

HOUSTON FIREFIGHTERS' RELIEF AND RETIREMENT FUND

# FORGING AHEAD

ANNUAL COMPREHENSIVE FINANCIAL REPORT | Component Unit of the City of Houston, TX

For fiscal years ended June 30, 2024 and June 30, 2023



# HOUSTON FIREFIGHTERS' RELIEF AND RETIREMENT FUND

Annual Comprehensive Financial Report – Component Unit of the City of Houston, TX

FOR FISCAL YEARS ENDED JUNE 30, 2024 AND JUNE 30, 2023

Prepared through the combined efforts of the Houston Firefighters' Relief and Retirement Fund staff under the leadership of the Board of Trustees

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Photos courtesy of:

- Scott Mellot, Houston Fire Memorial [www.houstonfirememorial.org](http://www.houstonfirememorial.org)

- James A. Schnur Seven-One



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# 01

SECTION 01

## *INTRODUCTION*



# INVESTING FOR FIREFIGHTERS AND THEIR FAMILIES®

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## BOARD OF TRUSTEES

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City Treasurer Designee

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Mayor's Representative

**Albertino "Al" Mays**  
Citizen Member



# LETTER OF TRANSMITTAL

December 9, 2024

City Treasurer Designee  
City of Houston  
P.O. Box 1562  
Houston, Texas 77251-1562

## DEAR CITY TREASURER:

The Annual Comprehensive Financial Report (ACFR) of the Houston Firefighters' Relief and Retirement Fund (the Fund), an independently governed component of the City of Houston, for the fiscal year ended June 30, 2024, is submitted herewith.

The Houston Firefighters' Relief and Retirement Fund was created in 1937 with the passage of a state law that provided benefits for firefighters in certain cities in Texas. In 1975, Article 6243e.2 was passed in the Texas legislature to create a fund for firefighters in cities with a population not less than 1.2 million. This statute was amended in 1997 into Article 6243e.2(1). Effective July 1, 2017, the Fund's statute (Vernon's Civil Statutes, Title 109, section 6243e.2(1)) was revised.

Article 6243e.2(1) states that a fund shall be created to provide retirement, disability, and death benefits for firefighters and their beneficiaries, and that it shall be governed by a Board of Trustees, which has sole responsibility for its maintenance. In earlier years, the City of Houston provided staff and financing for the daily administration of the Fund. Effective July 1, 1988, the Board of Trustees assumed full responsibility for its administration. Administration of the Fund includes accurately computing and disbursing retirement benefits, receiving and depositing contributions in a timely manner, accounting for investment activity, monitoring the activity of all external investment managers, auditing all financial activities of the Fund on an ongoing basis, and meeting reporting requirements in a timely manner.

Responsibility for the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with the Board of Trustees. To the best of the Board's knowledge and belief, the enclosed information is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of Fund operations. All disclosures necessary to enable the reader to gain an understanding of the financial activities of the Fund have been included.



## THE HOUSTON FIREFIGHTERS' RELIEF AND RETIREMENT FUND

Established in 1937 by state statute, the Fund is the retirement system for Houston's firefighters. Day-to-day operations were largely performed by City of Houston employees until 1988, when the Board of Trustees started hiring its own staff and exerting more autonomy as permitted by statute. The pension fund is a defined benefit plan and is funded through a combination of employee and employer contributions and investment earnings. The Fund's membership consists of more than 7,400 active and retired firefighters and survivors of firefighters. Firefighters do not participate in the U.S. Social Security system.

State law gives the Board of Trustees responsibility for conducting all Fund business. The 10-member board consists of five active firefighters, one retired firefighter (elected by other retirees), the City Treasurer or individual performing those functions, the Mayor or an appointed representative of the Mayor and two citizen members elected by the firefighter trustees.

For the 41st year in a row, our Finance and Operations team has received the Government Finance Officers Association (GFOA) Certificate of Achievement for Excellence in Financial Reporting.

The Board of Trustees is proud to present to you the Annual Comprehensive Financial Report for the fiscal years ended June 30, 2024 and June 30, 2023.

## ADMINISTRATION, STAFF AND PROFESSIONAL SERVICES

At fiscal year-end, the Fund staff was made up of 25 full-time and 3 part-time employee. The following professional organizations were employed by the Board of Trustees fiscal year ended June 30, 2024, to provide specialty services:

- Bank of New York (formerly known as Bank of New York Mellon) is the custodian bank.
- Weaver serves as the auditor.
- Gallagher (formerly known as Buck Global, LLC) is the actuary.

Most of the professional consultants appointed by the Board are listed on page 9 of this report. Other professionals employed by the Board are listed on page 57.

## ACCOUNTING SYSTEMS AND REPORTS

As plan administrator of the Fund, the Board of Trustees maintains the following various internal controls to ensure material accuracy of all data:

- Bi-weekly control reports are generated by the Fund staff to ensure the accuracy of employee and employer contributions received from the City of Houston. Monthly reconciliations are performed on benefit payment information to confirm payment instructions to the custodian bank.
- Monthly reviews are performed on all investment transactions to ensure that dividends and interest on the investments of the Fund are properly credited, all assets are accounted for properly, all market valuations are appropriate, and each investment manager is in compliance with established guidelines.
- The checking account of the Fund, from which administrative payments are made, is reconciled monthly by the staff, and wire transfers from the custodian bank are reconciled monthly to the in-house cash account.
- The Budget and Audit Committee of the Board of Trustees, which sets general parameters for spending, meets at least quarterly to review administrative expenditures.
- The Personnel and Procedures Committee, a committee of the whole, formulates and reviews administrative procedures of the Fund.

The financial statements included in this report, along with all the information provided, are the responsibility of the management of the Fund. This system includes the appropriate segregation of duties and responsibilities, sound practices in the performance of those duties, capable personnel, and the organizational structure itself. The Fund believes that the internal controls in effect adequately safeguarded assets and provided reasonable, rather than absolute, assurance that the financials are free of any material misstatements. The concept of reasonable assurance recognizes that: (1) the cost of a control should not exceed the benefits likely to be derived; and (2) the evaluation of costs and benefits requires estimates and judgments by management.

The financial statements have been prepared in accordance with generally accepted accounting principles (GAAP) and the principles of governmental accounting and reporting pronounced by the Governmental Accounting Standards Board (GASB). The accrual basis of accounting is used to record assets, liabilities, revenues and expenses.

Revenues for the Fund are taken into account when earned without regard to date of collection. Expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made. For an overview of the financial position of the Fund, please refer to the Management's Discussion and Analysis in the Financial section.

Employee contributions remained stable between fiscal years 2023 and 2024 at 10.5% of pensionable pay. The City

is required to contribute at a rate that has been agreed upon based on the Fund’s statute (Vernon’s Civil Statutes, Title 109, section 6243e.2(1)). The City contribution rate remained the same between fiscal years 2023 and 2024 at 26.89% of pensionable pay.

## INVESTMENTS

The Board of Trustees created the Investment Committee to oversee the investment portfolio. With guidance and advice from the Fund’s professional staff, the Investment Committee determines policy, strategy, and monitors the performance of the Fund.

Key components of the investment program that enable the Fund to achieve its target return are a diversified investment portfolio, a long-term outlook, and prudent risk-taking commensurate with fulfilling the return target of the program. The Fund’s assets are invested in short-term instruments (cash and cash equivalents), fixed income securities, domestic and international equity securities, private equity, private debt, real estate, digital assets, and hedge funds. By investing in different types of assets, the impact that a downturn in one asset class would have on the Fund is minimized and the probability that the Fund will earn an adequate rate of return is improved. The Board maintains an investment outlook that emphasizes stability and long-term planning – because payments to participants and beneficiaries are long-term in nature – and avoids drastic asset shifts and market timing decisions.

Additional information regarding the investment results for the year is included in the Investment Information section of this report.

## FINANCIAL HIGHLIGHTS

Additions to assets received by the Fund are used to fund current and future benefits for members and their beneficiaries. The primary sources of additions are contributions from active members, the City of Houston and investment income. Deductions from assets consist of benefits paid to retired members and their beneficiaries, fees for professional services, and operations costs.

The following table summarizes additions and deductions to plan net position for fiscal years 2024, 2023, and 2022.

	2024 (MILLIONS)	2023 (MILLIONS)	2022 (MILLIONS)
<b>Beginning net position</b>	\$5,109	\$5,094	\$5,257
<b>Additions</b>	581	304	113
<b>Deductions</b>	(311)	(289)	(276)
<b>Net Change</b>	270	15	(163)
<b>Ending net position</b>	<b>\$5,379</b>	<b>\$5,109</b>	<b>\$5,094</b>

## FUNDING STATUS

The funding objective of the Fund is to establish contributions which, when combined with present assets and future investment returns, will be sufficient to meet the financial obligations to present and future retirees and beneficiaries.

Effective July 1, 2017, the Fund’s statute (Vernon’s Civil Statutes, Title 109, section 6243e.2(1)) requires the Fund and the City of Houston to independently conduct annual Risk Sharing Valuation Studies (RSVS). It should be noted for any Fund RSVS, the Actuarial Value of Assets is based on the difference between the actual rate of return and a legislatively mandated 7% assumed rate of return recognized incrementally over five years.

The RSVS process is used to determine the City of Houston’s Contribution rate to the Fund. The RSVS’s must include some assumptions specified in the Fund’s statute. If the difference between the City and the Fund’s employer contribution rate falls at or below 2%, the Fund’s RSVS will be used to determine the employer contribution rate for the fiscal year. If the difference is greater than 2%, the Fund’s and the municipality’s actuaries must reconcile the rates until the difference falls within 2%. If it cannot be reconciled, the arithmetic average will be used.

In accordance with the Fund’s governing statute, the City’s calculated contributions for the fiscal year ending June 30, 2023 is 26.89%. This rate was based on the fact that the City’s estimated municipal contribution rate and the Fund’s RSVS contribution rate fell within 2% points; therefore, the Fund’s RSVS is considered to be the final RSVS. However, since the estimated municipal contribution rate for fiscal year 2024 was less than the initial RSVS’ minimum contribution rate of 26.89%, the City’s calculated contribution was set at the minimum. The July 1, 2023 RSVS results indicate the Fund has a funding ratio of 96.0%.

Additionally, the Fund wishes, subject to the legislative regime, to establish contributions that are an approximate level percentage of payroll for each generation of active members. The effective members’ contribution rate remained stable at 10.5% between fiscal year 2023 and 2024. Actuarial valuations and the RSVS can measure the progress toward such goals, as well as help test the adequacy of the contribution rate.



## INDEPENDENT AUDIT

An audit was performed by Weaver for the fiscal year ending June 30, 2024, and was conducted in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. The Independent Auditors' Report is included in the financial section of this ACFR on page 12. The financial section also contains a management discussion and analysis report that provides a narrative introduction, overview and analysis of the financial statements which reflect Fund resources available for payment of benefits and other expenses.

## CERTIFICATE OF ACHIEVEMENT

The Government Finance Officers Association (GFOA) of the United States and Canada awarded a Certificate of Achievement for Excellence in Financial Reporting to the Houston Firefighters' Relief and Retirement Fund, Houston, Texas, for its annual comprehensive financial report for the fiscal year ended June 30, 2023. This was the 41st year that the Fund has received this prestigious award. In order to be awarded a Certificate of Achievement, a governmental unit must publish an easily readable and efficiently organized annual comprehensive financial report. This report must satisfy both GAAP and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current annual comprehensive financial report continues to meet the Certificate of Achievement Program's requirements, and we are submitting it to the GFOA to determine its eligibility for another certificate.

## ACKNOWLEDGMENTS

The compilation of this report reflects the combined effort of the Houston Firefighters' Relief and Retirement Fund staff under the leadership of the Board of Trustees. It is intended to provide complete and reliable information as a basis for making management decisions, as a means of determining compliance with legal provisions, and as a means of determining responsible stewardship for the assets contributed by the employee members and the City of Houston.

On behalf of the Board of Trustees, we would like to take this opportunity to express our appreciation to staff members and the many other professionals and participants who have worked so diligently to assure the successful operation of the Fund.

Sincerely,

Brett Robert Besselman,  
Chairman

Timothy Schauer,  
Executive Director

# ADMINISTRATIVE ORGANIZATION

---

## EXECUTIVE DIRECTOR

Timothy Schauer

## CHIEF INVESTMENT OFFICER

Ajit Singh, FRM, CAIA

## ACTUARY

Gallagher  
(formerly known as Buck Global, LLC)

## AUDITOR

Weaver

## FUND'S CUSTODIAN BANK

Bank of New York  
(formerly known as Bank of New York Mellon)

## COMMITTEES

Pension Benefits  
Investment  
Budget and Audit  
Personnel and Procedures  
Legislative  
Memorial

# INVESTMENT ADVISORS

---

1. Advent Global Opportunities Management LLC
2. Advent International Corporation
3. AeroEquity GP LLC
4. AEW Capital Management LP
5. Apax X GP Co. Limited
6. ARCIS Group, The
7. Ares Management Limited
8. Atalaya Capital Management
9. Bertram Capital
10. BlackRock Inc.
11. Blackstone Credit BDC Advisors LLC
12. Blackstone Group, The
13. Bridgepoint Credit Services S.à.r.l.
14. Bridgewater Associates LP
15. Brookfield Asset Mgmt Private Inst Cap Adv US LLC
16. Cabot Properties LP
17. CBF Manager LP
18. Clearlake Capital
19. Collier Investment Management Limited
20. Delta-v Capital LLC
21. Drum Capital Management LLC
22. Energy Spectrum Capital
23. Energy Trust LLC
24. EQT Fund Management S.à r.l.
25. Exeter Property Group
26. Glouston Capital Management
27. Grosvenor Capital Management LP
28. Harbert Management Corp
29. Harbourvest Partners LLC
30. Hellman & Friedman LLC
31. Horsley Bridge Partners, LLC
32. Insignia Capital Partners GP LLC
33. Kildare Partners
34. KKR Credit Advisors (US) LLC
35. KSL Capital Partners
36. Leonard Green & Partners LP
37. Lexington Partners
38. LightBay Investment Partners UGP LLC
39. Lightspeed Management Company LLC
40. Lone Star Funds
41. Mellon Investments Corporation
42. Metropolitan Real Estate Management
43. Newton Investment Management North America LLC
44. Nordic Capital DPM LP
45. Northlane Capital Partners LLC
46. Phoenix Asia VI Limited
47. Portfolio Advisors LLC
48. Rialto Capital
49. Schroders Investment Management North America
50. Shenkman Capital
51. State Street Global Advisors
52. Stellex Management Partners LLC
53. StepStone Group LP
54. Sterling Organization, The
55. Thoma Bravo Discover Partners LLC
56. Timberland Investment Resources
57. Torchlight Investors LLC
58. TPG Holdings LP
59. StepStone Group LP

## NON-DISCRETIONARY CONSULTANTS

59. StepStone Group LP

For more information, refer to the schedule of Fees for Investment Services (page 65) and the schedule of Brokerage Commissions (page 66).

# FINANCIAL STATEMENT PREPARATION

## AN OVERVIEW OF FINANCIAL STATEMENT PREPARATION

At the end of each fiscal year, the Board and staff members prepare financial statements showing the financial activity of the Fund. The financial statements include the statements of fiduciary net position and changes in fiduciary net position for the years presented. The notes are essential to the completeness of the information in the financial statements.

After the financial statements are prepared, an independent outside auditor hired by the Board reviews the systems and methods used to arrive at the information in the financial statements. A financial audit is then performed to determine if the financial statements are free of material misstatement. The audit includes examination, on a test basis, of evidence supporting the amounts and disclosures in the financial statements.

The audit is conducted in accordance with generally accepted auditing standards and government auditing standards. If the auditor finds the financial statements free of material misstatement, the auditor issues an opinion such as that found on page 12, stating that the statements fairly present the financial position of the Fund in accordance with GAAP – generally accepted accounting principles.

Some of the terms used in this section are defined in the Glossary section of this report.

## STATEMENTS OF FIDUCIARY NET POSITION

The statements of fiduciary net position are statements of the financial condition of the Fund that show snapshots of Fund assets and liabilities at a specific point in time. In this case, it is the end of the fiscal year on June 30, 2024 and 2023.

The statements show assets, liabilities and the remaining Fund balance. An asset is anything having commercial, economic or exchange value. Assets include cash, receivables (interest and dividends earned by the investments of the Fund and employee member and employer contributions), investments, collateral on securities lending arrangements, and land.

Fund liabilities include money reserved for members who are entitled to benefits and obligations for professional services the Fund has used – but for which payment has not been made.

## STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

The statements of changes in fiduciary net position show the financial impact on the Fund of operations and investments

during a period of time. In this case, it is the years ended June 30, 2024 and 2023. Additions to plan net position represent cash that came into, or is expected to come into, the Fund from events that take place during a fiscal year.

Additions include employee contributions, employer contributions and investment income. Investment gains are included because the increase (or decrease) in fair value of investments is shown as revenue since the investments are reported at fair value.

Deductions from plan net position represent the money that the Fund paid out or expects to pay out from events that take place during a fiscal year. Deductions include benefit payments to retirees and beneficiaries, refunds of contributions to firefighters who leave the Houston Fire Department, and professional and administrative expenses.

This statement provides useful information about what happened during a single year. Retirement funds, however, operate with a long-term strategy (see “An Overview on the Actuarial Valuation” in the Actuarial section of this report).

Changes in plan net position at the end of the statement show the previous year’s balance, plus revenues after expenses, to total the plan net position held in trust for pension benefits at fiscal year-end.

## NOTES TO FINANCIAL STATEMENTS

The notes are an integral part of the financial statements. The notes include any information that might be needed to have an adequate understanding of the overall financial status of the Fund.

In this report, the notes include explanations of the payment and refund features of the governing statute of the Fund, the accounting methods used by the Fund, the funding methods used, the methods and assumptions the actuary uses to determine contribution requirements, and any significant changes that take place after fiscal year-end.

## SUPPLEMENTARY INFORMATION

The supplementary 10-year trend information provides additional historical perspective. These charts show the progress toward reaching the goal of being totally funded, as well as sources of revenues and types of expenses of the Fund during the fiscal year. Other supplementary information provides additional details for analysis.



2

SECTION 02

***FINANCIAL  
INFORMATION***

## INDEPENDENT AUDITOR'S REPORT

To the Board of Trustees of the  
Houston Firefighters' Relief and Retirement Fund

### REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

#### OPINION

We have audited the financial statements of the Houston Firefighters' Relief and Retirement Fund (the Fund), as of and for the year ended June 30, 2024, and the related notes to the financial statements, which collectively comprise the Fund's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Fund as of June 30, 2024, and the changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

#### BASIS FOR OPINION

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards (Government Auditing Standards)*, issued by the Comptroller General of the United States. 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.

### EMPHASIS OF MATTER

#### 2023 FINANCIAL STATEMENTS

The financial statements of the Fund for the year ended June 30, 2023 were audited by another auditor whose report dated October 17, 2023, expressed an unmodified opinion on those statements. We were not engaged to audit, review or apply any procedures to the 2023 financial statements of the Fund and, accordingly, we do not express an opinion or any other form of assurance on the 2023 financial statements as a whole.

#### RESPONSIBILITIES OF MANAGEMENT FOR THE FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for 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 may raise substantial doubt shortly thereafter.

Weaver and Tidwell, L.L.P.  
2300 North Field Street, Suite 1000 | Dallas, Texas 75201  
Main: 972.490.1970

**CPAs AND ADVISORS | WEAVER.CO**

## **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 opinion. 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 GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, 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 an audit in accordance with GAAS and *Government 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 on 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 we 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, schedule of changes in the Fund's net pension liability and related ratios, schedule of employer contributions, and schedule of investment returns, as listed in the table of contents, be presented to supplement the basic financial statements. Such information is the responsibility of management and, 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 GAAS and *Government Auditing Standards*, 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.

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## **SUPPLEMENTARY INFORMATION**

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Fund's basic financial statements. The schedule of administrative expenses, schedule investment services, professional services and administrative expenses, summary of investment services, and summary of professional services are presented for purposes of additional analysis and are not a required part of the basic financial statements.

Such information is the responsibility of management and were derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with GAAS and *Government Auditing Standards*. In our opinion, the schedule of administrative expenses, schedule investment services, professional services and administrative expenses, summary of investment services, and summary of professional services are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

## **OTHER INFORMATION INCLUDED IN THE ANNUAL COMPREHENSIVE FINANCIAL REPORT (ACFR)**

Management is responsible for the other information included in the ACFR. The other information comprises the introductory section, investment section, actuarial section, statistical section, and glossary but does not include the financial statements and our auditor's report thereon. Our opinions on the basic financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon. In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

## **OTHER REPORTING REQUIRED BY GOVERNMENT AUDITING STANDARDS**

In accordance with *Government Auditing Standards*, we have also issued our report dated October 15, 2024 on our consideration of the Fund's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Fund's internal control over financial reporting and compliance.

*Weaver and Tidwell, L.L.P.*

### **WEAVER AND TIDWELL, L.L.P.**

Dallas, Texas  
October 15, 2024

Weaver and Tidwell, L.L.P.  
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Main: 972.490.1970

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# MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

Management is pleased to present a discussion and analysis of the Houston Firefighters' Relief and Retirement Fund (the Fund) financial activity for the fiscal years ended June 30, 2024, 2023 and 2022. This discussion is intended to serve as an introduction to the Fund's basic financial statements which reflect Fund resources available for payment of benefits and other expenses. The basic financial statements consist of:

**The Statements of Fiduciary Net Position** which reflect a snapshot of the Fund's financial position and reflect resources available for the payment of benefits and other expenses at fiscal year-end. The statements show the Fund's assets, liabilities, and fiduciary net position available at the end of the fiscal year (Assets - Liabilities = Net Position).

**The Statements of Changes in Fiduciary Net Position** which reflect the results of all transactions that occurred during the fiscal year and show the fiscal year-end additions to and deductions from the Fund (Additions - Deductions = Net Change in Net Position). Essentially, this statement shows what has happened to the Fund assets during the fiscal year. If change in net position increased, then additions were more than the deductions. If change in net position decreased, then additions to the Fund were less than the deductions from the Fund.

**Notes to the Basic Financial Statements** which are an integral part of the basic financial statements and include additional information that might be needed to have an adequate understanding of the overall financial status of the Fund.

**Required Supplementary Information (Unaudited) and Additional Supplementary Information** follows the Notes to the Basic Financial Statements and provides historical and additional information considered useful in reviewing the basic financial statements.

## FINANCIAL HIGHLIGHTS

<b>SUMMARY COMPARATIVE STATEMENTS OF FIDUCIARY NET POSITION</b>			
	Fiscal Year 2024	Fiscal Year 2023	Fiscal Year 2022
<b>ASSETS</b>			
<b>Investments</b>	\$ 5,274,135,970	\$ 4,984,632,399	\$ 4,907,583,097
<b>Capital assets (net of depreciation):</b>			
<b>Land and building</b>	4,275,528	3,295,888	3,592,645
<b>Furniture, fixtures and equipment</b>	167,825	124,931	118,771
<b>Other</b>	115,660,401	159,389,223	228,988,782
<b>Total assets</b>	5,394,239,724	5,147,442,441	5,140,283,295
<b>LIABILITIES</b>			
<b>Short-term liabilities</b>	15,510,261	38,264,311	46,546,836
<b>Total liabilities</b>	15,510,261	38,264,311	46,546,836
<b>Net Position</b>	\$ 5,378,729,463	\$ 5,109,178,130	\$ 5,093,736,459

# MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) CONTINUED

Fiduciary net position at the end of fiscal year 2024, 2023, and 2022 totaled \$5,378,729,463, \$5,109,178,130, and \$5,093,736,459 respectively. The increase in fiduciary net position of \$269,551,333 for fiscal year 2024 is primarily due to an appreciation in the fair value of investments and income exceeding total net deductions, inclusive of \$110,105,076 in plan contributions.

## SUMMARY COMPARATIVE STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

	Fiscal Year 2024	Fiscal Year 2023	Fiscal Year 2022
<b>Beginning net position</b>	\$ 5,109,178,130	\$ 5,093,736,459	\$ 5,256,762,808
<b>ADDITIONS TO NET POSITION, NET:</b>			
<b>Contributions</b>	110,105,076	104,447,741	112,293,064
<b>Net appreciation in fair value of investments</b>	442,138,455	181,587,858	1,146,381
<b>Interest income</b>	31,521,063	24,167,468	5,585,459
<b>Dividends</b>	1,786,056	1,543,706	1,214,454
<b>Net activity from securities lending</b>	90,237	114,554	202,157
<b>Earnings from private equity, private debt and real estate investments</b>	1,723,068	1,079,700	414,592
<b>Other income</b>	270,054	231,494	100,317
<b>Less: cost of investment services</b>	(6,768,710)	(9,054,871)	(8,140,843)
<b>Net investment and other income</b>	470,760,223	199,669,909	522,517
<b>Total additions to net position, net</b>	580,865,299	304,117,650	112,815,581
<b>DEDUCTIONS FROM NET POSITION:</b>			
<b>Benefits</b>	304,279,365	281,417,678	268,370,833
<b>Contribution Refunds to Members</b>	1,574,693	1,677,318	2,227,893
<b>Professional/Administrative Expenses</b>	5,459,908	5,580,983	5,243,204
<b>Total deductions from net position</b>	311,313,966	288,675,979	275,841,930
<b>Change in net position</b>	269,551,333	15,441,671	(163,026,349)
<b>Ending net position</b>	\$ 5,378,729,463	\$ 5,109,178,130	\$ 5,093,736,459

## ADDITIONS

### CONTRIBUTIONS

The funds needed to finance retirement benefits are accumulated through the collection of employee and employer contributions and through income from investments. These are offset by deductions from net assets. The amounts contributed by employee members for the last three fiscal years were \$33,754,435 (fiscal year 2024), \$31,972,752 (fiscal year 2023), and \$30,941,552 (fiscal year 2022). Employer contributions for the last three years were \$76,350,641 (fiscal year 2024), \$72,474,989 (fiscal year 2023), and \$81,351,512 (fiscal year 2022).

# MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) CONTINUED

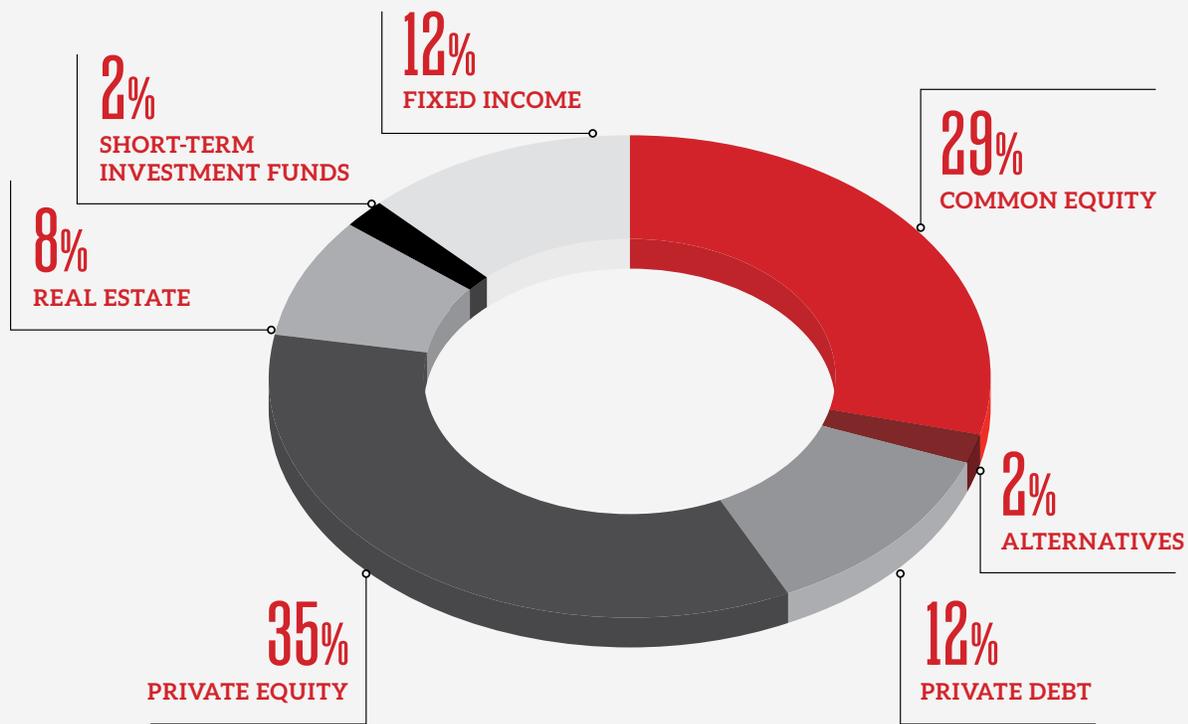
Employer contributions increased between fiscal year 2024 and 2023 mainly due to an increase in covered payroll. The decrease in employer contributions between fiscal year 2023 and 2022 was due to a statutory decrease in the City of Houston contribution rate of 26.89% in fiscal year 2023 from 31.89% in fiscal year 2022. The employee's contributions consist of both the statutory contributions plus unused leave pay (mustering out pay) that is placed in the member's active DROP account. The increase in the employee contributions between fiscal year 2024, 2023 and 2022 is primarily due to an increase in covered payroll.

## NET INVESTMENT AND OTHER INCOME

In Fiscal Year 2024, the Fund's investment portfolio produced a total return of 9.58% gross (9.5% net). The best performing asset classes were domestic equity (23.01%) and hedge funds (18.27%). Private debt, international equity, fixed income, private equity, and real estate returned 13.12%, 11.04%, 10.23%, 4.3%, and -2.8% respectively. In addition, the cash equivalents portfolio returned 4.54%.

At June 30, 2024, short-term investment funds represented 2% of the portfolio, fixed income securities represented 12%, domestic and international common equities represented 29%, alternatives represented 2%, the private debt portfolio represented 12%, the private equity portfolio represented 35%, and the real estate portfolio represented 8%.

## FUND ASSET ALLOCATION AS OF JUNE 30, 2024



# MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) CONTINUED

## DEDUCTIONS

Most deductions from fiduciary net assets in a retirement fund relate to the purpose for which it has been created: the payment of benefits. Consequently, recurring benefit payments prescribed by the Fund, lump sum benefits, refunds of contributions to members, and the cost of administering the Fund comprise the total deductions.

Deductions for fiscal years 2024, 2023, and 2022 totaled \$311,313,966, \$288,675,979, and \$275,841,930 respectively.

This represents a net increase of approximately 7.84% and 4.7% between fiscal years 2024 and 2023 and fiscal years 2023 and 2022 respectively and a decrease of approximately 5.50% between fiscal years 2022 and 2021.

## BENEFITS PAID TO MEMBERS

The increase of 8.1% between fiscal years 2024 and 2023 is mainly due to recent retirements, large number of actives terminating and taking a refund of contributions and the COLA increase of 4%. The increase of 4.86% between fiscal years 2023 (compared to fiscal year 2022) is mainly due to Cost of Living Adjustment (COLA) and an increase in DROP and PROP disbursements.

## PROFESSIONAL AND ADMINISTRATIVE EXPENSES

Professional and administrative deductions decreased between fiscal years 2024 and 2023 by 2.17% and increased between fiscal years 2023 and 2022 by 6.44%. The decrease in fiscal year 2024 was mostly due to drop in the cost of various government relations contracts. The increase in fiscal year 2023 was due to an increase in depreciation and staff census/salaries.

## NET POSITIONS

Total additions to net assets for fiscal year 2024 were \$580,865,299 and total deductions were \$311,313,966 thereby increasing the Fund's net position by \$269,551,333. Total additions to net position for fiscal year 2023 were \$304,117,650 and total deductions were \$288,675,979 thereby increasing the Fund's net position by \$15,441,671.

## ACTUARY VALUATION INFORMATION

The Fund, by statute, may adopt an actuarial valuation once every three years. The Texas Pension Review Board (PRB) has determined that since 2017, the annual statutory Risk Sharing Valuation Study (RSVS) satisfies the actuarial valuation statutory requirement. By statute and recently adopted board policy, the fund calculates the Actuarial Value of Assets based on 7% assumed rate of return.

GASB 67 requires a disclosure of the Net Pension Liability (NPL). The NPL is the difference between the Total Pension Liability (TPL) and the fair value of assets. GASB 67 requires the determination for the TPL using the individual entry age method, level percent of pay actuarial cost method and a discounted rate.

Information about whether the fiduciary's net positions are increasing or decreasing over time relative to the total pension liability is provided in the Schedule of Changes in the Fund's Net Pension Liability and Related Ratios - Unaudited (on page 46).

Annual required contributions of the employer and contributions made by the employer in relation to the determined contributions actuarial valuation are provided in the Schedule of Employer Contributions - Unaudited (on page 47). Effective July 1, 2017, the Fund's statute requires the Fund and the City of Houston to independently conduct annual RSVS. The RSVS is now a component used to determine the City of Houston's Contribution rate to the Fund.

## CONTACTING THE FUND'S FINANCIAL MANAGEMENT

This financial report is designed to provide our members, business partners, and taxpayers with a general overview of the Fund's financial activities. If you have questions about this report or need additional information, contact the Executive Director of the Houston Firefighters' Relief and Retirement Fund at 4225 Interwood North Parkway, Houston, Texas 77032.

# BASIC FINANCIAL STATEMENTS

## STATEMENTS OF FIDUCIARY NET POSITION (JUNE 30, 2024 AND JUNE 30, 2023)

Assets	2024	2023
<b>INVESTMENTS, AT FAIR VALUE:</b>		
Short-term investment funds	\$ 102,667,897	\$ 61,183,328
<b>Fixed income:</b>		
Domestic	290,754,759	480,073,520
International	337,841,472	390,989,387
<b>Common equity:</b>		
Domestic	974,631,296	785,598,176
International	543,347,225	613,806,426
Hedge funds	121,141,640	140,860,350
Private debt	609,168,316	431,753,707
Private equity	1,871,546,201	1,684,213,850
Real estate	423,037,164	396,153,655
<b>Total investments</b>	<b>5,274,135,970</b>	<b>\$ 4,984,632,399</b>
Cash and cash equivalents	43,736,766	\$ 114,070,209
<b>RECEIVABLES:</b>		
Accrued interest	5,337,617	7,127,454
Due from securities lending	3,867	4,437
Receivables for investments sold	50,434,741	977,402
Accrued dividends	7,628	7,765
City of Houston contributions	2,995,368	2,808,300
Member contributions	1,462,986	1,096,507
Other	145,113	96,034
<b>Total receivables</b>	<b>\$ 60,387,320</b>	<b>\$ 12,117,899</b>
Collateral on securities lending arrangements, at fair value	10,958,601	32,693,080
Land	483,325	483,325
Building, net	3,792,203	2,812,563
Furniture, fixtures and equipment, net	167,825	124,931
Prepays	577,714	508,035
<b>Total assets</b>	<b>\$ 5,394,239,724</b>	<b>\$ 5,147,442,441</b>
<b>LIABILITIES</b>		
Accounts payable and accrued expenses	3,519,711	3,911,269
Payables for investments purchased	1,031,949	1,644,914
Interest payable	0	15,048
Collateral on securities lending arrangements, at fair value	10,958,601	32,693,080
<b>Total liabilities</b>	<b>\$ 15,510,261</b>	<b>\$ 38,264,311</b>
<b>NET POSITIONS</b>		
Plan net position restricted for pensions	5,378,729,463	5,109,178,130

See accompanying notes to basic financial statements.

# BASIC FINANCIAL STATEMENTS CONTINUED

## STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION (FOR FISCAL YEARS ENDED JUNE 30, 2024 AND JUNE 30, 2023)

	2024	2023
<b>ADDITIONS (REDUCTIONS) TO PLAN NET POSITION NET:</b>		
<b>Contributions:</b>		
City of Houston	76,350,641	72,474,989
Members	33,754,435	31,972,752
<b>Total contributions</b>	<b>\$ 110,105,076</b>	<b>\$ 104,447,741</b>
<b>NET INVESTMENT INCOME:</b>		
Net appreciation in fair value of investments	\$ 442,138,455	\$ 181,587,858
Interest	31,521,063	24,167,468
Dividends	1,786,056	1,543,706
Earnings from private equity	1,050,836	661,037
Earnings from real estate	21,302	40,679
Earnings from private debt	650,930	377,984
Other	270,054	231,494
<b>Securities lending arrangements:</b>		
Earnings	1,063,281	831,675
Rebates and fees	(973,044)	(717,121)
<b>Total securities lending arrangements</b>	<b>\$ 90,237</b>	<b>\$ 114,554</b>
Gross investment income	\$ 477,528,933	\$ 208,724,780
Less: investment services expense	(6,768,710)	(9,054,871)
Net investment income	470,760,223	199,669,909
<b>Total additions to plan net position, net</b>	<b>\$ 580,865,299</b>	<b>\$ 304,117,650</b>
<b>DEDUCTIONS FROM PLAN NET POSITION:</b>		
Benefits paid to members	\$ 304,279,365	\$ 281,417,678
Contribution refunds to members	1,574,693	1,677,318
Professional services	866,402	1,098,575
Administrative expenses	4,593,506	4,482,408
<b>Total deductions from plan net position:</b>	<b>\$ 311,313,966</b>	<b>\$ 288,675,979</b>
Net increase (decrease) in plan net position	\$ 269,551,333	\$ 15,441,671
Plan net position beginning of year	5,109,178,130	5,093,736,459
<b>Plan net position end of year</b>	<b>\$ 5,378,729,463</b>	<b>\$ 5,109,178,130</b>

See accompanying notes to basic financial statements.

# NOTES TO BASIC FINANCIAL STATEMENTS

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

## 1. DESCRIPTION OF FUND

### GENERAL

The Houston Firefighters' Relief and Retirement Fund (the Fund) was created in 1937 by act of the 45th Legislature of the State of Texas (Article 6243e). The current governing statute is Article 6243e.2(1), Vernon's Texas Civil Statutes (the Act). The Fund is a single employer defined benefit pension plan covering all firefighters employed full time by the City of Houston (the City) and provides for service, disability, deferred and death benefits for eligible members and their survivors. At June 30, 2024 and 2023, the membership of the Fund consisted of the following:

	2024	2023
<b>Retirees and beneficiaries currently receiving benefits</b>	3,758	3,709
<b>Former members entitled to benefits but not yet receiving them</b>	29	26
<b>ACTIVE MEMBERS:</b>		
<b>Vested</b>	2,455	2,445
<b>Nonvested</b>	1,191	1,231
<b>Total members</b>	<b>7,433</b>	<b>7,411</b>

The Fund is a local governmental plan and, therefore, is not subject to the Employee Retirement Income Security Act of 1974.

The Fund is a component unit of the City. The operation of the Fund is solely for the City of Houston firefighters. The Fund is governed by a Board of Trustees (the Board) and can only be terminated or amended by an act of the Legislature of the State of Texas. One member of the Board is either the City mayor or an appointed representative, five members are elected by active firefighters, one member is elected by retired firefighters, two members are citizen representatives, and one member is the City treasurer designee.

The following description of the Fund provides only general information. Members should refer to the Summary Plan Description for a more complete description of the Fund's provisions.

### CONTRIBUTIONS

Active members are required to contribute to the Fund a certain percentage of qualifying salary. The City is required to contribute at a rate that has been agreed upon based on the Fund's governing statute.

For fiscal years 2024 and 2023, the active members' contribution rate was 10.50% and the City's contribution rate was 26.89%. The Fund's contributions are reduced by the contributions to the Houston Firefighters' Relief and Retirement Fund Section 415(m) Replacement Benefit Plan, if any.

### PENSION BENEFITS

All members who retired prior to November 1, 1997 should consult the Act in effect at the time of retirement to determine pension benefits.

Members with 20 or more years of service retiring on or after November 1, 1997, are entitled to a service retirement of 50% of average monthly salary (defined as the monthly average of their highest individual 78 pay periods), plus 3% of average monthly salary for each year of service in excess of 20 years until the member completes 30 years of service, for a total monthly pension not to exceed 80% of the member's average monthly salary for the highest 78 pay periods of the member's participation.

Effective July 1, 2017 modifications to the average monthly salary computation are as follows: For pre-July 1, 2017 members, highest 78 pay periods are used to determine the benefit on retirement. Applicable pay periods considered prior to July 1, 2017 include overtime (OT), while applicable pay periods considered after July 1, 2017 exclude OT and applicable pay periods are capped at highest tested ranks salary. For post July 1, 2017 members, last 78 pay periods (OT excluded) and applicable pay periods are capped at highest tested ranks salary.

For members after July 1, 2017 the rule of 70 applies. For example, a member who has 20 years of service must be 50 years of age to retire since 50 (years of age) plus 20 (years of service) equal 70. Effective July 1, 2017 the member contribution rate increased from 9% to 10.50%. Modifications to accrual rates effective July 1, 2017 are as follows: (1) for pre-July 1, 2017 members, service years 1-20 before July 1, 2017: 2.5% per year; (2) for pre-July 1, 2017 members, service years after 20th year before July 1, 2017: 3% per year; (3) for

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

pre-July 1, 2017 members, service years 1-20 after July 1, 2017: 2.75% per year; (4) for pre-July 1, 2017 members, service years after 20th year after July 1, 2017: 2.00% per year; (5) for post July 1, 2017 members service years 1-20: 2.25%; (6) for post July 1, 2017 members, service years after 20th year: 2.00% per year (7) capped at 80% for future members only, there is no benefit percentage cap for members pre-July 1, 2017.

Prior to July 1, 2017, pension payments were adjusted annually for a fixed annual cost-of-living adjustment (COLA) of 3% for eligible benefit recipients (age 48 and over) and members on a general on-duty disability, regardless of age. COLA benefits were suspended for FY18-FY20 for all members except for members age 70+ and those on a general disability pension, regardless of age. Those members are entitled to receive a COLA equal to the 5-year average of the Fund's smoothed investment return minus 5% for FY18 and FY19 and are entitled to receive a COLA equal to the 5-year average of the Funds' smoothed investment return minus 4.75% for FY20 and later fiscal years. Effective FY21 and beyond, retirees 55 years or older are entitled to a COLA equal to the most recent 5-year smoothed investment return minus 4.75%. After July 1, 2017, all COLAs have a floor of 0% and a max of 4% and birthday COLAs are no longer granted. Active Deferred Retirement Option Plan (DROP) participants are not eligible for a COLA.

Active members with 20 or more years of service and hired prior to July 1, 2017, are eligible to elect to establish a notional DROP account. When the DROP election becomes effective, a notional DROP account is established for the member and is credited with the following amounts: the monthly pension allowance determined as if the member had left active service on the DROP effective date; amounts equal to the deductions made from the DROP participant's (or member's) salary under Section 13(c) of the Act (9% of the member's salary after June 30, 2004); and earnings on those amounts, compounded monthly at a rate based on the Fund's actual average rate of return over the preceding five years. A member may participate in the DROP for a maximum of ten years (see subsequent changes to maximum allowable DROP participation below). The participant's monthly benefit at actual retirement would be increased by 2% of original monthly benefit for every full year of DROP participation. (Beginning September 1, 2000, the percentage increase applied to monthly benefits at actual retirement was 1%, to be phased in at 0.5% beginning on September 1, 2000, and an additional 0.5% beginning September 1, 2001. The benefit increase was then changed effective September 1, 2001 to 2% per year.) A member may

continue to be employed as a firefighter by the City after 10 years of participation in the DROP; however, the 9% deducted from the member's salary, the monthly pension allowance, and the earnings calculation would no longer be credited to the member's account. Effective September 1, 2003, the following three changes to the DROP were implemented: (1) the one percent annual administrative fee for retired members with DROP balances was removed; (2) a 5% floor and a 10% ceiling on annual DROP earnings rates was implemented; and (3) widows of deceased members with DROP account balances may choose to leave the DROP accounts with the Fund. Effective May 18, 2007, the following two changes to the DROP were implemented: (1) DROP participants have the option to designate one or more adult children as eligible children with respect to survivor benefits for the member's DROP funds; and (2) DROP participants receive a pro-rated portion of the 2% increase applied to the original benefit at retirement for completed months in the final year of DROP participation (0.166% per month). On November 1, 2007, the DROP period was extended to 13 years, with certain modifications for DROP years 11 to 13. The monthly pension contributions made by the member will not be posted to the DROP account after the tenth year of DROP participation. Upon retirement, the member will not receive the 2% per year calculation beyond the tenth year (maximum 20% of original benefit will be added to monthly DROP Benefit upon retirement). The 2% recalculation of monthly benefit while in DROP remains for those members in DROP as of July 1, 2017 or those that have at least 20 years of service as of July 1, 2017 (Max is 20%). The DROP participant will continue to receive the monthly benefit and earnings in the DROP account for DROP years 11, 12 and 13.

Effective July 1, 2017, the following modifications have been made to DROP: (1) Members hired before July 1, 2017 may participate in DROP for 13 years; (2) Member Contributions will not be credited to their DROP account; (3) DROP interest credit is credited to DROP account even if member remains in active service past the maximum DROP time allowed (13 years); however monthly benefit will cease if member remains active beyond 13th year in DROP; (4) DROP option is closed for firefighters hired on or after July 1, 2017; (5) DROP interest is based on 65% of the previous 5 year compounded average annual return with a minimum of 2.5% and no maximum ceiling; (6) Unused leave pay (mustering out pay) will be placed in member's DROP if member has an active account; and (7) Current 2% recalculation of monthly benefit while in DROP remains for those in DROP as of July 1, 2017 or those that have at least 20 years of service as of July 1, 2017 (Max

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

is 20%). The balance of the DROP accounts as of June 30, 2024 and 2023 were \$1,367,493,865 and \$1,334,120,511, respectively. The Post Retirement Option Plan (PROP) account balances as of June 30, 2024 and 2023 were \$35,052,161 and \$35,664,445, respectively.

Members or beneficiaries of members receiving pension or disability benefits (other than deferred retirees, survivors of deferred retirees, or active members who have elected the DROP) shall receive an additional monthly benefit payment of \$150 along with their standard monthly benefit payment.

The Fund established a PROP which became effective October 1, 2007. This benefit allows retired members and survivors who are receiving service retirement benefits or taxable disability pension benefits to have a portion of his or her monthly service pension or other taxable benefits issued by the Fund credited to a notional PROP account. However, after July 1, 2017, no additions or contributions are allowed to the PROP. The notional PROP account shall be credited with earnings in the same manner as the Fund's DROP program.

Effective July 1, 2000 a benefit enhancement was enacted by the Board under Section 10 of the Act to allow members

or beneficiaries of members receiving pension, disability, or death benefits (other than deferred retirees, survivors of deferred retirees, or active members who have elected the DROP) to receive a supplemental benefit payment each January. The aggregate amount of the annual supplemental benefit payment may not exceed \$5 million in any one year and to receive the annual supplemental benefit payment, the retired member or eligible survivors must have been receiving benefits on June 30 of the year preceding the year in which the annual supplemental benefits are to be paid. The amount of the benefit enhancement that an individual receives is based on date of retirement and the amount of annual retirement benefit in comparison to an annual minimum income level.

## DISABILITY BENEFITS

Service-connected disability benefits are 50% of average monthly salary (occupational), or 75% of average monthly salary (general), or the service retirement, if it is greater and if the member is eligible. Non service-connected disability benefits amount to 25% of average monthly salary, plus 2.5% of average monthly salary for each full year of service, up to a maximum of 50% of average monthly salary, or the service retirement, if it is greater and if the member is eligible.



# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

## DEATH BENEFITS

Death benefits are available to a surviving spouse, dependent children or dependent parents. Line-of-duty death benefits are payable at 100% of member's average monthly salary. If an active member dies who is eligible for a service, disability, or deferred pension, the member's eligible survivors are entitled to death benefits equal to the benefits the member would have been entitled to. Post-retirement death benefits are equal to the benefits being paid to the member upon his or her death. If there are no eligible survivors, the Fund will refund to the member's designated beneficiary or estate the amount of the member's contributions, with 5% simple interest, not compounded, for members with at least 10 years but less than 20 years of service and without interest for members with less than 10 years of service.

## VESTING

Members who terminate employment with at least 10 years of service, but prior to becoming eligible for the service retirement, are entitled to 1.7% of their average monthly salary for each year of service, payable beginning at age 50, or an optional refund of contributions with simple interest at 5%.

Effective July 1, 2017 the following modifications have been made to Refund of Contributions and Deferred payments (1) members with at least 10 years of participation but less than 20 may elect a refund of contributions, with interest computed at 5% simple interest for member's contributions to the Fund made before July 1, 2017 and without interest for the members contributions to the Fund made on or after July 1, 2017; (2) Members hired prior to July 1, 2017 still have a Deferred Pension Option; and (3) Deferred Pension Option is closed for members hired on or after July 1, 2017.

Members who terminate their employment with less than 10 years of service may receive a refund of their contributions to the Fund, without interest. Members who terminated their employment prior to September 1, 1987 and prior to retirement for reasons other than death or disability forfeit their accumulated Fund benefits, including their contributions to the Fund.



# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### BASIS OF PRESENTATION

The accompanying basic financial statements are presented in accordance with generally accepted accounting principles established by the Governmental Accounting Standards Board (GASB), which designates accounting principles and financial reporting standards applicable to State and local governmental units. The accompanying basic financial statements include solely the accounts of the Fund, which include all programs, activities and functions relating to the accumulation and investment of the net assets and related income necessary to provide the service, disability and death benefits required under the terms of the governing statutes and amendments thereto.

### BASIS OF ACCOUNTING

The economic resources measurement focus basis of accounting is the method by which revenues and expenses are recognized in the accounts and reported in the basic financial statements. The accrual basis of accounting is used by the Fund. Under the accrual basis of accounting, revenues, which include contributions and investment income, are recognized when they are earned and collection is reasonably assured, and expenses are recognized when the liability is incurred. Member and employer contributions are recognized when due, pursuant to formal commitments according to Fund requirements and State statute. Benefits paid to members and contribution refunds are recognized when due and payable in accordance with the terms of the Fund. Accrued income, when deemed uncollectable, is charged to operations.

### REPORTING ENTITY

The Fund is a component unit of the City and its basic financial statements and required supplementary information are included in the City's Annual Comprehensive Financial Report.

### USE OF ESTIMATES

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the basic financial statements and the reported amounts of revenues and expenses during the reporting period. Accordingly, actual results could differ from those estimates.

### CASH AND CASH EQUIVALENTS

The Fund considers only demand deposits as cash. Cash equivalent securities, which are composed of all highly liquid investments with a maturity of 90 days or less when purchased, are considered to be cash equivalents.

### INVESTMENT VALUATION AND INCOME RECOGNITION

The Board has contracted with BNY Mellon (Custodian) to serve as custodian of the assets of the Fund. The Custodian has established and maintains a custodial account to hold, or directs its agents to hold, for the account of the Fund, certain assets that the Board deposits with the Custodian from time to time. The Custodian also serves as the record-keeper of non-custody assets (commingled/ multi-investor funds managed by third-party managers, and private assets). All rights, title and interest in and to the Fund's assets at all times vests with the Fund's Board.

In performing its contractual duties, the Custodian is to adhere to a fiduciary standard of care, skill, prudence and loyalty, as measured by the high commercial standards reasonably expected of prudent professional custodians of public pension funds who are held in the highest repute or who hold themselves out as such. Further, in performing these duties, the Custodian is to exercise the same care and diligence that a professional custodian engaged in the banking or trust company industry and having professional expertise in financial and securities processing transactions and custody would observe in these affairs.

Investments are reported at fair value. Directly held securities that trade on national or international exchanges are priced by the Custodian and are based primarily on prices from several third-party vendors. Data received from vendors is checked to test for possible errors, which are researched manually by the Custodian. Default values established by the Custodian are applied for missing and stale prices. Prices of these securities reported by external managers are reconciled vis-à-vis this process by the Custodian. Short-term investments held by the Fund are government and corporate bonds with a maturity of less than three years and are valued at cost which approximates fair value. Timber investments are valued by the investment manager and are based on annual independent appraisals. Directly held real estate is valued based on independent appraisals. With the exception of certain energy related private equity investments that are valued at historical cost, private equity and real estate partnerships/trusts, hedge

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

fund accounts, and other commingled accounts are valued at fair value as determined by the investment manager in accordance with the investment's governing documents. Investments that do not have an established market may be reported at their estimated fair values as determined by the investment manager.

Directly held private assets (excludes real estate) are valued at historical cost unless appraised by a third-party. If a third-party has made such an appraisal, the appraised value is used. As of June 30, 2024 and June 30, 2023, these assets were valued at \$1,075,000.

Unrealized gains and losses are presented as net appreciation (depreciation) in fair value of investments on the statements of changes in fiduciary net position, along with gains and losses realized on sales of investments. Purchases and sales of investments and forward foreign exchange contracts are recorded on the trade date and reported as a payable or receivable until settlement. Gains or losses are recognized when the contract is complete. Dividend income is recorded on the ex-dividend date. Interest and income from other investments are recorded as earned.

## BUILDING, FURNITURE, FIXTURES AND EQUIPMENT

Building, furniture, fixtures, and equipment are recorded at cost less accumulated depreciation. Depreciation and amortization expense is computed using the straight-line method over the estimated useful lives of the related assets ranging from three to 30 years. Any gain or loss on the retirement of assets is recognized currently. Major outlays for additions and improvements are capitalized if equal to or greater than \$5,000. Maintenance and repairs are charged to expense.

## ADMINISTRATIVE EXPENSES

The cost of administering the Fund is paid by the Fund from current earnings pursuant to an annual fiscal budget approved by the Board.

## FEDERAL INCOME TAX

The Fund received a favorable letter of determination dated November 15, 2016 from the Internal Revenue Service stating that the Fund qualifies as a tax-exempt plan and trust. The Fund's management and Board believe that the Fund is currently designed and being operated in compliance with the applicable requirements of the Internal Revenue Code.

Accounting principles generally accepted in the United States of America require Fund's management to evaluate tax positions taken by the Fund and recognize a tax liability (or asset) if the Fund has taken an uncertain position that more likely than not would not be sustained upon examination by the Internal Revenue Service. Fund management has analyzed the tax positions taken by the Fund, and has concluded that as of June 30, 2024 and 2023, there are no uncertain positions taken or expected to be taken that would require recognition of a liability (or asset) or disclosure in the basic financial statements. The Fund is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress.

## RECENT ACCOUNTING PRONOUNCEMENTS

GASB Statement No. 100, *Accounting Changes and Error Corrections*. This Statement's primary objective is to enhance accounting and financial reporting requirements for accounting changes and error corrections. It requires disclosure in notes to financial statements of descriptive information about accounting changes and error corrections, such as their nature. In addition, information about the quantitative effects on beginning balances of each accounting change and error correction should be disclosed by reporting unit in a tabular format to reconcile beginning balances as previously reported to beginning balances as restated. Furthermore, this Statement addresses how information that is affected by a change in accounting principle or error correction should be presented in required supplementary information and supplementary information. For periods that are earlier than those included in the basic financial statements, information presented in RSI or SI should be restated for error corrections, if practicable, but not for changes in accounting principles. This Statement was adopted for fiscal year 2024 financial statements and the implementation of this new standard did not impact the Fund's financial statements for fiscal year 2024.

GASB Statement No. 101, *Compensated Absences*. The objective of this Statement is to better meet the information needs of financial statement users by updating the recognition and measurement guidance for compensated absences. That objective is achieved by aligning the recognition and measurement guidance under a unified model and by amending certain previously required disclosures. This Statement requires that liabilities be recognized for (1) leave that has not been used and (2) leave that has been used but not yet paid in cash or settled through noncash means. This Statement is effective

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

for the fiscal year beginning after December 15, 2023. The Fund will implement this Statement in next year's financial statements.

GASB Statement No. 102 *Certain Risk Disclosures*. The objective of this Statement is to provide users of government financial statements with essential information about risks related to a government's vulnerabilities due to certain

concentrations or constraints. That objective is achieved by requiring disclosures that will provide users with timely information regarding certain concentrations or constraints and related events that have occurred or have begun to occur that make a government vulnerable to a substantial impact. This Statement is effective for the fiscal year beginning after June 15, 2024. The Fund will implement this Statement in next year's financial statements.



# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

## 3. NET PENSION LIABILITY (ASSET) OF EMPLOYERS

### NET PENSION LIABILITY (ASSET) (\$000)

The components of the net pension liability (asset) at June 30, 2024, were as follows:

<b>Total pension liability</b>	\$ 5,378,306
<b>Fund fiduciary net position</b>	(5,378,729)
<b>City net pension liability</b>	\$ (423)
<b>Fund fiduciary net position as a percentage of total pension liability</b>	100.01%

### ACTUARIAL ASSUMPTIONS

The actuarial cost method used to develop the total pension liability is the Entry Age Normal Cost-Level Percent of Pay method, as required by GASB Statement No. 67.

The total pension liability as of June 30, 2024 was determined by rolling forward the Fund's total pension liability as of July 1, 2023 to June 30, 2024 using the following actuarial assumptions, applied to all periods included in the measurement.

Effective July 1, 2023, the Fund's staff recommended the use of the Board adopted 7.00% per annum rate of investment return assumption, which is equal to the assumption used in the July 1, 2023 Risk Sharing Valuation Study. As such, all methods and assumptions used to determine the total pension liability are set forth in Section III and are consistent with the assumptions used for the July 1, 2023 Risk Sharing Valuation Study.

The long-term expected rate of return on Fund investments was supported 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 rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2024 are summarized in the following table (note that the rates shown below include the inflation component): The long-term expected rate of return on Fund investments was supported 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 rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2024 are summarized in the following table (note that the rates shown below include the inflation component):

### TARGET ALLOCATIONS

Asset Class	Long-Term Expected Rate of Return	Target Asset Allocation
<b>Cash &amp; Short Term</b>	3.16%	2.00%
<b>Public Equity-Domestic</b>	7.87%	19.00%
<b>Public Equity-International</b>	9.53%	19.00%
<b>Aggregate Bonds</b>	4.49%	5.00%
<b>Intermediate Credit</b>	4.91%	3.00%
<b>Intermediate High Yield</b>	8.60%	5.00%
<b>Hedge Funds</b>	6.59%	2.00%
<b>Private Equity</b>	11.23%	25.00%
<b>Private Debt</b>	9.00%	10.00%
<b>Real Estate</b>	6.23%	10.00%

### DISCOUNT RATE

The discount rate used to measure the total pension liability in FY23 was 7.25%. In June 2023, the Board approved a motion to change the discount rate to 7.00%, effective July 1, 2023. The projection of cash flows used to determine the discount rate assumed that the Fund's contributions will continue to follow the current funding policy. Based on those assumptions, the Fund's fiduciary net position was projected to be available to make all projected future benefit payments of current Fund members for all future years and hence, the blended GASB discount rate is equal to the long-term rate of return of 7.00%. Therefore, the long-term expected rate of return on Fund investments of 7.00% was applied to all periods of projected benefit payments to determine the total pension liability.

In the event of benefit payments not covered by the Fund's fiduciary net position, a municipal bond rate of 4.21% would be used to discount the benefit payments not covered by the

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

Fund’s fiduciary net position. The 4.21% rate equals the S&P Municipal Bond 20-Year High Grade Rate Index at June 28, 2024. The rate was 4.13% as of June 30, 2023.

## SENSITIVITY OF THE NET PENSION LIABILITY (ASSET) TO CHANGES IN THE DISCOUNT RATE

The following presents the net pension liability (assets), calculated using the discount rate of 7.00%, 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 (6.00%) or one percentage point higher (8.00%) than the current rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
<b>Net Pension Liability (\$000)</b>	\$ 545,983	\$ (423)	\$ (452,285)



# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

## 4. CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE

The Fund's statute (Vernon's Civil Statutes, Title 109, section 6243e.2(1)) requires the Fund and the City of Houston to independently conduct annual Risk Sharing Valuation Studies (RSVS). The RSVS's must include state set assumptions. If the difference between the City and the Fund's employer contribution rate falls at or below 2%, the Fund's RSVS will be used to determine the employer contribution rate for the fiscal year. If the difference is greater than 2%, the actuaries must reconcile the rates until the difference falls within 2%. If it cannot be reconciled, the arithmetic average will be used. The annual RSVS will now be used to determine the City's contribution rate to the Fund.

Effective July 1, 2023, the City's determined contribution rate was 26.89%. This rate did not change from fiscal year 2023. The fiscal year 2024 RSVS consisted of 15.03% of covered members' salaries (to pay normal costs), increased by 11.86% of amortization deficit of the actuarial accrued liability over a closed amortization period of 30 years effective July 1, 2015.

The effective members' contribution rate of 10.5% remained the same for fiscal year 2024 and 2023.

ACTUARIALLY DETERMINED CONTRIBUTION REQUIREMENTS	
June 30, 2024*	
Employer normal cost	\$ 42,660,528
Member normal cost	33,754,435
<b>Total normal cost</b>	<b>\$ 76,414,963</b>
<b>Plus: Amortization of deficit</b>	
Actuarial accrued liability	33,690,113
<b>Net contributions required</b>	<b>\$ 110,105,076</b>
Employer contributions actually made	\$ 76,384,955
Pensionable Member contributions actually made	29,826,898
Non-Pensionable Employer contributions actually made	(34,314)
Non-Pensionable Member contributions actually made	3,927,537
<b>Total contributions</b>	<b>\$ 110,105,076</b>

ACTUARIALLY DETERMINED CONTRIBUTION REQUIREMENTS	
June 30, 2023*	
Employer normal cost	\$ 41,125,914
Member normal cost	31,972,753
<b>Total normal cost</b>	<b>\$ 73,098,667</b>
<b>Plus: Amortization of deficit</b>	
Actuarial accrued liability	31,349,075
<b>Net contributions required</b>	<b>\$ 104,447,742</b>
Employer contributions actually made	\$ 72,358,476
Pensionable Member contributions actually made	28,254,548
Non-Pensionable Employer contributions actually made	116,513
Non-Pensionable Member contributions actually made	3,718,205
<b>Total contributions</b>	<b>\$ 104,447,742</b>

\* Based on the arithmetic average of the Fund and the City of Houston's RSVS

## ACTUARIAL PROCESS

The Fund, by statute, may adopt an actuarial valuation once every three years. The Texas Pension Review Board has determined that the annual RSVS satisfies this statutory requirement.

The Fund's governing statute, Article 6243e.2(1), Section 13B, requires the Fund's actuary and City actuary to separately prepare a draft of a **Risk Sharing Valuation Study** (RSVS), based on the Fund's respective actuarial data. The RSVS must use the following assumptions set in statute to arrive at an estimated City contribution rate:

- Assumed rate of return (subject to adjustment) may not exceed 7% per year;
- Ultimate entry age normal actuarial cost method;
- Assets marked-to-market method applied as of June 30, 2016 (after initial RSVS, this changes to use 5-year smoothing method over a five-year period applied prospectively beginning on the year 2017 effective date);
- Closed 30-year amortization of legacy liability<sup>1</sup>;
- Payroll growth rate assumption, not to exceed 3%

[1] The RSVS as of April 30, 2024, resulted in an estimated contribution rate less than the statutory minimum contribution rate. Accordingly, per the governing statute, HFRRF accelerated the payoff year of the legacy liability to the extent required to increase the estimated contribution rate to equal the minimum contribution rate. Thus, the legacy liability will now only be amortized over the following 6.2 years rather than the remaining 25 years.

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

The RSVS must be included within an actuarial valuation. Once completed, each actuary shall exchange their draft RSVS. If the difference between the two estimated City contribution rates falls at or below 2%, the Fund's RSVS will be used to determine the contribution rate for the following fiscal year. If the difference is greater than 2%, the actuaries must reconcile the rates until the difference falls within 2%. If it cannot be reconciled, the arithmetic average will be used.

Accounting standards require that the statement of fiduciary net position state assets at fair value, and include only benefits and refunds due Fund members and beneficiaries, as well as accrued investment and administrative expenses as of the reporting date.

The Fund's governing statute limits the City's contribution to within a range of plus or minus 5% of 31.89% of pensionable payroll to pay the Fund's benefits. If the City's contributions are determined to not be within the range, the governing statute provides that certain adjustments shall be made.

## HISTORICAL TREND INFORMATION

Historical trend information is provided as required supplementary information on pages 46 through 57. This information is intended to demonstrate progress the Fund has made in accumulating sufficient assets to pay benefits when due and the related actuarial assumptions used in determining the actuarially determined amounts.



# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

## 5. INVESTMENTS

Statutes of the State of Texas authorize the Fund to invest surplus funds in the manner provided by the Government Code, Title 8, Subtitle A, Subchapter C. This subchapter provides for the investment of surplus assets as described in section 802.202 of the Government Code. The Board seeks to produce a return on investments that is based on prudent and reasonable investment risk and the cash flow requirements of the Fund given prevailing economic and capital market conditions. While the Board recognizes the importance of the preservation of capital, it also adheres to the theory of capital market pricing which maintains that varying degrees of investment risk should be rewarded with incremental returns. Consequently, prudent risk-taking is justifiable.

The Board manages the investment program of the Fund in compliance with all applicable Federal and State statutes and regulations concerning the investment of pension assets. The Board has adopted an Investment Policy Statement (Investment Policy) to set forth the factors involved in the management of investment assets for the Fund. The Board has established an Investment Committee to act on all matters related to investments.

The fair values of the Fund's investments as of June 30, 2024 and 2023, by type, are as follows:

	2024	2023
<b>Short-term Investment Funds</b>	\$ 102,667,897	\$ 61,183,328
<b>Fixed Income-Government Securities</b>	13,417,862	74,168,190
<b>Fixed Income-Corporate Bonds</b>	612,061,654	793,762,031
<b>Fixed Income-Convertibles</b>	3,116,715	3,132,686
<b>Common Equity</b>	1,517,978,521	1,399,404,602
<b>Hedge Funds:</b>		
<b>Global Macro Hedge Fund</b>	21,190,585	56,021,164
<b>Inflation Hedge Fund</b>	99,380,093	84,103,681
<b>Multi-Strategy FOHFs</b>	570,963	735,505
<b>Private Debt</b>	609,168,316	431,753,707
<b>Private Equity:</b>		
<b>Buyout Partnerships/Funds</b>	861,285,908	731,363,593
<b>Co-Investments</b>	285,734,557	240,890,622
<b>Digital Assets</b>	-	12,457,024

<b>Distressed Debt Partnerships/Funds</b>	65,635,390	83,309,904
<b>Direct Investments</b>	1,075,000	1,075,000
<b>Infrastructure Partnerships/Funds</b>	144,933,293	101,104,063
<b>Mixed Strategies</b>	92,563,697	74,877,768
<b>Secondary Partnerships/Funds</b>	206,573,291	190,950,267
<b>Special Situations Investments</b>	34,265,063	79,676,642
<b>Venture Capital Partnerships/Funds</b>	179,480,001	168,508,967
<b>Real Estate</b>	423,037,164	396,153,655
<b>Total investments</b>	<b>\$ 5,274,135,970</b>	<b>\$ 4,984,632,399</b>

## CUSTODIAL CREDIT RISK

Portions of the Fund's investments are classified as security investments. A security is a transferable financial instrument that evidences ownership or creditorship. Investments in companies, partnerships and real estate are investments that are evidenced by contracts rather than securities.

Custodial credit risk disclosures relate to securities. Custodial credit risk is the risk that, in the event of the failure of the counterparty, the Fund will not be able to recover the value of its securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are (i) uninsured, (ii) not registered in the name of the Fund, and (iii) are held by either the counterparty or the counterparty's trust department or agent but not in the Fund's name. At June 30, 2024 and 2023 the Fund's security investments (excluding cash) that were not subject to custodial credit risk were the investments not registered on an exchange.

## CONCENTRATION OF CREDIT RISK

Concentration of credit risk is the risk of loss attributable to the magnitude of the Fund's investment in a single issue. The allocation of assets among various asset classes is set by the Board with the objective of optimizing the investment return of the Fund within framework of acceptable risk and diversification. For major asset classes (e.g., domestic equities, international equities, fixed income hedge funds, digital assets, private debt, private equity and real estate), the Fund further diversifies by employing investment managers who implement the strategies selected by the Investment Committee (IC). In addition, Exchange Traded Funds (ETFs) may be used.

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

Significant risk management asset allocation guidelines are as follows:

1. Investment Manager investment philosophy, style, strategy, and structure shall remain consistent and shall not change without the IC's approval. The Investment Manager shall have discretion to manage the portfolio consistent with the agreement(s) governing the Investment Manager's activity for the Fund, the style presented to the IC at the time of selection, or as revised by the IC, and further subject to the restrictions established by the policy herein.
2. The following transactions are prohibited by a fiduciary manager subject to an Investment Management Agreement (IMA) acting directly on behalf of the Fund: short sales, selling on the Fund's margin, put and call options and the use of derivatives, unless expressly authorized by the IC by vote as to a particular manager, which authorization may be revoked as to new activity.
3. To the extent that any broker, custodian, or other Investment Manager would be engaged in a transaction with the Fund in a capacity as a counterparty to the Fund (whether as a principal or on behalf of any other third party or any affiliate), such broker, custodian or other Investment Manager shall promptly disclose such transaction to the Fund and act in a manner that is fair and reasonable in all respects. Transactions shall be executed at competitive cost or best execution.

Specific guidelines for each Investment Manager shall be developed and negotiated by the Fund's investment staff and legal counsel and shall be incorporated into an IMA, and/or other binding written agreement as is appropriate for the investment.

Quantitative and qualitative performance measures, as well as Investment Manager adherence to applicable guidelines, shall be monitored as are appropriate to each investment. In the case of a conflict between the specific guidelines and the general guidelines, the specific guidelines shall supersede, or be accorded primary weight in any reconciliation.

As of June 30, 2024, more than 5% of the Fund's net position is in the BNYM Mellon Broad Market Stock Index Fund (12.66%), BNYM Mellon ACWI Ex-U.S. Fund (9.43%), and KKR Global Credit Opportunities Fund (5.28%). As of June 30, 2023, more than 5% of the Fund's net assets are in the BNYM Newton

Dynamic Global ex-U.S. Equity Fund (7.87%), KKR Global Credit Opportunities Fund (6.25%), and BNYM Newton Dynamic U.S. Equity Fund (5.77%).

## INTEREST RATE RISK

The Fund invests in fixed income securities including, but not limited to, investments representing instruments with an obligated fixed rate of interest including public and private debentures, mortgages, investments in life insurance general accounts and guaranteed investment contracts, with maturities greater than one year, and options/futures. Instruments may have an investment grade or non-investment grade rating. Purchases and sales, investment selection and implementation of investment strategies are delegated to the discretion of external investment managers, subject to compliance with its investment management agreement and the Fund's Investment Policy.

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the investment. Interest rate risk is the greatest risk faced by an investor in the fixed income market. The price of a fixed income security typically moves in the opposite direction of the change in interest rates. The weighted average maturity expresses investment time horizons (when the investment comes due and payable) in years, weighted to reflect the dollar size of individual investments within the investment type. The Fund does not have a formal investment policy that limits investment maturities as a means of managing its exposure to potential fair value losses arising from future changes in interest rates, but rather mandates such limits within the external manager's investment management agreement.



# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

At June 30, 2024, the following table shows the Fund's investments by type, with weighted average maturity and fair value:

	WEIGHTED AVERAGE MATURITY	FAIR VALUE
Commingled Funds	4.31	\$ 284,173,294
Non-U.S. Corporate	2.92	53,668,178
Taxable Municipals	26.87	1,391,248
U.S. Agencies	28.37	6,738,425
U.S. Collateralized	4.51	826,602
U.S. Convertibles	2.09	3,116,715
U.S. Corporate	2.45	273,393,580
U.S. Treasuries	20.66	5,288,189
<b>Total Fixed Income Securities</b>		<b>\$ 628,596,231</b>

At June 30, 2023, the following table shows the Fund's investments by type, with weighted average maturity and fair value:

	WEIGHTED AVERAGE MATURITY	FAIR VALUE
Commingled Funds	4.43	\$ 319,102,635
Non-U.S. Convertibles	0.82	2,718,579
Non-U.S. Corporate	3.05	69,168,174
Taxable Municipals	20.81	1,324,827
U.S. Agencies	28.96	32,660,145
U.S. Collateralized	10.40	535,695
U.S. Convertibles	0.55	414,107
U.S. Corporate	2.72	404,955,528
U.S. Treasuries	14.39	40,183,218
<b>Total Fixed Income Securities</b>		<b>\$ 871,062,908</b>

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

## CREDIT RISK

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Fund does not have a formal policy limiting investment credit risk, but rather mandates such limits within the investment management agreement of each manager as may be appropriate to strategy.

The Fund's exposure to investment credit risk in fixed income securities (which includes government securities, corporate bonds, convertibles, and excludes U.S. treasuries) as of June 30 are as follows:

Quality Rating	2024		2023	
	Fair Value	Percentage of Holdings	Fair Value	Percentage Of Holdings
<b>AGY</b>	\$ 6,738,425	0.13%	\$ 32,660,145	0.66%
<b>AAA</b>	2,145,089	0.04%	1,830,544	0.04%
<b>AA1</b>	715,753	0.01%	1,237,646	0.02%
<b>AA3</b>	438,197	0.01%	1,407,846	0.03%
<b>A1</b>	630,835	0.01%	2,621,509	0.05%
<b>A2</b>	1,034,391	0.02%	3,256,793	0.07%
<b>A3</b>	2,338,726	0.04%	9,255,772	0.19%
<b>BAA1</b>	1,770,847	0.03%	15,151,454	0.30%
<b>BAA2</b>	5,161,264	0.10%	12,897,180	0.26%
<b>BAA3</b>	19,179,820	0.36%	26,765,550	0.54%
<b>BA1</b>	24,794,175	0.47%	30,521,722	0.61%
<b>BA2</b>	60,975,303	1.16%	71,890,373	1.44%
<b>BA3</b>	71,620,777	1.36%	90,328,973	1.81%
<b>B1</b>	53,389,778	1.01%	77,352,960	1.55%
<b>B2</b>	31,619,751	0.60%	48,493,134	0.97%
<b>B3</b>	22,995,084	0.44%	18,798,998	0.38%
<b>CAA1</b>	285,790,171	5.42%	332,169,821	6.66%
<b>CAA2</b>	2,336,671	0.04%	7,650,040	0.15%
<b>CA</b>	650,700	0.01%	736,899	0.01%
<b>Not rated</b>	28,982,285	0.55%	45,852,330	0.91%
<b>Total credit risk debt securities*</b>	<b>\$ 623,308,042</b>	<b>11.81%</b>	<b>\$ 830,879,689</b>	<b>16.66%</b>

\*Obligations of the U.S. government or obligations explicitly guaranteed by the U.S. government are not considered to have credit risk and therefore, have not been included in this disclosure.

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

## FOREIGN CURRENCY RISK

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. Realized and unrealized gains and losses on investments which result from changes in foreign currency exchange rates have been included in the net appreciation in fair value of investments. The Fund's policy allows external investment managers to decide what action to take regarding their respective portfolio's foreign currency exposures subject to compliance with its respective investment management agreement of each manager as may be appropriate to strategy the Fund's Investment Policy Statement. The Fund's exposure to foreign currency fluctuation as of June 30 are as follows:

TOTAL SECURITIES SUBJECT TO FOREIGN CURRENCY	2024		2023	
	Fair Value	Percentage of Holdings	Fair Value	Percentage Of Holdings
<b>EURO CURRENCY UNIT</b>	\$ 291,457,511	5.53%	\$ 218,849,257	4.39%

## ALTERNATIVE INVESTMENTS

As of June 30, 2024 and 2023, the Fund was invested in various private equity funds and hedge funds as detailed in the following chart:

FAIR VALUE OF THE FUND'S INTEREST		
Investment Type	June 30, 2024	June 30, 2023
<b>Private Debt</b>	\$ 609,168,316	\$ 431,753,707
<b>Private Equity</b>	1,871,546,201	1,684,213,850
<b>Hedge Funds</b>	121,141,640	140,860,350
	<b>\$ 2,601,856,157</b>	<b>\$ 2,256,827,907</b>

The Fund has a mature private equity portfolio diversified by vintage year, strategy, and manager.

In regard to hedge funds, as of June 30, 2024, the Fund had investments in one global macro hedge fund and one multi-strategy fund-of-hedge funds.



# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

Hedge Funds are managed portfolios of investments using advanced investment strategies such as leverage, long, short and derivative positions in both domestic and international markets with the goal of generating uncorrelated positive returns over a specified market benchmark. For the most part, hedge funds are unregulated and carry liquidity restrictions for redemption. The Fund's staff monitors risk, guidelines and compliance.

The use of derivatives in a portfolio gives rise to various types of risks. The primary types of risk include market risk, liquidity risk, counterparty risk and operations risk.

**Market risk** - represents the risk of adverse movements in markets (including asset prices, volatility, changes in yield curve, implied option volatility or other market variables/forces) for the derivatives or the underlying asset, reference rate or index to which the derivative relates. "Interest rate risk" is a type of market risk.

**Liquidity risk** - There are generally two types of liquidity risk. The first is the risk that a responsible party may not be able to, or cannot easily, unwind or offset a particular position risk at or near the previous market price, because of inadequate market depth or because of disruptions in the market place. The second is the risk that the portfolio will not be able to meet its future financial obligations resulting from its derivative activities, such as margin calls on futures contracts.

**Counterparty risk** - is the risk that a counterparty (the other party with whom a derivatives contract is made) will fail to perform contractual obligations (i.e. default in either whole or part) under a contract and that this failure occurs at a time when the contract is in-the-money. This is also sometimes referred to as "credit risk".

**Operations risk** - is the risk that deficiencies in the effectiveness and accuracy of the information or internal controls will result in a material loss. This risk is associated with human error, Fund failures and inadequate procedures and internal management controls.

## DERIVATIVE INVESTING

The Fund's investment managers may invest in derivatives as permitted by the investment management agreement of each manager as may be appropriate to strategy and the Fund's

Investment Policy Statement. Derivatives are generally defined as contracts whose values depend on, or are derived from, the value of an underlying asset, reference rate or index. The Fund's exposure to derivatives may be indirect by way of the Fund's investments in commingled fund vehicles or directly held in separate accounts, if permitted.

As of June 30, 2024 and 2023, the Fund held no derivative investments directly.

## FORWARD FOREIGN EXCHANGE CONTRACTS

A currency forward is a contractual agreement between two parties to pay or receive specific amounts of foreign currency at a future date in exchange for another currency at an agreed upon exchange rate. Forward foreign exchange contracts are recorded on the trade date and reported as a payable or receivable until settlement. Recognition of realized gain or loss depends on whether the currency exchange rate has moved favorable or unfavorable to the contract holder upon termination of the contract. Prior to termination of the contract, the Fund records the unrealized currency translation gain or loss based on the applicable forward exchange rates.

The Fund reported a loss of \$232,189 in fiscal year 2024 and a gain of \$300,360 in fiscal year 2023.

As of June 30, 2024 and 2023, the Fund held no positions in foreign exchange contracts.

Forward commitments are not standardized and carry credit risk due to the possible nonperformance by one of the counter parties. The maximum potential loss is the aggregate face value in U.S. dollars at the time the contract was opened; however, the likelihood of such loss is remote.

No active investment manager was employed by the Fund during fiscal year 2024 or 2023 for the sole purpose of managing foreign currency risk. External investment managers, investing on the Fund's behalf, may enter into forward foreign currency contracts to facilitate security transactions in international markets.

Summary of Investment and Professional Services on page 55 lists the Fund's investment and professional service providers.

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

## 6. FAIR VALUE MEASUREMENTS

Investments are recorded at fair value in accordance with the GASB Statement No. 72, *Fair Value Measurement and Application*.

The Fund categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs other than quoted market prices for similar assets; Level 3 inputs are significant unobservable inputs.

The Fund has the following recurring fair value measurements as of June 30, 2024:

### GASB 72 HIERARCHY TABLE

	FAIR VALUE MEASUREMENTS USING			
	6/30/2024	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investments by fair value level</b>				
<b>SHORT-TERM INVESTMENT FUNDS</b>	\$ 102,667,897	\$ 102,667,897		
<b>DEBT SECURITIES</b>				
<b>Government Securities</b>	13,417,862	5,288,189	8,129,673	
<b>Corporate bonds</b>	317,596,646	15,762,046	301,834,600	
<b>Convertibles</b>	3,116,715		3,116,715	
<b>TOTAL FIXED INCOME SECURITIES</b>	334,131,223	21,050,235	313,080,988	
<b>EQUITY SECURITIES</b>				
<b>Common</b>	4,756,802	4,756,802		
<b>TOTAL EQUITY SECURITIES</b>	4,756,802	4,756,802		
<b>DIGITAL ASSETS</b>				
<b>Bitcoin</b>	24,102,840	24,102,840		
<b>TOTAL DIGITAL ASSETS</b>	24,102,840	24,102,840		
<b>INFLATION HEDGE SECURITIES</b>				
<b>Gold</b>	99,380,093	99,380,093		
<b>Total inflation hedge securities</b>	99,380,093	99,380,093		
<b>PRIVATE INVESTMENTS</b>				
<b>Private debt</b>	25,228,889	25,228,889		
<b>Private equity - energy</b>	1,075,000			1,075,000
<b>Real estate</b>	1,170,000			1,170,000
<b>Total private investments</b>	27,473,889	25,228,889		2,245,000
<b>Total Investments By Fair Value Level</b>	<b>\$ 592,512,744</b>	<b>\$ 277,186,756</b>	<b>\$ 313,080,988</b>	<b>\$ 2,245,000</b>
<b>Investments measured at net position value (NAV)</b>				
<b>COMMINGLED INVESTMENT FUNDS</b>	\$ 1,783,583,886			
<b>HEDGE FUNDS</b>	21,761,548			
<b>PRIVATE DEBT FUNDS</b>	583,939,427			
<b>PRIVATE EQUITY FUNDS</b>	1,870,471,201			
<b>REAL ESTATE FUNDS</b>	421,867,164			
<b>Total Investments Measured at NAV</b>	4,681,623,226			
<b>TOTAL INVESTMENTS</b>	<b>\$ 5,274,135,970</b>			

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

The Fund has the following recurring fair value measurements as of June 30, 2023:

## GASB 72 HIERARCHY TABLE

	FAIR VALUE MEASUREMENTS USING			
	6/30/2023	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investments by fair value level</b>				
<b>SHORT-TERM INVESTMENT FUNDS</b>	\$ 61,183,328	\$ 61,183,328		
<b>DEBT SECURITIES</b>				
<b>Government Securities</b>	74,168,190	40,183,218	33,984,972	
<b>Corporate bonds</b>	458,222,440	26,282,687	431,939,753	
<b>Convertibles</b>	3,132,686		3,132,686	
<b>TOTAL FIXED INCOME SECURITIES</b>	535,523,316	66,465,905	469,057,411	
<b>EQUITY SECURITIES</b>				
<b>Common</b>	7,581,731	7,581,731		
<b>TOTAL EQUITY SECURITIES</b>	7,581,731	7,581,731		
<b>INFLATION HEDGE SECURITIES</b>				
<b>Gold</b>	84,103,681	84,103,681		
<b>Total inflation hedge securities</b>	84,103,681	84,103,681		
<b>PRIVATE INVESTMENTS</b>				
<b>Private debt</b>	20,121,658	20,121,658		
<b>Private equity - energy</b>	1,075,000			1,075,000
<b>Real estate</b>	1,170,000			1,170,000
<b>Total private investments</b>	22,366,658	20,121,658		2,245,000
<b>Total Investments By Fair Value Level</b>	<b>\$ 710,758,714</b>	<b>\$ 239,456,303</b>	<b>\$ 469,057,411</b>	<b>\$ 2,245,000</b>
<b>Investments measured at net position value (NAV)</b>				
<b>COMMINGLED INVESTMENT FUNDS</b>	\$ 1,727,362,462			
<b>HEDGE FUNDS</b>	56,756,669			
<b>PRIVATE DEBT FUNDS</b>	411,632,050			
<b>PRIVATE EQUITY FUNDS</b>	1,683,138,847			
<b>REAL ESTATE FUNDS</b>	394,983,657			
<b>Total Investments Measured at NAV</b>	4,273,873,685			
<b>TOTAL INVESTMENTS</b>	<b>\$ 4,984,632,399</b>			

Short-term investments held by the Fund classified in Level 1 are government and corporate bonds with a maturity of less than three years and are valued at cost which approximates fair value. Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt and equity securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. In Level 3 includes real estate held directly by the Fund. The property has been valued by an independent appraiser using the sales comparison method. The private equity (energy) assets include an interest in the net operating profits of an investment management company. This interest is valued at its historical cost in the absence of significant observable inputs. It is uncertain if this position can be exited at its historical cost.

The valuation method for investments measured at the net asset value (NAV) per share (or its equivalent) is presented on the following table.

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

At June 30, 2024, the following table shows the Fund's investments measured at the NAV:

	Fair Value	Unfunded Commitments	Redemption Frequency (if Currently Eligible)*	Redemption Notice Period
<b>COMMINGLED INVESTMENT FUNDS <sup>(A)</sup></b>	\$ 1,783,583,886		NR - Quarterly	0 - 90 days
<b>HEDGE FUNDS <sup>(B)</sup></b>	21,761,548		NR - Quarterly	0 - 5 days
<b>PRIVATE DEBT FUNDS <sup>(C)</sup></b>	583,939,427	363,236,154		
<b>PRIVATE EQUITY FUNDS <sup>(D)</sup></b>	1,870,471,201	1,281,939,513		
<b>REAL ESTATE FUNDS <sup>(E)</sup></b>	421,867,164	323,629,331		
<b>Total Investments Measured at NAV</b>	<b>\$ 4,681,623,226</b>			

\*NR is used to denote no contractual restriction

At June 30, 2023, the following table shows the Fund's investments measured at the NAV:

	Fair Value	Unfunded Commitments	Redemption Frequency (if Currently Eligible)*	Redemption Notice Period
<b>COMMINGLED INVESTMENT FUNDS <sup>(A)</sup></b>	\$ 1,727,362,462		NR - Quarterly	0 - 90 days
<b>HEDGE FUNDS <sup>(B)</sup></b>	56,756,669		NR - Quarterly	0 - 60 days
<b>PRIVATE DEBT FUNDS <sup>(C)</sup></b>	411,632,050	432,255,823		
<b>PRIVATE EQUITY FUNDS <sup>(D)</sup></b>	1,683,138,847	1,481,353,608		
<b>REAL ESTATE FUNDS <sup>(E)</sup></b>	394,983,657	424,259,367		
<b>Total Investments Measured at NAV</b>	<b>\$ 4,273,873,685</b>			

\*NR is used to denote no contractual restriction

## A. COMMINGLED INVESTMENT FUNDS.

As of June 30, 2024, this type includes ten commingled (multi-asset) accounts managed by six separate managers. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the investments. Two accounts are interests in funds that invest in U.S. and non-U.S. securities. Seven accounts are commingled investment funds that may invest in securities or other collective funds to track the performance of their respective public market index. The last of these accounts is a global tactical asset allocation account, a portion of which is invested in U.S and non-U.S. collective investment trusts.

## B. HEDGE FUNDS.

As of June 30, 2024, this type includes one global macro hedge fund and one multi-strategy fund-of-hedge funds. These funds pursue multiple hedge fund strategies. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the investments. The global macro hedge fund has a monthly redemption allowance and five business day notice period. While the fund-of-hedge funds does not have redemption gates, the Fund's ability to effect withdrawals is dependent on the fund-of-hedge fund's ability to redeem its interests in underlying positions. That said, in June 2016, the Investment Committee terminated the fund-of-hedge funds. Consequently, on the instruction of the Fund, the manager initiated redemption actions in August 2016. As of June 30, 2024, HFRRF has received over 99% of the expected proceeds. Other than seeking and executing redemptions, the fund-of-hedge funds manager is not actively trading on behalf of the Fund. Subsequent redemption proceeds received by the Fund will be determined by the NAV of the underlying positions liquidated by the manager, which may differ from the June 30, 2024 fair value due to market conditions.

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

## C. PRIVATE DEBT FUNDS.

As of June 30, 2024, this type includes sixteen private debt funds that invest globally in private assets and funds (or other funds that in turn invest in other private debt funds on a primary or secondary basis). The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the Fund's ownership interest in partners' capital. These investments can never be redeemed with the funds. Instead, the nature of the investments in this type is that distributions are received through the liquidation of the underlying assets of the fund. It is expected that the underlying assets of the funds will be liquidated over 1 to 15 years.

## D. PRIVATE EQUITY FUNDS.

As of June 30, 2024, this type includes eighty-two private equity funds that invest globally in private assets and funds (or other funds that in turn invest in other private equity funds on a primary or secondary basis). The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the Fund's ownership interest in partners' capital. While the digital assets fund may be redeemed with one day's notice, the private equity investments can never be redeemed with the funds. Instead, the nature of the investments in this type is that distributions are received through the liquidation of the underlying assets of the fund. It is expected that the underlying assets of the funds will be liquidated over 1 to 15 years.

## E. REAL ESTATE FUNDS.

As of June 30, 2024, this type includes thirty-four real estate funds that invest globally in commercial real estate (or other funds that in turn invest in other real estate funds on a primary or secondary basis) and one fund that invests in U.S. timberland. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the Fund's ownership interest in partners' capital. These investments can never be redeemed with the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over 1 to 15 years.

## 7. CASH AND CASH EQUIVALENTS

The Fund's deposits are held by the Custodian. As such, the Fund's cash deposits and cash equivalents beyond coverage by Federal depository insurance carries with it custodial risk; the risk that in the event of a bank failure, the Fund's deposits may not be returned to it. As of June 30, 2024 and 2023, the Fund's cash deposits in bank accounts totaled \$43,736,766 and \$114,070,209, respectively. These amounts are in demand deposit accounts subject to coverage by federal depository insurance but not collateralized. The Fund's cash balances exceeded federal depository insurance limits by \$43,486,766 and \$113,820,209 as of June 30, 2024 and 2023, respectively. The Fund does not have a deposit policy for custodial credit risk; however, management believes that the Fund's credit risk exposure for amounts not covered by Federal depository insurance is mitigated by the financial strength of the banking institution in which the deposits are held.

## 8. LAND

In February 1998, the Fund purchased land for \$483,325 to use in the construction of a new office building for its operations and its members. This land is not depreciated.

## 9. BUILDING, FURNITURE, FIXTURES AND EQUIPMENT

In April of 2001, the construction of the new building was completed. All capitalized costs associated with the building have been classified as building in the statements of fiduciary net position. This cost is being depreciated over 30 years. All other fixed assets are depreciated between 3 and 5 years.

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

Building, furniture, fixtures and equipment are comprised as follows at June 30, 2024:

	Beginning Balance	Increases	Decreases	Ending Balance
<b>CAPITAL ASSETS BEING DEPRECIATED:</b>				
Building	\$ 10,115,422	\$ 1,361,110	-	\$ 11,476,532
Office furnishings and equipment	672,031	13,726	-	685,757
Computer software and hardware	3,298,399	72,149	-	3,370,548
<b>Total assets being depreciated</b>	<b>14,085,852</b>	<b>1,446,985</b>	<b>-</b>	<b>15,532,837</b>
<b>LESS ACCUMULATED DEPRECIATION FOR:</b>				
Building	(7,302,859)	(381,470)	-	(7,684,329)
Office furnishings and equipment	(640,453)	(11,737)	-	(652,190)
Computer software and hardware	(3,205,046)	(31,244)	-	(3,236,290)
<b>Total accumulated depreciated</b>	<b>(11,148,358)</b>	<b>(424,451)</b>	<b>-</b>	<b>(11,572,809)</b>
<b>Total building, furniture, fixtures and equipment, net</b>	<b>\$ 2,937,494</b>	<b>\$ 1,022,534</b>	<b>-</b>	<b>\$ 3,960,028</b>

Building, furniture, fixtures, and equipment are comprised as follows at June 30, 2023:

	Beginning Balance	Increases	Decreases	Ending Balance
<b>CAPITAL ASSETS BEING DEPRECIATED:</b>				
Building	\$ 10,028,713	\$ 86,709	-	\$ 10,115,422
Office furnishings and equipment	675,167	-	3,136	672,031
Computer software and hardware	3,248,473	49,926	-	3,298,399
<b>Total assets being depreciated</b>	<b>13,952,353</b>	<b>136,635</b>	<b>3,136</b>	<b>14,085,852</b>
<b>LESS ACCUMULATED DEPRECIATION FOR:</b>				
Building	(6,919,394)	(383,465)	-	(7,302,859)
Office furnishings and equipment	(628,718)	(11,735)	-	(640,453)
Computer software and hardware	(3,176,150)	(28,896)	-	(3,205,046)
<b>Total accumulated depreciated</b>	<b>(10,724,262)</b>	<b>(424,096)</b>	<b>-</b>	<b>(11,148,358)</b>
<b>Total building, furniture, fixtures and equipment, net</b>	<b>\$ 3,228,091</b>	<b>\$ (287,461)</b>	<b>\$ 3,136</b>	<b>\$ 2,937,494</b>

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

## 10. SECURITIES LENDING ARRANGEMENTS

The Fund had the following securities on loan and held the following related cash collateral balances, at fair value, as of June 30:

	2024		2023	
	Securities Lent	Collateral Held	Securities Lent	Collateral Held
<b>Fixed income</b>	\$ 3,013,730	\$ 3,094,785	\$ 6,113,243	\$ 6,240,198
<b>Common and preferred stocks</b>	7,700,744	7,863,816	25,902,166	26,452,882
	<b>\$ 10,714,474</b>	<b>\$ 10,958,601</b>	<b>\$ 32,015,409</b>	<b>\$ 32,693,080</b>

Board policies, as filed with the Texas Pension Review Board, reflect the Fund's practice of lending its securities for the purpose of generating income from the investment of the related collateral. The Custodian as lending agent executes a securities lending program on behalf of the Fund.

Borrower credit risk is limited by the amount of collateral required. Concurrent with the loan, the collateral obtained is to equal 102% to 105% of the fair value (including any accrued interest) of the loaned securities. The percentage may vary within this allowance based on the types of securities lent. Thereafter, collateral value equaling 100% of the fair value of the loaned amount is to be maintained. Although security loans can be terminated on demand by the Fund, should the collateral value fall below 100% and the full value of the securities loaned not recovered, the Fund will incur losses. As of June 30, 2024 and 2023 the Fund was not exposed to borrower credit risk as collateral held as a percentage of the securities loaned was 102.3% and 102.1%, respectively. The securities lending income is divided between the Fund and the securities lending agent.

Borrower credit risk is also limited by the type of collateral permitted. Unless otherwise agreed by the Fund and the Custodian, collateral is to include U.S. dollars, securities issued or guaranteed by U.S. government entities, or irrevocable letters of credit issued by banks (independent of the borrower). The collateral held at the Fund's Custodian is exposed to custodian credit risk. Collateral held had a fair value of \$11,263,502 and \$32,693,080 as of June 30, 2024 and 2023, respectively. Cash collateral from the securities lending program (\$10,958,601 and \$25,553,028 as of June 30, 2024 and 2023, respectively) is invested in the Custodian's collateral investment pools. As of June 30, 2024 and June 30, 2023, the weighted average maturity of the collateral investment pool was one day. The relationship between the maturities of the collateral investment pool and the Fund's loans is affected by the maturities of the loans made by other entities that use the agent's pool, which the Fund cannot determine. Securities collateral from the securities lending program held a fair value of \$304,902. The Fund cannot sell or pledge the collateral unless the borrower defaults.

## 11. RELATED PARTY

During fiscal years 2024 and 2023, the Fund utilized the services of investment management companies in which the Fund owns an interest. Manager fees of approximately \$453,947 and \$528,120 were paid in fiscal years 2024 and 2023, respectively, to these companies.

## 12. BENEFIT PLANS

The Fund offers its employees a deferred compensation plan (the Plan) created in accordance with Internal Revenue Code 457. The Plan, available to all employees of the Fund, permits employees to defer a portion of their salary until future years. The deferred compensation is not available to employees until termination, retirement, death or unforeseeable emergency.

# NOTES TO BASIC FINANCIAL STATEMENTS CONTINUED

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

The Fund also offers its full-time employees a Profit Sharing Plan which is a qualified retirement plan under Section 401(a) of the Internal Revenue Code of 1986, as amended. The Fund maintains the Profit Sharing Plan to provide a tax-deferred way for it to contribute to its employees' savings for retirement, disability, death, and other major life events. The Fund contributes into the Profit Sharing Plan 16% of a participating employee's qualified yearly salary. During fiscal years 2024 and 2023, the Fund contributed \$502,784 and \$461,963 respectively, to the Profit Sharing Plan.

Both of the benefit plans are administered by an outside party, with the related amounts held in trust. Accordingly, these benefit plans are not reflected in the accompanying basic financial statements in accordance with GASB Statement No. 84 and 97.

## 13. COMMITMENTS AND CONTINGENCIES

As described in Note 1, certain members of the Fund are entitled to refunds of their accumulated contributions upon termination of employment with the City, prior to being eligible for pension benefits.

As of June 30, 2024 and 2023, aggregate contributions from active members of the Fund with less than ten years of service were \$35,116,316 and \$35,968,463, respectively. Contributions for employees with 10 to 20 years of service have not been determined. As of June 30, 2024 and 2023, interest payable related to these contributions has not been accrued.

Pursuant to the May 23, 1993 revision of Section 2(l), Chapter 432, Acts of the 64th Legislature, 1973 (Article 6243e.2, Vernon's Texas Civil Statutes), the Board may, from Fund assets, establish a self-insurance fund to pay certain claims for indemnification. On June 17, 1993, the Board voted to adopt this subsection allowing for the establishment of a self-insurance fund from Fund assets. The self-insurance fund is a designation of Fund net assets by the Board. As of June 30, 2024 and 2023, cumulative contributions made to the self-insurance fund by the Fund have been approximately \$5,000,000.

The Fund is a party to various claims and legal actions arising in the ordinary course of its business which, in the opinion of management, will not have a material effect on the Fund's financial position.

## 14. RISKS AND UNCERTAINTIES

The fund is diversified across various public and private market strategies on a global scale, exposing it to risks such as interest rate, market, event, geopolitical, and credit risk. Throughout FY 2024, the portfolio was impacted by heightened geopolitical tensions, persistent global inflation, and election cycles in numerous regions. The deceleration of economic growth due to higher interest rates resulted in a slowdown in deal-making activities.

Looking forward to FY 2025, it is anticipated that several of these risks will be effectively addressed.

The Fund's contribution rates and the actuarial information included in the notes and Schedules 1 and 2 (unaudited) are based on certain assumptions pertaining to interest rates, inflation rates and participant demographics, all of which are subject to change. Due to uncertainties inherent in the estimations and assumptions process, it is at least reasonably possible that changes in these estimates and assumptions in the near term could be material to the financial statements.

## 15. SUBSEQUENT EVENTS

Management of the Fund has evaluated subsequent events through October 15, 2024, which is the date the financial statements were available to be issued. Management has determined that no subsequent events require disclosure in these financial statements.

# 02

SECTION 02

*REQUIRED  
SUPPLEMENTARY  
INFORMATION*



# SCHEDULE 1

## Schedule of Changes in the Fund's Net Pension Liability and Related Ratios (\$000) (Unaudited)

Total Pension Liability	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
<b>Service cost</b>	57,942	\$ 55,961	54,129	55,596	57,743	55,532	52,579	80,002	76,407	68,145
<b>Interest</b>	367,958	353,824	354,304	362,472	349,760	343,416	332,357	389,938	369,708	353,405
<b>Changes of benefit terms</b>	-	-	-	-	-	-	-	(645,971)	-	-
<b>Differences between expected and actual experience</b>	79,006	77,461	(140,156)	(94,948)	78,724	34,668	62,117	(65,194)	(63,047)	(28,536)
<b>Changes of assumptions</b>	11,665	-	-	(155,659)	-	(47,463)	(16,572)	534,646	2,918	2,801
<b>Benefit payments</b>	(305,854)	(283,095)	(270,599)	(286,414)	(330,323)	(272,398)	(289,108)	(249,394)	(211,673)	(196,362)
<b>Net change in total pension liability</b>	210,717	204,151	(2,322)	(118,953)	155,904	113,755	141,373	44,027	174,313	199,453
<b>Total pension liability-beginning</b>	<b>5,167,589</b>	<b>\$ 4,963,438</b>	<b>4,965,760</b>	<b>5,084,713</b>	<b>4,928,809</b>	<b>4,815,054</b>	<b>4,673,681</b>	<b>4,629,654</b>	<b>4,455,341</b>	<b>4,255,888</b>
<b>Total pension liability-ending (a)</b>	<b>5,378,306</b>	<b>\$ 5,167,589</b>	<b>4,963,438</b>	<b>4,965,760</b>	<b>5,084,713</b>	<b>4,928,809</b>	<b>4,815,054</b>	<b>4,673,681</b>	<b>4,629,654</b>	<b>4,455,341</b>
<b>Fiduciary Net Position</b>										
<b>Contributions-employer</b>	76,351	72,475	81,351	77,495	83,837	89,897	83,010	93,658	94,279	92,610
<b>Contributions-employee</b>	33,754	31,973	30,942	29,873	33,441	34,281	35,622	25,404	25,511	25,092
<b>Net investment income</b>	470,760	199,670	523	1,338,230	84,115	221,775	322,306	432,948	(47,437)	51,801
<b>Benefit payments, including refunds of employee contributions</b>	(305,854)	(283,095)	(270,599)	(286,414)	(330,323)	(272,398)	(289,108)	(249,394)	(211,673)	(196,362)
<b>Administrative expense</b>	(4,594)	(4,482)	(4,161)	(4,213)	(4,516)	(4,952)	(4,890)	(4,898)	(6,771)	(6,640)
<b>Other (Professional services)</b>	(866)	(1,099)	(1,083)	(1,140)	(1,314)	(1,265)	(1,676)	(2,298)	(1,890)	(1,676)
<b>Net change in fiduciary net position</b>	269,551	\$ 15,442	(163,027)	1,153,831	(134,760)	67,338	145,264	295,420	(147,981)	(35,175)
<b>Fiduciary net position-beginning</b>	<b>5,109,178</b>	<b>\$ 5,093,736</b>	<b>5,256,763</b>	<b>4,102,932</b>	<b>4,237,692</b>	<b>4,170,354</b>	<b>4,025,090</b>	<b>3,729,670</b>	<b>3,877,651</b>	<b>3,912,826</b>
<b>Fiduciary net position-ending (b)</b>	<b>5,378,729</b>	<b>\$ 5,109,178</b>	<b>5,093,736</b>	<b>5,256,763</b>	<b>4,102,932</b>	<b>4,237,692</b>	<b>4,170,354</b>	<b>4,025,090</b>	<b>3,729,670</b>	<b>3,877,651</b>
<b>City's net pension liability (asset) - ending (a)-(b)</b>	\$ (423)	\$ 58,411	(130,298)	(291,003)	981,781	691,117	644,700	648,591	899,984	577,690
<b>Fiduciary net position as a percentage of the total pension liability</b>	100.01%	98.87%	102.63%	105.86%	80.69%	85.98%	86.61%	86.12%	80.56%	87.03%
<b>Covered payroll</b>	\$ 284,065	\$ 269,091	255,100	243,045	259,235	272,498	260,345	289,947	280,436	277,745
<b>Net pension liability as a percentage of Covered payroll</b>	(0.15)%	21.71%	(51.08%)	(119.73%)	378.72%	253.62%	247.63%	223.69%	320.92%	207.99%

# SCHEDULE 2

## SCHEDULE OF EMPLOYER CONTRIBUTIONS (\$000) (UNAUDITED)

Year Ended June 30	Covered Payroll	Actuarially Determined Contribution	Contributions Related to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Contribution as a Percentage of Covered Payroll
2024*	\$ 284,065	\$ 76,385	\$ 76,351	\$ 34	26.89%
2023*	269,091	72,358	72,475	(117)	26.89%
2022*	255,100	78,571	81,352	(2,781)	31.89%
2021*	243,045	88,104	77,495	10,609	31.89%
2020*	259,235	96,332	83,837	12,495	32.34%
2019*	272,498	99,676	89,897	9,779	32.99%
2018*	260,345	96,530	83,010	13,520	31.89%
2017*	289,947	88,745	93,658	(4,913)	32.30%
2016	280,436	87,464	94,279	(6,815)	33.62%
2015**	-	-	-	-	-

\*Effective July 1, 2017, the Fund's statute requires the Fund and the City of Houston to independently conduct annual Risk Sharing Valuation Studies (RSVS). The RSVS is now a component used to determine the City of Houston's Actuarially Determined Contribution rate to the Fund. In accordance with SB 2190, the City's fiscal year contributions are based on the mid-point between the Fund's actuary's and the City's actuary's July 1, 2016 Initial Risk Sharing Valuation contribution rates.

\*\* A funding valuation was not performed as of July 1, 2014; therefore, no actuarially determined contribution was calculated for the period July 1, 2014 to June 30, 2015

# SCHEDULE 3

## SCHEDULE OF INVESTMENT RETURNS (UNAUDITED)

Year Ended June 30	Annual Money-Weighted Rate Of Return, Net Of Investment Expense <sup>(1) (2)</sup>
2024	9.45%
2023	4.05%
2022	0.11%
2021	33.40%
2020	2.10%
2019	5.48%
2018	8.27%
2017	11.87%
2016	(1.29%)
2015	1.28%

<sup>1</sup> The money-weighted rate of return is the internal rate of return (IRR) on the Fund's investments, net of the Fund's investment expense, adjusted for the changing amounts actually invested. Accordingly, this calculation takes into account the effects of transactions that increase the amount of the Fund's investments (such as investment returns and contributions from employers and Fund members) and those that decrease the amount of pension Fund investments (such as benefit payments and Fund/investment expenses).

<sup>2</sup> Schedule is intended to show information for 10 years.

# NOTES TO REQUIRED SUPPLEMENTARY SCHEDULES (UNAUDITED)

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FOR YEAR ENDED JUNE 30, 2024

## NOTES TO SCHEDULE OF FUND CONTRIBUTIONS:

The Contributions related to the actuarially determined contribution is in accordance with Senate Bill 2190 (SB2190), which was adopted May 31, 2017. Effective July 1, 2017, SB2190 requires the Fund actuary and City actuary to separately prepare a draft of a Risk Sharing Valuation Study (RSVS).

The initial RSVS is dated as of July 1, 2016 and each RSVS uses the following assumptions:

- Use of an investment return assumption of not more than 7.00%;
- Ultimate Entry Age Method with liabilities allocated from date of entry to expected payment of benefit. Under this method, future normal cost for active employees is calculated based on the Fund provisions in effect for the most recently hired employees;
- An asset valuation method that recognizes gains and losses on the fair value of assets (based on the difference between the actual rate of return and the assumed rate of return) over five years. Past gains and losses were fully recognized in the Actuarial Value of Assets at July 1, 2016. New gains and losses will be recognized over five years beginning July 1, 2017;
- The use of a 30-year, closed, level percent of payroll amortization period, in which new gain/loss amortization bases are established each year. The Unfunded Actuarial Accrued Liability at July 1, 2016 is amortized as a level percentage of payroll over a closed amortization period of 30 years with payments effective for fiscal year beginning July 1, 2017. Additional actuarial experience losses will be amortized over a closed amortization period of 30 years in future valuations. If in any given year the Fund experiences an actuarial gain, any such gain will be used to offset the largest outstanding loss amortization base, if applicable;
- As noted in the "Addendum to the July 1, 2022 Proposed Risk Sharing Valuation Study" prepared by Buck and dated March 24, 2023, the remaining amortization payments as of July 1, 2022 for all the liability layers is 7.68.
- Payroll growth rate assumption of 2.75%, not to exceed 3% in future RSVS.

Upon completion of an annual RSVS, each actuary shall review and compare its counterpart's draft RSVS. If the difference between the two resulting City contribution rates is at or below 2%, the Fund actuary's RSVS will be used to determine the contribution rate for the fiscal year. If the difference is greater than 2%, the actuaries will have 20 business days to reconcile the contribution rates until the difference falls within 2%. If, however, the contribution rates cannot be reconciled, the arithmetic average will be used. If the resulting contribution rate is outside of certain bounds, SB2190 may require adjustments in plan provisions, assumptions, or funding methods. .

# NOTES TO REQUIRED SUPPLEMENTARY SCHEDULES (UNAUDITED) CONTINUED

FOR YEAR ENDED JUNE 30, 2024

## ACTUARIAL ASSUMPTIONS AND METHODS

<b>Assets valuation method</b>	Market value
<b>Actuarial Cost Method</b>	The Entry Age Normal Method (level percent of pay). In accordance with GASB 67, the Total Pension Liability for active members is valued as the total present value of benefits once they enter the DROP. For the funding valuation, the liability for these members is assumed to accumulate from their entry age until they are assumed to leave active service.

## KEY ECONOMIC ASSUMPTIONS

<b>Investment Return</b>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Real Rate of Return</td> <td style="text-align: right;">4.50%</td> </tr> <tr> <td>Price Inflation</td> <td style="text-align: right;">2.50%</td> </tr> <tr> <td>Total Nominal Rate</td> <td style="text-align: right;">7.00%</td> </tr> </table> <p>Expected future investment returns are assumed to be net of investment expenses.</p>	Real Rate of Return	4.50%	Price Inflation	2.50%	Total Nominal Rate	7.00%																					
Real Rate of Return	4.50%																											
Price Inflation	2.50%																											
Total Nominal Rate	7.00%																											
<b>Wage Inflation</b>	3.0%																											
<b>Payroll Growth Rate</b>	3.0%																											
<b>Individual Pay Increase Rate</b>	<p style="text-align: center;"><b>(Nominal = Merit + Wage Inflation)</b></p> <table style="width: 100%; border-collapse: collapse; margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="border-right: 1px solid black; border-bottom: 1px solid black;">Age</th> <th style="border-right: 1px solid black; border-bottom: 1px solid black;">Nominal</th> <th style="border-bottom: 1px solid black;">Merit</th> </tr> </thead> <tbody> <tr> <td style="border-right: 1px solid black;">20</td> <td style="border-right: 1px solid black; text-align: center;">7.00%</td> <td style="text-align: center;">4.00%</td> </tr> <tr> <td style="border-right: 1px solid black;">25</td> <td style="border-right: 1px solid black; text-align: center;">6.25</td> <td style="text-align: center;">3.25</td> </tr> <tr> <td style="border-right: 1px solid black;">30</td> <td style="border-right: 1px solid black; text-align: center;">5.50</td> <td style="text-align: center;">2.50</td> </tr> <tr> <td style="border-right: 1px solid black;">35</td> <td style="border-right: 1px solid black; text-align: center;">5.00</td> <td style="text-align: center;">2.00</td> </tr> <tr> <td style="border-right: 1px solid black;">40</td> <td style="border-right: 1px solid black; text-align: center;">4.00</td> <td style="text-align: center;">1.00</td> </tr> <tr> <td style="border-right: 1px solid black;">45</td> <td style="border-right: 1px solid black; text-align: center;">3.70</td> <td style="text-align: center;">0.70</td> </tr> <tr> <td style="border-right: 1px solid black;">50</td> <td style="border-right: 1px solid black; text-align: center;">3.40</td> <td style="text-align: center;">0.40</td> </tr> <tr> <td style="border-right: 1px solid black;">55</td> <td style="border-right: 1px solid black; text-align: center;">3.00</td> <td style="text-align: center;">0.00</td> </tr> </tbody> </table>	Age	Nominal	Merit	20	7.00%	4.00%	25	6.25	3.25	30	5.50	2.50	35	5.00	2.00	40	4.00	1.00	45	3.70	0.70	50	3.40	0.40	55	3.00	0.00
Age	Nominal	Merit																										
20	7.00%	4.00%																										
25	6.25	3.25																										
30	5.50	2.50																										
35	5.00	2.00																										
40	4.00	1.00																										
45	3.70	0.70																										
50	3.40	0.40																										
55	3.00	0.00																										

# NOTES TO REQUIRED SUPPLEMENTARY SCHEDULES (UNAUDITED) CONTINUED

FOR YEAR ENDED JUNE 30, 2024

RETIREMENT RATES   DEMOGRAPHIC ASSUMPTIONS	
Retirement Rates Number of Years of Service	Probability of Retiring Within One Year
Less than 25	2.0% <sup>1</sup>
25	2.0%
26	5.5%
27	5.5%
28	5.5%
29	5.5%
30	13.0%
31	15.0%
32	20.0%
33	20.0%
34	20.0%
35	30.0%
36	30.0%
37	40.0%
38	40.0%
39	40.0%
40+	100.0%

DROP DURATION	
Duration of DROP at Retirement	Percentage of Participants Electing Retirement at the Specified Duration
0	0%
3	0
5	10
8	20
10	45
13	25

<sup>1</sup> Participants eligible to enter the DROP in the future are not assumed to retire with less than 25 years of service before age 55

# NOTES TO REQUIRED SUPPLEMENTARY SCHEDULES (UNAUDITED) CONTINUED

FOR YEAR ENDED JUNE 30, 2024

Number of Years of Service of Actual Retirement	3 yr	5 yr	8 yr	10 yr	13 yr
20-24	0.0%	0.0%	0.0%	0.0%	0.0%
25-27	0.0%	100.0%	0.0%	0.0%	0.0%
28-29	0.0%	33.3%	66.7%	0.0%	0.0%
30-32	0.0%	13.3%	26.7%	60.0%	0.0%
33-40	0.0%	10.0%	20.0%	45.0%	25.0%

DROP balances for active members are assumed to be paid out over 15 years upon exiting the DROP. DROP balances of members who have left active service are assumed to be paid out over 7.5 years. Future DROP payments are discounted based on the difference between the assumed investment rate of return and the assumed DROP interest crediting rate.

## MORTALITY RATES

### Service Retirees and Contingent Annuities

SOA Public Safety (Below-Median, base year 2010) amount weighted tables generationally projected with Mortality Improvement Scale MP-2019. The base table for males is adjusted by 97.2% to reflect credible plan experience.

### Survivor Beneficiaries

SOA Public Contingent Survivor (Below-Median, base year 2010) amount weighted tables generationally projected with Mortality Improvement Scale MP-2019. The base table for females is adjusted by 106.0% to reflect credible plan experience.

### Disabled Retirees

SOA Public Safety Disabled Retiree (base year 2010) amount weighted tables generationally projected with Mortality Improvement Scale MP-2019.

### All others, including active and vested terminated participants

SOA Public Safety (Below-Median, base year 2010) amount weighted tables generationally projected with Mortality Improvement Scale MP-2019.



# NOTES TO REQUIRED SUPPLEMENTARY SCHEDULES (UNAUDITED) CONTINUED

FOR YEAR ENDED JUNE 30, 2024

DISABILITY RATES   GRADUATED RATES Sample Rates per 100 Participants	
Age	Disability
20	0.45
25	0.45
30	0.45
35	1.00
40	1.00
45	1.00
50	1.00
55	1.00
60	1.00

PERCENTAGE OF DEATHS AND DISABILITIES IN THE LINE OF DUTY		
Age	Death	Disability
25	80%	80%
35	80	80
45	40	80
55	20	80

TERMINATION RATES	
Age	Termination Rate
20	2.40%
25	2.40
30	2.40
35	1.50
40	0.75
45	0.75
50	0.00

<sup>1</sup> Percentage of disabilities in the line of duty is assumed to be a flat 80% for all ages. 50% of firefighters who become disabled in the line of duty are assumed to be incapable of performing any substantial gainful activity

# NOTES TO REQUIRED SUPPLEMENTARY SCHEDULES (UNAUDITED) CONTINUED

FOR YEAR ENDED JUNE 30, 2024

For members hired prior to July 1, 2017 who are terminating with at least 10 years but less than 20 years of service:

- 80% will elect a contribution refund
- 20% will elect a deferred monthly pension benefit

## MARITAL STATUS AT BENEFIT ELIGIBILITY

### Percentage married

82% of male participants are assumed to be married, and 85% of female participants are assumed to be married. No beneficiaries other than the spouse assumed.

### Age difference

Male participants are assumed to be two years older than wives, and female participants are assumed to be six years younger than their husbands.

## DEVELOPMENT OF VALUATION PAY

The Risk Sharing Valuation Study pay is developed by increasing the prior year's pay with the nominal individual pay increase rate. For participants reported with compensation less than \$10,000, their compensation is set equal to their most recent annual compensation amount in excess of \$10,000.

## AGE AT WHICH BENEFITS END FOR CHILD BENEFICIARIES

Benefits are assumed to end once the child beneficiary reaches age 23.

## FUTURE DROP RETURNS

Future DROP interest crediting rates are assumed to be equal to 65% of the assumed investment return (currently 65% of 7.00% equals 4.55%).

## FUTURE COST-OF-LIVING ADJUSTMENTS

COLAs are assumed to be equal to the assumed investment return less 4.75% (currently 7.00% minus 4.75% equals 2.25%).

## CENSUS DATES

All dates in the census used to calculate liabilities are set as July 1st in the year of the event.

## MISSING DATA ASSUMPTIONS

### Pay for New Hires

None were missing.

### Employee Contributions

Based on the prior year's contributions and current year's pay.

### Benefits Not Valued

The proportional retirement program between the Houston municipal, police and fire pension funds which allows for combining service credit from two or more City of Houston pension plans was not valued because its impact is expected not to be material.

## SUMMARY OF CHANGES FROM THE GASB 67 ACCOUNTING VALUATION FOR THE FISCAL YEAR ENDING JUNE 30, 2023

The expected investment return was decreased from 7.25% to 7.00%.

This change increased the total pension liability by approximately \$11.7M.

02

SECTION 02

***ADDITIONAL  
SUPPLEMENTARY  
INFORMATION***

# SCHEDULE 4

## INVESTMENT, PROFESSIONAL SERVICES AND ADMINISTRATIVE EXPENSES FOR YEARS ENDED JUNE 30, 2024 AND 2023

	2024	2023
<b>Investment Services:</b>		
Custodial services	\$ 203,355	\$ 181,166
Money management services	3,037,697	5,107,654
Consulting	981,015	1,052,397
Legal	157,022	405,728
Investment research	112,069	103,279
Department operating expenses	2,277,552	2,204,647
<b>Total investment services</b>	<b>\$ 6,768,710</b>	<b>\$ 9,054,871</b>
<b>Professional services:</b>		
Actuarial services	\$ 137,369	\$ 179,076
Audit and accounting services	68,814	55,000
Consulting and professional services	71,644	132,789
Government relations	517,200	630,000
Legal services	37,856	78,860
Medical examinations	33,519	22,850
<b>Total professional services</b>	<b>\$ 866,402</b>	<b>\$ 1,098,575</b>
<b>Administrative expenses:</b>		
Depreciation	\$ 424,451	\$ 424,100
Continuing education	63,129	70,063
Furniture, equipment and supplies	97,424	125,551
Insurance	559,488	546,002
Office cost	3,173,442	3,046,631
Facility maintenance	150,114	153,951
Utilities	125,458	116,110
<b>Total administrative expenses</b>	<b>\$ 4,593,506</b>	<b>\$ 4,482,408</b>

See accompanying independent auditors' report.

# SCHEDULE 5

## SUMMARY OF INVESTMENT SERVICES YEAR ENDED JUNE 30, 2024

Individual Or Firm Name	Amount	Nature Of Services
The Bank of New York Mellon Corporation	\$ 203,355	Custodial
BlackRock Institutional Trust Company, N.A.	8,615	Money Management
Newton Investment Management North America, LLC	1,012,058	Money Management
Mellon Investments Corporation	293,157	Money Management
Shenkman Capital Management, Inc.	1,345,224	Money Management
State Street Global Advisors Trust Company	211,928	Money Management
Schroder Investment Management North America, Inc.	166,715	Money Management
Blackstone Management Partners, L.L.C.	381,384	Money Management
Empower Trust Company, LLC	2,881	Consulting
StepStone Group, LP	596,750	Consulting
DLA Piper, LLP	157,022	Legal
Bloomberg Index Services Limited	4,000	Investment Research
Frank Russell Company	1,200	Investment Research
Hedge Fund Research	6,542	Investment Research
Institutional Limited Partners Association	14,000	Investment Research
Informa Investment Solutions, Inc	27,823	Investment Research
MSCI, Inc	1,000	Investment Research
S&P Global Market Intelligence, LLC	7,000	Investment Research
The Burgiss Group, LLC	50,505	Investment Research
	2,277,551	Dept Operating Exp
<b>Total Investment Services</b>	<b>\$ 6,768,710</b>	

See accompanying independent auditors' report.

# SCHEDULE 5 CONTINUED

## SUMMARY OF PROFESSIONAL SERVICES YEAR ENDED JUNE 30, 2024

Individual Or Firm Name	Amount	Nature Of Services
Buck Global, LLC	\$ 137,369	Actuarial Services
McConnell & Jones, LLP	61,200	Audit
Election Services	7,614	Audit
Begala McGarth, LLC	34,000	Consulting
Empower Trust Company, LLC	11,358	Consulting
Encore Support System	134	Consulting
G3 Public Relations	12,000	Consulting
Levi, Ray & Shoup, Inc	3,297	Consulting
Network international	250	Consulting
Payscale	4,536	Consulting
Bayside Printing Company, Inc	1,269	Consulting/printing/design
Limb Design, Inc	4,800	Consulting/printing/design
Cornerstone Government Affairs, Inc	180,000	Government Relations
Delisi Communications, Inc	144,000	Government Relations
One World Strategy Group, LLC	60,000	Government Relations
William Jensen, PLLC	133,200	Government Relations
Clark Hill Strasburger	17,219	Legal
Jackson Walker, LLP	20,637	Legal
Baylor College of Medicin	462	Medical Examinations
Exam Coordinators Network	33,057	Medical Examinations
<b>Total Professional Services</b>	<b>\$ 866,402</b>	

See accompanying independent auditors' report.

# 03

SECTION 03

*INVESTMENT  
INFORMATION*



# REPORT OF THE CHIEF INVESTMENT OFFICER & OUTLINE OF INVESTMENT POLICIES

Ajit Singh, FRM, CAIA

## REPORT OF CHIEF INVESTMENT OFFICER

The primary goal of the Houston Firefighters’ Relief and Retirement Fund’s (Fund) investment program is to grow the assets of the Fund while maintaining the ability to pay the benefits promised to retirees and beneficiaries. This shall be achieved by earning an average annual return of 7.00% over a 10-year period.

The internal objective of the Fund’s investment program is to generate an aggregate return in excess of the Fund’s Policy Benchmark over a five-year period. The secondary objective is to continually improve the administration, oversight, and Trustee education of the Fund’s investment program.

## PORTFOLIO RESULTS<sup>1</sup>

The Houston Firefighters’ Relief and Retirement Fund’s investment portfolio concluded the fiscal year ending June 30, 2024, with a total portfolio investment return of 9.6% gross, outperforming the policy benchmark return of 9.3% by 0.3%. Public equities ended the year with 17.5%, fixed income with 10.2%, hedge funds with 18.3%, private equity with 4.3%, private debt with 13.1%, and real estate with -2.8%. Hedge Funds, Digital Assets, and Fixed Income were the biggest contributors to the relative outperformance of the policy benchmark.

The Fund is involved in investing in a wide range of public and private market strategies on a global basis. These investment strategies are subject to various risks, including interest rate risk, market risk, geopolitical risk, and credit risk. In Fiscal Year 2024, the portfolio was impacted by several risks, including heightened geopolitical tensions, ongoing global inflation, and election cycles in various regions of the world. The rise in interest rates had the effect of slowing down economic growth and deal-making activity.

It is anticipated that some of the risks will be resolved to some extent in Fiscal Year 2025.

	7-YEAR	10-YEAR
<b>HFRRF Total Fund<sup>1</sup></b>	8.6	7.2
<b>Standard &amp; Poor’s 500 Index</b>	14.3	12.9
<b>Barclays Universal Index</b>	1.2	1.6
<b>Public Pension Fund Peers – Median<sup>2</sup></b>	8.0	7.4

<sup>1</sup> This information is gross of Fund expenses and investment fees (with the exception of commingled funds and partnerships whose fair value is reported as net asset values) and as such inclusive of management fees and expenses.

<sup>2</sup> Source: June 30, Wilshire Trust Universe Comparison Services report (TUCS).

## OUTLINE OF INVESTMENT POLICIES

The purpose of this Investment Policy Statement (IPS) is to assist the Board of Trustees (Board)/Investment Committee (IC) of the Fund in the investment and management of the Fund’s assets. The IPS sets forth those factors governing or guiding the investment policy of the Fund. The IPS shall assist the Board to increase the corpus of the Fund’s assets while maintaining the ability to pay those benefits determined by statute to the Fund retirees and beneficiaries. The Board manages the investment

policy of the Fund in compliance with all applicable federal and state statutes and regulations concerning the investment of pension assets. Accordingly, the IPS shall be construed in a manner to be consistent with applicable laws and regulations. The authority to amend these policies and procedures rests solely with the Board. The IC is a committee of the whole Board and has the authority to act on all matters related to investments.

# OUTLINE OF INVESTMENT POLICIES CONTINUED

## INVESTMENT PHILOSOPHY

In developing the investment policy, the IC is guided by a set of precepts from which all investment decisions are made, and which establish the foundation and direction for all investment activity. These precepts are applied by the IC, recognizing the importance of asset allocation and the benefits of diversification. The guiding precepts are as follows: Long-term Focus, Active Management, Strategic Asset Allocation, Tactical Asset Allocation, Liquidity, and Diversification.

## ASSET ALLOCATION AND REBALANCING

The IC is responsible for setting the Fund's asset allocation targets, ranges, benchmarks, and objectives. The IC allocates the assets of the Fund to several asset classes with the objective of optimizing the investment return of the Fund within the framework of acceptable risk and diversification.

The IC will undertake a comprehensive review of the Fund's asset allocation targets and ranges through a periodic Asset Liability Management (ALM) Study. Such study shall recommend benchmarks for the Fund and shall help place the development of investment policy into the context of future benefit payments, liabilities, required funding, and the prospective funded status of liabilities. The primary objective of the ALM Study is to determine the asset class mix for the Policy Benchmark consistent with the Risk Appetite of the Fund's IP. In addition, the ALM Study proposes benchmarks for various asset classes which collectively have the best probability of meeting the expected returns. The Fund undertook an Asset-Liability and Investment Strategy Project in the first quarter of the fiscal year ending on June 30, 2022.

ASSET CLASS	TARGET	BENCHMARK
<b>Public Markets</b>		
Cash & Short Term Cash Equivalent	2%	BofA ML 9-12 Mo. US Treasury Index*
Public Equities - Domestic	19%	Russell 3000 Index
Public Equities - International	19%	MSCI All Country World Ex-US Index
Aggregate Bonds	5%	Barclays US Aggregate Index**
Intermediate Credit	3%	Barclays US Aggregate Index**
Intermediate High Yield	5%	CS LLI 50%/ICE BofAML HY 50%**
Hedge Funds	2%	70% HFR Risk Parity V10 Inst Idx/30% Cash + CPI***
<b>Private Markets</b>		
Private Equity	25%	Cambridge Associates US Private Equity 10A
Private Debt	10%	CS LLI 50%/ICE BofAML HY 50%
Real Estate	10%	NCREIF Property****

\*Cash benchmark: Citigroup 3-month T-bill (4/30/1988 - 8/31/1997); ML 90-day T-bill Index (9/1/1997 - 5/31/2000); ML 1-Yr T-bill Index (6/1/2000 - 11/30/2009); 50% Barclays Capital 3-mo Tr Bill / 50% Barclays Capital 1-3 Yr Tr (12/1/2009 - 6/30/2013); BofA Merrill Lynch 9-12 Month US Treasury Index (7/1/2013 - Present).

\*\*Fixed Income benchmark: Bloomberg Barclays US Universal Index (1/1/1990 - 6/30/2016); Bloomberg Barclays US Aggregate Bond Index (7/1/2016 - 10/31/2021). Effective 11/1/2021, the Fixed Income asset class was separated into Aggregate Bonds, Intermediate Credit, and Intermediate High Yield with benchmarks as shown in the above chart.

\*\*\*Hedge Funds benchmark: LIBOR + 3% (6/1/2004 - 10/31/2021); 70% HFR RiskParityV10Inst Idx/30% Cash + CPI (November 1, 2021 - Present).

\*\*\*\*NCREIF Timber/Property: National Council of Real Estate Investment Fiduciaries (NCREIF) Timberland Index / Property Index with a 70/30 split (Inception to 6/30/2008); 50/50 split (7/1/2008 to 10/31/2021); NCREIF Property (11/1/2021 to Present).

## REBALANCING

Each asset class is allowed to operate within its specific range established by the IC. Market movements may make asset class weights fall outside of their ranges. An asset class is considered outside its range for the purpose of rebalancing when the average weight of the asset class during the calendar month falls outside its range. The CIO may rebalance public asset classes within Tactical Asset Allocation (TAA) ranges and disclose the rebalancing activities to the IC in the next monthly meeting.

If there is expected to be a near-term large cash outflow, the CIO may replenish cash accounts from public market asset classes, taking into consideration liquidity, trading cost, and TAA ranges. The CIO shall disclose the rebalancing activities to the IC in the next monthly meeting.

## RISK MANAGEMENT

The risk objective is to follow the approved Risk Appetite and the Risk Tolerance for investments.

The Risk Appetite is implicit in the choice of the Strategic Asset Allocation (SAA). It is a rolling three-year standard deviation from the monthly returns of the SAA.

The Risk Tolerance measures the acceptable variation in outcomes the Fund seeks to achieve. The Risk Tolerance of the Fund is targeted as 400 basis points, measured as Tracking Error of the standard deviation of excess returns from the total NAV of Fund assets relative to the Policy Benchmark using monthly time series returns over a three-year rolling period.

# OUTLINE OF INVESTMENT POLICIES CONTINUED

## MANAGER SELECTION

To assist the IC in the investment management of the Fund's assets, professional Investment Managers may be retained to implement certain strategies selected by the IC with guidance from the investment staff.

The appropriateness of seeking a new or replacement Investment Manager will be determined by the Fund's most current investment strategy, philosophy, asset class ranges, capital availability or the advisability of replacing an existing Investor Manager in accordance with the retention guidelines of this IPS.

The investment staff, for the recommendation to the IC, shall use a disciplined due diligence process to screen and select Investment Managers consistent with the asset class placement under consideration. No Investment Manager shall be given consideration by the IC until/unless the Investment Manager has undergone such due diligence process.

Any new mandate awarded to the existing Investment Managers or a recommendation to modify an existing mandate needs to go through the full due diligence process.

All relevant due diligence documentation for Investment Manager selection, review, retention, and termination purposes, should be retained as per the Fund's documentation retention policy.

A recommendation for a new mandate centered around terms specific to the recommended fund shall be presented by the investment staff for approval by the IC. As deemed appropriate by the IC, some outstanding matters may be delegated for successful resolution by consensus of the Investments Department and Legal Department (or assigned counsel, if applicable), with subsequent reporting of conclusion by the CIO

to the IC. The mandate is initiated only after all appropriate negotiations, documentation, and other legal matters are successfully resolved.

Investment staff shall confer with Fund Investment Managers on a regular basis for the purposes of ongoing due diligence and monitoring.

Any Investment Manager may be required to make a presentation to the IC, as deemed appropriate by the CIO or the IC.

## PERFORMANCE SUMMARIES

The reported investment performance of the Fund will be calculated by the Fund's custodian bank, an unaffiliated organization, with recognized expertise in this field and fiduciary level reporting responsibility to the Fund's IC. A calculation will be made for the Fund's aggregate, asset class, and Investment Manager performance consistent with the Global Investment Performance Standards (GIPS®) or a similar standard. Additionally, each Investment Manager is required to keep performance records and report periodically to the Fund's custodian, internal investment staff, and third-party auditor. The Fund's custodian bank will typically perform a calculation for any Investment Manager that has its Fund assets under management custodied by the Fund's custodian bank. If the custodian does not have custody of underlying assets of an investment, the custodian will rely on the NAV as duly reported to calculate aggregate Fund level performance.

A time-weighted rate of return calculation shall be used for all Market-Based Strategies and hedge funds. An internal rate of return shall be calculated for Private Investments.

The fair value of the Fund shall be maintained on an accrual basis in compliance with applicable Government Accounting Standards Board statements and applicable laws and regulations.

### FAIR VALUE AND CURRENT ASSET ALLOCATION (Dollars In Millions)

	June 30, 2024 Fair Value <sup>1</sup>	Percent	June 30, 2023 Fair Value <sup>1</sup>	Percent
Cash Equivalents	\$132	3%	\$153	3%
Aggregate Bonds	37	1%	147	3%
Intermediate Credit	0	0%	1	0%
Intermediate High Yield	652	12%	736	14%
Domestic Equity	913	17%	725	14%
International Equity	581	11%	677	13%
Hedge Funds	130	2%	154	3%
Digital Assets	24	0%	12	0%
Private Debt	609	11%	432	9%
Private Equity	1,872	35%	1,672	33%
Real Estate	423	8%	396	8%
	<b>\$5,373</b>	<b>100%</b>	<b>\$5,105</b>	<b>100%</b>

<sup>1</sup>The fair value shown in this report includes accrued interest/dividends and payables/receivables on pending trades. Values shown above will differ from total assets shown in the Statements of Fiduciary Net Position for the HFRF Total Portfolio by the amount of land, building, furniture, fixtures, and equipment as well as non-investments related payables/receivables.

# INVESTMENT RESULTS

(GROSS, AS OF 6.30.2024)

TOTAL FUND RETURN VS. POLICY BENCHMARK	FY 2024	FY 2023	FY 2022	FY 2021	FY 2020	3-YEAR	5-YEAR	7-YEAR	10-YEAR
<b>HFRRF - Total Portfolio</b>	9.6	4.2	0.1	33.7	2.1	4.6	9.3	8.6	7.2
<b>Policy Benchmark</b>	9.3	6.3	(4.0)	22.6	2.8	3.7	7.0	7.1	6.5

RETURNS BY ASSET CLASS	FY 2024	FY 2023	FY 2022	FY 2021	FY 2020	3-YEAR	5-YEAR	7-YEAR	10-YEAR
<b>HFRRF - Cash</b>	4.5	2.9	(5.0)	0.3	3.1	0.7	1.1	1.6	1.9
<b>BofA ML 9-12 Mo. US Treasury Index*</b>	5.0	1.9	(1.7)	0.1	2.9	1.7	1.6	1.7	1.3
<b>HFRRF - Domestic Equity</b>	23.0	18.1	(15.1)	41.3	7.7	7.3	13.4	12.9	10.4
<b>Russell 3000 Index</b>	23.1	19.0	(13.9)	44.2	6.5	8.1	14.1	13.5	12.1
<b>HFRRF - Fixed Income</b>	10.2	9.4	(9.0)	8.6	6.2	3.1	4.8	4.4	4.2
<b>Bloomberg Barclays US Aggregate Bond Index**</b>	2.6	(0.9)	(10.3)	(0.3)	8.7	(3.0)	(0.2)	0.9	1.3
<b>HFRRF - International Equity</b>	11.0	11.9	(21.7)	34.6	(4.2)	(0.9)	4.6	4.4	2.9
<b>MSCI All Country World Ex-US Index</b>	11.6	12.7	(19.4)	35.7	(4.8)	0.5	5.5	5.2	3.8
<b>HFRRF - Hedge Funds</b>	18.3	2.2	(8.6)	14.7	(4.2)	3.4	4.0	4.6	3.5
<b>70% HFR RiskParityV10Inst Idx/ 30% Cash + CPI Benchmark***</b>	8.5	1.2	(8.6)	3.2	4.7	0.1	1.6	2.6	2.9
<b>HFRRF - Digital Assets</b>	94.8	78.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Cash + CPI</b>	4.2	3.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>HFRRF - Private Debt</b>	13.1	4.1	11.8	22.0	2.1	9.6	10.4	N/A	N/A
<b>S&amp;P LSTA 50%/ICE BofAML HY 50%</b>	10.8	9.6	(7.7)	13.6	(1.5)	3.9	4.6	N/A	N/A
<b>HFRRF - Private Equity</b>	4.3	(5.8)	25.3	65.4	2.2	7.2	15.8	14.9	13.4
<b>CA US Private Equity 10A</b>	8.4	(0.3)	28.2	51.7	(3.1)	11.5	15.4	15.3	13.9
<b>HFRRF - Real Estate</b>	(2.8)	2.7	24.0	12.8	2.6	7.4	7.5	7.0	7.5
<b>NCREIF Property****</b>	(5.5)	(6.6)	19.5	5.2	1.5	1.8	2.4	3.2	4.6

\*Cash benchmark: Citigroup 3-month T-bill (4/30/1988 - 8/31/1997); ML 90-day T-bill Index (9/1/1997 - 5/31/2000); ML 1-Yr T-bill Index (6/1/2000 - 11/30/2009); 50% Barclays Capital 3-mo Tr Bill / 50% Barclays Capital 1-3 Yr Tr (12/1/2009 - 6/30/2013); BofA Merrill Lynch 9-12 Month US Treasury Index (7/1/2013 - Present).

\*\*Fixed Income benchmark: Bloomberg Barclays US Universal Index (1/1/1990 - 6/30/2016); Bloomberg Barclays US Aggregate Bond Index (7/1/2016 - Present).

\*\*\*Hedge Funds benchmark: LIBOR + 3% (6/1/2004 - 10/31/2021); 70% HFR RiskParityV10Inst Idx / 30% Cash + CPI (November 1, 2021 - Present).

\*\*\*\*Real Estate benchmark: National Council of Real Estate Investment Fiduciaries (NCREIF) Timberland Index / Property Index with a 70% / 30% split (Inception to 6/30/2008); NCREIF Timberland Index / Property Index 50% / 50% split (7/1/2008 to 10/31/2021); NCREIF Property (11/1/2021 - Present).

# COMPARISON OF INVESTMENT RETURNS

(GROSS, AS OF 6.30.2024)

TOTAL FUND RETURN VS POLICY BENCHMARK											
Year	Total Fund	Median Total Fund*	Fund Domestic Equity Inv	Russell 3000 Stock Ind	S&P 500	Fund Fixed Income Inv	Bloomberg Universal	Bloomberg Gov/Credit	Fund Intl Equity	MSCI World Ex US (Net Div)	MSCI EAFE (Net Div)
2015	1.5	3.4	0.4	7.3	7.4	0.2	1.6	1.7	(3.9)	(4.9)	(4.2)
2016	(1.0)	1.1	(2.7)	2.1	4.0	6.5	5.8	6.7	(13.8)	(9.8)	(10.2)
2017	12.0	12.4	18.1	18.5	17.9	5.0	0.9	(0.4)	19.4	19.5	20.3
2018	8.3	8.6	13.9	14.8	14.4	0.2	(0.3)	(0.6)	7.5	7.0	6.8
2019	5.7	6.6	9.4	9.0	10.4	6.5	8.1	8.5	0.0	1.3	1.1
2020	2.1	3.2	7.7	6.5	7.5	6.2	7.9	10.0	(4.2)	(5.4)	(5.1)
2021	33.7	27.0	41.3	44.2	40.8	8.6	1.1	(0.4)	34.6	33.6	32.4
2022	0.1	(8.4)	(15.1)	(13.9)	(10.6)	(9.0)	(10.9)	(10.9)	(21.7)	(16.8)	(17.8)
2023	4.2	8.3	18.1	19.0	19.6	9.4	(0.0)	(0.7)	11.9	17.4	18.8
2024	9.6	10.5	23.0	23.1	24.6	10.2	3.5	2.7	11.0	11.2	11.5

\*Median total fund returns are provided by Wilshire Trust Universe Comparison Service (TUCS) as of June 30, 'Total Returns of Master Trusts - Public'.

# ANNUALIZED RETURNS

(GROSS, AS OF 6.30.2024)

	Total Fund	Median Total Fund*	Fund Domestic Equity Inv*	Russell 3000 Stock Index	S&P 500 Stock Index	Fund Fixed Income Inv	Bloomberg Universal	Bloomberg Gov/Credit
<b>2-YEAR</b>	6.9	9.6	20.5	21.0	22.0	9.8	1.7	1.0
<b>3-YEAR</b>	4.6	3.9	7.3	8.1	10.0	3.1	(2.7)	(3.1)
<b>5-YEAR</b>	9.3	8.0	13.4	14.1	15.0	4.8	0.1	(0.1)
<b>7-YEAR</b>	8.6	8.0	12.9	13.5	14.3	4.4	1.2	1.0
<b>10-YEAR</b>	7.2	7.4	10.4	12.1	12.9	4.2	1.6	1.5

\*Median total fund returns are provided by Wilshire Trust Universe Comparison Service (TUCS) as of June 30, 'Total Returns of Master Trusts - Public'.

# TEN LARGEST EQUITY INVESTMENT HOLDINGS

(AS OF 6.30.2024) (INCLUDING COMMINGLED FUNDS)

DESCRIPTION	FAIR VALUE	PERCENT OF TOTAL FAIR VALUE
BNYM Mellon DB SL Broad Market Stock Index Fund	\$ 681,297,008	12.92%
BNYM Mellon DB SL ACWI Ex-U.S. Fund	507,040,769	9.61%
BlackRock Russell 3000 Fund	97,191,905	1.84%
iShares Gold Trust Micro	96,597,863	1.83%
BNYM Newton NSL Dynamic U.S. Equity Fund	37,399,045	0.71%
BNYM Newton NSL Dynamic U.S. Equity Large Cap Fund	35,856,671	0.68%
BNYM Newton DB NSL Dynamic Global Ex-U.S. Equity Fund	31,721,723	0.60%
iShares Bitcoin Trust ETF	24,102,840	0.46%
Russell 1000 Index NL CTF	18,285,200	0.35%
MSCI Emerging Markets Index NL CTF	14,642,820	0.28%

The complete list of portfolio holdings can be obtained through a submission of a public information request for HFRRF's comprehensive integrated itemization of the portfolio.

# TEN LARGEST BOND INVESTMENT HOLDINGS

(AS OF 6.30.2024) (INCLUDING COMMINGLED FUNDS)

DESCRIPTION	FAIR VALUE	PERCENT OF TOTAL FAIR VALUE
KKR Global Credit Opportunities Fund	\$ 284,173,294	5.39%
U.S. Aggregate Bond Index NL CTF	10,256,897	0.19%
SPDR Bloomberg High Yield Bond	7,031,882	0.13%
SPDR Blackstone Senior Loan	6,728,044	0.13%
Boxer Parent Co Inc 144A 7.125% 10/02/2025 DD 06/01/20	4,396,646	0.08%
Caesars Entertainment Inc 144A 8.125% 07/01/2027 DD 07/06/20	3,861,911	0.07%
IRB Holding Corp 144A 7.000% 06/15/2025 DD 05/21/20	3,644,984	0.07%
Select Medical Corp 144A 6.250% 08/15/2026 DD 08/01/19	3,640,680	0.07%
Albertsons Cos Inc/ Safe 144A 7.500% 03/15/2026 DD 02/05/19	3,612,402	0.07%
IQVIA Inc 144A 5.000% 10/15/2026 DD 09/28/16	3,471,769	0.07%

# FEES FOR INVESTMENT SERVICES

FISCAL YEAR 2024

ASSET CLASS	ASSETS UNDER MANAGEMENT	MANAGEMENT FEES PAID FROM TRUST	MANAGEMENT FEES NETTED FROM RETURNS	CARRIED INTEREST <sup>2</sup>	TOTAL DIRECT AND INDIRECT FEES	BASIS POINTS
Cash Equivalents Manager <sup>1</sup>	\$ 102,667,897	\$ 122,425	-	-	\$ 122,425	0.12%
Domestic Equity Managers	874,712,543	687,721	-	-	687,721	0.08%
International Equity Managers	543,347,225	503,684	59,955	-	563,639	0.10%
Fixed Income Managers	602,542,471	1,511,939	1,136,035	1,299,554	3,947,528	0.66%
Hedge Fund Managers	118,359,411	-	387,761	-	387,761	0.33%
Digital Assets Managers	24,102,840	-	48,193	-	48,193	0.20%
Private Debt Managers	609,168,316	-	6,583,792	928,200	7,511,992	1.23%
Private Equity Managers	1,871,546,201	-	28,667,187	11,351,578	40,018,765	2.14%
Real Estate Managers	423,037,164	-	6,997,896	1,195,108	8,193,004	1.94%
Global Tactical Asset Allocation Manager	104,651,902	211,928	132,613	-	344,541	0.33%
<b>OTHER INVESTMENT SERVICES</b>						
Custodian Bank	\$ 5,274,135,970	\$ 203,355	-	-	\$ 203,355	0.00%
<b>Total Fees For Investment Services</b>	<b>\$ 5,274,135,970</b>	<b>\$ 3,241,052</b>	<b>\$ 44,013,432</b>	<b>\$ 14,774,440</b>	<b>\$ 62,028,924</b>	<b>1.18%</b>

<sup>1</sup>Includes residual cash from separate accounts, which is swept daily and included in the Super STIF cash management portfolio.

<sup>2</sup>Carried Interest is realized/paid during the fiscal year.

# BROKERAGE COMMISSIONS

FISCAL YEAR 2024

BROKER NAME	NUMBER OF SHARES	COMMISSIONS	CENTS/SHARE
BNY Capital Markets Inc, New York	706,000	\$ 14,120	2.0
Broadcort Capital Corp, New York	155,522	1,089	0.7
CITADEL SECURITIES INSTL LLC, CHICAGO	207,205	1,900	0.9
Citigroup Global Markets, Inc., New York	114,510	960	0.8
Fidelity Capital Markets, New York	2,251	16	0.7
Goldman Sachs & Co, NY	208,869	2,317	1.1
Instinet Clearing Ser Inc, New York	41,214	288	0.7
J.P Morgan Securities Inc, New York	123,377	864	0.7
Jane Street Execution Services, New York	242,485	1,837	0.8
Luminex Trading and Analytics, Boston	1,417	7	0.5
Merrill Lynch Pierce Fenner Smith Inc NY	177,668	1,689	1.0
Merrill Lynch Professional CLRG	64,642	455	0.7
Mischler Financial Group Inc, New York	22,846	160	0.7
UBS Securities LLC, Stamford	11,480	80	0.7
Virtu Americas LLC, New York	171,969	1,303	0.8
Williams Capital Group LP, Jersey City	4,479	31	0.7
<b>Total</b>	<b>2,255,934</b>	<b>\$ 27,116</b>	

# 04

SECTION 04

## *ACTUARIAL INFORMATION*



October 11, 2024

Board of Trustees  
Houston Firefighter's Relief and Retirement Fund  
4225 Interwood North Parkway  
Houston, TX 77032-3866

**Re: Actuarial Certification**

Dear Board Members:

As required under Senate Bill 2190, effective July 2017, Houston Firefighters' Relief and Retirement Fund (Fund) and the City of Houston (City) are independently required to conduct an annual Risk Sharing Valuation Study (RSVS) to determine the City of Houston contributions.

Pursuant to our engagement to provide actuarial services to the Fund, we prepared the RSVS for the Fund as of July 1, 2023. We certify that the information contained in the Actuarial Report dated November 22, 2023, including the addendum dated April 30, 2024, has been prepared in accordance with the appropriate Actuarial Standards of Practice. To the best of our knowledge, the information fairly presents the actuarial position of the Fund as of July 1, 2023 for financial reporting purposes on the basis of the actuarial assumptions, methods and Fund provisions set forth herein.

The following tables and information contained in Section 4 (Actuarial Information) of the HFRRF Annual Comprehensive Financial Report (ACFR) were prepared by Gallagher:

- Risk Sharing Valuation Results, as revised by the Addendum
- Actuarial Investment Gain (Loss)
- Schedule of Actuarial Investment Gains (Losses)
- Actuarial Value of Assets
- Analysis of Change in Unfunded liability
- Development of Liability Layer for Plan Year Ending June 30, 2023
- Amortization Schedule as of July 1, 2023 (\$000), as revised by the Addendum
- Historical Unfunded Actuarial Accrued Liability
- Historical Solvency Test
- Appendix A: Summary of Actuarial Methods and Assumptions
- Appendix B: Summary of Plan Provisions
- Appendix C: Participant Information
- Historical Active and DROP Participant Data
- Appendix D: Risk Information
- Addendum to the July 1, 2023 Proposed Risk Sharing Valuation Study

We certify that the information presented herein is accurate and fairly portrays the actuarial position of HFRRF as of July 1, 2023.

The RSVS reflects the benefit provisions of the Fund as amended by, as well as funding policies mandated by, Senate Bill 2190.

In preparing the actuarial results, we have relied upon information provided by the Board of Trustees regarding plan participants, plan assets, contribution rates and other matters used in the actuarial valuation. Although we did not audit the data, we reviewed the data for reasonableness and consistency with the prior year's information. The results of the valuation are dependent on the accuracy of the data.

The prior actuaries prepared historical information for 2004 and prior fiscal years. We did not verify or provide an actuarial review of this historical information.

The Board of Trustees selected the actuarial methods and assumptions used in the valuation. In accordance with Senate Bill 2190, an experience study at least once every four years, the most recent having been made as of June 30, 2019. This RSVS was prepared on the basis of the demographic and economic assumptions that were recommended on the basis of the July 1, 2015 – June 30, 2019 Experience Review and approved by the Board of Trustees at its October 20, 2020, meeting, which includes a 7.00% per annum rate of investment return.

In our opinion, the actuarial assumptions used for funding purposes are reasonably related to the experience of the Fund and to reasonable long-term expectations. These assumptions were selected in accordance with applicable Actuarial Standards of Practice published by the Actuarial Standards Board.

We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. Except as noted below, the assumptions and methods used for funding purposes meet the requirements of the Actuarial Standards of Practice (ASOP), in particular ASOP Nos. 4, 27 and 35.

- The Ultimate Entry Age Normal Cost method is a variation of Entry Age Normal Cost, where the normal cost is calculated for each active member based on the Fund provisions applicable to new members of the Fund. As the Fund has a lower annual cost for new members hired on or after July 1, 2017, use of the Ultimate Entry Age Normal Cost method lowers the normal cost and increases the actuarial accrued liability, as compared to the Entry Age Normal Cost method.
- Based on the statutory requirements, it is our understanding that the actual City contribution rate may be established as an average of the contribution rates shown in this report and those shown in the Risk Sharing Valuation Study prepared by the City's actuary. If future contributions are established in this manner at levels below those presented in this report, the Fund may not be expected to achieve a fully funded position over the 30-year time horizon as contemplated in the statute based on the data, assumptions and methods set forth in this report.

Where presented, references to “funded ratio” and “unfunded accrued liability” typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets could result in different funded ratios and unfunded accrued liabilities.

Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the Fund if the Fund were to settle a portion or all of its liabilities.

The use of this report for any other purpose or by anyone other than the Board may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, Gallagher recommends requesting it to perform an advance review of any statement, document, or filing based on information contained in this report. Gallagher will accept no liability for any such statement, document or filing made without prior review by Gallagher.

Future actuarial measurements may differ significantly from current measurements due to Fund experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. An analysis of the potential range of such future differences is beyond the scope of the RSVS.

Actuarial Standard of Practice No. 56 (“ASOP 56”) provides guidance to actuaries when performing actuarial services with respect to designing, developing, selecting, modifying, using, reviewing, or evaluating models. Gallagher uses third-party software in the performance of annual actuarial valuations and projections. The model is intended to calculate the liabilities associated with the provisions of the plan using data and assumptions as of the measurement date under the funding methods specified in this report. The output from the third-party vendor software is used as input to an internally developed model that applies applicable funding methods and policies to the liabilities derived and other inputs, such as plan assets and contributions, to generate many of the exhibits found in this report. Gallagher has an extensive review process whereby the results of the liability calculations are checked using detailed sample output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other funding outputs and the internal model are similarly reviewed in detail and at a high level for accuracy, reasonability and consistency with prior results. Gallagher also reviews the third-party model when significant changes are made to the software. The review is performed by experts within the company who are familiar with applicable funding methods as well as the manner in which the model generates its output. If significant changes are made to the internal model, extra checking and review are completed. Significant changes to the internal model that are applicable to multiple clients are generally developed, checked and reviewed by multiple experts within the company who are familiar with the details of the required changes.

This report was prepared under my supervision. I am a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Academy's Qualification Standards to issue this Statement of Actuarial Opinion. This report has been prepared in accordance with all applicable Actuarial Standards of Practice and I am available to answer questions about it.

Gallagher Benefit Services, Inc

A handwritten signature in cursive script that reads "Michael A. Ribble".

Michael A. Ribble, FSA, EA, MAAA, FCA  
Principal, Consulting Actuary



110 West Berry Street  
 Suite 1300  
 Fort Wayne, IN 46802

November 22, 2023

Mr. Brett Besselman, Chairman of Board of Trustees  
 Mr. Tim Schauer, Executive Director  
 Houston Firefighters' Relief and Retirement Fund  
 4225 Interwood North Parkway  
 Houston, Texas 77032

**Re: Proposed Risk Sharing Valuation Study**

Dear Brett and Tim:

Pursuant to our engagement to provide actuarial services to the Houston Firefighters' Relief and Retirement Fund (Fund), we have prepared this Risk Sharing Valuation Study, as required under Senate Bill 2190, for the Fund as of July 1, 2023. This reflects the benefit provisions of the Fund as amended by, as well as funding policies mandated by, Senate Bill 2190 without regard to Section 13E. For comparison purposes the 2022 Risk Sharing Valuation Results shown below are based on adjustments in accordance with §13E(c)(4) per our Addendum dated March 24, 2023.

**Risk Sharing Valuation Results**

(\$000)	2023 Risk Sharing Valuation Results	2022 Risk Sharing Valuation Results <sup>1</sup>
Present Value of Future Benefits	\$ 6,004,259	\$ 5,774,144
Actuarial Accrued Liability	\$ 5,277,944	\$ 5,075,516
Actuarial Value of Assets	\$ 5,064,764	\$ 4,843,737
Unfunded Accrued Liability	\$ 213,180	\$ 231,779
Funded Ratio	96.0%	95.4%
City Normal Cost Rate <sup>2</sup>	14.53%	14.75%
City Accrued Liability Rate	11.58%	12.14%
Total City Contribution Rate <sup>3</sup>	26.11%	26.89%
Estimated City Contribution for following Fiscal Year	\$ 75,277	\$ 72,946
Employee Contribution Rate	10.50%	10.50%

<sup>1</sup> As adjusted in accordance with §13E(c)(4).

<sup>2</sup> Contains an allowance for administrative expenses equal to 1.25% of payroll.

<sup>3</sup> As a percentage of pensionable compensation

As shown in the table above, the proposed Risk Sharing Valuation Study results in a funded ratio that exceeds 90% and a City contribution rate of 26.11%, which is less than the Initial Risk Valuation Study Corridor Minimum of 26.89%. In accordance with Section 13E of Senate Bill 2190, potential changes in the actuarial value of assets, assumed rate of return, benefit levels, or the acceleration of the amortization period to payoff liability loss layers may be required.

## Development of the Actuarial Value of Assets (\$000)

### Actuarial Investment Gain (Loss)

	Fiscal Year End June 30, 2023
Fair Value of Assets at beginning of year	\$ 5,093,736
Net Cash Flow	
Contributions	\$ 104,448
Disbursements	<u>288,676</u>
Net Cash Flow	\$ (184,228)
Expected Investment Return	\$ 350,223
Expected Fair Value of Assets at end of year	\$ 5,259,731
Fair Value of Assets at end of year	\$ 5,109,178
Investment Gain / (Loss)	\$ (150,553)

### Schedule of Actuarial Investment Gains (Losses)

Plan Year Ending	Initial Actuarial Gain (Loss)	Current Year Recognized Gain (Loss)	Unrecognized Gain (Loss) As of July 1, 2023
June 30, 2019	(64,836)	\$ (12,967)	\$ 0
June 30, 2020	(204,992)	(40,998)	(40,998)
June 30, 2021	1,057,370	211,474	422,948
June 30, 2022	(361,824)	(72,365)	(217,094)
June 30, 2023	(150,553)	(30,111)	<u>(120,442)</u>
			\$ 44,414

### Actuarial Value of Assets

Fair Value as of July 1, 2023	\$ 5,109,178
(Gain) / Loss to be Recognized in Future Years	<u>(44,414)</u>
Actuarial Value as of July 1, 2023	\$ 5,064,764

### Change in Key Results since the Prior Risk Sharing Valuation (\$000)

Analysis of Change in Unfunded Liability		2022/2023
Unfunded at Beginning of Period		\$ 231,779
Estimated Change Due to Normal Operation		
Normal Cost		\$ 63,222
Contributions		(104,448)
Administrative Expenses		5,581
Interest		<u>14,998</u>
Net Change		\$ (20,647)
Estimated Change due to Actuarial Experience		
Actuarial (gain) loss from asset sources		\$ (72,532)
Actuarial (gain) loss from liability sources		<u>74,580</u>
Net change		\$ 2,048
Unfunded Actuarial Accrued Liability at End of Period		\$ 213,180

### Development of Liability Layer for Plan Year Ending June 30, 2023

Source	Amount (\$000)
Actuarial Value of Assets (Gain)/Loss	\$ (72,532)
Actuarial Accrued Liability (Gain)/Loss	74,580
Impact of Assumption Changes	0
Contributions Different than Expected	<u>(4,979)</u>
Total	\$ (2,931)

### Amortization Schedule as of July 1, 2023 (\$000)

Plan Year Ending	Initial Liability Layer	Liability Layer as of July 1, 2023	Remaining Amortization Payments as of July 1, 2024	Payment for Fiscal Year 2025	As a % of Fiscal Year 2025 Payroll
June 30, 2016	\$ 900,223	\$ 974,330	6.68	\$ 152,974	53.06%
June 30, 2017	(19,325)	(20,682)	6.68 <sup>1</sup>	(3,247)	(1.13)%
June 30, 2018	(32,368)	(34,293)	6.68 <sup>1</sup>	(5,384)	(1.87)%
June 30, 2019	(61,676)	(64,759)	6.68 <sup>1</sup>	(10,167)	(3.53)%
June 30, 2020	(190,421)	(198,405)	6.68 <sup>1</sup>	(31,150)	(10.80)%
June 30, 2021	(342,733)	(354,841)	6.68 <sup>1</sup>	(55,712)	(19.32)%
June 30, 2022	(79,662)	(85,239)	6.68 <sup>1</sup>	(13,383)	(4.64)%
June 30, 2023	(2,931)	<u>(2,931)</u>	6.68 <sup>1</sup>	<u>(540)</u>	<u>(0.19)%</u>
Total		\$ 213,180		\$ 33,391	11.58%

<sup>1</sup> Per SB 2190, the amortization period for a new liability gain layer is equal to the remaining amortization period on the largest remaining liability loss layer.

<sup>2</sup> Based on projected pensionable compensation of \$288,305,000.

### Historical Unfunded Actuarial Accrued Liability

Valuation Date	Actuarial Accrued Liability (\$000)	Valuation Assets (\$000)	Assets as Pct. of Actuarial Accrued Liability	Unfunded Actuarial Liability (UAAL, \$000)	Active Member Payroll (\$000)	UAAL as Pct. of Active Member Payroll
7/1/2014 *	N/A	N/A	N/A	N/A	N/A	N/A
7/1/2015	4,397,007	3,929,988	89.4%	467,019	273,073	171%
7/1/2016	5,073,523	4,089,047	80.6%	984,476	288,136	342%
7/1/2017 **	4,827,721	3,883,807	80.4%	943,914	261,881	360%
7/1/2018 **	4,948,133	4,027,079	81.4%	921,054	264,747	348%
7/1/2019 **	5,057,759	4,190,934	82.9%	866,825	266,480	325%
7/1/2020 **	4,932,307	4,251,851	86.2%	680,456	252,974	269%
7/1/2021 **	4,881,608	4,550,468	93.2%	331,140	251,353	132%
7/1/2022 **	5,075,516	4,843,737	95.4%	231,779	263,374	88%
7/1/2023 **	5,277,944	5,064,764	96.0%	213,180	279,908	76%

### Historical Solvency Test

Valuation Date	Actuarial Accrued Liability (AAL)				Valuation Assets (\$000)	Portion of AAL Covered by Valuation Assets		
	(1)	(2)	(3)	(1)		(2)	(3)	
	Active Member Contribution and DROP Balances (\$000)	Retirees, Beneficiary, and Vested Members (\$000)	Active and DROP Members Employer Financed (\$000)					
7/1/2014 *	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
7/1/2015	479,593	2,713,418	1,203,996	3,929,988	100%	100%	61%	
7/1/2016	490,874	3,109,860	1,472,789	4,089,047	100%	100%	33%	
7/1/2017 **	429,659	3,275,581	1,122,481	3,883,807	100%	100%	16%	
7/1/2018 **	437,596	3,385,273	1,125,264	4,027,079	100%	100%	18%	
7/1/2019 **	463,036	3,450,044	1,144,679	4,190,934	100%	100%	24%	
7/1/2020 **	456,895	3,435,330	1,040,082	4,251,851	100%	100%	35%	
7/1/2021 **	470,345	3,461,982	949,281	4,550,468	100%	100%	65%	
7/1/2022 **	475,925	3,626,324	973,267	4,843,737	100%	100%	76%	
7/1/2023 **	499,162	3,757,795	1,020,987	5,064,764	100%	100%	79%	

\* No valuation was performed as of 7/1/2014

\*\* Results for July 1, 2017 and later years are based on Risk Sharing Valuation Studies

NOTE: The ten-year schedule of actuarially determined and actual contributions is included in the Required Supplementary Information section (See Schedule 2 on page 47).

## Actuarial Certification

We certify that the information contained in this Risk Sharing Valuation Study has been prepared in accordance with the appropriate Actuarial Standards of Practice. To the best of our knowledge, the information fairly presents the actuarial position of the Houston Firefighters' Relief & Retirement Fund as of July 1, 2023 on the basis of the actuarial assumptions, methods and Fund provisions set forth herein.

The Board of Trustees of the Fund may use this report for discussing and reaching consensus with the City of Houston on the City Contribution Rate. Use of this report for any other purpose or by anyone other than the Board or the City of Houston may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, Buck, A Gallagher Company (Buck) recommends requesting an advance review of any statement, document, or filing to be based on information contained in this report. Buck will accept no liability for any such statement, document or filing made without prior review by Buck.

Future actuarial measurements may differ significantly from current measurements due to Fund experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in Fund provisions or applicable law. An analysis of the potential range of such future differences is beyond the scope of this Risk Sharing Valuation Study.

Where presented, references to "funded ratio" and "unfunded accrued liability" typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using fair value of assets could result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the Fund if the Fund were to settle a portion or all of its liabilities.

In preparing the actuarial results, we have relied upon information provided by the Board of Trustees as of July 1, 2023 regarding Fund provisions, Fund participants, Fund assets, contribution rates and other matters used in the Risk Sharing Valuation Study. Specifically, a fair value of assets equal to \$5,109,178,130 has been provided by the Fund representatives. Although we did not audit the data, we reviewed the data for reasonableness and consistency with the prior year's information. The accuracy of the results of this Risk Sharing Valuation Study is dependent on the accuracy of the data.

As required under Senate Bill 2190, experience studies are performed once in every four-year period. This Risk Sharing Valuation Study was prepared on the basis of the demographic and economic assumptions that were selected on the basis of the Fiscal Year Ending June 30, 2015 through Fiscal Year Ending June 30, 2019 Experience Review and adopted by the Board of Trustees at their October 20, 2020 meeting. This experience study is conducted to determine the assumptions that will serve as the basis for the Risk Sharing Valuation Studies from July 1, 2020 – July 1, 2023.

Except as prescribed in Senate Bill 2190 (as noted in Appendix A), the Board of Trustees has sole authority to determine the actuarial assumptions and has selected the actuarial methods and assumptions used in this Risk Sharing Valuation Study. In our opinion, those actuarial assumptions selected by the Board are reasonably related to the experience of the Fund and to reasonable long-term expectations. The actuarial assumptions prescribed by Senate Bill 2190 have been reflected in this Risk Sharing Valuation Study.

A summary of the actuarial assumptions, major Fund provisions, and Fund participant data used to calculate the results of this study can be found in the appendices.

The Total City Contribution Rate developed in this report exceeds the normal cost, plus interest on the unfunded actuarial accrued liability. Assuming that city contributions meet or exceed the Total City Contribution Rate developed in this report, the unfunded actuarial accrued liability is expected to be fully amortized within 6.68 years beginning July 1, 2024.

Based on the statutory requirements of Senate Bill 2190 it is our understanding that the actual City contribution rate may be established as an average of the contribution rates shown in this report and those shown in the Risk Sharing Valuation Study prepared by the City's actuary. If future contributions are established in this manner at levels below those presented in this report, the Fund may not be expected to achieve a fully funded position over the 30-year time horizon as contemplated in the statute based on the data, assumptions and methods set forth on the attached pages.

However, this proposed Risk Sharing Valuation Study results in a funded ratio that exceeds 90% and a City contribution rate of 26.11%, which is less than the Initial Risk Valuation Study Corridor Minimum of 26.89%. In accordance with Section 13E of Senate Bill 2190, potential changes in the actuarial value of assets, assumed rate of return, benefit levels, or the acceleration of the amortization period to payoff liability loss layers may be required.

I am a Fellow of the Society of Actuaries and Member of the American Academy of Actuaries. I meet the Academy's Qualification Standards to issue this Statement of Actuarial Opinion. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and I am available to answer questions about it.

If you have any questions concerning this information, please let me know.

Respectfully submitted,

Buck, A Gallagher Company



Michael A. Ribble, FSA, EA, MAAA, FCA  
Principal, Consulting Actuary

# APPENDIX A – SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

## BASIS FOR ASSUMPTIONS

The economic and demographic assumptions used in the study (except for the investment return assumption) were adopted by the Board in consultation with Buck. Senate Bill 2190 requires that an actuarial experience study be performed in order to review the experience of the Fund at least once every four years to determine if any changes to the Risk Sharing Valuation Study assumptions are warranted. In general, the assumptions used in the Risk Sharing Valuation Study are based on recommendations made and approved by the Board as part of an Experience Study covering Fiscal Year Ending June 30, 2015 through Fiscal Year Ending June 30, 2019. Senate Bill 2190 requires the use of an investment return assumption of not more than 7.00%.

Actuarial Standards of Practice 27 and 35 require the actuary to identify the economic and demographic assumptions that have a significant effect on the measurement and, for those that the actuary has not selected, to provide the information and analysis the actuary performed to determine that the assumption does not significantly differ from what the actuary deems reasonable for the purpose of the measurement.

The material demographic assumptions are disclosed in this Appendix A. All demographic assumptions were based on an Experience Review covering the period July 1, 2014 to June 30, 2019. The Board of Trustees, at their October 20, 2020 meeting, approved the use of the Experience Review's recommended demographic assumptions. We reviewed the assumptions along with recent experience and the assumptions are still reasonable for the current measurement.

The material economic assumptions include the salary scale and expected return on assets ("EROA"). The Board of Trustees, at their October 20, 2020 meeting, approved the use of the Experience Review's recommended salary scale assumption. We reviewed the salary scale assumption along with recent experience and the assumptions are still reasonable for the current measurement.

In the case of the EROA, Senate Bill 2190 requires the use of an investment return assumption of not more than 7.00%. We used economic information and tools provided by Buck's Financial Risk Management ("FRM") practice. A spreadsheet tool created by the FRM team converts averages, standard deviations, and correlations from Buck's Capital Markets Assumptions ("CMA") that are used for stochastic forecasting into approximate percentile ranges for the arithmetic and geometric average

returns. It is intended to suggest possible reasonable ranges for EROA without attempting to predict or select a specific best estimate rate of return. It takes into account the duration (horizon) of investment and the target allocation of assets in the portfolio to various asset classes. Based on our analysis, including consistency with other assumptions used in the valuation and the percentiles generated by the spreadsheet described above, we believe the EROA, in our professional judgment, is reasonable for the purpose of the measurement.

## USE OF MODELS

Actuarial Standard of Practice No. 56 ("ASOP 56") provides guidance to actuaries when performing actuarial services with respect to designing, developing, selecting, modifying, using, reviewing, or evaluating models. In addition to the EROA spreadsheet model disclosed above, Buck uses third-party software in the performance of annual actuarial valuations and projections. The model is intended to calculate the liabilities associated with the Fund provisions using data and assumptions as of the measurement date under the accounting standards specified in this report. The output from the third-party vendor software is used as input to an internally developed model that applies those accounting standards to the liabilities derived and other inputs to generate many of the exhibits found in this report. Buck has an extensive review process whereby the results of the liability calculations are checked using detailed sample output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other accounting outputs and internal model are similarly reviewed in detail and at a high level for accuracy, reasonability and consistency with prior results. Buck also reviews the third-party model when significant changes are made to the software. The review is performed by experts within the company who are familiar with applicable accounting rules as well as the manner in which the model generates its output. If significant changes are made to the internal model, extra checking and review are completed. Significant changes to the internal model that are applicable to multiple clients are generally developed, checked and reviewed by multiple experts within the company who are familiar with the details of the required changes.

## ACTUARIAL METHODS

### ACTUARIAL VALUE OF ASSETS

Senate Bill 2190 requires the use of an asset valuation method that recognizes gains and losses on the fair value of assets (based on the difference between the actual rate of return

# APPENDIX A – SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS CONTINUED

and the assumed rate of return) over five years. Past gains and losses were fully recognized in the Actuarial Value of Assets at July 1, 2016. New gains and losses will be recognized over five years beginning July 1, 2017. Unless otherwise specified, the fair value of assets is the market value of assets.

## ACTUARIAL COST METHOD

Senate Bill 2190 requires the use of the Ultimate Entry Age Method with liabilities allocated from date of entry to expected payment of benefit. Under the Ultimate Entry Age Method, future normal cost for active employees is calculated based on the Fund provisions in effect for the most recently hired employees.

Senate Bill 2190 also requires the use of a 30-year, closed, level percent of payroll amortization period, in which new gain/loss amortization bases are established each year. The Unfunded Actuarial Accrued Liability at July 1, 2016 was amortized as a level percentage of payroll over a closed amortization period of 30 years with payments effective for fiscal year beginning July 1, 2017. Additional actuarial experience losses will be amortized over a closed amortization period of 30 years in future Risk Sharing Valuation Studies. If, in any given year, the Fund experiences an actuarial gain, any such gain will be used to offset the largest outstanding loss amortization base, if applicable.

## KEY ECONOMIC ASSUMPTIONS

### INVESTMENT RETURN

Real Rate of Return	4.50%
Price Inflation	2.50%
Total Nominal Rate	7.00%

Expected future investment returns are assumed to be net of investment expenses.

### WAGE INFLATION

3.00%

### PAYROLL GROWTH RATE

3.00%

### NORMAL COST LOAD FOR ADMINISTRATIVE EXPENSES

1.25% of pensionable payroll<sup>1</sup>

## INDIVIDUAL PAY INCREASE RATE

Age	(NOMINAL = MERIT + WAGE INFLATION)	
	Nominal	Merit
20	7.00%	4.00%
25	6.25%	3.25%
30	5.50%	2.50%
35	5.00%	2.00%
40	4.00%	1.00%
45	3.70%	0.70%
50	3.40%	0.40%
55	3.00%	0.00%

<sup>1</sup> required by Senate Bill 2190

<sup>2</sup> participants eligible to enter the DROP in the future are not assumed to retire with less than 25 years of service before age 55

## KEY DEMOGRAPHIC ASSUMPTIONS

RETIREMENT RATES	
Number of Years of Service	Probability of Retiring Within One Year
Less than 25	2.0% <sup>2</sup>
25	2.0%
26	5.5%
27	5.5%
28	5.5%
29	5.5%
30	13.0%
31	15.0%
32	20.0%
33	20.0%
34	20.0%
35	30.0%
36	30.0%
37	40.0%
38	40.0%
39	40.0%
40+	100.0%

# APPENDIX A – SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS CONTINUED

DROP DURATION	
Duration of DROP at Retirement	Percentage of Participants Electing Retirement at the Specified Duration
0	0%
3	0
5	10
8	20
10	45
13	25

SAMPLE RATES					
Number of Years of Service at Actual Retirement	Percentage of Participants Retiring with Specific DROP Duration				
	3 yrs	5 yrs	8 yrs	10 yrs	13 yrs
20-24	0.0%	0.0%	0.0%	0.0%	0.0%
25-27	0.0%	100.0%	0.0%	0.0%	0.0%
28-29	0.0%	33.3%	66.7%	0.0%	0.0%
30-32	0.0%	13.3%	26.7%	60.0%	0.0%
33-40	0.0%	10.0%	20.0%	45.0%	25.0%

DROP balances for active members are assumed to be paid out over 15 years upon exiting the DROP. DROP balances of members who have left active service are assumed to be paid out over 7.5 years. Future DROP payments are discounted based on the difference between the assumed investment rate of return and the assumed DROP interest crediting rate.

## MORTALITY RATES

### SERVICE RETIREES AND CONTINGENT ANNUITIES

SOA Public Safety (Below-Median, base year 2010) amount weighted tables generationally projected with Mortality Improvement Scale MP-2019. The base table for males is adjusted by 97.2% to reflect credible plan experience.

### SURVIVOR BENEFICIARIES

SOA Public Contingent Survivor (Below-Median, base year 2010) amount weighted tables generationally projected with Mortality Improvement Scale MP-2019. The base table for females is adjusted by 106.0% to reflect credible plan experience.

### DISABLED RETIREES

SOA Public Safety Disabled Retiree (base year 2010) amount weighted tables generationally projected with Mortality Improvement Scale MP-2019.

### ALL OTHERS, INCLUDING ACTIVE AND VESTED

#### TERMINATED PARTICIPANTS

SOA Public Safety (Below-Median, base year 2010) amount weighted tables generationally projected with Mortality Improvement Scale MP-2019.

*<sup>1</sup>Percentage of disabilities in the line of duty is assumed to be a flat 80% for all ages. 50% of firefighters who become disabled in the line of duty are assumed to be incapable of performing any substantial gainful activity.*

## DISABILITY RATES

Graduated rates

SAMPLE RATES PER 100 PARTICIPANTS	
Age	Disability
20	0.45
25	0.45
30	0.45
35	1.00
40	1.00
45	1.00
50	1.00
55	1.00
60	1.00

PERCENTAGE OF DEATH AND DISABILITIES IN THE LINE OF DUTY		
Age	Death	Disability <sup>1</sup>
25	80%	80%
35	80	80
45	40	80
55	20	80

# APPENDIX A – SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS CONTINUED

## TERMINATION RATES

Age	Termination Rate
20	2.40%
25	2.40
30	2.40
35	1.50
40	0.75
45	0.75
50	0.00

For members hired prior to July 1, 2017 who are terminating with at least 10 years but less than 20 years of service:

- 80% will elect a contribution refund
- 20% will elect a deferred monthly pension benefit

## MARITAL STATUS AT BENEFIT ELIGIBILITY

### PERCENTAGE MARRIED

82% of male participants are assumed to be married, and 85% of female participants are assumed to be married. No beneficiaries other than the spouse assumed.

### AGE DIFFERENCE

Male participants are assumed to be two years older than wives, and female participants are assumed to be six years younger than their husbands.

## DEVELOPMENT OF RISK SHARING VALUATION STUDY PAY

The Risk Sharing Valuation Study pay is developed by increasing the prior year's pay with the nominal individual pay increase rate. For participants reported with compensation less than \$10,000, their compensation is set equal to their most recent annual compensation amount in excess of \$10,000.

## AGE AT WHICH BENEFITS END FOR CHILD BENEFICIARIES

Benefits are assumed to end once the child beneficiary reaches age 23.

## FUTURE DROP RETURNS

Future DROP interest crediting rates are assumed to be equal to 65% of the assumed asset return (currently 65% of 7% equals 4.55%).

## FUTURE COST-OF-LIVING ADJUSTMENTS

COLAs are assumed to be equal to the assumed asset return less 4.75% (currently 7% minus 4.75% equals 2.25%).

## CENSUS DATES

All dates in the census used to calculate liabilities are set as July 1st in the year of the event.

## MISSING DATA ASSUMPTIONS

### PAY FOR NEW HIRES

None were missing.

### EMPLOYEE CONTRIBUTIONS

Based on the prior year's contributions.

### BENEFITS NOT VALUED

The proportional retirement program between the Houston municipal, police and fire pension funds which allows for combining service credit from two or more City of Houston pension plans was not valued because its impact is expected not to be material.

## SUMMARY OF CHANGES FROM THE JULY 1, 2022 RISK SHARING VALUATION STUDY

None.

# APPENDIX B – SUMMARY OF PLAN PROVISIONS

## MEMBERSHIP

Any firefighter who has not reached the age of 36 at the time he or she first enters employment shall automatically become a participant in the Fund upon completing the training period. Before October 1, 1990, the eligibility age was age 31. Before 1984, participants entered the Fund on January 1 or July 1.

## AVERAGE SALARY

For members hired prior to July 1, 2017, the average of the highest 36 months of pensionable pay (or 78 pay periods). For members hired on or after July 1, 2017, the average of the final 36 months of pensionable pay (or 78 pay periods).

## PENSIONABLE PAY

Pensionable pay prior to July 1, 2017 includes base pay and overtime, before reduction for pre-tax employee contributions and salary deferrals. Pensionable pay after July 1, 2017 includes base pay, before reduction for pre-tax employee contributions and salary deferrals.

## STANDARD SERVICE PENSION - MEMBERS HIRED PRIOR TO JULY 1, 2017

### ELIGIBILITY

20 years of service.

### BENEFIT

- For retirement on or after November 1, 1997 and applicable for service accrued prior to July 1, 2017, 50% of average monthly salary; plus 3% of average monthly salary per year of service in excess of 20 years. For service accrued after July 1, 2017, 2.75% of average monthly salary per year of service for the member's first 20 years of service; plus 2.00% of average monthly salary per year of service in excess of 20 years.
- For retirement on or after November 1, 1996 and prior to November 1, 1997, 48.334% of average monthly salary, plus 2.834% of average monthly salary per year of service in excess of 20 years.
- For retirement on or after November 1, 1995 and prior to November 1, 1996, 46.667% of average monthly salary, plus 2.667% of average monthly salary per year of service in excess of 20 years.
- For retirement on or after September 1, 1991 and prior to November 1, 1995, 45% of average monthly salary, plus 2.5% of average monthly salary per year of service in excess of 20 years, up to 30 years, plus 1.0% of average monthly salary in excess of 30 years.

- For retirement on or after September 1, 1989 and prior to September 1, 1991, 45% of average monthly salary, plus 2.5% of average monthly salary per year of service in excess of 20 years.
- For retirement on or after September 1, 1987 and prior to September 1, 1989, 45% of average monthly salary, plus 2% of average monthly salary per year of service in excess of 20 years.
- For retirement on or after July 1, 1986 and prior to September 1, 1987, 40% of average monthly salary plus 2% of average monthly salary per year of service in excess of 20 years.
- For retirement on or after January 1, 1970 and prior to July 1, 1986, 35% of average monthly salary plus 3% of average monthly salary per year of service in excess of salary per year of service in excess of 25 years.

### MAXIMUM

- For retirement on or after July 1, 2017, none.
- For retirement on or after September 1, 1991, 80% of average monthly salary.
- For retirement on or after September 1, 1989 and prior to September 1, 1991, 70% of average monthly salary.
- For retirement on or after September 1, 1987 and prior to September 1, 1989, 65% of average monthly salary.
- For retirements on or after January 1, 1970 and prior to September 1, 1987, 60% of average monthly salary.

In addition, a member will receive a \$5,000 lump sum payment upon retirement.



# APPENDIX B – SUMMARY OF PLAN PROVISIONS CONTINUED

## STANDARD SERVICE PENSION - MEMBERS HIRED ON OR AFTER JULY 1, 2017

### ELIGIBILITY

Age at which the sum of the member's age and service equals 70.

### BENEFIT

2.25% of average monthly salary per year of service for the member's first 20 years of service; plus 2.00% of average monthly salary per year of service in excess of 20 years.

### MAXIMUM

80% of average monthly salary.

In addition, a member will receive a \$5,000 lump sum payment upon retirement.

## ALTERNATE SERVICE PENSION

### ELIGIBILITY

Firefighters who became participants prior to September 1, 1987 and who attain age 50 with 20 years of service will receive the greater of the standard or alternate pension.

### BENEFIT

50% of average monthly salary plus 1% of average monthly salary per year of service after becoming eligible to retire on an alternate pension.

### MAXIMUM

65% of average monthly salary.

## SUPPLEMENTAL BONUS CHECK

Supplemental payments totaling up to \$5 million will be payable on a prorated basis determined by the Board of Trustees to all retirees and survivors.

## DEFERRED RETIREMENT OPTION PLAN (DROP)

### ELIGIBILITY

20 years of service. Members hired on or after July 1, 2017 are not eligible to enter DROP.

### BENEFIT

Effective July 1, 2000, eligible participants may elect to participate in the DROP. The member's standard or alternate

service pension (whichever is greater) will be calculated based on service and earnings at the time the DROP is elected.

A notional account will be maintained for each DROP participant. This account will be credited with the following amounts while the member is a participant of the DROP:

- The member's monthly retirement pension, including applicable cost-of-living adjustments (no cost-of living adjustments will be granted while a member is a participant in DROP after July 1, 2017),
- The member's contributions to the Retirement Fund contributed prior to July 1, 2017, and
- Investment earnings/losses at the rate of the Retirement Fund's earnings/losses averaged over a five-year period. Effective July 1, 2017, investment earnings will be contributed to a member's DROP account at the rate of 65% of the Retirement Fund's earnings/losses averaged over a five-year period.

A benefit equal to the DROP account balance would be paid at the time the member leaves active service. The payment would be made as a single lump sum or as the member chooses.

Effective on July 1, 2000, a three-year back DROP is available for all eligible participants. The DROP account would be recalculated based on what the account balance would have been had the participant elected the DROP up to 3 years earlier than he/she actually did. The initial DROP entry date cannot be backdated prior to September 1, 1995, or prior to completion of 20 years of credited service, and must be on the first day of the month selected.

The monthly benefit at actual retirement will increase 2% for every year of DROP participation, not to exceed 10 years, for a participant who has at least 20 years of service as of July 1, 2017.

Members can remain in the DROP for 13 years. If a member remains in active service after 13 years in DROP, no further deposits other than unused leave pay will be made to the DROP account, but the DROP account will continue to accrue interest.

If a DROP participant suffers an on-duty disability resulting in the inability to perform any gainful activity or dies in the line of duty, the death or disability annuity benefit would be calculated as though the participant had not entered the DROP. In addition, the DROP account would be payable to the participant or beneficiary.

# APPENDIX B – SUMMARY OF PLAN PROVISIONS CONTINUED

## SERVICE-CONNECTED DISABILITY PENSION

### ELIGIBILITY

No age or service requirements.

### BENEFIT

50% of average monthly salary, or service pension if greater and eligible. Firefighters who are not capable of performing any substantial gainful activity will receive 75% of average monthly salary, or service pension, if greater and eligible.

In addition, a member will receive a \$5,000 lump sum.

## NON-SERVICE-CONNECTED DISABILITY PENSION

### ELIGIBILITY

No age or service requirements.

### BENEFIT

25% of average monthly salary, plus 2.5% of average monthly salary per year of service.

### MAXIMUM

50% of average monthly salary or service pension, if greater and eligible.

In addition, a member will receive a \$5,000 lump sum.

## VESTED PENSION

### ELIGIBILITY

For members hired prior to July 1, 2017, at least 10 but less than 20 years of service.

### BENEFIT

For members hired prior to July 1, 2017, 1.7% of average monthly salary per year of service payable beginning at age 50. Members receive a refund of contributions without interest in the event of termination before 10 years of service. Members who elect a refund of contributions after attaining 10 years of service receive interest only on contributions made prior to July 1, 2017.

Members hired on or after July 1, 2017 are entitled to a refund of contributions without interest in the event of their termination of employment for any reason other than death.

## DEATH BENEFITS

Payable as specified below if survived by a spouse, dependent children, or dependent parents. Effective November 1, 1997 dependent children can continue to receive benefits between the ages of 18 and 22 if they are in college.

### NON-SERVICE-CONNECTED

Monthly benefit that would have been payable had the participant retired for non-service-connected disability on the date of his or her death (or service pension if greater).

### POSTRETIREMENT

Monthly benefit payable to the participant prior to his or her death. Effective July 1, 1998, a “graded” postretirement death benefit is payable to a surviving spouse if the retiree was not married at the time of retirement. This “graded” benefit is equal to 20% of the postretirement death benefit for each year of marriage to a maximum 100% after five years of marriage.

### PRERETIREMENT

In the case of the death of an active firefighter in the line of duty, eligible survivor will receive a benefit equal to 100% of the decedent’s average monthly salary. Refund of contributions made if no eligible survivors. If death occurs after 10 years of service, interest is credited on the contributions at the flat rate of 5% not compounded. If death occurs before 10 years of service, no interest is credited.

### LUMP SUM

A one-time \$5,000 lump sum death benefit for any active or retired firefighter. This benefit applies to active members, current retirees, and disabled participants.

### ADDITIONAL BENEFIT

Effective on or after July 1, 2001, an extra monthly benefit of \$150 is payable for life to any retired or disabled member or to an eligible survivor of a deceased member. This benefit is not subject to the postretirement adjustment.

### EXCESS BENEFIT

Benefit equal to the excess of any members’ standard service pension benefit over the limit imposed by Section 415 of the code.

# APPENDIX B – SUMMARY OF PLAN PROVISIONS CONTINUED

## POST-RETIREMENT ADJUSTMENT

### PRIOR TO OCTOBER 1, 1990

Pensions adjusted each year based on changes in the CPI-U, but not below original amount or above original amount increased 3% each year, not compounded.

Pension adjustments for participants who retire after March 1, 1982 begin at age 55.

Pension adjustments begin immediately for participants whose benefits become payable on or after July 1, 1986 and are based upon 30 or more years of service.

### ON OR AFTER OCTOBER 1, 1990 AND PRIOR TO NOVEMBER 1, 1997

Pensions adjusted each year based on changes in the CPI-U. The adjustment is based on the amount of benefits payable at the time of adjustment. The maximum annual increase shall be 3% of the benefits payable at the time of adjustment.

Pension adjustments begin immediately for participants whose benefits become payable on or after July 1, 1986 and are based upon 30 or more years of service.

### ON OR AFTER NOVEMBER 1, 1997 AND PRIOR TO OCTOBER 1, 2017

Pensions adjusted each year at a fixed rate of 3%. The adjustment is based on the amount of benefits payable at the time of adjustment.

Pension adjustments for participants who retire or terminate with a vested benefit after March 1, 1982 begin at age 48. Pension adjustments begin immediately for participants who become disabled and cannot perform any substantial gainful activity (current and future) and qualify for general on-duty disability benefits. Participants whose benefits become

payable on or after July 1, 1986 and are based upon 30 or more years of service are also eligible for pension adjustments to begin immediately.

### ON OR AFTER OCTOBER 1, 2017 AND PRIOR TO OCTOBER 1, 2019

Pensions adjusted each year at a rate equal to the Fund's most recent five fiscal years' smoothed return minus 5% (but not less than 0% nor greater than 4%). The adjustment is based on the amount of benefits payable at the time of adjustment. Pension adjustments only paid to members who are at least 70 years old.

### ON OR AFTER OCTOBER 1, 2019

Pensions adjusted each year at a rate equal to the Fund's most recent five fiscal years' smoothed return minus 4.75% (but not less than 0% nor greater than 4%). The adjustment is based on the amount of benefits payable at the time of adjustment. Pension adjustments only paid to members who are at least 70 years old in October 2019. Pension adjustments only paid to members who are at least 55 years old after October 2019.

## CONTRIBUTION RATES

### MEMBERS

10.5% of salary effective July 1, 2017.

### CITY

Effective for fiscal year ending 2018, city contribution rates will be made in accordance with the annual Risk Sharing Valuation Study. The city contribution rate in any fiscal year will not be greater than the city contribution rate projected in the initial Risk Sharing Valuation Study for that fiscal year plus 5%. The city contribution rate in any fiscal year will not be less than the city contribution rate projected in the initial Risk Sharing Valuation Study for that fiscal year minus 5%.



# APPENDIX C – PARTICIPANT INFORMATION

## SUMMARY OF ACTIVE PARTICIPANTS AS OF JULY 1, 2023

Attained 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
<b>UNDER 25</b>	24	55	-	-	-	-	-	-	-	-	79
<b>Avg. Pay</b>	\$ 51,493	\$ 53,477	-	-	-	-	-	-	-	-	\$ 52,874
<b>25 TO 29</b>	38	158	53	-	-	-	-	-	-	-	249
<b>Avg. Pay</b>	\$ 52,441	\$ 54,716	\$ 67,545	-	-	-	-	-	-	-	\$ 57,099
<b>30 TO 34</b>	19	134	259	61	-	-	-	-	-	-	473
<b>Avg. Pay</b>	\$ 48,006	\$ 55,442	\$ 69,163	\$ 76,021	-	-	-	-	-	-	\$ 65,310
<b>35 TO 39</b>	5	50	284	176	96	2	-	-	-	-	613
<b>Avg. Pay</b>	\$ 44,748	\$ 56,058	\$ 67,807	\$ 75,602	\$ 80,755	82,476	-	-	-	-	\$ 70,974
<b>40 TO 44</b>	-	1	111	132	297	94	-	-	-	-	635
<b>Avg. Pay</b>	-	59,394	\$ 67,169	\$ 75,559	\$ 81,441	\$ 84,527	-	-	-	-	\$ 78,146
<b>45 TO 49</b>	-	-	1	69	298	235	15	-	-	-	618
<b>Avg. Pay</b>	-	-	\$ 76,782	\$ 73,238	\$ 81,159	\$ 83,315	\$ 97,084	-	-	-	\$ 81,474
<b>50 TO 54</b>	-	-	-	4	131	169	16	-	-	-	320
<b>Avg. Pay</b>	-	-	-	\$ 79,406	\$ 79,617	\$ 83,267	\$ 91,601	-	-	-	\$ 82,141
<b>55 TO 59</b>	-	-	-	-	2	43	6	-	1	-	52
<b>Avg. Pay</b>	-	-	-	-	\$ 104,111	\$ 79,784	\$ 75,715	-	\$ 107,120	-	\$ 80,776
<b>60 TO 64</b>	-	-	-	-	-	-	1	-	-	-	1
<b>Avg. Pay</b>	-	-	-	-	-	-	\$ 84,460	-	-	-	84,460
<b>65 TO 69</b>	-	-	-	-	-	-	-	-	-	-	-
<b>Avg. Pay</b>	-	-	-	-	-	-	-	-	-	-	-
<b>70 &amp; UP</b>	-	-	-	-	-	-	-	-	-	-	-
<b>Avg. Pay</b>	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL</b>	86	398	708	442	824	543	38	-	1	-	3,040
<b>AVG. PAY</b>	\$ 50,749	\$ 54,970	\$ 68,196	\$ 75,313	\$ 81,024	\$ 83,227	\$ 91,069	-	\$ 107,120	-	\$ 73,466
<b>Average Age: 40.03</b>						<b>Average Service: 12.60</b>					

# APPENDIX C – PARTICIPANT INFORMATION CONTINUED

## SUMMARY OF DROP PARTICIPANTS AS OF JULY 1, 2023

Attained 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
<b>UNDER 25</b>	-	-	-	-	-	-	-	-	-	-	-
<b>Avg. Pay</b>	-	-	-	-	-	-	-	-	-	-	-
<b>25 TO 29</b>	-	-	-	-	-	-	-	-	-	-	-
<b>Avg. Pay</b>	-	-	-	-	-	-	-	-	-	-	-
<b>30 TO 34</b>	-	-	-	-	-	-	-	-	-	-	-
<b>Avg. Pay</b>	-	-	-	-	-	-	-	-	-	-	-
<b>35 TO 39</b>	-	-	-	-	-	-	-	-	-	-	-
<b>Avg. Pay</b>	-	-	-	-	-	-	-	-	-	-	-
<b>40 TO 44</b>	-	-	-	-	-	4	-	-	-	-	4
<b>Avg. Pay</b>	-	-	-	-	-	\$ 83,632	-	-	-	-	\$ 83,632
<b>45 TO 49</b>	-	-	-	-	-	32	28	-	-	-	60
<b>Avg. Pay</b>	-	-	-	-	-	\$ 81,771	\$ 85,390	-	-	-	\$ 83,460
<b>50 TO 54</b>	-	-	-	-	-	45	176	37	1	-	259
<b>Avg. Pay</b>	-	-	-	-	-	\$ 82,871	\$ 89,099	\$ 95,661	85,623	-	\$ 88,941
<b>55 TO 59</b>	-	-	-	-	-	29	130	68	11	-	238
<b>Avg. Pay</b>	-	-	-	-	-	\$ 82,245	\$ 86,195	\$ 90,401	\$ 93,168	-	\$ 87,238
<b>60 TO 64</b>	-	-	-	-	-	-	35	25	10	5	75
<b>Avg. Pay</b>	-	-	-	-	-	-	\$ 85,931	\$ 87,756	\$ 98,159	\$ 92,700	\$ 88,621
<b>65 TO 69</b>	-	-	-	-	-	-	-	4	-	4	8
<b>Avg. Pay</b>	-	-	-	-	-	-	-	\$ 93,988	-	\$ 80,340	\$ 87,164
<b>70 &amp; UP</b>	-	-	-	-	-	-	-	-	-	1	1
<b>Avg. Pay</b>	-	-	-	-	-	-	-	-	-	\$ 86,520	\$ 86,520
<b>TOTAL</b>	-	-	-	-	-	110	369	134	22	10	645
<b>AVG. PAY</b>	-	-	-	-	-	\$ 82,414	\$ 87,494	\$ 91,467	\$ 95,094	\$ 87,138	\$ 87,707
<b>Average Age: 54.71</b>						<b>Average Service: 27.73</b>					

# APPENDIX C – PARTICIPANT INFORMATION CONTINUED

## SUMMARY OF ACTIVE AND DROP PARTICIPANTS AS OF JULY 1, 2023

Attained 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
<b>UNDER 25</b> Avg. Pay	24 \$ 51,493	55 \$ 53,477	- -	- -	- -	- -	- -	- -	- -	- -	79 \$ 52,874
<b>25 TO 29</b> Avg. Pay	38 \$ 452,441	158 \$ 55,442	53 \$ 67,545	- -	- -	- -	- -	- -	- -	- -	249 \$ 57,099
<b>30 TO 34</b> Avg. Pay	19 \$ 48,006	134 \$ 55,442	259 \$ 69,163	61 \$ 76,021	- -	- -	- -	- -	- -	- -	473 \$ 65,310
<b>35 TO 39</b> Avg. Pay	5 \$ 44,748	50 \$ 56,058	284 \$ 67,807	176 \$ 75,602	96 \$ 80,755	2 \$ 82,476	- -	- -	- -	- -	613 \$ 70,974
<b>40 TO 44</b> Avg. Pay	- -	1 \$ 59,394	111 \$ 67,169	132 \$ 75,559	297 \$ 81,441	98 \$ 84,490	- -	- -	- -	- -	639 \$ 78,180
<b>45 TO 49</b> Avg. Pay	- -	- -	1 \$ 76,782	69 \$ 73,238	298 \$ 81,159	267 \$ 83,130	43 \$ 89,469	- -	- -	- -	678 \$ 81,650
<b>50 TO 54</b> Avg. Pay	- -	- -	- -	4 \$ 79,406	131 \$ 79,617	214 \$ 83,184	192 \$ 89,308	37 \$ 95,661	1 \$ 85,623	- -	579 \$ 85,183
<b>55 TO 59</b> Avg. Pay	- -	- -	- -	- -	2 \$ 104,111	72 \$ 80,775	136 \$ 85,733	68 \$ 90,401	12 \$ 94,331	- -	290 \$ 86,079
<b>60 TO 64</b> Avg. Pay	- -	- -	- -	- -	- -	- -	36 \$ 85,890	25 \$ 87,756	10 \$ 98,159	5 \$ 92,700	76 \$ 88,506
<b>65 TO 69</b> Avg. Pay	- -	- -	- -	- -	- -	- -	- -	4 \$ 93,988	- -	4 80,340	8 \$ 87,164
<b>70 &amp; UP</b> Avg. Pay	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 86,520	1 \$ 86,520
<b>TOTAL</b> AVG. PAY	86 \$50,749	398 \$ 54,970	708 \$ 68,196	442 \$ 75,313	824 \$ 81,024	653 \$ 83,090	407 \$ 87,828	134 \$ 91,467	23 \$ 95,617	10 \$ 87,138	3,685 \$ 75,959
<b>Average Age: 42.60</b>						<b>Average Service: 15.25</b>					

# APPENDIX C – PARTICIPANT INFORMATION CONTINUED

## HISTORICAL ACTIVE AND DROP PARTICIPANT DATA

Valuation Date	Number of Active and DROP Participants	Annual Payroll (\$000)	Average Annual Pay (\$)	% Increase in Average Pay
7/1/2014*	N/A	N/A	N/A	N/A
7/1/2015	3,938	273,073	69,343	N/A
7/1/2016	4,094	288,136	70,380	1.5%
7/1/2017	4,094	261,881	63,967	-9.1%
7/1/2018	3,975	264,747	66,603	4.1%
7/1/2019	3,933	266,480	67,755	1.7%
7/1/2020	3,703	252,974	68,316	0.8%
7/1/2021	3,671	251,353	68,470	0.2%
7/1/2022	3,660	263,374	71,960	5.1%
7/1/2023	3,685	279,909	75,959	5.6%

\* No valuation was performed as of 7/1/2014



# APPENDIX C – PARTICIPANT INFORMATION CONTINUED

## SUMMARY OF INACTIVE PARTICIPANTS AS OF JULY 1, 2023

	NUMBER	AVERAGE AGE	ANNUAL BENEFITS (\$000)	AVERAGE ANNUAL BENEFITS
<b>BENEFITS IN PAY STATUS</b>				
Retirees	2,534	68.7	\$ 149,547	\$ 56,016
Beneficiaries	703	70.8	35,984	51,187
Disabled Participants	292	66.2	16,930	57,979
<b>Total</b>	<b>3,529</b>		<b>\$ 202,461</b>	<b>\$ 57,371</b>
<b>DEFERRED BENEFITS</b>				
Vested Terminated Participants	155	38.5	\$ 456 <sup>1</sup>	\$ 13,020 <sup>2</sup>
Beneficiaries	N/A	N/A	N/A	N/A
Disabled Participants	N/A	N/A	N/A	N/A
<b>Total</b>	<b>155</b>		<b>\$ 456</b>	<b>\$ 13,020</b>

<sup>1</sup> Does not include \$3,731,085 in pending refunds.

<sup>2</sup> Average is over 35 members not due pending refunds

## PARTICIPANT DATA RECONCILIATION

	ACTIVE	DROP	DEFERRED VESTED	RETIRED	TOTAL
<b>NUMBER OF MEMBERS AS OF JULY 1, 2022</b>	3,029	631	144	3,490	7,294
<b>CHANGE IN STATUS DURING THE PLAN YEAR:</b>					
Actives who retired	(22)	(58)		80	0
Actives who terminated	(32)		32		0
Actives who entered DROP	(74)	74			0
Inactives who returned to service		1	(1)		0
Inactives who retired			(3)	3	0
Participants who became disabled	(4)	(1)		5	0
<b>NO LONGER MEMBERS DUE TO:</b>					
Death	(4)	(1)		(102)	(107)
Non-vested terminations					0
Child attained cut-off age				(8)	(8)
Benefits no longer due	(29)		(17)		(46)
<b>NEW MEMBER DUE TO:</b>					
Initial membership	176			5	181
Death of another member				55	55
Correction		(1)		1	0
<b>Number of members as of July 1, 2023</b>	<b>3,040</b>	<b>645</b>	<b>155</b>	<b>3,529</b>	<b>7,369</b>

# APPENDIX C – PARTICIPANT INFORMATION CONTINUED

## RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS

Period Ended	ADDED TO ROLLS		REMOVED FROM ROLLS		ROLLS AT THE END OF THE YEAR			
	Number	Annual Benefits (\$000)	Number	Annual Benefits (\$000)	Number	Annual Benefits (\$000)	% Increase In Annual Benefits	Average Annual Benefit
<b>December 31, 1978</b>	72	719	23	76	794	4,294	15.8%	5,408
<b>December 31, 1979</b>	67	719	21	83	840	5,008	16.6	5,962
<b>December 31, 1980</b>	33	473	23	84	850	5,498	9.8	6,468
<b>December 31, 1981</b>	61	862	38	159	873	6,097	10.9	6,983
<b>December 31, 1982</b>	63	644	26	171	910	6,772	11.1	7,442
<b>December 31, 1983</b>	54	605	39	207	925	7,403	9.3	8,003
<b>June 30, 1984<sup>1</sup></b>	41	619	17	98	949	3,952	6.8	8,328
<b>June 30, 1985</b>	75	968	53	290	971	8,432	6.7	8,684
<b>June 30, 1986</b>	54	752	38	243	987	9,550	13.3	9,676
<b>June 30, 1987</b>	76	1,101	33	235	1,030	10,522	10.2	10,215
<b>June 30, 1988</b>	121	2,002	38	311	1,113	12,754	21.2	11,459
<b>June 30, 1989</b>	74	1,306	42	299	1,145	14,032	10.0	12,255
<b>June 30, 1990</b>	111	1,996	37	288	1,219	16,428	17.1	13,477
<b>June 30, 1991</b>	129	1,784	38	401	1,310	17,888	8.9	13,665
<b>June 30, 1992</b>	78	1,588	44	401	1,344	19,866	11.1	14,781
<b>June 30, 1993</b>	82	1,717	48	585	1,378	21,516	8.3	15,614
<b>June 30, 1994</b>	112	2,006	58	660	1,432	23,297	8.3	16,269
<b>June 30, 1995</b>	87	1,728	28	353	1,491	25,142	7.9	16,863
<b>June 30, 1996</b>	67	1,402	56	660	1,502	26,379	4.9	17,563
<b>June 30, 1997</b>	56	1,050	37	487	1,521	27,581	4.6	18,133
<b>June 30, 1998</b>	54	1,064	43	477	1,532	28,675	4.0	18,717
<b>June 30, 1999</b>	64	1,840	28	551	1,568	30,233	5.4	19,281

<sup>1</sup> Six-month period

# APPENDIX C – PARTICIPANT INFORMATION CONTINUED

## RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS

Period Ended	ADDED TO ROLLS		REMOVED FROM ROLLS		ROLLS AT THE END OF THE YEAR			
	Number	Annual Benefits (\$000)	Number	Annual Benefits (\$000)	Number	Annual Benefits (\$000)	% Increase in Annual Benefits	Average Annual Benefit
June 30, 2000	95	2,364	71	1,167	1,592	34,583	14.4	21,723
June 30, 2001	127	3,581	47	775	1,672	38,347	10.9	22,935
June 30, 2002	172	5,493	61	998	1,783	44,300	15.5	24,846
June 30, 2004 <sup>1</sup>	377	N/A	109	N/A	2,051	57,676	30.2	28,121
June 30, 2005	135	4,353	53	1,107	2,133	62,882	9.0	29,481
June 30, 2006	195	7,231	60	1,437	2,268	70,420	12.0	31,050
June 30, 2007	106	3,822	59	1,407	2,315	74,948	6.4	32,375
June 30, 2008	166	9,334	21	828	2,460	98,216	31.0	39,925
June 30, 2009	133	3,369	43	2,081	2,550	94,536	-3.7	37,073
June 30, 2010	162	7,159	103	2,886	2,609	96,580	2.2	37,018
June 30, 2011	181	8,905	64	1,489	2,726	106,832	10.6	39,190
June 30, 2012	141	7,042	77	2,398	2,790	114,176	6.8	40,923
June 30, 2013	170	8,286	54	1,837	2,906	124,080	8.7	42,698
June 30, 2014	162	7,772	70	1,401	2,998	132,749	7.0	44,279
June 30, 2015	147	7,273	85	383	3,060	140,629	5.9	45,957
June 30, 2016	138	7,496	60	2,302	3,138	150,005	6.7	47,803
June 30, 2017	207	11,829	95	3,667	3,250	162,671	8.4	50,053
June 30, 2018	150	8,353	88	2,546	3,312	169,601	4.3	51,208
June 30, 2019	114	6,432	81	3,818	3,345	173,433	2.3	51,848
June 30, 2020	148	8,388	83	3,821	3,410	179,050	3.2	52,508
June 30, 2021	127	6,730	96	4,510	3,441	182,964	2.2	53,172
June 30, 2022	137	7,716	88	4,286	3,490	192,873	5.4	55,265
June 30, 2023	149	7,851	110	5,343	3,529	202,461	5.0	57,371

<sup>1</sup> Two-year period

# APPENDIX D – RISK INFORMATION

## ACTUARIAL STANDARD OF PRACTICE NO. 51 DISCLOSURES

Funding future retirement benefits prior to when those benefits become due involves assumptions regarding future economic and demographic experience. These assumptions are applied to calculate actuarial liabilities and the corresponding funded status of the Fund. However, to the extent future experience deviates from the assumptions used, variations will occur in these calculated values. These variations create risk to the Fund. Understanding the risks to the funding of the Fund is important. Therefore, an Actuarial Standard of Practice (ASOP) has been adopted. Actuarial Standard of Practice No. 51 (ASOP 51) requires certain disclosures of potential risks to the Fund and provides useful information for intended users of actuarial reports that determine Fund contributions or evaluate the adequacy of specified contribution levels to support benefit provisions.

Under ASOP 51, risk is defined as the potential of actual future measurements deviating from expected future measurements resulting from actual future experience deviating from actuarially assumed experience.

It is important to note that not all risk is negative but all risk should be understood and accepted based on knowledge, judgment and educated decisions. Future measurements may deviate in ways that produce positive or negative financial impacts to the Fund.

In the actuary's professional judgment, the following risks may reasonably be anticipated to significantly affect the plan's future financial condition:

- Investment risk – the risk that assets will have a lower return than expected
- Contribution risk – the risk that the actual contribution made will be different than the recommended contribution in the Risk Sharing Valuation Study
- Salary increase risk – the risk that actual salary increases will be higher than expected
- Longevity and other demographic risk – the risk that mortality or other demographic experience will be different from expected

The following information is provided to comply with ASOP 51 and furnish beneficial information on potential risks to the Fund. This list is not all-inclusive; it is an attempt to identify the most significant risks and how those risks might affect the results shown in this report.

Note that ASOP 51 does not require the actuary to evaluate the ability or willingness of the Fund sponsor to make contributions to the Fund. In addition, this Risk Sharing Valuation Study report is not intended to provide investment advice or to provide guidance on the management or reduction of risk. Buck welcomes the opportunity to assist in such matters as part of a separate project or projects utilizing the appropriate staff and resources for those objectives.

## ASSESSMENT OF RISKS

- Investment return - One type of investment risk is that assets materially underperform expected return.
  - Lower assets mean higher unfunded liability and larger contribution amounts. For example, if returns on assets at fair value were 1% less than actual, this would reduce the actuarial value of assets by approximately \$10,200,000, which would increase the estimated City Contribution for Fiscal Year 2025 contribution by \$1,874,000.
  - The five-year smoothing method used for the actuarial value of assets defers a portion of investment gain/loss in each of the previous five years. If the assumed return on assets consistently overestimates the actual return on assets, the actuarial value of assets will be consistently higher than the true fair value. Consistent underestimation of the unfunded liability can prevent the Fund from achieving anticipated funding goals even when all minimum required contributions are made timely.

The Fund invests in a diversified portfolio with the objective of maximizing investment returns at a reasonable level of risk. However, Actuarial Standard of Practice No. 4 ("ASOP 4") requires the actuary to disclose a Low-Default-Risk Obligation Measure ("LDROM") of plan liabilities and provide commentary to help intended users of this report understand the significance of the measure with respect to funded status, contributions, and participant benefit security.

The LDROM is to be based on "discount rates derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future." The LDROM shown here represents what the Fund's liability would be if the Fund invested its assets solely in a portfolio of high-quality bonds whose cash flows approximately match future benefit payments. Consequently, the difference between the LDROM and the Actuarial Accrued Liability can be thought of as representing the expected taxpayer savings from investing in the Fund's diversified portfolio compared to investing only in high-quality bonds. It may also be thought of as the cost of reducing investment risk. In the case of this Fund, the net savings to taxpayer (or net

# APPENDIX D – RISK INFORMATION CONTINUED

cost of reducing investment risk) is the increase in liability due to the use of the lower discount rate offset by a decrease in liability due to expectation of lower benefit delivery (i.e., lower future cost-of-living adjustments and lower interest crediting to DROP accounts)

As of July 1, 2023, the LDROM is \$5.43 billion and is based on a 5.38% interest rate. Assumed future DROP returns and future cost-of-living adjustments are adjusted to reflect a 5.38% assumed asset return. Specifically, the assumed future Cost-of-Living Adjustments was changed from 2.25% to 0.63% and the assumed future DROP crediting rate from 4.55% to 3.50% for the LDROM. All other assumptions are the same as those used for funding as shown in this report.

The interest rate used for the LDROM was determined by calculating a single equivalent discount rate using projected benefit payments based and the Buck Above Median Yield Curve as of June 30, 2023. For purposes of selecting the interest rate for the LDROM, the projected benefit payments are based on the assumed future DROP returns and future cost-of-living adjustments based on the Fund's diversified portfolio. Note the interest rate used for the LDROM is based on bond yields applicable at the time of the measurement and will therefore vary for different measurement dates

Actuaries play a role in helping determine funding methods and policies that can achieve affordable and appropriate contributions and risk management. The funded status based on Actuarial Accrued Liability and the Actuarially Determined Contributions are determined using the expected return on assets which reflects the actual investment portfolio. Since the assets are not invested in an all-bond portfolio, the LDROM does not indicate the Fund's funded status or progress, nor does it provide information on necessary plan contributions.

With respect to security of participant benefits, if this plan were to be funded on an LDROM basis, participant benefits currently accrued as of the measurement date may be considered more secure as investment risk may be significantly reduced. However, the assets being invested in a diversified portfolio does not mean the participant benefits are not secure. Security of participant benefits relies on a combination of the assets in the plan, the investment returns generated on those assets, and the promise of future contributions from the plan sponsors. Reducing investment risk by investing solely in bonds may significantly increase Actuarially Determined Contributions and therefore increase contribution risk by decreasing the ability of the plan sponsor to make necessary contributions to fund the benefits. Unnecessarily high contribution requirements in the near term may not be affordable and could imperil plan

sustainability and benefit security. Participant benefits will remain secure if reasonable and appropriate contributions with managed risk are calculated and paid.

- Asset growth does not keep pace with liability increases over time - Another type of investment risk is that asset returns do not keep pace with liability growth over time. Fund liabilities are based on the discounted present value of anticipated future benefit payments. That present value grows at the discount rate as time passes and the future payouts move closer. If investment returns are lower than the rates used to discount liabilities, Fund liabilities will increase more rapidly than Fund assets. Over extended periods of time, such as those involved in pension obligations, these discrepancies can accumulate to significant shortfalls.
- Market shocks or regime changes - Invested assets are subject to significant disruptions from market shocks, such as the financial crisis of 2008/2009, or as a result of systemic regime changes that persist for years, such as historically low interest rates over the recent decade. These shocks or changes will increase the risk that investments will underperform the expected return. They may also lead to a need to lower the long-term return on assets assumption. Since the long-term return on asset assumption is also used for discounting liabilities a lower assumption will increase liabilities and recommended contributions. Currently the investment return assumption used for funding is set by Senate Bill 2190.
- Salary increases - Fund costs are sensitive to salary increases, with higher rates leading to higher obligations. This is because benefits at retirement are pay related, meaning that higher pay generates higher benefit levels at retirement. Compensation increases greater than assumed lead to actuarial losses since projected benefits are higher than predicted by assumed rates.
- The Fund provides certain eligible members to enter the Deferred Retirement Option Program (DROP). It allows members who elect DROP the option to continue to work beyond their standard or alternative service eligibility date and convert part of their retirement benefit into a lump sum.
  - A DROP presents a risk due to large lump sums paid, particularly during economic downturns. Another investment consideration is the need for liquid assets to pay DROP lump sums as employees and retirees may elect to receive their DROP account at any time creating either the necessity to maintain larger allocations of cash to pay these large lump sum benefits or force the Fund to sell securities or other

# APPENDIX D – RISK INFORMATION CONTINUED

illiquid investments at inopportune times. These payments are less predictable than monthly retirement benefits and may cause some losses.

- The DROP provided by the Fund also presents risk due to investment return provided to the DROP account. The Fund provides DROP investment return at the rate of 65% of the Fund's earnings/losses averaged over a five-year period. When the average is a loss, the DROP account is only decreased by 65% of the loss rate and the Fund has to absorb the remaining 35%. However, this risk is also mitigated by the 65% factor - when the average is an earning, the Fund gets to keep the extra 35% earnings.
- Longevity and other demographic risks - Potential that mortality or other demographic experience (retirement, turnover, disability) may be different than expected. As the Fund matures and the majority of participants reach (or have reached) retirement eligibility, risks associated when participants retire can become significant. The Fund provides for unreduced early retirement benefits after meeting certain age and service conditions. These benefits are highly subsidized and thus can be significantly more valuable than normal retirement benefits and regular early retirement benefits. The demographic assumptions used to determine the Risk Sharing Valuation Study attempt to account for unreduced early retirement based on historical plan experience. However, due to the unpredictable nature of such benefits, future experience could differ significantly from past experience.

In addition to the risk that participants will not retire as expected, the Fund is subject to longevity risk -the risk that participants will live longer (or shorter) than expected. Cost of living adjustments (COLA) provided by the Fund increase longevity risk because if a participant lives longer than expected more COLA will be provided.

- Declining active workforce - since the City's contributions are based on a percentage of participant's salaries, a declining active workforce will have the impact of the Fund potentially receiving lower contributions. In addition, if the required dollar amount of contributions remain level or increase, a declining active workforce will result in higher contribution rates in order to meet required contribution levels.
- Contribution risk – risk of not contributing an actuarially determined contribution. Based on the statutory requirements of Senate Bill 2190 it is our understanding that the actual City contribution rate may be established as an average of the contribution rates shown in this report and those shown in the Risk Sharing Valuation Study

prepared by the City's actuary. If future contributions are established in this manner at levels below those presented in this report, the Fund may not be expected to achieve a fully funded position over the 30-year time horizon as contemplated in the statute based on the data, assumptions and methods set forth in this report.

- Ultimate Entry Age Normal Cost Method (Ultimate EANC) - The Ultimate EANC method is a variation of EANC, where the normal cost is calculated for each active member based on the Fund provisions applicable to new members of the Fund. As the Fund has a lower annual cost for new members hired on or after July 1, 2017, use of the Ultimate EANC method lowers the normal cost and increases the actuarial accrued liability, as compared to EANC. Since normal costs under the Ultimate EANC method are not directly related to the individual expected costs of accruing benefits, its use may lead to a higher likelihood of benefits being due prior to being fully funded than other methods, like the more traditional Entry Age Normal Cost Method (EANC). If the EANC method was used, and if the unfunded liability was amortized over 15 years beginning July 1, 2024, we estimate the City Contribution Rate would be 21.43%, compared to the 26.11% rate determined under the Ultimate EANC method. Additionally, the funded ratio under the EANC method would be 97.2%, compared to 96.0% under the Ultimate EANC method.



# APPENDIX D – RISK INFORMATION CONTINUED

## HISTORICAL RESULTS

The following table shows selected historical values of key Risk Sharing Valuation Study measures. These items illustrate how actual volatility has impacted the Fund in recent years and gives additional context to the risks described above. Further information can be found in the RSVS reports for each year.

(\$1,000) RSVS Date	07/01/19	07/01/20	07/01/21	07/01/22	Current RSVS 07/01/23
<b>Liabilities and Assets at Valuation Date</b>					
<b>Actuarial Accrued Liability (AAL)</b>	5,057,759	4,932,307	4,881,608	5,075,516	5,277,944
<b>Normal Cost</b>	70,345	61,078	60,907	63,222	66,552
<b>Actuarial Value of Assets (AVA)</b>	4,190,934	4,251,851	4,550,468	4,843,737	5,064,764
<b>Funded Percent (AVA)</b>	83%	86%	93%	95%	96%
<b>Fair Value of Assets (MVA)</b>	4,237,692	4,102,932	5,256,763	5,093,736	5,109,178
<b>Funded Percent (MVA)</b>	84%	83%	108%	100%	97%
<b>Contributions and Disbursements for Plan Year Ended</b>					
	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Actuarially Determined Contribution (ADC)</b>	99,676	96,332	88,104	78,571	72,358
<b>Actual Contribution</b>	89,897	83,837	77,495	81,351	72,475
<b>Disbursements</b>	278,615	336,153	291,767	275,842	288,676
<b>Rates of Return for Plan Year Ended</b>					
	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Assumed</b>	7.00%	7.00%	7.00%	7.00%	7.00%
<b>AVA</b>	8.10%	6.90%	11.60%	10.20%	8.50%
<b>MVA</b>	5.40%	2.00%	33.40%	0.00%	4.00%
<b>Maturity Measures at Valuation Date</b>					
<b>Payroll</b>	272,498	259,235	243,045	255,100	269,091
<b>Asset Volatility Ratio (AVA / Payroll)</b>	15.4	16.4	18.7	19.0	18.8
<b>Liability Volatility Ratio (AAL / Payroll)</b>	18.6	19.0	20.1	19.0	19.6
<b>Retiree and Beneficiary (In-pay) Liability</b>	3,445,240	3,428,579	3,454,553	3,618,126	3,748,695
<b>Percent of Total Liability</b>	68%	70%	71%	71%	71%
<b>Contributions minus Disbursements in Prior Year</b>	(188,718)	(252,316)	(214,272)	(194,491)	(216,201)
<b>Percent Fair Value of Assets</b>	(4.5%)	(6.1%)	(4.1%)	(3.88%)	(4.2%)

# APPENDIX D – RISK INFORMATION CONTINUED

## COMMENTARY ON PLAN MATURITY MEASURES

### THE RATIO OF RETIRED LIFE ACTUARIAL ACCRUED LIABILITY TO TOTAL ACTUARIAL ACCRUED LIABILITY

A mature plan will often have a ratio above 60 - 65 percent. A higher percentage will generally indicate an increased need for asset / liability matching due to inability to absorb volatility in future returns. Also, an increasing percentage may indicate a need for a less risky asset allocation which may lead to a lower long-term return on assets assumption and increased costs.

### THE RATIO OF CASHFLOW TO FAIR VALUE OF ASSETS

The cashflow as a percentage of assets means the Fund may need to invest in more liquid assets to cover the benefit payments. More liquid assets may not garner the same returns as less liquid assets and therefore increase the investment risk. However, there may already be enough liquid assets to cover the benefit payments, less investment return is needed to cover the shortfall, or only a small portion of assets will need to be converted to cash. Therefore, the investment risk is likely not amplified at this time. This maturity measure should be monitored for continual upward trend with greater magnitude.

### THE RATIO OF ACTUARIAL VALUE OF ASSETS TO PARTICIPANT PAYROLL

Plans that have higher asset-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, if lower than expected asset return increases the unfunded liability of two plans by the same percent the plan with a higher assets-to-payroll ratio may experience higher contribution volatility than a plan with a lower asset-to-payroll ratio.





110 West Berry Street  
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April 30, 2024

Mr. Brett Besselman, Chairman of Board of Trustees  
Mr. Tim Schauer, Executive Director  
Houston Firefighters' Relief and Retirement Fund  
4225 Interwood North Parkway  
Houston, Texas 77032

**Re: Addendum to the July 1, 2023 Proposed Risk Sharing Valuation Study**

This addendum is incorporated and made part of the attached July 1, 2023 Proposed Risk Sharing Valuation Study (Proposed RSVS) for the Houston Firefighters' Relief and Retirement Fund (Fund). Unless otherwise stated, the results presented in this addendum were prepared using the same data, methods and actuarial assumptions that have been used for the Proposed RSVS. Please refer to the Proposed RSVS report for all the other assumptions, methods and caveats related to this addendum.

Buck published its Proposed RSVS on November 22, 2023 pursuant to our engagement to provide actuarial services to the Fund. The Proposed RSVS developed the estimated municipal contribution rate for fiscal year ending June 30, 2025 (FY 2025). The Proposed RSVS was prepared, as required under Senate Bill 2190, for the Fund as of July 1, 2023. The Proposed RSVS reflects the benefit provisions of the Fund as amended by and funding policies mandated by Senate Bill 2190, but without regard to Section 13E.

Since the Fund's and the City's estimated municipal contribution rates were different by more than two percentage points, the Executive Director for the Fund and the Interim Finance Director for the City executed a joint addendum to the respective Fund and Municipality final risk sharing valuation studies. This addendum noted that the arithmetic average of the estimated municipal contributions rates for the fiscal year stated by the municipal actuary and the fund actuary was 25.00%. However, since this rate was less than the initial RSVS' FY 2025 minimum contribution rate of 26.89% and the Fund's statutory funded level of 96.0% exceeded 90.0% (but was less than 100%), this addendum presents the implementation of the required adjustments under §13E(c) of HFRRF's governing statute, as follows:

- i. Adjusting the actuarial value of assets equal to the current market value of assets under §13E(c)(1) does not cause the municipal contribution rate to increase;
- ii. An agreement was not reached between the Fund and the City under §13E(c)(2) and §13E(c)(3) by April 30<sup>th</sup>;
- iii. Consequently, the Fund has accelerated the payoff year of the legacy liability to the extent required to increase the estimated municipal contribution rate to equal the minimum contribution rate in accordance with §13E(c)(4).

The following sections of the Proposed RSVS have been revised, in accordance with §13E(c) of HFRRF's governing statute.

**Revised Amortization Schedule as of July 1, 2023 (\$000) (Original on page 74 of Proposed RSVS)**

Plan Year Ending	Initial Liability Layer	Liability Layer as of July 1, 2023	Remaining Amortization Payments as of July 1, 2024	Payment for Fiscal Year 2025	As a % of Fiscal Year 2025 Payroll <sup>1</sup>
June 30, 2016	\$ 900,223	\$ 974,330	6.208	\$ 163,191	56.60%
June 30, 2017	(19,325)	(20,682)	6.208 <sup>2</sup>	(3,464)	(1.20)%
June 30, 2018	(32,368)	(34,293)	6.208 <sup>2</sup>	(5,744)	(1.99)%
June 30, 2019	(61,676)	(64,759)	6.208 <sup>2</sup>	(10,846)	(3.76)%
June 30, 2020	(190,421)	(198,405)	6.208 <sup>2</sup>	(33,231)	(11.53)%
June 30, 2021	(342,733)	(354,841)	6.208 <sup>2</sup>	(59,432)	(20.61)%
June 30, 2022	(79,662)	(85,239)	6.208 <sup>2</sup>	(14,277)	(4.95)%
June 30, 2023	(2,931)	<u>(2,931)</u>	6.208 <sup>2</sup>	<u>(576)</u>	<u>(0.20)%</u>
Total		\$ 213,180		\$ 35,621	12.36%

**Revised Risk Sharing Valuation Results (Original on page 72 of Proposed RSVS)**

(\$000)	2023 Risk Sharing Valuation Results		
	2022 Risk Sharing Valuation Results	Proposed RSVS (Published November 22, 2023)	Adjustments in accordance with §13E(c)(4)
Present Value of Future Benefits	\$ 5,774,144	\$ 6,004,259	\$ 6,004,259
Actuarial Accrued Liability	\$ 5,075,516	\$ 5,277,944	\$ 5,277,944
Actuarial Value of Assets	\$ 4,843,737	\$ 5,064,764	\$ 5,064,764
Unfunded Accrued Liability	\$ 231,779	\$ 213,180	\$ 213,180
Funded Ratio	95.4%	96.0%	96.0%
City Normal Cost Rate <sup>3</sup>	14.75%	14.53%	14.53%
City Accrued Liability Rate	12.14%	11.58%	12.36%
Total City Contribution Rate <sup>4</sup>	26.89%	26.11%	26.89%
Estimated City Contribution for following Fiscal Year	\$ 72,946	\$ 75,277	\$ 77,525
Employee Contribution Rate	10.50%	10.50%	10.50%

<sup>1</sup> Based on projected pensionable compensation of \$288,305,000

<sup>2</sup> Per SB 2190, the amortization period for a new liability gain layer is equal to the remaining amortization period on the largest remaining liability loss layer.

<sup>3</sup> Contains an allowance for administrative expenses equal to 1.25% of payroll.

<sup>4</sup> As a percentage of pensionable compensation.

## Actuarial Certification

We certify that the information contained in this addendum to the July 1, 2023 Proposed RSVS has been prepared in accordance with the appropriate Actuarial Standards of Practice. Unless otherwise stated, the results presented herein were prepared using the same data, methods and actuarial assumptions that have been used for the Proposed RSVS. A summary of the actuarial assumptions and methods, major Fund provisions, and Fund participant data used to calculate the results of this study can be found in the appendices of the attached July 1, 2023 Proposed RSVS report. Please refer to the same Proposed RSVS for the applicable disclosures under Actuarial Standards of Practice (“ASOPs”) 4, 27, 35, 51 and 56.

In addition to the ASOP 51 “Contribution risk” discussion, the implementation of Section 13E accelerates the amortization of the Fund’s liability layers and establishes a contribution rate that is greater than determined by the Proposed RSVS and further exceeds the normal cost plus interest on the unfunded actuarial accrued liability. Assuming that city contributions meet or exceed the Total City Contribution Rate developed in this Addendum, the unfunded actuarial accrued liability is expected to be fully amortized within 6.208 years beginning July 1, 2024.

I am a Fellow of the Society of Actuaries and Member of the American Academy of Actuaries. I meet the Academy’s Qualification Standards to issue this Statement of Actuarial Opinion. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and I am available to answer questions about it.

If you have any questions concerning this information, please let me know.

Respectfully submitted,

Buck Global, LLC



Michael A. Ribble, FSA, EA, MAAA, FCA  
Principal, Consulting Actuary

Attached: July 1, 2023 Proposed Risk Sharing Valuation Study dated November 22, 2023

# 05

SECTION 05

## *STATISTICAL INFORMATION*



# STATISTICS

## INTRODUCTION

The Statistical section of the Houston Firefighters' Relief and Retirement Fund's Annual Comprehensive Financial Report presents detailed information related to the financial statements. The schedules within the Statistical section are classified into the following three categories: Financial Trends, Revenue Capacity and Operating Information. All information was derived from Audited Annual Financials and/or our member services database system.

## FINANCIAL TRENDS

The Revenue by Source presents the member and employer contributions, as well as the net investment income/loss for the 10 years ending June 30, 2024.

The Fund's investment returns have the most significant impact on the additions to plan net position.

The Expenses by Type presents the benefits, refunds of contributions and administrative expenses for the 10 years ending June 30, 2024. The Fund's benefits payments have the most significant impact on the total deductions from plan net position.

The Benefit Expenses by Type presents the amount of benefit payments and refunds by type for the 10 years ending June 30, 2024. Most benefit types are monthly retirement benefits.

The Statement of Changes in Plan Net Position is a schedule combining the additions to and deductions from plan net position from the schedule of Revenue by Source and schedule of Expenses by Type to arrive at net increase/decrease to changes in plan net position for the 10 years ending June 30, 2024.

## REVENUE CAPACITY

The Schedule of Investment Income presents the details of the total net investment gain/loss for the 10 years ending June 30, 2024. The Fund has two outside sources of revenue and one own-source (internal) of revenue. Employer contributions and member contributions, provided in the schedule of Revenue by Source, are the two outside sources of revenue and investment income is the Fund's own-source revenue. Since investment income is the largest source of revenue to the Fund, this schedule provides more detail on the major components of the investment income, which is also disclosed in total on the schedule of Revenue by Source.

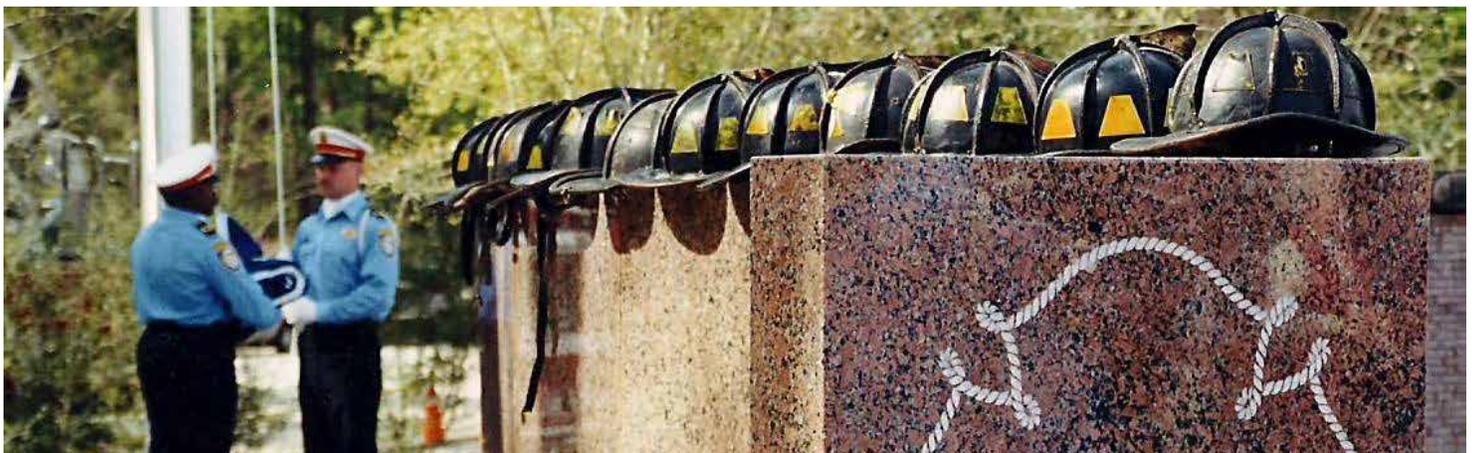
## OPERATING INFORMATION

The schedule of Retired Members by Type of Benefit presents, for given benefit ranges, the total number of retirees, total monthly benefits and total number of retirees by retirement type as of June 30, 2024.

The schedule of Average Monthly Benefit Payments and Average Final Average Salary of Retired Members presents, in five-year increments of credited service, the average monthly benefit, the average final average salary and the number of retired members for the 10 years ending June 30, 2024.

The schedule of Participating Employers and Active Members provides the number of covered employees and the corresponding percentage of participation who worked within the City of Houston for the 10 years ending June 30, 2024.

Some of these terms are used in the Investment section. Others are used throughout this report. Definitions are provided as they relate to the Houston Firefighters' Relief and Retirement Fund.



# REVENUE BY SOURCE AND EXPENSES BY TYPE

## REVENUES BY SOURCE — ACCRUAL BASIS (DOLLARS IN THOUSANDS)

Fiscal Year (Ending June 30)	Employee Contributions	Employer Contributions	Employer Contributions as a Percentage of Annual Covered Payroll	Investment Income (or Loss) Based on Fair Value	Other	Total
2024	\$ 33,754	\$ 76,351	26.89%	\$ 470,760	N/A	\$ 580,865
2023	31,973	72,475	26.89%	199,670	N/A	304,118
2022	30,942	81,351	31.89%	523	N/A	112,816
2021	29,873	77,495	31.89%	1,338,230	N/A	1,445,598
2020	33,441	83,837	32.34%	84,115	N/A	201,393
2019	34,281	89,897	32.99%	221,775	N/A	345,953
2018	35,622	83,010	31.89%	322,306	N/A	440,938
2017	25,404	93,658	33.20%	432,948	N/A	552,010
2016	25,511	94,279	33.20%	(49,877)	N/A	69,913
2015	25,092	92,609	33.20%	49,538	N/A	167,239

## EXPENSES BY TYPE — ACCRUAL BASIS (DOLLARS IN THOUSANDS)

Fiscal Year (Ending June 30)	Benefit Payments (excludes contribution refunds)	Professional and Administrative Expenses	Contribution Refunds	Total
2024	\$ 304,279	\$ 5,460	\$ 1,575	\$ 311,314
2023	281,418	5,581	1,677	288,676
2022	268,371	5,243	2,228	275,842
2021	283,989	5,353	2,425	291,767
2020	327,324	5,830	2,999	336,153
2019	270,862	6,217	1,536	278,615
2018	287,499	6,567	1,608	295,674
2017	248,354	7,196	1,040	256,590
2016	211,128	6,221	545	217,894
2015	195,493	6,052	869	202,414

# BENEFIT EXPENSES BY TYPE

	2024	2023	2022	2021	2020
<b>Refunds of Contributions</b>	\$ 1,574,693	\$ 1,677,318	\$ 2,227,893	\$ 2,425,034	\$ 2,998,517
<b>Death Benefits</b>	260,433	902,099	235,000	337,519	215,000
<b>Deferred Retirees</b>	870,780	883,541	860,512	738,592	742,861
<b>Off-Duty Disabilities</b>	1,125,860	1,084,514	1,199,996	1,188,487	1,281,164
<b>Annual Supplemental Benefit payments</b>	4,974,879	4,979,945	4,981,186	4,984,503	4,976,920
<b>On-Duty Disabilities</b>	16,864,485	16,222,167	15,361,749	14,811,532	14,843,981
<b>Survivors</b>	37,561,595	34,616,370	32,046,027	30,197,101	28,931,410
<b>DROP Distributions</b>	84,851,698	72,160,519	69,116,984	92,752,345	140,354,145
<b>PROP Distributions</b>	2,616,904	2,411,373	3,152,190	3,822,165	5,117,648
<b>Service Retirees</b>	155,152,731	148,157,150	141,417,189	135,156,911	130,861,303
<b>Total</b>	<b>\$305,854,058</b>	<b>\$283,094,996</b>	<b>\$ 270,598,726</b>	<b>\$ 286,414,189</b>	<b>\$ 330,322,949</b>

	2019	2018	2017	2016	2015
<b>Refunds of Contributions</b>	\$ 1,535,913	\$ 1,608,192	\$ 1,040,443	\$ 544,717	\$ 868,618
<b>Death Benefits</b>	225,000	257,834	192,500	70,000	201,307
<b>Deferred Retirees</b>	780,953	797,865	768,216	734,911	714,034
<b>Off-Duty Disabilities</b>	1,367,276	1,394,832	1,345,691	1,340,299	1,304,230
<b>Annual Supplemental Benefit Payments</b>	5,026,767	4,921,757	4,627,341	4,784,758	4,677,602
<b>On-Duty Disabilities</b>	15,027,536	15,078,051	14,097,847	14,058,318	13,740,358
<b>Survivors</b>	27,356,913	25,720,614	23,749,166	22,388,261	20,659,074
<b>DROP Distributions</b>	87,129,577	107,379,424	88,239,148	62,900,364	55,070,516
<b>PROP Distributions</b>	4,133,561	6,603,511	5,712,650	4,013,603	3,866,657
<b>Service Retirees</b>	129,814,823	125,345,352	109,621,105	100,837,387	95,259,573
<b>Total</b>	<b>\$ 272,398,319</b>	<b>\$ 289,107,432</b>	<b>\$ 249,394,107</b>	<b>\$ 211,672,618</b>	<b>\$ 196,361,969</b>

# STATEMENT OF CHANGES IN PLAN NET POSITION LAST 10 FISCAL YEARS

	2024	2023	2022	2021	2020
<b>ADDITIONS</b>					
Employer Contributions	\$ 76,350,641	\$ 72,474,989	\$ 81,351,512	\$ 77,495,206	\$ 83,836,678
Member Contributions	33,754,435	31,972,752	30,941,552	29,873,223	33,441,101
Net Investment Income (net of expenses)	470,760,223	199,669,909	522,517	1,338,229,965	84,114,982
<b>Total Additions</b>	<b>\$ 580,865,299</b>	<b>\$ 304,117,650</b>	<b>\$ 112,815,581</b>	<b>\$ 1,445,598,394</b>	<b>\$ 201,392,761</b>
<b>DEDUCTIONS</b>					
Total Benefit Expenses (see Benefit Expenses by Type)	\$ 305,854,058	\$ 283,094,996	\$ 270,598,726	\$ 286,414,189	\$ 330,322,949
Administrative & Professional Expense	5,459,908	5,580,983	5,243,204	5,353,176	5,830,113
<b>Total Deductions</b>	<b>\$ 311,313,966</b>	<b>\$ 288,675,979</b>	<b>\$ 275,841,930</b>	<b>\$ 291,767,365</b>	<b>\$ 336,153,062</b>
Change in Plan Net Position	\$ 269,551,333	\$ 15,441,671	\$ (163,026,349)	\$ 1,153,831,029	\$ (134,760,301)
Plan Net Position Beginning of Year	5,109,178,130	5,093,736,459	5,256,762,808	4,102,931,779	4,237,692,080
Plan Net Position End of Year	\$ 5,378,729,463	\$ 5,109,178,130	\$ 5,093,736,459	\$ 5,256,762,808	\$ 4,102,931,779

	2019	2018	2017	2016	2015
<b>ADDITIONS</b>					
Employer Contributions	\$ 89,897,222	\$ 83,010,066	\$ 93,657,800	\$ 94,279,235	\$ 92,609,565
Member Contributions	34,281,171	35,621,787	25,403,621	25,510,801	25,091,582
Net Investment Income (net of expenses)	221,775,210	322,306,521	432,948,121	(49,876,872)	49,538,145
<b>Total Additions</b>	<b>\$ 345,953,603</b>	<b>\$ 440,938,374</b>	<b>\$ 552,009,542</b>	<b>\$ 69,913,164</b>	<b>\$ 167,239,292</b>
<b>DEDUCTIONS</b>					
Total Benefit Expenses (see Benefit Expenses by Type)	\$ 272,398,319	\$ 289,107,432	\$ 249,394,107	\$ 211,672,618	\$ 196,361,969
Administrative & Professional Expense	6,217,169	6,566,644	7,195,777	6,221,053	6,052,085
<b>Total Deductions</b>	<b>\$ 278,615,488</b>	<b>\$ 295,674,076</b>	<b>\$ 256,589,884</b>	<b>\$ 217,893,671</b>	<b>\$ 202,414,054</b>
Change in Plan Net Position	\$ 67,338,115	\$ 145,264,298	\$ 295,419,658	\$ (147,980,507)	\$ (35,174,762)
Net Position Held in Trust, Beginning of Year	4,170,353,965	4,025,089,667	3,729,670,009	3,877,650,516	3,912,825,278
Net Position Held in Trust, End of Year	\$ 4,237,692,080	\$ 4,170,353,965	\$ 4,025,089,667	\$ 3,729,670,009	\$ 3,877,650,516

# SCHEDULE OF INVESTMENT INCOME LAST 10 FISCAL YEARS

	2024	2023	2022	2021	2020
<b>INVESTMENT GAIN (LOSS)</b>					
Net appreciation/(depreciation) in fair value of investments	\$ 442,138,455	\$ 181,587,858	\$ 1,146,381	\$ 1,330,056,713	\$ 66,752,612
Interest	31,521,063	24,167,468	5,585,459	14,522,710	22,496,378
Dividends	1,786,056	1,543,706	1,214,454	1,010,208	1,005,808
Earnings from private equity	1,050,836	661,037	379,907	514,997	422,877
Earnings from real estate	21,302	40,679	34,685	92,379	37,425
Earnings from private debt	650,930	377,984	-	-	-
Miscellaneous	270,054	231,494	100,317	22,190	146,003
<b>Total Investment Gain (Loss)</b>	<b>477,438,696</b>	<b>208,610,226</b>	<b>8,461,203</b>	<b>1,346,219,197</b>	<b>90,861,103</b>
Investment expenses	(6,768,710)	(9,054,871)	(8,140,843)	(8,105,569)	(6,815,731)
<b>Net Gain (Loss) from Investing Activities</b>	<b>\$ 470,669,986</b>	<b>\$ 199,555,355</b>	<b>\$ 320,360</b>	<b>\$ 1,338,113,628</b>	<b>\$ 84,045,372</b>

## FROM SECURITIES LENDING ARRANGEMENTS:

Earnings	\$ 1,063,281	\$ 831,675	\$ 202,157	\$ 55,354	\$ 165,061
Rebates and fees	(973,044)	(717,121)	-	60,983	(95,451)
<b>Net income from securities lending activities</b>	<b>90,237</b>	<b>114,554</b>	<b>202,157</b>	<b>116,337</b>	<b>69,610</b>
<b>Total Net Investment Gain (Loss)</b>	<b>\$ 470,760,223</b>	<b>\$ 199,669,909</b>	<b>\$ 522,517</b>	<b>\$ 1,338,229,965</b>	<b>\$ 84,114,982</b>

	2019	2018	2017	2016	2015
<b>INVESTMENT GAIN (LOSS)</b>					
Net appreciation/(depreciation) in fair value of investments	\$ 194,215,973	\$ 297,201,824	\$ 389,903,955	\$ (116,953,736)	\$ (23,687,040)
Interest	26,356,712	26,478,055	42,964,571	57,621,249	57,318,547
Dividends	5,719,922	4,127,663	4,660,644	16,298,917	25,615,080
Earnings from private equity	1,278,241	838,456	1,228,446	702,437	967,410
Earnings from real estate	41,890	3,320	60,958	58,453	158,620
Earnings from private debt	-	-	-	-	-
Miscellaneous	517,980	319,007	583,284	1,699,257	373,816
<b>Total Investment Gain (Loss)</b>	<b>228,130,718</b>	<b>328,968,325</b>	<b>439,401,858</b>	<b>(40,573,423)</b>	<b>60,746,433</b>
Investment expenses	(6,484,550)	(6,899,091)	(6,833,460)	(9,854,548)	(11,786,187)
<b>Net gain (Loss) from Investing Activities</b>	<b>\$ 221,646,168</b>	<b>\$ 322,069,234</b>	<b>\$ 432,568,398</b>	<b>\$ (50,427,971)</b>	<b>\$ 48,960,246</b>

## FROM SECURITIES LENDING ARRANGEMENTS:

Earnings	\$ 508,428	\$ 544,765	\$ 339,129	\$ 253,620	\$ 235,556
Rebates and fees	(379,386)	(307,478)	40,594	297,479	342,343
<b>Net income from securities lending activities</b>	<b>129,042</b>	<b>237,287</b>	<b>379,723</b>	<b>551,099</b>	<b>577,899</b>
<b>Total Net Investment Gain (Loss)</b>	<b>\$ 221,775,210</b>	<b>\$ 322,306,521</b>	<b>\$ 432,948,121</b>	<b>\$ (49,876,872)</b>	<b>\$ 49,538,145</b>

# NUMBER OF BENEFIT RECIPIENTS BY TYPE AND MONTHLY BENEFIT AMOUNT

FOR YEAR ENDED JUNE 30, 2024

BENEFIT AMOUNT RANGE	TOTAL BENEFIT RECIPIENT COUNT	SERVICE	DISABILITY	WIDOW	CHILDREN	PARENT	DEFERRED	INACTIVE	QDRO
0	15	1	2	2	0	0	0	10	0
1-200	10	0	0	1	0	0	0	0	9
201-400	31	0	0	3	1	0	0	0	27
401-600	40	0	0	6	0	0	8	0	26
601-800	53	0	0	13	2	0	18	0	20
801-1000	50	1	0	7	3	0	14	5	20
1001-1200	41	0	0	4	6	0	10	6	15
1201-1400	33	0	0	5	1	0	7	1	19
1401-1600	32	1	2	6	5	0	5	4	9
1601-1800	25	3	4	6	2	0	3	1	6
1801-2000	35	1	7	9	4	0	2	2	10
OVER 2000	3,422	2,492	275	610	23	0	3	0	19
<b>Total Benefit Count</b>	<b>3,787</b>	<b>2,499</b>	<b>290</b>	<b>672</b>	<b>47</b>	<b>0</b>	<b>70</b>	<b>29</b>	<b>180</b>



# AVERAGE MONTHLY BENEFIT PAYMENTS OF RETIRED MEMBERS

EFFECTIVE RETIREMENT DATE	YEARS OF CREDITED SERVICE						
	0-5	6-10	11-15	16-20	21-25	26-30	Over 30
<b>July 2023 - June 2024</b>							
Number of Service Retirements	0	0	0	35	19	11	37
Average Monthly Benefits	\$ 0	\$ 0	\$ 0	\$ 3,650	\$ 3,856	\$ 4,637	\$ 5,686
Average Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 6,753	\$ 7,220	\$ 7,404	\$ 7,128
<b>July 2022 - June 2023</b>							
Number of Service Retirements	0	0	0	17	17	18	25
Average Monthly Benefits	\$ 0	\$ 0	\$ 0	\$ 3,620	\$ 3,957	\$ 4,657	\$ 5,562
Average Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 6,726	\$ 7,219	\$ 7,190	\$ 6,556
<b>July 2021 - June 2022</b>							
Number of Service Retirements	0	0	0	9	17	15	46
Average Monthly Benefits	\$ 0	\$ 0	\$ 0	\$ 3,592	\$ 3,887	\$ 4,814	\$ 5,702
Average Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 6,689	\$ 7,091	\$ 7,417	\$ 6,628
<b>July 2020 - June 2021</b>							
Number of Service Retirements	0	0	0	6	11	16	37
Average Monthly Benefits	\$ 0	\$ 0	\$ 0	\$ 3,669	\$ 4,146	\$ 4,307	\$ 5,669
Average Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 6,914	\$ 7,328	\$ 6,590	\$ 6,447
<b>July 2019 - June 2020</b>							
Number of Service Retirements	0	0	0	4	20	21	48
Average Monthly Benefits	\$ 0	\$ 0	\$ 0	\$ 4,084	\$ 4,064	\$ 4,516	\$ 6,163
Average Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 7,786	\$ 7,056	\$ 6,611	\$ 6,634
<b>July 2018 - June 2019</b>							
Number of Service Retirements	0	0	0	2	13	16	34
Average Monthly Benefits	\$ 0	\$ 0	\$ 0	\$ 3,808	\$ 4,397	\$ 4,445	\$ 5,566
Average Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 7,240	\$ 7,485	\$ 6,309	\$ 5,851
<b>July 2017 - June 2018</b>							
Number of Service Retirements	0	0	0	4	16	11	62
Average Monthly Benefits	\$ 0	\$ 0	\$ 0	\$ 3,275	\$ 3,951	\$ 4,472	\$ 5,862
Average Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 6,182	\$ 6,735	\$ 6,163	\$ 5,862
<b>July 2016 - June 2017</b>							
Number of Service Retirements	0	0	0	3	11	11	134
Average Monthly Benefits	\$ 0	\$ 0	\$ 0	\$ 4,199	\$ 4,123	\$ 3,934	\$ 5,458
Average Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 8,057	\$ 6,691	\$ 5,761	\$ 5,637
<b>July 2015 - June 2016</b>							
Number of Service Retirements	0	0	0	1	3	4	86
Average Monthly Benefits	\$ 0	\$ 0	\$ 0	\$ 3,674	\$ 3,276	\$ 4,570	\$ 5,110
Average Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 6,899	\$ 5,580	\$ 5,908	\$ 5,284
<b>July 2014 - June 2015</b>							
Number of Service Retirements	0	0	0	1	6	3	76
Average Monthly Benefits	\$ 0	\$ 0	\$ 0	\$ 3,682	\$ 3,394	\$ 3,585	\$ 4,854
Average Final Average Salary	\$ 0	\$ 0	\$ 0	\$ 7,063	\$ 5,398	\$ 4,736	\$ 5,166

# PARTICIPATING EMPLOYER AND ACTIVE MEMBERS

CITY OF HOUSTON	ACTIVE MEMBERS	PERCENTAGE OF COVERED EMPLOYEES
2024	3,646	100%
2023	3,676	100%
2022	3,640	100%
2021	3,655	100%
2020	3,693	100%
2019	3,914	100%
2018	4,041	100%
2017	4,097	100%
2016	4,109	100%
2015	3,939	100%



# 06

SECTION 06

## *GLOSSARY*



# DEFINITIONS

Some of these terms are used in the Investment section, beginning on page 59. Others are used throughout this report. Definitions are provided as they relate to the Houston Firefighters' Relief and Retirement Fund.

## ACCRUAL BASIS OF ACCOUNTING

Accounting method in which income and expense transactions are recognized when they are earned or incurred rather than when they are settled. The Fund uses this method of accounting.

## ACTIVE MANAGEMENT

A process employed by the Fund to produce better returns than those of passively managed indexed funds by use of, for example, Investment Managers and Investment Advisors which typically rely on analytical research, quantitative models, forecast, regime analysis, judgment and experience in making investment decisions.

## ACTUARIAL DATA

(A) the census data, assumption tables, disclosure of methods, and financial information that are routinely used by the fund actuary for the fund's valuation studies or an actuarial experience study; and

(B) other data that is reasonably necessary.

## ACTUARIAL EXPERIENCE STUDY

Defined in Section 802.1014, of the Government Code.

## AMORTIZATION PERIOD

The time period necessary to fully pay a liability layer.

## AMORTIZATION RATE

The sum of the scheduled amortization payments for a given fiscal year for the current liability layers divided by the projected pensionable payroll for that fiscal year.

## ASSET

Anything having commercial or exchange value that is owned by the Fund.

## ASSET LIABILITY MANAGEMENT STUDY (ALM STUDY)

A comprehensive periodic study commissioned by the Board to examine various aspects of the Fund's assets and liabilities including, but not limited to, asset allocation and investment strategies along with key asset and liability risk exposures.

## ASSUMED RATE OF RETURN

The assumed market rate of return on Fund assets is 7% as set by statute and adopted by the Board in June 2023.

## AVERAGE MONTHLY SALARY

If the member has participated in the fund for:

(A) three or more years, the total salary received by a member as a firefighter over the member's:

(i) highest 78 biweekly pay periods for a member hired before the year 2017 effective date, including a member who was hired before the year 2017 effective date and who involuntarily separated from service but was retroactively reinstated in accordance with an arbitration, civil service, or court ruling; or

(ii) last 78 biweekly pay periods ending before the earlier of the date the member terminates employment with the fire department, divided by 36, or the member began participation in the DROP, divided by 36; or

(B) fewer than three years, the total salary paid to the member for the periods the member participated in the fund divided by the number of months the member has participated in the fund.

If a member is not paid on the basis of biweekly pay periods, "average monthly salary" is determined on the basis of the number of pay periods under the payroll practices of the municipality sponsoring the fund that most closely correspond to 78 biweekly pay periods.

## BENCHMARK

The specific standards against which the performance of securities held by the Fund in certain asset classes can be measured.

## BENEFICIARY ADULT CHILD

A child of a member by birth or adoption who:

(A) is not an eligible child; and

(B) is designated a beneficiary of a member's DROP or PROP account by valid designation.

## BOARD OR BOARD OF TRUSTEES

The Board of Trustees of a firefighters' relief and retirement fund.

## BOOK VALUE

The value (cost) at which an asset is carried on a balance sheet.

## CASH BASIS OF ACCOUNTING

Accounting method in which revenue and expense transactions are recognized when they are paid for (settled), rather than when they are incurred.

## CODE

The federal Internal Revenue Code of 1986, as amended.

## COMPOUND OR COMPOUNDING

The process of calculating and adding current interest to the principal and interest of a previous period(s).

## COMPOUND RETURN

Profit on an investment, usually expressed as an annual percentage rate.

## CONFIDENTIALITY AGREEMENT

A letter agreement sent from the municipal actuary or an independent actuary in which the municipal actuary or the independent actuary, as applicable, agrees to keep certain information confidential.

## CORRIDOR

The range of municipal contribution rates that are:

(A) equal to or greater than the minimum contribution rate; and

(B) equal to or less than the maximum contribution rate.

## CORRIDOR MARGIN

Five percentage points above/below the corridor midpoint.

## CORRIDOR MIDPOINT

The projected municipal contribution rate specified for each fiscal year for 31 years in the initial risk sharing valuation study, and as may be adjusted, and in each case rounded to the nearest hundredths decimal place.

## DEFERRED RETIREE

A member who is eligible for a benefit under Section 8(a) of the Fund's Governing Statute.

## DIGITAL ASSETS

Collection of binary data, which is self-contained, uniquely identifiable, and has value. Digital Assets are issued, stored, and transferred using a distributed ledger or immutable blockchain technology and include, but are not limited to, so-called 'virtual currencies,' 'coins,' and 'tokens.'

## DIVERSIFICATION

Spreading of risk by putting assets in several different categories of investments, such as stocks, bonds, cash, high-yield and hedge funds.

# DEFINITIONS CONTINUED

## **DROP**

The deferred retirement option plan.

## **DROP ACCOUNT**

The notional account established (for members who entered service prior to July 1, 2017), to reflect the credits, contributions and earnings of a member who has made a DROP election.

## **EMPLOYER NORMAL COST RATE**

The annual actuarially calculated contribution necessary to provide employee benefits.

## **ESTIMATED MUNICIPAL CONTRIBUTION RATE**

The municipal contribution rate estimated in a final risk sharing valuation study.

## **FAIR VALUE**

The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

## **FIREFIGHTER**

A full-time, fully paid, active, classified member of a regularly organized fire department of an incorporated municipality with a fund, including a member who has made a DROP election.

## **FISCAL YEAR**

A fiscal year beginning on July 1 and ending on June 30.

## **FUND**

A firefighters' relief and retirement fund established under this article.

## **FUND EQUITY (STOCK) INVESTMENTS**

The portion of the total Fund that is invested in ownership interest in corporations, usually in common stock.

## **FUND FIXED-INCOME (BOND) INVESTMENTS**

The portion of the total Fund that is invested in debt instruments that usually pay a fixed rate of interest or dividends over a specified period of time.

## **FUNDED RATIO**

The ratio of the fund's actuarial value of assets divided by the fund's actuarial accrued liability.

## **INSTITUTIONAL INVESTOR ORGANIZATION**

An organization that invests and trades large volumes of securities (stocks and bonds). The Fund is an institutional investor.

## **INVESTMENT MANAGER**

An entity that manages Fund assets, usually in a separately managed account, with discretionary authority to invest within the confines of a Fund mandated investment strategy or similar Fund directive, and where the account holdings are typically maintained in the custody of the Fund's custodian bank.

## **INVESTMENT POLICY STATEMENT (IPS)**

The investment policy statement of the Houston Firefighters' Relief and Retirement Fund as approved by the Board/Investment Committee that provides for the general investment goals and objectives of the Fund.

## **LEGACY LIABILITY**

The unfunded actuarial accrued liability:

(A) for the fiscal year ending June 30, 2016, reduced to reflect:

- (i) changes to benefits or contributions under this article that took effect on the year 2017 effective date; and

- (ii) payments by the municipality and earnings at the assumed rate of return allocated to the legacy liability from July 1, 2016, to July 1, 2017, excluding July 1, 2017; and

(B) for each subsequent fiscal year:

- (i) reduced by the contributions for that year allocated to the amortization of the legacy liability; and
- (ii) adjusted by the assumed rate of return.

## **LEVEL PERCENT OF PAYROLL METHOD**

The amortization method that defines the amount of the liability layer recognized each fiscal year as a level percent of pensionable payroll until the amount of the liability layer remaining is reduced to zero.

## **LIABILITY**

Any debt of the Fund giving a creditor a claim on the assets of the Fund (i.e., the money has not yet been paid, but the event causing the obligation has already occurred).

## **LIABILITY GAIN LAYER**

A liability layer that decreases the unfunded actuarial accrued liability.

## **LIABILITY LAYER**

The legacy liability established in the initial risk sharing valuation study and the unanticipated change as established in each subsequent risk sharing valuation study prepared.

## **LIABILITY LOSS LAYER**

A liability layer that increases the unfunded actuarial accrued liability.

## **MAXIMUM CONTRIBUTION RATE**

The rate equal to the corridor midpoint plus the corridor margin.

## **MEAN RETURN**

The average return.

## **MEDIAN RETURN**

The midpoint return when all returns are ranked from highest to lowest — and there is an equal number of returns above and below.

## **MEDIAN TOTAL FUND RETURN**

The midpoint return for all assets in all plans in a universe of plans.

## **MEMBER**

A firefighter or former firefighter who has satisfied the eligibility requirements and who has not yet received a distribution of the entire benefit to which the person is entitled.

## **MINIMUM CONTRIBUTION RATE**

The rate equal to the corridor midpoint minus the corridor margin.

## **MUNICIPALITY**

A municipality in this state having a population of more than 2 million.

## **MUNICIPAL CONTRIBUTION RATE**

A percent of pensionable payroll that is the sum of the employer normal cost rate and the amortization rate for liability layers, except as determined otherwise under the express provisions of Sections 13E and 13F of this article.

# DEFINITIONS CONTINUED

## NORMAL COST RATE

The salary weighted average of the individual normal cost rates determined for the current active population plus an allowance for projected administrative expenses. The allowance for projected administrative expenses equals the administrative expenses divided by the pensionable payroll for the previous fiscal year, provided the administrative allowance may not exceed 1.25 percent of the pensionable payroll for the current fiscal year unless agreed to by the municipality.

## NORMAL RETIREMENT AGE

(A) a member, including a member who was hired before the year 2017 effective date and who involuntarily separated from service but has been retroactively reinstated in accordance with an arbitration, civil service, or court ruling, hired before the year 2017 effective date, the age at which the member attains 20 years of service; or

(B) a member hired or rehired on or after the year 2017 effective date, the age at which the sum of the member's age, in years, and the member's years of participation in the fund equals at least 70.

## PAYOFF YEAR

The year a liability layer is fully amortized under the amortization period.

## PENSIONABLE PAYROLL

The aggregate salary (excluding overtime) of all the firefighters on active service, including all firefighters participating in an alternative retirement plan in an applicable fiscal year.

## PORTFOLIO

Combined holding of more than one stock, bond or other asset by an individual or institutional investor.

## PORTFOLIO MANAGEMENT

The process of selecting, monitoring and changing assets within a portfolio or account to meet defined investment objectives.

## PRICE INFLATION ASSUMPTION

(A) the most recent headline consumer price index 10-year forecast published in the Federal Reserve Bank of Philadelphia Survey of Professional Forecasters; or

(B) another standard as determined by mutual agreement between the municipality and the board.

## PRIVATE INVESTMENT

Strategies in which the Fund invests (typically through an interest in a limited partnership, limited liability company, or through some other binding agreement) in private equity, debt, or real assets not listed on a public exchange.

## PROJECTED PENSIONABLE PAYROLL

The estimated pensionable payroll for the fiscal year beginning 12 months after the date of the risk sharing valuation study at the time of calculation by:

(A) projecting the prior fiscal year's pensionable payroll forward two years using the current payroll growth rate assumptions; and

(B) adjusting, if necessary, for changes in population or other known factors, provided those factors would have a material impact on the calculation, as determined by the board.

## PROP

The post-retirement option plan.

## PROP ACCOUNT

The notional account established to reflect the credits and contributions of a member or surviving spouse who made a PROP election before the year 2017 effective date.

## RECEIVABLES

Assets to which the Fund is entitled — but has not received.

## RISK APPETITE

The amount of risk that the Fund is willing to take to meet its strategic objectives.

## RISK TOLERANCE

The degree of variability of investment returns relative to the assigned benchmark that the Fund is willing to accept.

## THIRD QUARTER LINE RATE

The corridor midpoint plus 2.5 percentage points.

## TOTAL FUND

All the investments of the Fund, including stocks, bonds, cash equivalents, high-yield bonds, private equity, real estate and hedge funds.

## ULTIMATE ENTRY AGE NORMAL

An actuarial cost method under which a calculation is made to determine the average uniform and constant percentage rate of contributions that, if applied to the compensation of each member during the entire period of the member's anticipated covered service, would be required to meet the cost of all benefits payable on the member's behalf based on the benefits provisions for newly hired employees.

## UNFUNDED ACTUARIAL ACCRUED LIABILITY

The difference between the actuarial accrued liability and the actuarial value of assets. For purposes of this definition:

(A) "actuarial accrued liability" means the portion of the actuarial present value of projected benefits attributed to past periods of member service based on the cost method used in an actuarial valuation study; and

(B) "actuarial value of assets" means the value of fund investments as calculated using the asset smoothing method used in valuation studies.

## UNANTICIPATED CHANGE

With respect to the unfunded actuarial accrued liability in each subsequent risk sharing valuation study prepared, the difference between:

(A) the remaining balance of all then-existing liability layers as of the date of the risk sharing valuation study; and

(B) the actual unfunded actuarial accrued liability as of the date of the valuation study.

## UNIVERSE

A total number of facts or events to which a specific fact or event is compared.

## YEAR 2017 EFFECTIVE DATE

The date on which S.B. No. 2190, Acts of the 85th Legislature, Regular Session, 2017, took effect.

## YEARS OF PARTICIPATION

The number of years that a member has participated in the fund by making the contributions required, as determined under rules established by the board.



**HOUSTON FIREFIGHTERS'  
RELIEF AND RETIREMENT FUND**

Fiscal Years 2024 and 2023 Annual Comprehensive Financial Report

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