2022 ANNUAL REPORT

AUSTIN FIREFIGHTERS RETIREMENT FUND

AFRFund.org

AUSTIN FIREFIGHTERS RETIREMENT FUND

4101 Parkstone Heights Drive, Suite 270
Austin, TX 78746

Staff @ AFRFund.org

(512) 454 – 9567

Anumeha Kumar, Executive Director

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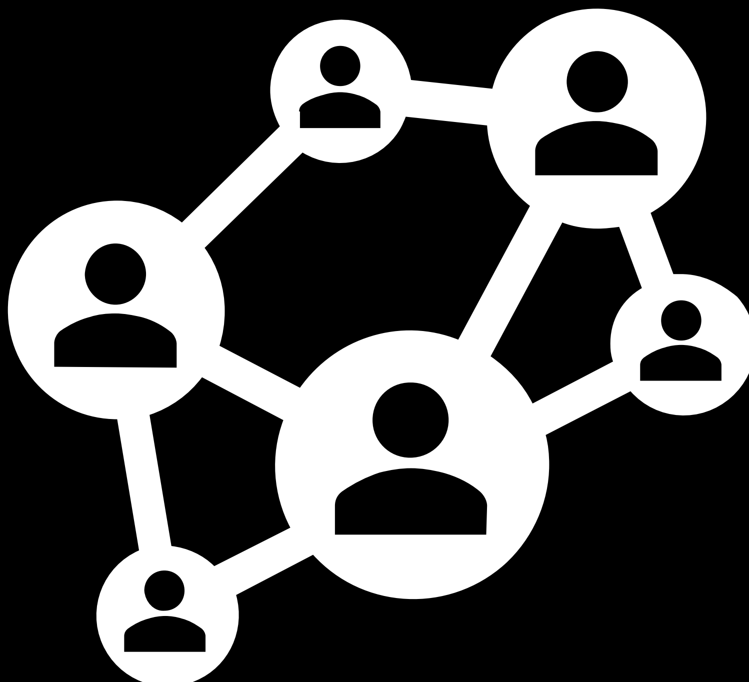


INTRODUCTORY SECTION

July 18, 2023

Dear Members,

The Board of Trustees and staff of the Austin Firefighters Retirement Fund (*AFRF* or *the Fund*) are pleased to present the Annual Report for the fiscal year ended December 31, 2022. We hope this Report will provide important information to help you stay abreast of AFRF's finances, including investment performance, funding health, operation, and management of the Fund. The Annual Report is divided into the following four sections:

- **Introductory Section** – This section contains information on administrative organization and investment performance provided by the Fund's general investment consultant.
- **Financial Section** – This section contains the Independent Auditor's report, Management's Discussion and Analysis (MD&A), basic financial statements, and certain required supplementary information.
- **Actuarial Section** – This section contains the Actuary's Certification letter and the Annual Actuarial Valuation Report.
- **Plan Provision Section** – This section contains historical information on plan provision changes, including any COLAs granted, and a summary of the benefit guide.

This past year, the financial markets took a downturn with the increased inflationary pressures across the country. AFRF produced a negative investment return of -10.8%, but the Fund ranked in the second quartile of its peer group. The Fund's net returns outperformed both its policy benchmarks but fell short of its actuarial return target of 7.30%. The funded status of AFRF remained strong at 86.9% but the amortization period increased to 35.7 years. The Fund ended 2022 with $1.1 billion in investment assets, down from $1.3 billion in 2021.

Striving to provide Cost of Living Adjustments (COLAs), when affordable, remains a top priority of the Board. Unfortunately, in 2022 the Fund's actuary determined that a COLA could not be supported under the Fund's COLA Policy, based on the Fund's -14.5% return through September 2022. The Board is bound by its COLA Policy and its actuary's recommendation. To accept the actuary's recommendation against granting the COLA was especially difficult for the Board, given our members do not participate in social security, which makes dealing with unrelenting inflation more difficult to manage. The Board will continue to work with the new actuary to explore both short- and long-term options to address the current COLA situation.

Overall, the Board remains vigilant of the current economic market volatility and the inflationary environment with the focus on maintaining the long-term funding health of the pension plan. The responsible stewardship of this Board, office staff, and our professional consultants will help us continue to focus on fulfilling our mission to safeguard and manage the Fund in the sole interest of the members and their beneficiaries.

I value and am honored with the opportunity to serve as Mayor of our great city and as Chair of the Austin Firefighters Retirement Fund. It is my first year on this Board following my previous tenure as Mayor, and I appreciate the opportunity to serve alongside a dedicated group of trustees. I appreciate their hard work as well as that of office staff and our advisors to ensure continued successful operation of AFRF.

Lastly, I would like to extend my appreciation to all our firefighters, both active and retired, for the courageous and dedicated service you provide or have provided to the residents of Austin.

Sincerely,

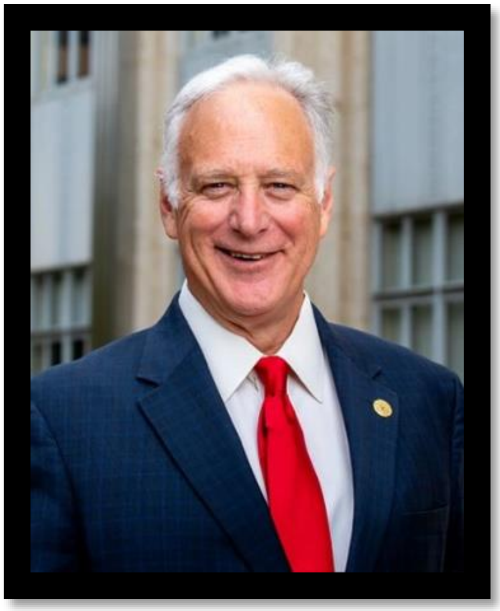
Mayor Kirk Watson
Board Chair

4101 Parkstone Heights Drive, Suite 270
Austin TX, 78741

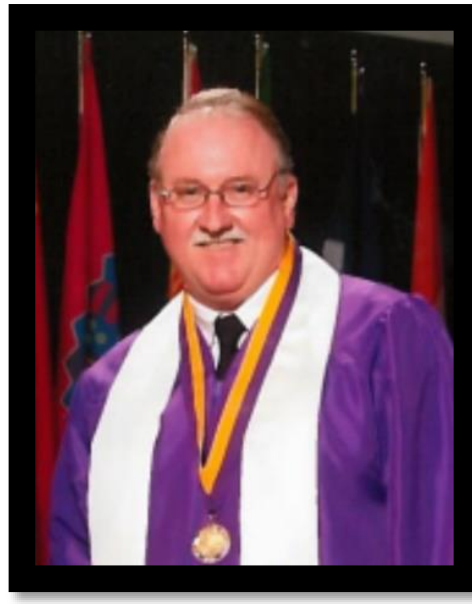
(512) 454-9567

Staff@AFRFund.org

BOARD OF TRUSTEES



Mayor Kirk Watson
Board Chair
City of Austin Mayor



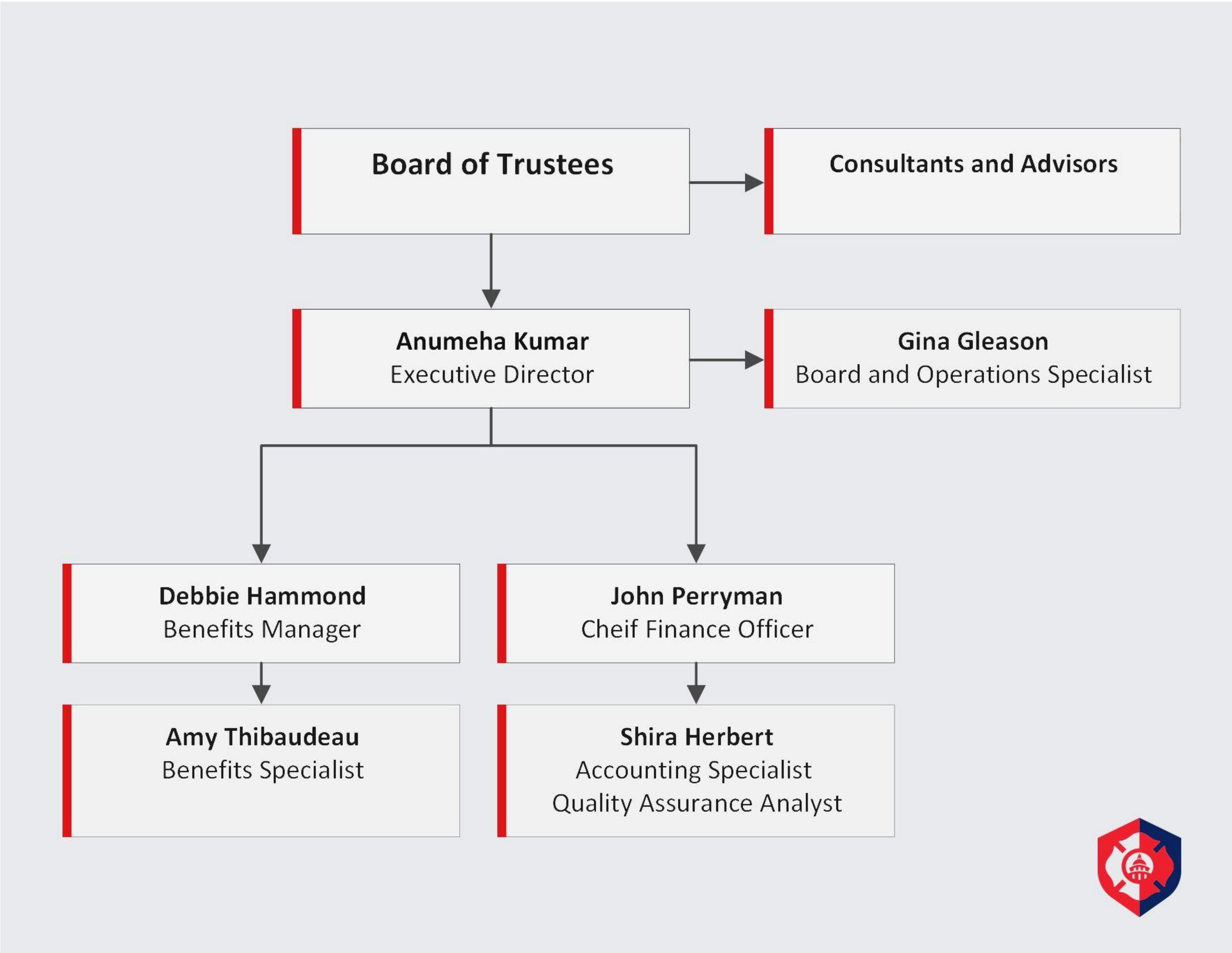
Doug Fowler
Vice Chair
Term Expires 12/2023

Belinda Weaver
Trustee
City of Austin Treasurer

John Bass
Trustee
Term Expires 12/2024

Aaron Woolverton
Trustee
Term Expires 12/2025

ORGANIZATION CHART



CONSULTANTS / ADVISORS

Actuary
Cheiron - McLean, VA

Custodian Bank
State Street - Boston, MA

Investment Consultant
Meketa Investment Group - Boston, MA

Auditor
Montemayor Britton Bender - Austin, TX

Legal Counsel
Jackson Walker, LLC - Austin, TX

INVESTMENT MANAGERS

Domestic Equites

State Street Global Advisors - Boston, MA
Vaughan Nelson Investment Management – Houston, TX
Westfield Capital Management – Boston, MA
Westwood Holding Group, Inc. – Dallas, TX

Fixed Income Securities

Aberdeen Asset Management, Inc. – Philadelphia, PA
Aberdeen Flag Capital – Stamford, CT
Loomis Sayles – Boston, MA
Pacific Asset Management – Newport Beach, CA
Pyramis Global Advisors – Smithfield, RI
State Street Global Advisors – Boston, MA

International Equities

Baillie Gifford – Edinburgh, Scotland
Deutshe Alternative Asset Management – London, England
Highclere International – London, England
Sanderson Asset Management – Chicago, IL
State Street Global Advisors – Boston, MA
TT International – Dublin, Ireland

Real Asset

Aether Investment Partners – Denver, CO

Real Estate

Clarion Partner – Auburn, CA
Metropolitan Real Estate Management – Boston, MA
Partner Group Inc. – New York, NY
Portfolio Advisors LLC – Darien, CT

INVESTMENT MANAGERS

Private Equity

57 Stars Investor Services – Washington D.C.
Arcmont Lending – London, England
Constitution Capital Partners – Andover, MA
Cross Creek Capital Partners – Salt Lake City, UT
DWS Alternatives Global Limited – London, England
Dimensional Fund Advisors – Austin, TX
Greenspring Associates – Owings Mills, MD
HarbourVest – Boston, MA
LGT Capital Partners Inc. – New York, NY
Partner Group Inc. – New York, NY
Private Advisors – Richmond, VA
Private Equity Investors – New York, NY
SVB Capital – San Francisco, CA

MEKETA
INVESTMENT GROUP

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MEMORANDUM

TO: Board of Trustees, Austin Fire Fighters' Relief and Retirement Fund
FROM: Leo Festino, Aaron Lally, Colin Kowalski, Meketa Investment Group
DATE: July 13, 2023
RE: Investment Consultant's Statement for Annual Financial Report

This letter reviews the global capital markets in 2022 and the investment performance of the Austin Fire Fighters' Relief and Retirement Fund (the "Fund" or "Austin Fire") for the year ending December 31, 2022.

Austin Fire produced a return of -10.8% in the calendar year, outperforming both its policy benchmarks. The Fund ranked in the second quartile of its peer group[1].

The Fund rates of return are represented using a net-of-fees time-weighted methodology based upon monthly market values and cash flows. Consistent with industry best practices, Austin Fire's private market valuations are included on a one-quarter lag, cash flow adjusted basis, to account for the typical 60-90 day delayed reporting cycle for most private market investments. Data was provided by State Street Bank, Austin Fire's custodian, and investment manager valuation statements.

Meketa Investment Group, Austin Fire's general investment consultant, works with the Board of Trustees and Staff, to assist with performance evaluation, asset allocation, manager selection, governance, and other industry best practices.

2022 Capital Markets Year in Review

When 2022 started, investors were riding the wave of strong returns over the last couple years and expectations were for inflation to be transitory, growth to fall slightly, and the Federal Reserve to raise interest rates to just 1% by year-end. This clearly did not play out in 2022 as inflation remained well above expectations and the Federal Reserve, and other central banks, raised interest rates at a pace we have not witnessed in a long time.

[1] InvMetrics Public DB >$1 bb net.

As the first calendar quarter of 2022 ended, market volatility increased, driven by unrelenting inflation, expectations for policy to tighten much faster than previously expected, and Russia's invasion of Ukraine as well as its potential financial consequences for the global economy. The Federal Reserve started its rate increases with 50 basis point hikes in March.

In the second calendar quarter, the Federal Reserve policy makers increased rates by a surprising 75 basis points at the June 2022 meeting. Shortly following this meeting, CPI was released showing that prices had increased to a multi-decade high of 9.1%, again above expectations. This surprised markets and put into question the idea that inflation was peaking, as well as accelerated investor expectations for the pace of the Fed tightening policy. Concerns of a looming recession increased.

The third quarter started off with strong performance across global markets, especially in the US. Investors' optimism at the time was driven by a decline in inflation measures, as the CPI ticked down from 9.1% to 8.5% and came in below expectations. However, Federal Reserve messaging about policy going forward, combined with outsized interest rate hikes due to the slow rate of decline in inflation and a strong labor market resulted in significant equity market declines in both August and September 2022.

The last calendar quarter of 2022 started very strong for developed market equities, on returned signs that inflation may be peaking, monetary policy tightening may relatedly slow, and hopes for a soft-landing of major economies. However, as the quarter progressed, results were mixed by month and region as the world received mixed signals on inflation.

Over the full year, US stocks outperformed emerging markets but underperformed developed markets outside the US. The Russell 3000 returned -19.2% for the year, compared to the MSCI EAFE at -14.5%, and a decline of -20.1% for the MSCI Emerging Markets index. Within fixed income, the inflation adjustment helped TIPS' full year relative results as the Bloomberg TIPS index decreased -11.8% over the full year, while the Bloomberg Aggregate index declined by -13.0%. Inflation, as measured by CPI, declined to 6.5% by the end of the year. Inflation in the Eurozone ended the year at 9.2%, down from a peak of 10.6%. Similarly, inflation in the UK ended the year at 9.2%, down from a peak of 9.6%.

Austin Fire's 2022 Performance Commentary

Austin Fire ended 2022 with approximately $1.1 billion in investment assets. During a tough year for traditional assets, most asset classes decreased in value. Real Estate was the strongest performing asset class for the Fund, generating a net return of 8.3%. In public market investments, eight of thirteen active public managers beat respective benchmarks.

	Calendar Year 2022 Return
Austin Fire (net of fees)	-10.8%
Static Benchmark[2]	-12.0%
Dynamic Benchmark[3]	-13.2%
Peer Median Return[4]	-11.2%

***Returns are time-weighted, net of fees. Austin Fire's private market valuations are included on a one-quarter lag, cash flow adjusted basis, to account for the typical 60-90 day delayed reporting cycle for most private market investments.*

Austin Fire's longer-term net returns (3-year, 5-year, and 10-year) all exceeded both policy benchmarks. Strong manager selection, stable asset allocation, and sizable allocation to strong performing private markets have been the biggest drivers of long-term performance.

2023 Capital Markets through 6/30/2023

The first half of 2023 was very favorable to public market investments as inflation steadily decreased. The US Equity market (S&P 500 Index) is up 16.9% year-to-date through 6/30/2023. The international equity market (MSCI EAFE index) is up 11.7% year-to-date through 6/30/2023. Investment grade bonds (Barclays Aggregate Index) is up 2.1% year-to-date as inflation has subsided.

Meketa, Staff and the Board of Trustees continue to diligently monitor the macro environment and its impact on the Fund.



Leandro Festino, CFA, CAIA
Managing Principal

Aaron Lally, CFA, CAIA
Managing Principal

Colin Kowalski
Investment Analyst

[2] Policy target weights multiplied by each respective asset class's benchmark
[3] Actual asset class weight (each prior month end) multiplied by each respective asset class's benchmark
[4] InvMetrics Public DB >$1 bb net.

FINANCIAL SECTION

Independent Auditor's Report
GASB Statement No. 67 and No. 68

INDEPENDENT AUDITOR'S REPORT

Montemayor Britton Bender PC

CERTIFIED PUBLIC ACCOUNTANTS

AUSTIN FIRE FIGHTERS' RELIEF AND RETIREMENT FUND DBA
AUSTIN FIREFIGHTERS RETIREMENT FUND

FINANCIAL STATEMENTS
WITH SUPPLEMENTARY INFORMATION AND
INDEPENDENT AUDITOR'S REPORT
31 DECEMBER 2022

Montemayor Britton Bender PC
CERTIFIED PUBLIC ACCOUNTANTS

Board of Trustees
Austin Firefighters Retirement Fund

INDEPENDENT AUDITOR'S REPORT

Opinion

We have audited the accompanying statement of fiduciary net position of the Austin Firefighters Retirement Fund (the Fund) as of 31 December 2022 the related statement of changes in fiduciary net position for the year then ended, which collectively comprise the Fund's financial statements, and the related notes to the financial statements.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial status of the Fund as of 31 December 2022 and the changes in its financial status for the year then ended, in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Fund and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Fund's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that main raise substantial doubt shortly thereafter.

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Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards will always detect a material misstatement when it exists. The risk of not detecting material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misinterpretations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing our audit in accordance with generally accepted auditing standards, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion of the effectiveness of the Fund's internal control. Accordingly, no such opinion is expressed.

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

- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Fund's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that are identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 4 through 7 and the supplemental schedules on pages 20 through 24 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.

Montemayor Britton Bender PC

17 July 2023
Austin, Texas

AUSTIN FIREFIGHTERS RETIREMENT FUND
MANAGEMENT'S DISCUSSION AND ANALYSIS

Our discussion and analysis of the Austin Firefighters Retirement Fund's (the Fund) financial performance provides an overview of the Fund's activities for the calendar years 2022 and 2021 This information is provided in conjunction with our financial statements that follow.

FINANCIAL HIGHLIGHTS

- Fiduciary net position of the Fund decreased by $187,711,635 or -14.40% in 2022, due to negative market returns, and increased fund payouts. The fiduciary net position of the Fund increased by $141,520,832 or 12.18% in 2021 due to positive financial returns, as well as continued contributions to the fund.

- Total contributions by the members and the City of Austin increased by 3.27% in 2022 and 3.44% in 2021. The increase for 2022 over 2021 reflects wage increase amongst participants.

- The amount of benefits paid directly to retired members and their beneficiaries increased by $10,787,197 in 2022 and contribution refunds increased by $6,699,243 in 2021. The number of pension recipients and lump sum distributions increased for both years.

- The funding objective of the Fund is to meet long-term benefit obligations through contributions by the members and the City of Austin as well as from the investment income. As of 31 December 2022, the most recent actuarial measurement date, the Fund's actuarial funded ratio of actuarial assets as a percentage of actuarial liabilities was 87.4%, compared to 89.6% as of 31 December 2021.

OVERVIEW OF THE FINANCIAL STATEMENTS

The Fund's financial statements consist of the Statement of Fiduciary Net Position and the Statement of Changes in Fiduciary Net Position, with accompanying Notes to the Financial Statements. The information available in each is summarized below:

The Statement of Fiduciary Net Position presents the Fund's assets and liabilities and the resulting net position, which are held in trust for pension benefits. This statement provides a snapshot as of year-end of the Fund's investments, stated at fair value, along with cash and short-term investments, receivables, and other assets and liabilities. Over time, increases or decreases in Fund net position may serve as a useful indicator of whether the financial position of the Fund is improving or deteriorating.

The Statement of Changes in Fiduciary Net Position presents information showing additions to and deductions from the Fund during a twelve-month period, using the accrual basis of accounting. Thus, additions are reported when earned and deductions when incurred, regardless of when cash is received or paid. The Notes to the Financial Statements provide additional information that is essential to a full understanding of the data provided in the financial statements.

See independent auditor's report.

FINANCIAL ANALYSIS

Our analysis below focuses on the fiduciary net position and changes in fiduciary net position of the Fund.

Summary of Fiduciary Net Position

31 December 2022, 2021 and 2020

	2022	2021	2020
Cash and receivables	$7,409,903	$24,361,041	$10,916,112
Investments	1,108,752,080	1,280,210,826	1,151,057,947
Other assets	0	0	49,614
Total assets	1,116,161,983	1,304,571,867	1,162,023,673
Total liabilities	329,113	1,027,362	0
Fiduciary net position for pension benefits	$1,115,832,870	$1,303,544,505	$1,162,023,673

Net position: The net position of the Fund decreased by $187,711,635 in 2022 and increased by $141,520,832 in 2021. The decrease in 2022 reflects poor financial markets, and increased payouts from the Fund. The increase between both 2021 and 2020 over prior years reflects positive investment returns due to stronger financial markets, as well as continued contributions to the Fund.

Liabilities: The Fund's liabilities decreased by 698,249 in 2022 due to decrease to the investment managers for their investment fees. The Fund's liabilities increased by $1,027,362 in 2021 due to larger accounts payable balance to the investment managers for their investment fees.

See independent auditor's report.

AUSTIN FIREFIGHTERS RETIREMENT FUND
MANAGEMENT'S DISCUSSION AND ANALYSIS

Summary of Changes in Fiduciary Net Position

31 December 2022, 2021 and 2020

	2022	2021	2020
Additions:			
Contributions	$42,071,919	$40,738,694	$39,384,313
Investment income (loss)	(147,628,167)	171,861,712	146,906,009
Other income	97,917	74,049	119,898
Total additions	(105,458,331)	212,674,455	186,410,220
Deductions:			
Benefit payments and contribution refunds	80,970,089	70,182,892	63,483,649
Administrative expenses	1,283,215	970,731	1,092,299
Total deductions	82,253,304	71,153,623	64,575,948
Net increase (decrease)	(187,711,635)	141,520,832	121,834,272
Fiduciary net position for pension benefits			
Beginning of year	1,303,544,505	1,162,023,673	1,040,189,401
End of year	$1,115,832,870	$1,303,544,505	$1,162,023,673

Additions: Total contributions by the members and City of Austin for 2022 and 2021 were $42,071,919 and $40,738,694 respectively. The increase of 1,333,225 in 2022 represents a 3.27% increase from 2021. The increase of $1,354,381 in contributions for 2021 represents a 3.44% increase. The net investment income/(loss) was approximately ($148 million) and $172 million for 2022 and 2021 respectively.

Deductions: The expenses paid by the pension plan include the benefit payments, refunds of member contributions, administrative and other expenses. Benefits paid directly to retired members and their beneficiaries and contribution refunds in 2022 were $80,970,089 compared to $70,182,892 in 2021. The amount of benefits paid increased by $10,787,197 in 2022 from 2021 and increased by $6,699,243 in 2021 from 2020. The increases in both 2022 and 2021 over prior years were due to the increases in the both number of retirees receiving benefits and in amount of lump sum distributions.

See independent auditor's report.

AUSTIN FIREFIGHTERS RETIREMENT FUND
MANAGEMENT'S DISCUSSION AND ANALYSIS

Overall Analysis: As of 31 December 2022, fiduciary net position decreased by $187,711,635 over 2021. As of December 2021, fiduciary net position increased by $141,520,832 or 12.18% over the prior year. The most recent actuarial measurement date of 31 December 2022 shows the Fund's actuarial funded ratio to be 87.4% compared to 89.6% from prior year. The 31 December 2022 valuation shows the Fund continues to be actuarially sound and has taken positive steps to continue that course.

REQUEST FOR INFORMATION

This financial report is intended to provide a general overview of the Fund's finances and to demonstrate the Fund's accountability for the money it receives. Any questions regarding this report may be addressed to the fund administration at: 4101 Parkstone Heights Dr., Suite 270, Austin, TX 78746.

See independent auditor's report.

AUSTIN FIREFIGHTERS RETIREMENT FUND
STATEMENT OF FIDUCIARY NET POSITION

31 DECEMBER 2022

ASSETS	
Cash and cash equivalents	$7,245,787
Investments at fair value:	
Public domestic equities	219,699,040
Public international equities	209,977,146
Private equity fund investments	222,733,907
Public fixed income investments	310,744,525
Real estate fund investments	112,168,625
Private natural resources fund investments	33,428,837
	1,108,752,080
Due from broker	253
Interest and dividends receivable	163,863
	1,116,161,983
LIABILITIES	
Due to broker	329,113
FIDUCIARY NET POSITION RESTRICTED FOR PENSION BENEFITS	$1,115,832,870

The accompanying notes are an integral part of this financial statement presentation.

AUSTIN FIREFIGHTERS RETIREMENT FUND

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

YEAR ENDED 31 DECEMBER 2022

ADDITIONS TO FIDUCIARY NET POSITION	
Contributions:	
Fire fighter contributions	$19,306,629
City of Austin contributions	22,765,290
	42,071,919
Net investment income:	
Net increase/(decrease) in the fair value of investments	(183,690,385)
Interest and dividends	9,157,804
Net gain on sale of investments	30,403,189
Investment expenses	(3,498,775)
	(147,628,167)
Other	97,917
	(105,458,331)
DEDUCTIONS FROM FIDUCIARY NET POSITION	
Retirement benefit payments	80,970,089
General and administrative expenses	1,283,215
	82,253,304
NET INCREASE (DECREASE) IN FIDUCIARY NET POSITION	(187,711,635)
BEGINNING OF YEAR FIDUCIARY NET POSITION	1,303,544,505
END OF YEAR FIDUCIARY NET POSITION	$1,115,832,870

The accompanying notes are an integral part of this financial statement presentation.

AUSTIN FIREFIGHTERS RETIREMENT FUND
NOTES TO THE FINANCIAL STATEMENTS

NOTE 1: ORGANIZATION

A. FUND DESCRIPTION

The Board of Trustees of the Firefighters Retirement Fund (the Fund) is the administrator of a single-employer defined benefit pension plan covering fire fighters employed by the City of Austin, Texas. The Fund is open solely to active fire fighters in the City of Austin (the City). The Fund is considered a part of the City of Austin's financial reporting entity and is included in the City's financial statements as a pension fund trust. The Fund was originally established, and may be amended, by acts of the Texas Legislature. The current governing statute is Article 6243e.1, Vernon's Texas Civil Statutes. The Fund is governed by a Board of Trustees, which is composed of five members: the mayor of the municipality; the City's treasurer or, if there is no treasurer, a person who by law, charter provision, or ordinance performs the duty of the City Treasurer, and three active members of the retirement Fund elected by vote of the fire fighters and retirees.

The table below summarizes the membership of the Fund as of 31 December 2022:

Retirees and Beneficiaries Currently Receiving Benefits	979
Terminated Members Entitled to Benefits but Not Yet Receiving Them	35
Active Participants (Vested and Nonvested)	1,199
	2,213

The Fund provides service retirement, death, disability, and termination benefits. When a member has completed ten years of credited service after entrance into the Fund, the member's account becomes vested and non-forfeitable. Under the terms of the Fund agreement, members or their beneficiaries are eligible for distributions of benefits upon attaining a normal retirement age of 50 with ten years of service, or upon completing 25 years of service regardless of age. In addition, members are eligible for early retirement benefits upon reaching age 45 with at least ten years of service or twenty years of creditable service, regardless of age. Distributions to members or their beneficiaries are also available in the event of total and permanent disability or upon death including survivor (spousal) benefits at 75% of retiree benefits. Members are eligible to enter the Deferred Retirement Option Plan (DROP) upon satisfaction of normal retirement eligibility, not to exceed seven years. DROP provides eligible participants the ability to designate benefits to be disbursed in a single payment or not more than four payments upon leaving active service.

The term of benefit payments are determined by the member's level of earnings and length of service. With the exception of payments under the DROP feature, distributions of payments are made in a series of equal installments over a period of time. Payments to members or their beneficiaries may be increased annually by the amount of increase in the Consumer Price index. Cost-of-living increases must be approved by the Board of Trustees and actuary of the Fund. There was a cost-of-living adjustment (COLA) of 5.4% put into effect for the year ending 31 December 2022. The contribution refunds are paid with 5% interest.

B. FUNDING POLICY

The contribution provision of this Fund is authorized by Article 6243e.1, Vernon's Texas Civil Statutes, which provides the authority and procedure to change the amount of contributions determined as a percentage of pay by each member and a percentage of payroll by the City.

The Fund is maintained by biweekly contributions from the earnings of fire fighters and from the City. For the year ended 31 December 2022, the City's contribution rate was 22.05% and fire fighters contribution rate was 18.70% of their earnings excluding overtime, educational incentive pay, assignment pay, and temporary pay in higher classifications.

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

C. NET PENSION LIABILITY

The Fund's net pension liability measured as of 31 December 2022 was as follows:

Total pension liability	$1,394,152,282
Plan fiduciary net position	(1,115,832,870)
Net pension liability	$278,319,412
Plan fiduciary net position as a percentage of total pension liability	80.0%

1. Actuarial Assumptions

The total pension liability in the 31 December 2022 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Long term inflation assumption: 2.6%

Rate of Investment Return: 7.30% compounded annually, net of investment and administration expenses.

Rates of Salary Increase: Salary increases are split into a wage inflation assumption of 3.00% and a merit scale based on service.

Disability:

Age	Rate
Under 30	0.0002
30-39	0.0006
40-49	0.0010
50+	0.0005

Mortality Rates:

Active Lives: PubS-2010 Mortality Table for Employees.

Retiree and Vested Terminated Lives: PubS-2010 Mortality Table for Healthy Retirees.

Contingent Survivor Lives: PubS-2010 Mortality Table for Contingent Survivors.

Disabled Lives: PubS-2010 Mortality Table for Disabled Retirees.

Generational mortality improvements are projected from 2010 using scale MP-2021.

Withdrawal rates are based on department and service.

Retirement Rates are based on probability of retirement and years past early retirement eligibility.

DROP Election: Members are assumed to elect a DROP period that maximizes the value of the retirement benefits and reflects the impact of previously granted COLAs.

Cost-of-Living Adjustment Assumption: 0%

Percent Married: 100% of actives are assumed to be married.

Spouse Age: A husband is assumed to be four years older than his wife.

Dependent Children: 50% of active members are assumed to have dependent children and the youngest child is assumed to be one year.

The target allocation and the expected arithmetic net real rates of return for each major asset class are summarized in the following table:

Asset Class	Target allocation	Expected real rate of return
US Equity	20%	4.2%
Developed Market Equity (non-US)	10%	4.9%
Emerging Market Equity	12%	5.8%
Private Equity (Fund of Funds)	15%	6.0%
Investment Grade Bonds	13%	-0.2%
TIPS	5%	-0.2%
High Yield Bonds	2.5%	1.8%
Bank Loans	2.5%	1.4%
Emerging Markets Bonds	7%	1.8%
Private Real Estate	10%	4.8%
Private Natural Resources	3%	5.9%

2. Discount Rate

The discount rate used to measure the Total Pension Liability was 7.30%. The projection of cash flows used to determine the discount rate assumed that employee and employer contributions to the Fund will continue to follow the required contributions as described by Vernon's Texas Civil Statute, Article 6243e.1. The City's contribution rate is 22.05% of compensation and members' contribution is 18.70% of compensation. Based on the 31 December 2022 measurement date, the fiduciary net position is projected to be greater than or equal to the benefit payments projected for each future period. Therefore, the long-term expected rate of return on Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

Based on those assumptions, the Fund'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 Fund investments was applied to all periods of projected benefit payments to determine the total pension liability.

3. Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of the Fund, calculated using the discount rate of 7.30%, as well as what the Fund's net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.30%) or one percentage point higher (8.30%) than the current rate:

	1% Decrease (6.30%)	Current Discount Rate (7.30%)	1% Increase (8.30%)
Fund's net pension liability	$405,942,841	$278,319,412	$170,701,782

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF ACCOUNTING

The Fund's financial statements are prepared using the accrual basis of accounting under which expenses are recorded when the liability is incurred, revenues are recorded in the accounting period in which they are earned and become measurable, and investment purchases and sales are recorded as of their trade date. Fire fighter and City contributions are recognized as revenues in the period which the related employees' payroll is earned. Benefits are recognized when the employee becomes eligible for retirement and elects to retire under the system and is paid a benefit. Employee contribution refunds are recognized when the employee leaves the City and elects to withdraw a contribution.

METHOD USED TO VALUE INVESTMENTS

Cash and short-term investments include deposits in a custodian-managed investment pool from which the Fund may make deposits and withdrawals at any time without prior notice or penalty. The market value of such deposits is equal to cost. The Board of Trustees has adopted a Statement of Investment Policies and Objectives (Investment Policy) to set forth factors involved in the management of investment assets for the Fund. By statute, the Board of Trustees in its sole discretion may invest, reinvest, or change the assets of the Fund.

METHOD USED TO VALUE INVESTMENTS

The Board of Trustees shall invest in funds in whatever instruments or investments are considered prudent. In making investments for the Fund, the Board of Trustees shall discharge its duties with care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a similar capacity and familiar with such matters would use in the conduct of an enterprise of a similar character and with similar aims.

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Investments are reported at fair value. Securities traded on a national or international exchanges are valued at the last reported sales price at current exchange rates. Investments that do not have an established market are reported at estimated fair value. Realized and unrealized gains and losses as well as other investment adjustments are reported as net appreciation (depreciation) in the fair value of investments.

ESTIMATES

The preparation of financial statements in conformity with U.S. generally accepted accounting principles 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 additions and deductions to the net position restricted for pension benefits during the reporting period. Actual results could differ from those estimates.

FUND EXPENSES

All Fund administrative costs are the responsibility of the Fund and are financed through investment earnings.

SUBSEQUENT EVENTS

Management has evaluated subsequent events through the date of the Independent Auditor's Report, the date the financial statements were available to be issued.

BUDGET

The Fund is not legally required to adopt a budget.

NOTE 3: FEDERAL INCOME TAXES

The Fund is a Public Employee Retirement Fund and is exempt from Federal income taxes and the provisions of the Employee Retirement Income Security Act of 1974.

NOTE 4: DEPOSIT AND INVESTMENT RISK

CUSTODIAL CREDIT RISK

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, the Fund will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. Deposits are exposed to custodial credit risk if they are uninsured and unsecured.

NOTE 4: DEPOSIT AND INVESTMENT RISK

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, the Fund will not be able to recover the value of investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the Fund and are held by either the counterparty or the counterparty's trust department or agent but not in the Fund's name. As of 31 December 2022, the Fund's investment securities are not exposed to custodial credit risk because all securities are held by the Fund's custodial bank in the Fund's name.

CONCENTRATION OF CREDIT RISK

Concentration of credit risk is the risk of loss attributed to the magnitude of the Fund's investment in a single issuer. As of year end, the Fund had no investments with a single issuer that exceeded 5% of the Fund's net position. The Fund's investment policy established asset allocation targets for major classes of invested assets as listed below. The Fund is authorized to invest in the following:

Class	Target Range
Equity	30-55%
Fixed Income Investments	20-40%
Alternatives	10-40%

INTEREST RATE RISK

Interest rate risk is the risk that changes in interest rates will adversely affect an investment's fair value. Although the Fund does have a formal investment policy, it does not specifically limit investment maturities as a means of managing its exposure to potential fair value losses from future changes in interest rates.

CREDIT RISK

Credit risk is the risk that an issuer or other counter party to an investment will not fulfill its obligations to the Fund. It is the Fund's policy to maintain fixed income securities within its portfolio at an average credit rating of investment grade or better.

NOTE 4: DEPOSIT AND INVESTMENT RISK

As of 31 December 2022, the Fund had the following investments subject to interest rate risk and credit risk:

Investment	Weighted Average Maturity	Weighted Average Credit Rating	Fair Value
SSgA Bond Fund	8.6 years	AA	$83,265,768
Loomis Sayles Core Plus Fixed Income	8.8 years	BBB	$53,124,477
Aberdeen Emerging Markets Bond Fund	11.1 years	BB	$65,367,498
SSGA TIPS	7.1 years	AAA	$54,551,729
Pyramis Tactical Bond Fund	13.2 years	BBB	$34,396,829
Pacific Asset Management Bank Loans	4.2 years	B	$20,038,223

FOREIGN CURRENCY RISK

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. Although the Fund does have a formal investment policy, it does not specifically address the Fund's exposure related to foreign currency risk. The Fund had the following exposure to foreign currency risk as of 31 December 2022:

Denomination by Investment Type	Market Value (USD)
Private Equity Fund Investments	
Euro	$34,565,133
Real Estate Fund Investments	
Euro	961,771
Public Fixed Income Investments	
Brazilian Real	50,998,180
Euro	57,044,950
South African Rand	14,719,469
Indian Rupee	7,395,865
Uraguay Peso	4,288,669
	134,447,133
	$169,974,037

NOTE 5: SCHEDULE OF INVESTMENT RETURNS

The money-weighted rate of return expresses investment performance, net of investment expenses, that reflects the estimated effect of the contributions received and the benefits paid during the year.

Fiscal Year	Annual Money-Weighted Net Real Rate of Return 31
December 2022	-10.40%

NOTE 6: FAIR VALUE MEASUREMENT

	Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Public domestic equities	$219,699,040	$0	$0
Public international equities	$209,977,146	$0	$0
Private equity fund investments	$0	$0	$222,733,907
Public fixed income investments	$0	$310,744,525	$0
Real estate fund investments	$0	$0	$112,168,625
Private natural resources fund	$0	$0	$33,428,837

Level 2 investments are valued based on quoted market prices in active markets as well as market valuation methodologies using discounted cash flows and observable credit ratings. Level 3 investments include investments in a group of non-registered private equity investment partnerships, private equity real estate, and private natural resources funds. Fair value determinations by the underlying funds take into consideration the operating results, financial conditions, real estate appraisals, and recent sales prices of issuers' securities.

NOTE 7: SECURITIES LENDING

The Fund is authorized under its investment policy to participate in securities lending programs through State Street Bank and Trust Company (State Street) under which, for an agreed-upon fee, investments owned by the Fund are loaned to a borrowing financial institution. Under this agreement, when the loan closes, the borrowed securities are returned to the Fund and the collateral is returned to the borrower. During the fiscal year, State Street lent, on behalf of the Fund, certain US Equity securities of the Fund held by State Street as custodian and received cash or other collateral including securities issued or guaranteed by the United States government (USD collateral). State Street does not have the ability to pledge or sell collateral securities delivered absent a borrower default.

NOTE 7: SECURITIES LENDING

The lending agreement requires securities to be collateralized by cash, US government securities or irrevocable letters of credit with a total market value of at least 100% of the market value of the loaned securities.

Pursuant to the Securities Lending Authorization Agreement, State Street had an obligation to indemnify the Fund in the event of default by a borrower. There were no failures by any borrowers to return loaned securities or pay distributions thereon during the fiscal year that resulted in a declaration or notice of default of the Borrower.

During the fiscal year, the Fund and the borrowers maintained the right to terminate securities lending transactions upon notice. The cash collateral received on each loan was invested, together with the cash collateral of other qualified tax-exempt plan lenders, in a collective investment fund comprised of a liquidity pool. As of 31 December 2022 the liquidity pool had an average duration of 3.29 days and an average weighted final maturity of 96.01 days for USD collateral. On 31 December 2022 the Fund had no credit risk exposure to borrowers. The market value of collateral held and the market value of securities on loan for the Fund as of 31 December 2022 was $5,723,505 and $ 5,584,386 respectively.

NOTE 8: COMMITMENTS AND CONTINGENCIES

The Fund’s investments include investment in partnership interests, which are closed end private markets strategies. In connection with those investments, the Fund still has remaining commitments as of 31 December 2022 of $46.40 million pursuant to the terms of the respective interest.

At 31 December 2022, the total accumulated lump sum benefit due to DROP participants was $157,393,946.

AUSTIN FIREFIGHTERS RETIREMENT FUND

Schedule of Changes in Net Pension Liability and Related Ratios

Last Ten Years

	Year ending 12/31/2013	Year ending 12/31/2014	Year ending 12/31/2015	Year ending 12/31/2016	Year ending 12/31/2017	Year ending 12/31/2018	Year ending 12/31/2019	Year ending 12/31/2020	Year ending 12/31/2021	Year ending 12/31/2022
Total Pension Liability										
Service Cost	$ 23,497,407	$ 25,318,456	$23,309,543	$ 24,322,417	$ 23,830,495	$ 25,130,502	$ 26,191,723	$ 26,169,522	$ 28,111,860	$ 31,101,116
Interest	59,249,151	62,976,839	66,404,730	70,892,708	75,812,099	80,552,018	84,547,315	86,820,853	91,654,965	94,234,349
Changes of Benefit Terms	0	0	0	5,491,908	8,963,689	10,188,417	8,058,934	7,158,834	30,096,465	0
Differences between Expected and Actual Experience	0	0	7,192,645	8,893,371	4,360,239	(735,314)	(9,834,830)	(1,670,701)	3,265,825	13,460,814
Changes of assumptions	0	4,883,207	0	0	0	(4,778,539)	12,707,469	21,410,890	0	20,949,282
Benefit Payments, including Refunds of Employee Contributions	(34,943,917)	(37,992,903)	(44,756,847)	(45,495,681)	(51,888,455)	(55,979,294)	(58,824,392)	(63,483,649)	(70,182,892)	(80,970,089)
Net Change in Total Pension Liability	47,802,641	55,185,599	52,150,071	64,104,723	61,078,067	54,377,790	62,846,219	76,405,749	82,946,223	78,775,472
Total Pension Liability-Beginning of year (2)	758,479,728	806,282,369	861,467,968	913,618,039	977,722,762	1,038,800,829	1,093,178,619	1,156,024,838	1,232,430,587	1,315,376,810
Total Pension Liability-Ending (a)	$806,282,369	$861,467,968	$913,618,039	$977,722,762	$1,038,800,829	$1,093,178,619	$1,156,024,838	$1,232,430,587	$1,315,376,810	$1,394,152,282
Plan Fiduciary Net Position										
Contributions-Employer	$17,786,494	$18,669,944	$19,222,329	$19,103,891	$19,242,205	$20,084,617	$21,057,765	$21,311,021	$22,041,592	22,765,290
Contributions- Employee	14,000,514	14,659,946	15,546,979	15,884,261	16,318,769	17,033,213	17,858,397	18,073,292	18,697,102	19,306,629
Net Investment Income	101,289,167	42,005,227	6,328,063	55,569,165	141,915,000	(25,114,064)	141,535,432	147,025,907	171,935,761	(147,530,250)
Benefit Payments, including Refunds of Employee Contributions	(34,943,917)	(37,992,903)	(44,756,847)	(45,495,681)	(51,888,455)	(55,979,294)	(58,824,392)	(63,483,649)	(70,182,892)	(80,970,089)
Administrative Expenses	(363,050)	(530,816)	(562,687)	(662,501)	(1,399,488)	(704,903)	(852,192)	(1,092,299)	(970,731)	(1,283,215)
Net Change in Plan Fiduciary Net Position	97,769,208	36,811,398	(4,222,163)	44,399,135	124,188,031	(44,680,431)	120,775,010	121,834,272	141,520,832	(187,711,635)
Plan Fiduciary Net Position - Beginning	654,852,618	752,621,826	789,433,224	785,211,061	829,610,196	953,798,227	909,117,796	1,029,892,806	1,162,023,673	1,303,544,505
Adjustment to Beginning Net Position	0	0	0	0	0	0	0	10,296,595	0	0
Plan Fiduciary Net Position - Ending (b)	$752,621,826	$789,433,224	$785,211,061	$829,610,196	$953,798,227	$909,117,796	$1,029,892,806	$1,162,023,673	$1,303,544,505	$1,115,832,870
Net Pension Liability (Asset) - Ending (a) - (b)	$53,660,543	$72,034,744	$128,406,978	$148,112,566	$85,002,602	$184,060,823	$126,132,032	$70,406,914	$11,832,305	$ 278,319,412
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	93.3%	91.6%	86.0%	84.9%	91.8%	83.2%	89.1%	94.3%	99.1%	80.0%
Covered Payroll	$ 83,279,101	$ 84,670,948	$87,836,040	$ 86,638,961	$ 87,266,236	$ 91,086,698	$ 95,500,068	$ 96,648,621	$ 99,961,868	$ 103,243,946
Net Pension Liability as a Percentage of Covered Payroll	64.4%	85.1%	146.2%	171.0%	97.4%	202.1%	132.1%	72.9%	11.8%	269.6%

See Independent Auditor's Report.

AUSTIN FIREFIGHTERS RETIREMENT FUND

Schedule of Employer Contributions

Last 10 Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a percentage of Covered Payroll
12/31/2022	N/A	N/A	N/A	$ 103,243,946	22.05%
12/31/2021	N/A	N/A	N/A	$ 99,961,868	22.05%
12/31/2020	N/A	N/A	N/A	$ 96,648,621	22.05%
12/31/2019	N/A	N/A	N/A	$ 95,500,068	22.05%
12/31/2018	N/A	N/A	N/A	$ 91,086,698	22.05%
12/31/2017	N/A	N/A	N/A	$ 87,266,236	22.05%
12/31/2016	N/A	N/A	N/A	$ 86,638,961	22.05%
12/31/2015	N/A	N/A	N/A	$ 87,836,040	21.88%
12/31/2014	N/A	N/A	N/A	$ 84,670,948	22.05%
12/31/2013	N/A	N/A	N/A	$ 83,279,101	21.36%

Schedule of Investment Returns

Last 10 Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
12/31/2022	-10.40%
12/31/2021	18.00%
12/31/2020	15.46%
12/31/2019	15.75%
12/31/2018	-2.66%
12/31/2017	17.29%
12/31/2016	7.13%
12/31/2015	0.81%
12/30/2014	5.60%
12/31/2013	13.30%

See independent auditor's report.

Notes to Schedules:

(2) Determined from the end of year total pension liability using the roll forward procedure allowed for the initial year of implementation for GASB 67.

Changes of benefit terms:

For measurement date 12/31/2021, amounts reported as changes of benefit terms resulted from a cost-of-living adjustment. Eligible retirees receive a 5.4% cost-of-living adjustment, effective January 1, 2022.

For measurement date 12/31/2020, amounts reported as changes of benefit terms resulted from a cost-of-living adjustment. Eligible retirees receive a 1.7% cost-of-living adjustment, effective January 1, 2021.

For measurement date 12/31/2019, amounts reported as changes of benefit terms resulted from a cost-of-living adjustment. Eligible retirees receive a 1.4% cost-of-living adjustment, effective January 1, 2020.

For measurement date 12/31/2018, amounts reported as changes of benefit terms resulted from a cost-of-living adjustment. Eligible retirees receive a 2.3% cost-of-living adjustment, effective January 1, 2019.

For measurement date 12/31/2017, amounts reported as changes of benefit terms resulted from a cost-of-living adjustment. Eligible retirees receive a 2.2% cost-of-living adjustment, effective January 1, 2018.

For measurement date 12/31/2016, amounts reported as changes of benefit terms resulted from a cost-of-living adjustment. Eligible retirees receive a 1.5% cost-of-living adjustment, effective January 1, 2017.

Changes of assumptions:

For the 12/31/2022 valuation, the DROP period assumption was changed from a rate table to be assumed the DROP period that maximizes the value of the retirement benefits reflecting previously granted COLAs.

The 12/31/2021 valuation reflects an update to use the most recently published mortality improvement scale by the Society of Actuaries (MP-2021).

For measurement date 12/31/2020, amounts reported as changes of benefit terms resulted from lowering the investment return from 7.50% to 7.30% per year, compounded annually, net of all expenses. Additionally, the payroll growth rate was increased from 2.00% to 2.50%.

For measurement date 12/31/19, as a result of actuarial experience study dated April 21, 2020, the Board approved the following changes:

- Price Inflation (lowered from 2.75 to 2.5)
- Investment Return (lowered from 7.70% to 7.50%)
- Mortality Rates (MP-2019 improvement scale)
- Salary Increases
- Retirement Rates
- Retro DROP Elections
- Withdrawal Rates
- Disability Rates

For measurement date 12/31/2018, amounts reported as changes of assumptions resulted from the following changes:

- The assumed mortality rates were updated to reflect the PubS-2010 (above-median, amount-weighted) tables.
- The price inflation assumption was lowered from 3.50% to 2.75% per year.

For measurement date 12/31/2014, amounts reported as changes of assumptions resulted from an actuarial experience study dated June 15, 2015; below is a brief overview of the changes:

• A "fresh-start" on the actuarial asset value has been implemented. For all future valuations, the asset valuation method will utilize a new smoothing technique.

See independent auditor's report.

Notes to Schedules:

- The investment return assumption has been decreased from 7.75% to 7.70% per year compounded annually, net of all expenses.
- The general wage inflation rate has been decreased from 3.5% to 3.0% per year.
- The service-based table attributable to merit and longevity salary increases has been amended.
- The retirement rates have been amended.
- The Retro-DROP election assumptions have been amended.
- The withdrawal rates have been amended.
- The assumed spousal age difference has been amended.

See independent auditor's report.

AUSTIN FIREFIGHTERS RETIREMENT FUND

Schedule of Direct and Indirect Fees and Commissions

ASSET CLASS	MANAGEMENT FEES PAID FROM FUND	MANAGEMENT FEES REDUCED FROM INVESTMENT	TOTAL INVESTMENT MANAGEMENT FEES (Management Fees Reduced from Investment + Management Fees Paid From Fund)	BROKERAGE FEES/COMMISSIONS REDUCED FROM INVESTMENT	TOTAL DIRECT AND INDIRECT FEES AND COMMISSIONS (Management Fees + Brokerage Fees/Commissions)
Public Equity	$ 1,465,099	$ 1,405,861	$ 2,870,960	$ 179,745	$ 3,050,705
Fixed Income	573,648	114,565	688,213	0	688,213
Real Assets	0	1,234,001	1,234,001	0	1,234,001
Alternative/Other	0	1,765,003	1,765,003	0	1,765,003
TOTAL	$ 2,038,747	$ 4,519,430	$ 6,558,177	$ 179,745	$ 6,737,922

Total Investment Expenses

Total Direct and Indirect Fees and Commissions	**$ 6,737,922**
Investment Services	
Custodial	$ 104,611
Investment Consulting	$ 201,844
Total	**$ 306,455**
Total Investment Expenses (Total Direct and Indirect Fees and Commissions + Investment Services)	**$ 7,044,378**

See independent auditor's report.

GASB STATEMENT NO. 67 and NO. 68

CHEIRON

Classic Values, Innovative Advice

Austin Firefighters Retirement Fund

GASB 67/68 Report as of December 31, 2022

Produced by Cheiron

July 2023

Via Electronic Mail

July 13, 2023

Board of Trustees
Austin Firefighters Retirement Fund
4101 Parkstone Heights Drive, Suite 270
Austin, Texas 78746

Dear Trustees of the Board,

The purpose of this report is to provide accounting and financial reporting information for the City of Austin for the Austin Firefighters Retirement Fund. This information includes:

- Projection of the Total Pension Liability from the valuation date to the measurement date,
- Calculation of the Net Pension Liability at the discount rate as well as discount rates 1% higher and lower than the discount rate,
- Changes in the Net Pension Liability,
- Schedule of Employer Contributions,
- Disclosure of Deferred Inflows and Outflows, and
- Calculation of the Annual Pension Expense for the City of Austin.

If you have any questions about the report or would like additional information, please let us know.

Sincerely,
Cheiron

Heath Merlak, FSA, EA, MAAA, FCA
Principal Consulting Actuary

Coralie Taylor, FSA, EA, MAAA, FCA
Consulting Actuary

Elizabeth Wiley, FSA, EA, MAAA, FCA
Consulting Actuary

CHEIRON *Classic Values, Innovative Advice.*

SECTION I - BOARD SUMMARY

Highlights

The measurement date for the Austin Firefighters Retirement Fund is December 31, 2022. Measurements as of the reporting date are based on the fair value of assets as of December 31, 2022 and the Total Pension Liability as of the valuation date, December 31, 2021, updated to December 31, 2022. The Total Pension Liability as of December 31, 2022 is based on Cheiron's replication valuation as of December 31, 2021, projected to December 31, 2022. There were no significant events between the valuation date and the measurement date, so the update procedures only included the addition of service cost and interest cost offset by actual benefit payments.

The table below provides a summary of the key results during this measurement period.

Summary of Results

	Measurement Date			
		12/31/2022		12/31/2021
Net Pension Liability	$	278,319,412	$	11,832,305
Deferred Outflows		(156,145,362)		(36,576,095)
Deferred Inflows		8,626,616		133,138,176
Net Impact on Statement of Net Position	$	130,800,666	$	108,394,386
Pension Expense ($ Amount)	$	45,171,570	$	11,702,412
Pension Expense (% of Payroll)		43.75%		11.71%

The Net Pension Liability (NPL) increased approximately $266 million since the prior measurement date, primarily due to investments earning less than the assumed rate. There were also actuarial losses and assumption changes that increased the NPL by approximately $34 million.

Investment losses are recognized over five years, and the actuarial gains and assumption changes are recognized over the average remaining service life, which is eight years. Unrecognized amounts are reported as deferred inflows and deferred outflows. As of the end of the current reporting year, the City of Austin would report a Net Pension Liability of $278,319,412 Deferred Inflows of $8,626,616 and Deferred Outflows of $(156,145,362). Consequently, the net impact on the City of Austin's Statement of Net Position due to AFRF would be $130,800,666 at the end of the reporting year. In addition, any contributions between the measurement date and the reporting date would be reported as deferred outflows to offset the cash outflow reported.

For the measurement year ending December 31, 2022, the annual pension expense is $45,171,570, or 43.75% of covered-employee payroll. This amount is not related to the City's contribution to AFRF ($22,765,290), but instead represents the change in the net impact on the City of Austin's Statement of Net Position plus employer contributions ($130,800,666 – $108,394,386 + $22,765,290). Volatility in pension expense from year to year is to be expected and will largely be driven by investment gains or losses, but other changes can also have a significant impact. A breakdown of the pension expense is shown in Section VII of the report.

SECTION II - CERTIFICATION

The purpose of this report is to provide accounting and financial reporting information under Government Accounting Standards Board Statement No. 67 (GASB 67) for the Austin Firefighters Retirement Fund (AFRF) and under GASB No. 68 for the City of Austin. This report is for the use of AFRF, the City of Austin, and their auditors in preparing financial reports in accordance with applicable law and accounting requirements. This report is not appropriate for other purposes, including the measurement of funding requirements for AFRF.

In preparing our report, we relied on information, some oral and some written, supplied by AFRF. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law.

Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal and have a basic understanding of it and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in the assumptions or output of ProVal that would affect this report.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This report was prepared for AFRF for the purposes described herein and for the use by the plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Heath Merlak, FSA, EA, MAAA, FCA
Principal Consulting Actuary

Coralie Taylor, FSA, EA, MAAA, FCA
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Consulting Actuary

SECTION III - DETERMINATION OF DISCOUNT RATE

The discount rate used to measure the Total Pension Liability was 7.30%.

The projection of cash flows used to determine the discount rate assumed that employee and employer contributions to the Fund will continue to follow the required contributions as described by Vernon's Texas Civil Statute, Article 6243e.1. The City's contribution rate is 22.05% of compensation and members' contribution is 18.70% of compensation. Based on the December 31, 2022 measurement date, the fiduciary net position is projected to be greater than or equal to the benefit payments projected for each future period. Therefore, the long-term expected rate of return on Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

SECTION IV - PROJECTION OF TOTAL PENSION LIABILITY

The Total Pension Liability (TPL) is measured as of a valuation date of December 31, 2021 and projected to December 31, 2022. There were no significant events during the projection period of which we are aware. Because the TPL shown in the prior report was measured as of December 31, 2020 and projected to December 31, 2021, it will not match the amounts measured as of December 31, 2021 that are shown in this exhibit.

The table below shows the projection of the TPL at discount rates equal to the rate used for disclosure and plus and minus one percent from the rate used for disclosure.

Projection of Total Pension Liability from Valuation to Measurement Date

Discount Rate	6.30%	7.30%	8.30%
Valuation Total Pension Liability, 12/31/2021			
Actives	$ 588,743,031	$ 526,801,843	$ 474,763,110
Inactives	732,119,630	668,463,912	614,348,200
DROP Balances	151,596,289	151,596,289	151,596,289
Total	**$1,472,458,950**	**$1,346,862,044**	**$1,240,707,599**
Service Cost, middle of year	38,829,103	31,705,871	26,052,084
Benefit Payments	80,970,089	80,970,089	80,970,089
Interest	91,457,747	96,554,456	100,745,058
Total Pension Liability, 12/31/2022	**$1,521,775,711**	**$1,394,152,282**	**$1,286,534,652**

SECTION V - NOTE DISCLOSURES

The table below shows the changes in the Total Pension Liability, the Plan Fiduciary Net Position (i.e., fair value of System assets), and the Net Pension Liability during the Measurement Year. Note this is the information the City will report for the fiscal year ending September 30, 2023.

Change in Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 12/31/2021	$1,315,376,810	$1,303,544,505	$ 11,832,305
Changes for the year:			
Service cost	31,101,116		31,101,116
Interest	94,234,349		94,234,349
Changes of benefits	0		0
Differences between expected and actual experience	13,460,814		13,460,814
Changes of assumptions	20,949,282		20,949,282
Contributions - employer		22,765,290	(22,765,290)
Contributions - member		19,306,629	(19,306,629)
Net investment income		(147,530,250)	147,530,250
Benefit payments	(80,970,089)	(80,970,089)	0
Administrative expense		(1,283,215)	1,283,215
Net changes	$ 78,775,472	$ (187,711,635)	$ 266,487,107
Balances at 12/31/2022	$1,394,152,282	$1,115,832,870	$ 278,319,412

During the measurement year, the NPL increased by approximately $266 million. The service cost and interest cost increased the NPL by approximately $125 million, investment losses and administrative expenses increased the NPL by approximately $149 million, and contributions decreased NPL by approximately $42 million.

There were no changes in benefits during the year. The mortality assumption and DROP assumption were changed from the prior measurement. The mortality assumption was changed from the PubS(A)-2010 table with mortality improvements projected five years past the valuation date using MP-2021 to the PubS-2010 table with mortality improvements projected generationally using MP-2021. The DROP period assumed for members was changed to assume members elect the DROP period that maximizes the value of their benefit reflecting any applicable previously granted COLAs. The combination of these assumption changes increased the TPL by approximately $21 million. There were actuarial experience losses during the year of approximately $13 million.

SECTION V - NOTE DISCLOSURES

Changes in the discount rate affect the measurement of the TPL. Lower discount rates produce a higher TPL and higher discount rates produce a lower TPL. Because the discount rate does not affect the measurement of assets, the percentage change in the NPL can be very significant for a relatively small change in the discount rate. The table below shows the sensitivity of the NPL to the discount rate.

Sensitivity of Net Pension Liability to Changes in Discount Rate

	1% Decrease 6.30%	Discount Rate 7.30%	1% Increase 8.30%
Total Pension Liability	$ 1,521,775,711	$ 1,394,152,282	$ 1,286,534,652
Plan Fiduciary Net Position	1,115,832,870	1,115,832,870	1,115,832,870
Net Pension Liability	$ 405,942,841	$ 278,319,412	$ 170,701,782
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	73.3%	80.0%	86.7%

A one percent decrease in the discount rate increases the TPL by approximately 9% and increases the NPL by approximately 46%. A one percent increase in the discount rate decreases the TPL by approximately 8% and decreases the NPL by approximately 39%.

Asset Allocation and Expected Long Term Real Rates of Return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 2022 are summarized in the following table:

SECTION V - NOTE DISCLOSURES

Asset Allocation and Expected Real Rate of Return[1]

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Domestic Equity	20.00%	4.20%
Developed Market Equity (non-US)	10.00%	4.90%
Emerging Market Equity	12.00%	5.80%
Private Equity	15.00%	6.00%
Investment Grade Bonds	13.00%	-0.20%
TIPS	5.00%	-0.20%
High Yield	2.50%	1.80%
Bank Loans	2.50%	1.40%
Emerging Market Bonds	7.00%	1.80%
Private Real Estate	10.00%	4.80%
Private Natural Resources	3.00%	5.90%
Total	100.00%	

[1] Source: Meketa

For the year ending December 31, 2022, the money-weighted rate of return on plan assets was calculated by Meketa to be -10.40%, net of investment expense.

SECTION VI - REQUIRED SUPPLEMENTARY INFORMATION

The schedules of Required Supplementary Information generally start with information as of the implementation of GASB 67, and eventually will build up to 10 years of information. The schedule below and on the following page shows the changes in NPL and related ratios required by GASB for the nine years since implementation of GASB No. 67.

Schedule of Changes in Net Pension Liability and Related Ratios
For the Measurement Year Ending December 31,

	2022	2021	2020	2019	2018
Total Pension Liability (TPL)					
Service cost (MOY)	$ 31,101,116	$ 28,111,860	$ 26,169,522	$ 26,191,723	$ 25,130,502
Interest	94,234,349	91,654,965	86,820,853	84,547,315	80,552,018
Changes of benefit terms	0	30,096,465	7,158,834	8,058,934	10,188,417
Differences between expected and actual experience	13,460,814	3,265,825	(1,670,701)	(9,834,830)	(735,314)
Changes of assumptions	20,949,282	0	21,410,890	12,707,469	(4,778,539)
Benefit payments, including refunds	(80,970,089)	(70,182,892)	(63,483,649)	(58,824,392)	(55,979,294)
Net change in TPL	**$ 78,775,472**	**$ 82,946,223**	**$ 76,405,749**	**$ 62,846,219**	**$ 54,377,790**
TPL - beginning	**1,315,376,810**	**1,232,430,587**	**1,156,024,838**	**1,093,178,619**	**1,038,800,829**
TPL - ending	**$ 1,394,152,282**	**$ 1,315,376,810**	**$ 1,232,430,587**	**$ 1,156,024,838**	**$ 1,093,178,619**
Plan fiduciary net position					
Contributions - employer	$ 22,765,290	$ 22,041,592	$ 21,311,021	$ 21,057,765	$ 20,084,617
Contributions - member	19,306,629	18,697,102	18,073,292	17,858,397	17,033,213
Net investment income	(147,530,250)	171,935,761	147,025,907	151,832,027 [1]	(25,114,064)
Benefit payments, including refunds	(80,970,089)	(70,182,892)	(63,483,649)	(58,824,392)	(55,979,294)
Administrative expense	(1,283,215)	(970,731)	(1,092,299)	(852,192)	(704,903)
Net change in plan fiduciary net position	**$ (187,711,635)**	**$ 141,520,832**	**$ 121,834,272**	**$ 131,071,605**	**$ (44,680,431)**
Plan fiduciary net position - beginning	**1,303,544,505**	**1,162,023,673**	**1,040,189,401** [1]	**909,117,796**	**953,798,227**
Plan fiduciary net position - ending	**$ 1,115,832,870**	**$ 1,303,544,505**	**$ 1,162,023,673**	**$ 1,040,189,401** [1]	**$ 909,117,796**
Net pension liability - ending	**$ 278,319,412**	**$ 11,832,305**	**$ 70,406,914**	**$ 115,835,437**	**$ 184,060,823**
Plan fiduciary net position as a percentage of the TPL	80.0%	99.1%	94.3%	90.0%	83.2%
Covered payroll	$ 103,243,946	$ 99,961,868	$ 96,648,621	$ 95,500,068	$ 91,086,698
Net pension liability as a percentage of covered payroll	269.6%	11.8%	72.8%	121.3%	202.1%

[1] Includes one-time adjustment to beginning Net Position per Foster & Foster in the amount of $10,296,595.

SECTION VI - REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in Net Pension Liability and Related Ratios For the Measurement Year Ending December 31,

	2017	2016	2015	2014
Total Pension Liability (TPL)				
Service cost (MOY)	$ 23,830,495	$ 24,322,417	$ 23,309,543	$ 25,318,456
Interest	75,812,099	70,892,708	66,404,730	62,976,839
Changes of benefit terms	8,963,689	5,491,908	0	0
Differences between expected and actual experience	4,360,239	8,893,371	7,192,645	0
Changes of assumptions	0	0	0	4,883,207
Benefit payments, including refunds	(51,888,455)	(45,495,681)	(44,756,847)	(37,992,903)
Net change in TPL	**$ 61,078,067**	**$ 64,104,723**	**$ 52,150,071**	**$ 55,185,599**
TPL - beginning	**977,722,762**	**913,618,039**	**861,467,968**	**806,282,369**
TPL - ending	**$ 1,038,800,829**	**$ 977,722,762**	**$ 913,618,039**	**$ 861,467,968**
Plan fiduciary net position				
Contributions - employer	$ 19,242,205	$ 19,103,891	$ 19,222,329	$ 18,669,944
Contributions - member	16,318,769	15,884,261	15,546,979	14,659,946
Net investment income	141,915,000	55,569,165	6,328,063	42,005,227
Benefit payments, including refunds	(51,888,455)	(45,495,681)	(44,756,847)	(37,992,903)
Administrative expense	(1,399,488)	(662,501)	(562,687)	(530,816)
Net change in plan fiduciary net position	**$ 124,188,031**	**$ 44,399,135**	**$ (4,222,163)**	**$ 36,811,398**
Plan fiduciary net position - beginning	**829,610,196**	**785,211,061**	**789,433,224**	**752,621,826**
Plan fiduciary net position - ending	**$ 953,798,227**	**$ 829,610,196**	**$ 785,211,061**	**$ 789,433,224**
Net pension liability - ending	**$ 85,002,602**	**$ 148,112,566**	**$ 128,406,978**	**$ 72,034,744**
Plan fiduciary net position as a percentage of the TPL	91.8%	84.9%	85.9%	91.6%
Covered payroll	$ 87,266,236	$ 86,638,961	$ 87,836,040	$ 84,670,948
Net pension liability as a percentage of covered payroll	97.4%	171.0%	146.2%	85.1%

SECTION VI - REQUIRED SUPPLEMENTARY INFORMATION

The following table provides the Statutorily Required Contribution compared to the actual contributions for the nine years since initial implementation of GASB No. 67.

Schedule of Employer Contributions For Year Ending December 31,

	2022	2021	2020	2019	2018
Statutorily Required Contribution	$ 22,765,290	$ 22,041,592	$ 21,311,021	$ 21,057,765	$ 20,084,617
Contributions in Relation to the Statutorily Required Contributions	22,765,290	22,041,592	21,311,021	21,057,765	20,084,617
Contribution Deficiency/(Excess)	$ 0	$ 0	$ 0	$ 0	$ 0
Covered Payroll	$103,243,946	$ 99,961,868	$ 96,648,621	$ 95,500,068	$ 91,086,698
Contributions as a Percentage of Covered Payroll	22.05%	22.05%	22.05%	22.05%	22.05%

	2017	2016	2015	2014
Statutorily Required Contribution	$ 19,242,205	$ 19,103,891	$ 19,222,329	$ 18,669,944
Contributions in Relation to the Statutorily Required Contributions	19,242,205	19,103,891	19,222,329	18,669,944
Contribution Deficiency/(Excess)	$ 0	$ 0	$ 0	$ 0
Covered Payroll	$ 87,266,236	$ 86,638,961	$ 87,836,040	$ 84,670,948
Contributions as a Percentage of Covered Payroll	22.05%	22.05%	21.88%	22.05%

SECTION VII - EMPLOYER REPORTING AMOUNTS

We understand the City has elected to use the measurement date as of the December 31 within the fiscal year for their reporting date. As a result, the schedules in this section will be used by the City of Austin for its September 30, 2023 reporting.

The table below summarizes the current balances of deferred outflows and deferred inflows of resources along with the net recognition over the next five years and the total amount recognized thereafter.

Schedule of Deferred Inflows and Outflows of Resources

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 15,962,148	$ 6,237,348
Changes in assumptions	42,873,536	2,389,268
Net difference between projected and actual earnings on pension plan investments	97,309,678	0
Total	**$ 156,145,362**	**$ 8,626,616**

Amounts reported as deferred outflows and deferred inflows of resources will be recognized in pension expense as follows:

Measurement year ended December 31:	
2023	$ 11,117,754
2024	23,307,142
2025	37,452,869
2026	55,188,419
2027	8,765,448
Thereafter	$ 11,687,114

The tables on the following pages provide details on the current balances of deferred inflows and outflows of resources along with the recognition of each base for each of the current and following five years as well as the total for any years thereafter.

SECTION VII - EMPLOYER REPORTING AMOUNTS

Recognition of Experience (Gains) and Losses

Experience Year	Recognition Period	Total Amount	Beginning Fiscal Year Amount	Ending Fiscal Year Amount	Recognition Year 2022	2023	2024	2025	2026	2027	Thereafter
2022	8.0	$ 13,460,814	$ 13,460,814	$ 11,778,212	$ 1,682,602	$ 1,682,602	$ 1,682,602	$ 1,682,602	$ 1,682,602	$ 1,682,602	$ 3,365,202
2021	8.0	3,265,825	2,857,603	2,449,374	408,229	408,229	408,229	408,229	408,229	408,229	408,229
2020	8.0	(1,670,701)	(1,253,028)	(1,044,190)	(208,838)	(208,838)	(208,838)	(208,838)	(208,838)	(208,838)	0
2019	8.0	(9,834,830)	(6,146,770)	(4,917,416)	(1,229,354)	(1,229,354)	(1,229,354)	(1,229,354)	(1,229,354)	0	0
2018	8.0	(735,314)	(367,656)	(275,742)	(91,914)	(91,914)	(91,914)	(91,914)	0	0	0
2017	7.0	4,360,239	1,245,782	622,891	622,891	622,891	0	0	0	0	0
2016	8.0	8,893,371	2,223,342	1,111,671	1,111,671	1,111,671	0	0	0	0	0
2015	8.0	7,192,645	899,081	0	899,081	0	0	0	0	0	0
Deferred Outflows			20,686,622	15,962,148	4,724,474	3,825,393	2,090,831	2,090,831	2,090,831	2,090,831	3,773,431
Deferred (Inflows)			(7,767,454)	(6,237,348)	(1,530,106)	(1,530,106)	(1,530,106)	(1,530,106)	(1,438,192)	(208,838)	0
Net Change in Pension Expense			$ 12,919,168	$ 9,724,800	$ 3,194,368	$ 2,295,287	$ 560,725	$ 560,725	$ 652,639	$ 1,881,993	$ 3,773,431

Recognition of Assumption Changes

Change Year	Recognition Period	Total Amount	Beginning Fiscal Year Amount	Ending Fiscal Year Amount	Recognition Year 2022	2023	2024	2025	2026	2027	Thereafter
2022	8.0	$ 20,949,282	$ 20,949,282	$ 18,330,622	$ 2,618,660	$ 2,618,660	$ 2,618,660	$ 2,618,660	$ 2,618,660	$ 2,618,660	$ 5,237,322
2020	8.0	$ 21,410,890	18,734,527	16,058,166	2,676,361	2,676,361	2,676,361	2,676,361	2,676,361	2,676,361	2,676,361
2019	8.0	$ 12,707,469	9,530,604	7,942,170	1,588,434	1,588,434	1,588,434	1,588,434	1,588,434	1,588,434	0
2018	8.0	$ (4,778,539)	(2,986,585)	(2,389,268)	(597,317)	(597,317)	(597,317)	(597,317)	(597,317)	0	0
2014	9.0	$ 4,883,207	1,085,156	542,578	542,578	542,578	0	0	0	0	0
Deferred Outflows			50,299,569	42,873,536	7,426,033	7,426,033	6,883,455	6,883,455	6,883,455	6,883,455	7,913,683
Deferred (Inflows)			(2,986,585)	(2,389,268)	(597,317)	(597,317)	(597,317)	(597,317)	(597,317)	0	0
Net Change in Pension Expense			$ 47,312,984	$ 40,484,268	$ 6,828,716	$ 6,828,716	$ 6,286,138	$ 6,286,138	$ 6,286,138	$ 6,883,455	$ 7,913,683

Recognition of Investment (Gains) and Losses

Experience Year	Recognition Period	Total Amount	Beginning Fiscal Year Amount	Ending Fiscal Year Amount	Recognition Year 2022	2023	2024	2025	2026	2027	Thereafter
2022	5.0	$ 241,248,210	$ 241,248,210	$ 192,998,568	$ 48,249,642	$ 48,249,642	$ 48,249,642	$ 48,249,642	$ 48,249,642	$ 0	$ 0
2021	5.0	$ (88,218,178)	(70,574,544)	(52,930,908)	(17,643,636)	(17,643,636)	(17,643,636)	(17,643,636)	0	0	0
2020	5.0	$ (70,728,633)	(42,437,181)	(28,291,454)	(14,145,727)	(14,145,727)	(14,145,727)	0	0	0	0
2019	5.0	$ (72,332,638)	(28,933,056)	(14,466,528)	(14,466,528)	(14,466,528)	0	0	0	0	0
2018	5.0	$ 97,803,222	19,560,644	0	19,560,644	0	0	0	0	0	0
Net Change in Pension Expense			$ 118,864,073	$ 97,309,678	$ 21,554,395	$ 1,993,751	$ 16,460,279	$ 30,606,006	$ 48,249,642	$ 0	$ 0

SECTION VII - EMPLOYER REPORTING AMOUNTS

The annual pension expense recognized by the City of Austin can be calculated two different ways. First, it is the change in the amounts reported on the City's Statement of Net Position that relate to AFRF and are not attributable to employer contributions. That is, it is the change in NPL plus the changes in deferred outflows and inflows plus employer contributions.

Alternatively, annual pension expense can be calculated by its individual components. While GASB does not require or suggest the organization of the individual components shown in the table below, we believe it helps to understand the level and volatility of pension expense.

The measurement year ending December 31, 2022 is for the City's fiscal year ending September 30, 2023.

Calculation of Pension Expense

	Measurement Year Ending 2022	2021
Change in Net Pension Liability	$ 266,487,107	$ (58,574,609)
Change in Deferred Outflows	(119,569,267)	(4,583,420)
Change in Deferred Inflows	(124,511,560)	52,818,849
Employer Contributions	22,765,290	22,041,592
Pension Expense	**$ 45,171,570**	**$ 11,702,412**
Operating Expenses		
Service cost	$ 31,101,116	$ 28,111,860
Employee contributions	(19,306,629)	(18,697,102)
Administrative expenses	1,283,215	970,731
Total	$ 13,077,702	$ 10,385,489
Financing Expenses		
Interest cost	$ 94,234,349	$ 91,654,965
Expected return on assets	(93,717,960)	(83,717,583)
Total	$ 516,389	$ 7,937,382
Changes		
Benefit changes	$ 0	$ 30,096,465
Recognition of assumption changes	6,828,716	4,210,056
Recognition of liability gains and losses	3,194,368	1,511,766
Recognition of investment gains and losses	21,554,395	(42,438,746)
Total	$ 31,577,479	$ (6,620,459)
Pension Expense	**$ 45,171,570**	**$ 11,702,412**

SECTION VII - EMPLOYER REPORTING AMOUNTS

Operating expenses are items directly attributable to the operation of the plan during the measurement year. Service cost less employee contributions represents the increase in employer-provided benefits attributable to the year, and administrative expenses are the cost of operating AFRF for the year.

Financing expenses equal the interest on the Total Pension Liability less the expected return on assets. Since the discount rate is equal to the long-term expected return on assets, the financing expense is primarily the interest on the Net Pension Liability with an adjustment for the difference between the interest on the service cost and contributions.

The recognition of changes will drive most of the volatility in pension expense from year to year. Changes include any changes in benefits made during the year and the recognized amounts due to assumption changes, gains or losses on the TPL, and investment gains or losses.

APPENDIX A - MEMBERSHIP INFORMATION

Please refer to the December 31, 2021 actuarial report dated July 12, 2022 from Foster & Foster for a summary of data for the December 31, 2021 valuation date. As part of Cheiron's replication valuation, this membership data was used to produce the results within this report with one exception. The DROP balances were updated from $148,686,615 to $151,596,289 as of December 31, 2021.

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

A summary of the actuarial assumptions and methods used to calculate the Total Pension Liability as of December 31, 2022 is provided below, including any assumptions that differ from those used in the December 31, 2021 actuarial valuation. Please refer to the December 31, 2021 actuarial valuation report dated July 12, 2022 from Foster & Foster for a complete description of all other assumptions.

Key Actuarial Assumptions

Expected Return on Assets	7.30%, net of investment and administration expenses
Discount Rate	7.30%
Inflation	2.50%
Salary Increases	3.00% plus service based increases
Mortality Table	PubS-2010 mortality table with mortality improvements projected from the base year of 2010 generationally using MP-2021
DROP	Members are assumed to elect a DROP period that maximizes the value of the retirement benefits and reflects the impact of previously granted COLAs.
COLA	Ad hoc COLAs are assumed to be 0% in each future year.
Changes from 12/31/2021	The mortality assumption was changed from the income above median for PubS-2010 Above Median Income table with mortality improvements projected 5 years past the valuation date using MP-2021 to the PubS-2010 table with mortality improvements projected from the base year 2010 generationally using MP-2021. The DROP period assumption was changed from a rate table to be assumed the DROP period that maximizes the value of the retirement benefits reflecting previously granted COLAs.

Contributions

The contributions to the AFRF are defined by Article 6243e.1 of Vernon's Texas Civil Statutes. The contribution rates for the year ending December 31, 2022 are 18.70% of compensation by active members and 22.05% of compensation by the City.

APPENDIX C - SUMMARY OF PLAN PROVISIONS

The plan provisions are the same as those summarized in the December 31, 2021 actuarial valuation report dated July 12, 2022 from Foster & Foster.

APPENDIX D - GLOSSARY OF TERMS

1. **Actuarial Valuation Date**

   The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

2. **Deferred Inflow of Resources**

   An acquisition of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience gains on the Total Pension Liability, assumption changes reducing the Total Pension Liability, or investment gains that are recognized in future reporting periods.

3. **Deferred Outflow of Resources**

   A consumption of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience losses on the Total Pension Liability, assumption changes increasing the Total Pension Liability, or investment losses that are recognized in future reporting periods.

4. **Entry Age Actuarial Cost Method**

   The actuarial cost method required for GASB 67 and 68 calculations. Under this method, the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this actuarial present value allocated to a valuation year is called the Service Cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future service costs is called the Total Pension Liability.

5. **Measurement Date**

   The date as of which the Total Pension Liability and Plan Fiduciary Net Position are measured. The Total Pension Liability may be projected from the Actuarial Valuation Date to the Measurement Date. The Measurement Date must be the same as the Reporting Date for the plan.

6. **Net Pension Liability**

   The liability of employers and nonemployer contributing entities to employees for benefits provided through a defined benefit pension plan. It is calculated as the Total Pension Liability less the Plan Fiduciary Net Position.

7. **Plan Fiduciary Net Position**

   The fair or market value of assets.

APPENDIX D - GLOSSARY OF TERMS

8. Reporting Date

The last day of the plan or employer's fiscal year.

9. Service Cost

The portion of the actuarial present value of projected benefit payments that is attributed to the current period of employee service in conformity with the requirements of GASB 67 and 68. The Service Cost is the normal cost calculated under the Entry Age Actuarial Cost Method.

10. Total Pension Liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of GASB 67 and 68. The Total Pension Liability is the Actuarial Liability calculated under the Entry Age Actuarial Cost Method. This measurement generally is not appropriate for estimating the cost to settle the Plan's liabilities.

ACTUARIAL SECTION

Actuarial Valuation as of December 31, 2022

ACTUARIAL VALUATION REPORT

CHEIRON Classic Values, Innovative Advice

Austin Firefighters Retirement Fund

Actuarial Valuation Report as of December 31, 2022

Produced by Cheiron

July 2023

Via Electronic Mail

July 18, 2023

Board of Trustees
Austin Firefighters Retirement Fund
4101 Parkstone Heights Drive, Suite 270
Austin, Texas 78746

Dear Trustees of the Board,

We are pleased to submit the December 31, 2022 Actuarial Valuation Report of the Austin Firefighters Retirement Fund ("Fund"). This report contains information on Fund assets, liabilities, and contributions. Financial disclosures are provided in a separate Governmental Accounting Standards Board (GASB) Statement Nos. 67/68 report.

In preparing our report, we relied on information, some oral and some written, supplied by the Fund's staff. This information includes, but is not limited to, plan provisions, member data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23, Data Quality.

The actuarial assumptions reflect our understanding of the likely future experience of the Fund and represent our best estimate, in cooperation with the views of the Board of Trustees (Board), for the future experience of the Fund. These assumptions are based on the most recent experience study dated April 21, 2020 based on data through December 31, 2019, which was performed by the previous actuary, with a few exceptions that are noted in Appendix C. The liability and contributions developed in this report rely on future Fund experience conforming to the underlying assumptions. Future results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice, set out by the Actuarial Standards Board as well as applicable laws and regulations, including Texas pension statutes. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

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Classic Values, Innovative Advice.

Austin Firefighters Retirement Fund
July 18, 2023
Page ii

This actuarial valuation report was prepared exclusively for the Austin Firefighters Retirement Fund and the Fund auditors for the purposes described herein and in preparing financial reports in accordance with applicable law and annual report requirements. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

Sincerely,
Cheiron

Elizabeth Wiley, FSA, EA, MAAA, FCA
Consulting Actuary

Heath Merlak

Heath Merlak, FSA, EA, MAAA, FCA
Principal Consulting Actuary

Coralie Taylor

Coralie Taylor, FSA, EA, MAAA, FCA
Consulting Actuary

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

FOREWORD

Cheiron is pleased to provide the annual actuarial valuation report of the **Austin Firefighters Retirement Fund (Fund)** as of December 31, 2022. The purpose of this report is to:

1) **Measure and disclose**, as of the valuation date, the financial condition of the Fund.

2) **Report** on past and expected financial trends.

3) **Determine** the funding period required to amortize any existing Unfunded Actuarial Liability (UAL).

4) **Assess** risks to the Fund's financial condition.

An actuarial valuation establishes and analyzes Fund assets and liabilities on a consistent basis and traces the progress of both from one year to the next. It includes measurement of the Fund's investment performance as well as an analysis of actuarial liability gains and losses. This valuation report is organized as follows:

Section I presents a summary of the valuation and compares this year's results to last year's results.

Section II identifies the primary risks to the Fund as well as provides background information and assessment of these risks.

Section III contains exhibits relating to the valuation of assets.

Section IV shows the various measures of liabilities and presents an analysis of the experience gains and losses over the past year and the source of changes to the UAL.

Section V shows the development of the Actuarially Determined Contribution Benchmark.

The appendices to this report contain a summary of the Fund's membership at the valuation date, a summary of the major provisions of the Fund, and the actuarial methods and assumptions used in developing the valuation.

In preparing our report, we relied on information, some oral and some written, supplied by the Fund's staff. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23, Data Quality.

The actuarial assumptions reflect our understanding of the likely future experience of the Fund, and the assumptions entirely represent our best estimate for the future experience of the Fund. These assumptions are based on the most recent experience study dated April 21, 2020 based on data through December 31, 2019, which was performed by the previous actuary, with a few exceptions that are noted in Appendix C. Based on an informal review, this is a reasonable basis appropriate for use in this valuation. Future results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law.

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

SECTION I – SUMMARY

General Comments

This is the first actuarial valuation report prepared for the Fund by Cheiron. The results prior to December 31, 2022 in the historic trend charts are those produced by the Fund's former actuary.

The employer and member contributions to this Fund are set by Vernon's Texas Civil Statute, Article 6243e.1. An Actuarially Determined Contribution Benchmark is provided in this report for comparison to the current contribution rates based on the Funding Policy adopted by the Board as of December 16, 2019. In addition, this report also provides a tread water contribution rate, which represents the contribution level required to cover the cost of benefits accruing during the year and interest on the Unfunded Actuarial Liability (UAL), and thus anticipated to keep the UAL at the same dollar amount if all assumptions are exactly met.

The key results of the December 31, 2022 actuarial valuation are as follows:

- The unfunded actuarial liability (UAL) on an actuarial value of assets (AVA) basis [actuarial liability (AL) – AVA] increased from $136.3 million as of December 31, 2021 to $183.4 million on December 31, 2022.
    - Investments earned -11.6% on a market value basis for the year ending December 31, 2022, resulting in an investment loss on the market value of assets (MVA) of $242.6 million. Due to smoothing of investment gains and losses, the AVA return was 6.3%, producing a loss of $11.2 million to the Fund for the year on that basis. Both returns are measured against the prior year's 7.30% expected return.
    - The Fund experienced a liability loss of $21.8 million. The liability loss is primarily due to data changes and valuation coding refinements.
    - The actuarial liability also increased by $16.0 million due to assumption changes effective December 31, 2022. The assumptions related to mortality, Deferred Retirement Option Plan (DROP) elections, and recognizing previously granted COLAs for actives in DROP were updated.
    - A more detailed analysis of the current year and historical changes in the unfunded actuarial liability can be found in Sections II and IV of this report.

- The Fund's AVA funded ratio, the ratio of the AVA to the actuarial liability, decreased from 89.6% as of December 31, 2021 to 86.9% as of December 31, 2022. On a MVA basis, the funded ratio decreased from 99.3% as of December 31, 2021 to 80.0% as of December 31, 2022.

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

SECTION I – SUMMARY

The tables below provide a summary of the actuarial valuation. The prior year valuation results are shown for comparison purposes as well as a column looking at the change in each value as a percentage of the prior year's values. Note results prior to December 31, 2022 are from the Fund's prior actuary.

Table I-1
Austin Firefighters Retirement Fund
Summary of Principal Results

	December 31, 2022	December 31, 2021	% Change
Assets and Liabilities			
Actuarial Liability (AL)	$ 1,394,695,732	$ 1,313,297,933	6.2%
Actuarial Value of Assets (AVA)	1,211,321,297	1,176,967,709	2.9%
Unfunded Actuarial Liability (UAL)	$ 183,374,435	$ 136,330,224	34.5%
Funded Ratio (AVA basis)	86.9%	89.6%	(2.8%)
Market Value of Assets (MVA)	$ 1,115,832,870	$ 1,303,544,505	(14.4%)
Funded Ratio (MVA basis)	80.0%	99.3%	(19.3%)
Amortization Period	35.7	17.5	104.0%
Statutory Contribution Rates			
City Contribution Rate	22.05%	22.05%	0.0%
Member Contribution Rate	18.70%	18.70%	0.0%
Total Contribution Rate	40.75%	40.75%	0.0%
Current Normal Cost as % of Payroll	30.73%	29.61%	3.8%
Contribution Rate Remaining to Pay UAL	10.02%	11.14%	(10.1%)
City Rate Based on ADC Benchmark	22.76%	18.71%	21.7%
City Rate Surplus/(Deficit) Compared to ADC Benchmark	(0.71%)	3.34%	(121.3%)
Treadwater City Contribution Rate	25.19%	20.93%	20.4%
City Rate Surplus/(Deficit) Compared to Treadwater Rate	(3.14%)	1.12%	(380.3%)
Participant Information			
Actives	1,199	1,175	2.0%
Service Retirees, including DROP	793	756	4.9%
Beneficiaries	171	152	12.5%
Disability Retirees	15	16	(6.3%)
Terminated Vested	35	29	20.7%
Total Participants	2,213	2,128	4.0%
Covered Payroll	$ 105,372,248	$ 102,887,082	2.4%

SECTION I – SUMMARY

Historical Trends

It is important to take a step back from these latest results and view them in the context of the Fund's recent history. Below we present a series of charts displaying key factors in the valuations since 2013.

Assets and Liabilities

The bars represent the actuarial liability (AL) as measured for funding purposes in the valuations. The lines represent the Fund's assets, with the green line showing the market value of assets (MVA) that is reported in the Fund's financials and the blue line showing the smoothed actuarial value of assets (AVA). The liabilities are compared to the assets to develop funding ratios as of each valuation date. The ratio of the AL to the AVA is the AVA funded ratio, which are the blue percentages shown in the chart along the top of each bar. Similarly, the ratio of the AL to the MVA is the MVA funded ratio, the green percentages shown on the bars.

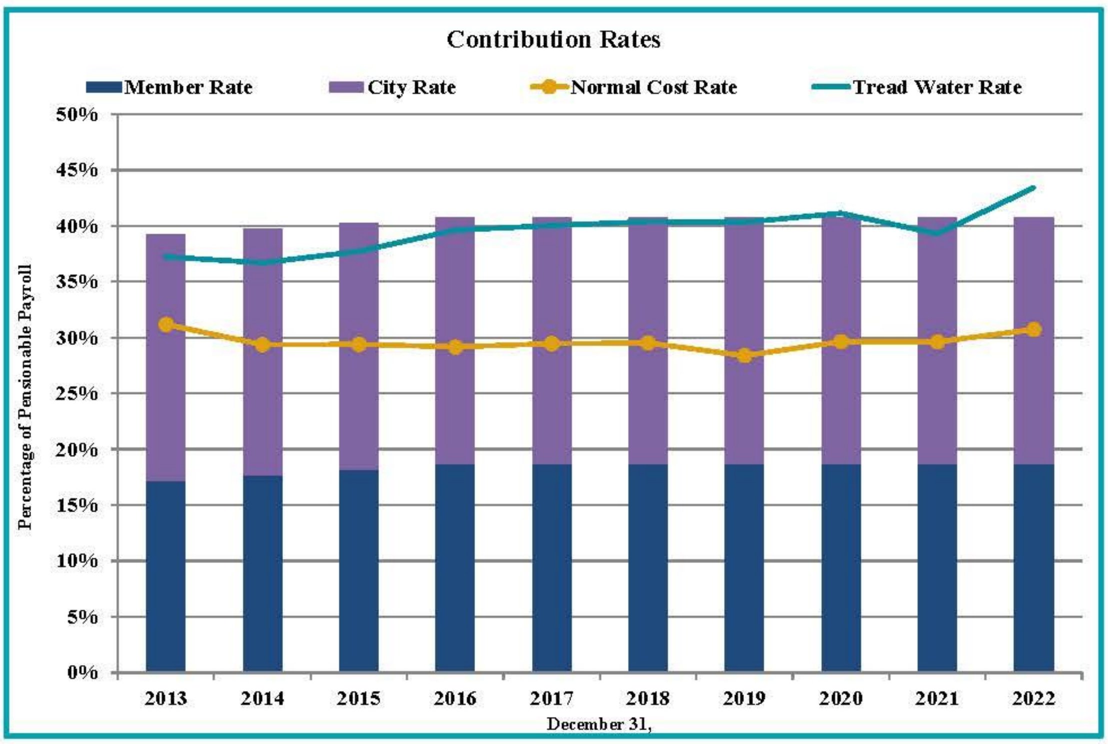
As shown, the Fund has had an AVA funded ratio of 86% or higher during this period with the highest funded ratio in 2013 at 91.8%. The MVA funded ratio has been more variable, reflecting the market volatility, from a high of 99.3% as of 2021 to a low of the current 80.0%.

Contributions versus Tread Water

The next chart compares the fixed city and member contribution rates, shown by the bars, to the normal cost rate and the tread water rate as of each valuation date. The normal cost rate, the orange line, is the percentage of salary needed to fund the benefits earned in a year for the active members. The tread water rate, the teal line, is that rate of payroll which, if contributed, would result in the UAL remaining the same in the following year if all experience exactly matched the assumptions. The tread water rate is equal to the normal cost rate plus interest on the UAL.

As shown below, the fixed total contributions exceed the normal cost rate for all years shown. The difference between the tops of the bars and the orange line represents the portion of contributions that are available to fund the UAL. The chart also shows that the normal cost rate has been relatively stable over this period, staying within approximately one percentage point of 30%.

As shown with the stacked bars, the sum of the fixed contribution rates for the city and members has been greater than the tread water rate over this period except for two years (2020 and 2022). With the 2022 asset loss, the tread water rate is higher than the fixed contribution rates and is expected to increase as the 2022 asset loss is reflected in future valuations.



AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

SECTION I – SUMMARY

Amortization Periods

The chart below shows the effective amortization period for funding the UAL based on the Actuarial Value of Assets as of each valuation date since the Fund began performing annual actuarial valuations in 2013. Due to leveraging, the amortization period can vary significantly from year to year.

The Pension Review Board (PRB) provides funding guidelines for public pensions in Texas, including that the contributions actually received by funds should be sufficient to pay the normal cost each year as well as amortize the fund's UAL over a period not to exceed 30 years and with 10-25 years being the preferred range. While the Fund's amortization period as of the current valuation of 35.7 years is greater than the guideline recommended maximum of 30 years, this amortization period does not trigger a Funding Soundness Restoration Plan (FSRP) for the current year. Based on the legislation for FSRPs that is currently in effect, the Fund and the City of Austin would be required to formulate an FSRP if the Fund's amortization period exceeds 30 years for three consecutive annual valuations.

While an FSRP is not currently triggered, it is important to note that in baseline projections where all assumptions are exactly met, as shown on page 8, it is anticipated that an FSRP will be triggered with the 2024 valuation unless the Fund experiences a significant gain, such as returns significantly exceeding the 7.3% assumed rate, in the next two years.

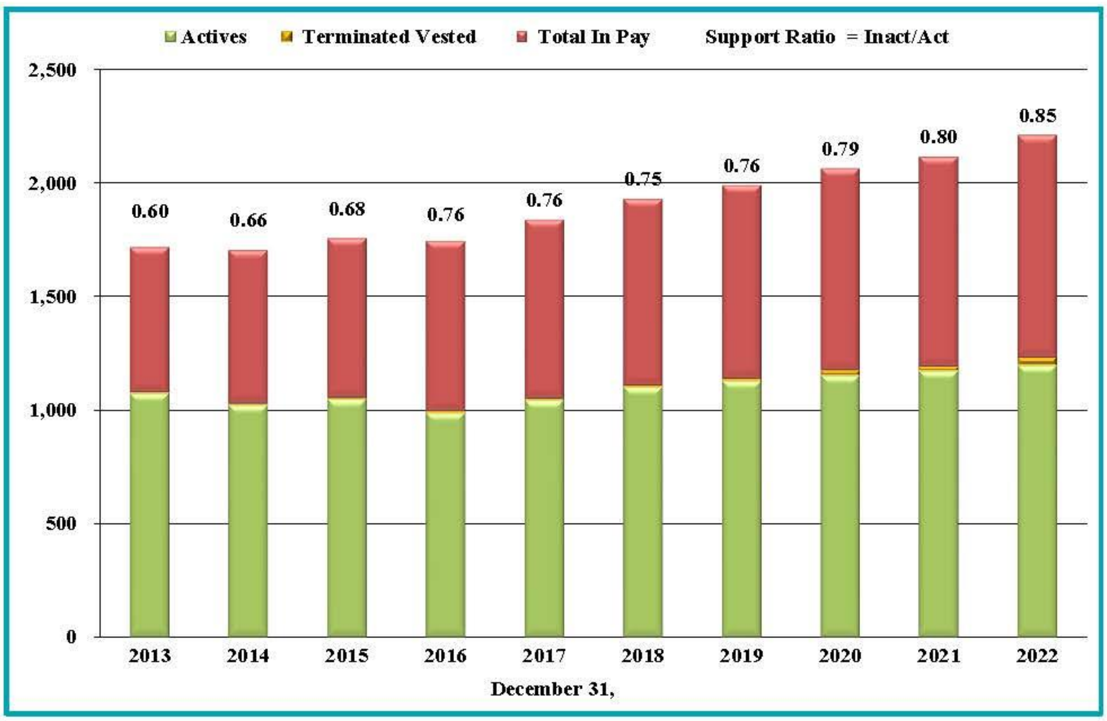
AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

SECTION I – SUMMARY

Member Trends

The following chart shows the membership counts of the Fund at successive valuations. The numbers that appear above each bar represent the ratio of the number of inactive members, those currently receiving benefits (red bars) and terminated vested members (yellow bars), to active members (green bars) as of each valuation date, referred to as the support ratio.

The number of inactives per each active has generally been steadily increasing during the period shown. An increasing ratio is a sign of plan maturity and should continue to be monitored. As a plan becomes more mature, the assets backing the retiree benefits become large relative to the contribution base, i.e., the active member payroll. As assets grow relative to the pensionable payroll, any experience gain or loss can have an increasingly significant impact on the actuarial valuation results. This maturity risk is discussed further in Section II of this report.



SECTION I – SUMMARY

Projections

The chart that follows shows the expected progress of the Fund's funding status over the next 20 years, measured in terms of the AVA funded ratio, the expected total contribution rates, and the total dollar amounts of contributions.

This baseline projection is based on the December 31, 2022 valuation, including the 7.30% rate of return assumption. It is important to note that the Fund's actual experience will not conform exactly to the assumptions every year. As a result, in addition to the baseline projection of 7.30% investment returns, we provide additional projections, or stress testing, in Section II based on varying returns in the future, as variation in this assumption is typically the most significant driver of variation in valuation results.

The projections, both the baseline in this section and the varying returns in Section II, assume there will be no future gains or losses on the liability, and that the Fund receives the statutory contribution rates (18.70% for members and 22.05% for City) each year. As such, these projections assume all valuation assumptions are exactly met, including the long-term rates of return specified and assumed for each scenario and the covered payroll increasing by 2.50% per year in all scenarios.

For each projection, there is a table of assumed asset returns for each of the projection and two charts showing the projected condition of the Fund based on returns equal to those shown in the table assuming all other assumptions are exactly met.

This first chart compares the market value of assets (MVA) (blue line) and the actuarial or smoothed value of assets (AVA) (green line) to the Fund's actuarial liabilities (AL) (gray bars). In addition, at the top of each chart, we show the Fund's AVA funded ratio (ratio of AVA to AL). The years shown in the chart signify the valuation date as of December 31 of each labeled year.

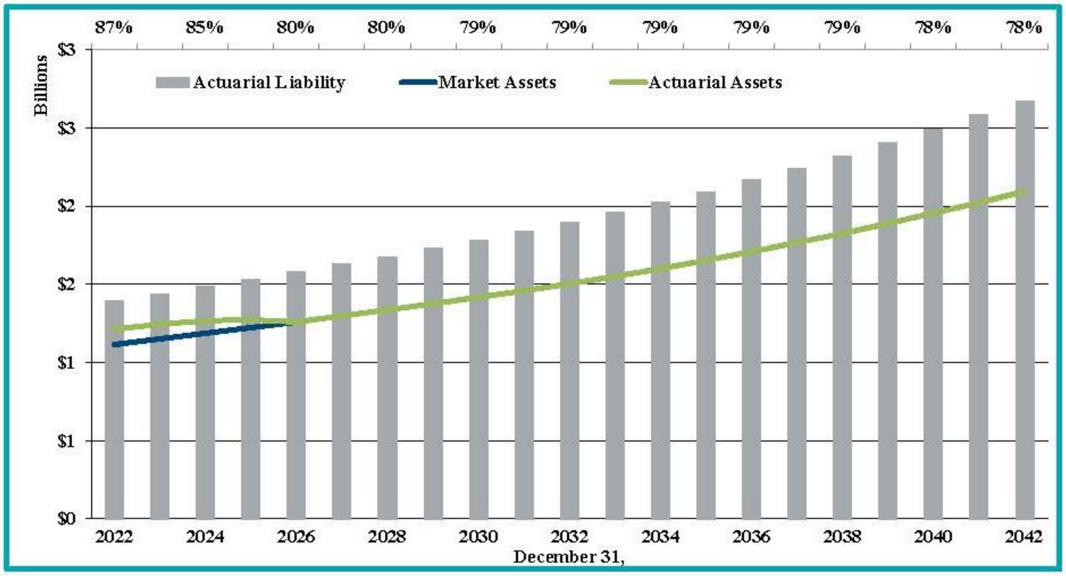
The second chart provides the effective amortization period based on the statutory contributions of 18.70% of pay for active members and 22.05% of pay for the City. When the bars expand to 100 years that indicates the City and member contributions are not expected to be sufficient to pay down the UAL. This occurs when the amount of contribution available to amortize the UAL is not sufficient to cover the interest on the UAL.

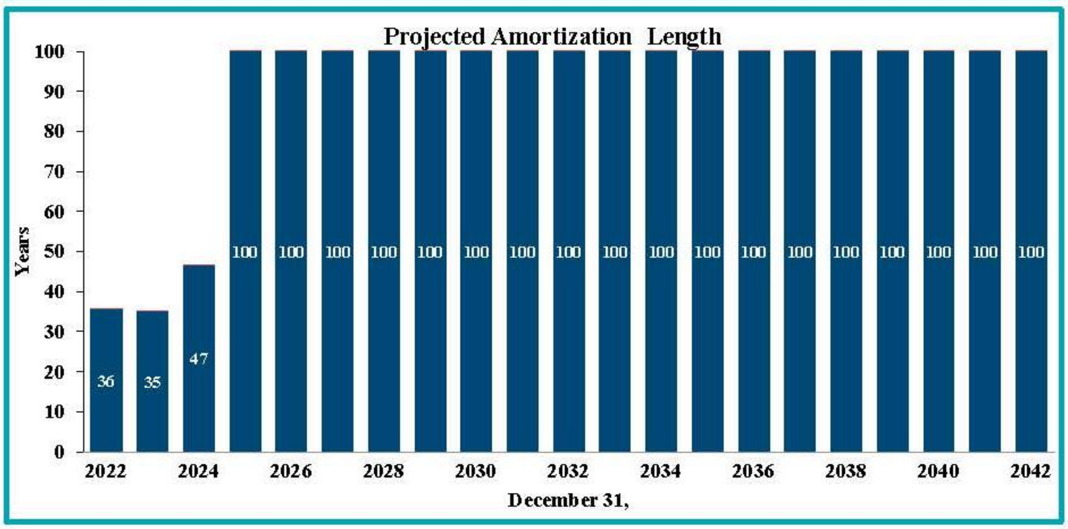
The baseline chart below shows that if all actuarial assumptions, including the current 7.3% rate of investment return assumption, are exactly met, the Fund's AVA funded ratio, shown along the top of the chart, is projected to decrease from the current level of 87% to 78% by the 2042 valuation. The AVA funded ratio is expected to decrease in the near-term as the 2022 asset loss is recognized in the valuation. Once the 2022 asset loss is fully recognized, the funded ratio is expected to decrease slightly throughout the projection period due to anticipated contributions being less than the tread water contributions. Over this projection period, the effective amortization period increases to 100 years, reflecting the full recognition of the 2022 asset loss. Section II explores further how these metrics can vary when returns deviate from the expected 7.3%.

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

SECTION I – SUMMARY

Projected Asset Returns	
2023	7.30%
2024	7.30%
2025	7.30%
2026	7.30%
2027	7.30%
2028	7.30%
2029	7.30%
2030	7.30%
2031	7.30%
2032	7.30%
2033	7.30%
2034	7.30%
2035	7.30%
2036	7.30%
2037	7.30%
2038	7.30%
2039	7.30%
2040	7.30%
2041	7.30%
2042	7.30%





SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Actuarial valuations are dependent on assumptions about future economic and demographic experience. Based on actuarial standards of practice, these assumptions represent a reasonable estimate of future experience. However, actual future experience will never conform exactly to the assumptions and may differ significantly. This deviation is the risk that pension plan sponsors undertake in relying on a pension plan's actuarial valuation results.

This section of the report is intended to identify the primary drivers of these risks to the Fund, provide background information and assessments about these risks and drivers, and communicate the significance of these risks to the Fund and its sponsors.

Identification of Risks

As we have discussed with the Board, the fundamental risk to the Fund is that the contributions needed to pay the desired benefits become insufficient. While there are many factors that could lead to current contribution rates becoming insufficient, we believe the primary risks are:

- Investment risk
- Interest rate risk
- Longevity and other demographic risks
- Assumption change risk
- Plan change risk

Other risks that we have not identified may also turn out to be important.

Investment Risk is the potential for investment returns to deviate from what is expected. When actual investment returns are lower than the investment return assumption used in the actuarial valuation, the unfunded actuarial liability will increase from what was expected and will require higher contributions than otherwise anticipated. But when actual returns exceed the assumption, the resulting unfunded liability measurements and actuarially determined contributions will be lower than anticipated. The potential volatility of future investment returns is determined by the Fund's asset allocation and the affordability of the investment risk is determined by the amount of assets invested relative to the size of the plan sponsor or other contribution base. As seen in the historical section that follows, this risk has been a very significant driver of deviations in the actual measurements for this Fund from those expected by the prior valuations.

Interest Rate Risk is the potential for interest rates to be different than expected. For public plans, short-term fluctuations in interest rates have little or no effect as the Fund's liability is usually measured based on the expected return on assets. Longer-term trends in interest rates, however, can have a powerful effect.

Longevity and Other Demographic Risks is the potential for mortality or other demographic experience to be different than expected. Generally, longevity and other demographic risks emerge slowly over time as the actual experience deviates from expected. In addition, the extensive number of assumptions related to longevity and other demographic experience often

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

result in offsetting factors contributing to the Fund's overall liability experience. As such, these risks are often dwarfed by other risks, particularly those due to investment returns. The historical section shows that this has been true for this Fund, with the total of the liability gains and losses only being about $4 million over the period of 2013-2022.

Assumption Change Risk is the potential for the environment to change such that future valuation assumptions are adjusted to be different than the current assumptions. For example, declines in interest rates over time due to economic factors may result in a change in the assumed investment rates of return used in the valuations. In terms of demographic factors, a healthier workforce may result in changes in employee behavior such that retirement rates are adjusted to reflect employees working longer. In addition, mortality rates are adjusted to account for members living longer and receiving more years of their retirement benefits. Assumption change risk is an extension of the risks previously identified, but rather than capturing the risk as it is experienced, it captures the cost of recognizing a change in environment resulting in the current assumption no longer being reasonable.

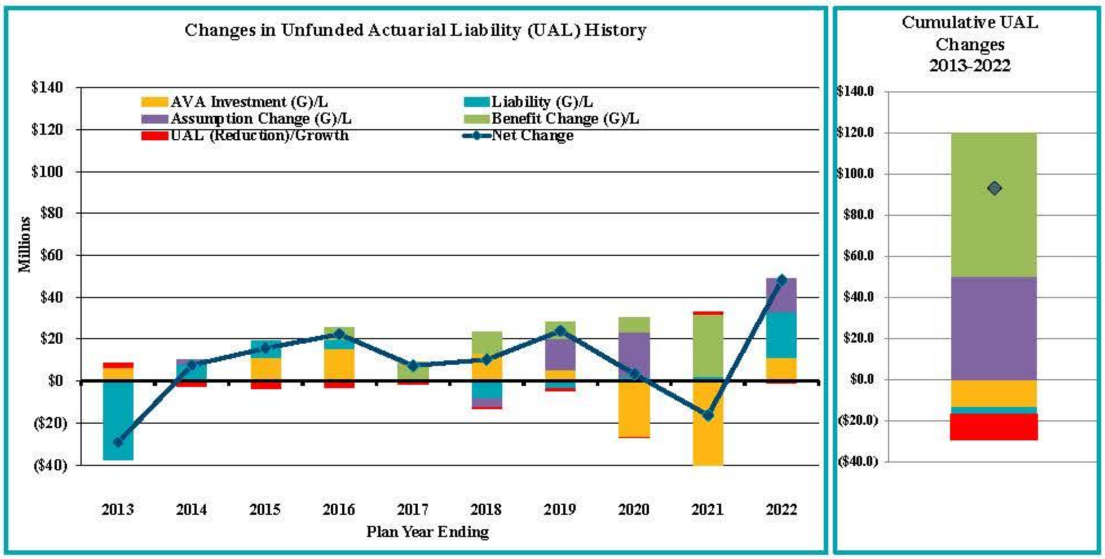
Plan Change Risk represents the possibility of legislated changes made to the statutes governing the Fund. This includes any changes to the benefits paid by the Fund or the contributions that must be paid by the city and the members to the Fund. Over the history of this Fund, these changes have included granting cost-of-living adjustments (COLAs), which increase the benefits paid to members designed to provide purchasing power protection from inflation, changes to the multipliers and minimums used to determine the amount of member benefits, and changes to the contributions that must be paid by the city and members. As shown on the chart on the following page, plan changes have been a significant driver of liability changes for the Fund over the last ten years.

Based on the Board's communicated intent, the most likely plan changes in the future are additional COLAs. It is important to note that the Fund's policies, which require the Fund to meet certain funding conditions before plan changes can be granted, provide protection from this risk.

The chart below shows the components of changes in the Unfunded Actuarial Liability (UAL) for the Fund over the last ten years, including investment gains and losses on the Actuarial Value of Assets, liability gains and losses, assumption and method changes, and the paying down of the UAL. Amounts below the horizontal axis are gains, or decreases to the UAL, while amounts above the axis are losses, or increases to the UAL. The net UAL change is shown by the dark blue line.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Historical Changes in UAL 2013-2022



On a smoothed asset basis, the investment gains and losses (gold bars) from 2013 to 2022 reflect investment losses on a smoothed or AVA basis in seven of the 10 years shown. However, two of these years, 2020 and 2021, had significant gains such that over the 10-year period, in aggregate, investment losses and gains decreased the UAL by approximately $13 million. While the aggregate amount is relatively small, it is important to note that this is the largest driver of changes in the UAL for the majority of individual years in the period shown.

On the liability side (teal bars), the Fund has experienced a net liability experience gain that reduced the UAL by approximately $4 million over this period. Assumption and method changes (purple bars) have increased the UAL by approximately $50 million over the 10-year period. The assumption changes have included lowering the discount rate from 7.75% to 7.30%, updating the mortality assumptions and other demographic assumptions, and the changes implemented with this valuation and the change in actuary.

Benefit changes noted by the green bar reflect the increase in liability for COLAs granted in the last ten years. Over this period, the granted COLAs have added $70 million to the UAL.

Finally, each year the UAL is expected to decrease/(increase) as the total contributions received by the Fund exceed/(are less than) the contributions needed to pay the normal cost, for the benefits earned in the current year. In aggregate, the contributions received by the Fund in excess of normal cost, have decreased the UAL by approximately $9 million over the last 10 years. Note that these amounts are all below the x-axis, meaning the contributions were sufficient to reduce the UAL, except for 2013 and 2021. In these years, the contributions were not sufficient to cover the interest on the existing UAL, thus increasing the UAL. In the case of 2021, this corresponds with the previous notation in Section I that in the 2020 valuation, which assesses the contributions for 2021, the total fixed contributions were less than the tread water contribution rate. Since the tread water contribution rate as of this December 31, 2022 valuation is also above the total fixed contribution, it is anticipated that the UAL paid amount for the 2023 plan year will also be above the x-axis since the actual contributions will be insufficient to amortize, or pay down, any portion of the existing UAL.

Plan Maturity Measures

The future financial condition of a mature pension plan is more sensitive to each of the risks identified above than a less mature plan. Before assessing each of these risks, it is important to understand the maturity of this Fund compared to other plans and how the maturity has changed over time.

Plan maturity can be measured in a variety of ways, but they all get at one basic dynamic – the larger the plan is compared to the contribution or revenue base that supports it, the more sensitive the plan will be to risk. The measures below have been selected as the most important in understanding the primary risks identified for this Fund.

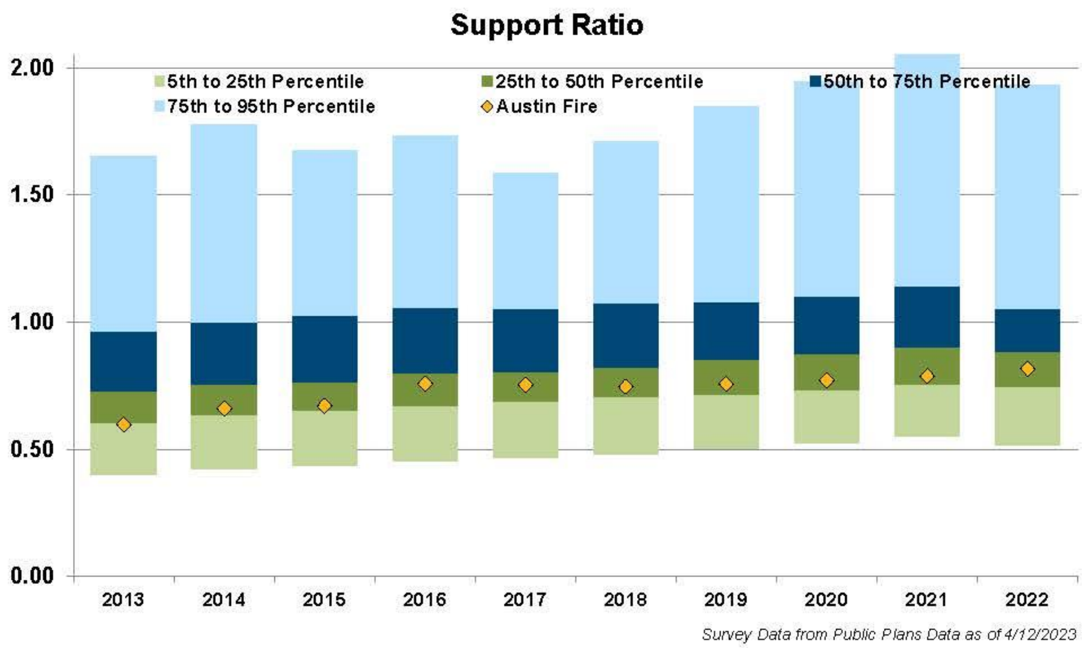
Inactives per Active (Support Ratio)

One simple measure of plan maturity is the ratio of the number of inactive members, those currently receiving benefits and terminated vested members, to the number of active members. The revenue base supporting the plan is usually proportional to the number of active members, so a relatively high number of inactives compared to actives indicates a larger plan relative to its revenue base as well.

The Boston College's Center for Retirement Research, the National Association of State Retirement Administrators (NASRA), MissionSquare, and the Government Finance Officers Association (GFOA) maintain the Public Plan Database that contains the majority of state plans (119) as well as many (101) large municipal plans, covering over 95% of the membership in public plans as well as over 95% of the assets held by public pension plans.

The chart that follows shows the support ratio for all plans in this database since 2013. The colored bars represent the central 90% of the support ratios for the plans in the database. The Austin Firefighters Retirement Fund is represented by the gold diamonds.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

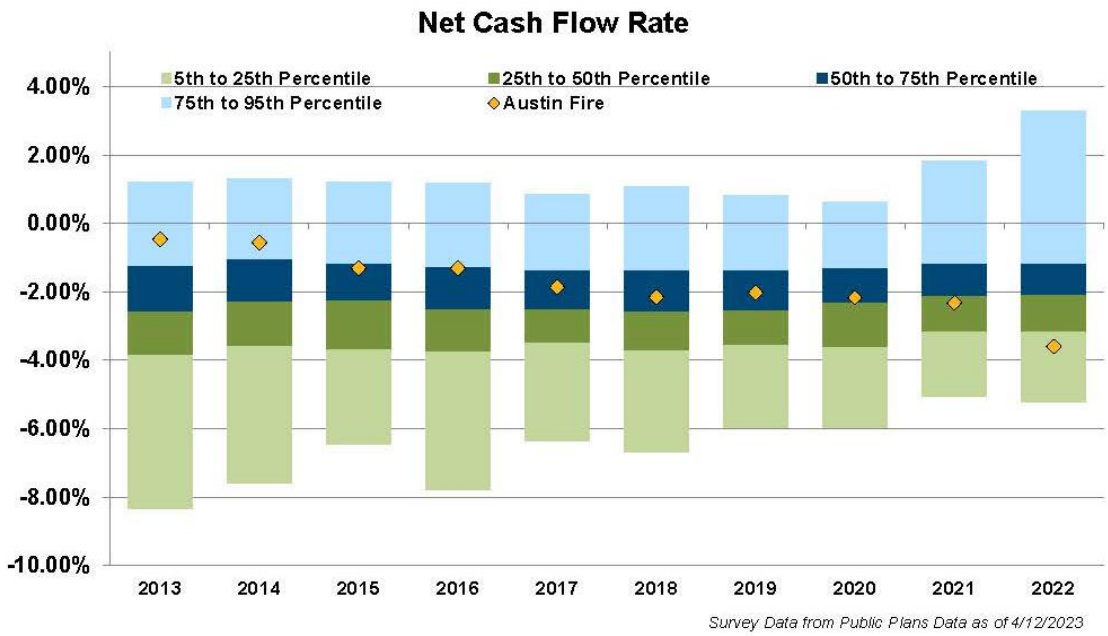


This chart shows that the Fund is not as mature as other plans in this database. The support ratios for the universe of public plans shown have increased over the period as they mature, with the Fund's support ratio generally increasing at a similar pace. The Fund has remained below the 50th percentile for the entire period.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Net Cash Flow

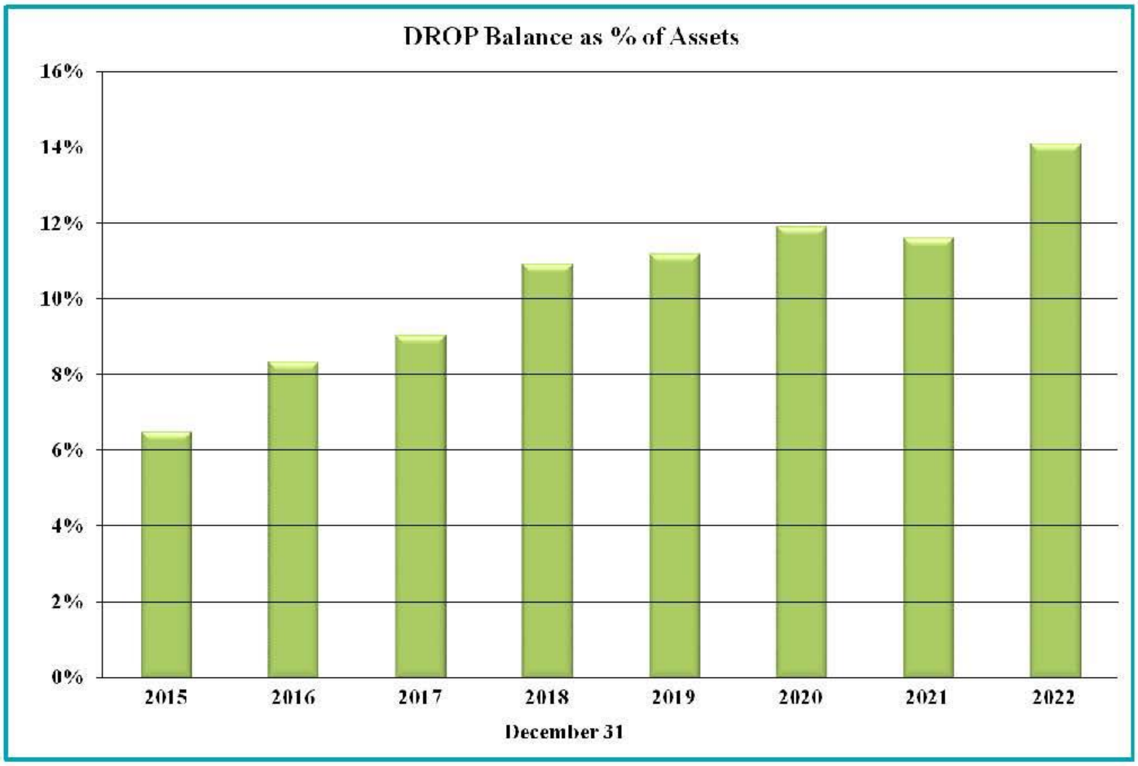
The net cash flow of the plan as a percentage of the beginning of year assets indicates the sensitivity of the plan to short-term investment returns. Net cash flow is equal to contributions less benefit payments and administrative expenses. Mature plans can have large amounts of benefit payments compared to contributions, particularly if they are well funded. Investment losses in the short-term are compounded by the net withdrawal from the plan leaving a smaller asset base to try to recover from the investment losses. Large negative cash flows can also create liquidity issues.



The chart above shows the distribution of net cash flow as a percent of assets, again with the bars showing the 5th to 95th percentile for the plans in the Public Plans Database. The gold diamonds show the Fund's experience for this metric as well, allowing comparison to the other plans. Up until 2020, the Fund was generally consistently above the 50th percentile. However, in 2021, the Fund's cash flow as a percent of assets decreased putting the Fund in the 25th to 50th percentile. The decrease in this percentage is primarily due to the plan maturing and the timing of the measurement. The Fund uses a measurement date of December 31, 2022 so the 2022 calendar returns are fully reflected whereas most of the universe uses measurement dates during the calendar year so only reflecting a portion of the 2022 calendar year returns.

Additionally, as DROP payments increase relative to the size of the Fund, these will likely create additional volatility in this measurement from year-to-year. The chart below shows the percentage of assets that are attributable to DROP balances since this information was first reported with the 2015 valuation.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK



This graph is provided because it is important that the Fund's assets be invested considering the liquidity needs of paying out DROP accounts to members. This is a specific risk applicable to this Fund due to the structure of the benefits provided.

Deterministic Scenarios/Stress Testing

We developed several hypothetical scenarios to illustrate the impact that deviations from the assumed investment returns may have on future funded ratios and amortization periods. The scenarios presented are illustrative and intentionally balanced between positive and negative scenarios. They are intended to illustrate the importance of both the return itself as well as the timing of such returns.

The charts on the following pages show the projections under each of these theoretical scenarios:

- Asset returns that are 1% higher than the expected return of 7.3% annually
- Asset returns that are 1% lower than the expected return of 7.3% annually
- Asset return for 2023 that is 10% higher than the expected return of 7.3% and then equal to the expected 7.3% for each year thereafter
- Asset return for 2023 that is 10% lower than the expected return of 7.3% and then equal to the expected 7.3% for each year thereafter
- Asset returns that vary from year to year based on market conditions observed beginning in the year ending January 1, 2004. The compounded return over this period is 7.4% and demonstrates the importance of the timing of returns.

The projection charts shown have the same format as those included for the baseline scenario in the prior section. The top projection chart compares the market value of assets (MVA) (gold line) and the actuarial or smoothed value of assets (AVA) (blue line) to the Plan's actuarial liabilities (AL) (gray bars). In addition, at the top of each chart, we show the Plan's AVA funded ratio (ratio of AVA to AL). The second chart provides the effective amortization period based on the statutory contributions of 18.70% of pay for members and 22.05% of pay for the City and all assumptions being exactly met, including the asset returns specified for each scenario.

In addition to showing the variability of valuation results with different returns, these scenarios highlight how volatile the amortization period metric is to returns.

AUSTIN FIREFIGHTERS RETIREMENT FUND
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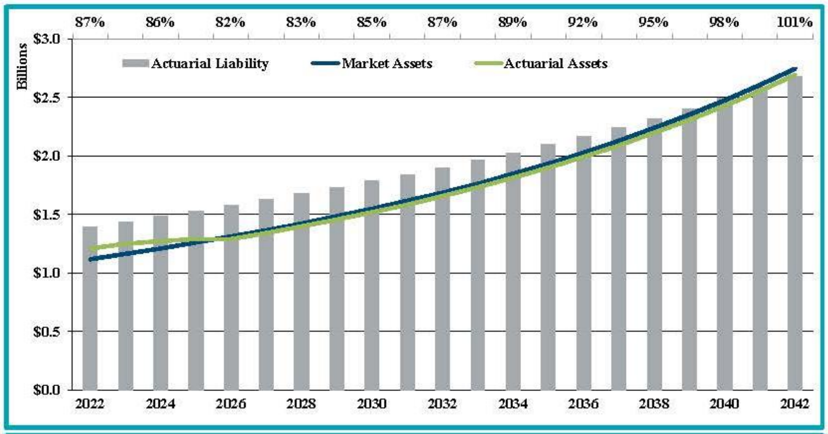
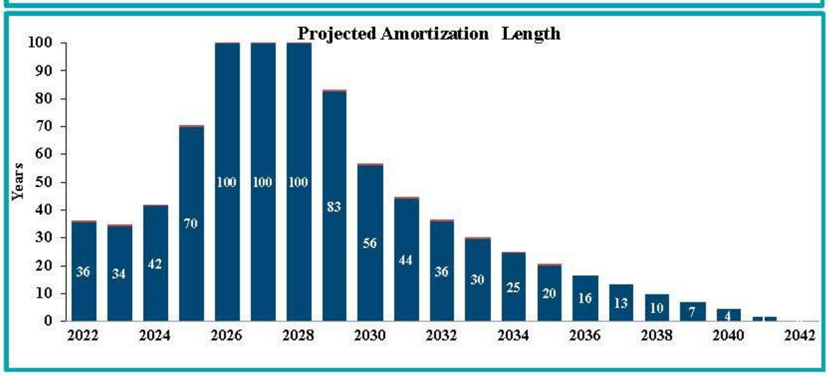
SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Fund Earns 8.3% for Each Year Over the Projection Period

Projected Asset Returns	
2023	8.30%
2024	8.30%
2025	8.30%
2026	8.30%
2027	8.30%
2028	8.30%
2029	8.30%
2030	8.30%
2031	8.30%
2032	8.30%
2033	8.30%
2034	8.30%
2035	8.30%
2036	8.30%
2037	8.30%
2038	8.30%
2039	8.30%
2040	8.30%
2041	8.30%
2042	8.30%



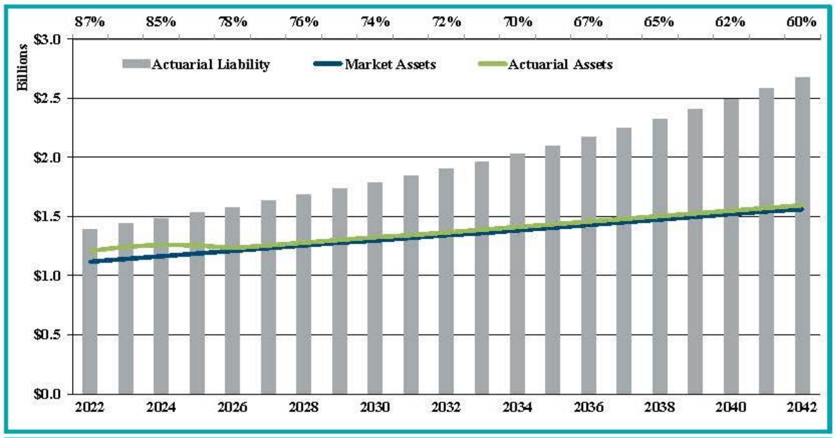


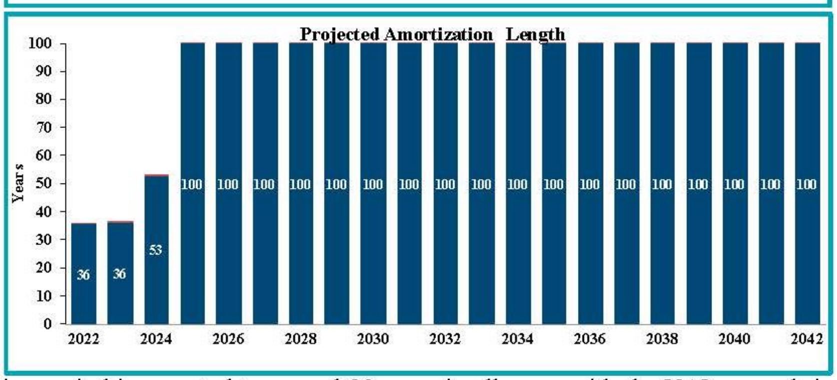
Under this scenario, the Fund reaches full funding by the end of the projection period. The amortization length is expected to exceed 30 years from 2022 until 2032 without any changes to funding.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Fund Earns 6.3% for Each Year Over the Projection

Projected Asset Returns	
2023	6.30%
2024	6.30%
2025	6.30%
2026	6.30%
2027	6.30%
2028	6.30%
2029	6.30%
2030	6.30%
2031	6.30%
2032	6.30%
2033	6.30%
2034	6.30%
2035	6.30%
2036	6.30%
2037	6.30%
2038	6.30%
2039	6.30%
2040	6.30%
2041	6.30%
2042	6.30%



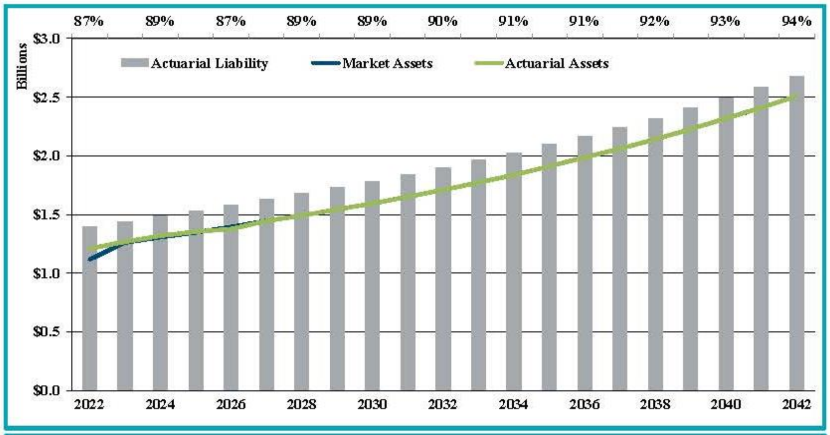


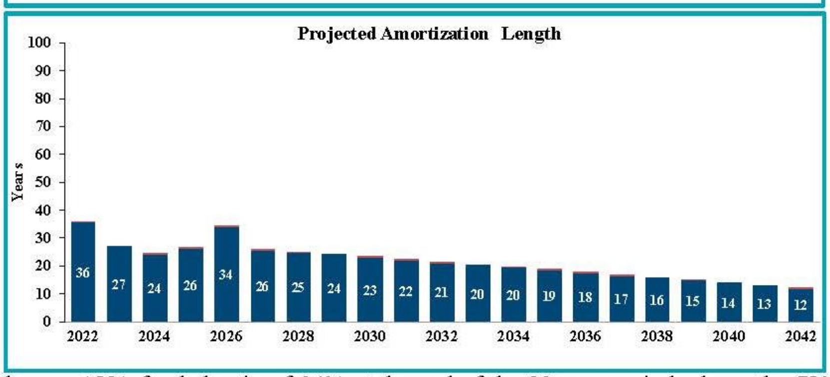
Under this scenario, the amortization period is expected to exceed 30 years in all years with the UAL never being expected to be amortized beginning with 2025, the same as is seen in the baseline scenario. At the end of the 20-year period, the AVA funded ratio is expected to be 60%, less than the 78% in the baseline scenario.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Fund Earns 17.3% for 2023 (10% above the expected return), then 7.3% per year each year thereafter

Projected Asset Returns	
2023	17.30%
2024	7.30%
2025	7.30%
2026	7.30%
2027	7.30%
2028	7.30%
2029	7.30%
2030	7.30%
2031	7.30%
2032	7.30%
2033	7.30%
2034	7.30%
2035	7.30%
2036	7.30%
2037	7.30%
2038	7.30%
2039	7.30%
2040	7.30%
2041	7.30%
2042	7.30%



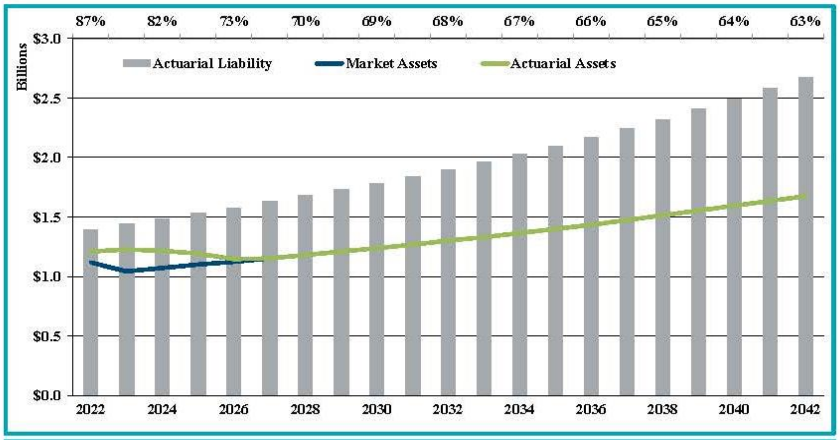


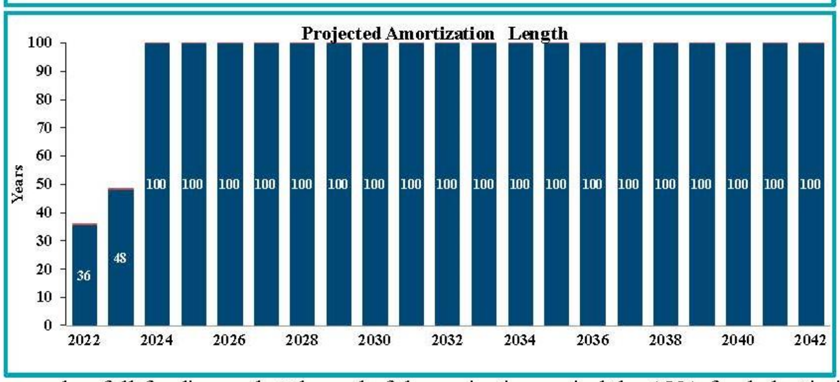
Under this scenario, the Fund reaches an AVA funded ratio of 94% at the end of the 20-year period, above the 78% of the baseline scenario, and the amortization length is only expected to exceed 30 years during 2022 and 2026. And in all years the UAL is expected to be amortized in this scenario.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Fund Earns -2.7% for 2023 (10% below the expected return), then 7.3% per year each year thereafter

Projected Asset Returns	
2023	-2.70%
2024	7.30%
2025	7.30%
2026	7.30%
2027	7.30%
2028	7.30%
2029	7.30%
2030	7.30%
2031	7.30%
2032	7.30%
2033	7.30%
2034	7.30%
2035	7.30%
2036	7.30%
2037	7.30%
2038	7.30%
2039	7.30%
2040	7.30%
2041	7.30%
2042	7.30%



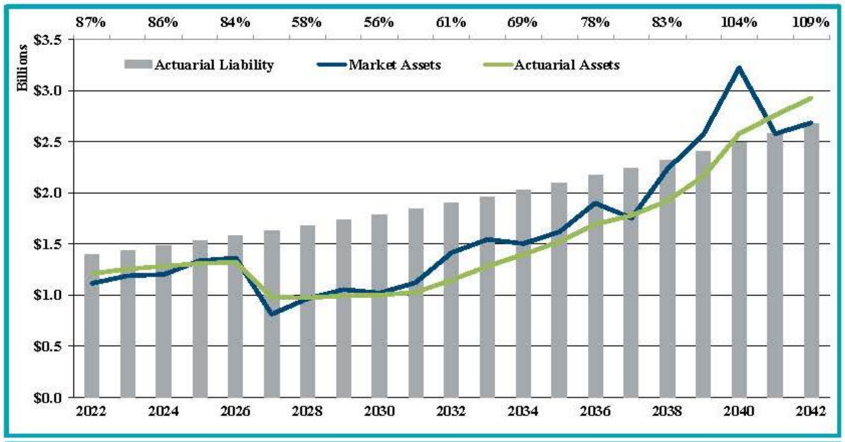


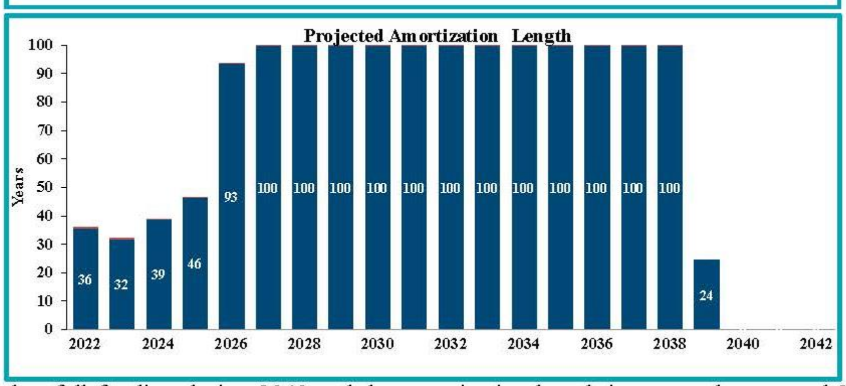
Under this scenario, the Fund never reaches full funding and at the end of the projection period the AVA funded ratio is expected to be 63%, less than the 78% of the baseline scenario. Additionally, the amortization length is expected to exceed 30 years for all years of the projection period, with there being no expectation of the UAL being fully amortized beginning in 2024.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Fund asset returns vary from year to year based on market conditions beginning with the year 2004

Projected Asset Returns	
2023	10.88%
2024	4.91%
2025	15.79%
2026	5.49%
2027	-37.00%
2028	26.46%
2029	15.11%
2030	2.11%
2031	16.00%
2032	32.39%
2033	13.69%
2034	1.38%
2035	11.96%
2036	21.83%
2037	-4.38%
2038	31.49%
2039	18.40%
2040	28.69%
2041	-18.14%
2042	7.30%





Under this scenario, the Fund reaches full funding during 2040 and the amortization length is expected to exceed 30 years through 2038 until high returns in 2038 drop the amortization period to 24 years for 2039 followed by anticipation of there being no UAL beginning with 2040.

SECTION III – ASSETS

Assets play a key role in the financial operation of the Fund and in the decisions that the Board of Trustees may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact upon benefit levels, employer contributions, and the ultimate security of members' benefits.

In this section, we present detailed information on the Fund's assets including:

- Disclosure of the Fund's assets as of December 31, 2022
- Statement of the changes in market values during the year
- Development of the actuarial value of assets
- A comparison of the year's investment performance to the return assumption

Disclosure

The market values of assets represent "snap-shot" or "cash-out" values, which provide the principal basis for measuring financial performance from one year to the next. However, market values can fluctuate widely with corresponding swings in the marketplace. As a result, smoothed market values are usually used in reviewing a Fund's financial condition.

The actuarial value of assets are based on market values that have smoothed in investment gains and losses. Current methods employed by this Fund set the actuarial value equal to the market value, adjusted for a five-year phase-in of investment experience gains and losses.

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SECTION III – ASSETS

The assets below are based upon audited financial data furnished by the Fund's staff. The components of the market value of assets as of the current and immediately prior valuation year as well as the change in these categories and the total market value of assets during the valuation year ending December 31, 2022 is summarized below.

Table III-1
Statement of Market Value of Assets as of December 31,

	2022	2021	% Change
Assets			
Cash & Short-Term Investments	$ 7,245,787	$ 23,333,740	(68.95%)
Receivables	164,116	1,027,301	(84.02%)
Fixed Income	310,744,525	355,108,683	(12.49%)
Domestic Equities	219,699,040	255,991,895	(14.18%)
International Equities	209,977,146	265,520,653	(20.92%)
Real Estate	112,168,625	105,885,100	5.93%
Natural Resources	33,428,837	33,391,511	0.11%
Private Equities	222,733,907	264,312,984	(15.73%)
Total Assets	**$ 1,116,161,983**	**$ 1,304,571,867**	(14.44%)
Liabilities			
Securities Purchased and Other Investment Liabilities	$ 0	$ 1,027,362	(100.00%)
Accrued Expenses and Other Liabilities	329,113	0	0.00%
Total Liabilities	**$ 329,113**	**$ 1,027,362**	(67.97%)
Market Value of Assets	**$ 1,115,832,870**	**$ 1,303,544,505**	**85.60%**

Numbers may not add due to rounding

AUSTIN FIREFIGHTERS RETIREMENT FUND
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SECTION III – ASSETS

The chart below shows the calculation of the investment gain/loss. On a market value basis, the Fund earned a -11.59% return, a total investment loss of $ 148.8 million during 2022, resulting in a net Fund asset loss on a market value of assets basis of $ 242.6 million. On an actuarial value of assets basis, the Fund had a higher return for the year, 6.33%, but still below the 7.30% return assumed in the prior year's valuation, producing a loss of $ 11.2 million to the Fund on that basis.

Table III-2
Changes in Value of Assets

		Market Value of Assets		Actuarial Value of Assets
1. **Value of Assets - December 31, 2021**	$	**1,303,544,505**	$	**1,176,967,709**
2. Calculation of Net Cash Flow				
(a) Member Contributions	$	19,306,629	$	19,306,629
(b) Employer Contributions		22,765,290		22,765,290
(c) Benefit Payments and Refunds		(80,970,089)		(80,970,089)
(d) **Net Cash Flow**	$	**(38,898,170)**	$	**(38,898,170)**
3. **Value of Assets - December 31, 2022**	$	**1,115,832,870**	$	**1,211,321,297**
4. Net Investment Income [3. - 1. - 2.(d)]	$	(148,813,465)	$	73,251,758
5. Average Value of Assets [1. + 1/2 x 2.(d)]	$	1,284,095,420	$	1,157,518,624
6. Rate of Return [4. / 5.]		-11.59%		6.33%
7. Assumed Rate of Return		7.30%		7.30%
8. Expected Net Investment Income	$	93,763,972	$	84,498,860
9. Investment Gain/(Loss) [4. - 8.]	$	(242,577,437)	$	(11,247,102)

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

SECTION III – ASSETS

The next table shows how the actuarial value of assets is developed. The actuarial value of assets represents a "smoothed" value developed by the actuary to reduce, or eliminate, erratic results that could develop from short-term fluctuations in the market value of assets.

The actuarial value of assets for the Fund is based on the market value of assets adjusted by a five-year smoothing of gains and losses on a market value basis. However, if the actuarial value of assets is less than 80% or more than 120% of the market value, an adjustment is made to the actuarial value to bring the value within this corridor. Additional details regarding this methodology are included in Appendix C of the report.

Table III-3
Development of Actuarial Value of Assets

	Original Gain/(Loss)	Deferred Portion
Defer 0% of 2018 Loss	$ (98,535,264)	$ 0
Defer 20% of 2019 Gain	71,447,637	14,289,527
Defer 40% of 2020 Gain	79,891,968	31,956,787
Defer 60% of 2021 Gain	87,212,015	52,327,209
Defer 80% of 2022 Loss	(242,577,437)	(194,061,950)
Total Deferred Gain/(Loss) for AVA Calculation		$ (95,488,427)
Market Value of Assets at December 31, 2022		$ 1,115,832,870
Total Unrecognized Gain/(Loss)		(95,488,427)
Actuarial Value of Assets at December 31, 2022		$ 1,211,321,297
Actuarial Value as a Percent of Market Value		108.6%

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

SECTION III – ASSETS

The final table in this section summarizes the annual returns on both a market and actuarial value of assets value for the last ten years as well as provides averages over the last five and ten years for these two metrics.

Table III-4
Historic Investment Return

Year Ending December 31,	Market Value	Actuarial Value
2022	-11.6%	6.3%
2021	14.9%	12.0%
2020	15.4%	10.2%
2019	15.7%	7.1%
2018	-2.7%	6.2%
2017	17.1%	7.8%
2016	7.0%	5.8%
2015	0.7%	6.3%
2014	5.5%	7.6%
2013	14.9%	8.1%
Average Returns		
Last 5 years:	5.7%	8.3%
Last 10 years:	7.3%	7.7%

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

SECTION IV – LIABILITIES AND EXPERIENCE GAINS/(LOSSES)

In this section, we provide detailed information related to the Fund's liability measurements, including:

- Disclosure of the Fund's liabilities;
- Development of the experience gains and losses from liabilities; and
- Detailed development of the sources of the liability gains and losses during the year.

The table that follows presents the present value of future benefits and the actuarial liabilities by membership status for the current and immediately preceding valuations. It also includes the normal cost for both of these valuations, as a dollar amount and as a percentage of the total pensionable payroll.

Table IV-1
Present Value of Future Benefits (PVFB) Detail and Liability Allocations

	December 31, 2022	December 31, 2021
Present Value of Future Benefits (PVFB)		
Active Member Benefits	$ 885,237,218	$ 822,868,771
Service Retirees, including DROP	795,346,099	762,133,987
Beneficiaries	55,477,984	46,008,096
Disability Retirees	7,256,265	7,426,188
Terminated Vested	5,039,375	3,668,501
Total Present Value of Future Benefits	**$ 1,748,356,941**	**$ 1,642,105,543**
Actuarial Liability		
Active Member Benefits	$ 531,576,009	$ 494,061,161
Service Retirees, including DROP	795,346,099	762,133,987
Beneficiaries	55,477,984	46,008,096
Disability Retirees	7,256,265	7,426,188
Terminated Vested	5,039,375	3,668,501
Total Actuarial Liability (AL)	**$ 1,394,695,732**	**$ 1,313,297,933**
Normal Cost	**$ 31,261,216**	**$ 29,387,903**
Normal Cost as a % of Pensionable Payroll	**30.73%**	**29.61%**

SECTION IV – LIABILITIES AND EXPERIENCE GAINS/(LOSSES)

The table below presents the changes in actuarial liability during the plan year. In general, the actuarial liability of any retirement Fund is expected to change at each subsequent valuation for a variety of reasons. In each valuation, we report on those elements of the change in the liabilities that are of particular significance, potentially affecting the long-term financial outlook of the Fund. The first table provides a summary of the expected liability and actual liability as of December 31, 2022. The second table provides more details on the liability (gain)/loss for the year.

Table IV-2
Changes in Actuarial Liability

Actuarial Liability as of December 31, 2021	$	1,313,297,933
Normal Cost		29,387,903
Benefit Payments		(80,970,089)
Interest		95,112,711
Assumption Changes		16,041,970
Benefit Changes		0
Expected Actuarial Liability as of December 31, 2022	$	1,372,870,428
Actual Actuarial Liability as of December 31, 2022	$	1,394,695,732
Actuarial Liability (Gain)/Loss	$	21,825,304

Table IV-3
Actuarial Liability (Gain)/Loss by Source as of December 31, 2022

Salary/Service Increase	$	(7,988,904)
Retirement Experience		634,435
Retiree Mortality		148,494
Change in Actuary		13,284,846
Data Updates		12,108,622
Other Experience		3,637,811
Experience (Gain)/Loss	$	21,825,304

SECTION V – ACTUARIALLY DETERMINED CONTRIBUTION BENCHMARK

Actuarially Determined Contribution Benchmark

Since the City and members each contribute to the Fund at a fixed rate as outlined in Vernon's Texas Civil Statute, Article 6243e.1, the Board developed an Actuarially Determined Contribution (ADC) benchmark for comparative purposes in the Fund's Funding Policy dated December 16, 2019. This ADC benchmark is developed using the actuarial assumptions and methods identical to those disclosed in this report, except as follows:

Amortization Period — The ADC benchmark is determined in conjunction with each annual actuarial valuation by determining the fixed-rate contribution rates that would result in a 30-year amortization period as of the valuation date. Note for informational purposes, a 20-year amortization period is provided as well.

Payroll Growth Assumption – The ADC benchmark will be calculated using a payroll growth assumption that is the lesser of 3.0% and the average payroll growth of the Austin Fire Department over the last ten (10) years. Since an actuarial valuation was not completed for December 31, 2012, a 9-year annual average of payroll growth from December 31, 2013 was used for the current year and determined to be 2.56%. This 2.56% was thus used to determine the ADC benchmark as defined by the Funding Policy as of December 31, 2022.

Cheiron recommends the Board review their funding policy and this ADC Benchmark prior to the December 31, 2023 actuarial valuation to reflect the updated Actuarial Standards of Practice No. 4 and Pension Review Board concerns.

The chart on the next page shows the results of the ADC benchmark.

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

SECTION V – ACTUARIALLY DETERMINED CONTRIBUTION BENCHMARK

Development of Actuarially Determined Contribution Benchmark

For Plan Year Beginning 12/31 of:	2022	2021
Valuation Results		
Actuarial Liability	$ 1,394,695,732	$ 1,313,297,933
Actuarial Value of Assets	1,211,321,297	1,176,967,709
Unfunded Actuarial Liability (UAL)	$ 183,374,435	$ 136,330,224
Total Normal Cost	$ 31,261,216	$ 29,387,903
Covered Payroll	$ 105,372,248	$ 102,887,082
ADC Benchmark		
Normal Cost Rate	30.73%	29.61%
Amortization of UAL Rate	10.73%	7.80%
Total Cost Rate	41.46%	37.41%
Member Contribution Rate	18.70%	18.70%
City Contribution Rate Based on ADC Benchmark	22.76%	18.71%
Current City Contribution Rate	22.05%	22.05%
City Contribution Rate Surplus/(Deficit) Compared to ADC Benchmark	(0.71%)	3.34%
Payroll Growth Assumption	2.56%	2.98%

If the 20-year amortization period would be used, the City contribution rate based on the ADC benchmark would be 25.42%, producing a (3.37%) deficit relative to the current city contribution rate.

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

APPENDIX A – FUND MEMBERSHIP

The data for this valuation was provided electronically in Excel format by the Fund's office. Cheiron did not audit any of the data, but we did perform an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23, Data Quality. The data for active and inactive members is as of December 31, 2022.

The following pages contain a summary of the data provided:

- Member status reconciliation from December 31, 2021 to December 31, 2022
- Active member statistics including age, service, and salary
- Age and service distribution for active members as of December 31, 2022
- Inactive member statistics including age and average benefit amounts
- DROP statistics and DROP balance reconciliation

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AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

APPENDIX A – FUND MEMBERSHIP

Table A-1
Member Status Reconciliation

			Actives	Term Vested Or Awaiting Refund	Retirees	Disability Retirees	Beneficiaries and Alt Payees	Total
1.	December 31, 2021 Valuation		**1,175**	**29**	**756**	**16**	**152**	**2,128**
2.	Additions							
	a.	New Entrants	79	2			11	92
	b.	DROP Balance Only[1]					5	5
	c.	Total	79	2	-	-	16	97
3.	Reductions							
	a.	Benefits Expired						-
	b.	Refunds		(7)				(7)
	c.	Deaths with no Beneficiaries	(1)				(2)	(3)
	d.	Total	(1)	(7)	-	-	(2)	(10)
4.	Changes in Status							
	a.	Surviving Spouse						-
	b.	Disabled						-
	c.	Non Vested Termination	(8)	8				-
	d.	Retired	(44)		45		(1)	-
	e.	Terminated Vested	(2)	2				-
	f.	Disabled						-
	g.	Death with Beneficiaries			(8)	(1)	9	-
	h.	Dependents					3	3
	i.	Data Corrections		1			(6)	(5)
	j.	Total	(54)	11	37	(1)	5	(2)
5.	December 31, 2022 Valuation		**1,199**	**35**	**793**	**15**	**171**	**2,213**

[1] Alternate Payees with DROP balance only.

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

APPENDIX A – FUND MEMBERSHIP

Table A-2
Active Members Statistics

	December 31, 2022	December 31, 2021	% Change
Active Members in Valuation			
Count			
Total	1,199	1,175	2.04%
Average Current Age			
Total	41.2	41.5	-0.63%
Average Service			
Total	11.9	12.2	-1.97%
Average Reported Pay			
Total	$87,220	$85,911	1.52%

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

APPENDIX A – FUND MEMBERSHIP

AGE/SERVICE DISTRIBUTION OF ACTIVE MEMBERS
ACTIVE MEMBERS AS OF DECEMBER 31, 2022

COUNTS BY AGE/SERVICE

	Service										
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
Under 25	16	9	0	0	0	0	0	0	0	0	25
25 to 29	32	69	4	0	0	0	0	0	0	0	105
30 to 34	22	114	58	2	0	0	0	0	0	0	196
35 to 39	9	94	106	23	13	0	0	0	0	0	245
41 to 44	0	9	63	62	57	20	0	0	0	0	211
45 to 49	0	0	11	30	73	59	8	0	0	0	181
50 to 54	0	0	0	3	41	71	47	2	0	0	164
55 to 59	0	0	0	0	4	17	36	10	0	0	67
60 to 64	0	0	0	0	0	0	2	2	1	0	5
65 to 69	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0
Total	79	295	242	120	188	167	93	14	1	0	1,199

Average Age = 41.2 Average Service = 11.9

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

APPENDIX A – FUND MEMBERSHIP

Table A-3
Inactive Member Statistics

	December 31, 2022	December 31, 2021	% Change
Vested Terminated Members and Awaiting Refund			
Count			
Total	35	29	20.69%
Average Current Age			
Total	39.4	38.6	1.95%
Retirees, including DROP Members			
Count			
Total	793	756	4.89%
Average Current Age			
Total	65.7	66.4	-1.05%
Average Monthly Benefit			
Total	$5,956	$5,928	0.47%
Disability Retirees			
Count			
Total	15	16	-6.25%
Average Current Age			
Total	67.1	67.5	-0.59%
Average Monthly Benefit			
Total	$3,825	$3,848	-0.60%
Beneficiaries and Alternate Payees			
Count			
Total	171	152	12.50%
Average Current Age			
Total	68.1	70.0	-2.71%
Average Monthly Benefit			
Total	$2,825	$2,912	-2.99%

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

APPENDIX A – FUND MEMBERSHIP

Table A-4
DROP Statistics and DROP Balance Reconciliation

	December 31, 2022	December 31, 2021	% Change
Number of DROP	331	312	6.10%
Total DROP Balance	$ 157,393,946	$ 151,493,773	3.90%
As a % of Trust Assets	14.10%	11.60%	21.60%
Average DROP Balance	$ 475,510	$ 479,138	-0.80%

Reconciliation of DROP Balances	
12/31/2021 Balance	$ 151,493,773
Deposits	18,627,812
Interest	7,607,488
Withdrawals	(20,335,127)
12/31/2022 Balance	$ 157,393,946

APPENDIX B – SUMMARY OF PLAN PROVISIONS

1. Membership Requirement

All commissioned civil service and Texas state-certified firefighters with at least six months of service employed by the City of Austin fire department.

2. Salary

Salary (compensation) means base pay and longevity pay. No other forms of pay are included within the pensionable salaries.

3. Average Monthly Compensation

The average of the member's compensation for the 36 months of highest compensation.

4. Service Credit

One month of service credit is earned for each month the member makes the required contribution to the Fund.

5. Member Contributions

18.70% of Salary

6. Normal Retirement

Eligibility:	Age 50 with 10 years of service or 25 years of service regardless of age.
Amount:	3.3% of average monthly compensation for each year of service with a minimum of $2,000 per month.
Normal Form of Payment:	Life Annuity with 75% continued to the Surviving Spouse (or designated beneficiary if the participant is not married).

7. Early Retirement

Eligibility:	Age 45 with 10 years of service or 20 years of service regardless of age.
Amount:	3.3% of average monthly compensation for each year of service.

8. Disability Retirement

Eligibility:	Upon approval of disability by the Board of Trustees.
Amount:	3.3% of average monthly compensation for each year of service (but not less than 20 years).

APPENDIX B – SUMMARY OF PLAN PROVISIONS

9. Death while an Active Employee

Eligibility:	Termination of employment due to death
Amount:	Surviving spouse or designated beneficiary will receive 75% of the member's accrued benefit based on the greater of their service at death or 20 years of service. Each dependent child of a surviving spouse will receive 15% of the Member's accrued benefit, but not less than 9.9% of Average Monthly Compensation with reduction if there are more than five surviving dependent children.

10. Deferred Retirement

Eligibility:	Ten years of service. Must also elect to leave their member contributions in the Fund.
Amount:	Accrued benefit payable at Normal Retirement eligibility.

11. Non-Vested Termination

Eligibility:	Less than ten years of service.
Amount:	Lump sum of member contributions with accumulated interest.

12. Deferred Retirement Option Plan (DROP)

Under this program a member eligible for service retirement may elect to continue in active service as a firefighter but have the fund begin crediting "payments" to a deferred retirement option plan (DROP) account. The monthly "payments" would be an amount equal to what the member's monthly annuity would have been if the member had retired as of that eligible DROP date. Any eligible cost-of-living adjustments (COLAS) would be applied to the monthly annuity during this DROP period. During the DROP period, the member would have all their pension contributions and applicable annual interest of 5% compounded monthly credited to their account. When the member retires, by terminating their active service in the fire department, an accumulated lump sum balance may be available to be distributed (all or part) to the member from the DROP account.

In lieu of electing to participate in the DROP before actual retirement, a member who is eligible for normal service retirement may elect to terminate active service as a firefighter and establish the DROP account at termination. Under this "RETRO or BACK DROP," the firefighter's DROP account reflects the accrual from the actual termination date back to a date on or after the date which they become eligible for normal service retirement.

APPENDIX B – SUMMARY OF PLAN PROVISIONS

The maximum period under which a firefighter can participate in a DROP is seven years. A firefighter may elect to establish a DROP account after reaching normal or early service retirement eligibility. Currently there are a total of twelve draws allowed while the retiree's DROP account balance remains in the pension plan. The number of draws can be set by pension board policy as determined feasible. The draws can either be in the form of a distribution to the retiree (provided the retiree reached age 50 before retiring), or a rollover into a qualified IRA. The entire DROP balance must be withdrawn from the fund by April 1st of the calendar year following the year the retiree reaches age 70 ½.

13. Cost of Living Adjustments (COLA)

Eligible pension recipients are entitled to annual cost-of-living adjustments (COLA) when deemed affordable. COLAs are approved only when the fund's actuary has advised the Board that the adjustment would not impair the financial stability of the fund based on the COLA Adjustment Policy approved by the Board. The COLAs are to be based on the annual percentage increase in the Consumer Price Index (CPI-U).

Members who retire under Early Retirement are not eligible for COLAs until they would have reached Normal Service Retirement eligibility had they continued in employment.

14. Changes Since Last Valuation

None.

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

1. Rate of Investment Return

7.30% compounded annually, net of investment and administration expenses.

2. Rates of Salary Increase

Salary increases are split into a wage inflation assumption of 3.00% and a merit scale based on service, shown below.

Years of Service	Increase
0	5.50%
1	7.00%
2	7.00%
3	2.50%
4	0.50%
5	4.00%
10	1.00%
15	1.00%
20	4.50%
21	0.50%
22+	0.25%

3. Aggregate Payroll Growth

2.50% per year

4. Disability

Age	Rate
Under 30	0.02%
30-39	0.06
40-49	0.10
50+	0.05

APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

5. Mortality Rates

Active Lives:
PubS-2010 Mortality Table for Employees.

Retiree and Vested Terminated Lives:
PubS-2010 Mortality Table for Healthy Retirees.

Contingent Survivor Lives:
PubS-2010 Mortality Table for Contingent Survivors.

Disabled Lives:
PubS-2010 Mortality Table for Disabled Retirees.

Generational mortality improvements are projected from 2010 using scale MP-2021.

6. Withdrawal

Withdrawal rates are based on department and service, shown below.

Years of Service	Rate
0-7	1.0%
8-13	0.5
14+	0.0

7. Retirement Rates

Years After Early Retirement Eligibility	Rate
0	1.5%
1	1.5
2	1.5
3	1.5
4	2.0
5	4.0
6	5.0
7	5.0
8	7.5
9	10.0
10	16.7
11	16.7
12	20.0
13	20.0
14	30.0

15	30.0
16	30.0
17	50.0
18+	100.0

8. DROP Election

Members are assumed to elect either normal retirement or DROP with the DROP period that maximizes the present value of their retirement benefits, including reflecting the impact of previously granted COLAs the member would be eligible for during the assumed DROP period.

9. Cost-of-Living Adjustment Assumption

0% for future years.

10. Percent Married

100% of actives are assumed to be married.

11. Spouse Age

A husband is assumed to be four years older than his wife.

12. Dependent Children

50% of active members are assumed to have dependent children and the youngest child is assumed to be one year old.

13. Technical and Miscellaneous Assumptions

Decrement timing: Middle of year, except at 100% retirement, which is assumed at the beginning of the year.

Terminated vested members: All terminated vested members are assumed married and assumed to retire at normal retirement eligibility.

14. Disclosures regarding Models Used

In accordance with Actuarial Standard of Practice (ASOP) No. 56 *Modeling*, the following disclosures are made:

A. Valuation Software

Cheiron utilizes ProVal, an actuarial valuation software program leased from Winklevoss Technologies (WinTech), to calculate liabilities and projected benefit

APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

payments. We have reviewed the underlying workings of this model to the degree feasible and consistent with ASOP No. 56 and believe them to be appropriate for the purposes of the valuation.

B. Projections

This valuation report includes projections of future contributions and funded status for the purpose of assisting the Board of Trustees and the sponsors of the Fund with the management of the Fund.

The projections are based on the same census data and financial information as of December 31, 2022 as disclosed in this actuarial valuation. The projections assume continuation of the plan provisions and actuarial assumptions in effect as of December 31, 2022. They do not reflect the impact of any changes in benefits or actuarial assumptions that may be adopted after December 31, 2022.

The projections assume that all future assumptions are met except where specifically indicated. The future outcomes become increasingly uncertain over time, and therefore the general trends and not the absolute values should be considered in the review of these projections. Further, for the purpose of these projections, we have only reflected the impact of new entrants entering the plan in aggregate and have not developed individual liabilities or detailed profiles related to these potential new entrants. We feel this is appropriate for the purpose of these projections, but if they were to be used for other purposes, this may not be appropriate and alternative projections may need to be developed.

15. Changes since Last Valuation

The mortality assumption was changed from the PubS-2010 Above Median Income table with mortality improvements projected five years past the valuation date using MP-2021 to the PubS-2010 table with mortality improvements projected from the base year 2010 generationally using MP-2021.

The DROP period assumption was changed from a rate table to the DROP period that maximizes the value of the retirement benefits, including any previously granted COLAs the active member is eligible for during the DROP.

16. Rationale for Assumptions

The actuarial assumptions, except for those noted as changed for this valuation, were chosen by the Board of Trustees, upon the recommendation of the actuaries, based on an experience study issued by the Fund's prior actuary on April 21, 2020 based on data through December 31, 2019. The assumptions changed for this valuation were adopted by the Board at the April 24, 2023 meeting.

AUSTIN FIREFIGHTERS RETIREMENT FUND
ACTUARIAL VALUATION AS OF DECEMBER 31, 2022

APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

1. Funding Method

Liabilities and contributions shown in this report are computed using the entry age normal method of funding. Under this funding method, a normal cost rate is determined as a level percentage of pay for each active member. The normal cost rate times payroll equals the total normal cost for each member. The normal cost-plus member contributions will pay for projected benefits at retirement for each active Fund member.

The actuarial liability is that portion of the present value of future benefits that will not be paid by either future employer normal cost contributions or member contributions. The difference between this liability and the assets accumulated as of the same date is referred to as the unfunded actuarial liability (UAL).

2. Asset Valuation Method

The actuarial value has been calculated by taking the market value of assets less 80% of the investment gain (loss) during the preceding year, less 60% of the investment gain (loss) during the second preceding year, less 40% of the investment gain (loss) during the third preceding year, and less 20% of the investment gain (loss) in the fourth preceding year.

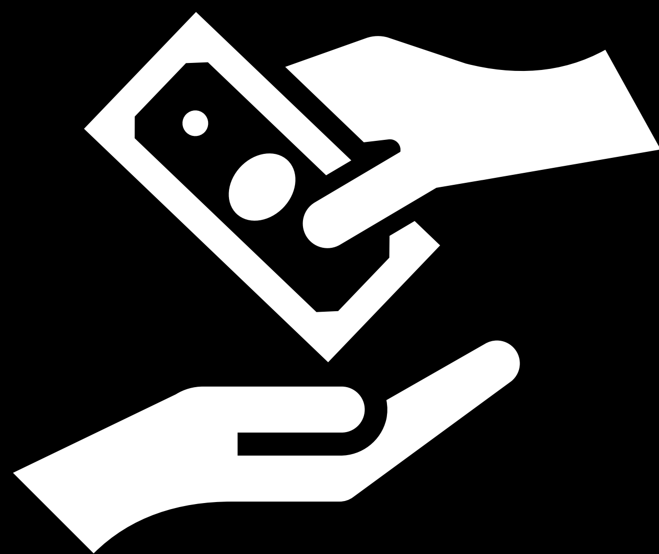
The investment gain (loss) is calculated by taking the difference between the expected market value of assets based on an investment return assumption and the actual market value of assets.

3. Amortization Method

Not applicable since the employer contribution rate is set by State Statute. For the Actuarially Determined Contribution Benchmark, the amortization method is an open 30-year level percentage of pensionable pay amortization based on a payroll growth assumption of 2.56%.

4. Changes since Last Valuation

None.



PLAN PROVISION SECTION

Historical Plan Provision Changes
Summary of Plan Benefits

HISTORICAL PLAN PROVISION CHANGES

Fund History

The Austin Firefighters Retirement Fund (*AFRF* or *the Fund*) was first created in 1937 by an Act of the 45th Legislature under the Texas Local Fire Fighters Retirement Act (Article 6243e, Vernon's Texas Civil Statutes). In 1975, the 64th Legislature enacted Article 6243e.1, to establish the Fund independently in state statute. AFRF is a single employer contributory defined benefit pension plan that provides retirement, disability, death, and survivor benefits to approximately 2100 active and retired firefighters of the City of Austin and their beneficiaries.

Plan Provision Changes

Significant changes in plan provisions including benefit enhancements since 1975 are as follows:

1975

- 2.0% COLA approved.
- The retirement calculations changed from using the highest 5 years' average salary to using the highest 3 years' average salary.
- The minimum monthly disability benefit changed from $100 to $200.
- The contribution rate by the firefighters increased from 11.85% to 13.7% of salary.
- State statute Article 6243e.1 is created pertaining only to the Austin Firefighters Pension Fund, allowing the plan to branch away from the former statewide system.

1976

- 2.0% COLA approved.

1977

- 2.0% COLA approved.

1978

- 2.0% COLA approved.
- The retirement multiplier increased from 2.0% to 2.1%

1979

- 2.0% COLA approved.
- The minimum monthly spousal benefit increased from $100 to $200.
- The minimum children's benefit increased from $50 to $100.

1980

- 2.0% COLA approved.

1981

- 2.0% COLA approved.

1982

- 2.0% COLA approved.
- The retirement multiplier increased from 2.1% to 2.2%

1983

- 2.0% COLA approved.

1984

- 2.0% COLA approved.
- The retirement multiplier increased from 2.2% to 2.3%.
- An actuarial study was conducted to increase all retirees' benefits to offset against inflation.

1985

- 4.0% COLA approved.
- The retirement multiplier increased from 2.3% to 2.5%.
- Early retirement eligibility set at age 50 and 25 years of service.
- The City of Austin contribution rate increased from 14.0% to 14.05%.
- Employee contributions treated as employer contributions for federal income tax purposes. Contributions are paid pre-taxed, creating more take home pay.
- A benefit increase for all retirees was approved to "catch benefits up" with inflation since the time of retirement. If the resulting monthly benefit for a retiree was less than $500, then a $500 minimum monthly benefit was approved.

1986

- 3.0% COLA approved.

1987

- 1.5% COLA approved.
- The retirement multiplier increased from 2.50% to 2.65%.
- Normal retirement eligibility remains at age 55, while normal retirement eligibility at any age was lowered from 35 years of service to 30 years of service.

1988

- 4.0% COLA approved.
- The retirement multiplier increased from 2.65% to 2.90%.

1989

- 4.25% COLA approved.
- The workers' compensation offset for disability benefits was eliminated.
- Actuarial assumption adopted that 12% of firefighters were assumed to be single at retirement.

1990

- 4.50% COLA approved.

1991

- 6.3% COLA approved.
- The minimum monthly pension benefit for eligible retirees and beneficiaries increased from $500 to $850.
- Normal retirement eligibility was lowered from age 55 to age 53. Normal retirement eligibility at any age was lowered from 30 years of service to 28 years of service.
- Surviving children became eligible for full spousal benefits in the event there is no surviving spouse.
- Actuarial assumption for salary growth decreased from 6.50% to 5.50% annually.

1992

- 2.9% COLA approved.
- The minimum monthly pension benefit for eligible retirees and beneficiaries increased from $850 to $1000.
- The actual assumption for a 5% anticipated COLA was extended through 1996.

1993

- 3.2% COLA approved.
- Normal retirement eligibility was lowered from age 53 to age 52. Normal retirement eligibility at any age was lowered from 28 years of service to 27 years of service.
- Early retirement eligibility lowered from age 50 with 25 years of service to age 50 OR 25 years of service, regardless of age.
- The survivor benefit changed to a flat 75% of retiree's benefit.
- Contribution refunds are paid with 5% interest.
- Actuarial assumption for payroll growth no longer assumed a 1% growth in membership annually.
- The actuarial assumption for a 5% anticipated COLA was extended through 1998.

1994

- 2.80% COLA approved.
- The minimum monthly pension benefit for eligible retirees and beneficiaries increased from $1,000 to $1,200.
- The City of Austin contribution rate increased from 14.05% to 16.05%. The firefighter contribution rate remained at 13.7% of pay.

1995

- 2.6% COLA approved.
- The retirement multiplier increased from 2.90% to 3.0%.
- Early retirement eligibility was lowered from age 50 to age 48 with at least 10 years of service. Early retirement eligibility at any age was lowered from 25 years of service to 23 years of service.
- Normal retirement eligibility was lowered from age 52 to age 50 with at least 10 years of service. Normal retirement eligibility at any age was lowered from 27 years of service to 25 years of service. A Deferred Retirement Option Plan (DROP) was added, allowing up to 2 years of service designated for DROP participation.
- The City of Austin contribution rate increased from 16.05% to 18.05%. The firefighter contribution rate remained at 13.7% of pay.
- An actuarial assumption for a 5% anticipated COLA was extended through 2002.

1996

- 2.90% COLA approved.

1997

- 3.0% COLA approved.
- Early retirement eligibility was lowered from age 48 to age 45 with at least 10 years of service. Early retirement eligibility at any age was lowered from 23 years of service to 20 years of service.
- COLA eligibility was delayed until normal retirement eligibility is met.
- The Deferred Retirement Option Plan (DROP) was extended from a maximum of 2 years to a maximum of 5 years of service.
- Benefits were made available to surviving spouses of retirees married after retirement. The requirement that a spouse's benefits terminate after remarriage was eliminated.
- The "meet and confer" agreement "bought down" firefighter contributions to 11.70%, while City contributions increased to 20.05%. Firefighters continued to get contribution credit for 13.70% per statutory requirements.
- An actuarial assumption for a 5% anticipated COLA was extended through 2004.

1998

- 2.10% COLA approved.
- The actuarial assumption for DROP participation rate was revised to 100% of the members to retire and elect a 5-year DROP one year following the age first eligible for a 5-year DROP.

1999

- 1.5% COLA approved.
- The retirement multiplier increased from 3.0% to 3.1%, to be used in all retirement and DROP calculations regardless of DROP date, effective September 1, 1999.
- The Deferred Retirement Option Plan (DROP) benefits are made available to eligible survivors of members who die before retirement but after becoming eligible for a DROP.
- A 3.33% benefit increase was approved effective September 1, 1999, for all retirees at the time based on the percentage increase of the retirement multiplier from 3.0% to 3.10%.
- After 2004, annual COLAs of 0.5% would be granted to retirees and beneficiaries if inflation was at least 0.5%. The COLA was not limited to 0.5%, but the idea was to determine required funding in advance. If inflation exceeded 0.5%, the Board and actuary would have to approve any portion above 0.5% based on the financial health of the Fund.
- Mortality rate assumption for actives and non-disabled annuitants were updated to the 1994 Group Annuity Mortality tables, to reflect industry standards.
- The Fund made an actuarial assumption of 3.50% anticipated COLA through 2004 (which was less than the 5% anticipated COLA previously assumed).

2000

- 2.60% COLA approved.

2001

- 3.4% COLA approved.
- The retirement multiplier increased from 3.10% to 3.30%, to be used in all retirement and DROP calculations regardless of the Deferred Retirement Option Plan (DROP) date, effective September 1, 2001.
- DROP extended from a maximum of 5 years to a maximum of 7 years of service.
- A survivor benefit was made available for all unmarried retirees and for unmarried firefighters who die after becoming eligible to retire per statutory provisions. The percentage is an actuarial equivalent of 75% of the firefighter's accrued benefit and is tied to the age difference of the firefighter and the designated beneficiary.
- A 6.45% benefit increase was approved, effective September 1, 2001, for all retirees at the time based on the percentage increase of the retirement multiplier from 3.10% to 3.30%.

2002

- 2.1% COLA approved.

2003

- The firefighter contribution rate increased from 13.7% to 15.7%, effective June 1, 2003. The City of Austin contribution rate remained at 18.05%.

2005

- A $32.00 per month increase in benefits was approved for all eligible retirees.

2006

- A $100.00 per month increase in benefits was approved for all eligible retirees.

2010

- The City of Austin contribution rate increased from 18.05% to 22.05%, completed in four 1% increments by 2013. The firefighter contribution rate increased from 15.7% to 18.7%, completed in six 0.5% increments by 2016.

2012

The minimum monthly pension increased to $2,000 for all annuitants who were members of the Fund in 1994 when the last adjustment of this type was made.

2013

- $93.00 per month increase in benefits for all eligible retirees.

2014

- $64.00 per month increase in benefits for all eligible retirees.

2015

- 1.3% COLA approved.

2016

- New fund rules (Section VI of Fund Rules as posted on website) were adopted for both active and retired firefighters regarding survivor and beneficiary designations. New optional forms of benefits (Section X of Fund Rules as posted on website) were adopted which now include the Single Life Annuity (SLA) option.*****

2017

- 1.5% COLA approved.
- New fund rules (Section VI of Fund Rules as posted on website) were adopted regarding the number of beneficiary designation changes allowed for unmarried retirees. New fund rules (Section XI of Fund Rules as posted on website) were adopted regarding possible retirement benefits and procedures upon indefinite suspension.

2018

- 2.2% COLA approved.

2019

- 2.3% COLA approved.

2020

- 1.7% COLA approved.

2021

- 1.4% COLA approved.

2022

- 5.4% COLA approved.

*** Fund Rules Section IV Beneficiary Designations (as amended September 20, 2016)**

1. Background. Section 7.09 of the Act provides that a retiree or member eligible to retire may designate a beneficiary for a survivor benefit on a form provided by the Fund if the Act does not otherwise provide a benefit payable to a spouse or child of the member or retiree upon his or her death. Pursuant to Section 2.11 of the Act, the Board may adopt rules it considers necessary or desirable for the efficient administration of the Fund. In addition, Section 7.09 of the Act provides that the Board may adopt rules to establish procedures for and requirements governing beneficiary designations. Through this Section VI, the Board adopts rules and procedures for designating beneficiaries under Section 7.09 of the Act, including limiting the circumstances under which such designations can be made. This Section VI is intended to replace and supersede any previous policy relating to beneficiary designations established by the Board.

2. Form. A form established by the staff of the Fund shall be utilized for purposes of designating a beneficiary under-Section 7.09 of the Act, and such form shall be the only method by which a beneficiary may be designated under such section. Any attempt by the member to designate a beneficiary other than through the form established by the Fund's staff, whether electronically, in writing or verbally, shall have no effect.

3. Eligibility-Active Members. An active member may designate or change a beneficiary under Section 7.09 if such member (A) is unmarried and (B) does not have a living child who is unmarried and under the age of twenty-two (a "Dependent Child"). Any form submitted to the Fund following September 1, 2012 that is executed on a date on which the member submitting the form is either married or has a Dependent Child shall have no effect and be null and void. An active member is not subject to a benefit reduction described in paragraph 4 below.

4. Eligibility-Retired Members. Effective November 1, 2016, if such member agrees to the benefit adjustment described in the paragraph below, a retired member may designate or change a beneficiary under Section 7.09 if such member (A) is unmarried,(B) married, but only if the retiree's marriage occurred after retirement and the term of the marriage is less than twenty-four-months, and (C) does not have a Dependent Child. Notwithstanding the above, a retiree will not be eligible to designate or change a beneficiary after retirement if such retiree has already made two designations or changes following his or her date of retirement, and such two designations or changes occurred on or after January 1, 2017. A retiree who designates or changes a beneficiary must agree to a benefit reduction for the designation or change to take effect. The benefit reduction will be determined by treating the monthly benefit amount that the retiree is receiving at the time of the designation or change of beneficiary as a single life annuity for the life of the retiree and converting such single life annuity into the form of benefit that the retiree was receiving under the Fund at the time of the designation or change, taking into account the current age of the beneficiary. The method of the conversion described above will be determined by the Fund's actuary and based on the actuarial assumptions in effect under the Fund at the time of the designation or change. The reduction described in this paragraph will apply to any designations or changes in beneficiaries on or after January 1, 2017.

5. Requirements for Beneficiaries. A beneficiary may be any living person selected by the member.

6. Termination of Beneficiary Designation. In the event a member who has previously submitted a valid beneficiary designation subsequently becomes married or has Dependent Children, the previously-submitted form shall be null and void as of (i) in the event of a subsequent marriage, the date that the member's spouse would be eligible for survivor benefits under Article 7 of the Fund (which, in the case of a spouse who married a retiree after his or her retirement, would be twenty-four months following the date of such marriage), or (ii) in the event of the birth or adoption of a Dependent Child, the date that the member's Dependent Child would be eligible for survivor benefits under Article 7 of the Fund. The nullification of a beneficiary designation pursuant to this paragraph 6 shall be permanent and shall not be reinstated.

7. Reduction of Benefit for Beneficiary 10 or More Years Younger. The reduction of a beneficiary's benefit as described in Section 7.09(c) for a beneficiary of a member (active or retired) who is 10 or more years younger than the member at the time of the member's death will determined in accordance with tables provided by the Fund's actuary and approved by the Board, as may be updated from time to time at the recommendation of the Fund's actuary. The tables as approved by the Board are set forth in Appendix B.

8. Administration. The application, administration and interpretation of this Section VI shall be at the full and absolute discretion of the Fund. Any decision relating to a beneficiary designation under this policy by the Fund shall be final and binding.

9. Termination of Provisional Beneficiary Designation. All provisional beneficiary designations made by members during the period beginning May 1, 2016 through June 1, 2016, on the special form provided by the Fund for such purpose (the "Provisional Designations") will expire at 12:00 am on November 1, 2016 (the "Expiration Date") and be null and void. No individual named under Provisional Designations will have any right or interest in the Fund following the Expiration Date solely by virtue of being named in such Provisional Designation. The Board did through action at its meeting of August 18, 2016 extend the survival period for Provisional Designations through the Expiration Date.

APPENDIX B

Reduction of Benefit for Beneficiary 10 or More Years Younger
10-Year Rule Joint & Survivor Benefit Forms

Age Difference (Retiree minus Beneficiary)	*Percent Continued to Beneficiary*
Less than 10	*75%*
10 - 14	*45%*
15 – 19	*40%*
20 - 34	*35%*
35+	*30%*

Please note the above table represents the percentage of the retiree's accrued benefit that is payable if the retiree predeceases the selected beneficiary.

SUMMARY OF PLAN BENEFITS

This section provides a general overview of AFRF's benefit provisions. If there is any discrepancy between this general overview and state or federal law, those governing statutes will take precedence.

ELIGIBILITY

All commissioned civil service and Texas state-certified firefighters with at least six (6) months of service who are employed by the fire department pursuant to the Firemen's and Policemen's Civil Service Statute.

CONTRIBUTIONS

As a result of an agreement between the firefighters and the City of Austin, the City's pension contributions increased from 18.05% to 22.05% of salary in a series of four 1% increments which was completed in 2013. The firefighters' pension contributions also increased from 15.70% to 18.70% of salary in a total of six 0.5% increments by 2016.

SERVICE CONSIDERED

The period of time for which a member is required to make and does make prescribed contributions. Military service, only which interrupts fire department service, may also be considered under certain circumstances.

COMPENSATION CONSIDERED IN DETERMINING AVERAGE SALARY

Base pay and longevity pay is considered. Overtime, any temporary pay in a higher classification, educational incentive pay, and lump sum payments for accrued sick leave or vacation are not considered. Also excluded is any Christmas Day bonus pay and pay for automobile and clothing allowances.

RETIREMENT BENEFIT

A firefighter is eligible for a normal service retirement benefit once he/she either attains age fifty (50) or accrues twenty-five (25) years of service, regardless of age. The monthly annuity, payable for life, is 3.30% of salary multiplied by years of service considered. Average salary is the monthly average of the firefighter's salary for the highest thirty-six (36) months during his/her period of service, excluding overtime pay, any temporary pay in higher classifications, educational incentive pay, Christmas Day bonus pay, automobile and clothing allowances.

EARLY RETIREMENT BENEFIT

A firefighter is eligible for an early retirement benefit at age forty-five (45), with at least (10) years of service, <u>or</u> twenty (20) years of service regardless of age. The early retirement benefit does <u>not</u> include a reduction in the factor. However, firefighters who retire early or who participate in a deferred retirement option plan (DROP), do not become eligible for cost-of-living adjustments (COLAs) until reaching normal service retirement eligibility (age fifty (50) with at least ten (10) years of service, or twenty-five (25) years of service credit regardless of age; whichever comes first.)

DEFERRED RETIREMENT OPTION PLAN

Under this program a member eligible for service retirement may elect to continue in active service as a firefighter but have the fund begin crediting “payments” to a deferred retirement option plan (DROP) account in the member’s name as of their eligible retirement (DROP) date. The monthly “payments” would be an amount equal to what the member’s monthly annuity would have been if the member had actually retired as of that eligible DROP date. Any eligible cost-of-living adjustments (COLAs) would be applied to the monthly annuity during this DROP period. In addition, during the DROP period, the member would have all of their appropriate pension contributions and applicable annual interest of 5% compounded monthly credited to their account during the DROP period as well. When the member actually retires, by terminating their active service in the fire department, an accumulated lump sum balance may be available to be distributed to the member from the DROP account if the retiree is eligible for such direct distribution by meeting age requirements according to pension Board policy. Certain penalties could apply for “early distributions,” so the pension Board encourages seeking tax advisement when in doubt. The DROP account lump sum may also be “rolled over” into a qualified Individual Retirement Account (IRA) which is typically the option chosen by most firefighters. A third option is for the DROP account lump sum to remain in the fund in the member’s name continuing to draw 5% interest compounded monthly until the retiree is ready to have the funds moved elsewhere. At this time of termination for retirement, the member will then begin receiving their ongoing monthly pension benefit payments from the fund as well.

A member who has remained in active service after becoming eligible for service retirement can retroactively establish such a DROP account. That is, in lieu of electing to participate in the DROP.

Before actual retirement, a member who is eligible for normal service retirement may elect to terminate active service as a firefighter and establish the DROP account at termination. This is commonly referred to as a “BACK DROP,” whereby the firefighter’s DROP account reflects the accrual from the actual termination date back to a date upon or after which they become eligible for normal service retirement. The maximum period under which a firefighter can participate in a DROP is 7 years. A firefighter may elect to establish a DROP account after reaching normal or early service retirement eligibility.

Effective September 1, 2001, all DROP calculations, including “BACK DROP” calculations, use a 3.30% factor regardless of the actual DROP date. Any firefighter eligible for a DROP who dies before retirement, and who is survived by a spouse, shall have such DROP options extended to their surviving spouse.

DISABILITY BENEFIT

A firefighter is eligible for a disability retirement benefit during the first thirty (30) months of his/her disability if he/she is unable to perform the duties of his/her occupation as a firefighter. After this initial thirty (30) month period, a disability retirement benefit may be continued, reduced, or discontinued according to criteria as established by the American Medical Association and as adopted by the pension Board. The annuity is equal to the firefighter’s accrued unreduced pension based on the greater of (1) his/her service at time of disability, or (2) twenty (20) years of service.

It is the policy of the Board that no disability retirement benefit shall commence retroactively more than ninety (90) days prior to the date on which the application is filed with the Fund.

DEATH BENEFIT

If a firefighter dies either before or after retirement, the firefighter's surviving spouse shall receive seventy-five (75) percent of the member's accrued unreduced pension based on the greater of (1) his/her service at time of death, or (2) twenty (20) years of service. If the member's employment is terminated by death before retirement and he/she leaves no surviving beneficiary entitled to pension benefits, then the member's estate shall receive their contributions with interest. Any lump sum payments to the member's estate will include 5% interest based on a method of application approved by the Board.

VESTED BENEFIT

If the member has at least ten (10) years of service and terminated his/her employment with the fire department, he/she may elect to leave his/her accumulated deposits in the fund. He/she will be entitled to a vested benefit commencing at the earliest of age fifty (50) or at the age which the firefighter would have completed twenty-five (25) years of service regardless of age, whichever occurs first.

SEVERANCE

The severance benefit of a firefighter who subsequently terminates his/her employment before he/she is eligible for retirement shall be an amount equal to the sum of his/her pension contributions, with interest, which were made while a participating member of the fund.

Severance benefits for such terminating members will include their contributions along with 5% interest and will be based on a method of application approved by the Board.

COST-OF-LIVING ADJUSTMENTS

Eligible pension recipients are entitled to annual cost-of-living adjustments (COLAs) when deemed affordable. COLAs are to be based on the annual percentage increase in the Consumer Price Index which measures inflation.

COLAs may not be approved unless the fund's actuary has advised the Board that the adjustment would not impair the financial stability of the fund. Striving to provide COLAs, when affordable, remains a top priority of the Board.

SURVIVORS BENEFIT

Benefits are available to eligible dependents of all plan participants should such participant die before or after retirement. Eligible dependents include:

- Spouse, if married to you at time of retirement.
- Spouse, if married to you after retirement and you remained married for at least 24 consecutive months prior to your death.
- Spouse, if married to you at time of your death; and you die before retirement.
- All unmarried children under age twenty-two (22), unless the Board determines to the contrary.
- Dependent parent, if no surviving spouse or children are eligible.
- Designated surviving beneficiaries other than a spouse, child, or dependent parent as explained below.

Since September 1, 1997, eligible spousal benefits are paid for life even after remarriage. Also since September 1, 1997, as mentioned above, spousal benefits apply to those who become married to the retiree after such retiree's retirement and remain married to such retiree at least 24 consecutive months prior to the retiree's death.

After all payments cease any remaining balance of the member's total contributions including interest at the date of the member's death, which exceeds any retirement and death benefits paid, shall go to the member's estate.

AFRF
AUSTIN FIREFIGHTERS RETIREMENT FUND