

**City of Kansas City, Missouri
Firefighters' Pension System
Auditor's Report and Financial Statements
April 30, 2017 and 2016**



City of Kansas City, Missouri
Firefighters' Pension System
April 30, 2017 and 2016

Contents

Independent Auditor's Report	1
 Required Supplementary Information	
Management's Discussion and Analysis	3
 Financial Statements	
Statements of Fiduciary Net Position	7
Statements of Changes in Fiduciary Net Position	8
Notes to Financial Statements	9
 Required Supplementary Information	
Schedule of Changes in the City's Net Pension Liability and Related Ratios	26
Schedule of City Contributions	27
Schedule of Investment Returns	28
Notes to Required Supplementary Information.....	29

Independent Auditor's Report

Retirement Board
City of Kansas City, Missouri
Firefighters' Pension System
Kansas City, Missouri

We have audited the accompanying basic financial statements of the City of Kansas City, Missouri Firefighters' Pension System (the Plan), which comprise the statements of fiduciary net position as of April 30, 2017 and 2016, and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the basic financial statements, which collectively comprise the Plan's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

Our responsibility is to express 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 audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes 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 fiduciary net position of the City of Kansas City, Missouri Firefighters' Pension System as of April 30, 2017 and 2016, and the changes in fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and pension information as listed in the table of contents be presented to supplement the basic financial statements. Such information, although not part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements and other knowledge we obtained during our audits 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.

BKD, LLP

Kansas City, Missouri
October 30, 2017

City of Kansas City, Missouri
Firefighters' Pension System
Management's Discussion and Analysis
April 30, 2017 and 2016

The Firefighters' Pension System of Kansas City, Missouri is the defined benefit retirement plan for firefighters of Kansas City, Missouri. The Firefighters' Pension System was established by City ordinance in 1953 and is administered by the Retirement System Board of Trustees to provide retirement, disability and survivor benefits to its members.

This discussion and analysis of the Firefighters' Pension System's financial statements provides an overview of the Firefighters' Pension System's operations and investment performance during the years ended April 30, 2017 and 2016, with selected comparative information for the fiscal year ended April 30, 2015. Please read it in conjunction with the Firefighters' Pension System's financial statements, which follow this section.

Overview of the Financial Statements and Accompanying Information

- The financial statements presented in this report are the Statements of Plan Net Position as of April 30, 2017 and 2016 and the Statements of Changes in Plan Net Position for the years ended April 30, 2017 and 2016. These statements reflect resources available for the payment of benefits as of the year-end, and the sources and uses of those funds during the year.
- The notes to the financial statements are an integral part of the financial statements and provide facts and detailed information to assist the reader in understanding the statements. Information in the notes includes a description of the Plan, a summary of significant accounting policies, the method used to value investments and a summary of investments.
- Required supplementary information presents schedules related to employer contributions and the funding of the Plan.

2017 and 2016 Summary Comparative Information of Fiduciary Net Position

	April 30, 2017	April 30, 2016	Amount Change	Percentage Change
Receivables	\$ 2,242,711	\$ 1,899,054	\$ 343,657	18.10%
Investments at fair value	510,118,808	464,917,697	45,201,111	9.72%
Securities lending collateral	28,575,689	31,411,584	(2,835,895)	-9.03%
Total assets	<u>540,937,208</u>	<u>498,228,335</u>	<u>42,708,873</u>	8.57%
Due to broker for purchases of investments	1,206,479	1,017,655	188,824	18.55%
Administrative and investment expenses payable	920,389	772,700	147,689	19.11%
Securities lending collateral	28,575,689	31,411,584	(2,835,895)	-9.03%
Total liabilities	<u>30,702,557</u>	<u>33,201,939</u>	<u>(2,499,382)</u>	-7.53%
Net Position	<u>\$ 510,234,651</u>	<u>\$ 465,026,396</u>	<u>\$ 45,208,255</u>	9.72%

City of Kansas City, Missouri
Firefighters' Pension System
Management's Discussion and Analysis
April 30, 2017 and 2016

2017 and 2016 Summary Comparative Information of Changes in Fiduciary Net Position

	April 30, 2017	April 30, 2016	Amount Change	Percentage Change
Member contributions	\$ 7,150,987	\$ 6,769,093	\$ 381,894	5.64%
Employer contributions	19,650,554	19,270,269	380,285	1.97%
Net investment income (loss)	58,937,463	(7,329,261)	66,266,724	904.14%
Total additions	<u>85,739,004</u>	<u>18,710,101</u>	<u>67,028,903</u>	358.25%
Benefits paid to members	39,168,674	37,448,441	1,720,233	4.59%
Refunds of contributions	1,017,015	1,931,310	(914,295)	-47.34%
Administrative expenses	345,060	300,479	44,581	14.84%
Total deductions	<u>40,530,749</u>	<u>39,680,230</u>	<u>850,519</u>	2.14%
Net Increase (Decrease) in Net Position	45,208,255	(20,970,129)	66,178,384	-315.58%
Net Position, Beginning of Year	<u>465,026,396</u>	<u>485,996,525</u>	<u>(20,970,129)</u>	-4.31%
Net Position, End of Year	<u>\$ 510,234,651</u>	<u>\$ 465,026,396</u>	<u>\$ 45,208,255</u>	9.72%

2017 Financial Highlights

Although fixed income market returns were negligible during the period, prices surged in most equity markets. This paved the way to an investment return, net of expenses, of 13.7%, which significantly exceeded the Policy Index benchmark return of 11.0%. All segments of the Fund performed relatively well compared to benchmarks. The international and global equity, along with fixed income and real assets segments of the Fund all exceeded performance expectations, while the domestic equity segment, in aggregate, slightly underperformed.

The 9.7% rise in plan net position, to \$510 million, was fueled by \$59 million of investment income. Contributions and benefits grew in ordinary fashion. Refunds of contributions decreased, as fewer members withdrew their contributions, while administrative expenses increased, due to increased staffing costs and the fees associated with an actuarial experience study.

2017 Operational Highlights

There were no significant changes to the investment structure. Ongoing cash needs were met primarily through the sale of appreciating equity securities.

City of Kansas City, Missouri
Firefighters' Pension System
Management's Discussion and Analysis
April 30, 2017 and 2016

2016 and 2015 Summary Comparative Information of Fiduciary Net Position

	April 30, 2016	April 30, 2015	Amount Change	Percentage Change
Receivables	\$ 1,899,054	\$ 1,546,145	\$ 352,909	22.83%
Investments at fair value	464,917,697	486,152,535	(21,234,838)	-4.37%
Securities lending collateral	31,411,584	41,084,056	(9,672,472)	-23.54%
Total assets	<u>498,228,335</u>	<u>528,782,736</u>	<u>(30,554,401)</u>	-5.78%
Due to broker for purchases of investments	1,017,655	810,197	207,458	25.61%
Administrative and investment expenses payable	772,700	891,958	(119,258)	-13.37%
Securities lending collateral	31,411,584	41,084,056	(9,672,472)	-23.54%
Total liabilities	<u>33,201,939</u>	<u>42,786,211</u>	<u>(9,584,272)</u>	-22.40%
Net Position	<u>\$ 465,026,396</u>	<u>\$ 485,996,525</u>	<u>\$ (20,970,129)</u>	-4.31%

2016 and 2015 Summary Comparative Information of Changes in Fiduciary Net Position

	April 30, 2016	April 30, 2015	Amount Change	Percentage Change
Member contributions	\$ 6,769,093	\$ 6,851,791	\$ (82,698)	-1.21%
Employer contributions	19,270,269	18,998,552	271,717	1.43%
Net investment income (loss)	(7,329,261)	32,850,361	(40,179,622)	-122.31%
Total additions	<u>18,710,101</u>	<u>58,700,704</u>	<u>(39,990,603)</u>	-68.13%
Benefits paid to members	37,448,441	35,699,785	1,748,656	4.90%
Refunds of contributions	1,931,310	1,956,321	(25,011)	-1.28%
Administrative expenses	300,479	264,100	36,379	13.77%
Total deductions	<u>39,680,230</u>	<u>37,920,206</u>	<u>1,760,024</u>	4.64%
Net Increase (Decrease) in Net Position	(20,970,129)	20,780,498	(41,750,627)	-200.91%
Net Position, Beginning of Year	<u>485,996,525</u>	<u>465,216,027</u>	<u>20,780,498</u>	4.47%
Net Position, End of Year	<u>\$ 465,026,396</u>	<u>\$ 485,996,525</u>	<u>\$ (20,970,129)</u>	-4.31%

**City of Kansas City, Missouri
Firefighters' Pension System
Management's Discussion and Analysis
April 30, 2017 and 2016**

2016 Financial Highlights

Equity markets across the globe posted negative returns with international and emerging market equities fairsing the worst, due to concerns over China's economic slowdown, deteriorating economic data globally and falling commodity prices. Real assets and fixed income assets posted positive returns. The investment portfolio attained an investment of return, net of expenses, of -1.50%, which underperformed the policy index benchmark return of -0.42%. Real assets and non-U.S. equity were the only segments of the fund that performed well, relative to their benchmarks. All other managers, in aggregate, underperformed.

The 4.3% decline in fiduciary net position, to \$465 million, was fueled by the \$7.3 million net investment loss. Benefits paid to members grew in ordinary fashion, while refunds of contributions slightly decreased. Administrative expenses increased, due to health insurance enrollment expenses.

2016 Operational Highlights

A core international equity manager and a small cap international equity manager were terminated due to organizational changes and performance issues. Searches were conducted and both managers were replaced. Ongoing cash needs were met through the sale of appreciating equity and real asset securities.

Requests for Information

This financial report is designed to provide members of the City of Kansas City, Missouri Firefighters' Pension System, citizens, investors and creditors of the City of Kansas City, Missouri with a general overview of the Firefighters' Pension System's finances and to demonstrate its accountability for the money it receives. If you have questions about this report or need additional financial information, contact the City of Kansas City Missouri Firefighters' Pension System, City Hall, 414 East 12th Street, 10th Floor, Kansas City, Missouri 64106-2705.

There are no other currently known facts, conditions or decisions that are expected to have a significant effect on the financial position or results of operations of the Plan.

City of Kansas City, Missouri
Firefighters' Pension System
Statements of Fiduciary Net Position
April 30, 2017 and 2016

Assets

	<u>2017</u>	<u>2016</u>
Investments, at Fair Value		
Short-term investment funds	\$ 13,771,821	\$ 17,451,659
Domestic common stock	101,285,804	87,485,184
Foreign equities	2,079,480	2,748,288
Partnerships	12,378,826	11,095,617
Collective trusts - equities	140,918,863	185,895,851
Collective trusts - fixed income	143,393,924	71,110,231
Collective trusts - hedge funds	48,943,956	45,427,612
Collective trusts - real estate	47,346,134	43,703,255
	<u>510,118,808</u>	<u>464,917,697</u>
Securities Lending Collateral	<u>28,575,689</u>	<u>31,411,584</u>
Receivables		
Contributions	1,001,481	943,790
Investment income	39,165	33,271
Due from broker for sales of investments	1,202,065	921,993
	<u>2,242,711</u>	<u>1,899,054</u>
Total assets	<u>540,937,208</u>	<u>498,228,335</u>
Liabilities		
Due to broker for purchases of investments	1,206,479	1,017,655
Administrative and investment expenses payable	920,389	772,700
Securities lending collateral	28,575,689	31,411,584
	<u>30,702,557</u>	<u>33,201,939</u>
Net Position Restricted for Pensions	506,697,663	462,024,002
Net Position Restricted for Health Care Subsidy	3,536,988	3,002,394
Total net position	<u>\$ 510,234,651</u>	<u>\$ 465,026,396</u>

City of Kansas City, Missouri
Firefighters' Pension System
Statements of Changes in Fiduciary Net Position
Years Ended April 30, 2017 and 2016

Additions	2017	2016
Investment Income		
Interest income	\$ 951,880	\$ 907,758
Dividend income	1,968,536	1,777,442
Net increase (decrease) in fair value of investments	58,254,989	(7,111,451)
Less investment expense	<u>(2,363,443)</u>	<u>(3,016,135)</u>
Net investment income (loss)	<u>58,811,962</u>	<u>(7,442,386)</u>
Securities Lending Income		
Securities lending gross income	<u>313,814</u>	<u>175,047</u>
Securities lending expenses		
Borrower fees	(134,651)	(13,594)
Management fees	(53,662)	(48,328)
Total securities lending expenses	<u>(188,313)</u>	<u>(61,922)</u>
Net securities lending income	<u>125,501</u>	<u>113,125</u>
Total net investment income (loss)	<u>58,937,463</u>	<u>(7,329,261)</u>
Contributions		
Contributions from the City of Kansas City, Missouri		
Pension contributions	16,754,798	16,631,844
Health subsidy contributions	1,233,276	1,191,878
Health supplemental contributions	1,662,480	1,446,547
Contributions from members	<u>7,150,987</u>	<u>6,769,093</u>
Total contributions	<u>26,801,541</u>	<u>26,039,362</u>
Total additions	<u>85,739,004</u>	<u>18,710,101</u>
Deductions		
Benefits Paid		
Members	39,134,674	37,420,441
Funeral benefits	<u>34,000</u>	<u>28,000</u>
Total benefits paid	39,168,674	37,448,441
Refunds		
Termination	41,992	136,626
Retirement	975,023	1,794,684
Administrative Expenses	<u>345,060</u>	<u>300,479</u>
Total deductions	<u>40,530,749</u>	<u>39,680,230</u>
Net Increase (Decrease) in Net Position	45,208,255	(20,970,129)
Net Position, Beginning of Year	<u>465,026,396</u>	<u>485,996,525</u>
Net Position, End of Year	<u>\$ 510,234,651</u>	<u>\$ 465,026,396</u>

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

Note 1: Summary of Significant Accounting Policies

Reporting Entity

The City of Kansas City, Missouri Firefighters' Pension System (the Plan) is a contributory, single-employer, defined benefit pension plan, covering all employees of the Firefighting Division of the City of Kansas City, Missouri (the City). The Plan is considered part of the City's financial reporting entity and is included in the City's comprehensive annual financial report as a pension trust fund. Employees should refer to the plan agreement for more complete information.

Adoption of New Accounting Standard

The Plan adopted fair value guidance as set forth in Governmental Accounting Standards Board Statement No. 72, *Fair Value Measurement and Application (GASB 72)*. The Statement sets forth guidance for determining and disclosing fair value of assets and liabilities reported in the financial statements. Adoption of GASB 72 did not have a significant impact on amounts reported or disclosed.

Basis of Accounting

The financial statements are prepared on the accrual basis of accounting. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions to the Plan are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when paid in accordance with the terms of each plan.

Investments

Investments owned are valued at fair value as follows:

Common stock and foreign equities (A) Listed – closing prices are reported on the composite summary of national securities exchanges or (B) Over-the-counter – bid prices

Collective trusts, partnerships and short-term investment funds consist primarily of non-marketable investments in various venture capital, corporate finance funds and private partnerships (collectively referred to as "Portfolio Funds"). These funds are primarily invested in a diversified portfolio of equities, fixed income, real estate and alternative or non-traditional investments. These investments are recorded at fair value based on financial data, which is generally at an amount equal to the net asset value per share or the Fund's proportionate interest in the net assets or net equity of the Portfolio Funds as determined by each Portfolio Fund's general partner or investment manager. The estimated value of such investments is subject to uncertainty and, therefore, may differ from the value that would have been used had a market for such investments existed.

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

Investment transactions are accounted for on a trade-date basis (date order to buy or sell is executed), and dividend income is recognized on the ex-dividend date. Interest income is recognized on an accrual basis. Realized gains and losses from investments are determined on an average cost basis.

Administrative Expenses

Plan administrative salary, duplicating, telecommunications and travel expenses are included in the Plan's administrative expenses when incurred. The City provides office space, a portion of administrative and clerical services of the Human Resources Department and accounting services of the Finance Department without any direct charge to the Plan.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the plan administrator to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of additions and deductions during the reporting period. Actual results could differ from those estimates.

Note 2: Plan Description

The Plan is established by City ordinances enacted by the City Council. The Plan is administered by the Board of Trustees of the Firefighters' Pension System of Kansas City, Missouri (the "Board"). The Board is composed of nine members, four of which are the Director of the Fire Department, the Director of Human Resources, the Director of Finance and the City Treasurer. One is an appointed retired member and the remaining four are elected by the members of the pension system.

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

At April 30, 2017 and 2016, the Plan's membership consists of the following:

	2017		
	Tier I Members	Tier II Members	Total
Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them	926	-	926
Current employees			
Vested	647	-	647
Nonvested	183	148	331
Inactive	5	1	6
Total	<u>1,761</u>	<u>149</u>	<u>1,910</u>
	2016		
	Tier I Members	Tier II Members	Total
Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them	929	-	929
Current employees			
Vested	638	-	638
Nonvested	227	57	284
Inactive	9	-	9
Total	<u>1,803</u>	<u>57</u>	<u>1,860</u>

Contributions

Funding is provided by contributions from the Plan's members, the City and earnings on investments. Firefighters contribute 10.55% of their base salary and an additional 1% to fund the health insurance subsidy. The City's contribution is set by the City Council in conjunction with its approval of the City's annual budget, based on the actuarially determined contribution rate set by the Plan's consulting actuary.

Based upon the April 30, 2016 actuarial valuation, the actuary recommended a City contribution rate of 28.51%. The Board of Trustees recognized a scheduled City contribution rate of 30.05% and 30.01% for 2017 and 2016, respectively. The City Council contributed 2% toward the health insurance subsidiary for 2016 and 2015.

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

Retirement Benefits

Benefit terms for the Plan are established in the City administrative code and can only be amended by the City Council. The Plan provides retirement, survivor, disability as well as pre-retirement death benefits as noted below:

Tier I Members

The Plan provides retirement benefits, for those employees hired before April 20, 2014 (Tier I Members). Members become vested for retirement benefits after 10 years of service. Members who retire with 25 years or more of creditable service are entitled to an annual pension of 2.5% of final average compensation multiplied by the number of years of creditable service, subject to a maximum limit of 80% of final compensation as defined in the Plan.

If members terminate prior to retirement and before rendering 10 years of service, they forfeit the right to receive the portion of their accumulated plan benefits attributable to City contributions and are refunded their member contributions with interest. Such refunds result in the forfeiture of all other benefits under the Plan and are reduced by a service charge if the terminated employee has less than five years of service.

An automatic annual cost-of-living adjustment of 3.0%, non-compounded, per year is provided in the Plan. The Plan also provides for a minimum monthly payment of \$600 to all current and future service and disability retirees.

Tier II Members

The Plan provides retirement benefits, for those employees hired on or after April 20, 2014 (Tier II Members). Members become vested for retirement benefits after 10 years of service. Members who retire with 27 years or more of creditable service are entitled to an annual pension of 2.5% of final average compensation multiplied by the number of years of creditable service, subject to a maximum limit of 80% of final compensation as defined in the Plan.

If members terminate prior to retirement and before rendering 10 years of service, they forfeit the right to receive the portion of their accumulated plan benefits attributable to City contributions and are refunded their member contributions with interest. Such refunds result in the forfeiture of all other benefits under the Plan and are reduced by a service charge if the terminated employee has less than five years of service.

An annual cost-of-living adjustment, not to exceed 2.5%, non-compounded, per year is provided in the Plan if the prior year funding ratio is equal to or greater than 80% and will be equal to the percentage increase in the prior 12 months of the final national consumer price index. The Plan also provides for a minimum monthly payment of \$600 to all current and future service and disability retirees.

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

Death Benefits

If an active member dies, the following benefits shall be paid:

A funeral benefit of \$2,000 to the spouse or named beneficiary.

To the member's spouse until death, a pension equal to one-half of the member's accrued pension, but not less than 25% of the member's average final compensation. The minimum monthly benefit is \$275 to all spouses. Certain benefit provisions have been established for deaths sustained in the performance of a member's duties, or deaths of active members prior to retirement who have achieved 25 years or more of creditable service.

To the member's children, an allowance of \$100 a month each until the attainment of age 18, unless certain conditions are met whereby benefits may continue.

To the member's designated beneficiary or estate, if there is no surviving spouse or qualifying child, any remaining member contributions and interest.

If a retired member dies, the following benefits shall be paid:

To the member's spouse until death, a retirement benefit equal to one-half of the member's normal retirement benefit.

To the member's designated beneficiary or estate, if there is no surviving spouse, any remaining member contributions and interest.

Disability Benefits

Disability benefits are available for members and are based on an average final compensation. The Plan provides for a minimum monthly payment of \$600 to all current and future disability retirees.

Health Care Subsidy

Effective May 1, 1991, the Plan established a subsidy fund (subsidy). The City and active firefighters each contribute 2% and 1% of salary, respectively. Prior to April 1 of each year, the board of trustees of the Plan establishes the dollar value of the monthly subsidy. The monthly subsidy for the years ended April 30, 2017 and 2016 was \$450.

The subsidy is invested in both fixed income and equity securities and is stated at fair value. Investments totaled \$3,536,988 and \$3,002,394 at April 30, 2017 and 2016, respectively.

The actuarial valuations do not consider the subsidy's fiduciary net position, which at April 30, 2017 and 2016 were \$3,536,988 and \$3,002,394, respectively. According to the City ordinance that established the subsidy, if the fiduciary net position available for the subsidy is zero, the subsidy will no longer be available. For the years ended April 30, 2017 and 2016, City contributions for the subsidy were \$2,895,756 and \$2,638,425, respectively, and employee contributions were \$616,638 and \$595,939, respectively.

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

Note 3: Deposits and Investments

The City administrative code and ordinances passed by the City Council provide that Plan investments may include, but are not limited to, obligations of the U.S. government, state of Missouri and municipal corporations, including school districts, corporate bonds, real estate mortgages and common and preferred stocks. The Plan purchases investments from Securities and Exchange Commission registered securities broker dealers and banks through its investment managers. Investments in U.S. Treasury obligations are held at the Federal Reserve Bank through the customer account of a financial institution.

Investment Policy

The asset type and classes, target allocation and ranges that have been approved by the Board are shown below. All percentages are based on market values. The Board has authorized Plan staff, with the guidance from the investment consultant, to rebalance the portfolio in accordance with the strategy guidelines below.

Asset Type and Class	Range	Target
Equities		
Large Cap Equity	10% - 20%	15%
Small Cap Equity	5% - 15%	10%
Non-U.S. Equity	10% - 20%	15%
Long/Short Equity	5% - 15%	10%
Global Equity	5% - 15%	10%
Fixed Income	25% - 35%	30%
Real Estate	5% - 15%	10%

Securities Lending Transactions

City ordinances and the Plan's Board policies permit the Plan to use investments of the Plan to enter into securities lending transactions – loans of securities to broker-dealers and other entities for collateral with a simultaneous agreement to return the collateral for the same securities in the future.

The Plan has contracted with Northern Trust as its third-party lending agent to lend domestic equity and debt securities for cash collateral of not less than 102% of the market value and international debt and equity securities of not less than 105% of the market value. At April 30, 2017 and 2016, management believes the Plan has no credit risk exposure to borrowers because the amounts the Plan owes the borrowers exceed the amounts the borrowers owe the Plan. Contracts with the lending agent require it to indemnify the Plan if borrowers fail to return the securities, if the collateral is inadequate to replace the securities lent or if the borrowers fail to pay the Plan for income distributions by the securities' issuers while the securities are on loan; therefore, non-cash collateral is not recorded as an asset or liability on the financial statements.

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

	2017	2016
Market value of securities loaned	\$ 27,764,427	\$ 30,562,367
Market value of cash collateral received from borrowers	\$ 28,575,689	\$ 31,411,854

All securities loans can be terminated on demand by either the Plan or the borrower. The cash collateral received on each security loan was invested, in accordance with the Plan investment guidelines, in short-term funds. The maturities of the resulting investments generally match the maturities of the securities lending arrangements themselves. The Plan is not permitted to pledge or sell collateral received unless the borrower defaults.

Custodial Credit Risk

Custodial credit risk is the risk that, in the event of the failure of the counterparty, the Plan will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. Consistent with the Plan's securities lending policy, \$27,764,427 and \$30,562,367 at April 30, 2017 and 2016, respectively, was held by the counterparty that was acting as the Plan's agent in securities lending transactions.

Investment Concentrations

The following presents investments that represent 5% or more of the fiduciary net position of the Plan, as of April 30, 2017:

Investment	Fair Value
Pioneer Multi-Sector Fixed Income	\$ 65,292,770
Franklin Templeton Global Multisectorplus Trust Fund	64,093,349
Acadian Global Equity Fd	54,963,829
Rock Creek Georgetown LTD CL	48,943,957
Marathon-London International Fund	41,573,845
Northern Trust Collective Funds	39,695,872
JPMCB Special Situation Property Fund	27,214,188

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

The following presents investments that represent 5% or more of the fiduciary net position of the plan, as of April 30, 2016:

Investment	Fair Value
Pioneer Multi-Sector Fixed Income	\$ 61,660,083
Franklin Templeton Global Multisectorplus Trust Fund	57,211,156
Acadian Global Equity Fd	46,146,078
Rock Creek Georgetown LTD CL	43,703,255
Northern Trust Collective Funds	38,368,451
Marathon-London International Fund	37,728,071
JPMCB Special Situation Property Fund	26,020,689

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to the Plan. As of April 30, 2017 and 2016, the Plan's fixed income assets that are not government guaranteed represented 100% of the fixed income portfolio. The Plan has not established a policy with regard to credit risk. The following tables summarize the Plan's fixed income portfolio exposure levels and credit qualities at April 30, 2017 and 2016:

Average Credit Quality and Exposure Levels of Nongovernment Guaranteed Securities

Fixed Income Security Type	Fair Value April 30, 2017	Percentage of all Fixed Income Assets	Weighted Average Credit Quality
Money market funds	\$ 13,771,821	9%	Not rated
Collective trusts - fixed income	143,393,924	91%	Not rated
	<u>\$ 157,165,745</u>	<u>100%</u>	

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

Fixed Income Security Type	Fair Value April 30, 2016	Percentage of all Fixed Income Assets	Weighted Average Credit Quality
Money market funds	\$ 17,451,659	20%	Not rated
Collective trusts - fixed income	71,110,231	80%	Not rated
	<u>\$ 88,561,890</u>	<u>100%</u>	

Each portfolio is managed in accordance with operational guidelines that are specific as to permissible credit quality ranges, exposure levels within individual quality tiers and the average credit quality of the overall portfolios.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The Plan has not established a policy with regard to interest rate risk. The Plan actually owns an interest in the underlying assets of the collective trusts and the money market funds and the unit values are based on the fair value of their underlying assets.

Effective Duration of Fixed Income Assets by Security Type at April 30, 2017

Fixed Income Security Type	Fair Value April 30, 2017	Percentage of all Fixed Income Assets	Weighted Average Effective Duration (Years)
Money market funds**	\$ 13,771,821	9%	**
Collective trusts - fixed income	143,393,924	91%	4.57
	<u>\$ 157,165,745</u>	<u>100.0%</u>	

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

Effective Duration of Fixed Income Assets by Security Type at April 30, 2016

Fixed Income Security Type	Fair Value April 30, 2016	Percentage of all Fixed Income Assets	Weighted Average Effective Duration (Years)
Money market funds**	\$ 17,451,659	20%	**
Collective trusts - fixed income	71,110,231	80%	4.07
	<u>\$ 88,561,890</u>	<u>100.0%</u>	

**The Plan actually owns an interest in the underlying assets of the money market funds and the unit values are based on the fair value of their underlying assets. The money market funds do not have a maturity date, even though their underlying assets do have maturity dates of less than one year.

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. The Plan's currency risk exposure, or exchange rate risk, primarily reside within the Plan's foreign debt obligations and foreign equity holdings through the Plan's various asset managers. The Plan's policy for each specific portfolio does not place limits on the amount of foreign exposure that can be held by the individual asset managers.

Annual Money-Weighted Rate of Return

For the year ended April 30, 2017 and 2016, the annual money-weighted rate of return on the pension plan investments, net of pension plan investment expense, was 12.89% and -1.50%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

Note 4: Net Pension Liability

The components of the net pension liability of the City at April 30, were as follows:

	<u>2017</u>	<u>2016</u>
Total pension liability	\$ 719,980,737	\$ 625,656,241
Plan fiduciary net position	<u>(506,697,663)</u>	<u>(462,024,002)</u>
City's net pension liability	<u>\$ 213,283,074</u>	<u>\$ 163,632,239</u>
Fiduciary net position as a % of total pension liability	70.38%	73.85%

Note 5: Actuarial Methods and Assumptions

An actuary from Cheiron determines the total pension liability. The total pension liability as of April 30, 2017 and 2016 was determined based on an actuarial valuation prepared as of April 30, 2016 and 2015, respectively, rolled forward one year, using the following actuarial assumptions:

Inflation	2.5% per annum
Projected salary increases, including inflation	3.0% to 8.0% per annum, depending on age
Long-term investment rate of return, net of plan investment expenses, including inflation	7.25% and 7.50% per annum as of April 30, 2017 and 2016, respectively
Mortality Tables:	
Healthy	RP – 2000 Combined Mortality Table Set forward one year
Disabled	RP – 2000 Combined Mortality Table Set forward three years

The actuarial assumptions used in the April 30, 2016 valuation was based on the results of the most recent actuarial expense study for the period of May 1, 2011 to April 30, 2016. The actuarial experience study is dated February 9, 2017. The actuarial assumptions used in the April 30, 2015 valuation was based on the results of the most recent actuarial experience study for the period May 1, 2007 through April 30, 2011. The actuarial experience study is dated April 27, 2012.

For purposes of calculating the total pension liability, future ad hoc COLAs of 3.0% (simple COLA) were assumed to be granted in all future years, for Tier I Members. For Tier II Members, COLA will only be payable if the prior year's funding ratio is greater than or equal to 80% and will be equal to the percentage increase in the consumer price index, up to a maximum of 2.50%, payable at the 27th anniversary date of hire.

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

Long-Term Expected Rate of Return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best-estimates arithmetic real rates of return for each major asset class included in the Plan's target asset allocation as of April 30, 2017 and 2016 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Large Cap Equity	15%	8.49%
Small Cap Equity	10%	9.72%
Non - U.S. Equity	15%	9.67%
Long/Short Equity	10%	8.24%
Global Equity	10%	9.25%
Fixed Income	30%	4.21%
Real Estate	10%	7.51%

Discount Rate

The discount rate used to measure the total pension liability was 7.25% and 7.50% as of April 30, 2017 and 2016, respectively. In the professional judgment of the Plan's actuary, the funding policy of the plan will result in the pension plan's projected Fiduciary Net Position being greater than or equal to the benefit payments projected for each future period. Therefore, the long-term expected rate of return was applied to all periods of projected benefit payments.

City of Kansas City, Missouri Firefighters' Pension System

Notes to Financial Statements April 30, 2017 and 2016

Sensitivity Analysis

The following sensitivity analysis presents the net pension liability of the City, calculated using the discount rate as well as what the City's net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate as of April 30, 2017 and 2016:

	2017		
	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Total pension liability	\$ 815,011,904	\$ 719,980,737	\$ 641,314,547
Fiduciary net position	(506,697,663)	(506,697,663)	(506,697,663)
Net pension liability	<u>\$ 308,314,241</u>	<u>\$ 213,283,074</u>	<u>\$ 134,616,884</u>
	2016		
	1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
Total pension liability	\$ 702,285,984	\$ 625,656,241	\$ 561,336,666
Fiduciary net position	(462,024,002)	(462,024,002)	(462,024,002)
Net pension liability	<u>\$ 240,261,982</u>	<u>\$ 163,632,239</u>	<u>\$ 99,312,664</u>

Note 6: Risks and Uncertainties

The Plan invests in various investment securities. Investment securities are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the statements of fiduciary net position.

Plan contributions are made and the total pension liability are reported based on certain assumptions pertaining to interest rates, inflation rates and employee demographics, all of which are subject to change. Due to uncertainties inherent in the estimation and assumption process, it is at least reasonably possible that changes in these estimates and assumptions in the near term would be material to the financial statements.

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

Note 7: Fair Value Measurements

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. Fair value measurements must maximize the use of observable inputs and minimize the use of unobservable inputs. There is a hierarchy of three levels of inputs that may be used to measure fair value:

- Level 1** Quoted prices in active markets for identical assets or liabilities
- Level 2** Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities
- Level 3** Unobservable inputs supported by little or no market activity and are significant to the fair value of the assets or liabilities

Recurring Measurements

The following table presents the fair value measurements of assets and liabilities recognized in the accompanying financial statements measured at fair value on a recurring basis and the level within the fair value hierarchy in which the fair value measurements fall at April 30, 2017 and 2016:

	Total Fair Value	April 30, 2017		
		Level 1	Level 2	Level 3
Investments by fair value level				
Domestic common stock	\$ 101,285,804	\$ 101,285,804	\$ -	\$ -
Foreign common stock	2,079,480	2,079,480	-	-
Collective trusts - equity	25,688,068	-	25,688,068	-
Collective trusts - fixed income	14,007,805	-	14,007,805	-
Short-term investment funds	13,771,821	13,771,821	-	-
Total investments	156,832,978	\$ 117,137,105	\$ 39,695,873	\$ -
Investments measured at the net asset value (NAV) (A)				
Collective trusts - fixed income	129,386,119			
Collective trusts - equity	115,230,795			
Partnerships	12,378,826			
Collective trusts - real estate	47,346,134			
Collective trusts - hedge funds	48,943,956			
Total investments measured at the NAV	353,285,830			
Total investments measured at fair value	\$ 510,118,808			

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

	Total Fair Value	April 30, 2016		
		Level 1	Level 2	Level 3
Investments by fair value level				
Domestic common stock	\$ 87,485,184	\$ 87,485,184	\$ -	\$ -
Foreign common stock	2,748,288	2,748,288	-	-
Collective trusts - equity	24,469,376	-	24,469,376	-
Collective trusts - fixed income	13,899,075	-	13,899,075	-
Short-term investment funds	17,451,659	17,451,659	-	-
Total investments	146,053,582	\$ 107,685,131	\$ 38,368,451	\$ -
Investments measured at the net asset value (NAV) (A)				
Collective trusts - fixed income	57,211,156			
Collective trusts - equity	161,426,475			
Partnerships	11,095,617			
Collective trusts - real estate	43,703,255			
Collective trusts - hedge funds	45,427,612			
Total investments measured at the NAV	318,864,115			
Total investments measured at fair value	\$ 464,917,697			

(A) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts included above are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the statements of fiduciary net position.

Equity and short-term investment funds classified as Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Certain collective trusts classified as Level 2 of the fair value hierarchy are valued using third-party pricing services based on market observable information such as market quotes for similar assets, as well as normal market pricing considerations such as duration, interest rates and prepayment assumptions.

The fair value estimates presented herein are based on pertinent information available to management as of April 30, 2017 and 2016. Although management is not aware of any factors that would significantly affect the estimated fair value amounts, such amounts have not been comprehensively revalued for purposes of these financial statements since that date, and current estimates of fair value may differ significantly from the amounts presented herein.

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

Where quoted market prices are available in an active market, securities are classified within Level 1 of the valuation hierarchy. If quoted market prices are not available, then fair values are estimated by using quoted prices of securities with similar characteristics or independent asset pricing services and pricing models, the inputs of which are market-based or independently sourced market parameters, including, but not limited to, yield curves, interest rates, volatilities, prepayments, defaults, cumulative loss projections and cash flows. Such securities are classified in Level 2 of the valuation hierarchy. In certain cases where Level 1 or Level 2 inputs are not available, securities are classified within Level 3 of the hierarchy. See the table below for inputs and valuation techniques used for Level 3 securities.

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

	April 30, 2017			
	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Collective trusts - fixed income (A)	\$ 129,386,119	\$ -	Daily	1 Business Day
Collective trusts - equity (B)	115,230,795	-	Daily/Monthly	3-30 Days
Partnerships (C)	12,378,826	-	Monthly	15 Days
Collective trusts - real estate (D)	27,214,188	-	One per Quarter	45 Days Prior to Quarter End
Collective trusts - real estate (D)	20,131,946	-	Daily	1 Business day
Collective trusts - hedge funds (E)	48,943,956	-	Quarterly	90 Days
Total investments measured at the NAV	<u>\$ 353,285,830</u>			

	April 30, 2016			
	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Collective trusts - fixed income (A)	\$ 57,211,156	\$ -	Daily	1 Business Day
Collective trusts - equity (B)	161,426,475	-	Daily/Monthly	3-30 Days
Partnerships (C)	11,095,617	-	Monthly	15 Days
Collective trusts - real estate (D)	26,020,689	-	One per Quarter	45 Days Prior to Quarter End
Collective trusts - real estate (D)	17,682,566	-	Daily	1 Business day
Collective trusts - hedge funds (E)	45,427,612	-	Quarterly	90 Days
Total investments measured at the NAV	<u>\$ 318,864,115</u>			

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Financial Statements
April 30, 2017 and 2016

- (A) This category is a fixed income fund that is traded daily. The fund includes U.S. and Non-U.S. government, securitized and corporate bonds, and currencies across the entire quality spectrum.
- (B) This category includes collective trust funds. Each invests in equity securities both on the national and international markets listed on public market exchanges and are traded daily.
- (C) This category is a limited partnership. Investments are open-ended Global Core/Core Plus infrastructure investments.
- (D) This category is a common collective trust redeemable quarterly with a 45 day and 1 day notice period, respectively. Investments are open-ended U.S. Commercial real estate.
- (E) This category is a limited partnership domiciled in the Cayman Islands. Investments provide exposure to more than sixty “hedge fund risk premiums” across nine broad strategy groups (event driven, convertible arbitrage, equity market neutral, dedicated short bias, long/short equity, emerging markets, global macro, managed futures, and fixed income relative value) with a dynamic and disciplined investment process that aims to provide risk-balanced, long-term exposure to the underlying strategies. The result is a high risk-adjusted expected return stream with low correlation to traditional asset classes.

Required Supplementary Information

City of Kansas City, Missouri
Firefighters' Pension System
Required Supplementary Information

Schedule of Changes in the City's Net Pension Liability and Related Ratios
Last Ten Fiscal Years

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Total pension liability			
Service cost	\$ 12,886,414	\$ 13,124,510	\$ 13,137,551
Interest on total pension liability	46,425,259	44,922,139	43,442,934
Differences between expected and actual experience	(1,411,774)	(1,569,538)	-
Changes of assumptions	73,346,941	-	-
Benefit payments, including member refunds	<u>(36,922,344)</u>	<u>(35,808,161)</u>	<u>(34,761,116)</u>
Net change in total pension liability	94,324,496	20,668,950	21,819,369
Total pension liability - beginning	<u>625,656,241</u>	<u>604,987,291</u>	<u>583,167,922</u>
Total pension liability - ending	<u>719,980,737</u>	<u>625,656,241</u>	<u>604,987,291</u>
Fiduciary net position			
Net investment income (loss)	58,651,918	(7,690,067)	32,672,401
City contributions	16,754,798	16,631,844	16,258,533
Member contributions	6,534,349	6,173,154	6,258,482
Benefits paid	(35,905,329)	(33,876,851)	(32,536,750)
Refunds of contributions	(1,017,015)	(1,931,310)	(1,956,321)
Administrative expenses	<u>(345,060)</u>	<u>(300,479)</u>	<u>(264,100)</u>
Net change in fiduciary net position	44,673,661	(20,993,709)	20,432,245
Fiduciary net position - beginning	<u>462,024,002</u>	<u>483,017,711</u>	<u>462,585,466</u>
Fiduciary net position - ending	<u>506,697,663</u>	<u>462,024,002</u>	<u>483,017,711</u>
Net pension liability, ending	<u>\$ 213,283,074</u>	<u>\$ 163,632,239</u>	<u>\$ 121,969,580</u>
Fiduciary net position as a percentage of total pension liability	70.38%	73.85%	79.84%
Covered payroll	\$ 57,625,619	\$ 59,294,555	\$ 59,410,476
Net pension liability as a percentage of covered payroll	370.12%	275.97%	205.30%

Note to schedule: This schedule is intended to show a 10-year trend. Additional years will be reported as they become available.

City of Kansas City, Missouri
Firefighters' Pension System
Required Supplementary Information
Schedule of City Contributions
Last Ten Fiscal Years

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Actuarially determined employer contribution	\$ 16,726,994	\$ 16,581,464	\$ 16,162,139	\$ 16,182,139	\$ 15,400,040	\$ 14,045,886	\$ 12,827,773	\$ 17,123,835	\$ 9,476,409	\$ 8,734,919
Actual City contributions	<u>16,754,798</u>	<u>16,631,844</u>	<u>16,258,533</u>	<u>11,795,883</u>	<u>13,120,169</u>	<u>11,603,818</u>	<u>10,297,638</u>	<u>10,465,322</u>	<u>10,319,886</u>	<u>9,937,683</u>
Annual contribution deficiency (excess)	<u>\$ (27,804)</u>	<u>\$ (50,380)</u>	<u>\$ (96,394)</u>	<u>\$ 4,386,256</u>	<u>\$ 2,279,871</u>	<u>\$ 2,442,068</u>	<u>\$ 2,530,135</u>	<u>\$ 6,658,513</u>	<u>\$ (843,477)</u>	<u>\$ (1,202,764)</u>
Covered payroll	\$ 57,625,619	\$ 59,294,555	\$ 59,410,476	\$ 58,356,072	\$ 60,062,558	\$ 51,983,293	\$ 51,934,305	\$ 53,612,509	\$ 51,168,515	\$ 49,420,823
Actual contributions as a percentage of covered payroll	29.08%	28.05%	27.37%	20.21%	21.84%	22.32%	19.83%	19.52%	20.17%	20.11%

City of Kansas City, Missouri
Firefighters' Pension System
Required Supplementary Information
Schedule of Investment Returns
Last Ten Fiscal Years

Fiscal Year Ending April 30	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	12.89%	-1.50%	7.19%	10.85%

Note to schedule: This schedule is intended to show a 10-year trend. Additional years will be reported as they become available.

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Required Supplementary Information
April 30, 2017 and 2016

Changes of benefit and funding terms – The following changes to the plan provisions were reflected in the valuation as listed below:

4/30/2014 Valuation

- Effective April 20, 2014, member contribution rates increased by 1.00% and Tier II have been added to the Plan.

4/30/2011 Valuation

- According to Ordinance No. 100606, members can now designate at retirement that a qualified domestic partner receive death benefits.

Changes in actuarial assumptions and methods – The following changes to the plan provisions were reflected in the valuations as listed below:

4/30/2015 Valuation

- All assumptions have been revised based on the results of the experience study conducted for the period May 1, 2011 to April 30, 2016. These assumptions were incorporated into the GASB 67 disclosures and net pension liability calculation for the Plan's 2017 fiscal year-end which are based on the 4/30/2015 Valuation.

4/30/2015 Valuation

- An administrative expense assumption of .35% of payroll was added. Retirement rates added for Tier 2.

4/30/2014 Valuation

- The investment return assumption decreased from 7.75% to 7.50%.

4/30/2012 Valuation

- An actuarial experience study was conducted and resulted to changes in the following assumptions:
 - Inflation
 - Real wage growth
 - Termination rates
 - Retirement rates
 - Disability rates
 - Duty related disability percentage
 - Spouse age difference

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Required Supplementary Information (Continued)
April 30, 2017 and 2016

- Marriage assumption
- Health mortality
- Disabled mortality

4/30/2009 Valuation

- The minimum asset corridor, used in the asset smoothing method, changed from 85% to 80% and the maximum asset corridor changed from 110% to 120%.
- The Amortization of UAL changed from a 20-year fixed level percent of pay amortization method for changes to the UAL for the years on and after May 1, 2009 to a 30-year fixed level percent of pay amortization method for changes to the UAL for the years on and after May 1, 2009.

4/30/2008 Valuation

- The minimum asset corridor, used in the asset smoothing method, changed from 90% to 85%.
- The Amortization of UAL changed from a 30-year rolling level percent of pay amortization method to a 30-year fixed level percent of pay amortization of the May 1, 2008 UAL and a 20-year fixed level percent of pay amortization method for changes to the UAL for the years on and after May 1, 2009.
- The investment return assumption was changed from 8.00% to 7.75%.

4/30/2006 Valuation

- The salary increase rate for ages 25 through 29 were increased and the salary increase rates for ages 30 through 64 were decreased.
- The withdrawal rates for ages above 25 were decreased.
- The mortality tables for healthy lives were changed to the 1983 Group Annuity Mortality Table with 5% of deaths assumed to be Duty related, from the 1971 Group Annuity Mortality Table.
- The mortality tables for disabled lives were changed to the 1983 Group Annuity Mortality Table, from the 1983 Railroad Retirement Board Disabled Life Mortality Table.

City of Kansas City, Missouri
Firefighters' Pension System
Notes to Required Supplementary Information (Continued)
April 30, 2017 and 2016

The following actuarial methods and assumptions were used to determine the actuarially determined employer contribution reported in the most recent fiscal year, which was based on the April 30, 2015 actuarial valuation:

Valuation Date	5/1/2015
Timing	Actuarially determined contribution rates are calculated based on the actuarial valuation one year prior to the beginning of the plan year.

Key Methods and Assumptions Used to Determine Contribution Rates:

Actuarial cost method	Entry Age
Asset valuation method	5-year smoothed market. 80% / 120% corridor around market value.
Amortization method	30-year layered amortization as a level percent of pay for changes to the unfunded actuarial liability on or after 5/1/2008.
Discount rate	7.50%
Amortization growth rate	4.00%
Price inflation	2.50%
Salary increases	Ranges from 8.0% to 3.0%
Cost-of-living adjustments	3.00% simple for Tier I Members; 2.50% for Tier II Members
Mortality	Healthy: RP-2000 Combined Mortality Table set forward one year for males and females Disabled: RP-2000 Combined Disability Mortality Table projected using a Modified Scale MP-2015 on a generational basis