Classic Values, Innovative Advice

City of Kansas City, Missouri Employees' Retirement System

Actuarial Valuation as of May 1, 2015

Produced by Cheiron

September 2015

TABLE OF CONTENTS

September 15, 2015

Board of Pension Trustees
City of Kansas City, Missouri Employees' Retirement System
12th Floor, City Hall
414 East 12th Street
Kansas City, MO 64106

Dear Members of the Board:

At your request, we have conducted an actuarial valuation of the City of Kansas City, Missouri Employees' Retirement System (KCERS) as of May 1, 2015. The valuation is organized as follows:

- In Section I of the **Board Summary** we describe the purpose of an actuarial valuation and summarize the key results found in this valuation;

- The **Main Body** of the report presents details on the System's:

    - Section II - Assets
    - Section III - Liabilities
    - Section IV - Contributions
    - Section V - Financial Statement Information

- In the **Appendices**, we conclude our report with detailed information describing the System's membership (Appendix A), actuarial assumptions and methods employed (Appendix B), a summary of pertinent plan provisions (Appendix C), and a glossary of terms (Appendix D).

The purpose of this report is to present the annual actuarial valuation of the City of Kansas City, Missouri Employees' Retirement System. This report is for the use of the Employees' Retirement Board and its auditors in preparing financial reports in accordance with applicable law and accounting requirements.

In preparing our report, we relied on information (some oral and some written) supplied by KCERS' staff. This information includes, but is not limited to, the plan provisions, employee data, and unaudited financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice #23.

Future valuation reports may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law.

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

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

Sincerely,
Cheiron

Stephen T. McElhaney, FSA, FCA, EA, MAAA	Jacqueline R. King, ASA, EA, MAAA
Principal Consulting Actuary	Associate Actuary

SECTION I
BOARD SUMMARY

The primary purpose of the actuarial valuation and this report is to measure, describe and identify as of the valuation date:

- The financial condition of the System,
- Past and expected trends in the financial progress of the System,
- The City's Actuarially Determined Contribution for Fiscal Year Ending 2016, and
- Information required for the System's financial statement.

In the balance of this Board Summary we present (A) the basis upon which this year's valuation was completed, (B) the key findings of this valuation including a summary of all key financial results, (C) an examination of the historical trends, and (D) the projected financial outlook for the System.

A. Valuation Basis

This May 1, 2015 valuation represents Cheiron's ninth valuation performed for KCERS. Effective with this valuation the actuarially determined contribution rate has been increased by 0.24% to cover the System's expected administrative expenses. Other than this change, there have been no changes in assumptions or methods since the May 1, 2014 valuation. The data, methods, assumptions and plan provisions that serve as the basis for this valuation are all summarized in the appendices.

B. Key Findings of this Valuation

The key results of the May 1, 2015 actuarial valuation are as follows:

- We have calculated the City's contribution rate on two bases:

  - The actuarially determined City contribution rate under the Board's funding policy decreased from 14.64% as of May 1, 2014 to 13.81% as of May 1, 2015. The actual rate that the City is scheduled to contribute for the current year is 14.64% of payroll, which is the actuarially determined Board contribution rate for the prior year, for the period from May 1, 2015 to June 30, 2015, and 14.71% for the period from July 1, 2015 to April 30, 2016.
  - Under the City ordinance, the City's budgeted contribution rate for the year beginning May 1, 2016 will be based upon a 30-year open amortization for the entire amount of unfunded actuarial liability. This rate is 12.97% as of May 1, 2015.

- The Employees' Retirement System's (ERS) unfunded actuarial liability decreased from $188 million on May 1, 2014 to $160 million on May 1, 2015.

- The ERS's funding ratio, the ratio of actuarial asset value over liabilities, increased from 83.7% as of May 1, 2014 to 86.5% as of May 1, 2015.

SECTION I
BOARD SUMMARY

- The primary factor in the increase of the Plan's funded status was an overall actuarial gain of $30.0 million.

- During the year ended April 30, 2015, the System's assets earned 8.33% on a market value basis. The return on the actuarial asset value was 9.58% (as compared to 7.50% assumed). This resulted in an actuarial gain on investments of $19.7 million. However, the Plan also experienced a gain of $4.2 million due to the difference between actual and recommended contributions as a result of payroll and timing differences.

- On the liability side, the System experienced an actuarial gain of $6.1 million.

This report does not include disclosures required by GASB Statements No. 67 and 68. Statement No. 67 was effective for the plan year ending April 30, 2015. Statement No. 68 will be effective for the employer fiscal year ending April 30, 2016. Please refer to the separate report issued by Cheiron for accounting and financial disclosure information under GASB Statements No. 67 and No. 68.

SECTION I
BOARD SUMMARY

The following is Table I-1 which summarizes the key results of the valuation with respect to the System's membership, assets and liabilities, and contributions. The results are presented and compared for both the current and prior plan year.

Table I-1
City of Kansas City, Missouri Employees' Retirement System
Summary of Principal Plan Results

Valuation as of:	May 1, 2014	May 1, 2015	% Change
Participant Counts			
Active Participants	3,211	3,188	(0.7%)
Disabled Participants	10	9	(10.0%)
Retirees and Beneficiaries	2,202	2,297	4.3%
Terminated Vested Participants	95	88	(7.4%)
Inactive Participants	133	144	8.3%
Total	**5,651**	**5,726**	1.3%
Annual Salaries of Active Members	$ 167,629,048	$ 166,853,097	(0.5%)
Annual Retirement Allowances for Retired Members and Beneficiaries*	$ 52,055,562	$ 55,912,726	7.4%
Assets and Liabilities			
Actuarial Liability (AL)	$ 1,149,883,725	$ 1,185,743,686	3.1%
Actuarial Value of Assets	962,152,010	1,026,045,837	6.6%
Unfunded Actuarial Liability (UAL)	$ 187,731,715	$ 159,697,849	(14.9%)
Funded Ratio	83.7%	86.5%	
Present Value of Accrued Benefits (PVAB)	$ 1,010,547,311	$ 1,054,291,324	4.3%
Market Value of Assets	1,027,655,034	1,085,133,277	5.6%
Unfunded/(Surplus) PVAB	$ (17,107,723)	$ (30,841,953)	
Accrued Benefit Funding Ratio	101.7%	102.9%	
Contributions as a Percentage of Payroll under Board's Funding Policy	**Fiscal Year 2015**	**Fiscal Year 2016**	
Normal Cost Rate	7.77%	7.69%	
Administrative Expense Rate	0.00%	0.24%	
Unfunded Actuarial Liability Rate	6.87%	5.88%	
Total Actuarially Determined City Contribution Rate	14.64%	13.81%	
Actuarially Determined Contribution (GASB)	$24,540,893	$23,042,413	(6.1%)

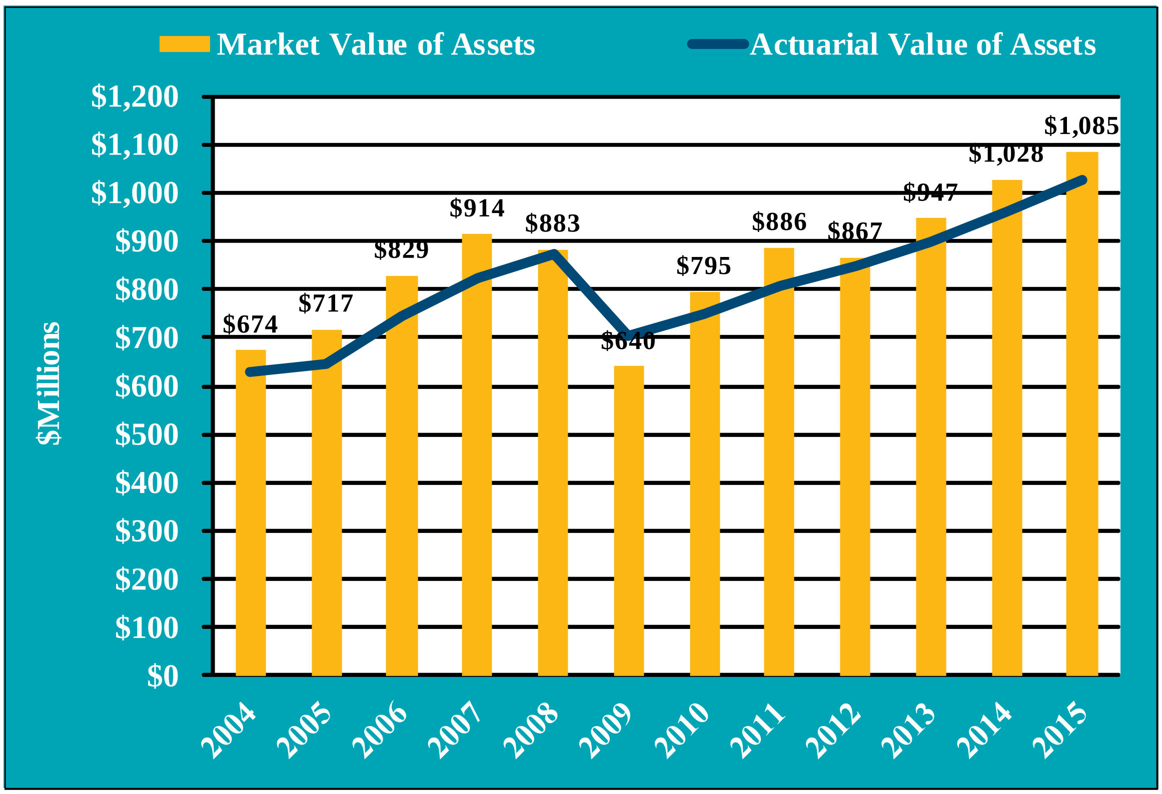
** The annual retirement allowances do not include the subsidy benefits*

SECTION I
BOARD SUMMARY

C. Historical Trends

Despite the fact that for most retirement systems the greatest attention is given to the current valuation results and in particular the size of the current unfunded actuarial liability and the City's contribution, it is important to remember that each valuation is merely a snapshot in the long-term progress of a pension fund. It is more important to judge a current year's valuation result relative to historical trends, as well as trends expected into the future. The numbers above the bars represent the value (in millions) of the market value of assets.

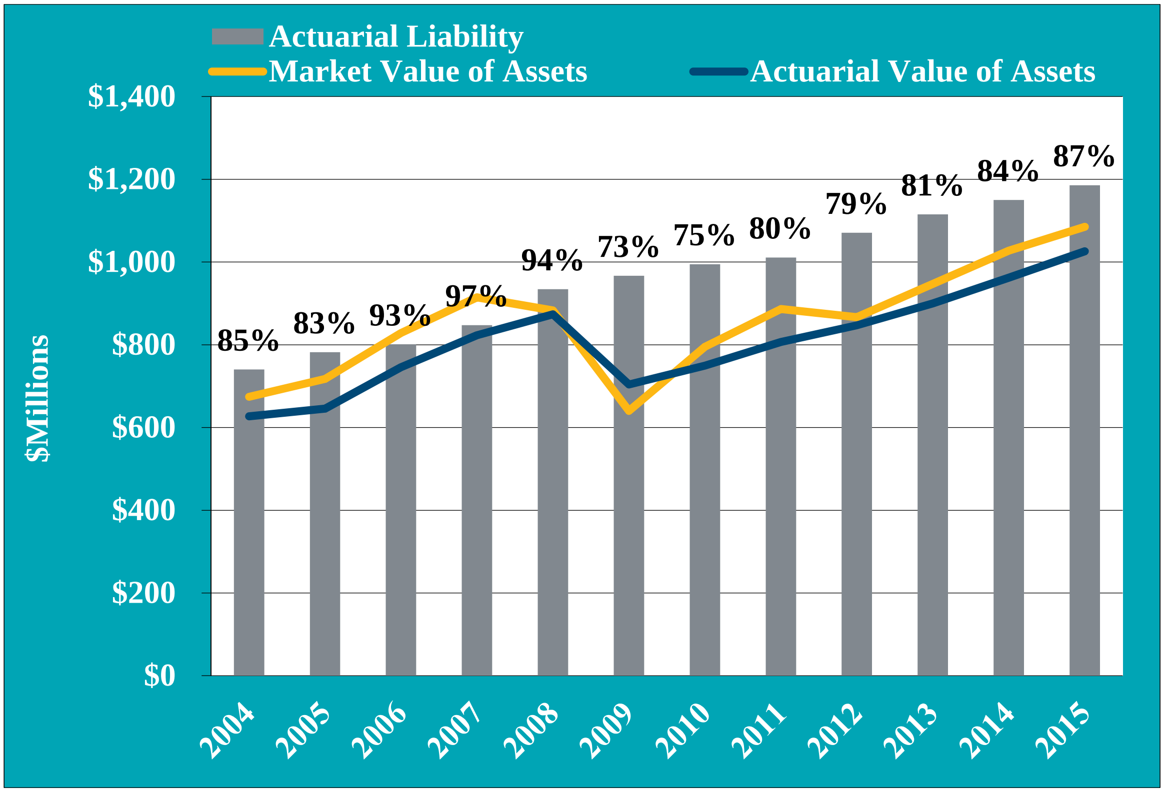
System Assets



There was a market value of assets (MVA) gain on investments in 2015, returning 8.33%, increasing from $1,028 million to $1,085 million. With the asset smoothing method in place, the actuarial value of assets has tracked a slightly smoother path through the volatility of the market value of assets. As can be seen in the graph, the actuarial value of assets (AVA) also increased from 2014 to 2015 returning 9.58% due to recent market gains.

SECTION I
BOARD SUMMARY

Assets and Liabilities



The above chart compares the actuarial value of assets to the actuarial liabilities as well as the funded ratio, sometimes referred to as the benefit security ratio. This chart shows that in 2009, the System had its lowest funded ratio in the past 10 years, but has since increased.

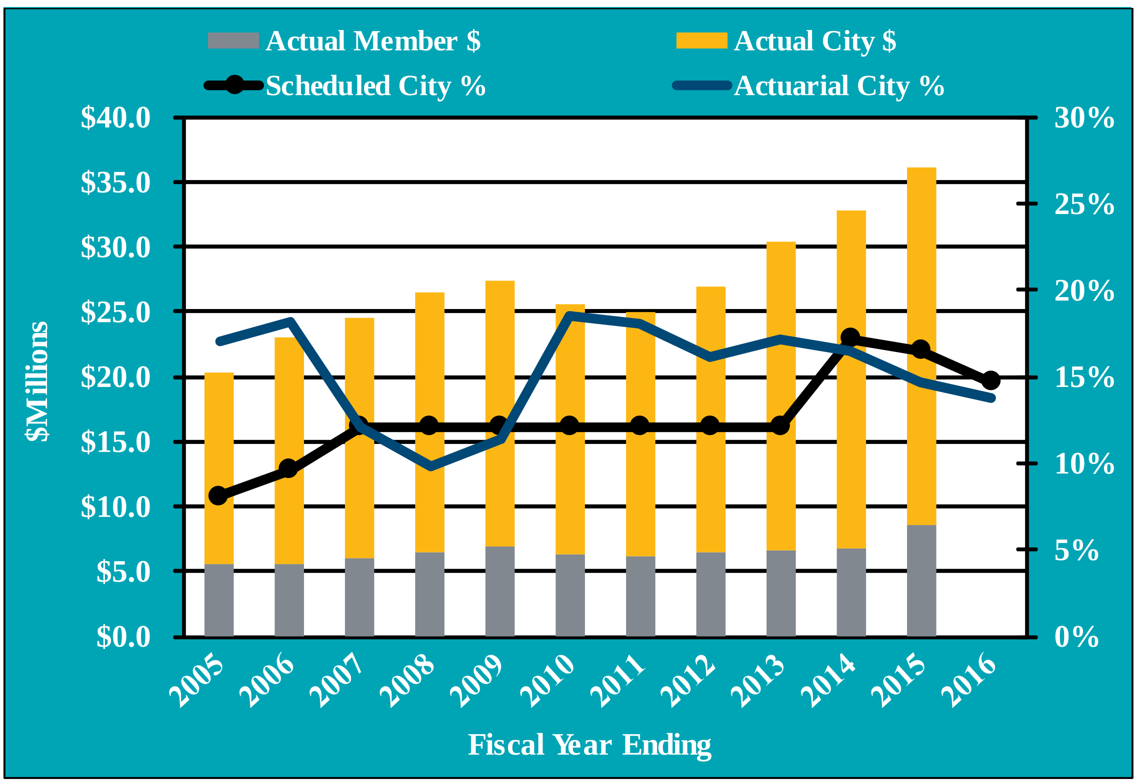
SECTION I
BOARD SUMMARY

Contribution Rates

The stacked bars in this graph show the dollar amount of contributions made by the City and the members (depicted on the left hand scale) since Fiscal Year Ending 2005. The blue line shows the City's actuarial contribution rate under the Board's funding policy as a percent of payroll (depicted on the right hand scale). The black line shows the scheduled City contribution rate as a percent of payroll (depicted on the right hand scale).

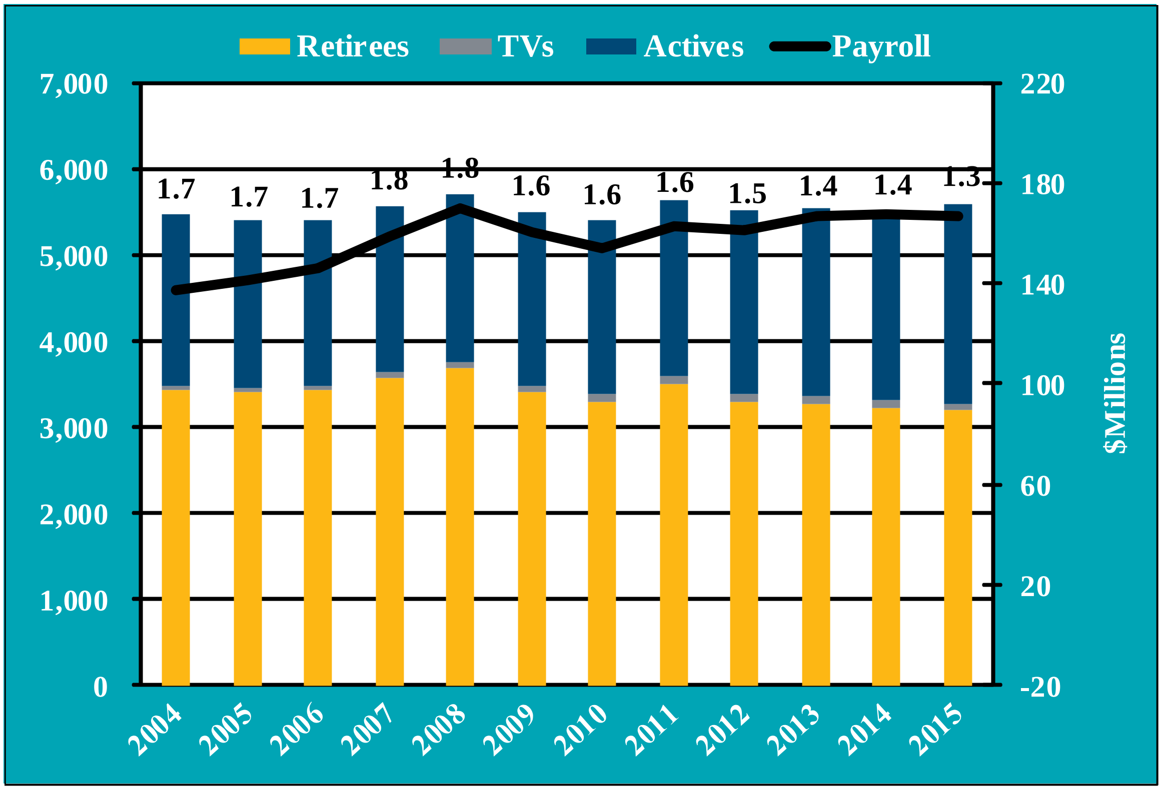
The member contribution rate is set by City law at 4% (more than 4% for certain MAST employees) of payroll prior to April 20, 2014, and 5% (more than 5% for certain MAST employees) of payroll effective April 20, 2014.

For Fiscal Years Ending from 2007 through 2013, the City contribution rate was 9.50% of payroll plus 2.53% of payroll for the retirement window offered in 2003 (paid annually through April 30, 2013) for General Employees, and 19.50% of payroll for Judges and Elected Officials. For Fiscal Years Ending 2014 and later, the scheduled City contribution rate is the actuarial contribution rate, determined under the City's funding policy, in the prior year's actuarial valuation. The actuarial contribution rate under the City's funding policy decreased from 14.64% of payroll in 2014 to 13.81% of payroll in 2015 primarily due to the actuarial gain on Plan assets. For the Fiscal Year Ending 2016, the City is contributing 14.64% of payroll from May 1, 2015 to June 30, 2015, and 14.71% for the period from July 1, 2015 to April 30, 2016.



SECTION I
BOARD SUMMARY

Participant Trends



The above chart provides a measure for the maturity in the plan, by comparing the ratio of active members to inactive members (retirees and terminated-vesteds). As with many public retirement systems, as the plan matures, the ratio of active members to inactive members has decreased. The System's active-to-inactive ratio was 1.7 in 2004, but there are 1.3 actives supporting each inactive member today. The black line shows the total active participating payroll for each valuation year.

SECTION I
BOARD SUMMARY

D. Future Expected Financial Trends

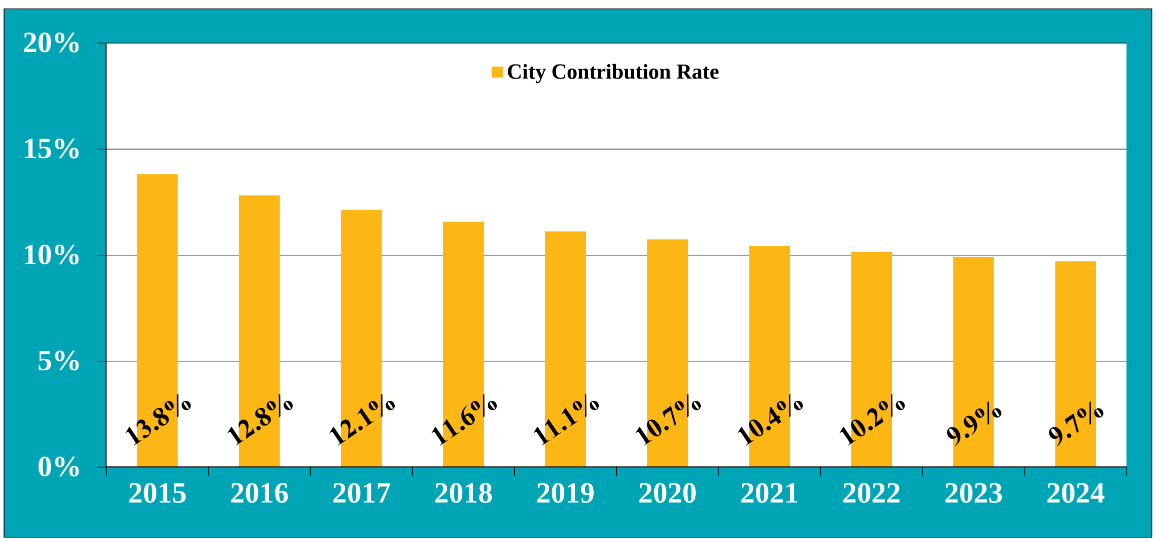
The analysis of projected financial trends is perhaps the most important component of this valuation. In this Section, we present the implications of the May 1, 2015 valuation results in terms of (1) the projected City's contributions and (2) projected System's funded status (ratio of assets over liabilities). For each projection set we assume three future different investment return scenarios: baseline returns of 7.50%, optimistic returns of 9.00%, and pessimistic returns of 6.00%. The projections assume that the City makes contributions equal to the prior year's actuarially determined contribution rate under the Board's funding policy.

1. Contribution Rate Projections (Board Funding Policy)

The first set of charts shows the expected City contribution rate. The years shown in the charts are plan years beginning May 1.

Baseline Returns of 7.50%

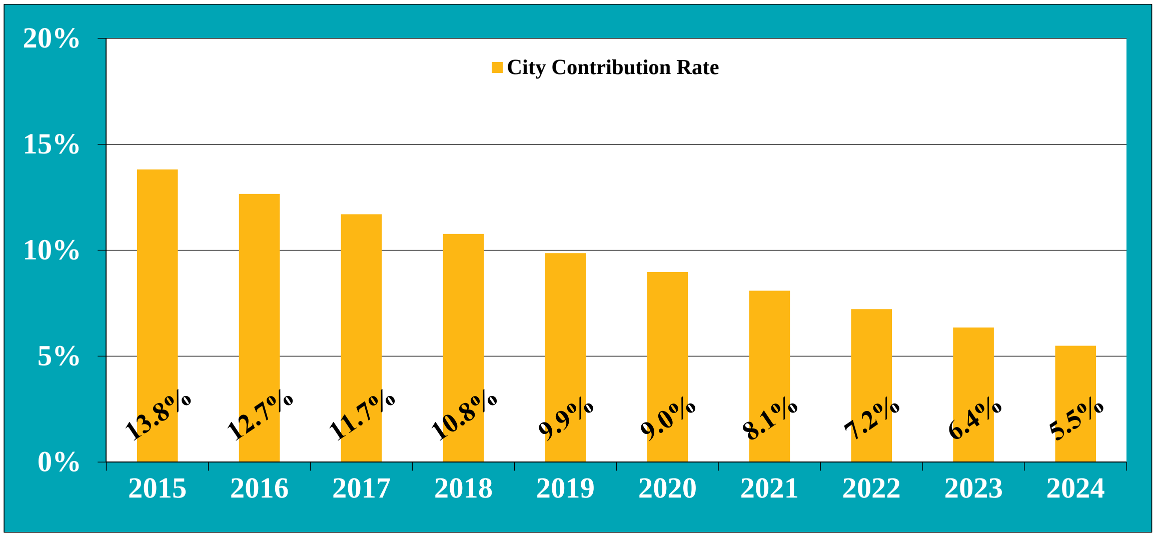
The chart below shows that the contribution rate will decrease over the next 10 years assuming that the fund earns the assumed investment rate of 7.5% on market value.



SECTION I
BOARD SUMMARY

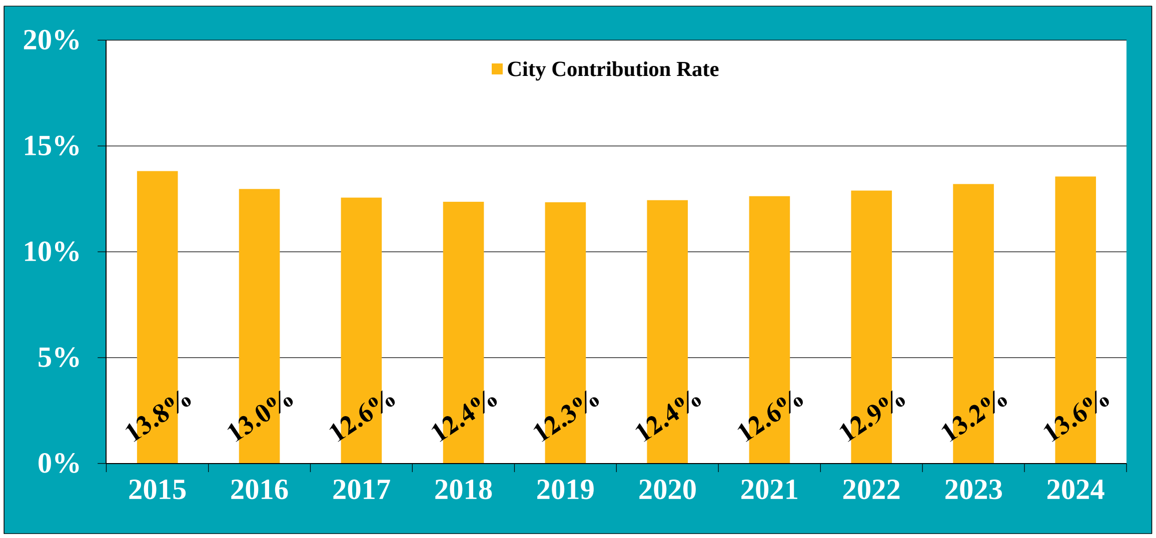
Optimistic Returns of 9.00%

If the fund earns 1.50% greater than the assumed rate, the contribution rate will decrease faster than if the fund earns the assumed rate of 7.5%.



Pessimistic Returns of 6.00%

If the fund earns 1.50% less than the assumed rate, the contribution rate initially decreases, then increases over the last 5 years.



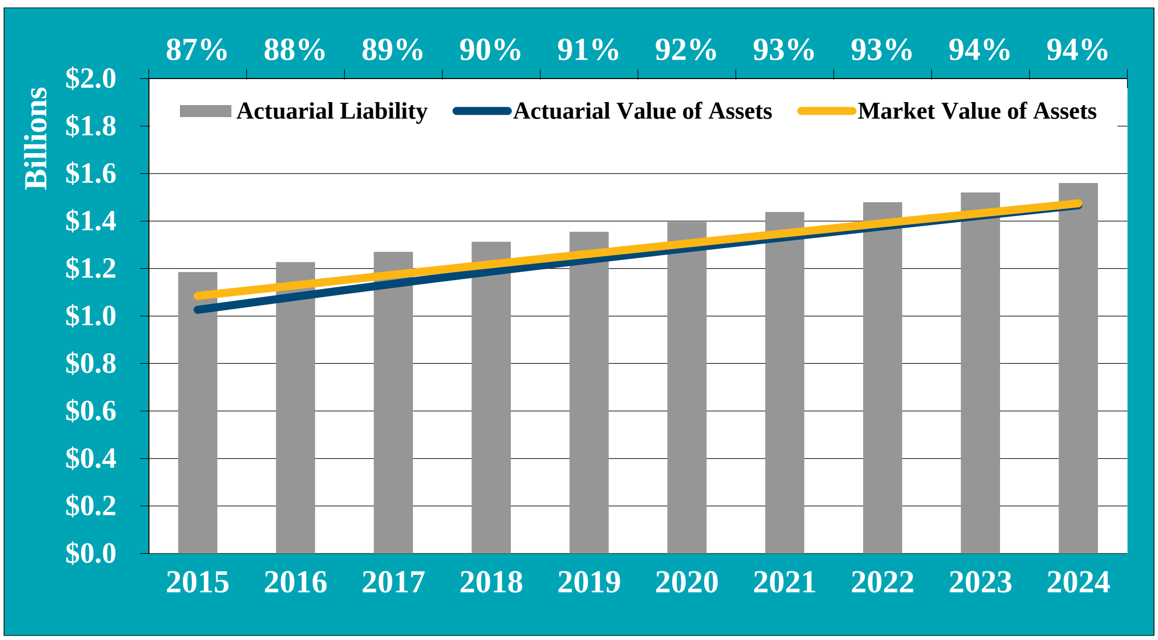
SECTION I
BOARD SUMMARY

2. Asset and Liability Projections (Board Funding Policy)

The next set of projection charts compares the market value of assets (gold line) and the actuarial or smoothed value of assets (blue line) to the System's actuarial liabilities (gray bars). The top of each chart also portrays the System's funded ratio (ratio of actuarial value of assets to actuarial liabilities). The years shown in the chart are plan years beginning May 1.

Baseline Returns of 7.50%

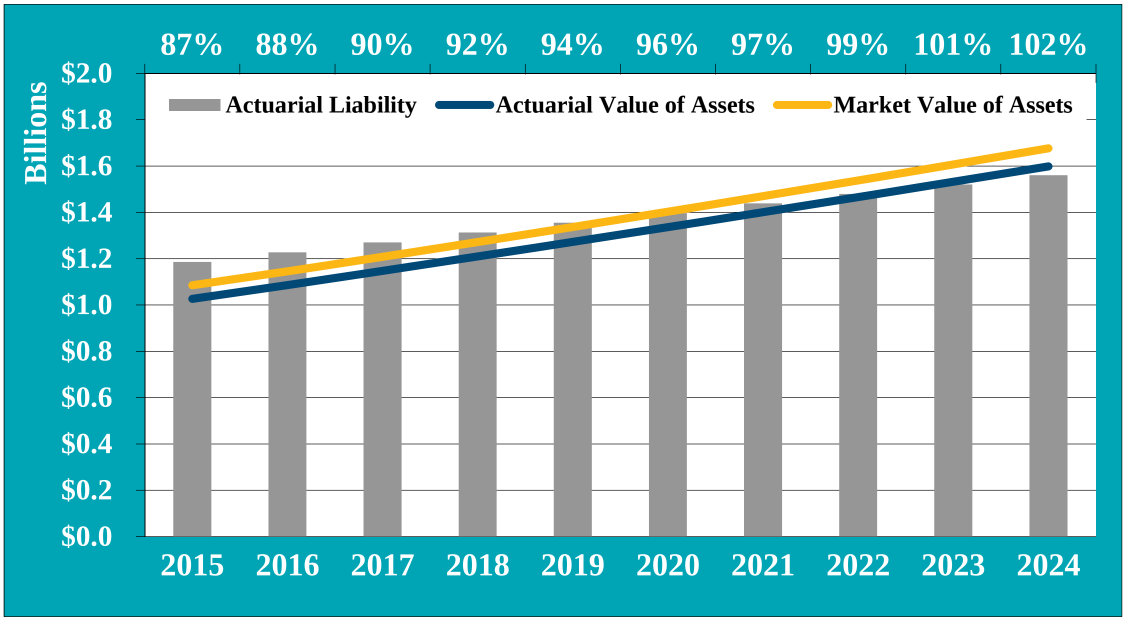
Assuming that the fund earns the assumed investment rate of 7.5% and that the City continues to contribute the current scheduled contribution rate equal to the prior year's actuarially determined contribution rate, the funded ratio will increase gradually to 94% over the next 10 years.



SECTION I
BOARD SUMMARY

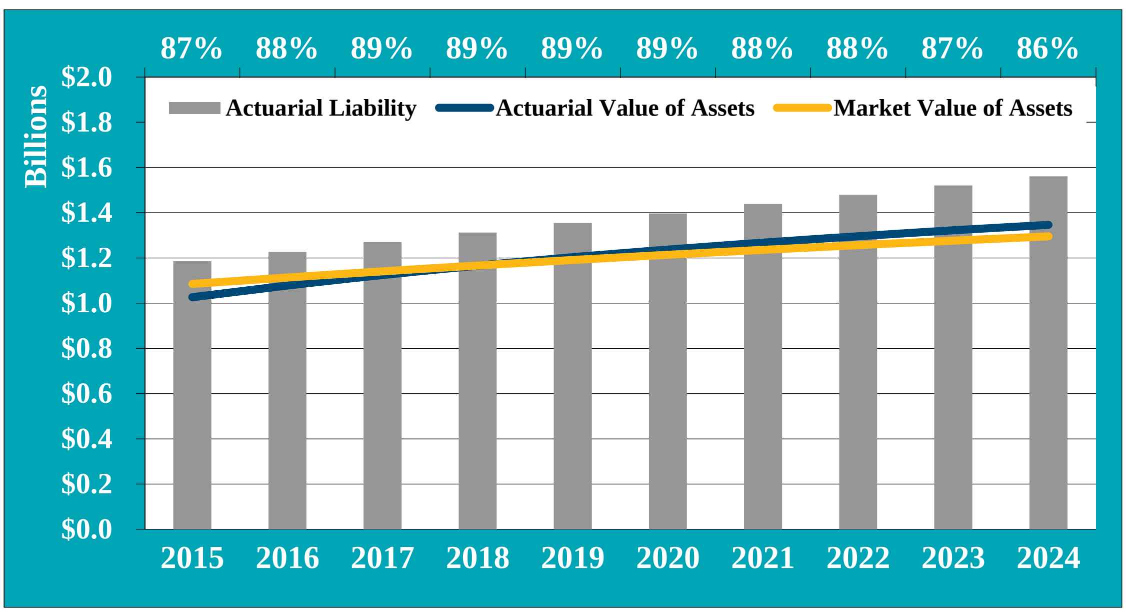
Optimistic Returns of 9.00%

If the fund earns 1.50% greater than the assumed rate of return, the funded ratio will increase to 102% over the next 10 years.



Pessimistic Returns of 6.00%

If the fund earns 1.50% less than the assumed rate of return, the funded ratio will increase gradually to 89%, then decrease to 86% over the next ten years.



SECTION I
BOARD SUMMARY

3. 30 Year Projections Based on City Contribution Policy:

The charts on the following 2 pages show 30-year cost projections under two amortization policies: (1) 30-year open amortization which is the current City contribution policy and (2) 30-year closed amortization for comparison purposes. For the purpose of these projections, it has been assumed that the active population remains constant and the fund earns the assumed return of 7.5% per year on market value.

SECTION I
BOARD SUMMARY

30-Year Open Amortization Method:

City of Kansas City, Missouri Firefighters' Pension System
Projection Based on April 30, 2015 Actuarial Valuation
30-Year Open Amortization
Interest at 7.50%
Amounts in thousands

Valuation as of April 30, (1)	Employer Contribution Rate (2)	Member Contribution Rate (3)	Compensation at Valuation (4)	Employer Contribution (5)	Actuarial Accrued Liability (AAL) (6)	Actuarial Value of Assets (AVA) (7)	Unfunded AAL (8)	UAL Amortization Payment Rate (9)	Normal Cost Rate (10)	Administrative Expense Rate (11)	Employer ADC (12)	Dollar Amount of ADC (13)	Funded Ratio Using AVA (14)
2015	14.70%	5.01%	$ 166,853	$ 25,010	$ 1,185,744	$ 1,026,046	$ 159,698	5.04%	7.69%	0.24%	12.73%	$ 21,244	86.5%
2016	12.81%	5.01%	$ 173,527	$ 22,669	$ 1,227,413	$ 1,080,656	$ 146,757	4.53%	7.43%	0.24%	11.95%	$ 20,745	88.0%
2017	11.95%	5.01%	$ 180,468	$ 21,993	$ 1,270,159	$ 1,133,505	$ 136,654	4.05%	7.22%	0.24%	11.27%	$ 20,346	89.2%
2018	11.27%	5.01%	$ 187,687	$ 21,571	$ 1,312,659	$ 1,183,813	$ 128,846	3.67%	7.03%	0.24%	10.71%	$ 20,100	90.2%
2019	10.71%	5.01%	$ 195,195	$ 21,319	$ 1,354,893	$ 1,231,998	$ 122,894	3.37%	6.86%	0.24%	10.23%	$ 19,978	90.9%
2020	10.23%	5.01%	$ 203,002	$ 21,178	$ 1,396,816	$ 1,278,370	$ 118,446	3.12%	6.71%	0.24%	9.83%	$ 19,956	91.5%
2021	9.83%	5.01%	$ 211,122	$ 21,164	$ 1,438,461	$ 1,323,246	$ 115,215	2.92%	6.56%	0.24%	9.48%	$ 20,014	92.0%
2022	9.48%	5.00%	$ 219,567	$ 21,227	$ 1,479,729	$ 1,366,756	$ 112,973	2.75%	6.42%	0.24%	9.17%	$ 20,145	92.4%
2023	9.17%	5.00%	$ 228,350	$ 21,354	$ 1,520,452	$ 1,408,916	$ 111,535	2.61%	6.29%	0.24%	8.90%	$ 20,326	92.7%
2024	8.90%	5.00%	$ 237,484	$ 21,555	$ 1,560,659	$ 1,449,907	$ 110,752	2.50%	6.16%	0.24%	8.66%	$ 20,565	92.9%
2025	8.66%	5.00%	$ 246,983	$ 21,812	$ 1,600,081	$ 1,489,577	$ 110,504	2.39%	6.04%	0.24%	8.44%	$ 20,842	93.1%
2026	8.44%	5.00%	$ 256,863	$ 22,109	$ 1,638,950	$ 1,528,255	$ 110,694	2.31%	5.94%	0.24%	8.24%	$ 21,175	93.2%
2027	8.24%	5.00%	$ 267,137	$ 22,448	$ 1,677,548	$ 1,566,303	$ 111,245	2.23%	5.84%	0.24%	8.07%	$ 21,561	93.4%
2028	8.07%	5.00%	$ 277,823	$ 22,864	$ 1,716,260	$ 1,604,166	$ 112,094	2.16%	5.76%	0.24%	7.92%	$ 21,992	93.5%
2029	7.92%	5.00%	$ 288,936	$ 23,337	$ 1,755,094	$ 1,641,904	$ 113,191	2.10%	5.68%	0.24%	7.77%	$ 22,456	93.6%
2030	7.77%	5.00%	$ 300,493	$ 23,811	$ 1,794,351	$ 1,679,857	$ 114,495	2.04%	5.60%	0.24%	7.64%	$ 22,963	93.6%
2031	7.64%	5.00%	$ 312,513	$ 24,349	$ 1,834,225	$ 1,718,252	$ 115,973	1.99%	5.53%	0.24%	7.52%	$ 23,504	93.7%
2032	7.52%	5.00%	$ 325,013	$ 24,925	$ 1,875,507	$ 1,757,906	$ 117,601	1.94%	5.48%	0.24%	7.42%	$ 24,104	93.7%
2033	7.42%	5.00%	$ 338,014	$ 25,577	$ 1,918,828	$ 1,799,471	$ 119,357	1.89%	5.43%	0.24%	7.32%	$ 24,732	93.8%
2034	7.32%	5.00%	$ 351,534	$ 26,242	$ 1,965,104	$ 1,843,880	$ 121,224	1.85%	5.38%	0.24%	7.23%	$ 25,418	93.8%
2035	7.23%	5.00%	$ 365,596	$ 26,956	$ 2,014,795	$ 1,891,606	$ 123,189	1.80%	5.35%	0.24%	7.15%	$ 26,136	93.9%
2036	7.15%	5.00%	$ 380,220	$ 27,724	$ 2,068,689	$ 1,943,447	$ 125,242	1.76%	5.31%	0.24%	7.07%	$ 26,898	93.9%
2037	7.07%	5.00%	$ 395,428	$ 28,510	$ 2,127,131	$ 1,999,757	$ 127,374	1.72%	5.28%	0.24%	7.00%	$ 27,686	94.0%
2038	7.00%	5.00%	$ 411,245	$ 29,357	$ 2,191,266	$ 2,061,688	$ 129,579	1.69%	5.25%	0.24%	6.94%	$ 28,535	94.1%
2039	6.94%	5.00%	$ 427,695	$ 30,270	$ 2,262,225	$ 2,130,374	$ 131,851	1.65%	5.23%	0.24%	6.88%	$ 29,427	94.2%
2040	6.88%	5.00%	$ 444,803	$ 31,208	$ 2,341,135	$ 2,206,948	$ 134,187	1.61%	5.21%	0.24%	6.83%	$ 30,365	94.3%
2041	6.83%	5.00%	$ 462,595	$ 32,221	$ 2,428,997	$ 2,292,414	$ 136,583	1.58%	5.20%	0.24%	6.78%	$ 31,349	94.4%
2042	6.78%	5.00%	$ 481,099	$ 33,264	$ 2,526,790	$ 2,387,752	$ 139,037	1.55%	5.18%	0.24%	6.73%	$ 32,377	94.5%
2043	6.73%	5.00%	$ 500,343	$ 34,340	$ 2,635,875	$ 2,494,327	$ 141,548	1.51%	5.17%	0.24%	6.69%	$ 33,454	94.6%
2044	6.69%	5.00%	$ 520,357	$ 35,501	$ 2,757,492	$ 2,613,377	$ 144,115	1.48%	5.16%	0.24%	6.65%	$ 34,581	94.8%
2045	6.65%	5.00%	$ 541,171	$ 36,701	$ 2,893,002	$ 2,746,267	$ 146,735	1.45%	5.16%	0.24%	6.61%	$ 35,758	94.9%

Projections assume a constant population and no actuarial gains and losses

SECTION I
BOARD SUMMARY

30-Year Closed Amortization Method:

City of Kansas City, Missouri Firefighters' Pension System
Projection Based on April 30, 2015 Actuarial Valuation
30-Year Closed Amortization
Interest at 7.50%
Amounts in thousands

Valuation as of April 30, (1)	Employer Contribution Rate (2)	Member Contribution Rate (3)	Compensation at Valuation (4)	Employer Contribution (5)	Actuarial Accrued Liability (AAL) (6)	Actuarial Value of Assets (AVA) (7)	Unfunded AAL (8)	UAL Amortization Payment Rate (9)	Normal Cost Rate (10)	Administrative Expense Rate (11)	Employer ADC (12)	Dollar Amount of ADC (13)	Funded Ratio Using AVA (14)
2015	14.70%	5.01%	$ 166,853	$ 25,010	$ 1,185,744	$ 1,026,046	$ 159,698	5.15%	7.69%	0.24%	12.84%	$ 21,416	86.5%
2016	12.92%	5.01%	$ 173,527	$ 22,864	$ 1,227,413	$ 1,080,839	$ 146,574	4.71%	7.43%	0.24%	12.14%	$ 21,064	88.1%
2017	12.14%	5.01%	$ 180,468	$ 22,343	$ 1,270,159	$ 1,134,039	$ 136,120	4.30%	7.22%	0.24%	11.52%	$ 20,794	89.3%
2018	11.52%	5.01%	$ 187,687	$ 22,050	$ 1,312,659	$ 1,184,861	$ 127,798	3.98%	7.03%	0.24%	11.01%	$ 20,665	90.3%
2019	11.01%	5.01%	$ 195,195	$ 21,917	$ 1,354,893	$ 1,233,723	$ 121,169	3.72%	6.86%	0.24%	10.58%	$ 20,654	91.1%
2020	10.58%	5.01%	$ 203,002	$ 21,903	$ 1,396,816	$ 1,280,939	$ 115,876	3.51%	6.71%	0.24%	10.22%	$ 20,739	91.7%
2021	10.22%	5.01%	$ 211,122	$ 22,004	$ 1,438,461	$ 1,326,837	$ 111,625	3.34%	6.56%	0.24%	9.90%	$ 20,905	92.2%
2022	9.90%	5.00%	$ 219,567	$ 22,168	$ 1,479,729	$ 1,371,557	$ 108,172	3.21%	6.42%	0.24%	9.63%	$ 21,145	92.7%
2023	9.63%	5.00%	$ 228,350	$ 22,426	$ 1,520,452	$ 1,415,135	$ 105,316	3.10%	6.29%	0.24%	9.39%	$ 21,440	93.1%
2024	9.39%	5.00%	$ 237,484	$ 22,741	$ 1,560,659	$ 1,457,770	$ 102,889	3.02%	6.16%	0.24%	9.18%	$ 21,798	93.4%
2025	9.18%	5.00%	$ 246,983	$ 23,122	$ 1,600,081	$ 1,499,333	$ 100,748	2.94%	6.04%	0.24%	8.99%	$ 22,199	93.7%
2026	8.99%	5.00%	$ 256,863	$ 23,549	$ 1,638,950	$ 1,540,179	$ 98,771	2.89%	5.94%	0.24%	8.82%	$ 22,664	94.0%
2027	8.82%	5.00%	$ 267,137	$ 24,028	$ 1,677,548	$ 1,580,696	$ 96,853	2.84%	5.84%	0.24%	8.68%	$ 23,191	94.2%
2028	8.68%	5.00%	$ 277,823	$ 24,593	$ 1,716,260	$ 1,621,361	$ 94,899	2.80%	5.76%	0.24%	8.56%	$ 23,770	94.5%
2029	8.56%	5.00%	$ 288,936	$ 25,223	$ 1,755,094	$ 1,662,268	$ 92,826	2.77%	5.68%	0.24%	8.44%	$ 24,390	94.7%
2030	8.44%	5.00%	$ 300,493	$ 25,864	$ 1,794,351	$ 1,703,794	$ 90,558	2.74%	5.60%	0.24%	8.34%	$ 25,063	95.0%
2031	8.34%	5.00%	$ 312,513	$ 26,580	$ 1,834,225	$ 1,746,204	$ 88,021	2.71%	5.53%	0.24%	8.25%	$ 25,778	95.2%
2032	8.25%	5.00%	$ 325,013	$ 27,345	$ 1,875,507	$ 1,790,360	$ 85,147	2.69%	5.48%	0.24%	8.17%	$ 26,562	95.5%
2033	8.17%	5.00%	$ 338,014	$ 28,163	$ 1,918,828	$ 1,836,958	$ 81,870	2.67%	5.43%	0.24%	8.10%	$ 27,384	95.7%
2034	8.10%	5.00%	$ 351,534	$ 29,038	$ 1,965,104	$ 1,886,982	$ 78,122	2.66%	5.38%	0.24%	8.04%	$ 28,271	96.0%
2035	8.04%	5.00%	$ 365,596	$ 29,976	$ 2,014,795	$ 1,940,957	$ 73,838	2.64%	5.35%	0.24%	7.99%	$ 29,200	96.3%
2036	7.99%	5.00%	$ 380,220	$ 30,981	$ 2,068,689	$ 1,999,739	$ 68,949	2.63%	5.31%	0.24%	7.94%	$ 30,182	96.7%
2037	7.94%	5.00%	$ 395,428	$ 32,019	$ 2,127,131	$ 2,063,743	$ 63,388	2.61%	5.28%	0.24%	7.89%	$ 31,196	97.0%
2038	7.89%	5.00%	$ 411,245	$ 33,090	$ 2,191,266	$ 2,134,185	$ 57,082	2.60%	5.25%	0.24%	7.85%	$ 32,278	97.4%
2039	7.85%	5.00%	$ 427,695	$ 34,239	$ 2,262,225	$ 2,212,266	$ 49,959	2.58%	5.23%	0.24%	7.81%	$ 33,406	97.8%
2040	7.81%	5.00%	$ 444,803	$ 35,427	$ 2,341,135	$ 2,299,190	$ 41,945	2.56%	5.21%	0.24%	7.77%	$ 34,580	98.2%
2041	7.77%	5.00%	$ 462,595	$ 36,655	$ 2,428,997	$ 2,396,031	$ 32,966	2.54%	5.20%	0.24%	7.74%	$ 35,789	98.6%
2042	7.74%	5.00%	$ 481,099	$ 37,974	$ 2,526,790	$ 2,503,836	$ 22,953	2.51%	5.18%	0.24%	7.69%	$ 37,010	99.1%
2043	7.69%	5.00%	$ 500,343	$ 39,238	$ 2,635,875	$ 2,624,015	$ 11,860	2.45%	5.17%	0.24%	7.63%	$ 38,152	99.6%
2044	7.63%	5.00%	$ 520,357	$ 40,489	$ 2,757,492	$ 2,757,760	$ (268)	-0.05%	5.16%	0.24%	5.11%	$ 26,588	100.0%
2045	5.11%	5.00%	$ 541,171	$ 28,201	$ 2,893,002	$ 2,893,028	$ (26)	0.00%	5.16%	0.24%	5.15%	$ 27,877	100.0%

Projections assume a constant population and no actuarial gains and losses

SECTION II
ASSETS

Pension plan assets play a key role in the financial operation of the System and in the decisions the Trustees may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact benefit levels, City contributions, and the ultimate security of participants' benefits.

In this section, we present detailed information on the System assets including:

- **Disclosure** of the System assets as of April 30, 2014 and April 30, 2015;
- Statement of the **changes** in market values during the year;
- Development of the **Actuarial Value of Assets**;
- An assessment of **investment performance**; and
- A projection of the System's expected **cash flows** for the next 10 years.

Disclosure

There are two types of asset values disclosed in this valuation, the market value of assets and the actuarial value of assets. The market value represents a "snap-shot" or "cash-out" value which provides the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. As a result, market values are usually not as suitable for year-to-year budgeting as are the actuarial value of assets which reflect smoothing of annual investment returns.

Table II-1 below discloses and compares each asset value as of April 30, 2014 and 2015.

Table II-1
Statement of Assets at Market Value as of April 30,

Assets	2014	2015	% Change
Cash	$ 28,651,926	$ 18,614,805	(35.03%)
Stock and Collective Trusts	1,006,809,161	1,067,057,623	5.98%
Accounts Receivable	5,909,218	4,211,198	(28.74%)
Interest and Dividends	520,927	827,254	58.80%
Contributions Receivable	1,104,566	1,136,292	2.87%
Expenses	(1,425,847)	(1,805,453)	26.62%
Purchase of Investments	(13,914,917)	(4,908,442)	(64.73%)
Market Value of Assets	**$1,027,655,034**	**$1,085,133,277**	5.59%

SECTION II
ASSETS

Changes in Market Value

Table II-2 below shows the components of change between the market value of assets as of April 30, 2014 and April 30, 2015.

Table II-2 Changes in Market Values		
Value of Assets – April 30, 2014		**$ 1,027,655,034**
Additions		
Member Contributions	$ 8,610,268	
Employer Contributions	27,569,434	
Interest and Dividends	15,687,454	
Investment Return	73,340,199	
Total Additions	**$ 125,207,355**	
Deductions		
Benefit Payments	$ (63,149,987)	
Expenses	(4,579,125)	
Total Deductions	**$ (67,729,112)**	
Value of Assets – April 30, 2015		**$ 1,085,133,277**

SECTION II
ASSETS

Actuarial Value of Assets

The next table, Table II-3, shows how the actuarial value of assets is developed.

Asset values are gradually adjusted toward market value by adding 25% of the difference between the market value and expected actuarial asset value to the expected actuarial asset value. The expected actuarial asset value is the actuarial asset value at the beginning of the year plus contributions, less benefit payments, all with interest at the assumed net rate of investment return on an actuarial basis. If the actuarial value of assets is less than 85% or more than 110% of the market value, an adjustment is made to the actuarial value to bring the value within this corridor.

Table II-3
Development of Actuarial Value of Assets

1. Actuarial Value of Assets at May 1, 2014	**$ 962,152,010**
2. Contributions	36,179,702
3. Benefit Payments	(63,149,987)
4. Expected Return	71,168,299
5. Expected Actuarial Value at End of Year = (1) + (2) + (3) + (4)	1,006,350,024
6. Actual Market Value of Assets at April 30, 2015	1,085,133,277
7. Excess of (6) over (5)	78,783,253
8. Adjustment toward market value: 25% of (7)	19,695,813
9. Adjustment to be within 85%/110% corridor	0
10. Actuarial Value of Assets at May 1, 2015 = (5) + (8) + (9)	**$ 1,026,045,837**

SECTION II
ASSETS

Investment Performance

The market value of assets (MVA) returned 8.33% during plan year ending April 30, 2015, which is more than the assumed 7.50% return. A return of 9.58% was experienced on the actuarial value of assets (AVA). Below, we show additional historical returns.

Table II-4
Historical Returns

	MVA	AVA
2007	12.36%	12.58%
2008	(1.73%)	8.14%
2009	(25.78%)	(17.92%)
2010	28.14%	9.24%
2011	14.76%	10.62%
2012	0.68%	8.32%
2013	12.39%	9.38%
2014	11.44%	9.96%
2015	8.33%	9.58%

Projection of System's Future Cash Flows

Table II-5
Projection of System's Expected Cash Flows ($ thousands)

Year Beginning May 1,	Benefits and Expenses	Total Contributions*	Net Cash Flow
2015	$ (67,599)	$ 31,822	$ (35,777)
2016	(69,991)	31,544	(38,447)
2017	(73,836)	31,547	(42,289)
2018	(77,727)	31,744	(45,983)
2019	(81,682)	32,105	(49,577)
2020	(85,620)	32,602	(53,018)
2021	(89,665)	33,215	(56,450)
2022	(93,883)	33,935	(59,948)
2023	(98,057)	34,739	(63,318)
2024	(102,497)	35,634	(66,863)

* *Expected contributions include City contributions and Member contributions. City contributions are projected under the Board's funding policy assuming future market value returns of 7.5% as shown in the graph on page 10.*

SECTION III
LIABILITIES

In this section, we present detailed information on the System liabilities including:

- **Disclosure** of the System liabilities as of May 1, 2014 and May 1, 2015, and
- Statement of **changes** in these liabilities during the year.

Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them.

- **Present Value of Future Benefits:** Used for measuring all future System obligations, represents the amount of money needed today to fully pay off all benefits of the System both earned as of the valuation date and those to be earned in the future by current plan participants, under the current plan provisions.

- **Actuarial Liability:** Used for funding calculations, this liability is calculated taking the present value of benefits and subtracting the present value of future member contributions and future employer normal costs under an acceptable actuarial funding method. This method is referred to as the **Entry Age Normal** funding method.

- **Present Value of Accrued Benefits:** Used for communicating the current level of liabilities, this liability represents the total amount of money needed today to fully pay off the current accrued obligations of the System, assuming no future accruals of benefits. These liabilities are also used for accounting purposes (Topic 960) and used to assess whether the Plan can meet its current benefit commitments.

Table III-1, which follows, discloses each of these liabilities for the current and prior valuations. With respect to each disclosure, a subtraction of the appropriate value of plan assets yields, for each respective type, a **net surplus** or an **unfunded liability**.

SECTION III
LIABILITIES

Table III-1
Liabilities/Net (Surplus)/Unfunded

	May 1, 2014	May 1, 2015
Present Value of Future Benefits		
Active Participant Benefits	$ 666,110,511	$ 659,173,651
Retiree and Inactive Benefits	630,055,478	669,334,615
Present Value of Future Benefits (PVB)	**$ 1,296,165,989**	**$ 1,328,508,266**
Actuarial Liability		
Present Value of Future Benefits (PVB)	$ 1,296,165,989	$ 1,328,508,266
Present Value of Future Normal Costs (PVFNC)	146,282,264	142,764,580
Actuarial Liability (AAL = PVB – PVFNC)	**1,149,883,725**	**1,185,743,686**
Actuarial Value of Assets (AVA)	962,152,010	1,026,045,837
Net (Surplus)/Unfunded (AL – AVA)	**$ 187,731,715**	**$ 159,697,849**
Present Value of Accrued Benefits		
Present Value of Future Benefits (PVB)	$ 1,296,165,989	$ 1,328,508,266
Present Value of Future Benefit Accruals (PVFBA)	285,618,678	274,216,942
Present Value of Accrued Benefits (PVAB = PVB – PVFBA)	**1,010,547,311**	**1,054,291,324**
Market Value of Assets (MVA)	1,027,655,034	1,085,133,277
Net Unfunded/(Surplus)	**$ (17,107,723)**	**$ (30,841,953)**

SECTION III
LIABILITIES

Changes in Liabilities

Each of the Liabilities disclosed in the prior table are expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New hires since the last valuation
- Benefits accrued since the last valuation
- System amendments increasing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial or investment assumptions
- A change in the actuarial funding method

Unfunded liabilities will change because of all of the above, and also due to changes in plan assets resulting from:

- Employer contributions different than expected
- Investment earnings different than expected
- A change in the method used to measure plan assets

In each valuation, we report on those elements of change which are of particular significance, potentially affecting the long-term financial outlook of the System. Below, we present key changes in liabilities since the last valuation.

In the table that follows, we show the components of change in the actuarial liability between May 1, 2014 and May 1, 2015.

Table III-2

	Actuarial Liability
Liabilities May 1, 2014	$ 1,149,883,725
Liabilities May 1, 2015	1,185,743,686
Liability Increase/(Decrease)	**35,859,961**
Change Due to:	
Plan Amendments	0
Assumption Changes	0
Actuarial (Gain)/Loss	(6,077,385)
Benefits Accumulated and Other Sources	41,937,346

SECTION III
LIABILITIES

In addition, we breakdown the change in actuarial liability further by showing the total actuarial (gain)/loss by source, as shown in Table III-3 below.

TABLE III-3
(Gain)/Loss by Source as of May 1, 2015

Turnover	$ (421,000)
Retirement	657,000
Pre-retirement mortality	741,000
Post-retirement mortality	1,525,000
Salary increase more/(less) than expected for continuing actives	(11,237,000)
New entrants	937,000
Data Composition & Miscellaneous changes	1,721,000
Total (Gain)/Loss	**$ (6,077,000)**

Table III-4
Historical Liability (Gains)/Losses ($ Millions)

Change due to:	2011	2012	2013	2014	2015
Turnover	$ 1.6	$ 3.4	$ (1.1)	$ (6.1)	$ (0.4)
Retirement	(3.3)	(0.1)	(0.5)	1.5	0.7
Pre-retirement mortality	0.7	0.6	0.7	0.8	0.7
Post-retirement mortality	(1.1)	0.8	(2.7)	(4.1)	1.5
Salary change	(18.1)	(1.6)	5.7	(5.4)	(11.2)
New entrants	3.8	0.7	3.0	1.6	0.9
Miscellaneous	22.5	1.7	(4.0)	2.8	1.7
Total (Gain)/Loss	**$ 6.1**	**$ 5.5**	**$ 1.1**	**$ (8.9)**	**$ (6.1)**

SECTION IV
CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to properly maintain the funding status of the System. Typically, the actuarial process will use a funding method that will result in a pattern of contributions that are both stable and predictable.

For this System, the funding method employed is the **Entry Age Actuarial Cost Method**. Under this method, there are three primary components to the total actuarially determined contribution: the **normal cost rate** (employee and employer), the **administrative expense rate**, and the **unfunded actuarial liability rate** (UAL rate). The normal cost rate is determined by taking the value, as of entry age into the system, of each member's projected future benefits. This value is then divided by the value, also at entry age, of each member's expected future salary. The normal cost rate is multiplied by current salary to determine each member's normal cost rate. Finally, the total normal cost rate is reduced by the member contribution to produce the employer normal cost rate. The difference between the Entry Age Normal actuarial liability and the actuarial value of assets is the unfunded actuarial liability. Effective May 1, 2015, an expected **administrative expense rate** is added to the total actuarially determined contribution.

Contributions are calculated on two bases:

- Under the Board's policy for calculating the Actuarially Determined Contribution, the unfunded actuarial liability is amortized under a layered approach over a 20-year period as a level percent of pay for all years except with respect to the experience loss for the plan year ending April 30, 2009. That loss was amortized over 30 years. All future gains or losses to the unfunded actuarial liability will establish new 20-year amortization periods. Payroll is expected to increase 4.0% per year.

- Under the City ordinance, the City's contributions will be based upon a 30-year open amortization of the entire unfunded liability.

SECTION IV
CONTRIBUTIONS

Table IV-1 below presents and compares the employer contribution rates for the System for this valuation and the prior one using both the current Board funding policy amortization method and using a 30-year open amortization method.

Table IV-1
Employer Contribution Rate

	May 1, 2014	May 1, 2015
Current Board Funding Policy		
Entry Age Normal Cost Rate	7.77%	7.69%
Administrative Expense Rate	0.00%	0.24%
Amortization Payment	6.87%	5.88%
Actuarially Determined Contribution	14.64%	13.81%
30-Year Open Amortization Method		
Entry Age Normal Cost Rate	7.77%	7.69%
Administrative Expense Rate	0.00%	0.24%
Amortization Payment	5.90%	5.04%
Actuarially Determined Contribution	13.67%	12.97%

SECTION IV
CONTRIBUTIONS

Table IV-2 below presents the May 1, 2015 employer contribution rates for the System split between the General Employees and the Judges and Elected Officials. The employer contribution rate is based on the amortization schedule shown in Table IV-3. The employer contribution rates are then compared to what the City is expected to contribute for the current plan year. The current expected City contribution rate for all employees for the year ending April 30, 2016 is 14.64% of payroll from May 1, 2015 to June 30, 2015, and 14.71% for the period from July 1, 2015 to April 30, 2016, which equates to a weighted average of 14.70% for the year.

Table IV -2
Development of Plan Contribution Rate
as of May 1, 2015

	General Employees	Judges and Elected Officials	Total
1. Normal Cost (Monthly):			
a. Total Normal Cost	12.66%	19.75%	12.70%
b. Administrative Expense	0.24%	0.24%	0.24%
c. Expected Members Contribution	5.01%	5.00%	5.01%
d. Employer Paid Normal Cost (a) + (b) - (c)	7.89%	14.99%	7.93%
2. Amortization of Unfunded Liability			
a. Actuarial Liability	$1,172,768,898	$ 12,974,788	$1,185,743,686
b. Actuarial Value of Assets[1]	1,014,818,514	11,227,323	1,026,045,837
c. Unfunded Liability (a) - (b)	157,950,384	1,747,465	159,697,849
d. Amortization of Unfunded Liability	5.86%	7.54%	5.88%
3. Actuarially Determined Employer Contribution Rate (1) + (2d)[2]	13.75%	22.53%	13.81%
4. Scheduled City Contributions[3]	14.70%	14.70%	14.70%

1 Allocated in proportion to the Actuarial Liability

2 Total payroll is $166,853,097, and the actuarially determined contribution for plan year ending April 30, 2015 is $23,042,413 based on the total employer actuarially determined contribution rate. The payroll for the judges and elected officials is $1,241,472, and the actuarially determined contribution for this group for the plan year ending April 30, 2015 is $279,704

3 The scheduled contribution is based upon the prior year's actuarially determined employer contribution rate for all employees.

SECTION IV
CONTRIBUTIONS

Under Board funding policy, for purposes of calculating the Actuarially Determined Contribution under GASB, the Unfunded Actuarial Liability is amortized in accordance with the schedule below:

Initial unfunded actuarial liability (as of May 1, 2008)	20 years
Changes to the UAL on May 1, 2009	30 years
Changes to the UAL on and after May 1, 2010	20 years

Amortization payments as of May 1, 2015 are shown in the table below.

TABLE IV-3
Unfunded Actuarial Liabilitiy Amortization Schedule

Item	Date Created	Initial Years	Initial Balance	Remaining Years	Outstanding Balance	Amortization Payment	Amortization Factor
Initial UAL	5/1/2008	20	$ 60,653,589	13	$ 56,969,292	$ 5,399,947	10.550
2009 (Gain)/Loss*	5/1/2009	30	$ 201,970,870	24	$221,155,420	$13,372,938	16.538
2010 (Gain)/Loss*	5/1/2010	20	$ (21,123,472)	15	$ (20,631,984)	$ (1,747,474)	11.807
2011 (Gain)/Loss*	5/1/2011	20	$ (12,149,092)	16	$ (12,012,067)	$ (968,354)	12.405
2011 Assumption Change	5/1/2011	20	$ (32,092,544)	16	$ (31,730,589)	$ (2,557,966)	12.405
2012 (Gain)/Loss*	5/1/2012	20	$ 372,006	17	$ 370,812	$ 28,561	12.983
2012 Plan Amendment	5/1/2012	20	$ 16,284,519	17	$ 16,232,275	$ 1,250,269	12.983
2013 (Gain)/Loss*	5/1/2013	20	$ (11,094,653)	18	$ (11,109,473)	$ (820,336)	13.543
2014 (Gain)/Loss*	5/1/2014	20	$ (29,765,565)	19	$ (29,846,317)	$ (2,119,173)	14.084
2014 Plan Amendment	5/1/2014	20	$ 253,038	19	$ 253,725	$ 18,015	14.084
2015 (Gain)/Loss*	5/1/2015	20	$ (29,953,245)	20	$ (29,953,245)	$ (2,050,514)	14.608
Total					**$159,697,849**	**$ 9,805,915**	

**Also includes differences between the Actuarially Determined Contribution and the actual contributions made.*

Under the City ordinance, Amortization payments are calculated using a 30-year open amortization method. The amortization payment as of May 1, 2015 is shown in the table below.

TABLE IV-4
Unfunded Actuarial Liability Amortization Schedule

UAL	Remaining Years*	Amortization Payment	Amortization Factor
$159,697,849	30	$8,408,239	18.993

**30-year open amortization*

SECTION V
FINANCIAL STATEMENT INFORMATION

The Government Finance Officers Association (GFOA) maintains a checklist of items to be included in a public retirement system's Comprehensive Annual Financial Report (CAFR) in order to receive recognition for excellence in financial reporting. Although the Kansas City Employees' Retirement System does not issue a CAFR under GFOA guidelines, we have included certain schedules in this section for possible inclusion within the System's audited financial statements.

Tables V-1 through V-5 are exhibits which could be used with the CAFR report. Table V-1 is the Note to Required Supplementary Information, Table V-2 is a history of gains and losses in actuarial liability, Table V-3 is the Solvency Test which shows the portion of actuarial liability covered by assets, Table V-4 shows historical Actuarially Determined Contribution information, compared to what the City actually contributed, and Table V-5 is the Schedule of Funding Progress.

SECTION V
FINANCIAL STATEMENT INFORMATION

Table V-1
NOTE TO REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.

Valuation date	May 1, 2015
Actuarial cost method	Entry age
Amortization method	20-year layered amortization, level percent of pay*
Remaining amortization period for the UAL	Weighted average of 23.4 years
Asset valuation method	Four year smoothing using Expected Value Method
Actuarial assumptions:	
Investment rate of return	7.50%
Projected salary increases	Ranges from 8.0% to 4.0%
Cost-of-living adjustments	3.0% simple
Inflation	3.0%

The actuarial assumptions used have been based upon recommendations by the actuary and adopted by the System's Board of Trustees. The most recent actuarial experience study was performed for the period May 1, 2006 through April 30, 2010.

The rate of employer actuarially determined contributions to the System is composed of the normal cost, expected administrative expenses, and an amortization of the unfunded actuarial liability. The normal cost is a level percent of payroll cost which, along with member contributions, will pay for projected benefits at retirement for the average plan participant. The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and the actuarial value of assets as of the same date is the unfunded actuarial liability.

** For all years except changes to the 5/1/2009 unfunded actuarial liability, which are amortized over 30 years.*

SECTION V
FINANCIAL STATEMENT INFORMATION

Table V-2
ANALYSIS OF FINANCIAL EXPERIENCE
Gain and Loss in Unfunded Actuarial Liability During Years Ended April 30
Resulting from Differences Between Assumed Experience and Actual Experience

	Gain (or Loss) for Year ending April 30, (expressed in thousands)						
Type of Activity	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Investment Income*	$(216,876)	$ 5,151	$ 18,253	$ 880	$ 12,225	$ 20,897	$ 23,876
Combined Liability Experience	12,781	15,972	(6,104)	(1,252)	(1,130)	8,868	6,077
Gain/(or Loss) during Year from Financial Experience	$(204,095)	$ 21,123	$ 12,149	$ (372)	$ 11,095	$ 29,765	$ 29,953
Non-Recurring Gain/(or Loss) Items	0	0	32,093	(16,285)	0	(253)	0
Composite Gain/(or Loss) during Year	$(204,095)	$ 21,123	$ 44,242	$ (16,657)	$ 11,095	$ 29,512	$ 29,953

** Investment experience includes differences in actual and recommended contributions*

SECTION V
FINANCIAL STATEMENT INFORMATION

Table V-3
SOLVENCY TEST
Aggregate Actuarial Liabilities for
(expressed in thousands)

Valuation Date May 1	Active Member Contributions (1)	Retirees & Beneficiaries (2)	Active Member Employer Financed Contributions (3)	Actuarial Value of Reported Assets	Portion of Actuarial Liabilities Covered by Reported Assets (1)	(2)	(3)
2007	$73,078	$446,908	$327,407	$823,014	100%	100%	93%
2008	$78,339	$468,489	$387,506	$873,680	100%	100%	84%
2009	$78,693	$502,980	$385,106	$704,069	100%	100%	32%
2010	$82,853	$521,175	$390,740	$749,552	100%	100%	37%
2011	$87,137	$549,227	$374,632	$806,793	100%	100%	45%
2012	$88,746	$577,175	$404,832	$847,090	100%	100%	45%
2013	$90,514	$603,734	$420,917	$900,062	100%	100%	49%
2014	$92,849	$630,056	$426,979	$962,152	100%	100%	56%
2015	$96,110	$669,335	$420,299	$1,026,046	100%	100%	62%

SECTION V
FINANCIAL STATEMENT INFORMATION

Table V-4
Schedule of City Contributions

Plan Year Ended April 30	Actuarially Determined Contributions*	Actual Contributions	Percentage Contributed
2007	$17,652,900	$18,496,476	104.78%
2008	$15,623,936	$20,011,617	128.08%
2009	$19,364,846	$20,330,486	104.99%
2010	$29,589,060	$19,186,317	64.84%
2011	$27,772,227	$18,822,709	67.78%
2012	$26,326,555	$20,543,487	78.03%
2013	$27,682,872	$23,744,372	85.77%
2014	$27,568,194	$25,987,662	94.27%
2015	$24,540,893	$27,569,434	112.34%
2016	$23,042,413	--	--

**The actuarially determined contribution for the current year is described in Section IV, Table IV-2.*

SECTION V
FINANCIAL STATEMENT INFORMATION

Table V-5
Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Liability (b)	Unfunded Actuarial Liability (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAL as a Percentage of Covered Payroll* [(b) - (a)] / (c)
5/1/2006	$745,720,993	$800,839,808	$55,118,815	93.12%	$146,365,332	37.66%
5/1/2007	$823,014,181	$847,393,167	$24,378,986	97.12%	$158,779,836	15.35%
5/1/2008	$873,680,276	$934,333,865	$60,653,589	93.51%	$169,867,066	35.71%
5/1/2009	$704,069,429	$966,779,322	$262,709,893	72.83%	$160,200,649	163.99%
5/1/2010	$749,551,649	$994,767,684	$245,216,035	75.35%	$153,948,044	159.28%
5/1/2011	$806,792,596	$1,010,996,133	$204,203,537	79.80%	$163,113,722	125.19%
5/1/2012	$847,089,856	$1,070,752,440	$223,662,584	79.11%	$161,134,295	138.81%
5/1/2013	$900,061,516	$1,115,165,108	$215,103,592	80.71%	$166,877,688	128.90%
5/1/2014	$962,152,010	$1,149,883,725	$187,731,715	83.67%	$167,629,048	111.99%
5/1/2015	$1,026,045,837	$1,185,743,686	$159,697,849	86.53%	$166,853,097	95.71%

** Not less than zero*

APPENDIX A
MEMBERSHIP INFORMATION

City of Kansas City, Missouri Employees' Retirement System Active Member Data	May 1, 2014	May 1, 2015	% Change
Total			
Count	3,211	3,188	-0.72%
Average Current Age	47.05	46.97	-0.17%
Average Service	12.30	12.08	-1.79%
Average Valuation Pay	$ 52,205	$ 52,338	0.26%
Annual Compensation	$ 167,629,048	$ 166,853,097	-0.46%
General Members			
Count	3,197	3,176	-0.66%
Average Current Age	47.00	46.93	-0.15%
Average Service	12.31	12.08	-1.87%
Average Valuation Pay	$ 51,955	$ 52,145	0.36%
Annual Compensation	$ 166,100,635	$ 165,611,625	-0.29%
Judges			
Count	8	6	-25.00%
Average Current Age	56.09	55.10	-1.77%
Average Service	14.45	12.67	-12.32%
Average Valuation Pay	$ 144,875	$ 145,343	0.32%
Annual Compensation	$ 1,159,000	$ 872,058	-24.76%
Elected Officials			
Count	6	6	0.00%
Average Current Age	61.19	62.19	1.63%
Average Service	8.33	9.33	12.00%
Average Valuation Pay	$ 61,569	$ 61,569	0.00%
Annual Compensation	$ 369,414	$ 369,414	0.00%

APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Employees' Retirement System Table of Plan Coverage	May 1, 2014	May 1, 2015	% change
Active Members in Valuation			
Tier 1			
Number	3,211	2,904	-9.56%
Average Age	47.05	47.95	1.92%
Average Service	12.30	13.21	7.41%
Total Payroll	$ 167,629,048	$ 156,408,115	-6.69%
Average Anticipated Payroll	$ 52,205	$ 53,860	3.17%
Account Balance	$ 92,848,669	$ 95,879,129	3.26%
Eligible to Retire on:			
Normal Pension	85	96	12.94%
Optional Pension	386	377	-2.33%
Early Pension	257	239	-7.00%
Deferred Pension	1,735	1,615	-6.92%
Total Active Vested Members	2,463	2,327	-5.52%
Tier 2			
Number	N/A	284	N/A
Average Age	N/A	36.93	N/A
Average Service	N/A	0.49	N/A
Total Payroll	N/A	$ 10,444,982	N/A
Average Anticipated Payroll	N/A	$ 36,778	N/A
Account Balance	N/A	$ 230,966	N/A
Eligible to Retire on:			
Normal Pension	N/A	0	N/A
Optional Pension	N/A	0	N/A
Early Pension	N/A	0	N/A
Deferred Pension	N/A	0	N/A
Total Active Vested Members	N/A	0	N/A
Total			
Number	3,211	3,188	-0.72%
Average Age	47.05	46.97	-0.17%
Average Service	12.30	12.08	-1.79%
Total Payroll	$ 167,629,048	$ 166,853,097	-0.46%
Average Anticipated Payroll	$ 52,205	$ 52,338	0.26%
Account Balance	$ 92,848,669	$ 96,110,095	3.51%
Eligible to Retire on:			
Normal Pension	85	96	12.94%
Optional Pension	386	377	-2.33%
Early Pension	257	239	-7.00%
Deferred Pension	1,735	1,615	-6.92%
Total Active Vested Members	2,463	2,327	-5.52%

APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Employees' Retirement System Table of Plan Coverage (cont.)	May 1, 2014	May 1, 2015	% change
Vested Terminated Members	95	88	-7.37%
Deaths During the Plan Year	108	92	-14.81%
Pensioners:			
Number in Pay Status			
Retirees	1,825	1,910	4.66%
Disabled Retirees	10	9	-10.00%
Total	1,835	1,919	4.58%
Average Age	70.05	69.95	-0.14%
Average Monthly Benefit**	$ 2,166	$ 2,223	2.63%
Beneficiaries in Pay Status*	377	387	2.65%
Members Due Refunds	133	144	8.27%

** Widows, QDROs, and Children*

*** The monthly benefit does not include the subsidy benefits*

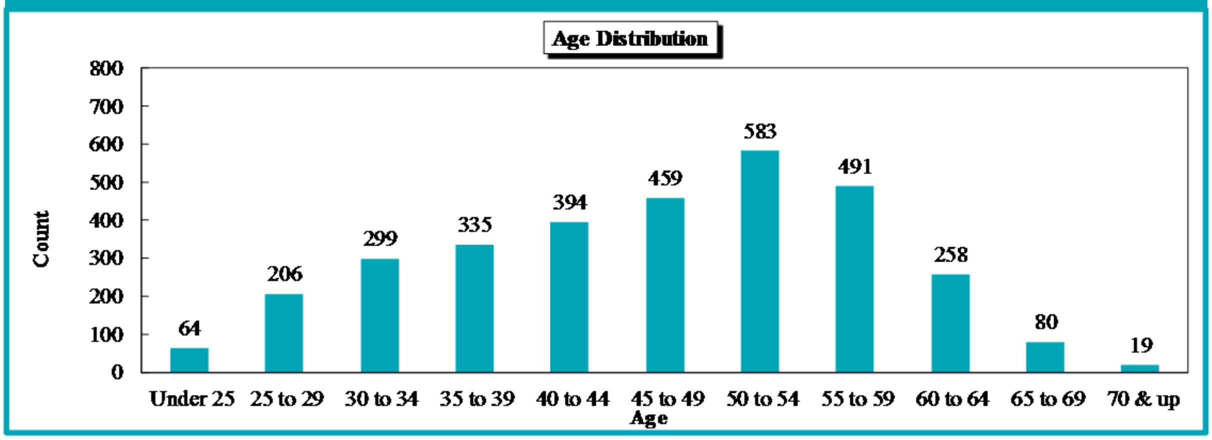
APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Employees' Retirement System Distribution of Active Members by Age and Service as of May 1, 2015

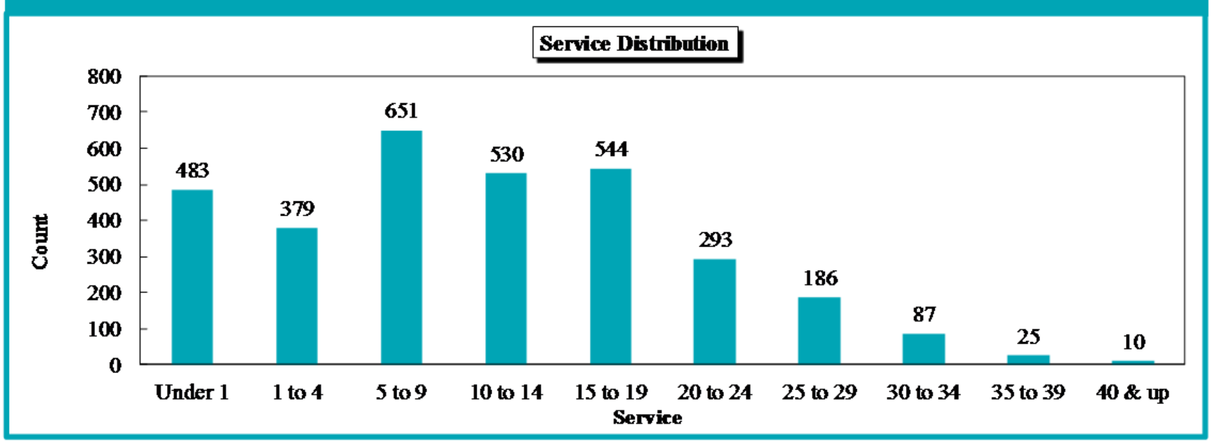
COUNTS BY AGE/SERVICE

	Service										
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
Under 25	51	12	1	0	0	0	0	0	0	0	64
25 to 29	99	67	40	0	0	0	0	0	0	0	206
30 to 34	95	69	104	30	1	0	0	0	0	0	299
35 to 39	76	51	107	73	27	1	0	0	0	0	335
40 to 44	51	45	96	95	88	18	1	0	0	0	394
45 to 49	26	42	69	108	125	67	22	0	0	0	459
50 to 54	32	39	94	105	128	97	68	19	1	0	583
55 to 59	39	31	84	64	99	65	55	43	10	1	491
60 to 64	12	19	35	40	58	34	31	20	7	2	258
65 to 69	2	4	18	14	15	7	6	5	7	2	80
70 & up	0	0	3	1	3	4	3	0	0	5	19
Total	483	379	651	530	544	293	186	87	25	10	3,188

Kansas City Employees' Retirement System Distribution of Active Members by Age as of May 1, 2015



Kansas City Employees' Retirement System Distribution of Active Members by Service as of May 1, 2015



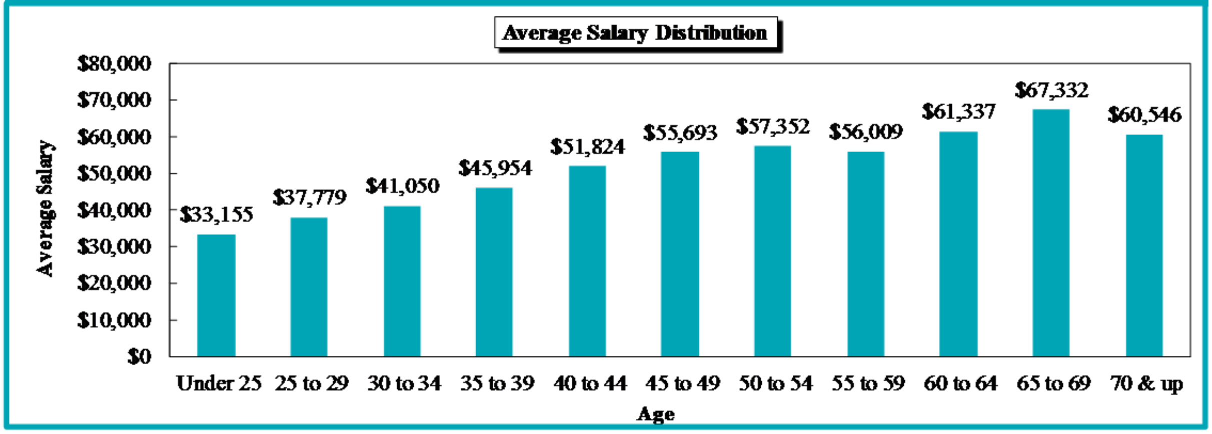
APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Employees' Retirement System Distribution of Active Members by Age and Service as of May 1, 2015

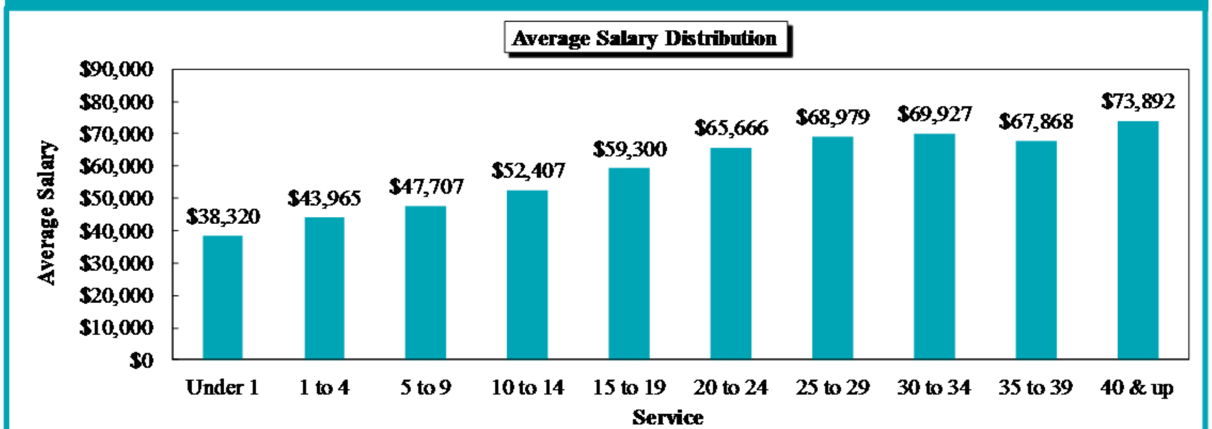
AVERAGE SALARY BY AGE/SERVICE

	Service										
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
Under 25	$ 33,417	$ 31,967	$ 34,068	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$33,155
25 to 29	36,582	39,086	38,554	-	-	-	-	-	-	-	37,779
30 to 34	37,506	43,297	42,279	42,873	40,164	-	-	-	-	-	41,050
35 to 39	38,569	46,166	48,270	48,946	49,152	43,848	-	-	-	-	45,954
40 to 44	42,278	45,088	52,739	53,076	56,678	59,554	68,544	-	-	-	51,824
45 to 49	39,672	46,680	48,017	52,656	61,980	66,182	63,139	-	-	-	55,693
50 to 54	38,096	46,783	48,950	51,639	58,991	68,327	71,261	66,274	85,812	-	57,352
55 to 59	40,216	38,937	47,729	54,294	58,685	61,378	69,433	68,439	60,274	77,292	56,009
60 to 64	51,458	55,556	48,387	60,725	59,838	69,683	66,259	71,371	70,756	106,350	61,337
65 to 69	47,832	60,423	59,810	58,896	76,652	69,533	70,622	90,831	73,264	60,408	67,332
70 & up	-	-	54,050	37,164	58,592	54,243	76,732	-	-	65,623	60,546
Total	$ 38,320	$ 43,965	$ 47,707	$ 52,407	$ 59,300	$ 65,666	$ 68,979	$ 69,927	$ 67,868	$ 73,892	$52,338

Kansas City Employees' Retirement System Distribution of Active Members by Age as of May 1, 2015



Kansas City Employees' Retirement System Distribution of Active Members by Service as of May 1, 2015



APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Employees' Retirement System
Pensions in Payment Status by Type and Monthly Amount
as of May 1, 2015

Monthly Amount	Total	Normal	Early	Optional	Vested	Disability	Widows & QDROs
Total	**2,306**	**238**	**223**	**1,276**	**173**	**9**	**387**
Under $500	269	26	61	4	36	0	142
$500-$1,000	418	63	84	94	66	2	109
$1,000-$1,500	345	41	48	150	43	7	56
$1,500-$2,000	300	38	19	194	17	0	32
$2,000-$2,500	260	19	5	210	6	0	20
$2,500-$3,000	230	14	1	201	4	0	10
$3,000-$3,500	152	9	2	135	0	0	6
$3,500-$4,000	100	8	1	86	1	0	4
$4,000-$4,500	73	7	1	62	0	0	3
$4,500-$5,000	51	5	0	46	0	0	0
$5,000 & over	108	8	1	94	0	0	5

During the year ended April 30, 2015 there were 177 new pensions awarded (25 Normal, 21 Early, 84 Optional, 16 Vested, 0 Disability, and 31 Widows and QDROs)

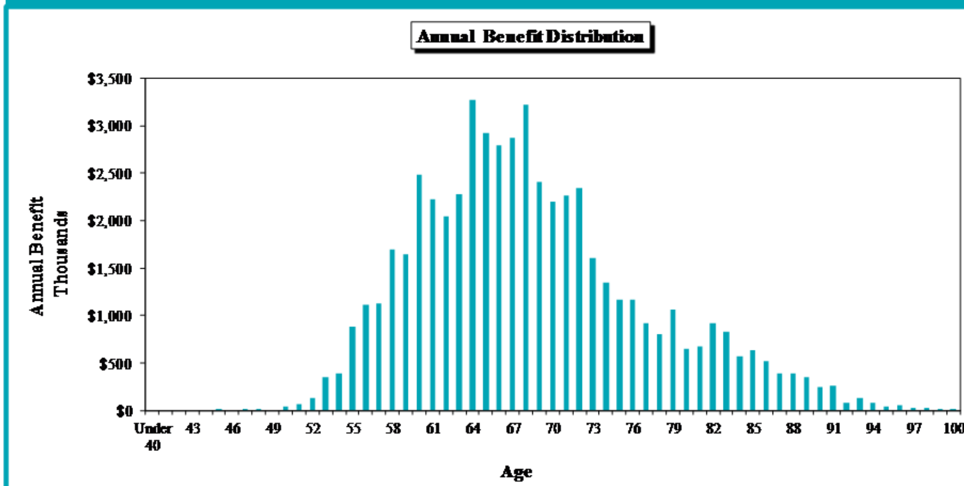
APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Employees' Retirement System Distribution of Retired Members and Survivors as of May 1, 2015

Age	Count	Annual Benefit*	Age	Count	Annual Benefit*	Age	Count	Annual Benefit*
<25	0	$0	57	36	$1,127,577	89	31	$358,776
25	0	0	58	52	1,697,265	90	21	249,466
26	0	0	59	53	1,645,046	91	21	255,738
27	0	0	60	86	2,487,457	92	9	87,054
28	0	0	61	76	2,221,109	93	20	129,253
29	0	0	62	83	2,050,192	94	11	76,809
30	0	0	63	89	2,272,068	95	7	42,451
31	0	0	64	114	3,274,696	96	9	59,613
32	0	0	65	104	2,927,228	97	3	29,094
33	0	0	66	105	2,789,742	98	1	32,706
34	0	0	67	103	2,871,877	99	2	5,820
35	0	0	68	113	3,216,598	100	0	0
36	0	0	69	78	2,402,289	101	1	5,841
37	0	0	70	84	2,193,837	102	0	0
38	0	0	71	86	2,265,885	103	0	0
39	0	0	72	88	2,344,181	104	0	0
40	0	0	73	64	1,602,768	105	0	0
41	0	0	74	60	1,345,571	106	0	0
42	0	0	75	51	1,166,723	107	0	0
43	0	0	76	54	1,163,088	108	0	0
44	0	0	77	44	921,114	109	0	0
45	1	12,563	78	43	808,136	110	0	0
46	0	0	79	49	1,056,579	111	0	0
47	1	3,369	80	34	653,087	112	0	0
48	1	5,731	81	38	673,615	113	0	0
49	0	0	82	49	923,076	114	0	0
50	1	48,191	83	42	824,330	115	0	0
51	3	62,219	84	45	572,276	116	0	0
52	5	137,597	85	40	634,680	117	0	0
53	12	356,959	86	31	523,650	118	0	0
54	13	385,493	87	27	396,063	119	0	0
55	35	882,717	88	29	389,002	120	0	0
56	39	1,118,410						
						Totals	2,297	$55,786,675

** The annual benefit does not include the subsidy benefits*

Kansas City Employees' Retirement System Distribution of Retired Members and Survivors as of May 1, 2015



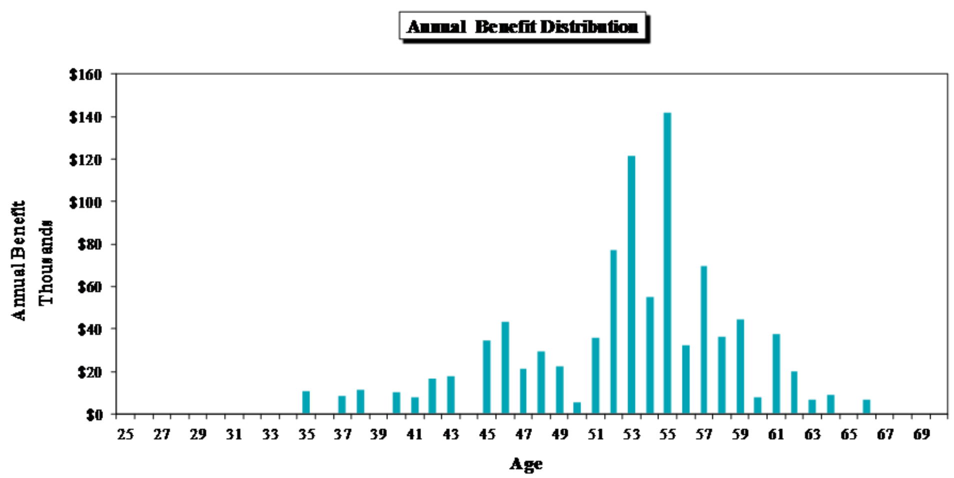
APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Employees' Retirement System Distribution of Vested Members as of May 1, 2015

Age	Count	Annual Benefit*	Age	Count	Annual Benefit*	Age	Count	Annual Benefit*
<25	0	$0	57	6	$69,717	89	0	$0
25	0	0	58	2	36,545	90	0	0
26	0	0	59	4	44,409	91	0	0
27	0	0	60	2	7,800	92	0	0
28	0	0	61	4	37,718	93	0	0
29	0	0	62	3	20,268	94	0	0
30	0	0	63	1	6,425	95	0	0
31	0	0	64	1	9,066	96	0	0
32	0	0	65	0	0	97	0	0
33	0	0	66	2	6,793	98	0	0
34	0	0	67	0	0	99	0	0
35	2	10,950	68	0	0	100	0	0
36	0	0	69	0	0	101	0	0
37	1	8,173	70	0	0	102	0	0
38	2	11,036	71	0	0	103	0	0
39	0	0	72	0	0	104	0	0
40	1	10,093	73	0	0	105	0	0
41	2	7,985	74	0	0	106	0	0
42	2	16,407	75	0	0	107	0	0
43	2	17,625	76	0	0	108	0	0
44	0	0	77	0	0	109	0	0
45	2	34,741	78	0	0	110	0	0
46	3	43,357	79	0	0	111	0	0
47	2	21,335	80	0	0	112	0	0
48	2	29,157	81	0	0	113	0	0
49	2	22,396	82	0	0	114	0	0
50	1	5,363	83	0	0	115	0	0
51	3	35,927	84	0	0	116	0	0
52	7	76,990	85	0	0	117	0	0
53	10	121,687	86	0	0	118	0	0
54	6	55,009	87	0	0	119	0	0
55	8	141,775	88	0	0	120	0	0
56	5	32,273						
						Totals	88	$941,020

** The annual benefit does not include the subsidy benefits*

Kansas City Employees' Retirement System Distribution of Vested Members as of May 1, 2015



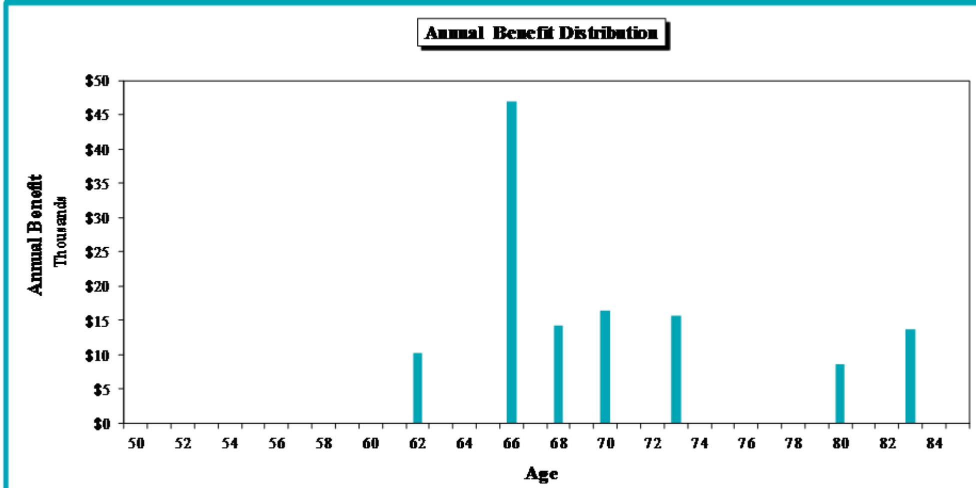
APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Employees' Retirement System Distribution of Disabled Members as of May 1, 2015

Age	Count	Annual Benefit*	Age	Count	Annual Benefit*	Age	Count	Annual Benefit*
<25	0	$0	57	0	$0	89	0	$0
25	0	0	58	0	0	90	0	0
26	0	0	59	0	0	91	0	0
27	0	0	60	0	0	92	0	0
28	0	0	61	0	0	93	0	0
29	0	0	62	1	10,277	94	0	0
30	0	0	63	0	0	95	0	0
31	0	0	64	0	0	96	0	0
32	0	0	65	0	0	97	0	0
33	0	0	66	3	46,973	98	0	0
34	0	0	67	0	0	99	0	0
35	0	0	68	1	14,325	100	0	0
36	0	0	69	0	0	101	0	0
37	0	0	70	1	16,454	102	0	0
38	0	0	71	0	0	103	0	0
39	0	0	72	0	0	104	0	0
40	0	0	73	1	15,651	105	0	0
41	0	0	74	0	0	106	0	0
42	0	0	75	0	0	107	0	0
43	0	0	76	0	0	108	0	0
44	0	0	77	0	0	109	0	0
45	0	0	78	0	0	110	0	0
46	0	0	79	0	0	111	0	0
47	0	0	80	1	8,599	112	0	0
48	0	0	81	0	0	113	0	0
49	0	0	82	0	0	114	0	0
50	0	0	83	1	13,774	115	0	0
51	0	0	84	0	0	116	0	0
52	0	0	85	0	0	117	0	0
53	0	0	86	0	0	118	0	0
54	0	0	87	0	0	119	0	0
55	0	0	88	0	0	120	0	0
56	0	0						
						Totals	9	$126,053

** The annual benefit does not include the subsidy benefits*

Kansas City Employees' Retirement System Distribution of Disabled Members as of May 1, 2015



APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Employees' Retirement System
Change in Plan Membership

Tier 1

	Actives	Vested Terminations	Refund Due	Disabilities	Retirees	Beneficiaries*	Total
May 1, 2014	**3,211**	**95**	**133**	**10**	**1,825**	**377**	**5,651**
New Entrants	0	0	8	0	0	0	8
Rehires	10	0	(2)	0	0	0	8
Vested Terminations	(2)	2	0	0	0	0	0
Terminated with Refund Due	(99)	0	99	0	0	0	0
Return of Contributions	(89)	(1)	(115)	0	0	0	(205)
Disabilities	0	0	0	0	0	0	0
Retirements	(120)	(7)	(14)	0	141	0	0
Deaths	0	(2)	0	(1)	(68)	(21)	(92)
New Survivor	0	0	0	0	0	32	32
Miscellaneous Adjustments	(7)	1	2	0	12	(1)	7
May 1, 2015	**2,904**	**88**	**111**	**9**	**1,910**	**387**	**5,409**

Tier 2

	Actives	Vested Terminations	Refund Due	Disabilities	Retirees	Beneficiaries*	Total
May 1, 2014	**0**	**0**	**0**	**0**	**0**	**0**	**0**
New Entrants	274	0	31	0	0	0	305
Rehires	7	0	0	0	0	0	7
Vested Terminations	0	0	0	0	0	0	0
Terminated with Refund Due	0	0	0	0	0	0	0
Return of Contributions	0	0	0	0	0	0	0
Disabilities	0	0	0	0	0	0	0
Retirements	0	0	0	0	0	0	0
Deaths	0	0	0	0	0	0	0
New Survivor	0	0	0	0	0	0	0
Miscellaneous Adjustments	3	0	2	0	0	0	5
May 1, 2015	**284**	**0**	**33**	**0**	**0**	**0**	**317**

Total

	Actives	Vested Terminations	Refund Due	Disabilities	Retirees	Beneficiaries*	Total
May 1, 2014	**3,211**	**95**	**133**	**10**	**1,825**	**377**	**5,651**
New Entrants	274	0	39	0	0	0	313
Rehires	17	0	(2)	0	0	0	15
Vested Terminations	(2)	2	0	0	0	0	0
Terminated with Refund Due	(99)	0	99	0	0	0	0
Return of Contributions	(89)	(1)	(115)	0	0	0	(205)
Disabilities	0	0	0	0	0	0	0
Retirements	(120)	(7)	(14)	0	141	0	0
Deaths	0	(2)	0	(1)	(68)	(21)	(92)
New Survivor	0	0	0	0	0	32	32
Miscellaneous Adjustments	(4)	1	4	0	12	(1)	12
May 1, 2015	**3,188**	**88**	**144**	**9**	**1,910**	**387**	**5,726**

** Widows & QDROs*

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions and Actuarial Cost Method

1. Demographic Assumptions

a. Mortality Rates

Healthy: 1994 Group Annuity Mortality Table (sample rates shown below)

Disabled: 1983 Railroad Retirement Board Disabled Life Mortality Table

The most recent experience study covering the period 2006-2010 showed that there are sufficient margins in these rates to provide for potential future improvement in mortality.

b. Termination Rates before Retirement

Sample Rate (%)					
	Mortality		Withdrawal*		
Age	Male	Female	General Employees**	Judges	Elected Officials
20	0.05%	0.03%	10.74%	--	10.00%
25	0.07%	0.03%	10.46%	--	10.00%
30	0.08%	0.04%	10.09%	--	10.00%
35	0.09%	0.05%	8.93%	--	10.00%
40	0.11%	0.07%	6.60%	--	10.00%
45	0.16%	0.10%	5.10%	--	10.00%
50	0.26%	0.14%	4.35%	--	--
55	0.44%	0.23%	2.37%	--	--
60	0.80%	0.44%	0.15%	--	--

* Withdrawal rates end upon first assumed retirement age.
** Select rates for first four years of service for General Employees:

Select Period	
Years of Service	Rate
0 – 1	20%
1 – 2	15%
2 – 3	12%
3 – 4	10%

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

c. Retirement Rates

Age	General Employees Age Plus Service Greater than or Equal to 80/85*	Other General Employees
Under 55	15%	0%
55	10%	2%
56	10%	2%
57	10%	2%
58	10%	2%
59	10%	2%
60	15%	10%
61	15%	10%
62	15%	20%
63	15%	20%
64	15%	20%
65	50%	50%
66	50%	50%
67	50%	50%
68	50%	50%
69	50%	50%
70	100%	100%

* 33% of General Employees younger than 65 are assumed to retire at first age when age plus service equals 80 for Tier 1 members and 85 for Tier 2 members.

	Age	Percent
Elected Officials	65	100%
Judges	65	100%

d. Retirement Age for Inactive Vested Members

60 if years of service is greater than or equal to 10, and 65 if years of service is less than 10.

e. Unknown Data for Members

Same as those exhibited by Members with similar known characteristics. If not specified, Members are assumed to be male.

f. Percent Married

80% for males and 70% for females in active status.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

g. Age of Spouse

Females 3 years younger than males.

.

h. Joint and Survivor Election Assumption

85% for married males and 70% for married females in active status.

i. Net Investment Return

7.50% per annum, including inflation of 3.00% and net of investment fees.

j. Administrative Expenses

0.24% of payroll is added to the normal cost of the system for expected administrative expenses.

k. Salary Increases

General Employees	
Age	**Rate (%)**
Less than 25	8.00%
25 – 29	7.00
30 – 34	6.50
35 – 39	5.50
40 – 44	5.00
45 – 49	5.00
50 – 54	4.50
55 – 59	4.00
60 – 64	4.00
65 and up	4.00

Judges and Elected Official: 5.00% per year for all ages.

l. Interest on Employee Contributions

5.00% per year, compounded annually.

m. Changes since Last Valuation

An administrative expense assumption of 0.24% of payroll was added.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

B. Rationale for Assumptions

1. Economic Assumptions

The investment return assumption of 7.50% was selected based upon an analysis that included (a) capital market assumptions provided by the investment consultant, (b) the asset allocation of the fund, and (c) investment return assumptions of other public retirement systems.

The inflation assumption of 3.0% was selected based upon an analysis that included (a) input from the investment consultant, (b) historical inflation as measured by the Consumer Price Index, and (c) implied inflation in long term government bonds.

The long term wage growth assumption of 4.0% was based upon the inflation assumption of 3.0% plus a real wage growth assumption of 1.0% which was derived from an analysis of historical increases in Social Security Average earnings.

2. Demographic Assumptions

The demographic assumptions are based upon the most recent experience study covering the period 2006-2010.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

C. Actuarial Methods

1. Actuarial Value of Assets

Asset values are gradually adjusted toward market value by adding 25% of the difference between the market value and expected actuarial asset value to the expected actuarial asset value. The expected actuarial asset value is the actuarial asset value at the beginning of the year plus contributions, less benefit payments, all with interest at the assumed net rate of investment return on an actuarial basis. If the actuarial value of assets is less than 85% or more than 110% of the market value, an adjustment is made to the actuarial value to bring the value within this corridor.

2. Actuarial Cost Method

Entry Age Normal Actuarial Cost Method: Entry age is the age at the time the participant commenced employment. Normal cost and actuarial liability are calculated on an individual basis and are allocated by salary, with normal cost determined as if the current benefit accrual rate had always been in effect.

3. Amortization of Unfunded Actuarial Liability/Surplus

Board Funding Policy: 20-year layered amortization method; level percent of pay for all years except the 5/1/2009 Plan Year (30-year layer). Under the layered approach, the May 1, 2009 changes to the unfunded actuarial liability will be written down over a 30-year period and all future changes to the unfunded actuarial liability will establish new 20-year amortization periods. Payroll is expected to increase 4.0% per year.

City Contribution Policy: Under the Ordinance, the City's contribution will be based on an open 30-year amortization period, level percent of pay.

4. Changes since Last Valuation

None.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

1. Plan Year

May 1 through April 30.

2. Membership

All full-time permanent employees hired prior to April 20, 2014 in the classified and unclassified services shall become members as a condition of employment. Employees of any administrative board or board of control as organized and existing under general laws of Missouri and as defined in Revised Statutes of Missouri, Section 95.540, whose governing body has elected membership, shall become members. Unless otherwise provided, no members of the Council, including the Mayor, who commence a term of office after April 30, 2011 shall participate in this plan for any service after April 30, 2011. However, members of the Council, including the Mayor, elected on March 27, 2007 for a term beginning May 1, 2007 and also elected on March 22, 2011 for a term beginning May 1, 2011 are members of this plan as long as they are continuously a member of the council, including the Mayor. Membership shall begin on the first day of employment.

3. Credited Service

Total creditable service is defined as the sum of the number of years of membership service and prior service.

Membership Service: Years and full calendar months of employment while a contributing member of this System.

Prior Service: Years and full calendar months of employment preceding December 21, 1962, if continuous with membership service.

MAST employees are credited with service after April 25, 2010, plus a fraction of their service earned prior to April 25, 2010. This Fraction is based on their age and service as of April 25, 2010 as shown in the following table:

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

Sum of Age and Prior Service as of 4/25/10 Less Adjustment for Prior Retirement Benefit	Percent of Prior Service Credit
Over 80	100%
74 to 79	90
68 to 73	80
62 to 67	70
56 to 61	60
50 to 55	50
44 to 49	40
38 to 43	30
32 to 37	20
26 to 31	10
20 to 25	5

4. Normal Retirement

Age Requirement: General Employees: 65
Judges and Elected Officials: Later of age 60 or expiration of term of office.

Service Requirement: General Employees: 5 years of creditable service.
Judges and Elected Officials: One elective term.

Amount: General Employees:
If unmarried or married and not electing a joint & survivor benefit at time of retirement, 2.22% of final average compensation multiplied by years and months of creditable service.

If married and electing a joint & survivor benefit at date of retirement, 2.00% of final average compensation multiplied by years and months of creditable service.

Minimum benefit: $400 per month if retirement with at least 10 years of creditable service.

Maximum benefit: 70% of final average compensation.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

Judges and Elected Officials:
2.22% of average monthly compensation received by then serving Judges and Elected Officials of the same office during the 24 months preceding the beginning of the annuity multiplied by years and months of creditable service.

Maximum benefit: 70% of the existing salary for then serving Judges and Elected Officials of the same office.

A member retiring with a normal, optional, service or early retirement benefit may elect to withdraw all, or a portion of, member accumulated contributions and interest, and receive a reduced annuity.

Final average compensation is defined as the monthly average of the two highest years of compensation in the last ten years (for Judges and Elected Officials, last ten years for then serving elected official of same office). Compensation does not include bonus, overtime, expense allowance or other extraordinary compensation.

5. Optional Retirement

Age/Service Requirement:	60 and 10 years of creditable service, or the sum of age and service equals 80, if earlier.
Amount:	Same as normal retirement.

6. Early Retirement

Age/Service Requirement:	General Employees: 60 and 5 years of creditable service, or 55 and 10 years of creditable service. Judges and Elected Officials: 55 and 10 years of creditable service.
Amount:	Accrued benefit reduced by ½ of 1% per month of age less than 60 or, if service is less than ten, ½ of 1% per month of age less than 65.

7. Disability Benefit

Disability benefits are provided through a separate long-term disability program, effective June 1, 1996.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

8. Vesting

Age Requirement: None.

Service Requirement: Five years of service.

Amount: Accrued benefit payable at age 60, or payable at age 65 if service less than 10.

9. Withdrawal (Refund) Benefit

Age Requirement: None.

Service Requirement: Less than five years of service.

Amount: An employee terminating before becoming eligible for a deferred pension or choosing not to elect a deferred benefit, will receive a return of contributions with interest.

10. Pre-Retirement Death Benefit

Service less than five years

Age Requirement: None.

Service Requirement: Less than five years.

Amount: Lump sum equal to the member's accumulated contributions and interest shall be paid to the surviving spouse or, if no surviving spouse, to the designated beneficiary, or, if none, to the member's estate.

Service of five or more years but less than 20 years:

Age Requirement: None.

Service Requirement: Five or more years of service but less than 20 years.

Amount: The surviving spouse may elect, in lieu of the lump sum settlement above, an annuity equal to 50% of the member's accrued annuity at the time of death. The effective date of this annuity shall be the later of the first day of the month following the member's death or attainment of what would have been the member's early retirement

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

date. The annuity is reduced for early retirement if paid at the member's early retirement date.

Service of 20 or more years of service:

Age Requirement: None.

Service Requirement: 20 or more years of service.

Amount: The surviving spouse may elect, in lieu of the settlements above, an annuity equal to 100% of the member's accrued annuity at the time of death, actuarially reduced for 100% joint and survivor coverage. The effective date of this annuity shall be the first day of the month following the member's death.

11. Post-Retirement Death Benefit

Age Requirement: None.

Service Requirement: None.

Amount: The surviving spouse shall receive an annuity equal to 50% of the member's accrued annuity, or, if the member elected the actuarially equivalent 100% joint and survivor annuity, this annuity shall continue to be paid to the surviving spouse. Either annuity is payable until death of the spouse.

12. Minimum Surviving Spouses' Pension

A minimum benefit of $200 per month is paid to surviving spouses of members with 10 or more years of creditable service.

13. Health Insurance Subsidy

A monthly health insurance subsidy of $200 is paid to all current and future pensioners. Benefits are payable for the lifetime of the member and are not subject to an annual cost-of-living adjustment.

14. Cost-of-Living Adjustment (COLA)

An increase of 3.00% of the original pension will be made annually. Members must retire on or before January 1st in order to receive a COLA in the following year.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

15. Contributions

a. Member
- 5.00% of salary for non-MAST employees.
- Between 5.00% and 7.00% for MAST employees based on their age and service as of April 25, 2010 (see following table).
- The City "picks up" these employee contributions.

b. City
- For the year beginning May 1, 2015, the City is contributing 14.64% of payroll, which is the actuarially determined Board contribution rate for the prior year, for the period from May 1, 2015 to June 30, 2015, and 14.71% for the period from July 1, 2015 to April 30, 2016. Future City contributions will be determined through the City's budgeting process.

The contribution rate for MAST employees is based upon the following table:

Sum of Age and Prior Service as of 4/25/10 Less Adjustment for Prior Retirement Benefit	Contribution Rate
Over 80	7.0%
74 to 79	6.0%
68 to 73	5.8%
62 to 67	5.6%
56 to 61	5.4%
50 to 55	5.2%
44 to 49	5.1%
38 to 43	5.0%
32 to 37	5.0%
26 to 31	5.0%
20 to 25	5.0%

16. Interest on Employee Contributions

As determined by the Board of Trustees.

17. Changes since Last Valuation

None.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 2

1. Plan Year

May 1 through April 30.

2. Membership

All full-time permanent employees hired on or after April 20, 2014 in the classified and unclassified services shall become members as a condition of employment.

3. Credited Service

Total creditable service is defined as the sum of the number of years of membership service and prior service.

Membership Service:	Years and full calendar months of employment while a contributing member of this System.
Prior Service:	Years and full calendar months of employment preceding December 21, 1962, if continuous with membership service.

4. Normal Retirement

Age Requirement:	67
Service Requirement:	10 years of creditable service.
Amount:	1.75% of final average compensation multiplied by years and months of creditable service. Minimum benefit: $400 per month if retirement with at least 10 years of creditable service. Maximum benefit: 70% of final average compensation. A member retiring with a normal, optional, service or early retirement benefit may elect to withdraw all, or a portion of, member accumulated contributions and interest, and receive a reduced annuity. Final average compensation is defined as the monthly average of the three highest years of compensation in the last ten years. Compensation does not include bonus, overtime, expense allowance or other extraordinary compensation.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 2

5. Optional Retirement

Age/Service Requirement:	The earlier of age 62 and 10 years of creditable service, or the sum of age and service equals 85.
Amount:	Same as normal retirement.

6. Early Retirement

Age/Service Requirement:	57 and 10 years of creditable service.
Amount:	Accrued benefit reduced by ½ of 1% per month of age less than 62.

7. Disability Benefit

Disability benefits are provided through a separate long-term disability program.

8. Vesting

Age Requirement:	None.
Service Requirement:	Ten years of service.
Amount:	Accrued benefit payable at age 62.

9. Withdrawal (Refund) Benefit

Age Requirement:	None.
Service Requirement:	Less than ten years of service.
Amount:	An employee terminating before becoming eligible for a deferred pension or choosing not to elect a deferred benefit, will receive a return of contributions with interest.

10. Pre-Retirement Death Benefit

Service less than ten years

Age Requirement:	None.
Service Requirement:	Less than ten years.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 2

Amount:	Lump sum equal to the member's accumulated contributions and interest shall be paid to the surviving spouse or, if no surviving spouse, to the designated beneficiary, or, if none, to the member's estate.

Service of ten or more years but less than 20 years:

Age Requirement:	None.
Service Requirement:	Ten or more years of service but less than 20 years.
Amount:	The surviving spouse may elect, in lieu of the lump sum settlement above, an annuity equal to 50% of the member's accrued annuity at the time of death. The effective date of this annuity shall be the later of the first day of the month following the member's death or attainment of what would have been the member's early retirement date. The annuity is reduced for early retirement if paid at the member's early retirement date.

Service of 20 or more years of service:

Age Requirement:	None.
Service Requirement:	20 or more years of service.
Amount:	The surviving spouse may elect, in lieu of the settlements above, an annuity equal to 100% of the member's accrued annuity at the time of death, actuarially reduced for 100% joint and survivor coverage. The effective date of this annuity shall be the first day of the month following the member's death.

11. Post-Retirement Death Benefit

Age Requirement:	None.
Service Requirement:	None.
Amount:	The surviving spouse shall receive an annuity equal to 50% of the member's accrued annuity, or, if the member elected the actuarially equivalent 100% joint and survivor annuity, this annuity shall continue to be paid to the surviving spouse. Either annuity is payable until death of the spouse.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 2

12. Minimum Surviving Spouses' Pension

A minimum benefit of $200 per month is paid to surviving spouses of members with 10 or more years of creditable service.

13. Health Insurance Subsidy

A monthly health insurance subsidy of $200 is paid to all current and future pensioners. Benefits are payable for the lifetime of the member and are not subject to an annual cost-of-living adjustment.

14. Cost-of-Living Adjustment (COLA)

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 age 62. Members must retire on or before January 1st, in order to receive a COLA in the next year.

15. Contributions

a. Member	-	5.00% of salary.
	-	The City "picks up" these employee contributions.
b. City	-	For the year beginning May 1, 2015, the City is contributing 14.64% of payroll, which is the actuarially determined Board contribution rate for the prior year, for the period from May 1, 2015 to June 30, 2015, and 14.71% for the period from July 1, 2015 to April 30, 2016. Future City contributions will be determined through the City's budgeting process.

16. Interest on Employee Contributions

As determined by the Board of Trustees.

17. Changes since Last Valuation

None.

APPENDIX D
GLOSSARY OF TERMS

1. **Actuarial Assumptions**

   Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disability, and retirement; changes in compensation; inflation; rates of investment earnings, and asset appreciation or depreciation; and other relevant items.

2. **Actuarial Cost Method**

   A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a Normal Cost and an Actuarial Liability.

3. **Actuarial Gain/(Loss)**

   A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

4. **Actuarial Liability**

   The portion of the Actuarial Present Value of Projected Benefits which will not be paid by future Normal Costs. It represents the value of the past Normal Costs with interest to the valuation date.

5. **Actuarial Present Value (Present Value)**

   The value as of a given date of a future amount or series of payments. The Actuarial Present Value discounts the payments to the given date at the assumed investment return and includes the probability of the payment being made. As a simple example: assume you owe $100 to a friend one year from now. Also, assume there is a 1% probability of your friend dying over the next year, in which case you won't be obligated to pay him. If the assumed investment return is 10%, the actuarial present value is:

Amount		Probability of Payment		1/(1+Investment Return)		
$100	x	(1 - .01)	x	1/(1+.1)	=	$90

6. **Actuarial Valuation**

   The determination, as of a specified date, of the Normal Cost, Actuarial Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

APPENDIX D
GLOSSARY OF TERMS

7. Actuarial Value of Assets

The value of cash, investments and other property belonging to a pension plan as used by the actuary for the purpose of an Actuarial Valuation. The purpose of an Actuarial Value of Assets is to smooth out fluctuations in market values. This way long-term costs are not distorted by short-term fluctuations in the market.

8. Actuarially Equivalent

Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

9. Amortization Payment

The portion of the pension plan contribution which is designed to pay interest and principal on the Unfunded Actuarial Liability in order to pay for that liability in a given number of years.

10. Entry Age Normal Actuarial Cost Method

A method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages.

11. Funded Percentage

The ratio of the Actuarial Value of Assets to the Actuarial Liabilities.

12. Investment Return Assumption

The assumed interest rate used for projecting dollar related values in the future.

13. Mortality Table

A set of percentages which estimate the probability of death at a particular point in time. Typically, the rates are annual and based on age and sex.

14. Normal Cost

That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

APPENDIX D
GLOSSARY OF TERMS

15. Projected Benefits

Those pension plan benefit amounts which are expected to be paid in the future under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and increases in future compensation and service credits.

16. Unfunded Actuarial Liability

The excess of the Actuarial Liability over the Actuarial Value of Assets.