

COMPREHENSIVE ANNUAL FINANCIAL REPORT

2016

FISCAL YEAR ENDED DECEMBER 31, 2016



EMPLOYEES' RETIREMENT FUND OF THE CITY OF DALLAS



**2016 AT – A – GLANCE**  
(unaudited)  
(\$ in thousands)

Active Members	7,619
Benefit Recipients	6,903
Inactive Members	1,215
Fund Net Position	\$3,352,043
Benefits Paid	\$243,775
Refunds	\$5,864
Member Contributions	\$53,436
City Contributions	\$56,130
Investment Rate of Return	9.17%

# COMPREHENSIVE ANNUAL FINANCIAL REPORT

# 2016

FISCAL YEAR ENDED, DECEMBER 31, 2016

Prepared by the Staff of The Employees' Retirement Fund

CHERYL D. ALSTON  
EXECUTIVE DIRECTOR

## Employees' Retirement Fund of the City of Dallas

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# INTRODUCTORY SECTION





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Employees' Retirement Fund  
of the City of DALLAS®

## LETTER OF TRANSMITTAL

June 13, 2017

Board of Trustees  
Employees' Retirement Fund of the City of Dallas  
600 North Pearl Street, Suite 2450  
Dallas, Texas 75201

Dear Board Members:

The comprehensive annual financial report (CAFR) of the Employees' Retirement Fund (ERF) for the fiscal year ended December 31, 2016 is submitted herewith. Our mission is to provide retirement benefits and superior service to advance the financial security of our members. Responsibility for both the accuracy of the data and the completeness and fairness of the presentation rests with me and the staff of ERF.

### Report Contents

This CAFR is divided into five sections:

**Section One - Introductory Section** contains a letter of transmittal, administrative organization, and the Plan Summary.

**Section Two - Financial Section** contains the report of the Independent Auditors, the financial statements of ERF and certain required supplementary information.

**Section Three - Investment Section** contains a report on investment activity, investment policies, investment results, and various investment schedules.

**Section Four - Actuarial Section** contains an Actuary's Certification Letter and the results of the annual actuarial valuation.

**Section Five - Statistical Section** contains significant data pertaining to ERF.

I trust that you and the members of ERF will find this CAFR helpful in understanding the retirement plan.

### Plan Overview

ERF was established by ordinance in November 1943 and became effective in January 1944 after ratification by the voters of the City of Dallas. ERF is a single-employer defined benefit pension plan sponsored by the City of Dallas (the "City"), and it provides retirement, disability, and death benefits to its members. All employees of the City are members except police officers, firefighters, elected officers, non-salaried appointee members of administrative boards or commissions, temporary employees, individuals working under contract, and individuals whose salaries are paid in part by another government agency. Members are entitled to retirement benefits at the date of eligibility for retirement or to survivor benefits after two years of service.

### Investments

The Board of Trustees oversees ERF's portfolio, managers, and performance. It also reviews and approves potential investment opportunities, with input from the investment consultant and staff. The Board follows the "prudent person rule" which states that fiduciaries shall discharge their duties solely in the interest of ERF and its participants and beneficiaries with the degree of diligence, care and skill which prudent men and women would ordinarily exercise under similar circumstances in a like position.



Employees' Retirement Fund  
of the City of DALLAS®

The Plan had a return of 9.17% for 2016, in comparison to -1.77% in 2015 and 6.50% in 2014. The Fund expects and assumes an investment rate of 7.75% over the long term, which encompasses many years in the future.

An integral part of the overall investment policy is the strategic asset allocation policy. This policy is designed to provide an optimal diversification to reduce risk and maximize total rate of return relative to risk. This emphasizes a maximum diversification of the portfolio that protects ERF from declines that a particular asset class may experience in a given period.

#### Additions To Plan Net Assets

The collection of employer and member contributions, as well as income from investments, is intended to provide the reserves needed to finance retirement benefits. Contribution and investment income, including unrealized gains and losses, for 2016 total \$404,816,109. City and member contributions for the fiscal year were \$109,566,139, an increase of approximately \$8,102,940 from prior year. This increase is attributed to the change in the City's contribution rate to the Fund and an increase in the number of active employees. The City's contribution rate toward the pension plan increased from 13.83% in 2015 to 14.33% in 2016. The total City's contribution rate was 22.68% of which 8.28% was for debt service payments on the pension obligation bond. The member's contribution rate remained the same as 13.32% in 2016 in comparison to 2015. City's contributions received in 2016 were \$56,130,489 and member's contributions were \$53,435,650.

#### Deductions To Plan Net Assets

The principal purpose for which ERF was established is to provide retirement benefits, survivor benefits, and total and permanent disability benefits to qualified members and their beneficiaries. The cost of such programs includes recurring benefit payments, refund of contributions to terminated employees, and the cost of administering ERF.

Deductions for fiscal year 2016 totaled \$254,981,638, an increase of 4.26% over 2015. This increase is primarily due to an increased number of refund applicants and an increase in administrative expenses. Administrative expenses, which are controlled by a budget approved by the Board of Trustees, increased from the prior year. 2016 reflected an increase of \$746,072, when compared to fiscal year 2015 expenses.

#### Accounting System And Internal Controls

This CAFR was prepared to conform with the principles of governmental accounting and reporting set forth by the Governmental Accounting Standards Board (GASB) in Statement No. 67, "Financial Reporting for Pension Plans – An Amendment of GASB Statement No. 25, as well as generally accepted accounting principles that apply to government accounting for fiduciary funds. The accompanying financial statements are prepared using the accrual basis of accounting. Member and employer contributions are recognized in the period in which employee services are performed. Expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made.

The statistical section presents detailed information, typically in ten-year trends, that assists users in utilizing the basic financial statements, notes to basic financial statements, and required supplementary information to assess the economic condition of a government. The statistical section is a required part of a comprehensive annual financial report (CAFR) and applies to any statistical section that accompanies a government's basic financial statements.

In developing and evaluating ERF's accounting system, it was determined that internal controls adequately safeguard assets and provide reasonable assurance of proper recording of financial transactions.

#### Funding

A pension fund is well funded when it is receiving enough money to meet all expected future obligations to participants. ERF's funding objective is to meet long-term benefit payments through contributions that remain approximately level as a percent of member payroll. The actuarial accrued liability and actuarial value of assets of ERF as of December 31, 2016 amounted to \$4.292 billion and \$3.451 billion, respectively. A detailed discussion of funding is provided in the Actuarial Section of this report.



Employees' Retirement Fund  
of the City of DALLAS®

### Professional Services

Consultants are appointed by the Board of Trustees to perform professional services that are essential to the effective and efficient operation of ERF. An opinion from the certified public accounting firm of Grant Thornton LLP, the actuarial firm of Gabriel, Roeder, Smith & Company, and the investment consultant firm of Wilshire Associates, Inc. are included in this report. The consultants appointed by the Board are listed in this Introductory Section.

### Acknowledgments

The compilation of this report reflects the combined effort of the 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 of the funds of ERF.

The report is available to all members of ERF.

I would like to express my gratitude to the staff, the advisors, and others who have worked so diligently to assure the successful operation of ERF.

Respectfully submitted,

Chervl D. Alston

A handwritten signature in black ink, appearing to read 'Chervl D. Alston'.

Executive Director



## BOARD OF TRUSTEES

As of December 31, 2016

**John D. Jenkins, Chair**  
Employee Elected Member

**Carla D. Brewer, Vice Chair**  
Employee Elected Member

**Randy Bowman**  
Council Appointed Member

**Craig D. Kinton, CPA**  
City Auditor

**Lee Kleinman**  
Council Appointed Member

**John W. Peavy III**  
Council Appointed Member

**Tina B. Richardson**  
Employee Elected Member

## ADMINISTRATIVE STAFF

**Cheryl D. Alston**  
Executive Director

**David Etheridge**  
Deputy Director

**Natalie Jenkins Sorrell**  
Deputy Chief Investment Officer

**Minoti Dhanaraj**  
Senior Investment Officer

**Deirdre Taylor**  
Fund Controller

**Saki Vimal**  
Senior Accounting Specialist

**Jennifer Chaffin**  
Senior Accounting Specialist

**Naveed Khan**  
Senior Accounting Specialist

**Duc Lam**  
Information Technology Manager

**Jody Thigpen**  
Senior Web Developer

**Micaela Galicia**  
Pension System Analyst

**Jason Thompson**  
System Administrator

**Ervin H. Frenzel**  
Security Administrator

**Andrea Houston**  
Senior Pension Specialist

**Re’Gine Green**  
Senior Pension Specialist

**C. Kay Watson**  
Pension Officer

**Susan Oakey**  
Pension Officer

**Todd Green**  
Senior Pension Specialist

**Patricia Jack**  
Senior Pension Specialist

**Kaleb Jones**  
Senior Pension Specialist

**Al Perez**  
Record Compliance Officer

**Stephanie Henderson**  
Record Compliance Officer

**Melissa Harris**  
Communications Manager

**Kate Shaw**  
Communications Specialist

**Tearyne Glover**  
Web Developer

**Margaret Lara**  
Administrative Specialist II

**Yvonne Garcia**  
Administrative Specialist II

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## PROFESSIONAL SERVICE PROVIDERS

### **MASTER CUSTODIAN**

The Northern Trust Company

### **CONSULTING ACTUARY**

Gabriel, Roeder, Smith & Company

### **INVESTMENT CONSULTANT**

Wilshire Associates, Inc.

### **INVESTMENT ACCOUNTING FIRM**

STP Investment Services

### **AUDITOR**

Grant Thornton, LLP

### **LEGAL ADVISORS**

Strasburger & Price, LLP

Foster Pepper, PLLC

## PLAN SUMMARY

### Summary of Key Provisions

Employees' Retirement Fund of the City of Dallas

As of December 31, 2016

Membership	An employee becomes a member upon permanent employment and contributes to the Retirement Fund.
Contributions	The contribution rate is determined each year by the actuarial valuation. The total contribution is split 37% members and 63% City. As of December 31, 2016, the members contributed 13.32% of pay and the City contributed 22.68% of pay of which 14.33% is received by the Fund and 8.35% is used for the pension obligation bonds debt service.
Definitions	Final Average Salary: Average monthly salary over the member's highest three years of service. Credited Service: Length of time as an employee of the City of Dallas and while making contributions to the Fund. Part-time employees receive proportional credited service only.
Retirement Pension	<p>Eligibility:</p> <ul style="list-style-type: none"> <li>a. Attainment of age 60; or</li> <li>b. Attainment of age 55 (if credited service began before May 9, 1972); or</li> <li>c. Completion of 30 years of credited service; or</li> <li>d. At any age after completion of 30 years of credited service with a reduced benefit before age 50; or</li> <li>e. Attainment of age 50, if the sum of an active member's age and credited service is at least 78.</li> </ul>
Retirement Benefits	The retirement benefit equals 2.75% multiplied by average monthly earnings multiplied by credited service limited to a maximum of 36.3636 years plus \$125 health supplement (prorated for service less than 5 years).
Form of Payment	An unreduced pension under a joint and one half survivor option or a ten-year certain and life option. An actuarially equivalent joint and full survivor option is also available.
Deferred Retirement	<p>Eligibility:</p> <p>Deferred retirement pension commencing at age 60 or at age 55, if employment commenced prior to May 9, 1972, with at least five years of credited service, and accumulated contributions are left on deposit with the Fund.</p> <p>Monthly Benefit:</p> <p>The deferred retirement is equal to the retirement pension based on earnings and credited service at the time of termination.</p>

Disability Retirement Pension

**Non-Service Disability:**

Eligibility:

Five years of service and totally and permanently incapacitated from procuring and retaining any type of employment for compensation.

Monthly Benefit:

Computed based on average monthly earnings and credited service at time of disability but not less than 10 times the percentage multiplier multiplied by the average monthly earnings.

**Service Disability:**

Eligibility:

Not less than \$500 per month if death resulted from a service related injury.

Monthly Benefit:

Calculated as a non-service disability pension but not less than \$500 per month.

Death Benefits

Form:

Benefit paid in accordance with the option on file, or the eligible option, or if no eligible beneficiary, a lump sum equivalent of 10 years of benefit payments to the member's estate. If less than 2 years of service, contributions are refunded.

Monthly Benefit:

Based on average monthly earnings and credited service at death but not less than 10 times the percentage multiplier multiplied by the average monthly earnings.

Minimum Service Death Benefit:

Not less than \$500 per month if death resulted from a service related injury.

Return of Accumulated Contributions

A member at the time of termination is entitled to be paid their accumulated contributions without interest.

Cost-of-Living Adjustments

A cost-of-living adjustment to the base pension shall be made based on the greater of:

The percentage of change in the price index for October of the current year over October of the previous year up to 5%, or

The percentage of the annual average change of the price index for the latest 12 months available up to 5%.

## UPCOMING CHANGES TO THE PLAN - TIER B BENEFITS

In 2016 the Employees' Retirement Fund Board and City Council unanimously approved proposed changes to the pension plan in order to reduce pension liability.

On November 8, 2016, the City of Dallas voters provided the final approval step by passing Proposition I authorizing the amendment to the existing Plan.

### **Following are the amendments to the existing Pension Plan. Changes to the Plan will only impact new employees hired after December 31, 2016**

Pension calculation multiplier	2.50%
Normal Retirement	Age 65 with 5 years of service
Service Retirement	40 years of service
Rule of 80	Actuarially reduced before Age 65
Final Average Pay	Best of 5 years or last 60 months
Health Benefit Supplement	None
Maximum Retiree COLA	3.00%
Restricted Prior Service Credit	Yes
Joint & Half Survivor Benefit	Actuarially reduced
Joint & Full Survivor Benefit	Actuarially reduced



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# FINANCIAL SECTION





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EMPLOYEES' RETIREMENT FUND OF THE CITY OF DALLAS

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FINANCIAL STATEMENTS

As Of December 31, 2016 and 2015  
With Independent Certified Public Accountant's Report Thereon

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## REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

### Grant Thornton LLP

1717 Main Street, Suite 1800  
Dallas, TX 75201-4667

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twitter.com/GrantThorntonUS

The Board of Trustees

Employees' Retirement Fund of the City of Dallas, Texas

We have audited the accompanying financial statements of Employees' Retirement Fund of the City of Dallas (the "Plan"), which comprise the statements of fiduciary net position as of December 31, 2016 and 2015 and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements.

### Management's responsibility for the financial statements

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

### Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Plan's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

### Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the information regarding the Employee's Retirement Fund of the City of Dallas' fiduciary net position as of December 31, 2016 and 2015, and changes therein for the years then ended in accordance with accounting principles generally accepted in the United States of America.



**Other Matters*****Required supplementary information***

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, the Schedule of Changes in Net Pension Liability and Related Ratios, the Schedule of the Net Pension Liability, and the Schedule of Contributions be presented to supplement the basic financial statements. Such information, although not a required part of the basic financial statements, is required by 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. This required supplementary information is the responsibility of management. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America. These limited procedures consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

***Other information***

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The introductory, investment, actuarial, and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

A handwritten signature in blue ink that reads "Grant Thornton LLP".

Dallas, Texas

June 29, 2017

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# MANAGEMENT'S DISCUSSION AND ANALYSIS

Required Supplementary Information

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## MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

The management's discussion and analysis of the Employees' Retirement Fund of the City of Dallas (the Plan) financial performance provides an overview of the financial activities and funding conditions for the fiscal years ended December 31, 2016, 2015, and 2014. The intent of this discussion and analysis is to give a narrative overview and analysis of the Plan's financial performance as a whole. For more detailed information regarding performance, readers should also review the financial statements, notes to the financial statements, and required supplementary information in order to enhance their understanding of the Plan's financial performance.

### FINANCIAL STATEMENTS

The Plan is a defined benefit plan that provides retirement, disability, and death benefits to full time and permanent part-time civilian employees of the City of Dallas (the City). The Plan has two basic financial statements:

- A statement of fiduciary net position that provides information about the fair value and composition of plan assets, plan liabilities, and Fiduciary Net position; and
- A statement of changes in fiduciary net position that provides information about the year-to-year changes in fiduciary net position.

There are also notes to the financial statements that include a brief plan description, a summary of significant accounting policies, and information about contributions, legally required reserves, and investment concentrations. The report also contains required supplementary information in addition to the basic financial statements. Collectively, this information presents the net position restricted for pension benefits and summarizes the changes in net position for those benefits.

### FINANCIAL HIGHLIGHTS

Fiscal year 2016 experienced an increase in investments for the Plan year. This was preceded by the negative return for the Plan last year. Financial highlights for the Plan at fiscal year ended December 31, 2016 are as follows:

- The Plan had a return of 9.17% for the year, with a 3-year return of 4.55%, and 5-year of 8.84%.
- The net position restricted for pension benefits was \$3.4 billion as of December 31, 2016. This amount reflects an increase of \$150 million from last year. This increase is attributed to the better performing asset classes in 2016 such as public real assets, global equity and global low volatility assets.
- Total contributions for fiscal year 2016 were \$110 million, an increase of approximately \$8 million from last fiscal year. This is attributed to an increase in the contribution rates and an increase in the number of active employees.
- Pension benefits paid to retirees and beneficiaries increased \$9 million in 2016 compared to 2015 bringing the total benefit payments to \$244 million. Refunds of contributions paid to former members upon termination of employment were \$5.9 million for 2016 and \$4.9 million for 2015.
- Net investment income (net appreciation/depreciation in the fair value of investments, plus interest and dividend income, less investment expenses) increased \$348 million compared to last fiscal year.
- Administrative expenses of \$5.3 million in 2016 were approximately \$746 thousand more than 2015.

**CONDENSED FINANCIAL INFORMATION**

	2016	2015	2014
	(\$ in 000s)	(\$ in 000s)	(\$ in 000s)
Assets	\$4,053,238	\$3,715,408	\$4,129,664
Liabilities	701,195	513,200	731,179
Fiduciary Net Position for Pension Benefits	3,352,043	3,202,208	3,398,485
Contributions	109,566	101,463	92,369
Investment & other income, net	295,251	(53,182)	208,149
Benefit payments	243,775	235,106	225,614
Refund of contributions	5,864	4,854	4,629
Administrative expenses	5,343	4,598	4,150
Change in Fiduciary Net Position for Pension Benefits	<u>\$149,835</u>	<u>\$ (196,277)</u>	<u>\$66,125</u>

**FINANCIAL POSITION AND RESULTS OF OPERATIONS**

The Plan's total return for fiscal year 2016 was 9.17%, as compared to -1.77% in 2015 and 6.50% in 2014. The one year return was below the policy benchmark of 10.37%. The Fund has performed well over longer time periods. The Fund's 3 year return is 4.55% and the 5 years return is 8.84%.

The best performing asset class in 2016 was public real assets, returning 23.07%. The Fund's real estate investments generated 5.83% for the year. The real estate investments consist of publicly traded real estate Funds called real estate investment trust ("REITS") and domestic private real estate funds. The investments in domestic equity returned 13.38% for the year. Overall, the Plan's investment portfolio increased from \$3.2 billion in fiscal year 2015 to \$3.4 billion in 2016, an increase of approximately \$150 million.

Additions to Fiduciary Net Position consist of employer and employee contributions, investment income, and net realized and unrealized gain on investments. For fiscal year 2016, additions to Fiduciary Net position reflect an increase of \$357 million, in comparison to 2015. This increase is primarily due to an increase in market value of investments specifically commingled funds, domestic equities and real estate. As experienced in 2014 and 2015, both City and employee contributions showed increases as a result of increased contribution rates. City and employee contributions for fiscal year 2016 were \$56 million and \$53 million, respectively. Collection levels for total contributions for 2016 were \$110 million compared to \$101 million in 2015 and \$92 million in 2014.

Net investment income/(loss) is presented net of investment expenses and is comprised of interest, dividend income, gains/(losses) from the sale of investments, net unrealized appreciation/(depreciation) in the fair value of investments, and net income from securities lending activities. For fiscal year 2016, the Plan had a net investment gain of \$295 million (which does not include non-investment income of \$333 thousand) vs net investment loss of \$53 million in fiscal year 2015.

Fiscal year 2016 liabilities of \$701 million showed an increase of 37% over fiscal year 2015 liabilities of \$513 million. Liabilities for 2015 had a decrease of 30% over the \$731 million of liabilities for fiscal year 2014. The increase in 2016 was primarily due to an increase in hedging activities. Hedging activities increased \$188 million or 97% from 2015. Year end balances for securities purchased were \$4 million in 2016, \$8 million in 2015 and \$28 million in 2014. Foreign currency exchange contracts at year end were \$383 million in 2016, \$195 million in 2015 and \$373 million in 2014. The differences were due to investment managers' portfolio management.

Deductions from Fiduciary Net Position are largely benefit payments. During fiscal year 2016, benefits paid were \$244 million, an increase of \$9 million over payments made in 2015. Benefits paid in fiscal year 2015 were \$235 million, an increase of \$9 million over payments made in 2014. The major cause of the 2016 increase is attributable to new retirements with higher base benefits, as was the increase between 2015 and 2014.

New retirements were 324, 287 and 252 respectively for fiscal years 2016, 2015 and 2014. Cost-of-living-adjustments (which are effective on January 1 of the succeeding year) paid in each of the respective years were 0.0% in 2016 and

1.6% in 2015 and 1.4% in 2014. A cost of living adjustment (COLA) is granted if there is an increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) either from October of the prior year to October of the current year or if the monthly changes average is greater than zero. During fiscal year 2016, refunds of contributions amounted to \$5.9 million (478 refunds), compared to 2015 refunds of contributions amounted to \$4.9 million (390 refunds) and \$4.6 million refunded (427 refunds) during 2014. The fiscal year 2016 refund amount reflects an increase in the number of members requesting refunds as compared to fiscal year 2015. Administrative expenses of approximately \$5.3 million represent approximately 2% of total deductions for the year.

## **CURRENT ENVIRONMENT**

Plan membership for active members increased during fiscal year 2016. Active membership increased from 7,477 to 7,619 members, an increase of 1.90%. For 2016, the number of new retirements was 324 compared to 287 in 2015. The trend of benefit payments continues to increase. Similar to most mature plans, benefit payments exceed the level of contribution revenue received, and cash generated from investments is needed in order to meet benefit payments.

An actuarial valuation of the Plan's assets and benefit obligations is performed annually by an independent firm, Gabriel Roeder Smith & Smith (GRS). Based on the actuarial value of assets, the funded ratio of ERF remained the same in 2016 at 80.4% compared to 2015. The Unfunded Actuarial Accrued Liability increased from \$809 million as of December 31, 2015 to \$840 million as of December 31, 2016. Based on GASB 67/68 calculation, the Plan Fiduciary Net Position as a percentage of the Total Pension Liability was 78.10% in 2016 vs 59.66% in 2015. This increase is due to a blended discount rate of 7.75% used for 2016 vs 5.76% for 2015. See page 47 for more information regarding the discount rate.



**EMPLOYEES' RETIREMENT FUND OF  
THE CITY OF DALLAS**

Statements of Fiduciary Net Position  
As of December 31, 2016 and 2015  
(\$ in 000s)

	2016	2015
<b>ASSETS:</b>		
Cash and short-term investments	\$123,539	\$85,936
Collateral on loaned securities	303,141	301,078
	426,680	387,014
<b>RECEIVABLES:</b>		
Currency contracts	382,743	194,708
Currency gains	694	606
Accrued dividends	2,974	2,528
Accrued interest	9,102	10,719
Accrued securities lending	167	85
Accrued real estate dividend income	-	1,970
Securities sold	3,152	4,220
Employer contributions	1,779	1,463
Employee contributions	1,654	1,409
Total receivables	402,265	217,708
Investments, at fair value:		
Commingled index funds	219,247	109,994
Domestic equities	1,255,384	935,950
United States and foreign government fixed income	214,768	213,806
Domestic corporate fixed-income securities	658,962	664,380
International equities	476,225	761,473
Investments, at estimated fair value:		
Private equities	184,812	148,135
Real estate	214,895	276,948
Total investments	3,224,293	3,110,686
Total assets	4,053,238	3,715,408
<b>LIABILITIES:</b>		
Accounts payable	7,968	6,193
Payable for securities purchased	4,314	8,144
Investment fees payable	3,029	3,077
Currency contracts	382,743	194,708
Securities lending collateral	303,141	301,078
Total liabilities	701,195	513,200
Net position RESTRICTED for PENSION benefits	\$3,352,043	\$3,202,208
(A Schedule of Net Pension Liability is presented on page 50)		

The accompanying notes are an integral part of these financial statements.

**EMPLOYEES' RETIREMENT FUND OF  
THE CITY OF DALLAS**

Statements of Changes in Fiduciary Net Position

As of December 31, 2016 and 2015

(\$ in 000s)

	2016	2015
Additions:		
Contributions:		
Employer	\$56,130	\$50,721
Employee	53,436	50,742
Total contributions	109,566	101,463
Net investment income:		
Dividends	52,528	46,287
Interest	41,393	46,990
Real estate dividend income	4,397	9,435
Net appreciation/(depreciation) in fair value of investments	210,665	(139,372)
Securities lending rebates paid by (refunded to) borrowers	(530)	355
Securities lending income	2,277	1,146
Total investment income/(loss)	310,730	(35,159)
Less investment expenses:		
Investment management fees	(14,933)	(17,407)
Custody fees	(187)	(138)
Consultant fees	(343)	(340)
Securities lending management fees	(349)	(300)
Total investment expenses	(15,812)	(18,185)
Net investment income/(loss)	294,918	(53,344)
Other income	333	162
Total additions	404,817	48,281
Deductions:		
Benefit payments	243,775	235,106
Refund of contributions	5,864	4,854
Administrative expenses	5,343	4,598
Total deductions	254,982	244,558
Net increase/(decrease) in net position restricted for pension benefits	149,835	(196,277)
Net position RESTRICTED FOR PENSION benefits		
Beginning of year	3,202,208	3,398,485
End of year	\$3,352,043	\$3,202,208

The accompanying notes are an integral part of these financial statements.

**EMPLOYEES' RETIREMENT FUND OF  
THE CITY OF DALLAS**

Notes to the Financial Statements  
December 31, 2016 and 2015

1. Description of the Plan

a) General

The Employees' Retirement Fund of the City of Dallas (the "Plan") is a single-employer defined benefit pension plan that provides retirement, disability, and death benefits to its members, and is sponsored by the City of Dallas (the "City"). All employees of the City are members in the Plan, except police officers, firefighters, elected officers, non-salaried appointee members of administrative boards or commissions, part-time employees working less than one-half time, temporary employees, individuals working under contract, and individuals whose salaries are paid in part by another government agency. Members are entitled to retirement benefits after five years of service and to survivor benefits after two years of service or at the date of eligibility for retirement. The Plan was established and derives its authority to continue in operation from Chapter 40A of the Dallas City Code. The description of the Plan provisions in this report is for financial disclosure only. It is not intended to create or reduce legal rights. The rights and responsibilities of the Board of Trustees, the Plan, the members and the retirees are governed by the Plan as set forth in Chapter 40A. As of December 31, 2016 and 2015, the Plan's membership consisted of:

	2016	2015
Retirees and beneficiaries currently receiving benefits and inactive members entitled to benefits but not yet receiving them	8,118	7,919
Current members:		
Vested	4,423	4,183
Non-vested	3,196	3,294
Total current members	7,619	7,477
Total membership	15,737	15,396

b) Pension Benefits

Effective November 7, 1989, members of the Plan are entitled to pension benefits equal to 2.75% of the average monthly earnings of the member for each year of credited service. Average monthly earnings are determined based on the member's earnings for the three highest years. Normal retirement age is 60. Members of the Plan employed prior to May 9, 1972 are entitled to pension benefits at age 55, determined as described in this note.

A member who has completed 30 years of credited service may elect retirement at age 50 and is entitled to full pension benefits. A member who has completed 30 years of service and elects retirement before age 50 is entitled to pension benefits at a percentage of normal retirement benefits ranging from 67.0% to 93.3%, depending upon the age of the member. Effective May 1993, active members may elect to retire after the attainment of age 50 once a combination of their age and years of service equal at least 78 ("Rule of 78"). They are then entitled to full pension benefits. The Rule of 78 has been incorporated into the actuarial calculations reflected in these notes to the financial statements.

Cost-of-living adjustments for retirees are made each year on the first of January by adjusting the pension base by the percentage change of the Consumer Price Index, not to exceed 5%. The cost-of-living adjustment effective January 2016 was 0.0% and 1.6% in January 2015.

In addition, the Plan provides retirees who have five or more years of service a flat taxable amount of \$125 per month as a health premium subsidy. Payment of the health supplement will be prorated for each partial year of credited service for less than five years of credited service.

c) Disability and Death Benefits

Members that become totally and permanently disabled may qualify for a service-connected disability with no minimum service requirement, or a non-service connected disability with five or more years of credited

**EMPLOYEES' RETIREMENT FUND OF  
THE CITY OF DALLAS**

Notes to the Financial Statements  
December 31, 2016 and 2015

service. Non-service connected benefits are based on actual credited service or a minimum of 10 years. Service-connected benefits are equal to normal retirement benefits or a minimum of \$500.

Upon the death of an active married member with less than 15 years of service, the joint and one-half survivor option is the automatic death benefit.

If an active member has at least 15 years of service or is eligible to retire, the member may elect the joint and full survivor option. Under this option, the member receives a reduced base pension payment which is actuarially computed based on the member's age, average monthly earnings, years of credited service at retirement, and the relative age of the spouse. Upon the death of the member, this option pays the full amount of the member's pension payment to the surviving spouse for life.

Upon the death of a member before retirement, death benefits equal to the normal retirement benefit will be paid to a qualified recipient: surviving spouse, minor child under age 18, a disabled child who became disabled before age 18, or a dependent parent. Death benefits vary depending on the beneficiary. The surviving spouse, the disabled child, or the dependent parent will receive a lifetime benefit unless the ten-year option is taken. The minor child under age 18 will receive the normal retirement benefit for ten years or until reaching age 18. If the member has less than two years of credited service, the member's contributions will be refunded.

Upon the death of a retired member, a death benefit is paid in accordance with the option selected by the member at retirement. If there are no qualified recipients at the time of death and benefits have not been paid for ten years, death benefits are paid to the designee (an estate, a person or an entity) named by the member. The designee will receive a lump-sum payment based on ten years of benefit payments when the member's death occurs before retirement. If death occurs after retirement, the designee will receive a commuted lump-sum payment representing the balance of a guaranteed ten-year period starting from the date of retirement.

If a member does not have an eligible beneficiary, death benefits will be paid to the designee or member's estate in one commuted value payment. Benefit payments will vary depending on whether death occurred before or after retirement. Upon the death of a member before retirement, the designee or member's estate will receive a lump-sum payment based on ten years of benefit payments. Upon the death of a retired member, the designee or estate will receive a commuted value lump-sum payment representing the balance of a guaranteed ten-year period starting from the date of retirement.

**d) Contributions**

If employment ends before attaining five years of service and before attaining eligibility for retirement, the member's contributions will be refunded upon written request to the Plan.

If a member's employment is terminated after five years of service, the member may elect a refund of contributions upon a written request, or the member may elect to receive pension benefits at normal retirement age equal to the amount accrued to the date of termination.

Based on the authorization in the Plan, the annual actuarial valuation will establish any new contribution rates for employees and the City. The new rates which became effective October 1, 2016 are 13.32% for employees and a combined rate of 22.68% of pay for the City. The City's 22.68% is divided into 14.33% cash to the Plan and 8.35% for debt service payments on the pension obligation bonds. The former rates, effective October 1, 2015, were 13.32% of pay for employees and a combined rate of 22.68% of pay for the City.

The percent contributed may vary from the legally required rate as the annual required contribution is based upon covered payroll as of the actuarial valuation date, January 1, whereas contributions are calculated and paid based upon actual payrolls throughout the year.

Certain factors, such as changes in benefit provisions, the size or composition of the population covered by the Plan or the actuarial assumptions used, may significantly affect the identification of trends in the amounts reported in the Schedule of Net Pension Liability and Schedule of Changes in Net Pension Liability located in the Required Supplemental Information section.

**e) Plan Administration**

The Plan is governed by seven members, consisting of three members appointed by the City Council who may be Council members, three employee members of the Plan (elected by the membership) and the City Auditor (serving ex officio). The Board has general powers and duties to administer the Plan, including appointing an

## EMPLOYEES' RETIREMENT FUND OF THE CITY OF DALLAS

Notes to the Financial Statements  
December 31, 2016 and 2015

administrator to carry out the business of the Board, investing the assets of the Plan, making expenditures from the Plan, and determining members' eligibility for benefits.

Based on a Plan amendment passed by the voters of the City of Dallas in November 2004, the Board annually increases or decreases contribution rates in a ratio where the City pays 63% and the employee pays 37% of the contribution rate as determined by the actuarial valuation. The Plan requires notice to the City of the contribution rates and provides procedures by which the City may review and challenge those rates; codifying the Board's policies and procedures relating to the Plan's actuarial process and the City's participation in the selection of an actuarial firm to perform a peer review/audit; increasing the Board from five members to seven by adding another employee elected representative and another council appointed representative effective March 1, 2005; increasing from three to four the number of board members required to constitute a quorum; increasing the terms of the employee elected representatives from two to three years; requiring Council approval before the Board may grant temporary or permanent discretionary adjustments to retirement benefits over and above the regular cost-of-living increases; correcting section references to the term "qualified recipient"; and authorizing either the Council or the Board to propose amendments to Chapter 40A, subject to approval by the Board, the Council, and the voters of the City.

The Plan may be terminated only by ordinance recommended by the Board, adopted by the City Council, and approved by a majority of the voters of the City voting in a general or special election. The Plan does not address allocation of the net position in the event of termination.

### 2. Summary of Significant Accounting Policies

#### a) Basis of Accounting

The accompanying financial statements are prepared on the economic resources measurement focus and accrual basis of accounting. Accordingly, interest earned but not received and dividends declared but not received as of the Plan's fiscal year end are recorded as accrued interest and dividends receivable, respectively. Contributions owed but not received as of the Plan's fiscal year end are recorded as contributions receivable. Benefits and refunds are recorded when paid. In addition, unsettled investment purchases and sales are accrued.

#### b) Administrative Expenses

Administrative expenses are paid from the Plan's contributions. The contribution rates calculated by the actuary take into consideration the expected administrative expenses.

#### c) 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 financial statements and the reported amount of revenues and expenses during the reporting period. Actual results could differ from those estimates.

#### d) Investments and Investment Income

The Plan's investment policy requires that investments comply at all times with applicable local, state and federal regulations. The Plan's investment policy is based upon an asset allocation study that considers the current and expected condition of the Plan, the expected long-term capital market outlook and the Plan's risk tolerance. Unless specifically permitted in the investment manager guidelines or other governing document, the investment policy prohibits the purchase of non-negotiable securities, short sales, selling on margin, puts, calls, straddles, options, or "letter" (restricted) stock. Also, unless specifically authorized in a manager's individual guidelines, the investment policy prohibits the use of derivatives (See derivatives disclosure in footnote 3).

Marketable securities are valued at fair value based on quoted market prices, where available. Purchases and sales of securities and any resulting gain or loss are recorded on a trade-date basis. Net appreciation/ (depreciation) include the Plan's gains and losses on investments bought and sold as well as held during the year.

In July 2015, the Plan adopted a new asset allocation. The changes made to the investment policy allocations included adding Global Low Volatility Equity, Credit Opportunities Fixed income, and increasing the allocation to Master Limited Partnerships (MLPs). The Plan's asset allocation is shown in the following table.

**EMPLOYEES' RETIREMENT FUND OF  
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Notes to the Financial Statements  
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Asset Class	Allocation Percent
US Equity	
Domestic Equity	15.0
Real Estate	5.0
REITs	5.0
Private Equity	5.0
MLPs	10.0
Total US Equity	40.0
Non-US Equity	
International	15.0
Global	5.0
Global Low Volatility	10.0
Total Non-US Equity	30.0
<b>Total Equity</b>	<b>70.0</b>
Credit Opportunities	2.5
Global Investment Grade	15.0
High Yield	12.5
<b>Total Fixed Income</b>	<b>30.0</b>
<b>Total Fund Allocation</b>	<b>100.0</b>

e) Private Equity

To enhance the potential for earning higher rates of return relative to its other asset classes and to provide for broader portfolio diversification, the Plan, in 2009, allocated 5% of its total Plan portfolio to private equity. Recognizing that private equity investments have higher risk levels, this target of 5.0% is to be allocated within an acceptable range of 0.0% to 7.0% of private equity-oriented investments. Funding of committed capital in the private equity portfolio can occur over an extended time period and may take several years before the total allocation is fully invested. In order to reach the allocation target, a "committed" allocation up to 1.5 times the allocation is authorized. The Plan currently has three private equity managers.

Investments in these funds as a limited partner are carried at estimated fair value. Estimated fair values of investments in private limited partnerships are determined by the fund managers or general partner based on the latest investee information available, including audited financial statements and other similar data necessary to the valuation process. The private equity value at December 31, 2016 and December 31, 2015 was \$185 million and \$148 million respectively.

f) Real Estate

The Plan allocates 5% of its portfolio to private real estate. The Plan has two managers that manage real estate funds for a value of \$215 million at December 31, 2016 and \$277 million at December 31, 2015.

Estimated fair values of investments in these funds are determined by the fund managers based on their best estimates using fair value estimation techniques substantiated, in part, by their audited financial statements and supported by the due diligence of the Plan investment staff.



**EMPLOYEES' RETIREMENT FUND OF  
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Notes to the Financial Statements  
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g) Foreign Currency Transactions

The Plan may enter into forward foreign currency exchange contracts for the purchase or sale of a specific foreign currency at a fixed price on a future date as a hedge against specific transactions or portfolio position to protect the Plan against adverse currency movements. Entering into these arrangements involves the risk of dealing with counterparties and their ability to meet the terms of the contracts. These contracts are valued at fair value at the financial statement date, and any realized and unrealized gains and losses are recorded when they are incurred.

Investments denominated in foreign currencies at December 31, 2016 and 2015 were converted to U.S. dollars at the foreign exchange rates quoted at December 31, 2016 and 2015. These foreign exchange gains and losses are included in net appreciation/(depreciation) in fair value of investments in the accompanying Statements of Changes in Fiduciary Net Position.

h) Securities Lending

The Board has authorized the Plan to enter into an agreement with The Northern Trust Company ("Northern") for the lending of certain of the Plan's securities (the "Securities Lending Program" or "Program") including, but not limited to, stocks and bonds to counterparty brokers and banks ("borrowers"), for a predetermined period of time and fee.

In 2009, the Board capped the securities lending exposure at \$538.2 million.

i) Rate of Return

For the year ended December 31, 2016, the annual money-weighted rate of return on pension plan investment, net of investment fees, was 8.88%. The money-weighted rate of return expresses investment performance, net of investment expenses, adjusted for the changing amounts actually invested.

**Schedule of Money-Weighted Investment Returns  
Year Ended December 31, 2016**

For Year Ended December 31	Annual Investment Returns*
2015	-1.92%
2016	8.88%

\* Annual money-weighted rate of return, net of investment fees and adjusted for the changing amounts actually invested. This schedule is intended to include information for ten years. Additional years will be included as they become available.

3. Derivatives

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 Plan has classified the following as derivatives:

a) Currency Forward 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 commitments are not standardized and carry credit risk due to the possible nonperformance by one of the counterparties. 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 such losses occurred during fiscal years 2016 and 2015. Currency forwards are usually traded over-the-counter. These transactions are entered into in order to hedge risks from exposure to foreign currency rate fluctuation and to facilitate trade settlement of foreign

**EMPLOYEES' RETIREMENT FUND OF  
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Notes to the Financial Statements  
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security transactions. Currency forwards carry market risk resulting from adverse fluctuations in foreign exchange rates. 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 Plan records the unrealized currency translation gain or loss based on the applicable forward exchange rates.

The Plan recognized a net realized gain on forward contracts of \$4.6 million as of December 31, 2016 and a net realized gain of \$2.2 million as of December 31, 2015. As of December 31, 2016, the Plan had a net unrealized gain on forward contracts of \$720 thousand and a net unrealized gain of \$611 thousand at December 31, 2015. These gains and losses are included in net appreciation/(depreciation) in fair value of investments in the accompanying Statements of Changes in Fiduciary Net Position.

Currency forward contracts outstanding at December 31, 2016 and 2015 were approximately \$383 million and \$195 million, respectively.

Currency	2016 Currency Forward Contracts Outstanding (in thousands)	2015 Currency Forward Contracts Outstanding (in thousands)
Australian Dollar	\$20,114	\$6,615
Brazilian Real	8,155	1,649
Canadian Dollar	17,336	4,905
Chile Peso	2,331	2,466
Columbian Peso	1,593	1,905
Czech Koruna	898	1,259
Denmark Krone	252	20
Euro	12,568	8,443
Hong Kong Dollars	939	1,496
Hungary Forint	2,070	2,279
Indonesia-Rupiahs	2,205	2,874
Indian Rupee	7,892	5,930
Israel Shekel	259	1,615
Japanese Yen	23,501	26,891
Korean Won	2,329	162
Malaysia Ringgit		444
Mexican Peso	8,982	1,000
New Zealand Dollar	10,503	161
Norwegian Krone	18,459	2,169
PEI	-	-
Peruvian Nuevo Sol	19	19
Philippine Peso	935	-
Poland Zloty	1,246	191
Russia Ruble	3,034	-
Singapore Dollar	1,056	3,725
Swedish Krona	14,231	6,519

**EMPLOYEES' RETIREMENT FUND OF  
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Switzerland Franc	6,899	2,591
Thailand Baht	205	57
Turkey Lira	1,364	4,440
Taiwan New Dollar	5	6
UK Pound	10,937	4,872
US Dollar	196,934	98,286
South Africa Rand	5,492	1,719
Total	\$382,743	\$194,708

b) Swaps

A swap is an agreement between two or more parties to exchange a sequence of cash flows over a period of time in the future. No principal is exchanged at the beginning of the swap. The cash flows that the counterparties exchange are tied to a "notional" amount. The agreements provide, at predetermined future dates, the Plan pays interest based upon a notional principal amount and receives a return based upon the underlying index. Notional amounts represent the volume of outstanding transactions and do not represent the potential gain or loss associated with market risk or credit risk of such instruments. Risk associated with swaps includes adverse movements in the underlying index. The Plan has one investment manager authorized to enter into swaps. The Plan held no open swap contracts at December 31, 2016 and December 31, 2015.

c) Futures

Financial futures are agreements to purchase or sell a specific amount of an asset at a specified delivery or maturity date for an agreed upon price. These derivative securities are used to improve yield, adjust the duration of the fixed income portfolio, circumvent changes in interest rates, or to replicate an index. Futures contracts are standardized and traded on organized exchanges, thereby minimizing the Plan's risk. There were no outstanding futures contracts at December 31, 2016 and December 31, 2015.

4. Deposit and Investment Risk Disclosures

Deposits and investments of state and local governments are exposed to risks that have the potential to result in losses. The common deposit and investment risks include custodial credit risk, credit risk, concentration of credit risk, interest rate risk, and foreign currency risk. The required disclosures related to these risks and the Plan's exposures to these risks are disclosed in the following sections.

a) Custodial Credit Risk

Custodial credit risk is the risk, in the event of the failure of the counterparty the Plan will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. The Plan's custodial credit risk policy is set forth in Chapter 40A of the Dallas City Code and in the master custody agreement which includes the securities lending program. All investments are registered in the name of Employees' Retirement Fund of the City of Dallas or in the name of the Plan's custodian established through a master trust custodial agreement. The securities are held by the custodian in the name of the Plan.

As of December 31, 2016 the Plan had \$2.1 million or 0.07% of its approximate \$3.2 billion total investments (excluding short term investments) exposed to custodial credit risk. The risk exposure at December 31, 2015 was \$3.1 million or 0.09% of total investments (excluding short term investments) of approximately \$3.2 billion. These exposures were uninsured and uncollateralized deposits held by custodian banks outside of the United States. The Plan has experienced no such losses on these deposits during the year.

b) Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of an investment in a single issuer. A concentration of investments in any one single issuer of debt securities presents a greater risk for loss in the event that the issuer fails on its obligations.

The Board has contracted with third party investment managers to manage the investment portfolio of the Plan,

**EMPLOYEES' RETIREMENT FUND OF  
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subject to the policies and guidelines established by the Board. As the Plan's custodian bank, Northern Trust has responsibility for the safekeeping of certain investments, handling of transactions based on the instructions of investment managers, and recordkeeping for the investment transactions.

Investments that individually represent 5% or more of the net position available for Plan benefits and the total of investments that individually represent less than 5% of the net position restricted for pension benefits at December 31, 2016 and December 31, 2015 are as shown below (in thousands except per share amounts). There were no individual investments that met these criteria for fiscal years 2016 and 2015. The Plan's concentration of credit risk policy is communicated to individual managers in their guidelines through limitations or restrictions to securities, sectors, debt ratings, and other factors that may be applicable to a particular manager.

	2016		2015	
	Number of Shares/ Units	Fair Value	Number of Shares/ Units	Fair Value
Investments greater than 5% of net position, at fair value:	-	\$-	-	\$-
Investments less than 5% of net position (inclusive of cash):				
At fair value		\$3,650,973		\$3,497,700
Total cash and investments		\$3,650,973		\$3,497,700

c) Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. Credit quality ratings for the Plan's investments in fixed income securities as of December 31, 2016 and 2015 are included in the schedule below. Securities are rated using Standard and Poor's quality ratings as presented below in the rating scale.

The Plan's strategic fixed income investment policy allocates 30.0% of the total assets to fixed income. The policy provides for investment of up to 15% of the fixed income allocation in investment grade assets and up to 15% of the fixed income allocation in high yield (below investment grade) assets. The investment grade allocation also allows selected managers to invest in non-US dollar issues on an opportunistic basis up to 20% of their portfolio assets. Long term bond ratings as of December 31, 2016 and 2015 are as follows (in thousands):

Quality Rating	Fair Value	2016		2015	
		Percentage of Bond Portfolio	Fair Value	Percentage of Bond Portfolio	Fair Value
AAA	\$78,788	9.02	\$101,758	11.59	
AA+	14,721	1.68	20,000	2.28	
AA	1,315	0.15	3,562	0.41	
AA-	5,494	0.63	8,426	0.96	
A+	2,689	0.31	905	0.10	
A	12,699	1.45	16,494	1.88	

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A-	17,792	2.04	16,056	1.83
BBB+	26,140	2.99	22,560	2.57
BBB	32,203	3.69	34,105	3.88
BBB-	43,468	4.98	26,493	3.01
BB+	37,236	4.26	48,318	5.50
BB	54,485	6.24	60,742	6.92
BB-	68,198	7.81	85,963	9.79
B+	64,763	7.41	63,304	7.21
B	66,057	7.56	76,744	8.74
B-	42,977	4.92	55,282	6.30
CCC+	27,760	3.18	31,734	3.61
CCC	5,620	0.64	7,624	0.87
CCC-	1,406	0.16	2,773	0.32
CC	627	0.07	1	0.00
C			521	0.06
DDD	257	0.03	336	0.04
D	1,519	0.17	1,074	0.12
Not rated (NR)*	156,899	17.96	90,484	10.30
U.S. Government fixed income securities (NR)**	110,617	12.66	102,927	11.71
	<u>\$873,730</u>	<u>100.00%</u>	<u>\$878,186</u>	<u>100.00%</u>

\* NR-Investments that are not rated.

\*\*NR-U.S. Treasury Bonds and Notes are obligations of the U. S government or explicitly guaranteed by the U.S. government and therefore are not considered to have a credit risk.

d) Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. The Plan's foreign currency risk policy is communicated to those managers who are authorized to hedge currencies in their guidelines and sets specific parameters for each manager individually.

The Plan's investment policies limit the aggregate amount that can be invested in each class of investments. The equity investment policy sets an allocation of 15% of assets to international equity, 5% of assets to global equity and 10% to global low volatility equity.

The Plan's positions in international equity securities, directly and through commingled funds, were 14.77% and 24.48% of invested assets at December 31, 2016 and 2015, respectively. The Plan's position in global equity securities was 4.88% and 4.80% of invested assets at December 31, 2016 and 2015, respectively. The Plan's position in global low volatility equity was 10.26% at December 31, 2016 and 10.10% at 2015. The Plan's positions in global fixed income assets were 6.66% and 14.1% of invested assets at December 31, 2016 and 2015, respectively.

Non-US Dollar denominated investments at December 31, 2016 and 2015 were as follows (in thousands):

**EMPLOYEES' RETIREMENT FUND OF  
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Currency	2016			2015		
	U. S. Dollars Balance of Investments (in thousands)			U. S. Dollars Balance of Investments (in thousands)		
	Equities	Fixed	Currency Forward	Equities	Fixed	Currency Forward
Australian Dollar	\$3,066	\$9,760	\$20,114	\$14,219	\$5,760	\$6,615
Australian Shilling	-	-	-			
Belgium Franc	-	-	-			
Brazil Real	6,093	-	8,155	4,309		1,649
British Pound Sterling	46,383	-	10,937	39,611		4,872
Canadian Dollar	30,917	1,961	17,336	22,171	805	4,905
Chile Peso	-	-	2,331			2,466
Colombian Peso	-	-	1,593			1,905
Czech Republic- Koruna	300	-	898	235		1,259
Denmark Krone	2,294	-	252	4,721		20
Dutch Guilder	-	-	-			
Euro	84,051		12,568	78,856		8,443
Finland Markka	-	-	-			
French Francs	-	-	-			
German Marks	-	-	-			
Hong Kong Dollars	31,539	-	939	27,256		1,496
Hungary-Forint	2,553	-	2,070	494		2,279
Indian Rupee	-	-	7,892			5,930
Indonesia-Rupiahs	4,816	-	2,205	2,823		2,874
Israel Shekel	3,999	-	259	2,932		1,615
Italian Lira	-	-	-			
Japanese Yen	70,865	-	23,501	65,346		26,891
Korean Won	-	-	2,329			162
Malaysia Ringgit	3,363	-		4,755		444
Mexican Peso	2,119		8,982	4,019	2,703	1,000
New Zealand Dollar	5,837	-	10,503	4,381		161
Norwegian Krone	8,519	-	18,459	8,982		2,169
Peruvian Nuevo Sol	-	-	19			19
Philippines-Pesos	859	-	935	835		
PEI	-	-	-			
Poland-Zloty	1,104	-	1,246	2,019		191
Portuguese Escudos	-	-	-			



**EMPLOYEES' RETIREMENT FUND OF  
THE CITY OF DALLAS**

Notes to the Financial Statements  
December 31, 2016 and 2015

Russian Ruble	-	-	3,034			
Singapore Dollar	1,874	-	1,056	2,050		3,725
South Africa Rand	4,586	-	5,492	5,969		1,719
South Korea-Won	24,142	-	-	20,721		
Spanish Pesetos	-	-	-			
Swedish Krona	4,949	-	14,231	10,202		6,519
Swiss Franc	16,753	-	6,899	21,278		2,591
Taiwan New Dollar	5,621	-	5			6
Thailand Baht	9,469	-	205	7,114		57
Turkish Lira	1,449	-	1,364	2,040		4,440
<b>Total</b>	<u>\$377,520</u>	<u>\$11,721</u>	<u>\$185,809</u>	<u>\$357,338</u>	<u>\$9,268</u>	<u>\$96,422</u>

As of December 31, 2016 and 2015 open currency forward contracts are as follows:

Derivative Type	Total Notional Value 12/31/2016 (in thousands)	Total Fair Value 12/31/2016 (in thousands)	Total Notional Value 12/31/2015 (in thousands)	Total Fair Value 12/31/2015 (in thousands)
Currency				
Forward Contracts	\$720	\$382,743	\$611	\$194,708
<b>Total</b>	<u>\$720</u>	<u>\$382,743</u>	<u>\$611</u>	<u>\$194,708</u>

e) Interest Rate Risk

Interest rate risk is the risk that future changes in prevailing market rates of interest will have an adverse effect on the fair value of debt investments. The fair values of securities with long terms to maturity may be highly sensitive to interest rate changes.

As of December 31, 2016 and 2015 the weighted-average maturity of the bonds by bond type are as follows:

Bond Category	Fair Value 12/31/2016 (in thousands)	Weighted Average Maturity (years) at 12/31/2016	Fair Value 12/31/2015 (in thousands)	Weighted Average Maturity (years) at 12/31/2015
Asset Backed Securities	\$36,051	10.20	\$23,289	7.81
Bank Loans	13,252	4.22	12,433	4.68
Commercial Mortgage-Backed	16,172	30.86	29,514	28.35

**EMPLOYEES' RETIREMENT FUND OF  
THE CITY OF DALLAS**

Notes to the Financial Statements  
December 31, 2016 and 2015

Corporate Bonds	545,368	7.62	571,029	7.50
Government Agencies	55,072	13.23	18,216	8.40
Government Bonds	88,567	12.43	82,722	12.70
Government Mortgage-Backed Securities	87,529	20.60	107,705	20.17
Government issued Commercial Mortgage-Backed Securities			1,216	3.12
Index Linked Government Bonds	2,961	15.71	2,542	21.78
Municipal/ Provincial Bonds	18,157	15.45	19,004	16.39
Non-Government Backed CMOs	10,601	17.97	10,516	18.90
	<u>\$873,730</u>		<u>\$878,186</u>	
Total				
Portfolio weighted Average maturity		10.36		10.51

Government Mortgage Backed Securities are most sensitive to changes in interest rates as their prepayments can vary significantly with interest rate changes. This change in prepayments will generally cause the duration, or interest rate risk, of these securities to increase when interest rates rise and decrease when interest rates fall. These securities represent 10% and 12% of the total fixed income portfolio for 2016 and 2015. Their fair values at year end 2016 and 2015 were \$87.5 million and \$107.7 million, respectively. The Plan's interest rate risk policy is communicated to the fixed income managers through the Fixed Income Asset Policy and each manager's guidelines.

5. Appreciation or Depreciation of Investments

In 2016 and 2015, the Plan's investments, including investments bought, sold, and held during the year, appreciated (depreciated) in value as follows (in thousands):

	<u>2016</u>	<u>2015</u>
Investments, at fair value:		
Commingled index funds	\$9,869	\$(9,855)
Domestic equities	76,749	(166,866)
United States and foreign government fixed income securities	(11,772)	(14,110)
Domestic corporate fixed-income securities	47,974	(46,117)
International equities	55,878	48,834
Short-term investments	(220)	948
Currency contracts	4,706	1,300
	<u>183,184</u>	<u>(185,866)</u>
Investments, at estimated fair value:		
Real estate	9,338	33,640
Private equity and venture capital funds	18,143	12,854
	<u>210,665</u>	<u>(139,372)</u>

## 6. New Accounting Pronouncements

GASB Statement Number 72, "Fair Value Measurement and Application" is effective for financial statements for periods beginning after June 15, 2015. The Statement has been implemented by the Fund as required by GASB during fiscal year ending December 30, 2016.

GASB Statement Number 72, "Fair Value Measurement and Application" addresses accounting and financial reporting issues related to fair value measurements. The definition of fair value is 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. This Statement provides guidance for determining a fair value measurement for financial reporting purposes.

This Statement also provides guidance for applying fair value to certain investments and disclosures related to all fair value measurements.

The plan measures and records its investments using fair value measurement guidelines established by generally accepted accounting principles. These guidelines recognize a three-tiered fair value hierarchy, as follows:

- Level 1: Quoted prices for identical investments in active markets;
- Level 2: Observable inputs other than quoted market prices; and,
- Level 3: Unobservable inputs.

At December 31, 2016, the plan had the following recurring fair value measurements.

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**EMPLOYEES' RETIREMENT FUND OF  
THE CITY OF DALLAS**  
**Investments at Fair Value Measurement**  
**As of December 31, 2016**

(Dollar Amounts in Thousands)

	Fair Value Measurements Using			
	12/31/2016	Level 1	Level 2	Level 3
<b>Investments by Fair Value Level</b>				
Cash and Short Term Investment:				
Short-Term Investment Fund	\$123,539	\$123,539		
Total Cash and Short Term Investment	\$123,539	\$123,539	-	-
Fixed Income:				
Domestic Asset-Backed and Mortgage-Backed	\$26,198		\$26,198	
US Government and Agency Obligations	204,574		204,574	
Domestic Corporate and Taxable Municipal Bonds	503,988		489,121	14,867
International Fixed Income	11,721		11,721	
Total Fixed Income	\$746,481		\$731,614	\$14,867
Equity:				
Domestic Common and Preferred Stock	\$582,507	\$580,162		\$2,345
International Common and Preferred Stock	377,520	369,382		8,138
Total Equity	\$960,027	\$949,544		\$10,483
Directly-Owned Real Estate	\$214,895			\$214,895
<b>Total Investments by Fair Value Level</b>	<b>\$2,044,942</b>	<b>\$1,073,083</b>	<b>\$731,614</b>	<b>\$240,245</b>
<b>Investments Measured at Net Asset Value</b>				
Collective Trust	\$713,172			
Private Equity	462,469			
Private Debt	127,249			
<b>Total Investments Measured at Net Asset Value</b>	<b>\$1,302,890</b>			

**EMPLOYEES' RETIREMENT FUND OF  
THE CITY OF DALLAS**

Notes to the Financial Statements  
December 31, 2016 and 2015

7. Securities Lending

During the year, Northern lent, on behalf of the Plan, securities held by Northern as Plan custodian and received cash, United States government securities, agency securities, and irrevocable bank letters of credit as collateral. Northern did not have the ability to pledge or sell collateral securities absent a borrower default. Northern Trust's Core USA Collateral Section establishes requirements for participation, collateralization levels, cash and non-cash collateral guidelines, and investment guidelines for the collateral received from borrowers. Borrowers were required to put up collateral for each loan equal to: (i) in the case of loaned securities, the collateral for which is all denominated in the same currency as the loaned securities, 102% of the fair market value of the loaned securities plus any accrued but unpaid distributions thereon, and (ii) in the case of loaned securities denominated in a different currency from the loaned securities, 105% of the fair market value of the loaned securities plus any accrued but unpaid distributions thereon. Additionally, the guidelines set maturity/liquidity requirements for the collateral received from borrowers. The following table shows for open loans at December 31, 2016 and 2015, the type of collateral held, the fair value of the securities on loan, and the fair value of the collateral held (in thousands except percentages).

Collateral Type	Fair Value 12/31/2016	Collateral Market Value 12/31/2016	Collateral Percentage	Fair Value 12/31/2015	Collateral Market Value 12/31/2015	Collateral Percentage
Cash	\$295,494	\$303,141	103%	\$292,623	\$301,078	103%
Non-cash	-	-	0%	-	-	0%
<b>Total</b>	<b>\$295,494</b>	<b>\$303,141</b>		<b>\$292,623</b>	<b>\$301,078</b>	

The following represents the balances relating to the securities lending transactions as of December 31, 2016 and 2015 (in thousands):

	Underlying Securities 12/31/2016	Securities Collateral Value 12/31/2016	Cash Collateral Investment Value 12/31/2016	Underlying Securities 12/31/2015	Securities Collateral Value 12/31/2015	Cash Collateral Investment Value 12/31/2015
<b>Securities Lent</b>	<b>12/31/2016</b>	<b>12/31/2016</b>	<b>12/31/2016</b>	<b>12/31/2015</b>	<b>12/31/2015</b>	<b>12/31/2015</b>
Lent for cash collateral:						
Domestic equities	\$123,305	\$-	\$126,614	\$146,228	\$-	\$150,490
Domestic corporate fixed income	86,054	-	88,251	71,426	-	73,535
Global corporate fixed income				61		66
International equities	9,378	-	9,922	9,799	-	10,397
US Agencies	613		628	952		978
US government fixed	76,144	-	77,726	64,157	-	65,612
<b>Subtotal</b>	<b>\$295,494</b>	<b>\$-</b>	<b>\$303,141</b>	<b>\$292,623</b>	<b>\$-</b>	<b>\$301,078</b>

**EMPLOYEES' RETIREMENT FUND OF  
THE CITY OF DALLAS**

Notes to the Financial Statements  
December 31, 2016 and 2015

Disclosure of securities lending income is shown gross with the associated reductions for investment expenses on the Statements of Changes in Fiduciary Net Position, and the cash collateral and associated securities lending payable is shown on the Statements of Fiduciary Net Position for December 31, 2016 and 2015. The net income from securities lending in 2016 was \$1.2 million compared to \$1.2 million in 2015.

8. Federal Income Tax Status

The Internal Revenue Service issued a determination letter dated August 15, 2016, stating that the Plan was designed in accordance with applicable Internal Revenue Code requirements as of that date. The Plan administrator believes that the Plan is currently designed and being operated in compliance with the applicable requirements of the Internal Revenue Code. Therefore, the Plan was qualified and the related trust was tax-exempt as of the financial statement dates.

9. Schedule of Net Pension Liability

a) The components of the net pension liability of the City at December 31, 2016 and 2015 respectively were as follows:

Description	2016	2015
Total Pension Liability	\$4,291,802	\$5,367,564
Plan Fiduciary Net Position	3,352,043	3,202,208
Net Pension Liability	939,759	2,165,356
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	78.10%	59.66%

b) **Actuarial Methods and Assumptions:**

Valuation date	December 31, 2015 for most ADEC shown on Schedule of contribution December 31, 2016 for Net Pension Liability
Actuarial cost method	Entry Age Normal
Asset valuation method	5-year smoothed market
Amortization method	The actuarially determined contribution (ADEC) is initially based on a 30-year open amortization period. As specified in City Ordinance No. 25695, the rate may not change from year to year if the calculated rate is less than 300 basis points different from the current rate.
Remaining Amortization Period	Not determined, see description of amortization method
Investment rate of return	8.00%
Salary increases	3.50% to 6.50%, including inflation



**EMPLOYEES' RETIREMENT FUND OF  
THE CITY OF DALLAS**

Notes to the Financial Statements  
December 31, 2016 and 2015

Inflation	3.00%
Retirement Age	Experienced-based table of rates that are specific to the type of eligibility condition. Last updated for the December 31, 2014 valuation pursuant to an experience study of the 5-year period December 31, 2014.
Mortality	<p>For Actives:</p> <p>Males – RP2000 Healthy Mortality Table for male employees, set forward 4 years.</p> <p>Females – RP2000 Healthy Mortality Table for female employees, set back 5 years.</p> <p>For Healthy Retirees:</p> <p>Males – RP-2000 Blue Collar Mortality Table for male annuitants, with a 109% multiplier and fully generational mortality using improvement Scale BB</p> <p>Females – RP-2000 Blue Collar Mortality Table for female annuitants, with a 103% multiplier and fully generational mortality using improvement Scale BB</p> <p>For Disabled Lives:</p> <p>RP 2000 Disabled Mortality Table for male annuitants, set forward one year.</p>
Other Information	
Notes:	<p>There were no benefit changes during the year.</p> <p>The assumptions described above were for the most recent ADEC shown in the schedule of contributions.</p> <p>The assumptions used in determining the Net Pension Liability as of December 31, 2016 were those used in the actuarial valuation as of December 31, 2016.</p> <p>Most notably an Investment Return Rate of 7.75% was used. Please see the actuarial valuation report for a complete description of those assumptions.</p>

**EMPLOYEES' RETIREMENT FUND OF  
THE CITY OF DALLAS**

Notes to the Financial Statements  
December 31, 2016 and 2015

The long term rate of return on pension plan investments was estimated using a building block methodology in which best-estimate ranges of expected future real rates of return 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 return rates by the target asset allocation percentage and by adding expected inflation. The following table shows the best estimates of arithmetic real rates of return for each of the Plan's asset classes.

Asset Class	Long-Term Expected Real Rate of Return
Domestic Equity	6.50%
International Equity	6.70
Global Equity	6.70
Low Volatility Global Equity	6.70
Private Equity	9.40
REITS	5.40
Real Assets	6.30
Investment Grade Fixed Income	3.65
High Yield Fixed Income	5.35
Credit Opportunities	6.10

- c) Discount rate - A blended discount rate of 7.75% was used to measure the total pension liability. This blended discount rate was based on the expected rate of return on pension plan investments of 8% and the municipal bond rate of 3.78%. The projection of cash flows used to determine this blended discount rate assumed that plan member contributions and employer contributions will be made at the projected future contribution rates assuming that the ERF annually earns 8% on its market value of assets and that the number of active members remains constant in the future. In addition, it is assumed that the contribution smoothing will be eliminated when the Pension Obligation Bonds are retired.
- d) Sensitivity of the net pension liability to changes in the discount rate. Below is a table providing the sensitivity of the net pension liability to changes in the discount rate. In particular, the table presents the plan's net pension liability, if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher than the single discount rate:

Sensitivity of the Net Pension Liability  
To the Single Discount Rate Assumption  
(\$000)

1% Decrease	Current Single Discount Rate	1% Increase
6.75%	7.75%	8.75%
\$1,450,563	\$939,759	\$512,898

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# REQUIRED SUPPLEMENTARY INFORMATION

(unaudited)

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## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

(\$ in 000s)

Fiscal Year ending December 31	2016	2015
<b>Total Pension Liability</b>		
Service Cost	\$133,457	\$78,020
Interest on the Total Pension Liability	305,826	313,847
Benefit Changes	-	-
Difference between Expected and Actual Experience	(38,327)	(26,829)
Assumption Changes	(1,227,079)	1,238,431
Benefit Payments	(243,775)	(235,106)
Refunds	(5,864)	(4,854)
<b>Net Change in Total Pension Liability</b>	<b>(1,075,762)</b>	<b>1,363,509</b>
Total Pension Liability – Beginning	5,367,564	4,004,055
<b>Total Pension Liability – Ending (a)</b>	<b>4,291,802</b>	<b>5,367,564</b>
<b>Plan Fiduciary Net Position</b>		
Employer Contributions	56,130	50,721
Employee Contributions	53,436	50,742
Pension Plan Net Investment Income	294,918	(53,344)
Benefit Payments	(243,775)	(235,106)
Refunds	(5,864)	(4,854)
Pension Plan Administrative Expense	(5,343)	(4,598)
Other	333	162
<b>Net Change in Plan Fiduciary Position</b>	<b>149,835</b>	<b>(196,277)</b>
Plan Fiduciary Net Position – Beginning	3,202,208	3,398,485
<b>Plan Fiduciary Net Position – Ending (b)</b>	<b>3,352,043</b>	<b>3,202,208</b>
<b>Net Pension Liability – Ending (a)–(b)</b>	<b>\$939,759</b>	<b>\$2,165,356</b>
Plan Fiduciary Net Position as a Percentage of		
Total Pension Liability	78.10%	59.66%
Covered Employee Payroll	\$409,433	\$393,186
Net Pension Liability as a Percentage of Covered		
Employee Payroll	229.53%	550.72%

### Notes to Schedule:

The covered employee payroll is the sum of the active members' pay for valuation purposes as of the measurement date. An active member's valuation pay is the greater of their actual pay for the just completed calendar year or their current annual rate of pay.

## SCHEDULE OF THE NET PENSION LIABILITY (HISTORICAL)

Last 10 Fiscal Years  
(\$ in 000s)

FY Ending December 31,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2014	\$4,004,055	\$3,398,485	\$605,570	84.68%	\$363,109	168.95%
2015	5,367,564	3,202,208	2,165,356	59.66%	393,186	550.72%
2016	4,291,802	3,352,043	939,759	78.10%	409,433	229.53%

### Notes to Schedule:

The covered employee payroll is the sum of the active members' pay for valuation purposes as of the measurement date. An active member's valuation pay is the greater of their actual pay for the just completed calendar year or their current annual rate of pay.

## SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years  
(\$ in 000s)

FY Ending December 31,	Actuarially Determined Contribution 1,3	Actual Contributions 2,3	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2007	\$17,012	\$23,413	\$ (6,401)	\$353,671	6.62%
2008	15,535	22,720	(7,185)	376,159	6.04%
2009	20,148	25,232	(5,084)	373,807	6.75%
2010	33,952	27,323	6,629	336,490	8.12%
2011	33,612	27,302	6,310	312,380	8.74%
2012	41,570	30,363	11,207	319,274	9.51%
2013	56,394	37,823	18,571	342,219	11.05%
2014	61,747	45,833	15,914	363,109	12.62%
2015	64,648	50,721	13,927	393,186	12.90%
2016	84,316	56,130	28,186	409,433	13.71%

### Notes to Schedule:

1. The actuarially determined contribution (ADEC) shown is the employer contribution based on a 30-year open amortization period prior to fiscal year 2006. Beginning in fiscal year 2006, the current adjusted total obligation Rate (CATOR), as specified in City Ordinance No. 25695, reduced by the member contribution rate and the debt service on the pension obligation bonds is shown.

2. Since the City's fiscal year is October 1 to September 30 and the Fund's fiscal year is the calendar year, the contribution amounts shown above are a blend of the City's two fiscal year rates that occur during the calendar year.



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# OTHER SUPPLEMENTARY INFORMATION

(unaudited)

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## SCHEDULE OF ADMINISTRATIVE EXPENSES

As of December 31, 2016

(\$ in 000s)

<b>Personal Services:</b>	
Salaries	2,240
Retirement	327
Insurance	168
<b>Total Personal Services</b>	<b>2,735</b>
<b>Professional Services:</b>	
Actuary Service	133
Accounting & Audit Fees	100
Attorney Fees	708
Medical	5
Other	17
<b>Total Professional Services</b>	<b>963</b>
<b>Operating Services:</b>	
Data Processing	161
Election	-
Parking	43
Printing	38
Rent	255
Supplies and Services	121
Telephone	3
Travel and Training	134
Board of Trustees	11
Indirect and Other Costs	619
<b>Total Operating Services</b>	<b>1,385</b>
<b>Furniture &amp; Fixtures</b>	
Furniture	87
Other	173
<b>Total Furniture &amp; Fixtures</b>	<b>260</b>
<b>Total Administrative Expenses</b>	<b>\$5,343</b>

## SCHEDULE OF INVESTMENT EXPENSES

As Of December 31, 2016

(\$ in 000s)

Manager Fees	\$14,933
Custodian Fees	187
Securities Lending Fees	349
Investment Consultant Fees	343
<b>Total Investment Expenses</b>	<u><u>\$15,812</u></u>

\*Securities lending fees include broker rebates and the lending agent's fees.

## SCHEDULE OF PAYMENTS FOR PROFESSIONAL SERVICES

As Of December 31, 2016

(\$ in 000s)

### Accounting and Audit

STP Investment Services	\$56
Grant Thornton LLP	44

### Actuarial

Gabriel, Roeder, Smith & Company	133
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### Legal

Strasburger & Price, LLP	392
Foster Pepper PLLC	314
Carter Scholer Arnett Hamada LLP	2

### Medical

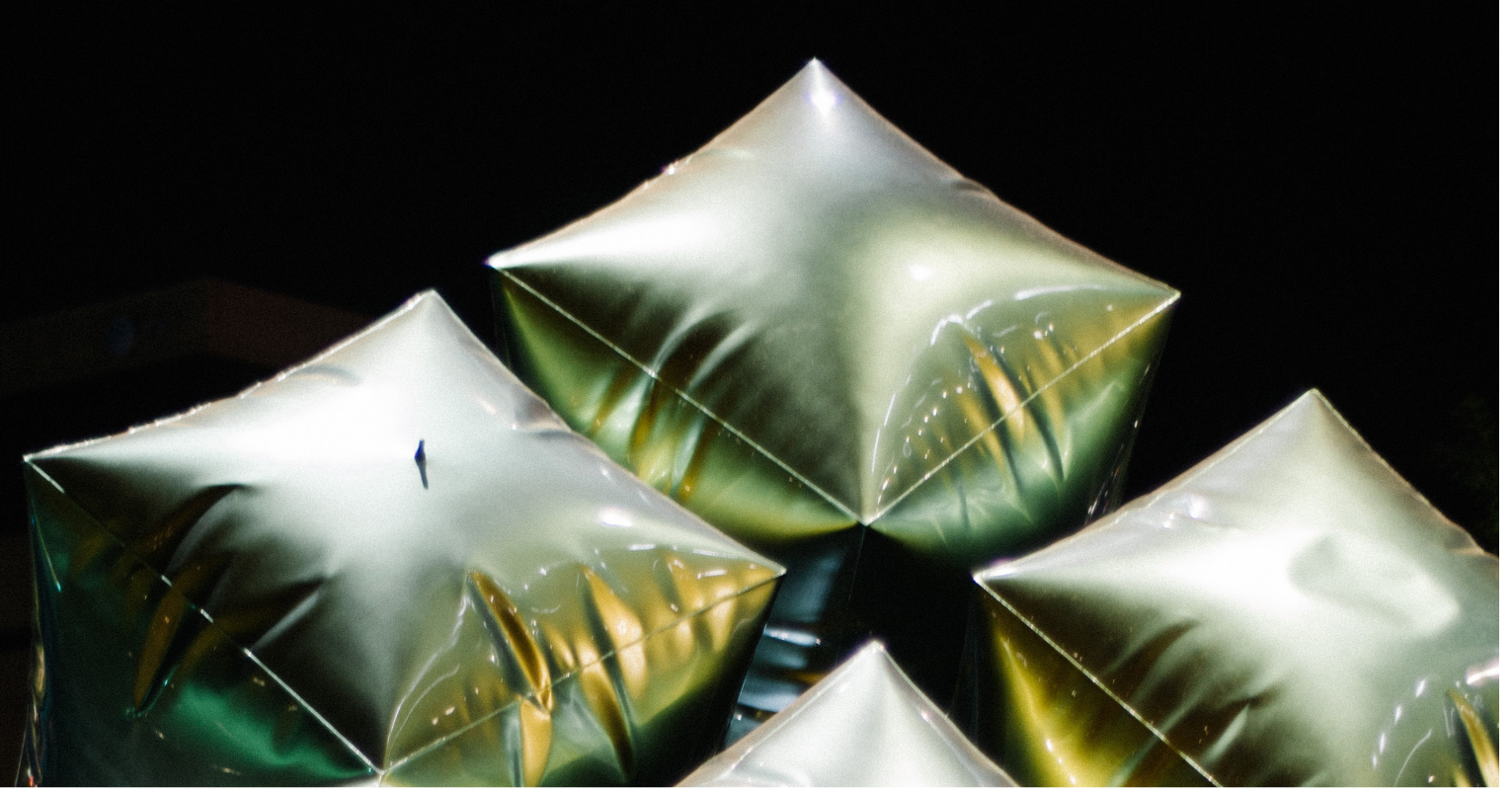
Various	5
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### Other

The Margulies Communications Group	17
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<b>Total Professional Services Payments</b>	<u><u>\$963</u></u>
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# INVESTMENT SECTION





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**Thomas Toth, CFA**  
**Managing Director, Wilshire Consulting**

May 1st, 2017

Ms. Cheryl Alston  
Executive Director  
Employees' Retirement Fund of the City of Dallas  
600 North Pearl Street #2450  
Dallas, TX 75201

Re: 2016 Performance Results

Dear Cheryl:

The purpose of this letter is to review the 2016 investment performance results of the Employees' Retirement Fund of the City of Dallas ("ERF", "the Fund").

With an economy in its eighth year of expansion and continued job growth, the Federal Reserve continued its gradual pace of interest rate increases in 2016, and signaled that it expects to raise rates more quickly in 2017. In addition, though there is uncertainty around the pace and ultimate level, the process of shrinking the \$4.5 trillion Federal Reserve portfolio of Treasury and mortgage securities is under active discussion for 2017. In general, 2016 was highlighted by a rally in global stocks amid signs of improving U.S. economic growth and aggressive central bank stimulus measures around the world. U.S. stocks led developed markets higher, while emerging markets also enjoyed strong returns, supported by rising commodity prices and political reform efforts. In a year marked by volatility and political surprises, the Fund's total return posted a gain of 9.2%<sup>[1]</sup> in 2016 compared to the -1.8% loss in the prior year. This performance ranked in the second quartile in 2016 compared to other public funds in the Wilshire Cooperative Total Fund Universe. Over longer time periods, the Fund's rankings have done well, placing in the second quartile over the five- and ten-year periods.

The 2016 investment environment encountered a myriad of unexpected outcomes both at home (a surprising U.S. Presidential election outcome) and abroad (the United Kingdom voting to leave the European Union). Overall, economically sensitive sectors outpaced defensive areas of the market, highlighted by strong returns in energy, materials and industrial stocks. Healthcare and other traditionally high-dividend-paying sectors lagged the overall market while investment-grade bonds advanced despite a modest rise in interest rates and signs of higher inflation. Meanwhile, the U.S. dollar rose against the Euro and most other currencies. Against this backdrop, the Fund's results remained resilient in large part thanks to a well-diversified investment portfolio that includes global equities, high yield bonds, real estate,

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<sup>1</sup> Performance calculations are consistent with the computations and methodologies approved by the CFA Institute and are based on a time-weight using monthly market values and flows using the modified BAI methodology. When a cash flow exceeds 7% of the beginning monthly market value, a daily time-weight is calculated around the cash flow date.



private equity, and real assets. This asset allocation allowed ERF to benefit from various market risk exposures.

Supported by investors thirst for return in a low-growth, and low-yield environment, real assets and high yield fixed income led all ERF asset classes and posted the highest returns at +23.1% and +14.0%, respectively. Comparable returns of +13.4% and +8.3% for the domestic equity and global low volatility equity segments followed suit finishing the year on a positive note. The global fixed income segment posted a gain of +3.9% in 2016 but struggled into year-end as interest rates ticked upward along with the U.S. Dollar which, in turn, weighed on investment grade bond prices and pressured other duration-sensitive assets. Overall, each of the Fund's asset class exposures ended the year in positive territory accruing favorably to the Fund's performance as a whole. Looking over longer time horizons, the Fund's performance continues to track closely with the policy benchmark while outperforming over the three- and five-year time periods.

As the ERF Board of Trustees look to pro-actively diversify its investments across asset classes, the Fund will continue to examine further investments in private equity, private real estate and inflation-linked assets. The approved allocations as of the end of 2016 were:

<b>Asset Class</b>	<b>Allocation</b>
Domestic Equity	15.00%
International Equity	15.00%
Global Equity	5.00%
Global Low Volatility	10.00%
Investment Grade Fixed Income	15.00%
High Yield	12.50%
Credit Opportunities	2.50%
Public Real Assets	10.00%
Real Estate	10.00%
Private Equity	5.00%



Wilshire annually publishes a research paper detailing our long-term nominal return forecast for the next ten years. Our geometric return forecasts are shown below.

	Total Return			Risk		
	Dec. 2015	Dec. 2016	Change	Dec. 2015	Dec. 2016	Change
Investment Categories:						
U.S. Stocks	6.50%	<b>17.00%</b>	0.00%	17.00%	<b>17.00%</b>	0.00%
Dev ex-U.S. Stocks	6.50	<b>6.50</b>	0.25	18.00	<b>18.00</b>	0.00
Emerging Mkt Stocks	6.50	<b>6.50</b>	0.00	26.00	<b>26.00</b>	0.00
Global Stocks	6.70	<b>6.70</b>	0.00	17.10	<b>17.15</b>	0.05
Private Markets *	9.50	<b>9.40</b>	-0.10	27.50	<b>27.50</b>	0.00
Cash Equivalents	1.25	<b>1.55</b>	0.30	1.25	<b>1.25</b>	0.00
Core Bonds	3.50	<b>3.65</b>	0.15	5.00	<b>5.15</b>	0.15
LT Core Bonds	4.30	<b>4.10</b>	-0.20	10.00	<b>9.85</b>	-0.15
TIPS	3.25	<b>2.95</b>	-0.30	6.00	<b>6.00</b>	0.00
High Yield Bonds	6.35	<b>5.35</b>	-1.00	10.00	<b>10.00</b>	0.00
Non-U.S. Bonds (Hdg)	1.65	<b>1.35</b>	-0.30	3.50	<b>3.50</b>	0.00
U.S. RE Securities	5.00	<b>5.40</b>	0.40	17.00	<b>17.00</b>	0.00
Private Real Estate *	5.80	<b>6.00</b>	0.20	14.00	<b>14.00</b>	0.00
Commodities	2.80	<b>3.50</b>	0.70	15.00	<b>15.00</b>	0.00
Real Asset Basket *	6.40	<b>6.30</b>	-0.10	8.40	<b>8.40</b>	0.00
Inflation:	1.55	<b>1.95</b>	0.40	1.75	<b>1.75</b>	0.00
Total Returns minus Inflation:						
U.S. Stocks	4.95	<b>4.55</b>	-0.40			
U.S. Bonds	1.95	<b>1.70</b>	-0.25			
Cash Equivalents	-0.30	<b>-0.40</b>	-0.10			
Stocks minus Bonds:	3.00	<b>2.85</b>	-0.15			
Bonds minus Cash:	2.25	<b>2.10</b>	-0.15			

\* December 2014 returns are based on a revised model but using inputs consistent with that time period.

As always, we thank you for the opportunity to be of service to ERF.

Sincerely,

Best regards,

Thomas Toth, CFA

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## INVESTMENT POLICIES SUMMARY

### Statement of Goals

The general investment goals are broad in nature to encompass the purpose of the Fund and its investments. They articulate the philosophy by which the Board will manage the Fund's assets within the applicable regulatory constraints.

1. The overall goal of the Fund is to provide benefits, as anticipated under the Plan document, Dallas City Code Chapter 40A, to its participants and their beneficiaries through a carefully planned and executed investment program.
2. The Fund seeks to produce the highest return on investments which is consistent with sufficient liquidity and investment risk that are prudent and reasonable, given prevailing capital market conditions. While the importance of the preservation of capital is recognized, the theory of capital market pricing which maintains that varying degrees of investment risk should be rewarded with compensating returns is also recognized. Consequently, prudent risk taking is reasonable and necessary.
3. The Fund investment program shall at all times comply with existing and applicable local, state and federal regulations.

### Investment Philosophy

The Fund is long term in nature, and the selection of investments is regulated by: the investment time horizon; the limits of acceptable risk; and the objective of optimizing the total rate of return. Each investment manager is authorized to execute investment transactions on behalf of the Board.

Investment decisions are made under the framework of the goal established for the rate of return, limits of acceptable risk, and Fund objectives. The goal is to optimize the return of the portfolio, as opposed to maximizing the rate of return.

The optimal portfolio mix is one that carefully equates expected rate of return with expected risk of all investment categories utilized in the portfolio. In setting the optimal mix of assets for the portfolio, the Board has developed a strategic asset allocation policy which incorporates a diversified asset mix. The strategic asset allocation is designed to provide an optimal diversification to reduce risk and maximize total rate of return relative to risk and the existing and projected liability structure.

The Board bases its investment strategy and goals on advice obtained from the investment consultant, the staff, and the external investment managers. The Board uses the annual external audit and annual actuarial valuation in its evaluation of the Fund's performance each year.

Article XVI, Section 67 of the Texas Constitution and Chapter 40A of the Dallas City Code, give complete responsibility for the management and investment actions of the Employees' Retirement Fund to the Board of Trustees. The Board is held to the standard of conduct of fiduciaries in discharging their responsibilities. According to Chapter 40A the Trustees, as fiduciaries, must carry out their functions solely in the interest of the members and beneficiaries.

### Corporate Governance

The Board considers the active voting of proxies an integral part of the investment process. Proxy voting may be delegated to the discretion of investment managers retained by the Board. The managers shall be required to establish a proxy voting policy and maintain records of proxy votes, and shall make these records available quarterly to the Board or its designee. The Board may at its discretion establish an overall policy of voting proxies in which case the manager's proxy voting policy shall be in accordance with that of the Board's. The Board recognizes that in certain non-U.S. markets, investment managers may, balancing the costs and benefits, not exercise proxy voting.

## INVESTMENT RESULTS

The investment managers and the returns by investment category are shown in the following tables.

<b>Investment Category</b>	<b>2016 Rate of Return</b>
Public Real Assets (MLPs)	23.07%
High Yield Bonds	14.04%
Domestic Equities	13.38%
Global Low Volatility	8.30%
Real Estate	5.83%
Global Equities	5.52%
International Equities	4.89%
Private Equity	4.26%
Global Fixed Income	3.89%
Cash Equivalents	0.30%
<b>Total Portfolio</b>	<b>9.17%</b>

## INVESTMENT MANAGERS

### **Domestic Equities, REITs, Master Limited Partnerships, & Commingled Index Funds**

Adelante Capital Management, LLC	Northern Trust Russell 2000 Growth
Atlantic Trust	Redwood Investments LLC
Channing Capital Management, LLC	Security Capital Research & Management, Inc.
Harvest Fund Advisors	Systematic Financial Management, LLP
Northern Trust S&P 500	T. Rowe Price Associates, Inc.

### **International Equities**

Acadian Asset Management, LLC	Baring International Investment Limited
AQR Capital Management, LLC	

### **Global Equity**

Acadian Global Low Volatility	Northern Trust ACWI IMI
Black Rock Global Low Volatility	Wellington Management Company, LLP

### **Fixed Income**

Advantus Capital Management, Inc.	Oaktree Capital Management, LLC
Aberdeen Asset Management, Inc.	Garcia Hamilton & Associates, L.P.
BlackRock Financial Management	Neuberger Berman

### **Cash Equivalents**

The Northern Trust Company
----------------------------

### **Private Equity**

Fairview Capital Partners	Hamilton Lane
Grosvenor Capital Management	

### **Real Estate**

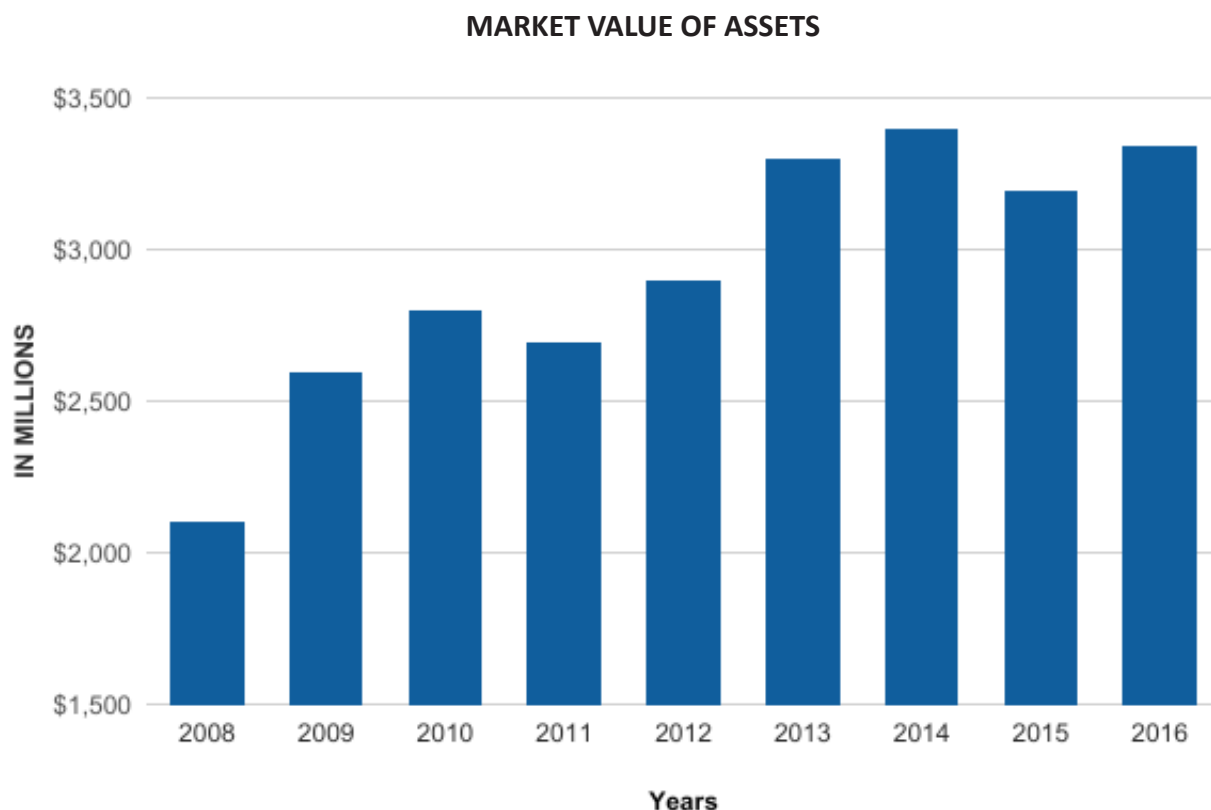
Heitman Real Estate Investment Management	Invesco Real Estate
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## TOTAL PLAN RESULTS

Fiscal year 2016 was up 9.17%. The world equity markets as measured by various indices were mixed for 2016 with the MSCI All World ex-US IMI Index was up 4.50% and the Dow Jones Wilshire 5000 returned 13.37%. The Barclays Aggregate Bond Index was up 2.65%. The Citigroup High Yield Cash Pay Index ended up at 17.58% for the year.

At December 31, 2016, the Net Asset value of the Plan was \$3.4 billion. This value represents a 4.68% or \$150 million increase over last year's value. The Net Assets of the Plan graph below provides a pictorial history of the Plan's growth over the past 10 years.



## ASSET ALLOCATION

The Plan's long-term strategic asset allocation policy sets the following targets: 70% in equity and 30% in fixed income. Although no specific allocation to cash and equivalents is targeted, cash must be available for the payment of benefits and other expenses of the Plan. To accommodate constantly changing market values, the Board has approved ranges for each of the asset classes.

**ASSET ALLOCATION**

As Of December 31, 2016

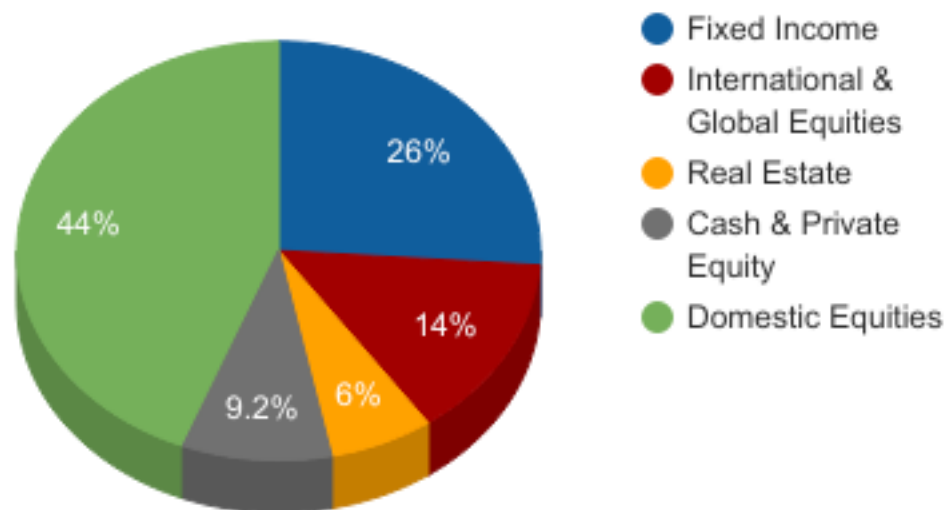
<b>Investment Category</b>	<b>% of Total Fund</b>
<b>US Equity</b>	
Domestic Equity	15.0
Real Estate	5.0
REITs	5.0
Private Equity	5.0
MLPs	10.0
<b>Total US Equity</b>	<b>40.0</b>
<b>Non-US Equity</b>	
International	15.0
Global	5.0
Global Low Volatility	10.0
<b>Total Non-US Equity</b>	<b>30.0</b>
<b>Total Equity</b>	<b>70.0</b>
<b>Fixed Income</b>	
Global Investment Grade	15.0
Credit Opportunities	2.5
High Yield	12.5
<b>Total Fixed Income</b>	<b>30.0</b>
<b>Total Fund</b>	<b>100.0</b>

**DOMESTIC, INTERNATIONAL AND GLOBAL EQUITY**

The Plan's allocation to US domestic fund is targeted at 40% of the Plan's total assets including 15% to domestic equity, 10% allocated to real estate securities and private real estate, 5% to private equity, and 10% to MLPs. Passively managed index funds totaled 16.68% of domestic equity assets at year end, and actively managed portfolios represented the remaining 83.32% of domestic equity investments. Total US equity returned 13.38% for the year while the benchmark Wilshire 5000 Index had a return of 13.37%.

Non-US equity has a target allocation of 30%, and it is split between international equity 15%, global equity 5% and 10% Global Low Volatility. The Plan's international equity composite return was 4.89% while the MSCI All World ex-US Index reported a return of 4.41% for the year, and the MSCI EAFE Index reported 1%. The global equity funds allocation reported a return of 5.52%.

## ASSET ALLOCATION



### GLOBAL FIXED INCOME

Global fixed income has a target of 15% of total assets allocated amongst three investment managers. During the year the global fixed income returned 3.89% while the Barclays Aggregate Bond Index returned 2.65%.

### HIGH YIELD FIXED INCOME

High yield fixed income has a target of 12.5%. This allocation is evenly split between two investment managers. The high yield return for 2016 was 14.04% and the Citigroup High Yield Cash Pay Index returned 17.58%.

### PRIVATE EQUITY

Private equity has a target allocation of 5.0%. This allocation is split between three investment managers. At year end the market value was approximately 5.20% of the Fund. The rate of return for the year was 4.26%.

### REAL ESTATE

Real estate is comprised of real estate securities (REITs) and private real estate. REITs and private real estate both have a 5.0% allocation each for a total real estate allocation of 10.0%. REITs had a return of 4.71% against the Wilshire RE Securities Index of 7.62%, and the private real estate returned 5.99% against the NCREIF Property Index returned 8.76%.

### PUBLIC REAL ASSETS (MLPs)

Public real assets have a target allocation of 10.0%. The allocation is split between two investment managers. Public real assets returned 23.07% against the Alerian MLP index of 18.31%.

**ANNUALIZED RATE OF RETURN**

As Of December 31, 2016

	<b>1-Year</b>	<b>3-Year</b>	<b>5-Year</b>
<b>Total Fund</b>	<b>9.17%</b>	<b>4.55%</b>	<b>8.84%</b>
<b>Domestic Equity</b>	13.38	8.23	14.32
S&P 500 Index	11.96	8.87	14.66
Wilshire 5000 Index	13.37	8.76	14.71
<b>International Equity</b>	4.89	-0.49	7.26
MSCI ACWI ex US Index	4.50	-1.77	5.00
MSCI EAFE Index	1.00	-1.60	6.53
<b>Global Fixed Income</b>	3.89	3.61	3.07
Barclays Aggregate Bond Index	2.65	3.03	2.23
<b>High Yield Fixed Income</b>	14.04	4.15	6.58
Citigroup High Yield Cash Pay	17.58	4.23	6.89
<b>Cash Equivalents</b>	0.30	0.13	0.12
T-Bills	0.33	0.14	0.12
<b>Real Estate</b>	5.83	11.43	11.10
Wilshire RE Securities Index	7.62	14.05	12.24
NCREIF ODCE INDEX	8.76	12.06	12.21
<b>Private Equity</b>	4.26	10.45	9.98
S&P 500 Index	11.96	8.87	14.66
<b>Public Real Assets</b>	23.07	-0.42	8.99
Alerian MLP Index	18.31	-5.80	2.24

## INVESTMENT MANAGEMENT FEES

As Of December 31, 2016

(\$ in 000s)

<b>Investment**</b>	<b>Assets Under Management</b>	<b>Fees</b>	<b>Basis Points</b>
Domestic Equity	\$1,194,710	1,761	14.7
International Equity	316,067	3,088	97.7
Global Equity	160,158	1,093	68.2
Global Fixed Income	381,620	347	9.1
High Yield Fixed Income	492,110	2,439	57.0
Real Estate	214,895	2,671	124.3
Master Limited Partnerships	279,921	1,641	58.6
Private Equity	184,812	1,877	101.6
Cash Equivalents	121,374	16	1.3
Subtotal	<u>\$3,345,667</u>	<u>\$14,933</u>	<u>44.6</u>

## OTHER INVESTMENT SERVICES

As Of December 31, 2016

(\$ in 000s)

Investment Consultant	\$342
Custodian	187
Security Lending*	<u>349</u>
Subtotal	<u>\$878</u>
<b>Total Investment Management Fees</b>	<b><u>\$18,185</u></b>

\*Securities lending fees include broker rebates and the lending agent's fees.

\*\*Excludes cash (see Investment Holdings for cash value)

## TEN LARGEST HOLDINGS

As Of December 31, 2016

(\$ in 000s)

<b>Equity</b>	<b>Shares</b>	<b>Fair Value</b>
MFB NTGI-QM COLTV DAILY S&P 50	29,175	\$219,246,888
CF BLACKROCK MSCI ACWI MINIMUM	12,890,928	165,726,821
CF HEITMAN AMERICA REAL ESTATE	74,813	85,993,605
NTC ALL COUNTRY WORLD IMI	559,156	79,193,232
CF INVESCO CORE RE FUND	416	68,989,378
CREDIT SUISSE DALLAS ERF PARTNERS	53,502,848	58,793,407
1900 MCKINNEY HARWOOD LLC	52,226,317	50,377,723
MFO NEUBERGER BERMAN HI IN B	4,822,134	41,952,564
MLP ENTERPRISE PRODS PARTNERS	1,288,282	34,835,145
ENERGY TRANSFER PARTNERS L P U	792,027	28,362,487

<b>Fixed Income</b>	<b>Par Value</b>	<b>Fair Value</b>
USA Treasury NTS 1.750% due 11/30/2021	13,545,000	\$13,443,954
USA Treasury Bonds 2.750% due 08/15/2042	11,655,000	11,010,828
USA Treasury NTS 1.250% due 10/31/2021	9,184,500	8,906,118
USA Treasury NTS 1.625% due 10/31/2023	7,865,000	7,566,681
USA Treasury Bonds 2.875% due 08/15/2045	7,360,000	7,082,602
USA Treasury NTS 0.750% due 08/15/2019	4,988,600	4,911,825
USA Treasury Bonds 2.250% due 08/15/2046	5,623,900	4,728,688
USA Treasury Notes 2.00% due 11/15/2026	4,876,700	4,692,117
USA Treasury 1.125% due 09/30/2021	4,572,500	4,410,496
Morgan Stanley SR NT FLTG 2.281% due 10/24/2023	4,185,000	4,231,495

## INVESTMENT HOLDINGS SUMMARY

As Of December 31, 2016

(\$ in 000s)

<b>Fixed Income</b>	<b>Market Value</b>	<b>Percentage of Market Value</b>
Government Bonds	\$214,768	6.42%
Corporate Bonds	658,962	19.69%
Total Fixed Income	\$873,730	26.10%
<b>Equity</b>		
Common Stock	\$1,731,609	51.73%
Index & Commingled	219,247	6.55%
Total Equity	\$1,950,856	58.28%
<b>Real Estate</b>		
Real Estate	214,895	6.42%
Total Real Estate	\$214,895	6.42%
<b>Alternative Investments</b>		
Private Equity	184,812	5.52%
Total Alternative Investments	\$184,812	5.52%
<b>Cash and Equivalents</b>		
Cash	\$1,697	0.05%
Cash Equivalents	121,374	3.63%
Total Cash and Equivalents	\$123,071	3.68%
<b>Total Fund</b>	<b>\$3,347,364</b>	<b>100.00%</b>



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# ACTUARIAL SECTION





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The Report of the  
December 31, 2016 Actuarial Valuation  
of the Employees' Retirement Fund  
of the City of Dallas

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Gabriel Roeder Smith & Company  
Consultant & Actuaries

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May 10, 2017

Board of Trustees  
Employees' Retirement Fund of the City of Dallas,  
Texas 600 North Pearl Street  
Suite 2450  
Dallas, Texas 75201

Dear Members of the Board:

We are pleased to present our report of the actuarial valuation of the Employees' Retirement Fund of the City of Dallas, Texas ("ERF" or the "Fund") as of December 31, 2016.

This valuation provides information on the funding status of ERF. It includes a determination of the actuarially calculated contribution rates for the 2017 calendar year. In addition, it also contains the information necessary to determine the current total obligation rate and the current adjusted total obligation rate for the fiscal year beginning October 1, 2017 per City Ordinance. This rate is a function of the previous year's adjusted total obligation rate, this year's actuarially calculated contribution rate, and the rate necessary to make the debt service payment on the previously issued pension obligation bonds for fiscal year 2018.

The actuarially calculated rates are intended to be sufficient to cover the normal cost of the plan and to amortize any unfunded actuarial accrued liabilities over a period of 30 years from the valuation date. The actual contribution rates are established based on the funding corridor and the maximum contribution rates of Chapter 40-A of the Dallas City Code. Currently, the actual contribution rates are less than the actuarially calculated contribution rates and therefore, the funding policy is not currently being met.

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

As authorized in Chapter 40-A(4)(16) of the Dallas City Code, the actuarial assumptions and methods are set by the Board of Trustees, based upon recommendations made by the plan's actuary. An experience investigation was performed for the five year period ending December 31, 2014. As a result of that study, revised assumptions were adopted by the Board effective with the valuation as of December 31, 2014. As described later in this report, these assumptions were further modified effective December 31, 2016. We believe the assumptions are internally consistent, reasonable, and, where appropriate, based on the actual experience of the ERF. All of the assumptions and methods used in this valuation were selected in compliance with the Actuarial Standards of Practice. All actuarial assumptions and methods are described under Section O of this report.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions.

Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. Due to the limited scope of this assignment, GRS did not perform an analysis of the potential range of such possible future differences. The actuarial calculations are intended to provide information for rational decision making.

This valuation is based on the provisions of ERF in effect as of the valuation date, data on the ERF membership and information on the asset values of the Fund as of December 31, 2016. The member, annuitant and asset data used in the valuation were all prepared and furnished by ERF staff. While certain checks for reasonableness were performed, the data used was not audited.



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The following schedules in the actuarial section of the ERF Comprehensive Annual Financial Report were prepared by GRS: Schedule of Active Member Valuation Data, Schedule of Retirees and Beneficiaries Added to and Removed from Rolls, Solvency Test, Schedule of Funding Progress, and Schedule of Contributions.

The last actuarial valuation of the ERF was prepared as of December 31, 2015 by Gabriel, Roeder, Smith & Company. Valuations are prepared annually as of December 31st.

To the best of our knowledge, this report is complete and accurate and was conducted in accordance with the Actuarial Standards of Practice as set forth by the Actuarial Standards Board and in compliance with the provisions of the Dallas City Code. The undersigned are independent actuaries and consultants. Mr. Randall is an Enrolled Actuary and a Member of the American Academy of Actuaries and he meets the Qualification Standards of the American Academy of Actuaries. Both Mr. Randall and Mr. Ward have significant experience in performing valuations for large public retirement systems.

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

Respectfully submitted,

A handwritten signature in black ink that reads "Lewis Ward".

Lewis Ward  
Consultant

A handwritten signature in black ink that reads "Mark R. Randall".

Mark R. Randall, MAAA, FCA, EA  
Chief Executive Officer



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## SUMMARY OF THE VALUATION

(This summary is an excerpt of the 2016 Actuarial Valuation Report.  
Sections referenced in this summary are available in the full report.)

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## EXECUTIVE SUMMARY

(\$ in 000's)

The key results from the actuarial valuation of the Employees' Retirement Fund of the City of Dallas as of December 31, 2016 may be summarized as follows:

	<u>December 31, 2015</u>	<u>December 31, 2016</u>
Actives	7,477	7,619
Benefit recipients	6,756	6,903
Deferred vested*	748	768
Other terminated*	415	447
Total	<u>15,396</u>	<u>15,737</u>
Covered payroll (including overtime)	\$393,186	\$409,433
Normal cost	\$78,818	\$83,387
as % of expected payroll	20.36%	20.75%
Actuarial accrued liability	\$4,129,133	\$4,291,802
Actuarial value of assets	\$3,320,387	\$3,451,463
Market value of assets	\$3,194,582	\$3,327,681
Unfunded actuarial accrued liability (UAAL)	\$808,746	\$840,339
Estimated yield on assets (market value basis)	(1.83%)	8.65%
Estimated yield on assets (actuarial value basis)	7.02%	8.51%
Contribution Rates		
Prior Adjusted Total Obligation Rate	36.00%	36.00%
Current Total Obligation Rate	42.54%	43.46%
Current Adjusted Total Obligation Rate	36.00%	36.00%
Actuarial gains/(losses)		
Assets	\$(31,243)	\$16,405
Actuarial liability experience	\$26,829	\$32,351
Assumption and method changes	\$-	\$(41,157)
30-year level % of pay funding cost	\$134,824	\$144,114
as % of payroll (Employee + City)	34.19%	35.18%
Funded ratio		
Based on actuarial value of assets	80.40%	80.40%
Based on market value of assets	77.40%	77.50%

\* Deferred vested are members who have applied for a deferred pension. Other terminations are other members who have terminated and still have contribution balances in the Fund.

## ACTUARIAL ASSUMPTIONS

Costs are determined using the Entry Age Normal actuarial cost method. The assumed annual investment return rate is 7.75% and includes an annual assumed rate of inflation of 2.75%.

The Board made the decision to lower the inflation assumption from 3.00% to 2.75% effective with the December 31, 2016 valuation. Since the inflation assumption is a building block for all the economic assumptions, lowering the inflation rate also impacted the following assumptions:

- The assumed investment return assumption was decreased from 8.00% to 7.75%
- The COLA assumption was decreased from 3.00% to 2.75%
- The general wage increase assumption was decreased from 3.50% to 3.25%
- The payroll growth assumption was decreased from 3.00% to 2.75%

Changing the actuarial assumptions increased the unfunded actuarial accrued liability by approximately \$41.2 million.

### **Vacation Leave Conversions**

Members with 20 or more years of service are assumed to convert unused vacation leave to 1.5 months of service. Other members are assumed to convert unused vacation leave to 1 month of service. No vacation leave conversion is assumed for disability retirement.

### **Spouse Age**

The female spouse is assumed to be 3 years younger than the male spouse.

### **Payroll Growth Rate**

In determining the level percent amortization of UAAL rate, the payroll of the entire system is assumed to increase at 3% each year.

### **Member's Pay**

In determining the member's valuation salary, the greater of the prior calendar year's gross pay and the member's rate of compensation is used.

### **Form of Payment**

It is assumed that 60% of married active male members and 84% of married active female employees will elect a Joint & 50% Survivor form of payment. Taking into consideration the marriage assumption and the inherent subsidy in the System's Joint & 100% Survivor factors, the male employees are valued with Joint and 29.0% Survivor annuities and the female employees are valued with Joint and 16.5% Survivor annuities.

### **Changes in Assumptions and Methods Since Prior Valuation**

The Board of Trustees adopted a lower inflation assumption and in conjunction with that change also modified several other economic assumptions. We believe this change is reasonable based on the current outlook for inflation. The demographic assumptions remain unchanged from the prior year.

## ANALYSIS OF ACTUARIAL (GAINS) AND LOSSES FOR 2016

(\$ in 000's)

	<u>2016</u>
<b>Investment Return</b>	\$(16,405)
<b>Salary Increase</b>	3,744
<b>Age and Service Retirement</b>	(4,327)
<b>General Employment Termination</b>	1,875
<b>Disability Incidence</b>	(195)
<b>Active Mortality</b>	102
<b>Benefit Recipient Mortality</b>	(1,665)
<b>Actual vs. Expected Cost of Living Adjustment (COLA)*</b>	(27,890)
<b>Other</b>	<u>(3,995)</u>
<b>Total Actuarial (Gain)/ Loss</b>	\$(48,756)

\* Actual COLA of 1.45% versus expected COLA of 3.00%

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## SCHEDULE OF FUNDING STATUS

(\$ in 000's)

End of Year	Actuarial Value of Assets (a)	AAL (b)	UAAL (b-a)	Funding Ratio (a/b)	Payroll* (c)	UAAL as % of payroll ((b-a)/c)
1997	\$1,437,533	\$1,673,761	\$236,228	85.89%	\$261,799	90.20%
1998	1,617,468	1,750,430	132,962	92.40%	275,547	48.30%
1999	1,862,644	1,873,998	11,353	99.39%	282,127	4.00%
2000	1,997,828	2,038,078	40,250	98.03%	298,355	13.50%
2001	2,017,041	2,276,488	259,447	88.60%	332,842	77.90%
2002	1,863,701	2,399,569	535,868	77.67%	324,615	165.08%
2003	1,843,099	2,489,071	645,972	74.05%	318,492	202.82%
2004	2,482,082	2,488,270	6,188	99.75%	331,201	1.87%
2005	2,739,269	2,606,173	(133,096)	105.11%	332,446	-40.04%
2006	2,998,099	2,761,404	(236,695)	108.57%	344,997	-68.61%
2007	3,183,260	2,915,164	(268,096)	109.20%	370,150	-72.43%
2008	2,957,506	3,075,385	117,879	96.17%	389,362	30.27%
2009	3,031,652	3,192,120	160,468	94.97%	375,164	42.77%
2010	3,027,439	3,282,126	254,687	92.24%	332,045	76.70%
2011	2,916,946	3,391,652	474,906	86.00%	318,972	148.89%
2012	2,846,124	3,518,356	672,232	80.89%	340,452	197.45%
2013	3,074,284	3,610,845	362,477	85.14%	352,486	102.83%
2014	3,241,053	4,004,055	763,002	80.94%	374,002	204.01%
2015	3,320,387	4,129,133	808,746	80.41%	404,981	199.70%
2016	\$3,451,463	\$4,291,802	\$840,339	80.42%	\$420,693	199.75%

## ACTUARIAL METHOD AND ASSUMPTIONS

### Entry Age Normal Method

The Entry Age Normal actuarial cost method is the actuarial valuation method used for all purposes under ERF.

The concept of this method is that funding of benefits for each member should be effected as a, theoretical, level contribution (as a level percentage of pay) from entry into ERF to termination of active status.

The Normal Cost (NC) for a fiscal year under this method is determined as described in the prior paragraph for each member. The ERF NC for the year is the total of individual normal costs determined for each active member.

The Actuarial Accrued Liability (AAL) under this method is the theoretical asset balance of the NC that would have accumulated to date based upon current actuarial assumptions. To the extent that the assets of the fund are insufficient to cover the AAL, an Unfunded Actuarial Accrued Liability (UAAL) develops.

The actuarially calculated contribution for a year is the NC for that year plus an amount to amortize the UAAL over 30 years as a level percentage of pay.

### Actuarial Value of Asset Method

The actuarial value of assets is equal to the expected actuarial value of assets adjusted for a five- year phase-in of actual investment return in excess of (or less than) expected investment return. The actual return is calculated net of investment expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's actuarial value of assets, adjusted for contributions, benefits paid, and refunds.

Annual Rate of Investment Return: For all purposes under the Fund, the rate of investment return is assumed to be 7.75% per annum, net of investment expenses. This rate includes an annual assumed rate of inflation of 2.75%. In addition, annual cost-of-living adjustments are assumed to occur on average at the rate of 2.75% per annum.

### Annual Compensation Increases

Each member's compensation is assumed to increase in accordance with a table based on actual ERF experience. Sample rates follow:

<u>Years of Service</u>	<u>Merit, Promotion, Longevity</u>		<u>General</u>		<u>Total</u>	
<b>0</b>	3.00	%	3.25	%	6.25	%
<b>1</b>	3.00		3.25		6.25	
<b>2</b>	2.75		3.25		6.00	
<b>3</b>	2.00		3.25		5.25	
<b>4</b>	1.50		3.25		4.75	
<b>5</b>	1.50		3.25		4.75	
<b>6</b>	1.50		3.25		4.75	
<b>7</b>	1.00		3.25		4.25	
<b>8</b>	1.00		3.25		4.25	
<b>9</b>	0.75		3.25		4.00	
<b>10</b>	0.75		3.25		4.00	
<b>11</b>	0.75		3.25		4.00	
<b>12</b>	0.50		3.25		3.75	
<b>13</b>	0.50		3.25		3.75	
<b>14</b>	0.50		3.25		3.75	
<b>15</b>	0.50		3.25		3.75	
<b>16</b>	0.50		3.25		3.75	
<b>17</b>	0.50		3.25		3.75	
<b>18</b>	0.25		3.25		3.50	
<b>19 &amp; Over</b>	0.00		3.25		3.25	

## SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Year Ending December 31,	Active Participants	Percent Change	Covered Payroll	Percent Change	Average Salary	Percent Change
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2007	8,117	-	\$359,369,000	-	\$44,274	-
2008	8,371	3.1%	378,021,000	5.2%	45,158	2.0%
2009	7,654	-8.6%	364,237,000	-3.6%	47,588	5.4%
2010	7,034	-8.1%	322,374,000	-11.5%	45,831	-3.7%
2011	6,745	-4.1%	309,682,000	-3.9%	45,913	0.2%
2012	6,864	1.8%	330,536,000	6.7%	48,155	4.9%
2013	6,993	1.9%	342,219,000	3.5%	48,937	1.6%
2014	7,180	2.7%	363,109,000	6.1%	50,572	3.3%
2015	7,477	4.1%	393,186,000	8.3%	52,586	4.0%
2016	7,619	1.9%	409,433,000	4.1%	53,738	2.2%

## SCHEDULE OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS

Year Ending December 31,	Added to Rolls		Removed from Rolls		Rolls-End of Year		% Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2007	239	\$9,484,039	205	\$4,064,965	5,304	\$142,267,609	-	\$26,823
2008	383	12,144,419	211	4,287,869	5,476	154,692,846	8.7%	28,249
2009	446	15,663,920	216	4,530,438	5,706	165,826,328	7.2%	29,062
2010	508	15,996,695	221	4,635,309	5,993	179,730,384	8.4%	29,990
2011	404	13,636,816	198	4,216,579	6,199	193,851,170	7.9%	31,271
2012	325	9,615,428	204	4,457,973	6,320	202,120,582	4.3%	31,981
2013	324	10,291,868	197	4,327,990	6,447	210,027,512	3.9%	32,578
2014	370	11,692,776	219	4,821,713	6,598	219,150,070	4.3%	33,215
2015	385	11,757,189	227	4,887,969	6,756	226,019,290	3.1%	33,455
2016	384	15,356,961	237	5,562,549	6,903	237,992,528	5.3%	34,477



## SOLVENCY TEST

<u>Valuation Date</u>	<u>Aggregated Accrued Liabilities for</u>			<u>Reported Assets</u>	<u>Portions of Accrued Liabilities Covered by Reported Assets</u>		
	<u>Active and Inactive Members Contributions</u>	<u>Retirees and Beneficiaries</u>	<u>Active and Inactive Members (Employer Financed Portion)</u>		<u>(5)/(2)</u>	<u>[(5)-(2)]/3</u>	<u>[(5)-(2)-(3)]/(4)</u>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
December 31, 2007	\$205,700	\$1,591,731	\$1,117,733	\$3,183,260	100%	100%	100.0%
December 31, 2008	221,414	1,707,599	1,146,372	2,957,506	100%	100%	89.7%
December 31, 2009	228,445	1,834,491	1,129,184	3,031,652	100%	100%	85.8%
December 31, 2010	232,727	2,041,322	1,008,077	3,027,439	100%	100%	74.7%
December 31, 2011	240,821	2,181,731	969,100	2,916,746	100%	100%	51.0%
December 31, 2012	257,716	2,250,533	1,010,107	2,846,124	100%	100%	33.4%
December 31, 2013	278,892	2,319,424	1,012,529	3,074,284	100%	100%	47.0%
December 31, 2014	301,567	2,578,071	1,124,417	3,241,053	100%	100%	32.1%
December 31, 2015	325,607	2,650,638	1,152,888	3,320,387	100%	100%	29.9%
December 31, 2016	350,646	2,770,533	1,170,623	3,451,463	100%	100%	28.2%

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## MORTALITY

### Active Members

- a. Males – RP2000 Healthy Mortality Table for male employees, set forward 4 years.
- b. Females – RP2000 Healthy Mortality Table for female employees, set back 5 years.

Sample rates follow (rate per 1,000):

Age	Mortality Rate	
	Male	Female
30	0.7	0.2
40	1.4	0.5
50	2.8	1.1
60	7.0	2.5
70	33.9	5.8
80	99.8	28.1
90	250.7	77.4

*10% of active deaths are assumed to be service related.*

### Other Benefit Recipients

- a. Males – RP-2000 Blue Collar Healthy Mortality Table for male annuitants, with a 109% multiplier and fully generational mortality using improvement Scale BB.
- b. Females – RP-2000 Blue Collar Healthy Mortality Table for female annuitants, with a 103% multiplier and fully generational mortality using improvement Scale BB.

Sample rates follow (rate per 1,000), with projected mortality applied:

Age	Male	Female
30	0.8	0.3
40	1.4	0.9
50	2.5	1.9
60	8.1	4.3
70	22.9	15.8
80	60.4	41.6
90	166	118

## DISABILITY

A client-specific table of disability incidence with sample rates follows (rate per 1,000):

<u>Age</u>	<u>Disability Rate</u>
30	0.3
40	0.6
50	2.4
60	6.0

20% of disabilities are assumed to be service related. There is a 0% assumption of disabilities for members who have over 30 years of service and are eligible for retirement.

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## ACTIVE MEMBERS ELIGIBLE FOR RETIREMENT

Upon eligibility, active members are assumed to retire as follows (rate per 1,000)

<u>Age</u>	<u>Male</u>		<u>Female</u>	
	<u>First Year Eligible</u>	<u>Thereafter</u>	<u>First Year Eligible</u>	<u>Thereafter</u>
<b>48-49</b>	100	100	100	100
<b>50</b>	600	550	400	350
<b>51</b>	500	450	400	350
<b>52</b>	500	330	400	350
<b>53</b>	450	300	400	300
<b>54</b>	400	280	400	250
<b>55</b>	350	280	300	250
<b>56</b>	350	280	300	250
<b>57</b>	350	280	300	220
<b>58-59</b>	350	280	300	220
	<u>Service &lt; 18 yrs</u>	<u>Service 18 yrs</u>	<u>Service &lt; 18 yrs</u>	<u>Service 18 yrs.</u>
<b>60</b>	80	250	100	300
<b>61</b>	90	250	150	220
<b>62</b>	100	250	150	200
<b>63</b>	150	250	150	150
<b>64</b>	150	250	100	100
<b>65</b>	180	250	200	200
<b>66</b>	200	250	250	250
<b>67</b>	200	250	250	250
<b>68</b>	200	250	150	250
<b>69</b>	200	250	150	250
<b>70</b>	1,000	1,000	1,000	1,000

## GENERAL TURNOVER

A table of termination rates based on ERF experience. A sample of the ultimate rates are as follows

<u>Years of Service</u>	<u>Terminations (per 1,000)</u>
<b>0</b>	210.0
<b>1</b>	160.0
<b>2</b>	130.0
<b>3</b>	105.0
<b>4</b>	85.0
<b>5</b>	67.5
<b>6</b>	62.5
<b>7</b>	57.5
<b>8</b>	49.0
<b>9</b>	46.0
<b>10-14</b>	37.0
<b>15-19</b>	22.0
<b>20 &amp; Over</b>	14.0

There is 0% assumption of termination for members eligible for retirement.

**Mortality Improvement:** Scale BB is used to project mortality improvements for Healthy Retirees on a fully generational basis. There is no projection of mortality improvement before or after the measurement date for disabled lives or active employees.

**Refunds of Contributions:** Members are assumed to choose the most valuable termination benefit.

**Operational Expenses:** The amount of estimated administrative expenses expected in the next year is assumed to be equal to the prior year's expenses and is incorporated in the Normal Cost.

**Marital Status:** 75% of active male members and 50% of active female employees are assumed to be married.

## FUNDING PROCESS

Based on the previous work of the Employees' Retirement Fund Study Committee, which was ratified by both the City Council and the voters of Dallas, a new funding process commenced October 1, 2015. From this date forward, a new "current adjusted total obligation rate" will be contributed jointly by the City (63%) and the Membership (37%). This current adjusted total obligation rate will cover both the debt service tied to the pension obligation bonds issued in 2005 and the contributions to the ERF. In subsequent years, the contribution rate changes only if the actuarial valuation develops a "current total obligation rate" which differs from the "prior adjusted total obligation rate" by more than 3.00%.

The current total obligation rate exceeds the prior adjusted total obligation rate as of December 31, 2015. This means that the "current adjusted total obligation rate" will remain at 36.00% of active member payroll for the fiscal year beginning October 1, 2016. It should be noted that under the contribution corridor methodology, the "current adjusted total obligation rate" would have been higher if not for the maximum rate of 36.00% allowed under Chapter 40-A of the Dallas City Code.

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## EXPERIENCE DURING 2016

An Actuarial (Gain)/Loss Analysis [(G)/L] reviews the effects of the actual experience that differs from the assumed experience based on the actual results for the year. If any difference increases assets or reduces liabilities, we have an actuarial gain. The reverse is an actuarial loss.

On a market value return basis, the Fund returned approximately 8.65% (calculated on a dollar-weighted basis, net of investment expenses). Given this return, the actual investment income was less than the expected investment income on the actuarial value of assets; therefore, an investment income loss is being partially recognized this year (1/5) and partially deferred into the near future (4/5). After also recognizing prior 5 years' deferred investment gains and losses (years 2015 - 2012), there was an overall actuarial gain of \$16 million on the actuarial value of assets as of December 31, 2016. The rate of return on the actuarial value of assets for 2016 was 8.51% (calculated on a dollar-weighted basis, net of investment expenses). This result was more than the current investment return assumption of 7.75%.

During 2016 there was a liability actuarial gain of about \$32.4 million derived from demographic assumptions and non-investment economic assumptions (cost-of-living-adjustment). As seen below, ERF experienced an overall experience actuarial gain in calendar year 2016 in the amount of \$48.8 million.

The total (G)/L for the prior 4 years is broken down as follows (\$ in millions):

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
1) Actuarial (Gain)/Loss on Assets	\$(144.95)	\$(61.00)	\$31.24	\$(16.41)
2) Actuarial (Gain)/Loss on Liabilities	\$(19.70)	\$(21.97)	\$(26.83)	\$(32.35)
3) Total Actuarial (Gain) or Loss (1+2)	\$(164.65)	\$(82.97)	\$4.41	\$(48.76)

The unfunded actuarial accrued liability (UAAL) also increased \$27.8 million due to the difference between the calculated contribution rate and the actual contributions during 2016.

## FUNDED STATUS

The funded status of ERF is measured by the Funded Ratio and the Unfunded Actuarial Accrued Liability (UAAL). The Funded Ratio is the ratio of the actuarial value of assets available for benefits to the actuarial accrued liability (AAL) of the Fund on the valuation date. Therefore, it reflects the portion of the AAL that is covered by ERF assets. The UAAL is the difference between these two amounts.

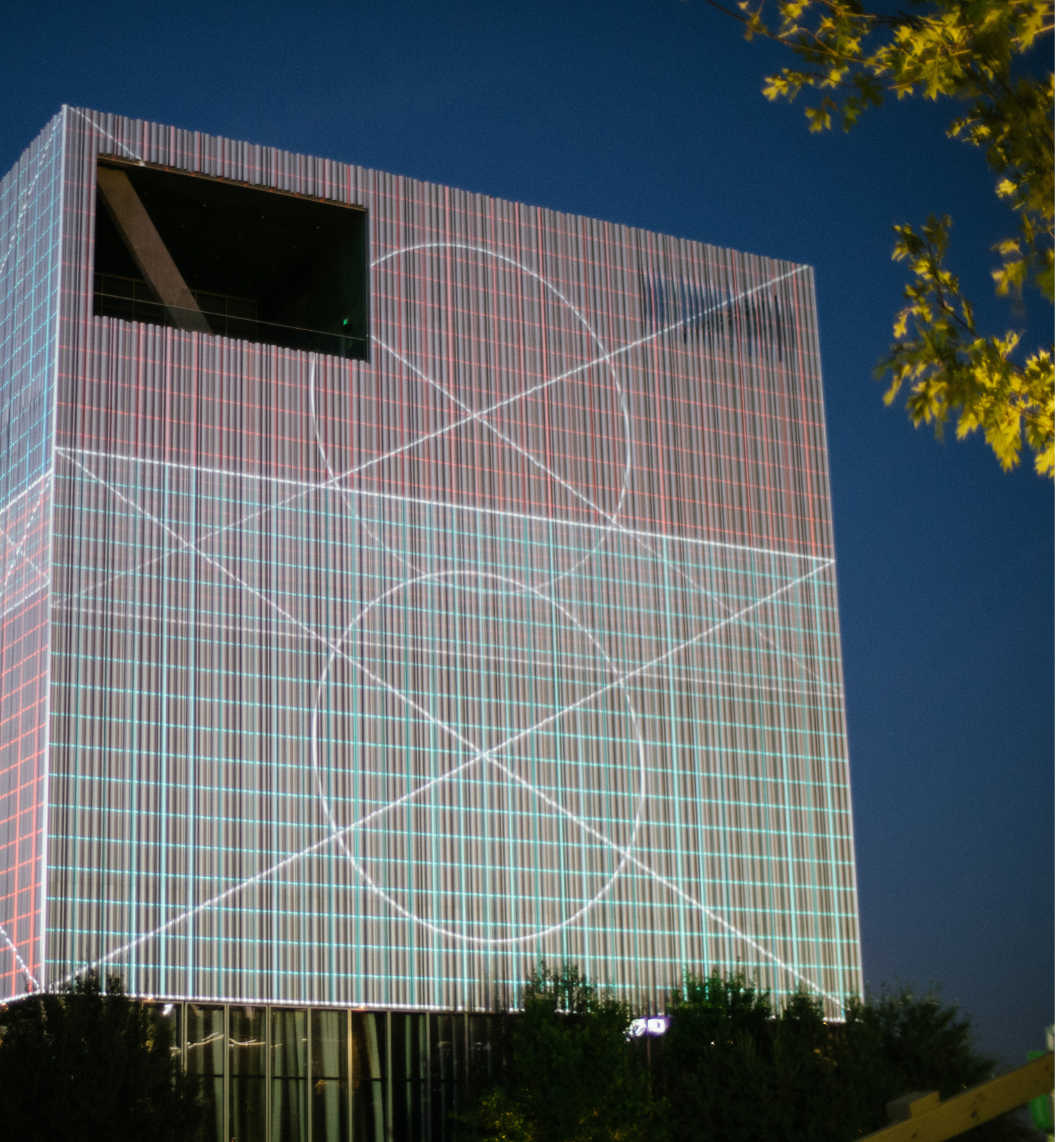
A Funded Ratio of 100% means that the funding of ERF is precisely on schedule as of the particular valuation date. In addition, an increasing funded ratio from year-to-year may also mean that the funding of ERF is on schedule. By monitoring changes in the Funded Ratio each year, we can determine whether or not funding progress is being made.

Based on the actuarial value of assets, the Funded Ratio of ERF remained unchanged at 80.4% as of December 31, 2016.

The UAAL increased from \$808.7 million as of December 31, 2015 to \$840.3 million as of December 31, 2016. Since the UAAL is positive, this implies the actuarial accrued liabilities exceed the actuarial assets of the Fund as of December 31, 2016.

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# STATISTICAL SECTION





## SCHEDULE OF REVENUE BY SOURCE

(\$ in 000's)

Year Ending	Member Contributions	Employer Contributions	% of Annual Covered P/R	Investment Income	Total
2007	\$31,806	\$23,493	6.3	\$110,659	\$165,964
2008	31,839	22,720	5.8	(975,641)	(921,076)
2009	32,229	25,265	6.7	619,177	676,678
2010	31,666	27,323	8.2	398,713	457,710
2011	31,748	27,302	8.6	24,554	83,613
2012	35,644	30,371	9.6	385,678	451,703
2013	41,730	37,823	11.0	493,498	573,062
2014	46,536	45,833	12.6	207,992	300,374
2015	50,742	50,721	13.2	(53,343)	48,133
2016	53,436	56,130	13.9	294,918	404,498

## SCHEDULE OF EXPENSES BY TYPE

(\$ in 000's)

Year Ending	Benefit Payments	Administrative Expenses	Refunds	Investment Professional Expenses	Total
2007	\$146,810	\$2,675	\$3,056	\$39,855	\$192,396
2008	156,575	3,255	2,742	20,926	183,498
2009	172,493	3,315	4,273	9,637	189,718
2010	182,883	3,235	4,476	11,173	201,767
2011	195,270	3,492	4,982	14,026	217,770
2012	209,097	3,446	4,369	15,854	232,766
2013	216,988	3,595	4,405	16,286	241,274
2014	225,614	4,150	4,629	18,678	253,071
2015	235,106	4,594	4,854	18,185	262,743
2016	243,775	5,343	5,864	15,812	270,554

## SCHEDULE OF BENEFIT EXPENSES BY TYPE

(\$ in 000's)

Year Ending	Retiree	Beneficiary	Disability	Supplement	Total
2007	\$129,326	\$5,897	\$3,806	\$7,781	\$146,810
2008	138,695	5,959	3,979	7,942	156,575
2009	150,843	9,340	4,149	8,161	172,493
2010	162,042	7,984	4,322	8,535	182,883
2011	176,028	5,767	4,536	8,939	195,270
2012	187,712	7,561	4,677	9,147	209,097
2013	196,525	6,470	4,656	9,337	216,988
2014	205,172	6,147	4,743	9,552	225,614
2015	214,343	6,101	4,908	9,754	235,106
2016	220,977	7,926	4,884	9,986	243,773

## AVERAGE BENEFIT PAYMENT

As of December 31, 2016

Retirement Effective Dates	Years of Credited Service						
	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30+
Period 01/01/2016 to 12/31/2016							
Average monthly benefit	\$325	\$763	\$1,488	\$2,427	\$2,489	\$4,170	\$4,974
Average final average salary	\$4,290	\$3,561	\$4,840	\$5,274	\$4,943	\$5,651	\$5,720
Number of retired members	4	33	24	50	46	62	57
Period 01/01/2015 to 12/31/2015							
Average monthly benefit	\$145	\$882	\$1,365	\$2,126	\$3,025	\$4,106	\$4,922
Average final average salary	\$3,347	\$4,697	\$4,059	\$4,582	\$4,948	\$5,592	\$5,691
Period 01/01/2014 to 12/31/2014							
Average monthly benefit	\$327	\$644	\$1,451	\$1,934	\$2,949	\$4,012	\$5,568
Average final average salary	\$3,845	\$3,211	\$4,109	\$4,165	\$4,888	\$5,445	\$6,371
Number of retired members	7	42	36	56	45	71	38
Period 01/01/2013 to 12/31/2013							
Average monthly benefit	\$302	\$578	\$1,689	\$2,012	\$2,909	\$3,823	\$4,639
Average final average salary	\$3,892	\$3,100	\$4,954	\$4,223	\$4,764	\$5,260	\$5,390
Number of retired members	8	29	33	33	49	62	44
Period 01/01/2012 to 12/31/2012							
Average monthly benefit	\$325	\$845	\$1,591	\$2,010	\$2,829	\$3,964	\$4,517
Average final average salary	\$2,933	\$4,442	\$4,633	\$4,118	\$4,570	\$5,397	\$5,269
Number of retired members	12	39	32	26	39	61	32
Period 01/01/2011 to 12/31/2011							
Average monthly benefit	\$323	\$787	\$1,259	\$2,027	\$3,099	\$3,754	\$4,263
Average final average salary	\$3,798	\$3,757	\$3,702	\$4,261	\$5,052	\$5,105	\$4,990
Number of retired members	15	33	41	48	58	105	61
Period 01/01/2010 to 12/31/2010							
Average monthly benefit	\$224	\$734	\$1,303	\$1,830	\$2,995	\$3,711	\$4,116
Average final average salary	\$2,595	\$3,679	\$4,364	\$4,784	\$4,904	\$5,040	\$4,772
Number of retired members	8	36	49	44	70	133	91
Period 01/01/2009 to 12/31/2009							
Average monthly benefit	\$302	\$784	\$1,294	\$2,150	\$2,950	\$3,577	\$4,305
Average final average salary	\$3,287	\$3,606	\$3,879	\$4,396	\$4,788	\$4,882	\$4,969
Number of retired members	27	25	36	37	65	110	79

## RETIRED MEMBERS BY TYPE OF BENEFIT

As of December 31, 2016

Amount of Monthly Benefits	Type of Retirement							Option Selected		
	1	2	3	4	5	6	7	#1	#2	#3
\$1 - \$250	52	0	13					11	16	38
\$251 - \$500	118	2	41	31		1	10	24	79	100
\$501 - \$750	221	6	53	58	2	6	32	43	167	168
\$751 - \$1,000	245	8	80	25	20	17	12	57	184	166
\$1,001 - \$1,250	222	12	73	31	8	22	10	58	153	167
\$1,251 - \$1,500	226	14	61	14	6	16	5	81	115	146
\$1,501 - \$1,750	214	11	64	14	4	15	5	70	105	152
\$1,751 - \$2,000	225	21	58	19	3	9	4	99	118	122
over \$2,000	3,878	146	305	65	9	47	20	1,166	1,781	1,523
<b>Total</b>	<b>5,401</b>	<b>220</b>	<b>748</b>	<b>257</b>	<b>52</b>	<b>133</b>	<b>98</b>	<b>1,609</b>	<b>2,718</b>	<b>2,582</b>

### a Type of Retirement

- 1 Normal retirement for age, service or Rule of 78
- 2 Early retirement
- 3 Beneficiary payment, normal or early retirement
- 4 Beneficiary payment, service connected death
- 5 Service connected disability retirement
- 6 Non-Service connected disability retirement
- 7 Beneficiary payment, disability retirement

### b Option Selected

- 1 Joint & 100%- beneficiary receives 100% of member's benefit
- 2 Joint & 50%- beneficiary receives 50% of member's benefit
- 3 10 Year Certain- beneficiary receives member's unused benefits

## AVERAGE AGE AND PENSION AT RETIREMENT

As of December 31, 2016

Status	Average Age	Average Pension	Average Age at Retirement
Members Only	68	\$2,930.89	57
Members and Survivors	69	\$2,722.90	N/A
Survivors Only	73	\$1,670.01	N/A

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Employees' Retirement Fund of the City of Dallas

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