset			
Strategic Partnership	199,370	-	199,370
Asset Allocation	-	-	-
Risk Parity	323,917	-	323,917
Cash & Equivalents	45,003	-	45,003
Total Manager Fees and Broker Commissions	\$ 6,814,520	\$ 155,746	\$ 6,970,266

COAERS Investment Portfolio

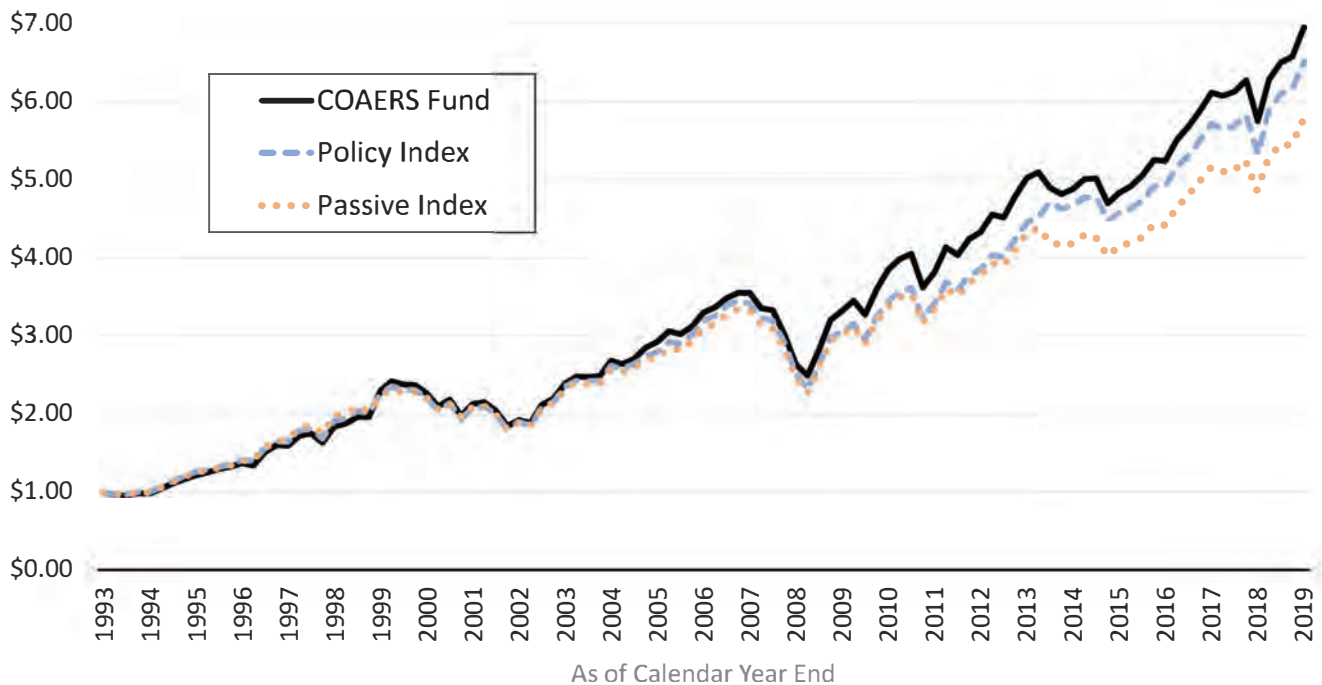
Asset Class	Fair Value	Percentage of Total Fair Value
Global Equities		
US Equities	1,021,393,552	35.04%
Developed Market Equities	523,459,725	17.96%
Emerging Market Equities	243,233,943	8.34%
Fixed Income		
US Treasuries	253,641,269	8.70%
US Mortgages	107,957,488	3.70%
US Credit	229,673,712	7.88%
Real Assets		
Real Estate Equity	288,531,325	9.90%
Infrastructure Equity	72,459,756	2.49%
Multi-Asset		
Strategic Partnership	148,868,390	5.11%
Asset Allocation	-	0.00%
Cash & Equivalents	<u>25,607,121</u>	<u>0.88%</u>
TOTAL	<u>2,914,826,282</u>	<u>100.00%</u>



TOTAL FUND VS. PEER ANALYSIS



TOTAL GROWTH OF \$1: COAERS FUND VS. STRATEGIC BENCHMARKS



The Passive Index aims to reflect the investment mix prevailing among institutional peer portfolios as implemented via low cost passive investable indices. Outperformance relative to this index should represent the value added through decisions made in the SAA process.

The Policy Index aims to reflect a passive implementation of the strategic target allocations established by the Board within the SAA, and outperformance should represent the value added by investment implementation and rebalancing activities.

The current and historical composition of these indices are available upon request.

ACTUARIAL SECTION



April 20, 2020

Mr. Christopher Hanson
Executive Director
City of Austin Employees' Retirement System
6850 Austin Center Blvd., Suite 320
Austin, TX 78731

Dear Mr. Hanson:

Subject: Actuarial Valuation as of December 31, 2019

We are pleased to present our report on the actuarial valuation of the City of Austin Employees' Retirement System (COAERS or the System). This report describes the current actuarial condition of COAERS, determines the period over which the unfunded liabilities of the System are expected to be paid off, and determines the funded status of the System.

In addition, the report provides various summaries of the data. A separate report is issued with regard to valuation results determined in accordance with Governmental Accounting Standards Board (GASB) Statements 67 and 68. Results of this report should not be used for any other purpose without consultation with the undersigned. Valuations are prepared annually as of December 31st, the last day of the COAERS plan year. This report was prepared at the request of the Board and is intended for use by the COAERS staff and those designated or approved by the Board. This report may be provided to parties other than COAERS staff only in its entirety and only with the permission of the Board.

This report does not reflect the recent and still developing impact of COVID-19, which may significantly impact demographic and economic experience. The risks to the plan may include the health of the members, decreases in payroll and contribution revenue, investment losses and plan mortality experience.

As you know, the employee and employer contribution rates are set by statute. It is expected that these contribution rates will remain level as a percentage of payroll. The System's funding policy is for the contribution rates to be sufficient to cover the normal cost of the plan and to amortize any unfunded actuarial accrued liabilities over a period not to exceed 25 years.

Currently, the total contribution rate is sufficient to amortize the System's unfunded liabilities in approximately 40 years. Therefore, the Board's funding policy is not currently being met. As of the prior valuation, the total contribution rate was sufficient to amortize the unfunded liabilities in 32 years. The increase in the funding period is primarily due to the Board's updated expectations for plan experience as reflected in the adoption of new actuarial assumptions.

In 2010, the City of Austin adopted the Amended Supplemental Funding Plan (ASFP). The ASFP provides for an additional City contribution rate of up to a maximum of 10.0% above the base 8.0% rate. The City is now

contributing an additional 10.0%, or a total rate of 18.0%. The additional contribution rate is intended to stay in place until the ASFP is amended or repealed.

We certify that the information presented herein is accurate and fairly portrays the actuarial position of COAERS as of December 31, 2019. All of the supporting schedules and tables contained in this actuarial valuation report were prepared by Gabriel, Roeder, Smith and Company (GRS), including various accounting and statistical tables which should help you compare the results of this plan year with prior years. The information presented in the trend data schedules of this report has been prepared by GRS. The information for years 1993 through 2000 was prepared by Watson Wyatt & Company.

The following schedules in the actuarial section of the COAERS Comprehensive Annual Financial Report were prepared by GRS: Summary of Cost Items, Analysis of Normal Cost by Component, Actuarial Present Value of Future Benefits and Calculation of Actuarial Accrued Liability, Development of Actuarial Value of Assets, Change in Net Position, Change in Unfunded Actuarial Accrued Liability, Relative Size of Unfunded Actuarial Accrued Liability, Schedule of Active Member Valuation Data, Schedule of Retirees and Beneficiaries Added to and Removed from Rolls, Solvency Test, Schedule of Funding Progress.

GRS provided COAERS with the information used in preparing the following trend schedules in the financial section of the CAFR: Notes to the Financial Statements - Schedule of Net Pension Liability, and Sensitivity of the Net Pension Liability to Changes in the Discount Rate; Required Supplementary Information - Schedule of Changes in the Net Pension Liability and Related Ratios. GRS provided no additional assistance in the preparation of any other schedules in the financial section of the CAFR. These schedules were provided to COAERS in a separate GASB report.

As authorized under Article 6243n of the Vernon's Civil Statutes of the State of Texas, actuarial assumptions and methods are set by the Board of Trustees, based upon recommendations made by the plan's actuary. An experience investigation was performed for the five year period ending December 31, 2018. As a result of that study, revised assumptions were adopted by the Board effective with the valuation as of December 31, 2019. This actuarial valuation report is the first to reflect those changes. We believe the assumptions are internally consistent, reasonable, and, where appropriate, based on the actual experience of COAERS. All of the assumptions and methods used in this valuation were selected in compliance with the Actuarial Standards of Practice.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates, and funding periods. Due to the limited scope of this assignment, GRS did not perform an analysis of the potential range of such possible future differences. The actuarial calculations are intended to provide information for rational decision making.

Member data for retired, active, and inactive participants was supplied as of December 31, 2019 by the COAERS staff. We have not subjected this data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data. Asset information was also supplied by the



Mr. Christopher Hanson
April 20, 2020
Page 3

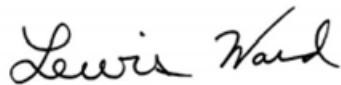
COAERS staff.

The last actuarial valuation of COAERS was prepared as of December 31, 2018 by GRS. Valuations are prepared annually as of December 31st.

The undersigned are independent actuaries and consultants. Mr. Falls is an Enrolled Actuary and a Member of the American Academy of Actuaries and he meets the Qualification Standards of the American Academy of Actuaries. Both Mr. Falls and Mr. Ward are experienced in performing valuations for large public retirement systems.


We would like to thank you and your staff for your assistance in providing all necessary information to complete this valuation. Your courteous help is very much appreciated. We look forward to discussing this actuarial valuation report with you at your convenience. Please do not hesitate to let us know if you have any questions or need additional information.

Sincerely,



Lewis Ward
Consultant
zz1

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R. Ryan Falls, F.S.A, E.A., M.A.A.A.
Senior Consultant



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Executive Summary

The key results from the valuation of the City of Austin Employees' Retirement System as of December 31, 2019 may be summarized as follows:

	<u>December 31, 2019</u>	<u>December 31, 2018</u>
	(1)	(2)
• Members		
— Actives	10,149	9,838
— Retirees (including disabled) and beneficiaries	6,703	6,414
— Vested - terminated	<u>1,271</u>	<u>1,217</u>
— Total	18,123	17,469
• Covered payroll	\$ 707,534,152	\$ 664,335,027
• Normal cost as % of payroll*	17.29%	17.46%
• Actuarial accrued liability	\$ 4,487,884,062	\$ 3,989,560,137
• Actuarial value of assets	\$ 2,848,950,000	\$ 2,695,388,392
• Unfunded actuarial accrued liability (UAAL)	\$ 1,638,934,062	\$ 1,294,171,745
• Estimated yield on assets		
— Actuarial value basis	7.13%	5.23%
— Market value basis	20.63%	-5.97%
• Contribution rate		
— Employee	8.00%	8.00%
— Employer	18.00%	18.00%
• Benefit and refund payments	\$ 218,221,546	\$ 202,987,285
• Amortization period of unfunded actuarial accrued liability	40 years	32 years
• Funding Policy employer contribution rate	21.55%	19.37%
• Funded ratio using actuarial value of assets	63.5%	67.6%
• Funded ratio using market value of assets	65.2%	61.7%

* Includes 0.51% of payroll for administrative expenses.



Introduction

This December 31, 2019 actuarial valuation of the City of Austin Employees' Retirement System has been prepared by GRS. The primary purpose of the valuation is to value the liabilities of the System as of December 31, 2019, determine the funding period of any unfunded liability for the plan year beginning January 1, 2020, and to provide certain required disclosure information. We are pleased to have the privilege of working for the Board, and look forward to discussing the results with you at your convenience.

This report does not reflect the recent and still developing impact of COVID-19, which may significantly impact demographic and economic experience. The risks to the plan may include the health of the members, decreases in payroll and contribution revenue, investment losses and plan mortality experience.

Pages 86 and 87 of this report provides the current funded status of the plan and reviews the valuation results. Assets are discussed on page 88 while page 89 contains an analysis of the actuarial gains and losses during the past year.

Page 90 discusses some of the historical comparisons and statistical summaries for the plan. Pages 91 through 94 provide an assessment and disclosure of risk associated with measuring pension obligations and determining pension plan contributions. Page 95 provides a summary of the valuation results along with other comments.

Various tables supporting the report describe the actuarial methods and assumptions used in the valuation, outline the Plan's benefit provisions, including any changes since the last valuation. Finally, included are definitions of terms used throughout this report.



Funded Status of the Plan

The funded status of the plan is shown in Table 1, Table 2, and Table 3. Table 1 summarizes the various cost items from the current year's and prior year's actuarial valuations, while Table 2 provides an allocation of the normal cost by its various components. Table 3 shows the components of the actuarial liability.

Reviewing the composition of normal cost of the System, Table 2 indicates that the employer normal cost as of December 31, 2019 is 17.29% of pay. This compares with 17.46% of pay as of the prior valuation on December 31, 2018. This normal cost is developed based on the Individual Entry Age Normal (EAN) actuarial cost method. As may be seen in Item 1, the normal cost for the retirement benefits is 13.51% of pay. Similarly, the normal cost is 1.14% for the deferred termination benefits, 1.67% for refunds of terminated employees (both vested and non-vested), 0.20% for disability benefits, and 0.26% for death benefits. In addition, the cost of anticipated administrative expenses is being added to the normal cost rate. This adds 0.51% of pay to the normal cost rate as of December 31, 2019. The decline in the average normal cost reflects the continued shift in the active membership from Group A to Group B. We expect this pattern of declining normal costs (as a percentage of payroll) to continue until the active population is mostly Group B.

Table 1 illustrates a number of the key actuarial items for the 2019 valuation. As mentioned above, the total normal cost rate is 17.29% of covered payroll. The actuarial accrued liability is \$4,487.9 million as shown in Item 5 and as detailed in Table 3. The actuarial value of assets equals \$2,849.0 million, as shown in Item 6. Item 7 of Table 1 shows that the plan has an \$1,638.9 million unfunded liability (i.e. liabilities exceed plan assets) as of the valuation date. As of the last valuation (December 31, 2018), the System was underfunded by \$1,294.2 million. The increase in the unfunded liability is described in greater detail on page B-5 and Table 7.

On October 1, 2012, the City began contributing 18% of payroll and the employees are contributing 8% of payroll. Combining the employees' contributions with the City contribution, the System will have 26.00% of payroll to fund benefits. The current normal cost of the plan is 17.29%, which means that the System is currently receiving contributions in excess of the normal cost equal to 8.71% of pay (26.00% less 17.29%). These excess contributions are available to amortize any unfunded actuarial accrued liability. Based on these contribution rates, if all assumptions are exactly met then the current unfunded liability will be fully amortized over the next 40 years.



Funded Status of the Plan (Continued)

The actuarial valuation report as of December 31, 2019 reveals that the funded ratio (the ratio of actuarial assets to actuarial accrued liability) is 63.5%. On a market value of asset basis, the funded status is 65.2%. The funded status is one of many metrics used to show trends and develop future expectations about the health of the System. The funded status measure itself is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations or assessing the need for or the amount of future contributions since it does not reflect normal cost contributions, the timing of amortization payments, or future experience other than expected.

Under the Amended Supplemental Funding Plan (ASFP), the total City contribution rate is 18.0% of pay. The additional contribution is intended to stay in place until the ASFP is amended or repealed. The normal cost was determined using the Individual Entry Age Normal (EAN) actuarial cost method. This method determines the normal cost for all employees on an individual basis, based on the benefits applicable to each individual member. Because employees hired on or after January 1, 2012 (Group B) have a less valuable benefit tier than employees hired prior to that date (Group A), the normal cost for Group B is less than the normal cost of Group A. With the application of the Individual EAN method, the normal cost is equal to the average of the individual members' normal costs. Since the current group of employees is still approximately 46% Group A, the average normal costs for the System will continue to decline over time as Group B employees replace Group A employees.

Because the contributions to the System are a fixed percentage of payroll, this means that the percentage of payroll that will go to pay off the unfunded liability will increase in the future as the average normal cost decreases. This result makes it difficult to calculate the funding period using a mathematical formula since the amount of contributions to pay off the unfunded liability will not be either a constant dollar amount or a constant percentage of payroll in the future. For this reason, we are using an open group projection to determine when the System is expected to pay off its unfunded liability. The open group projection assumes a constant active population and that there will be no actuarial gains or losses on liabilities or the actuarial value of assets. Based on the open group projection, the funding period of the System as of the valuation date is 40 years. Please see Table 5 which shows selected information from this projection.



Change in Assets

Table 4 shows the development of the actuarial value of assets. Item 11 of Table 4 shows that the actuarial value of assets as of December 31, 2019 is \$2,849.0 million. Table 4 also shows the development of the gain/(loss) on the actuarial value of assets for the prior plan year. As shown in Item 12, the System had a gain on an actuarial asset basis of \$16.5 million in 2019. This compares to the \$58.5 million loss in 2018.

The method for determining the actuarial value of assets offsets excesses or shortfalls in the current year's investment income dollar for dollar against prior years' deferred excesses or shortfalls. Any remaining amounts from the current or prior years continue to be recognized over a five-year period. The investment income exceeded the assumed 7.00% rate of return on a market value of assets (MVA) basis. As shown in column 2 of Table 4, this excess investment income fully offset the prior years' deferred shortfalls in investment income. In addition, \$98.9 million in excess income remained, 20% of which (\$19.8 million) is recognized in this year's actuarial value of assets with the remainder deferred for future valuations.

The total deferral of all excess/(shortfall) investment income for all prior years (shown in Table 4, column 5 of Item 8) is \$79.1 million.

An analysis of the change in the System's market value of assets for the last two plan years and an estimate of the return on assets for the System are included in Table 6. The estimated average annual rate of return for the year ending December 31, 2019 assuming that income, revenue, and expenditures are evenly distributed throughout the year is 20.63% on a market value of assets basis. The rate of return for the year ending December 31, 2019 on an actuarial value basis was 7.13% (including both the change in method and the experience for the year). Note that these returns should be will be compared to the newly adopted investment return assumption of 7.00%.



Actuarial Gains and Losses

An important part of the change in unfunded actuarial accrued liability from year to year is due to the impact of actuarial gains and losses of the System. This section summarizes the combined asset and liability experience changes since the prior valuation on December 31, 2018.

As can be seen in Item 7 of Table 7, the expected value of the unfunded actuarial accrued liability as of December 31, 2019 was an underfunded position of \$1,625.4 million. This expected value reflects the impact of the new actuarial assumptions of \$280 million as shown in Item 1.a. and an assumed investment return assumption of 7.00% applied to the beginning of year unfunded actuarial accrued liability, normal cost, and contributions during 2019.

Since the actual unfunded actuarial accrued liability as of December 31, 2019 is \$1,638.9 million, it represents a total unexpected net increase for the period of \$13.5 million, as shown in Item 9 of Table 7. That is, the unfunded actuarial accrued liability is greater than expected. The net increase in the unfunded actuarial accrued liability includes an asset experience gain of \$16.5 million, a \$13.1 million decrease in the actuarial value of assets due to the AVA method change, as shown in Table 4, and an unexpected increase on the liability side due to experience of equal to \$16.9 million, which is broken out by source in Items 16-23 of Table 7.

Please see the Statement of Actuarial Methods and Assumptions for a more detailed description of the assumptions and methods.



Historical Comparisons and Statistical Summaries

Various statistical data on the System is shown in the tables contained in the Statistical Section. In addition, Tables 8 through 11 under the Actuarial Tables section contain certain actuarial trend information which may be of interest.

Table 8 relates the size of the unfunded actuarial accrued liability (UAAL) to three different measurements. In Columns 3 and 4, the UAAL is related to the covered payroll of the System. Columns 5 and 6 relate the UAAL to the actuarial value of assets, while Columns 7 and 8 relate the UAAL to the total actuarial liabilities of the System.

Tables 9 through 11 provide information which should be included in your annual report. Table 9 provides a schedule of active member valuation data. Table 10 provides a schedule of retirees and beneficiaries added to and removed from payment rolls. Solvency test results are presented in Table 11.



Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions

The determination of the accrued liability and an actuarially determined contribution (or funding period) requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and an actuarially determined contribution (or funding period) that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Asset/Liability mismatch – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
6. Other demographic risks – members may terminate, retire, or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.



Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions (Continued)

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The Funding Policy employer contribution rate shown on the Executive Summary may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Several generally accepted plan maturity measures are described below and are followed by a table showing a 10-year history of the measurements for COAERS.

RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.



Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions (Continued)

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll (5 to 2 ratio), a change in liability of 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

DURATION OF ACTUARIAL ACCRUED LIABILITY

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

ADDITIONAL RISK ASSESSMENT

Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability. While a robust measurement of additional risk assessment is outside the scope of the annual actuarial valuation, some scenario tests and sensitivity tests are included in the valuation summary PowerPoint presentation presented to the Board at the Board's March Board Meeting.



Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions (Continued)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Ratio of the market value of assets to payroll	4.14	3.71	4.21	3.84	3.83	4.10	4.34	3.96	3.69	3.90
Ratio of actuarial accrued liability to payroll	6.34	6.01	6.03	5.99	6.06	5.74	5.93	6.31	6.03	5.61
Ratio of actives to retirees and beneficiaries	1.51	1.53	1.54	1.58	1.60	1.67	1.68	1.74	1.84	1.91
Ratio of net cash flow to market value of assets	-1.3%	-1.3%	-1.0%	-0.7%	-0.8%	-0.9%	-0.9%	-1.2%	-1.4%	-1.7%
Duration of the actuarial accrued liability*	14.01	13.81	NA	NA	NA	NA	NA	NA	NA	NA

*Duration measure not available prior to 2018



Summary and Closing Comments

It is our opinion that the results of this valuation provide a reasonable reflection of the funded status of the System as of the valuation date. The System's contributions are currently sufficient to amortize the unfunded liability of the System.

As previously mentioned, in 2010 the City of Austin adopted an Amended Supplemental Funding Plan (ASFP) which provides for an additional contribution from the City, above the 8.0% base rate, which has resulted in a gradual increase the City's total contribution rate to the System to 18.0%. This additional contribution is intended to remain in place until the ASFP is either amended or repealed.

The overall funded position of the System decreased from 67.6% at the prior valuation to 63.5% at this valuation. Using an open group projection, we have determined that the System is expected to be fully funded in 40 years, assuming all valuation assumptions are realized in the future. The increase in the funding period is primarily due to the change in actuarial assumptions.

As the System is well aware, a funding period of 40 years does not leave much room for adverse experience. Because of the asymptotic nature of funding periods, even small differences between the expected and actual experience in the future could significantly increase the funding period. Therefore, we recommend that the System's Board and Staff continue discussions with the City and other stakeholders about appropriate measures to ensure the solvency of the System on a long-term basis.



Actuarial Tables

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Table 1

Summary of Cost Items

	December 31, 2019		December 31, 2018	
	Cost Item	Cost as % of Pay	Cost Item	Cost as % of Pay
	(1)	(2)	(3)	(4)
1. Participants				
a. Active	10,149		9,838	
b. Terminated vested	1,271		1,217	
c. Retired participants and beneficiaries	6,592		6,302	
d. Disabled	111		112	
e. Total	18,123		17,469	
2. Covered Payroll	\$ 707,534,152		\$ 664,335,027	
3. Averages for Active Participants				
a. Average age	45.0		45.1	
b. Average years of service	9.8		9.5	
c. Average pay	\$ 69,715		\$ 67,527	
4. Total Normal Cost				
a. Normal Cost Rate	16.78%		16.95%	
b. Administrative Expenses	0.51%		0.51%	
c. Total	17.29%		17.46%	
5. Actuarial Accrued Liability				
a. Active participants	\$ 2,005,616,437		\$ 1,805,258,347	
b. Terminated vested participants	93,620,723		78,912,143	
c. Refunds of terminated nonvested participants	10,337,602		9,298,315	
d. Retired participants and beneficiaries	2,357,035,868		2,075,457,016	
e. Disabled participants	21,273,432		20,634,316	
f. Total	\$ 4,487,884,062	634.30%	\$ 3,989,560,137	600.53%
6. Actuarial Value of Assets	\$ 2,848,950,000	402.66%	\$ 2,695,388,392	405.73%
7. Unfunded Actuarial Accrued Liability (UAAL)	\$ 1,638,934,062	231.64%	\$ 1,294,171,745	194.81%
8. Relative Size of UAAL				
a. As percent of actuarial value of assets	57.53%		48.01%	
b. As percent of covered payroll	231.64%		194.81%	
9. Funding period using open group projection	40		32	
10. Employer contribution rate to satisfy funding policy*	21.55%		19.37%	

* Employer rate that produces fully funded plan in 25-years in open group projection.



Table 2

Analysis of Normal Cost by Component

Benefit Component (1)	Cost as % of Pay	
	December 31, 2019 (2)	December 31, 2018 (3)
1. Retirement Benefits	13.51%	13.84%
2. Termination - Deferred Benefits	1.14%	1.03%
3. Termination - Refund Benefits	1.67%	1.40%
4. Disability Benefits	0.20%	0.20%
5. Death Benefits	0.26%	0.48%
6. Administrative Expenses	<u>0.51%</u>	<u>0.51%</u>
7. Normal Cost	17.29%	17.46%



Table 3

Actuarial Present Value of Future Benefits and Calculation of Actuarial Accrued Liability

	<u>December 31, 2019</u> (1)	<u>December 31, 2018</u> (2)
A. Present Value of Future Benefits		
1. Active participants		
a. Retirement benefits	\$ 2,664,423,006	\$ 2,445,360,268
b. Deferred termination benefits	97,239,311	88,617,179
c. Refund of contributions terminations	76,976,391	63,337,457
d. Disability benefits	17,744,006	17,283,635
e. Death benefits	<u>35,748,292</u>	<u>61,929,503</u>
f. Total	\$ 2,892,131,006	\$ 2,676,528,042
2. Retired participants		
a. Service retirements and beneficiaries	\$ 2,357,035,868	\$ 2,075,457,016
b. Disability retirements	<u>21,273,432</u>	<u>20,634,316</u>
c. Total	\$ 2,378,309,300	\$ 2,096,091,332
3. Inactive participants		
a. Vested terminations with deferred benefits	\$ 93,620,723	\$ 78,912,143
b. Nonvested terminations with refunds payable	<u>10,337,602</u>	<u>9,298,315</u>
c. Total	\$ 103,958,325	\$ 88,210,458
4. Total actuarial present value of future benefits	\$ 5,374,398,631	\$ 4,860,829,832
B. Normal Cost Rate (including administrative expenses)	17.29%	17.46%
C. Present Value of Future Normal Costs	\$ 886,514,569	\$ 871,269,695
D. Actuarial Accrued Liability for Active Members		
1. Present value of future benefits (Item A.1.f)	\$ 2,892,131,006	\$ 2,676,528,042
2. Less present value of future normal costs (Item C)	<u>886,514,569</u>	<u>871,269,695</u>
3. Actuarial accrued liability	\$ 2,005,616,437	\$ 1,805,258,347
E. Total Actuarial Accrued Liability (Item A.2.c + Item A.3.c + Item D.3)	\$ 4,487,884,062	\$ 3,989,560,137



Table 4

Development of Actuarial Value of Assets

	Year Ending	
	December 31, 2019	
1. Market value of assets at beginning of year	\$	2,461,383,437
2. Net new investments		
a. Contributions	\$	187,235,968
b. Benefits and refunds paid		(218,221,546)
c. Administrative expenses		(6,218,288)
d. Subtotal	\$	(37,203,866)
3. Assumed investment return rate for fiscal year		7.00%
4. Expected net investment income	\$	170,994,705
5. Expected market value at end of year (Item 1+ Item 2 + Item 4)	\$	2,595,174,276
6. Market value of assets at end of year	\$	2,928,033,076
7. Excess or Shortfall in Investment Income (Item 6 - Item 5)	\$	332,858,800
8. Development of amounts to be recognized as of December 31, 2019:		

Notes: Remaining deferrals in Column (1) for prior years are from Column (6) in last year's report. Column 2 is a direct offset of the current year's excess/(shortfall) return against prior years' excess/(shortfall) of the opposite type.



Table 5

Open Group Projection

Projection Results Based on December 31, 2019 Actuarial Valuation

Valuation as of December 31,	Compensation (in Millions)	Contributions Year Following Valuation (in Millions)	Benefit Payments Year Following Valuation (in Millions)	Actuarial Accrued Liability (AAL, in Millions)	Actuarial Value of Assets (AVA, in Millions)	Unfunded Actuarial Accrued Liability (UAAL, in Millions)	Funded Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2019	\$708	\$185	\$238	\$4,488	\$2,849	\$1,639	63.5%
2020	727	190	246	4,681	2,990	1,691	63.9%
2021	748	196	265	4,877	3,137	1,740	64.3%
2022	769	201	284	5,069	3,281	1,788	64.7%
2023	791	207	302	5,257	3,422	1,835	65.1%
2024	814	213	321	5,440	3,559	1,882	65.4%
2025	838	219	339	5,619	3,692	1,927	65.7%
2026	863	226	357	5,793	3,822	1,971	66.0%
2027	889	233	376	5,963	3,949	2,013	66.2%
2028	916	240	394	6,127	4,073	2,054	66.5%
2029	945	248	414	6,286	4,193	2,092	66.7%
2030	974	255	433	6,438	4,310	2,128	66.9%
2031	1,005	263	451	6,584	4,423	2,162	67.2%
2032	1,037	272	468	6,725	4,533	2,192	67.4%
2033	1,071	281	484	6,861	4,641	2,219	67.7%
2034	1,106	290	498	6,993	4,750	2,243	67.9%
2035	1,144	300	511	7,123	4,861	2,262	68.2%
2036	1,183	310	522	7,254	4,977	2,278	68.6%
2037	1,224	321	532	7,388	5,100	2,288	69.0%
2038	1,266	332	541	7,525	5,232	2,293	69.5%
2039	1,310	344	549	7,668	5,375	2,293	70.1%
2040	1,356	356	556	7,818	5,532	2,286	70.8%
2041	1,403	368	564	7,977	5,704	2,273	71.5%
2042	1,451	380	572	8,144	5,893	2,252	72.4%
2043	1,501	393	581	8,321	6,099	2,223	73.3%
2044	1,552	407	591	8,508	6,323	2,185	74.3%
2045	1,605	421	600	8,704	6,567	2,137	75.4%
2046	1,660	435	611	8,911	6,832	2,079	76.7%
2047	1,716	450	623	9,129	7,119	2,010	78.0%
2048	1,775	465	635	9,358	7,430	1,928	79.4%
2049	1,836	481	648	9,597	7,765	1,832	80.9%
2050	1,899	498	661	9,849	8,126	1,722	82.5%
2051	1,964	515	676	10,112	8,515	1,596	84.2%
2052	2,032	533	692	10,387	8,934	1,453	86.0%
2053	2,102	551	709	10,674	9,384	1,290	87.9%
2054	2,175	570	726	10,974	9,866	1,108	89.9%
2055	2,250	590	744	11,286	10,384	902	92.0%
2056	2,329	611	764	11,612	10,938	673	94.2%
2057	2,410	632	784	11,951	11,533	417	96.5%
2058	2,494	654	805	12,304	12,170	134	98.9%
2059	2,581	677	827	12,671	12,853	-181	101.4%

Projection assumes all assumptions exactly met, including a 7.00% annual return on the current actuarial value of assets.



Table 6
Change in Net Position

	Valuation Period Ending December 31,	
	2019	2018
	(1)	(2)
1. Assets in plan at beginning of year (A)	\$ 2,461,383,437	\$ 2,650,438,116
2. Employer contributions	123,609,683	116,485,749
3. Employee contributions	63,626,285	58,713,327
4. Benefit payments made*	213,956,372	198,846,376
5. Refunds of contributions	4,265,174	4,140,909
6. Expenses paid from trust	6,218,288	4,024,367
7. Investment expense	5,056,457	5,492,075
8. Investment return	<u>508,909,962</u>	<u>(151,750,028)</u>
9. Assets in plan at end of year (B) (1 + 2 + 3 - 4 - 5 - 6 - 7 + 8)	\$ 2,928,033,076	\$ 2,461,383,437
10. Approximate rate of return on average invested assets		
a. Net investment income (8 - 7 = I)	\$ 503,853,505	\$ (157,242,103)
b. Estimated yield based on (2I/(A + B - I))	20.63%	-5.97%

* Benefit payments exclude any distributions from the 415 Restoration Plan



Table 7

Change in Unfunded Actuarial Accrued Liability as of December 31, 2019

<u>CALCULATION OF TOTAL ACTUARIAL GAIN OR LOSS</u>	<u>2019</u>	<u>2018</u>
1. a. Unfunded actuarial accrued liability (UAAL) as of prior year	\$ 1,294,171,745	\$ 1,205,362,672
b. Change in actuarial assumptions as of December 31, 2018	<u>279,897,169</u>	<u>0</u>
c. UAAL with new actuarial assumptions and methods	\$ 1,574,068,914	\$ 1,205,362,672
2. Actual normal cost paid during year (includes service purchases)	<u>130,365,022</u>	<u>120,089,686</u>
3. Subtotal (1.c. + 2)	\$ 1,704,433,936	\$ 1,325,452,358
4. Interest at new assumption rate of 7.00%	114,747,600	94,905,564
5. Contributions during year	(187,235,968)	(175,199,076)
6. Interest on contributions for one-half year	(6,553,259)	(6,569,965)
7. Expected UAAL as of December 31st (3 + 4 + 5 + 6)	1,625,392,309	1,238,588,881
8. Actual UAAL as of December 31st	1,638,934,062	1,294,171,745
9. Unexpected Change in UAAL for the period (8 - 7)	13,541,753	55,582,864
 <u>SOURCE OF CHANGE IN UAAL</u>		
10. Asset (gain)/loss (See Table 4)	\$ (16,494,700)	\$ 58,501,239
11. Actuarial Value of Asset Method change	13,104,278	
12. Total unanticipated increase/(decrease) in liabilities for the period (9-10-11)	16,932,175	(2,918,375)
13. Increase/(decrease) due to benefit enhancements	0	0
14. Increase/(decrease) due to assumption & method changes	<u>279,897,169</u>	<u>0</u>
15. Total liability changes (12 + 13 + 14)	\$ 296,829,344	\$ (2,918,375)
 <u>SOURCE OF LIABILITY (GAINS) AND LOSSES</u>		
16. Salary Increases	\$ 19,906,595	\$ (9,857,906)
17. Service Retirement	(14,480,594)	(13,318,101)
18. Withdrawal	4,246,005	3,226,936
19. Disability Retirement	172,872	123,103
20. Active Mortality	(297,406)	616,530
21. Retiree Mortality	(1,026,695)	645,119
22. Rehires with past service	1,765,885	1,952,042
23. Other (Data) including proportionate program	<u>6,645,513</u>	<u>13,693,902</u>
24. Total Liability Experience (Gain)/Loss	\$ 16,932,175	\$ (2,918,375)



Table 8
Relative Size of Unfunded Actuarial Accrued Liability

Valuation as of December 31,	Unfunded/ (Overfunded) Actuarial Accrued Liability	Relative to Covered Payroll		Relative to Actuarial Value of Present Assets		Relative to Total Actuarial Accrued Liability	
		Covered Payroll	Percent of Covered Payroll	Present Assets	Percent of Present Assets	Actuarial Accrued Liability	Percent of Actuarial Accrued Liability
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2000	(18,353,201)	268,635,564	(6.8%)	1,230,971,746	(1.5%)	1,212,618,545	(1.5%)
2001	48,980,941	316,793,390	15.5%	1,311,288,668	3.7%	1,360,269,609	3.6%
2002	189,347,298	322,007,672	58.8%	1,250,851,348	15.1%	1,440,198,646	13.1%
2003	203,040,300	312,790,966	64.9%	1,348,790,502	15.1%	1,551,830,802	13.1%
2004	321,383,795	326,590,164	98.4%	1,356,797,448	23.7%	1,678,181,243	19.2%
2005	395,382,953	348,619,141	113.4%	1,398,798,722	28.3%	1,794,181,675	22.0%
2006	476,226,660	390,963,991	121.8%	1,497,783,958	31.8%	1,974,010,618	24.1%
2007	459,277,808	417,450,797	110.0%	1,653,533,484	27.8%	2,112,811,292	21.7%
2008	765,526,422	448,740,469	170.6%	1,481,377,439	51.7%	2,246,903,861	34.1%
2009	658,466,636	422,539,199	155.8%	1,672,470,344	39.4%	2,330,936,980	28.2%
2010	749,087,565	438,877,002	170.7%	1,711,577,229	43.8%	2,460,664,794	30.4%
2011	932,942,173	451,831,198	206.5%	1,790,902,641	52.1%	2,723,844,815	34.3%
2012	1,070,656,825	470,231,969	227.7%	1,897,722,867	56.4%	2,968,379,692	36.1%
2013	861,988,246	490,553,170	175.7%	2,047,929,504	42.1%	2,909,917,750	29.6%
2014	900,174,491	539,158,693	167.0%	2,193,881,221	41.0%	3,094,055,712	29.1%
2015	1,083,708,976	559,829,504	193.6%	2,308,087,140	47.0%	3,391,796,116	32.0%
2016	1,168,107,291	599,574,934	194.8%	2,423,269,015	48.2%	3,591,376,306	32.5%
2017	1,205,362,672	629,943,122	191.3%	2,592,460,631	46.5%	3,797,823,303	31.7%
2018	1,294,171,745	664,335,027	194.8%	2,695,388,392	48.0%	3,989,560,137	32.4%
2019	1,638,934,062	707,534,152	231.6%	2,848,950,000	57.5%	4,487,884,062	36.5%



Table 9
Schedule of Active Member Valuation Data

Year Ending December 31, (1)	Active Participants (2)	Percent Change (3)	Covered Payroll (4)	Percent Change (5)	Average Salary (6)	Percent Change (7)
2000	6,894	5.9%	268,635,564	9.9%	38,967	3.8%
2001	7,713	11.9%	316,793,390	17.9%	41,073	5.4%
2002	7,647	-0.9%	322,007,672	1.6%	42,109	2.5%
2003	7,432	-2.8%	312,790,966	-2.9%	42,087	-0.1%
2004	7,489	0.8%	326,590,164	4.4%	43,609	3.6%
2005	7,638	2.0%	348,619,141	6.7%	45,643	4.7%
2006	8,055	5.5%	390,963,991	12.1%	48,537	6.3%
2007	8,358	3.8%	417,450,797	6.8%	49,946	2.9%
2008	8,643	3.4%	448,740,469	7.5%	51,920	4.0%
2009	8,142	-5.8%	422,539,199	-5.8%	51,896	0.0%
2010	8,270	1.6%	438,877,002	3.9%	53,069	2.3%
2011	8,348	0.9%	451,831,198	3.0%	54,124	2.0%
2012	8,387	0.5%	470,231,969	4.1%	56,067	3.6%
2013	8,592	2.4%	490,553,170	4.3%	57,094	1.8%
2014	9,028	5.1%	539,158,693	9.9%	59,721	4.6%
2015	9,063	0.4%	559,829,504	3.8%	61,771	3.4%
2016	9,364	3.3%	599,574,934	7.1%	64,030	3.7%
2017	9,612	2.6%	629,943,122	5.1%	65,537	2.4%
2018	9,838	2.4%	664,335,027	5.5%	67,527	3.0%
2019	10,149	3.2%	707,534,152	6.5%	69,715	3.2%



Table 10
Schedule of Retirees and Beneficiaries Added to and Removed From Rolls

Year Ending December 31,	Added to Rolls		Removed from Rolls		Rolls-End of Year		% Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2002	309	7,754,803	118	2,534,050	2,783	72,520,159	10.5%	26,058
2003	271	7,706,066	59	1,502,757	2,995	78,596,302	8.4%	26,243
2004	227	5,619,478	85	1,741,624	3,137	82,121,249	4.5%	26,178
2005	258	6,699,023	98	2,438,555	3,297	85,324,686	3.9%	25,879
2006	259	6,788,190	89	1,883,938	3,467	90,312,037	5.8%	26,049
2007	289	8,523,459	123	2,262,126	3,633	96,071,149	6.4%	26,444
2008	290	8,299,468	88	2,056,217	3,835	101,840,870	6.0%	26,556
2009	331	9,953,411	80	1,630,148	4,086	109,656,152	7.7%	26,837
2010	341	10,495,807	92	2,029,423	4,335	117,954,059	7.6%	27,210
2011	324	9,851,119	117	2,785,375	4,542	124,748,580	5.8%	27,466
2012	405	13,035,228	116	3,011,032	4,831	134,653,163	7.9%	27,873
2013	387	12,451,142	98	2,176,950	5,120	144,755,297	7.5%	28,273
2014	397	12,737,257	121	2,568,479	5,396	154,937,553	7.0%	28,713
2015	411	13,547,663	128	2,980,334	5,679	165,579,191	6.9%	29,156
2016	385	12,920,841	130	3,199,901	5,934	175,327,721	5.9%	29,546
2017	422	14,942,887	131	2,979,178	6,225	187,304,849	6.8%	30,089
2018	338	12,352,947	149	3,496,334	6,414	196,302,394	4.8%	30,605
2019	434	17,128,087	145	3,358,432	6,703	210,148,047	7.1%	31,351



Table 11
Solvency Test

Valuation Date	Aggregated Accrued Liabilities for			Reported Assets	Portions of Accrued Liabilities Covered by Reported Assets		
	Active and Inactive Members Contributions	Retirees and Beneficiaries	Active and Inactive Members (Employer Financed Portion)		(5)/(2)	[(5)-(2)]/3	[(5)-(2)-(3)]/(4)
	(1)	(2)	(3)		(6)	(7)	(8)
December 31, 2003	252,182,701	777,100,825	522,547,276	1,348,790,502	100.0%	100.0%	61.1%
December 31, 2004	261,905,526	812,266,336	604,009,381	1,356,797,448	100.0%	100.0%	46.8%
December 31, 2005	280,994,642	848,185,652	665,001,381	1,398,798,722	100.0%	100.0%	40.5%
December 31, 2006	295,166,238	904,166,079	774,678,301	1,497,783,958	100.0%	100.0%	38.5%
December 31, 2007	333,340,167	968,493,997	810,977,128	1,653,533,484	100.0%	100.0%	43.4%
December 31, 2008	357,423,035	1,025,407,475	864,073,351	1,481,377,439	100.0%	100.0%	11.4%
December 31, 2009	362,288,592	1,109,773,550	858,874,838	1,672,470,344	100.0%	100.0%	23.3%
December 31, 2010	377,651,365	1,195,328,215	887,685,214	1,711,577,229	100.0%	100.0%	15.6%
December 31, 2011	413,944,399	1,267,467,354	1,042,433,062	1,790,902,641	100.0%	100.0%	10.5%
December 31, 2012	417,481,360	1,375,244,710	1,175,653,622	1,897,722,867	100.0%	100.0%	8.9%
December 31, 2013	436,164,975	1,478,146,019	995,606,756	2,047,929,504	100.0%	100.0%	13.4%
December 31, 2014	453,220,166	1,580,320,342	1,060,515,204	2,193,881,221	100.0%	100.0%	15.1%
December 31, 2015	471,000,910	1,771,674,810	1,149,120,396	2,308,087,140	100.0%	100.0%	5.7%
December 31, 2016	497,752,958	1,873,037,310	1,220,586,038	2,423,269,015	100.0%	100.0%	4.3%
December 31, 2017	517,234,871	2,007,105,437	1,273,482,995	2,592,460,631	100.0%	100.0%	5.3%
December 31, 2018	549,887,200	2,096,091,332	1,343,581,605	2,695,388,392	100.0%	100.0%	3.7%
December 31, 2019	572,708,759	2,378,309,300	1,536,866,003	2,848,950,000	100.0%	96.5%	0.0%



Table 12
Schedule of Funding Progress

Valuation Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	Funded Ratio (2)/(3)	Annual Covered Payroll	UAAL as % of Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
December 31, 2000	1,231.0	1,212.6	(18.4)	101.5%	268.6	(6.8%)
December 31, 2001	1,311.3	1,360.3	49.0	96.4%	316.8	15.5%
December 31, 2002	1,250.9	1,440.2	189.3	86.9%	322.0	58.8%
December 31, 2003	1,348.8	1,551.8	203.0	86.9%	312.8	64.9%
December 31, 2004	1,356.8	1,678.2	321.4	80.8%	326.6	98.4%
December 31, 2005	1,398.8	1,794.2	395.4	78.0%	348.6	113.4%
December 31, 2006	1,497.8	1,974.0	476.2	75.9%	391.0	121.8%
December 31, 2007	1,653.5	2,112.8	459.3	78.3%	417.5	110.0%
December 31, 2008	1,481.4	2,246.9	765.5	65.9%	448.7	170.6%
December 31, 2009	1,672.5	2,330.9	658.5	71.8%	422.5	155.8%
December 31, 2010	1,711.6	2,460.7	749.1	69.6%	438.9	170.7%
December 31, 2011	1,790.9	2,723.8	932.9	65.7%	451.8	206.5%
December 31, 2012	1,897.7	2,968.4	1,070.7	63.9%	470.2	227.7%
December 31, 2013	2,047.9	2,909.9	862.0	70.4%	490.6	175.7%
December 31, 2014	2,193.9	3,094.1	900.2	70.9%	539.2	167.0%
December 31, 2015	2,308.1	3,391.8	1,083.7	68.0%	559.8	193.6%
December 31, 2016	2,423.3	3,591.4	1,168.1	67.5%	599.6	194.8%
December 31, 2017	2,592.5	3,797.8	1,205.4	68.3%	629.9	191.3%
December 31, 2018	2,695.4	3,989.6	1,294.2	67.6%	664.3	194.8%
December 31, 2019	2,849.0	4,487.9	1,638.9	63.5%	707.5	231.6%

Note: Dollar amount in millions.



Statement of Actuarial Methods and Assumptions (Effective as of December 31, 2019)

The most recent experience study was completed based on data collected through December 31, 2018. The Board adopted the assumptions outlined below to be effective with the December 31, 2019 actuarial valuation. Please see our Experience Study report to see more detail of the rationale for the current assumptions. As authorized under Article 6243n of the Vernon's Civil Statutes of the State of Texas, actuarial assumptions and methods are set by the Board of Trustees, based upon recommendations made by the plan's actuary.

A. ACTUARIAL ASSUMPTIONS

1. Investment Return Rate (adopted effective December 31, 2019)

7.00% per annum, compounded annually, composed of an assumed inflation rate of 2.50% and a real rate of return of 4.50%, net of investment expenses.

2. Mortality

a. Nondisabled annuitants (adopted effective December 31, 2019)

Healthy retirees and beneficiaries – The PubG-2010 Healthy Retiree Mortality Table (for General employees) for males and females with full generational projection assuming immediate convergence of rates in the mortality projection scale MP-2018, 2D for male and female. Mortality improvement is projected from the mortality table's base year of 2010 (see Item 20 for further discussion of mortality improvement).

b. Disabled annuitants (adopted effective December 31, 2019)

Disabled annuitants – The PubG-2010 Healthy Retiree Mortality Table (for General employees) for males and females, set forward three years with full generational projection assuming immediate convergence of rates in the mortality projection scale MP-2018, 2D for male and female. Mortality improvement is projected from the mortality table's base year of 2010 (see Item 20 for further discussion of mortality improvement). A minimum 3% rate of mortality applies at all ages.

c. Active members (adopted effective December 31, 2019)

Active employees – The PubG-2010 Employee Mortality Table (for General employees) for males and females with full generational projection assuming immediate convergence of rates in the mortality projection scale MP-2018, 2D for male and female. Mortality improvement is projected from the mortality table's base year of 2010 (see Item 20 for further discussion).

Note regarding mortality table extensions:

Pub-2010 mortality tables are not inclusive of all ages. Mortality rates for active members were extended above age 80 by a constant exponential rate to the Healthy Retiree rate at age 100. Mortality rates for nondisabled annuitants below age 50 were extended using a constant exponential rate to the Juvenile rates.



Statement of Actuarial Methods and Assumptions (Effective as of December 31, 2019) (Continued)

3. Retirement Rates: (adopted effective December 31, 2019)

The following rates of retirement are assumed for members eligible for normal retirement.

Age	Rates of Retirement	
	<u>Males</u>	<u>Females</u>
44 & under	22.0%	25.0%
45	20.0%	20.0%
46	20.0%	20.0%
47	20.0%	20.0%
48	20.0%	20.0%
49	20.0%	20.0%
50	22.0%	24.0%
51	22.0%	24.0%
52	22.0%	24.0%
53	22.0%	24.0%
54	22.0%	24.0%
55	21.0%	26.0%
56	21.0%	26.0%
57	21.0%	26.0%
58	21.0%	26.0%
59	21.0%	26.0%
60	22.0%	21.0%
61	22.0%	21.0%
62	27.0%	24.0%
63	18.0%	16.0%
64	18.0%	16.0%
65	18.0%	24.0%
66	30.0%	24.0%
67	30.0%	26.0%
68	22.0%	26.0%
69	22.0%	26.0%
70	30.0%	26.0%
71	22.0%	24.0%
72	22.0%	24.0%
73	22.0%	24.0%
74 & older	100.0%	100.0%

Group B members are assumed to retire at twice the applicable rate upon the first year they attain eligibility for normal retirement. Early retirement rates (of 1% at age 55 increasing by 1% every two years to 5% at ages 63 and 64) apply for Group B members.



Statement of Actuarial Methods and Assumptions (Effective as of December 31, 2019) (Continued)

4. Rates of Decrement Due to Withdrawal (adopted effective December 31, 2019)

Rates of withdrawal are comprised of a select period for the first 5 years of employment and ultimate rates based on years of service from retirement after the end of the select period. The following rates during the select period apply at all ages during the applicable year of employment:

<u>Years of Employment</u>	<u>Males</u>	<u>Females</u>
1	0.1100	0.1600
2	0.1050	0.1500
3	0.0925	0.1275
4	0.0675	0.1000
5	0.0600	0.0850

After the select period ends, rates of withdrawal are based on the number of years from retirement. The rates are shown below for males and females:

<u>Years from Eligibility for Unreduced Retirement</u>	<u>Rates of Withdrawal After Select Period</u>	
	<u>Males</u>	<u>Females</u>
1	0.0120	0.0080
2	0.0120	0.0175
3	0.0120	0.0175
4	0.0120	0.0200
5	0.0150	0.0200
6	0.0200	0.0200
7	0.0200	0.0250
8	0.0200	0.0250
9	0.0200	0.0250
10	0.0250	0.0300
11	0.0300	0.0350
12	0.0350	0.0375
13	0.0400	0.0400
14	0.0450	0.0700
15+	0.0560	0.0825



Statement of Actuarial Methods and Assumptions (Effective as of December 31, 2019) (Continued)

5. Disability Rates* (adopted effective December 31, 2015)

Sample rates are shown below:

Age	Rates of Decrement Due to Disability Males and Females
20	0.000004
25	0.000025
30	0.000099
35	0.000259
40	0.000494
45	0.000804
50	0.001188
55	0.001647
60	0.002180

* Rates are for disability due to all causes. Occupational disability rates are assumed to be 10% of all causes.

6. Rates of Salary Increase (adopted effective December 31, 2019)

Years of Service	Promotional Rate of Increase	Total Annual Rate of Increase Including 2.50% Inflation Component and 1.00% Productivity Component
1 - 3	2.25%	5.75%
4 - 5	2.00%	5.50%
6	1.75%	5.25%
7	1.50%	5.00%
8	1.25%	4.75%
9 - 10	1.00%	4.50%
11 - 12	0.75%	4.25%
13 - 14	0.50%	4.00%
15 - 16	0.25%	3.75%
17 or more	0.00%	3.50%

7. DROP Participation: (adopted effective December 31, 2019)

It was assumed that 15% of retiring active members with at least 20 years of service would elect a "Backward" DROP. Additionally, it was assumed that all members who Back Drop would elect to DROP back to the date that would provide the greatest actuarial value to the member.



Statement of Actuarial Methods and Assumptions (Effective as of December 31, 2019) (Continued)

8. Married Percentage: (adopted effective December 31, 1997)

100% of the active members are assumed to be married.

9. There will be no recoveries once disabled: (adopted effective December 31, 1997)

10. Spousal Age Difference: (adopted effective December 31, 2012)

Males are assumed to be three years older than females.

11. Normal Form of Payment: (adopted effective December 31, 1997)

It is assumed that all retiring members will elect the Life only form of payment with a guaranteed return of accumulated employee contributions.

12. Crediting Rate on Employee Contributions: (adopted effective December 31, 2002)

It is assumed that the interest credit rate on employee contributions will be 6.0%.

13. Individual salaries used to project benefits: (adopted effective December 31, 1997)

Rates of pay as of the valuation date are reported for all employees.

14. Pay increase timing: (adopted effective December 31, 1997)

Middle of calendar year.

15. Decrement timing: (adopted effective December 31, 1997)

Decrements of all types are assumed to occur mid-year.

16. Eligibility testing: (adopted effective December 31, 2002)

Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur

17. Decrement relativity: (adopted effective December 31, 2002)

Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.



Statement of Actuarial Methods and Assumptions (Effective as of December 31, 2019) (Continued)

18. Incidence of Contributions: (adopted effective December 31, 2002)

Contributions are assumed to be received continuously throughout the year based upon the contribution rates as a percent of payroll (established in statute or agreed upon under the Supplemental Funding Plan) shown in this report and the actual payroll payable at the time contributions are made.

19. Benefit Service: (adopted December 31, 1997)

All members are assumed to accrue one year of eligibility service each year.

20. Mortality Improvement:

The base mortality tables are anchored at the year 2010. To account for future mortality improvement, the base mortality rates shown in Item 2 are projected forward assuming immediate convergence of rates in the mortality projection scale MP-2018, 2D for males and females.

21. Service Purchases (military, permissive, and sick leave conversion):

No service purchases of any type are assumed. Any gains or losses due to these purchases are recognized in the valuation following the purchase.

22. Cost of Living Adjustments and One-time Payments:

No future cost of living adjustments are assumed. In addition, no one-time payments (13th checks) are assumed.

ACTUARIAL VALUE OF ASSETS

The actuarial value of assets is equal to the market value of assets less a five-year phase in of the Excess (Shortfall) between expected investment return and actual income. The expected investment return each year is calculated based on the market value of assets with the difference from actual income smoothed in over five years in 20% increments. If the current year's difference is opposite sign of the prior years' deferred excesses/(shortfalls), then the prior years' bases (starting with the oldest) are reduced dollar for dollar along with the current year's base. Any remaining bases are then recognized over five years (20% per year) from their initial creation. This can and will result in some bases being recognized in a period shorter than five years.

If the resulting preliminary asset value is less than 80% or more than 120% of the market value of assets, then 1/3 of the amount outside of the 80% to 120% corridor is recognized in the final actuarial value of assets. In extreme market conditions, this could result in an actuarial value of assets outside of the 80% to 120% market value of assets corridor.



Statement of Actuarial Methods and Assumptions

(Effective as of December 31, 2019)

(Continued)

B. ACTUARIAL FUNDING METHOD

The actuarial accrued liability is determined using the Entry Age Normal actuarial cost method. This method assigns the System's total actuarial present value of future benefits to various periods. The actuarial accrued liability is assigned to years prior to the valuation and the normal cost is assigned to the year following the valuation. The remaining costs are assigned to future years.

The normal cost is determined on an individual basis using the Individual Entry Age Normal Cost method. The actuarial accrued liability is the difference between the total present value of future benefits and the actuarial present value of future normal costs where future normal costs are based on the benefit provisions that are applicable to each individual member. The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over the actuarial value of assets.

C. FUNDING PERIOD

The funding period is determined using an open group projection. In the open group projection, the demographic assumptions are applied to the current active employees and any employees that are assumed to leave employment are replaced one for one with a new employee. Over time this results in the change of the employee group from mostly Group A members to Group B members. The projection is built to assume no gains or losses on the actuarial accrued liability or the actuarial value of assets. The funding period is the length of time it takes in the open group projection for the actuarial value of assets to exceed the actuarial accrued liability.

In the projection, new members' pay are assumed to increase at 3.50% year over year (i.e. a new employee in 2020 is assumed to be hired at a salary that is 3.50% greater than a new employee hired in 2019). The 3.50% growth rate is equal to our wage inflation assumption of 3.50% (ultimate salary increase assumption shown in Item A.6.). Note that this is not an assumption that payroll will grow at 3.50% per year. Payroll could grow more slowly in the near-term due to membership demographics.

D. CHANGES IN ASSUMPTIONS AND METHODS

New assumptions were adopted effective December 31, 2019. Please refer to the Actuarial Experience Study report for more detail on the assumption changes.



Summary of Benefit Provisions of the Retirement Plan as of December 31, 2019

A. EFFECTIVE DATE

January 1, 1941.

B. ELIGIBILITY AND PARTICIPATION

Any regular and permanent employee of the City of Austin, excluding all civil service commissioned police officers and firefighters, the Mayor and members of the City Council and all part-time employees who work less than 75 percent of a normal work week.

Members originally hired prior to January 1, 2012 are classified as Group A members and members hired on or after January 1, 2012 are classified as Group B members.

Unless noted otherwise, the provisions for Group A and Group B are the same.

C. MEMBERSHIP SERVICE

The period of time during which an eligible employee pays into and keeps on deposit the contribution prescribed to be paid by the employee into the System.

D. AVERAGE FINAL COMPENSATION

The average of the monthly compensation for the 36 calendar months of highest compensation during the last 120 months prior to termination. The monthly compensation used in the determination of benefits cannot exceed the compensation limits of Internal Revenue Code §401(a)(17) for the applicable period. The limit for 2011 is up to \$20,416.67 for persons who first become members after 1995 (members hired prior to 1996 have no limit on their compensation).

E. CITY AND MEMBER CONTRIBUTION RATES

The City currently contributes a base rate of 8.00% of pay for each active member. Under the Amended Supplemental Funding Plan, the City is providing an additional contribution for each active member. Beginning October 1, 2012, this additional contribution became 10% of pay, for a total city contribution of 18%. Each active member contributes 8.00% of pay. These employee contributions are made under a pre-tax 401(h) pick-up arrangement.



Summary of Benefit Provisions of the Retirement Plan as of December 31, 2019 (Continued)

F. RETIREMENT BENEFITS

1. Normal Retirement

a. Eligibility:

Group A – A participant may retire upon attaining age 62, or any age with 23 years of service, or attaining age 55 with 20 years of service.

Group B – A participant may retire upon attaining age 62 with 30 years of service, or at age 65 with 5 years of service.

b. Monthly Benefit:

Group A – 3.00% of average final compensation times years of service.

Group B – 2.50% of average final compensation times years of service.

- c. Payment Form: Benefits are paid as a monthly life annuity to the participant, with a provision that should the participant die prior to receiving monthly payments whose sum is greater than or equal to the participant's accumulated employee contributions, then the participant's beneficiary shall receive a lump-sum equal to the excess of the participant's accumulated employee contributions with interest over the sum of the monthly payments received.

d. Optional Forms of Payment:

- i) Joint and contingent annuity with either 100%, 66 2/3%, or 50% of the reduced retirement income payable for the life of the contingent annuitant upon the death of the retiring participant, with the provision that, should the contingent annuitant predecease the participant, the monthly annuity will revert to the amount that would have been payable under the normal form of payment,
- ii) Joint and 66 2/3% last survivor provides a reduced retirement income payable as long as both the member and the joint annuitant are alive, and upon the death of either the member or the joint annuitant, the benefit reduces to 2/3 of such amount for the remainder of the life of the last survivor,
- iii) Period certain and life annuity with 15 years of payments guaranteed, or



Summary of Benefit Provisions of the Retirement Plan as of December 31, 2019 (Continued)

- e. Deferred Retirement Option Program (DROP): A member may elect to retroactively participate in the System's DROP (i.e. a Backward DROP). The member would receive a lump-sum payment equal to 90% of the sum of the monthly annuities the participant would have received if the member had retired at the DROP entry date. No COLAs are included but changes in the benefit multiplier are reflected. The maximum period a member may retroactively elect under the DROP is 60 months.

2. Early Retirement:

a. Eligibility:

Group A – Currently there are no reduced retirement benefits under the plan.

Group B – A participant may retire with a reduced benefit upon attaining age 55 with 10 years of service.

b. Monthly Benefit:

Group A – Not applicable.

Group B – the same formula benefit as determined under normal retirement multiplied by an actuarial equivalent early retirement reduction factor.

G. DISABILITY RETIREMENT

- 1. Eligibility: If the employee is terminated by reason of a total and permanent disability which prevents the employee from engaging in any employment duties. If the employee has less than five years of service, the disability must be job related.
- 2. Monthly Benefit: Same as Normal Retirement benefit using pay and service at date of disability.
- 3. Form of Payment: The normal form of payment that is available to a member taking normal retirement and the optional forms of payments described in F.1.d.i) and F.1.d.ii) above.



Summary of Benefit Provisions of the Retirement Plan as of December 31, 2019 (Continued)

H. VESTING OF BENEFITS

1. Vesting

An employee is vested according to the following schedule:

<u>Years of Vesting Service</u>	<u>Vested Percentage</u>
Less than 5	0%
5 or more	100%

Benefits Upon Vesting

A vested participant is entitled to the retirement benefit payable at normal retirement earned to the date of participant's termination multiplied by his/her vested percentage, or a refund of the employee's accumulated employee contributions with interest.

I. DEATH IN SERVICE

1. Eligibility: All active members.
2. Benefit: The amount of the benefit payable to the beneficiary is:

- a. Employee eligible for retirement at date of death:

The surviving spouse if any may elect to receive an annuity equal to the monthly benefit as if the member had retired under any retirement option that would have been available to the member at the end of the month in which the member died. If there is no surviving spouse, then the beneficiary may elect to receive a 15 years certain and life annuity. The surviving spouse or beneficiary instead of electing the annuity may elect to receive a death benefit equal to twice the member's accumulated employee contributions with interest.

- b. Employee not eligible for retirement at date of death:

A refund of the member's accumulated deposits (with interest) plus a death benefit from COAERS equal to the member's accumulated deposits (with interest), but excluding any purchases for Non-contributory time, prior military service purchases, or Supplementary Service Credit.



Summary of Benefit Provisions of the Retirement Plan as of December 31, 2019 (Continued)

J. RETIREE LUMP-SUM DEATH BENEFIT

Upon death of a retired member, a \$10,000 lump-sum death benefit is payable. This benefit is also payable upon the death of an active member eligible for retirement whose surviving spouse or beneficiary elects to receive an annuity.

K. COST-OF-LIVING ADJUSTMENT (COLA)

On January 1 of each year the Board may approve a cost-of-living adjustment for those retirees who retired on or before December 31 of the previous year. The maximum adjustment which can be approved is 6%. The amount of the adjustment is set by the Board upon recommendation by the System's actuary that such an adjustment will not make the Fund financially unsound, and the adjustment is not inconsistent with the Code. The adjustment is prorated for any benefit which has been in effect for less than a year, with the proration being 1/12 for each monthly payment received during the prior year.

L. LUMP-SUM ADDITIONAL BENEFIT PAYMENT

Once each year the Board may approve a lump-sum additional benefit payment to be paid to those members and beneficiaries currently in payment status. The additional payment would be equal to a percentage of the member's monthly annuity with a maximum percentage of 100%.

M. LEGISLATED PLAN CHANGES ENACTED BY 1995 LEGISLATURE

1. 2.3% Multiplier

The benefit multiplier was increased from 2.2% per year of service to 2.3% per year of service effective October 1995.

2. 2.3% Retiree Gross-up

Effective October 1995, current retirees received an increase in their benefit amount to bring their retirement benefit amount up to what it would be currently if they had retired under the 2.3% multiplier.



Summary of Benefit Provisions of the Retirement Plan as of December 31, 2019 (Continued)

3. \$10,000 Retiree Lump-Sum Death Benefit

The lump-sum death benefit payable upon the death of a retiree was increased from \$2,000 to \$10,000.

4. Plan Participation Begins at Date of Hire

The six-month service requirement for participation was eliminated. Current active members were granted service for the period between their date of hire and their date of participation, up to six months.

N. LEGISLATED PLAN CHANGES ENACTED BY 1997 LEGISLATURE

1. 2.6% Multiplier

The benefit multiplier was increased from 2.3% per year of service to 2.6% per year of service effective October 1997.

2. 2.6% Retiree Gross-up

Effective October 1997, current retirees received an increase in their benefit amount to bring their retirement benefit amount up to what it would be currently if they had retired under the 2.6% multiplier.

3. Military Service Purchase

Increased the number of months of military service that may be purchased from 24 to 48.

4. Noncontributory Service Purchase

Allowed an employee to purchase noncontributory service for the following periods of time: (1) while employee was on workers' compensation leave, (2) while employee was on an authorized leave of absence, and (3) while employee performed service for the employer in a position for which the service was not otherwise creditable. The employee pays the full actuarial cost of the service purchase.



Summary of Benefit Provisions of the Retirement Plan as of December 31, 2019 (Continued)

5. Employer Purchase of Creditable Service

Allowed the employer to purchase the amount of service required to qualify an employee for an unreduced retirement benefit at age 55. To be eligible for the purchase, the employee must never have been a highly compensated employee within the meaning of IRC Section 414(q). The cost of the service purchase is the full actuarial cost of both the benefit and the retirement eligibility.

O. LEGISLATED PLAN CHANGES ENACTED BY 1999 LEGISLATURE

1. 2.7% Multiplier

The benefit multiplier was increased from 2.6% per year of service to 2.7% per year of service effective October 1999.

2. 2.7% Retiree Gross-up

Effective October 1999, current retirees received an increase in their benefit amount to bring their retirement benefit amount up to what it would be currently if they had retired under the 2.7% multiplier.

3. 23 & Out Provision

The service requirement at which a participant may retire with an unreduced retirement benefit was decreased from 25 years of Creditable Service to 23 years of Creditable Service.

4. Pop-Up Provisions for Certain Joint and Survivor Payment Options

Certain optional forms of payment which extend coverage to a joint annuitant (Options I, II, and III) were amended so that, should the contingent annuitant predecease the participant, the monthly annuity will revert to the amount that would have been payable under the normal form of payment.

5. Lump-sum Additional Benefit Payment

The Board was given the ability to make an additional payment to members and beneficiaries in payment status in the form of a lump-sum additional benefit payment. The additional payment would be a percentage of the current monthly payment with a maximum percentage of 100%.



Summary of Benefit Provisions of the Retirement Plan as of December 31, 2019 (Continued)

6. Employer Purchase of Creditable Service

Limitations on employer purchases of Creditable Service for a Member before actual retirement were removed.

P. BENEFIT ENHANCEMENTS ENACTED BY THE BOARD OF TRUSTEES IN 2000

1. "415 Restoration of Retirement Income Plan"

Certain highly compensated members may have their retirement annuity limited because of Section 415(b)(1) of the Internal Revenue Code. A plan amendment effective January 1, 2000, provides for COAERS to pay a benefit payment that exceeds the maximum benefit limitation imposed by the Internal Revenue Code from a separate, non-qualified, pay-as-you-go "Restoration of Retirement Income Plan."

2. 2.98% Multiplier

The benefit multiplier was increased from 2.7% per year of service to 2.98% per year of service effective April 2000.

3. 2.98% Retiree Gross-up

Effective April 2000, current retirees received an increase in their benefit amount to bring their retirement benefit amount up to what it would be currently if they had retired under the 2.98% multiplier.

4. "Pop-up" Benefit Amendment

The "pop-up" benefit is extended to retirees who selected the actuarial equivalent of Life Annuity option with underlying options of I, II, or III.

Q. BENEFIT ENHANCEMENTS ENACTED BY THE BOARD OF TRUSTEES IN 2001

None



Summary of Benefit Provisions of the Retirement Plan as of December 31, 2019 (Continued)

R. BENEFIT ENHANCEMENTS ENACTED BY THE BOARD OF TRUSTEES IN 2002

1. 3.00% Multiplier

Benefit multiplier was increased from 2.98% per year of service to 3.00% per year of service effective January 2002.

2. 3.00% Retiree Gross-up

Effective January 2002, current retirees received an increase in their benefit amount to bring their retirement benefit amount up to what it would be currently if they had retired under the 3.00% multiplier.

3. Deferred Retirement Option Program

A “Backward” DROP was added as an optional benefit effective in 2002. The retiring member may elect to retroactively participate in a DROP. The member would receive a lump-sum payment equal to 90% of the sum of the monthly annuities the participant would have received if the member had retired at the DROP entry date. No COLAs are included but changes in the benefit multiplier are reflected.

4. Purchase of Permissive Time

A member may purchase up to five years of Permissive Time. The purchase price charged to the member is the anticipated actuarial cost to the System for the additional service. Minimum purchase is one month with a maximum of 60 months (5 years) or the number of months needed to reach first eligibility for retirement whichever is less.

5. Conversion of Unused Sick Leave

At retirement an employee may elect to purchase Creditable Service for unused sick leave. The Board requires payment by the Member, and then by the City of the equivalent amount of retirement contributions that would have been made had the sick hours been exercised as sick hours. An employee must already be eligible for retirement to purchase the service.



Summary of Benefit Provisions of the Retirement Plan as of December 31, 2019 (Continued)

S. BENEFIT ENHANCEMENTS ENACTED BY THE BOARD OF TRUSTEES IN 2003

1. "Pop-up" Benefit Amendment

"Pop-up" benefit was extended to any Joint and Survivor option (including level income options), other than Joint and Last Survivor.

2. Permissive Time Amendment

Permissive Time resolution was amended removing the provision that restricts members from purchasing Permissive Time in excess of the amount needed to reach first retirement eligibility.

T. BENEFIT ENHANCEMENTS ENACTED BY THE BOARD OF TRUSTEES IN 2004

None

U. BENEFIT ENHANCEMENTS ENACTED BY THE BOARD OF TRUSTEES IN 2005

None

V. BENEFIT ENHANCEMENTS ENACTED BY THE BOARD OF TRUSTEES IN 2006

None

W. BENEFIT ENHANCEMENTS ENACTED BY THE BOARD OF TRUSTEES IN 2007

None

X. BENEFIT ENHANCEMENTS ENACTED BY THE BOARD OF TRUSTEES IN 2008

None

Y. BENEFIT ENHANCEMENTS ENACTED BY THE BOARD OF TRUSTEES IN 2009

None

Z. BENEFIT ENHANCEMENTS ENACTED BY THE BOARD OF TRUSTEES IN 2010

None



Summary of Benefit Provisions of the Retirement Plan as of December 31, 2019 (Continued)

AA. LEGISLATED PLAN CHANGES ENACTED BY THE 2011 LEGISLATURE

1. Retirement Provisions

For members hired on after January 1, 2012 (Group B members), changed the eligibility for normal retirement to age 65 with 5 years of service, or age 62 with 30 years of service. Also for members hired on or after January 1, 2012, added an eligibility for early retirement upon age 55 with 10 years of service.

2. Benefit Multiplier

For members hired on after January 1, 2012, the benefit multiplier was changed to 2.5% per year of service. Early retirement benefits would be reduced on an actuarially equivalent basis.

BB. BENEFIT ENHANCEMENTS ENACTED IN 2012-2019

There have been no changes to the benefit provisions of the Plan since January 1, 2012.



Definition of Terms

1. ***Actuarial Cost Method***

A method for determining the actuarial present value of future benefits and allocating such value to time periods in the form of a normal cost and an actuarial accrued liability.

2. ***Present Value of Future Benefits***

This is computed by projecting the total future benefit cash flow from the System, using actuarial assumptions, and then discounting the cash flow to the valuation date.

3. ***Normal Cost***

Computed differently under different actuarial cost methods, the normal cost generally represents the value of the portion of the participant's anticipated retirement, termination, and/or death and disability benefits accrued during a year.

4. ***Actuarial Accrued Liability***

Computed differently under different actuarial cost methods. Generally actuarial accrued liability represents the value of the portion of the participant's anticipated retirement, termination, and/or death and disability benefits accrued as of the valuation date.

5. ***Entry Age Actuarial Cost Method***

A method under which a participant's actuarial present value of future benefits is allocated on a level basis over the earnings of the participant between his/her entry into the System and his/her assumed exit.

6. ***Unfunded Actuarial Accrued Liability***

The difference between total actuarial present value of future benefits over the sum of the tangible assets of the System and the actuarial present value of the members' future normal costs. The System is underfunded if the difference is positive and overfunded if the difference is negative.

7. ***Actuarial Value of Assets***

The value of cash, investments, and other property belonging to the System, as valued by the actuary for purposes of the actuarial valuation.



Definition of Terms (Continued)

8. *Actuarial Gain or Loss*

From one valuation to the next, if the experience of the plan differs from that anticipated by the actuarial assumptions, an actuarial gain or loss occurs. For example, an actuarial gain would occur if the assets in the trust had a yield of 12% based on actuarial value, while the assumed yield on the actuarial value of assets was 7.50%.



STATISTICAL SECTION

The Statistical Section provides additional historical perspective, context, and detail to assist the reader in using the information in the financial statements and note disclosures to understand and assess the economic condition of the City of Austin Employees' Retirement System (COAERS). In compliance with *GASB Statement No. 44, Economic Condition Reporting: The Statistical Section*, schedules are classified into the following categories: Demographic and Economic Information, Operating Information, and Financial Trends.

Statistical Tables

Table Number	Content of Tables	Page
	Demographic and Economic Information – designed to assist the reader in understanding the environment in which COAERS operates.	
13A	Distribution of All Active Participants by Age and Length of Service	131
13B	Distribution of Group A Active Participants by Age and Length of Service	132
13C	Distribution of Group B Active Participants by Age and Length of Service	133
14	Distribution of All Active Participants by Service and Current Rate of Pay	134
	Operating Information – provides contextual information to help the reader understand how COAERS' financial information relates to the services it provides and the activities it performs.	
15	Schedule of Average Benefit Payments	135
16	Retired Members by Type of Benefit	136
17	Schedule of Participating Employers	137
	Financial Trends – schedules to help the reader understand and assess changes in COAERS' financial position over time.	
18	Change in Net Position, Last Ten Fiscal Years	138
19	Benefit and Refund Deductions from Net Position by Type, Last Ten Fiscal Years	139

Sources: Schedules and data are provided by the consulting actuary, GRS Retirement Consulting, unless otherwise noted.



Table 13A
Distribution of All Active Participants by Age and Length of Service
As of December 31, 2019

Attained Age	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Number of Employees	Average Annual Salary
Under 25	90	48	27	16	5	2	0	0	0	0	0	0	188	\$ 40,914
25-29	187	182	101	102	53	89	0	0	0	0	0	0	714	49,285
30-34	203	176	155	147	108	327	73	3	0	0	0	0	1,192	57,241
35-39	144	135	151	145	93	421	271	64	5	0	0	0	1,429	65,861
40-44	119	96	92	74	83	359	319	203	72	0	0	0	1,417	73,333
45-49	83	89	87	83	54	329	302	275	189	26	2	0	1,519	75,230
50-54	84	84	49	56	37	248	287	235	177	90	16	0	1,363	77,712
55-59	60	57	45	37	33	212	231	209	180	83	26	2	1,175	76,769
60-64	36	22	25	29	27	163	167	174	120	47	22	3	835	75,478
65 & Over	7	9	8	9	12	68	73	53	35	21	14	8	317	78,767
All Ages	1,013	898	740	698	505	2,218	1,723	1,216	778	267	80	13	10,149	\$ 69,715



Table 13B
**Distribution of Group A Active Participants by Age and Length of Service
as of December 31, 2019**

Attained Age	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Number of Employees	Average Annual Salary
Under 25	0	0	0	0	0	0	0	0	0	0	0	0	0	\$ 0
25-29	0	0	0	0	0	1	0	0	0	0	0	0	1	46,800
30-34	0	0	0	0	0	77	73	3	0	0	0	0	153	66,928
35-39	0	2	1	0	1	114	265	64	5	0	0	0	452	70,765
40-44	0	0	1	0	3	110	319	203	72	0	0	0	708	79,094
45-49	0	1	0	0	0	91	298	275	189	26	2	0	882	78,645
50-54	1	0	1	1	1	82	282	235	177	90	16	0	886	81,161
55-59	0	1	0	0	1	71	223	209	180	83	26	2	796	79,805
60-64	0	0	0	1	0	57	164	174	120	47	22	3	588	77,289
65 & Over	0	0	0	0	1	28	73	53	35	21	14	8	233	81,497
All Ages	1	4	3	2	7	631	1,697	1,216	778	267	80	13	4,699	\$ 78,209



Table 13C
Distribution of Group B Active Participants by Age and Length of Service
as of December 31, 2019

Attained Age	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Number of Employees	Average Annual Salary
Under 25	90	48	27	16	5	2	0	0	0	0	0	0	188	\$ 40,914
25-29	187	182	101	102	53	88	0	0	0	0	0	0	713	49,289
30-34	203	176	155	147	108	250	0	0	0	0	0	0	1,039	55,814
35-39	144	133	150	145	92	307	6	0	0	0	0	0	977	63,592
40-44	119	96	91	74	80	249	0	0	0	0	0	0	709	67,581
45-49	83	88	87	83	54	238	4	0	0	0	0	0	637	70,502
50-54	83	84	48	55	36	166	5	0	0	0	0	0	477	71,304
55-59	60	56	45	37	32	141	8	0	0	0	0	0	379	70,392
60-64	36	22	25	28	27	106	3	0	0	0	0	0	247	71,167
65 & Over	7	9	8	9	11	40	0	0	0	0	0	0	84	71,196
All Ages	1,012	894	737	696	498	1,587	26	0	0	0	0	0	5,450	\$ 62,391



Table 14
**Distribution of All Active Participants by Service and
Current Rate of Pay as of December 31, 2019**

Completed Years of Service	Number of Employees	Total Average Salary
0	1,013	\$ 57,231
1	898	59,013
2	740	59,735
3	698	61,594
4	505	62,325
5-9	2,218	69,364
10-14	1,723	75,546
15-19	1,216	80,262
20-24	778	81,988
25-29	267	89,590
30-34	80	93,808
35+	<u>13</u>	<u>82,198</u>
All Years	10,149	\$ 69,715

Table 15
Schedule of Average Benefit Payments

Retirement Effective Dates	Years Creditable Service						
January 1, 2014 to December 31, 2019	0-4	5-9	10-14	15-19	20-24	25-29	30+
Period 01/01/2014 to 12/31/2014							
Average Monthly Benefit	\$304	\$934	\$1,748	\$2,059	\$3,457	\$4,653	\$5,142
Average Final Salary	\$41,458	\$54,808	\$61,215	\$55,462	\$66,771	\$74,120	\$70,799
Number of Active Retirees	23	51	50	39	115	56	22
Period 01/01/2015 to 12/31/2015							
Average Monthly Benefit	\$342	\$826	\$1,856	\$2,469	\$3,650	\$4,597	\$5,533
Average Final Salary	\$45,450	\$49,458	\$65,657	\$66,219	\$71,037	\$70,821	\$76,571
Number of Active Retirees	30	44	49	51	112	54	25
Period 01/01/2016 to 12/31/2016							
Average Monthly Benefit	\$205	\$1,072	\$1,801	\$2,320	\$3,592	\$4,801	\$6,625
Average Final Salary	\$35,701	\$66,456	\$64,162	\$60,699	\$69,051	\$75,365	\$85,827
Number of Active Retirees	22	43	50	44	108	49	21
Period 01/01/2017 to 12/31/2017							
Average Monthly Benefit	\$371	\$925	\$1,788	\$3,032	\$3,871	\$4,630	\$6,037
Average Final Salary	\$50,749	\$54,135	\$61,636	\$71,751	\$73,301	\$74,520	\$80,261
Number of Active Retirees	21	43	63	61	114	43	28
Period 01/01/2018 to 12/31/2018							
Average Monthly Benefit	\$293	\$1,112	\$1,772	\$2,863	\$3,979	\$5,495	\$6,080
Average Final Salary	\$56,345	\$69,022	\$64,441	\$70,931	\$78,425	\$87,300	\$84,409
Number of Active Retirees	10	44	45	39	78	43	23
Period 01/01/2019 to 12/31/2019							
Average Monthly Benefit	\$371	\$1,053	\$1,923	\$2,916	\$3,899	\$5,097	\$6,723
Average Final Salary	\$51,792	\$64,130	\$68,532	\$73,958	\$74,027	\$81,487	\$91,779
Number of Active Retirees	14	37	51	46	138	64	27



Table 16
Retired Members by Type of Benefit (as of December 31, 2019)

Amount of Monthly Benefit	Number of Retired Members	Type of Retirement ^a				Option Selected ^b							
		1	2	3	4	Unmod.	1	2	3	4	5	6	7
Deferred						1,271							
\$1-250	205	172	12	2	19	135	52	6	1		11		
251-500	300	244	30	12	14	165	94	15	8	2	14	1	1
501-750	349	275	51	10	13	211	103	14	9	3	9		
751-1,000	366	275	63	14	14	212	106	20	14	4	10		
1,001-1,250	350	259	68	15	8	192	110	16	18	5	9		
1,251-1,500	402	321	61	15	5	192	142	30	23	2	10	1	2
1,501-1,750	422	354	57	11	0	194	133	31	44	4	11		5
1,751-2,000	455	395	44	12	4	204	160	43	36	5	7		
Over \$2,000	3,854	3,648	176	20	10	1,484	1,528	359	324	38	92	25	4
Total	6,703	5,943	562	111	87	4,260	2,428	534	477	63	173	27	12

Notes:

^a Type of Retirement

1. Normal retirement for age and service
2. Beneficiary payment, normal retirement or death in service
3. Disability retirement
4. QDRO - alternate payee

^b Option Selected:

Unmodified Plan: life annuity (includes Type 2 receiving survivor benefit for life)

The following options reduce the retired member's monthly benefit:

Option 1 - Beneficiary receives 100 percent of member's reduced monthly benefit

Option 2 - Beneficiary receives 50 percent of member's reduced monthly benefit

Option 3 - Beneficiary receives 66-2/3 percent of member's reduced monthly benefit

Option 4 - Survivor receives 66-2/3 percent of member's reduced monthly benefit upon first death

Option 5 - Life annuity with 15 years guaranteed

Option 6 - Other: participant created actuarial equivalent forms of payment

Option 7 - Beneficiary of Option 5 receiving payment until termination of guaranteed period

Note: The number of Retired Members and the number of options selected are not equal due to the inclusion of 1,271 deferred vested members in the Unmodified option selection.



Table 17

Schedule of Participating Employers

The City of Austin and the City of Austin Employees' Retirement System are the only participating employers in the plan.

Table 18
Change in Net Position, Last Ten Fiscal Years

	Fiscal Year									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Additions										
Member Contributions	\$40,629	\$41,503	\$43,922	\$47,449	\$50,489	\$54,066	\$60,801	\$56,194	\$58,713	\$63,626
Employer Contributions	53,576	66,718	76,217	86,713	93,470	100,637	104,488	111,058	116,671	123,770
Investment Income (net of expenses)	230,102	(21,964)	220,199	287,075	99,704	(47,608)	171,641	376,819	(157,242)	503,854
Total additions to plan net assets	\$324,307	\$86,257	\$340,338	\$421,237	\$243,663	\$107,095	\$336,930	\$544,071	\$18,142	\$691,250
Deductions										
Benefit Payments	\$115,665	\$123,558	\$131,606	\$141,923	\$152,664	\$162,085	\$171,736	\$183,344	\$195,538	\$208,828
Refunds	4,205	3,801	4,916	4,738	4,154	4,052	3,911	4,045	4,141	4,265
Administrative Expenses	2,113	2,218	2,280	2,561	2,631	2,421	2,701	2,778	4,024	6,218
Lump-sum Payments	2,013	2,483	3,843	4,858	5,039	3,532	3,697	3,154	3,494	5,288
Total deductions from plan net assets	\$123,996	\$132,060	\$142,645	\$154,080	\$164,488	\$172,090	\$182,045	\$193,321	\$207,197	\$224,599
Change in net assets	\$200,311	(\$45,803)	\$197,693	\$267,157	\$79,175	(\$64,995)	\$154,884	\$350,750	(\$189,055)	\$466,651

Notes: Dollar amounts in thousands

Columns may not add due to rounding

Includes contributions to and benefit payments from 415 Restoration Plan



Table 19
Benefit and Refund Deductions from Net Position by Type, Last Ten Fiscal Years

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Type of Benefit										
Age and service benefits:										
Retirees ^a	\$114,244	\$121,366	\$130,019	\$139,667	\$150,335	\$160,219	\$170,031	\$181,270	\$192,905	\$205,575
Beneficiaries ^a										
Lump-sum payments	\$2,011	\$2,483	\$3,843	\$4,858	\$5,039	\$3,532	\$3,697	\$3,154	\$3,494	\$5,288
In service death benefits: ^b	\$1,421	\$2,192	\$1,587	\$2,256	\$2,329	\$1,866	\$1,705	\$2,074	\$2,633	\$3,253
Disability benefits: ^c										
Total benefits	\$117,676	\$126,041	\$135,449	\$146,781	\$157,703	\$165,617	\$175,433	\$186,498	\$199,032	\$214,116
Type of Refund										
Death ^b										
Separation	\$4,205	\$3,801	\$4,916	\$4,738	\$4,154	\$4,052	\$3,911	\$4,045	\$4,141	\$4,265
Total refunds	\$4,205	\$3,801	\$4,916	\$4,738	\$4,154	\$4,052	\$3,911	\$4,045	\$4,141	\$4,265

Notes: Dollar amounts in thousands

^a Segregation of age benefits for beneficiaries not currently available

^b Segregation of death benefits between refunds and in service death benefits not currently available

^c Segregation of disability benefits from age and service benefits not currently available

Includes benefit payments from 415 Restoration Plan

Excludes administrative expenses



HISTORY OF BENEFIT CHANGES

January 1, 1941

City Council established the City of Austin Employees' Retirement System.

Original City Ordinance provided a maximum annuity of \$100 per month at age 65.

Contributions to retirement system set at 4.0%.

No survivor options, no early retirement eligibility, no vesting, no disability benefits, and no death benefits.

1951

Established two options for survivor benefits:

Option I – 100% Joint and Survivor

Option II – 66 $\frac{2}{3}$ Joint and Survivor

Established eligibility for early retirement.

Established a provision for vested benefits after 15 years of Creditable Service.

Established disability retirement benefits.

Increased contribution rate to 5.0%.

1962

System changed from a money-purchase plan to a formula-based plan with a multiplier of 1.125%.

Established additional options for survivor benefits:

Option III – 50% Joint and Survivor

Option IV – 66 $\frac{2}{3}$ Joint and Last Survivor

1967

Multiplier increased from 1.125% to 1.25%.

Set Active Member death benefits at \$2,000.

1969

Established provisions for cost-of-living adjustment (COLA).

Set Retired Member death benefits at \$2,000.

1971

Increased multiplier from 1.25% to 1.5%.

Established a provision for unreduced retirement benefits at age 62 (lowered from age 65) with any number of years of service.

Provided free health insurance benefits, ages 62 - 65.

Increased contribution rate to 6.0%.

1972

Established a provision for vested eligibility after 10 years of Creditable Service.

Established a provision for regular employees working 30 or more hours per week to make retirement contributions.

Established a provision for Members eligible for early retirement benefits to choose Option I to provide survivor benefits.

1973

Increased multiplier from 1.5% to 1.75%.

Established a provision for Final Average Earnings based on highest 60 months of contributing service.

Allowed Members eligible for retirement to select option to provide survivor benefit before actually retiring.

Established disability retirement for line-of-duty disabilities regardless of Creditable Service. Disability retirement available for any disability after 10 years of service. Disability retirement benefits based on age and years of service at time of disability retirement; no penalty based on age.

December 1977

Elimination of \$2,000 death benefit for Active Members; continued for Retirees.

Established a provision for Active Members' designated beneficiaries to receive contributions and interest plus an equal amount from the System if Member dies prior to retirement eligibility.

September 1978

Established additional retirement options.

December 1979

Discontinued medical insurance payment for Retirees who were ages 62 - 65.

July 1981

Established a provision for contributions to be required after age 62 until retirement. Members older than age 62 have option to make up missed contributions to benefit from higher salary averaging for retirement benefits.

Reduced Final Average Earnings period from 60 to 36 months.

October 1982

Increased contribution rate to 6.6%, matched by City.

November 1982

Established retirement benefits for Members age 55 or older with 20 years of service.

March 1984

Adopted unisex option factors. The sex of the Member and the beneficiary no longer considered in the determination of any System benefits.

December 1984

Increased Member contribution rate from 6.6% to 7.0%, matched by the City.

Increased multiplier from 1.75% to 1.85%.

Established a provision for a surviving spouse to select an optional benefit if Active Member dies who was already eligible to retire and had not yet selected a benefit option.

Implemented employer "pick up" of member contributions pursuant to 414(h)(2) of the Internal Revenue Code. Member contributions after January

1, 1985 not taxed until time when benefits are paid to the Member.

Limited "Prior Service" Purchase – Former Members who forfeited membership service by taking a refund when they left City employment may purchase their prior Creditable Service. Current Members allowed six months to reinstate former credit by repaying withdrawn deposits plus interest. Only former Members who had been reemployed by the City before December 20, 1984 are eligible.

Established that the 36 months of salary used to calculate monthly benefits need not be consecutive. Highest 36 months of salary during last 10 years of Creditable Service would be averaged to determine Final Average Earnings.

March 1985

Granted a special one-time benefit increase based on year of retirement.

October 1985

Increased multiplier from 1.85% to 2.0%.

February 1986

Change in composition of Board of Trustees; replaced Council Member position with Retired Member Trustee to be appointed by the City Council.

May 1987

Established that Members laid-off during the period from September 30, 1986 through October 1, 1989, and who were eligible for retirement would receive an unreduced current service annuity.

October 1987

Reduced Member and City contribution rates to the System temporarily from 7.0% to 6.2% of basic compensation for the period from October 1, 1987 to September 30, 1988.

March 1988

Established survivor benefit options for Disability Retirees effective March 13, 1988.

August 1988

Established vesting eligibility at five years of Creditable Service.

Extension of “Prior Service Purchases” – Former Members who forfeited membership service by taking a refund of their retirement contributions when they left City employment, who have returned to City employment, may purchase and reinstate their prior Creditable Service.

For purposes of calculating benefits and determining eligibility, three years were added to both age and service for all Members retiring between September 1, 1988 and December 31, 1988.

September 1988

Restored Member and employer contribution rates to 7.0% from 6.2% of basic earnings effective September 30, 1988.

December 1989

Amended ordinance for Retiree Member Trustee position of the Board to be elected by Retired Members to a four-year term, instead of appointment by the City Council.

January 1990

Granted a special one-time benefit increase ranging from 0.5% to 15% based on date benefit commenced.

February 1990

Established unreduced retirement benefits for Members at any age with 30 years Creditable Service.

Increased multiplier from 2.0% to 2.1%.

October 1990

Adopted limits on income of Social Security disability benefits for System Disability Retirees.

August 1991

Established System governance by Article 6243n of Texas State Law effective August 26, 1991. All changes to the System made by the Texas State Legislature.

Became a member of Proportionate Retirement Program with five other statewide retirement systems. Membership service may be combined with other participating systems for meeting service requirements for retirement eligibility.

July 1993

Increased multiplier from 2.1% to 2.2%, with commensurate increase for members retired before December 1, 1989.

Established a provision for unreduced retirement benefits for Members at any age with 25 years of service.

Allowed purchases for up to 24 months of former active duty U.S. military service.

October 1995

Increased multiplier from 2.2% to 2.3%, with commensurate increase for previous Retirees.

Established that new City of Austin employees hired after October 1, 1995 become Members of COAERS at date of employment. Current employees as of October 1, 1995 are given retirement service credit for up to one six-month probationary period at time of retirement. Change in composition of Board of Trustees; Director of Finance Designee replaced with additional Retired Member Trustee to be elected by Retired Members. Increased death benefit for Retirees from \$2,000 to \$10,000.

October 1997

Increased multiplier from 2.3% to 2.6%, with commensurate increase for previous Retirees.

Established a provision for unreduced retirement benefits for Members at age 55 with 20 years of service.

Increased purchases of former active duty U.S. military service from 24 to 48 months.

Allowed new purchase option of Creditable Service for non-contributory time including time while on workers' compensation, leaves of absence, part-time and temporary service.

Allowed for the City of Austin to purchase service credit for Members in order to qualify an employee for unreduced retirement benefit at age 55.

October 1999

Increased multiplier from 2.6% to 2.7%, with commensurate increase for previous Retirees.

Increased Member contribution rate from 7.0% to 8.0% following vote by Active Members.

Established a provision for unreduced retirement benefits for Members at any age with 23 years of service.

Set new limits on Retirees returning to work for the City.

Added “pop-up” benefit for Retirees choosing Options I, II, or III (Joint and Survivor Annuities) to increase Retiree benefits if the survivor beneficiary predeceased the Retiree on, or after, October 1, 1999.

Granted Board authority to authorize certain benefit improvements subject to statutory guidelines.

Gave Board the ability to grant an additional payment to Members receiving monthly annuity payments in the form of an additional lump-sum benefit payment. The additional payment would be a percentage of the current monthly payment with a maximum percentage of 100%.

Established a provision for disability retirement benefits for off-the-job injury/illness after five years Creditable Service (previously 10 years).

Removed limitations on employer purchases of Creditable Service for a Member.

January 2000

Established Restoration of Retirement Income Plan to restore retirement income otherwise limited by Section 415 of the Internal Revenue Code.

April 2000

Increased multiplier from 2.7% to 2.98%, with commensurate increase for previous Retirees.

Increased employer contribution rate from 7.0% to 8.0%, matching Member contribution rate.

July 2000

Extended “pop-up” benefit to Retirees who selected the actuarial equivalent of Life Annuity option with underlying options of I, II, or III.

January 2002

Increased multiplier from 2.98% to 3.0%, with commensurate increase for previous Retirees.

Established a provision for purchases of Permissive Time to Active/Inactive Vested Members, based on EGTRRA federal law with a minimum purchase of one month and a maximum of 60 months (five years) or the number of months needed to reach first eligibility for retirement, whichever is less.

Amended Proportionate Retirement Program provided by Texas Government Code 803 to allow former members of participating proportionate systems to re-establish Creditable Service previously forfeited in that system without returning to membership in that system.

April 2002

Established Sick Leave Conversion benefit. Allows Members to convert sick leave balances to Creditable Service at time of retirement with purchase paid by Member and City of Austin.

Established Backward DROP (Deferred Retirement Option Program) benefit up to five years for Members working beyond retirement eligibility.

January 2003

Extended “pop-up” benefit to any Joint and Survivor option other than Joint and Last Survivor.

Amended Permissive Time resolution removing provision which restricted Members from purchasing Permissive Time in excess of the amount needed to reach first eligibility for retirement.

May 2005

City Council adopted a Supplemental Funding Plan providing additional City contributions in Resolution No. 20050512-045. The Plan is structured to increase City contributions to achieve a 30-year amortization period as follows: 1% in fiscal year 2007, 2% in fiscal year 2008, 3% in fiscal year 2009, and 4% in fiscal year

2010 and thereafter, if necessary. If, during any calendar year, COAERS earns greater than a 12% time weighted rate of return net of fees, the increase is delayed one budget cycle. Any future benefit enhancements or cost of living adjustments require a recommendation from the City Manager and approval by the City Council. In addition, if the CPI index exceeds 3.0% in any calendar year, an actuarial study is to be performed to determine the additional subsidy needed if a cost of living adjustment were to be provided.

October 2006

City Council adopted a budget including a Supplement Funding Plan contribution subsidy of 1% for fiscal year 2007.

September 2007

Established a limited proportionate service arrangement exclusively for those individuals who have membership in COAERS and a retirement system within the Travis County Healthcare District (District) organization. This arrangement, effective with employees transitioning into the District effective March 1, 2009, is similar to the general proportionate program except that it applies only between these two retirement systems.

October 2007

Scheduled increase in City Supplemental Funding Plan contribution subsidy postponed because of time-weighted rates of investment returns (net of fees) exceeding 12%.

October 2008

City Council adopted a budget including a Supplement Funding Plan contribution subsidy of 2% for fiscal year 2009.

March 2009

City of Austin Police Retirement System joins the Proportional Retirement Program.

October 2009

City Council adopts a budget increasing Supplemental Funding Plan City contributions from 2% to 4% for fiscal year 2010.

September 2010

City Council approves an Amended Supplemental Funding Plan establishing the City's total employer contribution to the System as follows:

- 14% of compensation effective October 1, 2010 for fiscal year 2010-11;
- 16% of compensation effective October 1, 2011 for fiscal year 2011-12; and
- 18% of compensation effective October 1, 2012 for fiscal year 2012-13, and each fiscal year thereafter.

The City's total employer contribution levels remain in effect until the Amended Supplemental Funding Plan is amended or repealed.

The Amended Supplemental Funding Plan also requires any future benefit enhancements or cost of living adjustments otherwise permitted under the System's governing documents to be recommended by the City Manager and approved by the City Council. Finally, the Amended Supplemental Funding Plan stated that it was the City and the System's intention to seek legislative amendments to state law to improve the overall financial condition of the System by establishing reasonable but different benefit levels for employees of the City who became members of the System on or after January 1, 2012.

March 2011

The Board, through policy, increased the waiting period for certain retirees returning to work from 60 to 90 days.

June 2011

Article 6243n was amended establishing a new benefit tier for employees hired on and after January 1, 2012. The following provisions apply to those employees:

- Normal retirement eligibility at age 65 with 5 years of service credit; or at age 62 with 30 years of service credit;

- Early reduced retirement eligibility at age 55 with 10 years of service credit;
- An annuity formula multiplier of 2.5%; and
- The purchase of nonqualified permissive service (supplementary service credit) for annuity calculations only and not for eligibility purposes.

Unrelated to the new benefit tier, Article 6243n was amended to revise the rules for retirees returning to work. The revised rules require the Board to suspend the retirement allowance of a retired member who resumes employment with an employer in a position that is not required to participate in another retirement system maintained by an employer, and who is not a regular full-time employee of an employer, if the member works for, or is compensated by, an employer for more than 1,508 hours in any rolling 12-month period after the member resumes employment with the employer.

November 2014

The Board implemented a Funding Policy which established certain actuarial methods for funding and created long-term funding goals to ensure that COAERS is well funded into the future and to specify under what conditions future benefit enhancements would be considered.

HISTORY OF CONTRIBUTIONS AND BENEFIT RATES

Year	Employer Contribution Rate	Member Contribution Rate	Interest Paid on Member Deposits	Benefits Multiplier	Cost of Living Adjustment
1941	4.00%	4.00%	-	N/A	-
1942	"	"	-	"	-
1943	"	"	-	"	-
1944	"	"	-	"	-
1945	"	"	2.00%	"	-
1946	"	"	2.00%	"	-
1947	"	"	2.00%	"	-
1948	"	"	2.00%	"	-
1949	"	"	2.00%	"	-
1950	"	"	2.00%	"	-
1951	5.00%	5.00%	2.00%	"	-
1952	"	"	2.00%	"	-
1953	"	"	1.91%	"	-
1954	"	"	2.46%	"	-
1955	"	"	2.52%	"	-
1956	"	"	2.60%	"	-
1957	"	"	2.00%	"	-
1958	"	"	2.62%	"	-
1959	"	"	2.79%	"	-
1960	"	"	3.27%	"	-
1961	"	"	2.77%	"	-
1962	"	"	3.65%	1.125%	-
1963	"	"	3.76%	"	-
1964	"	"	3.31%	"	-
1965	"	"	3.25%	"	-
1966	"	"	3.56%	"	-
1967	"	"	3.68%	1.25%	-
1968	"	"	4.25%	"	-
1969	"	"	4.66%	"	0.50% ^a
1970	"	"	4.98%	"	1.50%
1971	6.00%	6.00%	5.43%	1.50%	2.00%
1972	"	"	6.04%	"	3.00%
1973	"	"	6.22%	1.75%	3.00%
1974	"	"	6.33%	"	3.00%
1975	"	"	6.82%	"	3.00%
1976	"	"	6.94%	"	3.00%
1977	"	"	6.51%	"	3.00%
1978	"	"	6.66%	"	3.00%
1979	"	"	7.84%	"	3.00%
1980	"	"	8.01%	"	3.00%
1981	6.00%	6.00%	8.14%	"	3.00%

HISTORY OF CONTRIBUTIONS AND BENEFIT RATES

Year	Employer Contribution Rate	Member Contribution Rate	Interest Paid on Member Deposits	Benefits Multiplier	Cost of Living Adjustment
1982	6.60%	6.60%	8.21%	"	3.00%
1983	"	"	8.39%	"	3.00%
1984	7.00%	7.00%	8.29%	1.85%	3.00%
1985	"	"	8.22%	2.00%	3.00%
1986	"	"	8.00%	"	3.00%
1987	6.20%	6.20%	8.00%	"	1.50%
1988	7.00%	7.00%	8.00%	"	3.00%
1989	"	"	8.00%	"	3.00%
1990	"	"	8.00%	2.10%	3.00%
1991	"	"	6.50%	"	3.00%
1992	"	"	6.00%	"	4.00%
1993	"	"	5.00%	2.20%	3.10%
1994	"	"	6.00%	"	6.00%
1995	"	"	6.75%	2.30%	6.00%
1996	"	"	6.75%	"	6.00%
1997	"	"	6.75%	2.60%	6.00%
1998	"	"	5.00%	"	5.00%
1999	"	8.00%	6.25%	2.70%	3.00%
2000	8.00%	"	5.75%	2.98%	0.00%
2001	"	"	4.25%	"	3.50%
2002	"	"	3.75%	3.00%	2.50%
2003	"	"	3.75%	"	0.00%
2004	"	"	3.75%	"	0.00%
2005	"	"	4.50%	"	0.00%
2006	9.00% ^b	"	4.50%	"	0.00%
2007	"	"	4.50%	"	0.00%
2008	10.00% ^b	"	4.00%	"	0.00%
2009	12.00% ^b	"	3.25%	"	0.00%
2010	12.00% ^c	"	2.75%	"	0.00%
2011	14.00% ^c	"	2.25%	"	0.00%
2012	16.00% ^c	"	1.85%	3.00%/2.50% ^d	0.00%
2013	18.00% ^c	"	2.17%	"	0.00%
2014	"	"	2.63%	"	0.00%
2015	"	"	2.14%	"	0.00%
2016	"	"	1.83%	"	0.00%
2017	"	"	2.32%	"	0.00%
2018	"	"	2.81%	"	0.00%
2019	"	"	2.32%	"	0.00%

^a In 1969, the adjustment was 1.5% prorated for 4 months, 4/12 x 1.5% or .05%.

^b Includes City of Austin subsidy payment, effective at beginning of their fiscal year, October 1, pursuant to Supplemental Funding Plan.

^c Increased to 14.00% effective October 1, 2010; increased to 16.00% effective October 1, 2011; increased to 18.00% effective October 1, 2012 and thereafter; pursuant to Amended Supplemental Funding Plan.

^d The multiplier was set at 2.50% for those hired on and after January 1, 2012. The multiplier remained at 3.00% for those hired before January 1, 2012.

Notes: The System was a money purchase plan until 1962 when a formula for computing benefits was introduced with a multiplier of 1.125%. Special adjustments based on years of retirement granted by City Council in 1985 and 1990 are not reflected in table.



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