

**City of Kansas City,
Missouri Firefighters'
Pension System**

**Actuarial Valuation
as of May 1, 2008**

Produced by [Cheiron](#)

August 2008

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LETTER OF TRANSMITTAL

August 11, 2008

Board of Pension Trustees
City of Kansas City, Missouri Firefighters' Pension 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 Firefighters' Pension System (KCFPS) as of May 1, 2008. The valuation is organized as follows:

- In Section I, 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- Required Accounting Disclosures (GASB)
- In the **Appendices** we conclude our report with detailed information describing System membership (Appendix A), actuarial assumptions and methods employed (Appendix B), and a summary of pertinent plan provisions (Appendix C).

The results of this report rely on future plan experience conforming to the underlying assumptions. . As of May 1, 2008, we changed the investment return assumption from 8.00% to 7.75%. To the extent that actual plan experience deviates from the underlying assumptions, the results would vary accordingly.

In addition to the investment return assumption change, we also changed the smoothing method for the actuarial value of assets, as well as the amortization method of the Unfunded Actuarial Liability (UAL). Both of these changes are mentioned throughout the valuation and are stated in detail in Appendix B.

In preparing our report, we relied without audit, on information supplied by KCFPS staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. In addition, we certify that, to the best of our knowledge, this report is complete and accurate and has 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 as set out by the Actuarial Standards Board.

Finally, as a Member of the American Academy of Actuaries, I, Gene Kalwarski, certify that I meet the Qualification Standards to render the opinions contained in this report.

Sincerely,
Cheiron



Gene Kalwarski, FSA
Consulting Actuary



Matthew Avery, ASA
Assistant 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 Plan,
- Past and expected trends in the financial progress of the Plan,
- The City's contributions for Fiscal Year 2009, and
- Information required by the Governmental Accounting Standards Board (GASB).

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 valuation represents Cheiron's second valuation performed for KCFPS. As stated in the letter of transmittal, the May 1, 2008 valuation reflects the assumption and methodology changes that were approved by the KCFPS Board. These changes are as follows:

- The Asset Smoothing Method: The Board moved to change the asset corridor from 90% minimum/110% maximum to 85% minimum/110% maximum.
- Amortization of UAL: The Board moved to change the unfunded actuarial liability amortization method 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 5/1/2009*. Under the layered approach the May 1, 2008 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.
- Investment Assumption: The Board moved to change the investment assumption from 8.00% to 7.75%.

SECTION I
BOARD SUMMARY

B. Key Findings of this Valuation

The key results of the May 1, 2008 actuarial valuation are as follows:

- The actuarially determined City contribution rate increased from 17.67% as of May 1, 2007 to 18.52% as of May 1, 2008. The actual rate that the City is scheduled to use for Fiscal Year 2009 however is 19.60% of payroll.
- The FPS's unfunded actuarial liability decreased from \$36 million on May 1, 2007 to \$32 million on May 1, 2008.
- The FPS's funding ratio, the ratio of assets over liabilities increased from 92.1% to 93.4% as of May 1, 2008.
- The primary factor in the improvement in the plan's funded status was an overall gain on the unfunded actuarial liability of \$2.6 million.
 - During the year ended April 30, 2008, the Plan's assets returned -4.50% on a market value basis. The return on the actuarial asset value (i.e. incorporating asset smoothing) was 11.05% (as compared to 8.00% assumed). This resulted in an actuarial gain on investments of \$12.4 million.
 - On the liability side the System experienced an actuarial gain of \$3.6 million attributable to assumptions made on pay increases and rates of mortality, retirement, disability and withdrawal.
 - In addition, the change of the investment return assumption resulted in a loss of \$13.4 million on the actuarial liability.

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

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**SECTION I
BOARD SUMMARY**

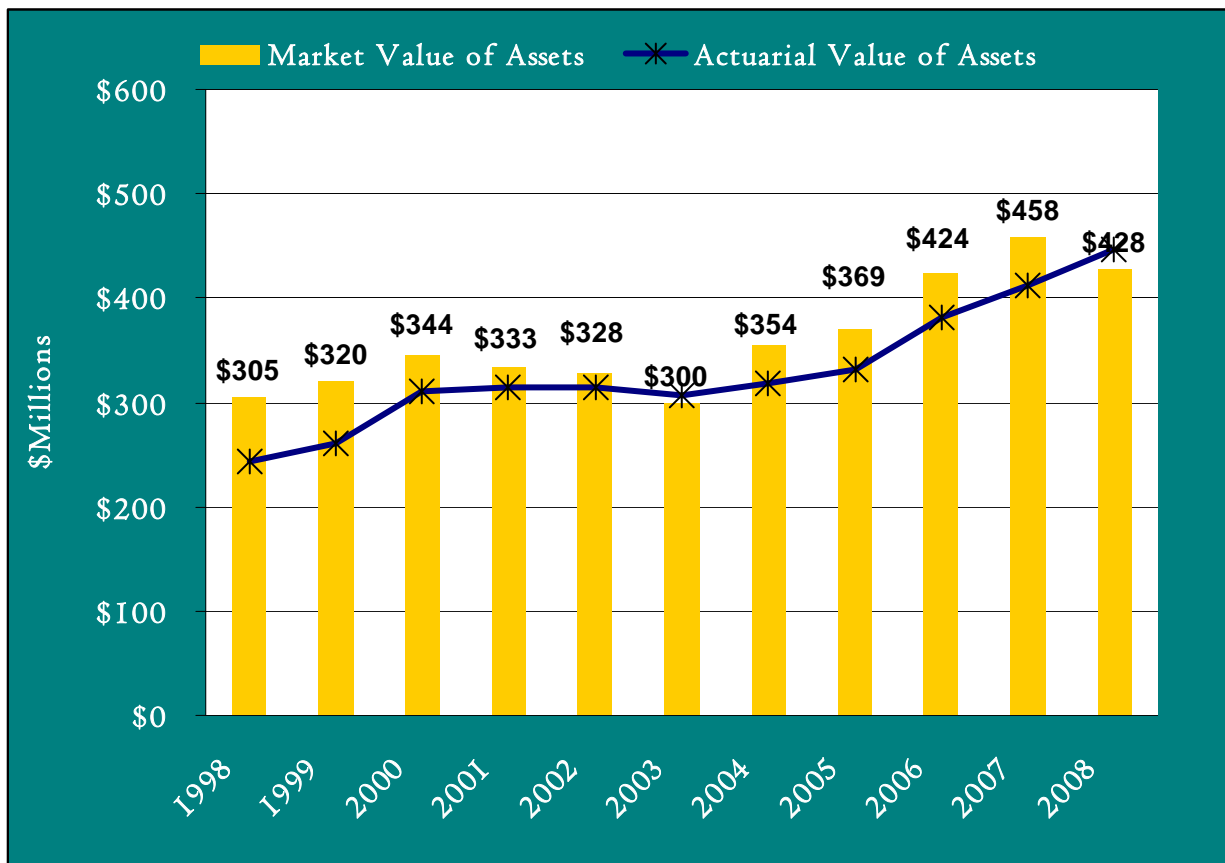
City of Kansas City, Missouri Firefighters' Pension System Summary of Principal Plan Results			
Valuation as of:	May 1, 2007	May 1, 2008	% Change
<u>Participant Counts</u>			
Active Participants	928	932	0.43%
Disabled Participants	250	255	2.00%
Retirees and Beneficiaries	624	612	(1.92%)
Terminated Vested Participants	0	0	0.00%
Inactive Participants	9	8	(11.11%)
Total	1,811	1,807	(0.22%)
Annual Salaries of Active Members	\$ 49,420,823	\$ 51,168,515	3.54%
Annual Retirement Allowances for Retired Members and Beneficiaries	\$ 23,705,813	\$ 24,570,133	3.65%
<u>Assets and Liabilities</u>			
Actuarial Liability (AL)	\$ 447,939,116	\$ 478,734,450	6.87%
Actuarial Value of Assets	412,407,949	447,209,064	8.44%
Unfunded Actuarial Liability (UAL)	35,531,167	31,525,386	(11.27%)
Funded Ratio	92.1%	93.4%	
Present Value of Accrued Benefits (PVAB)	\$ 423,701,959	\$ 452,920,487	6.90%
Market Value of Assets	458,231,054	427,637,394	(6.68%)
Unfunded PVAB	(34,529,095)	25,283,093	(173.22%)
Accrued Benefit Funding Ratio	108.1%	94.4%	
<u>Contributions as a Percentage of Payroll</u>			
	Fiscal Year 2008	Fiscal Year 2009	
Normal Cost Contribution	13.17%	14.77%	
Unfunded Actuarial Liability Contribution	4.50%	3.75%	
Total City Contribution	17.67%	18.52%	
Annual Required Contribution (GASB)	\$ 8,734,919	\$ 9,476,409	8.49%

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.

System Assets

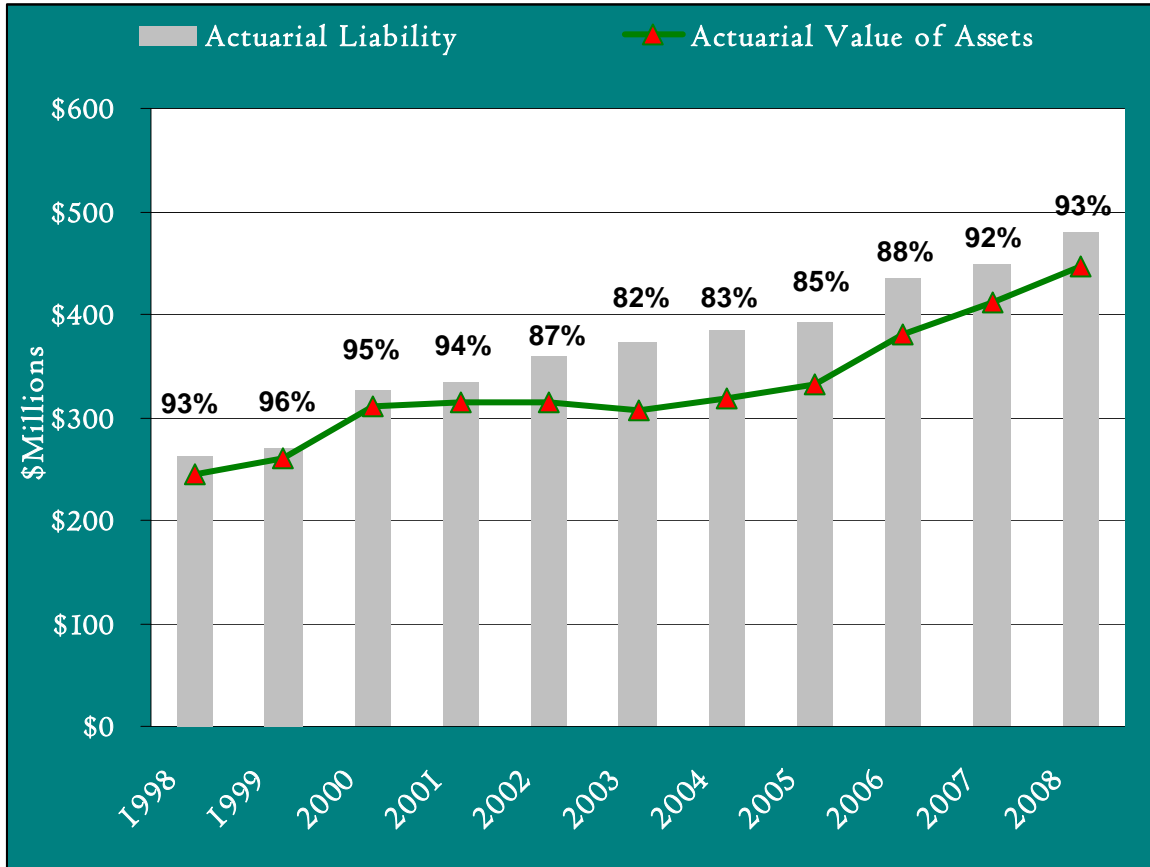


The market value of assets (MVA) had a loss on investments in 2008, returning -4.50%. However, due to the asset smoothing method in place, the actuarial value of assets has tracked a much smoother path through the volatility of the market value of assets. As can be seen in the graph, the actuarial value of assets (AVA) increased from 2007 to 2008 due to smoothing, despite a loss on the market value of assets.

SECTION I
BOARD SUMMARY

Assets and Liabilities

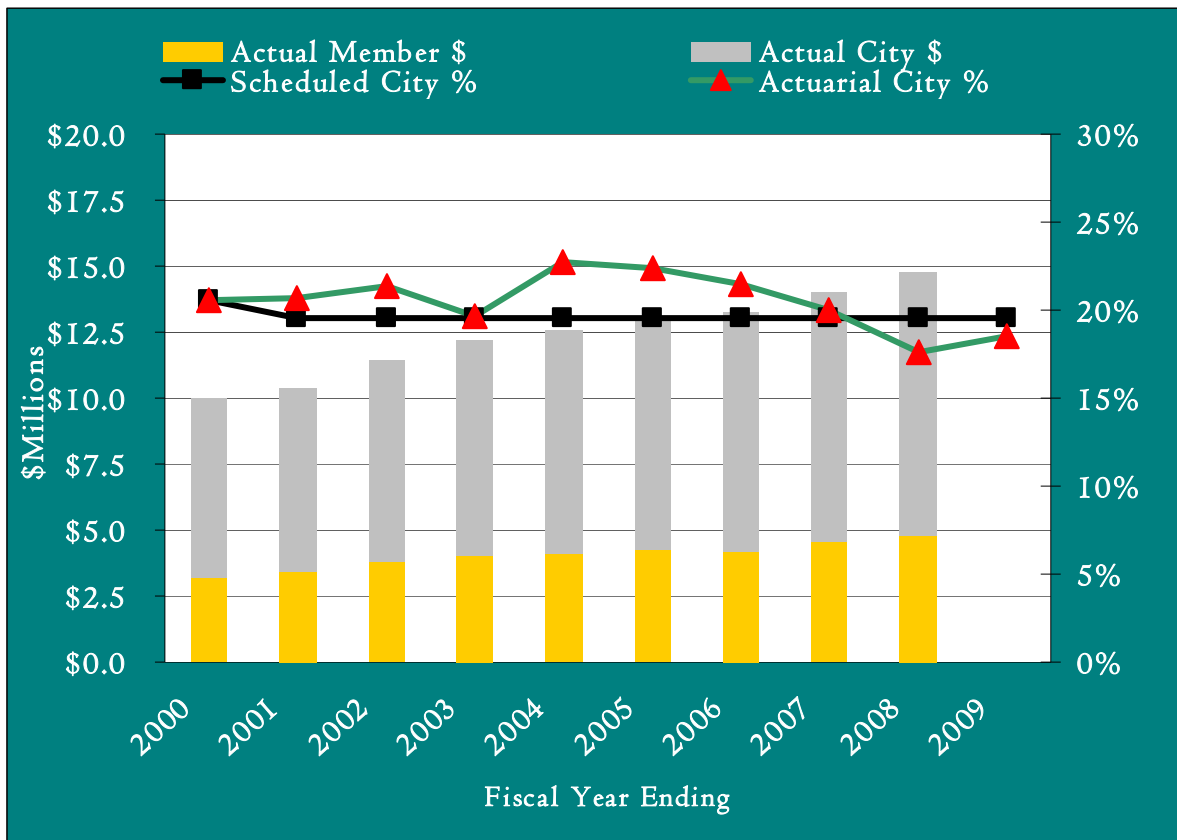
The chart below compares the actuarial value of assets to the actuarial liabilities as well as the funded ratio, sometimes referred to as the benefit security ratio. This chart shows that the Plan now has the highest funded ratio since 2001.



**SECTION I
BOARD SUMMARY**

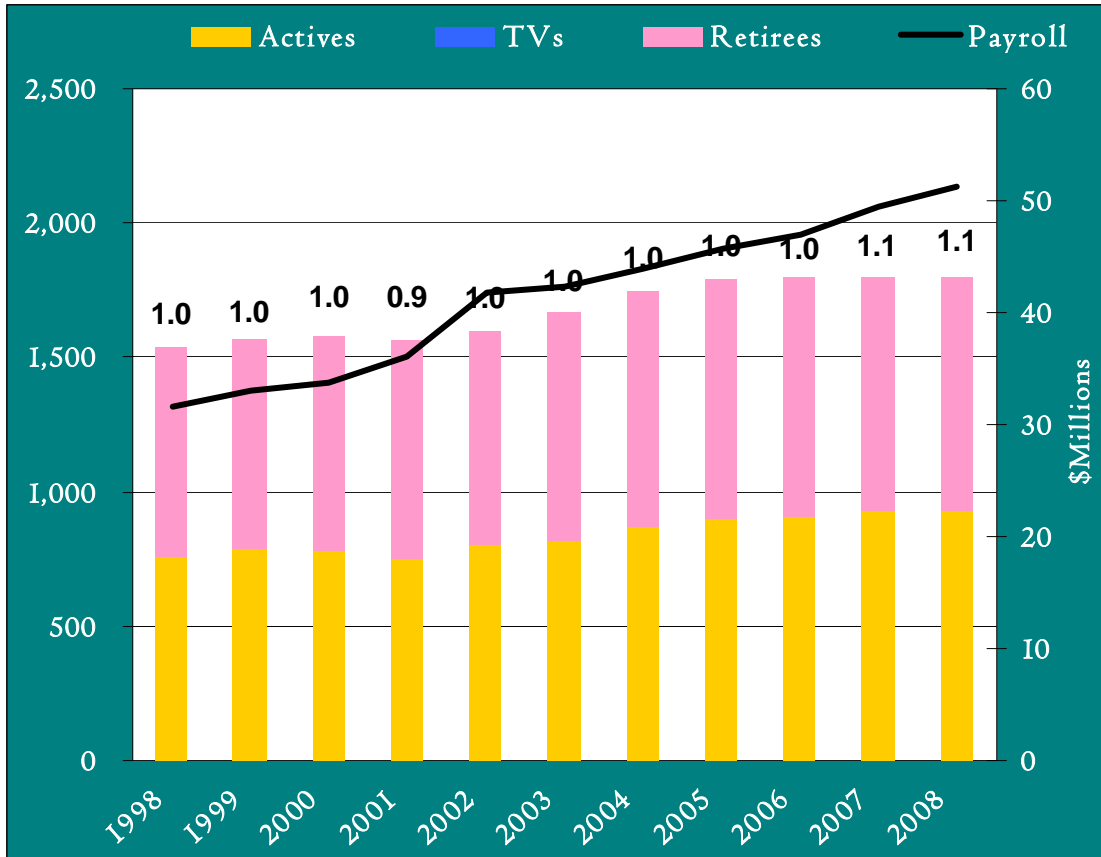
Contribution Rates

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 2000. The green line shows the City's actuarial contribution rate as a percent of payroll (depicted on the right hand scale). The black line shows the City's scheduled contribution rate as a percent of payroll (depicted on the right hand scale). The member contribution rate is set by City law at 9.55% of payroll. The City contribution rate is currently scheduled to be 19.60% of payroll.



SECTION I
BOARD SUMMARY

Participant Trends



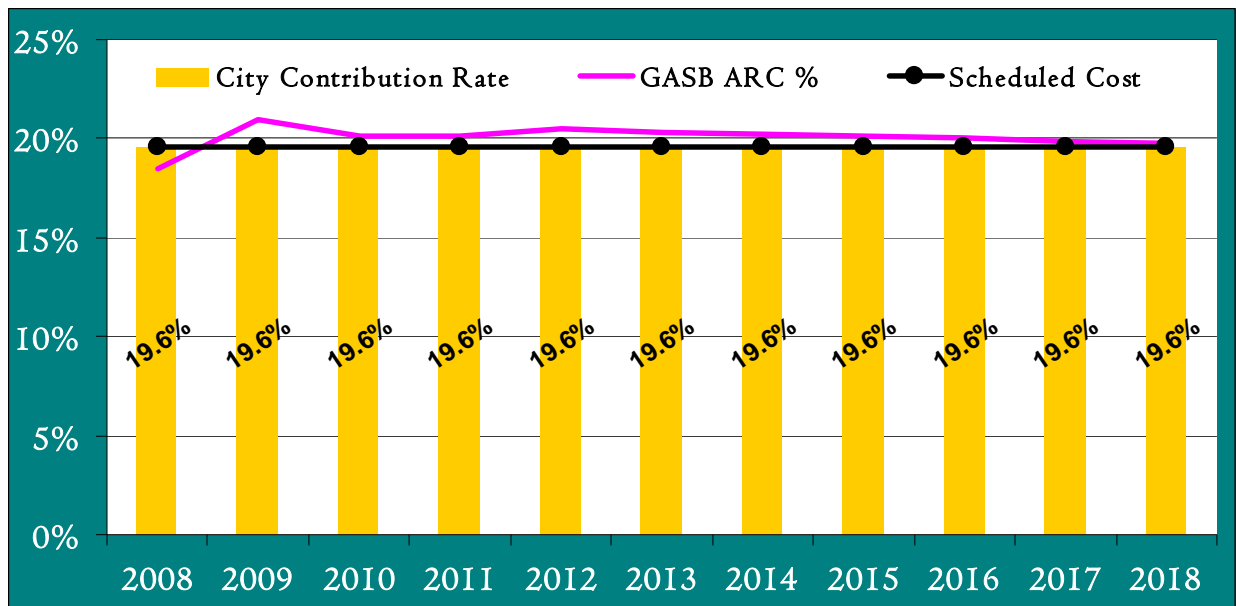
This next chart provides a measure for the maturity in the plan, by comparing the ratio of active members to inactive members (retirees and terminated-vesteds). As with many funds in this country, there has been a steady growth in the number of retired members as the Plan has matured. The active-to-inactive ratio has increased since 2001 from 0.9 actives supporting each inactive member to 1.1 actives supporting each inactive member today.

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 our assessment of the implications of the May 1, 2008 valuation results in terms of benefit security (assets over liabilities). As far as the City's scheduled cost progression, the employer's rate is projected, under each scenario, to be the same regardless of the investment return scenario.

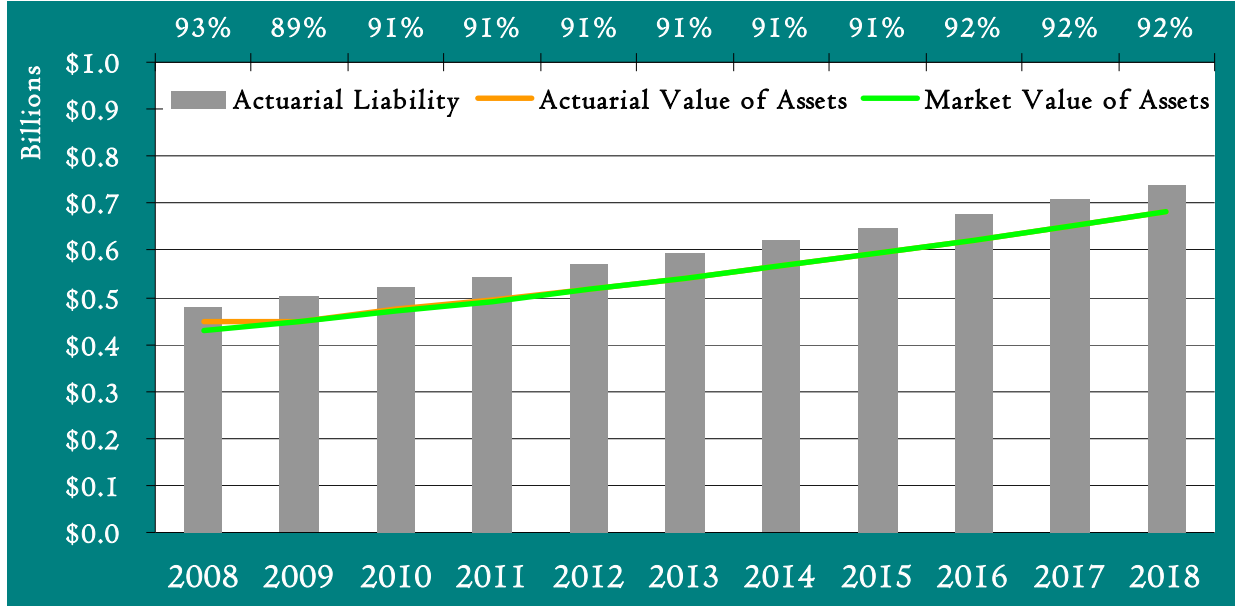
Contribution Rate Projections



Our projections of assets to liabilities which follow are shown on three different bases, expected investment returns of 7.75%, the current assumed rate, returns of 9.25%, and returns of 6.25%.

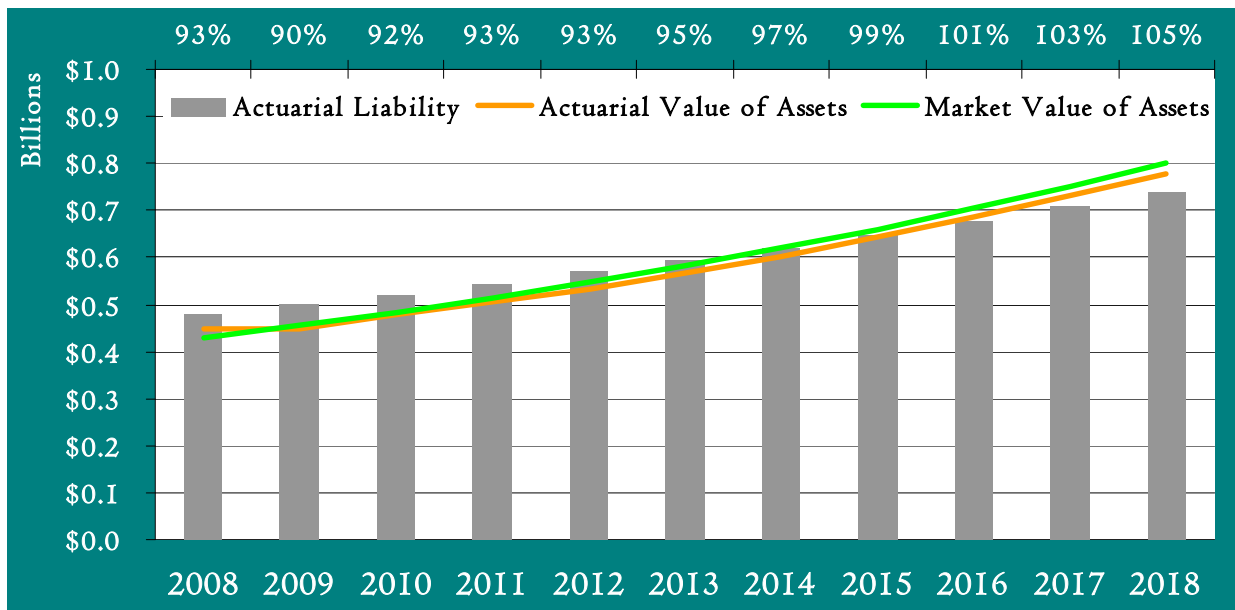
SECTION I
BOARD SUMMARY

Asset and Liability Projections: Baseline 7.75% return



The graph above shows the projected funding status remaining steadily over 90% over the next 10 years.

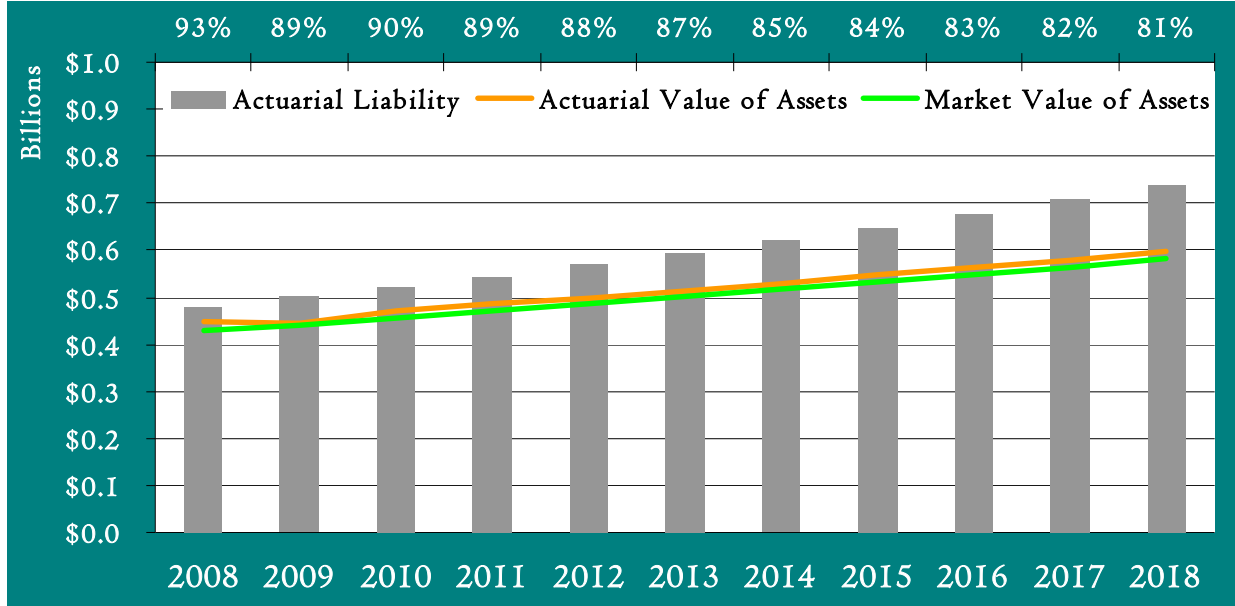
Projections With Asset Returns of 9.25%



With superior returns of 9.25% each year, the Plan would reach 105% funding by 2018.

SECTION I
BOARD SUMMARY

Projections With Asset Returns of 6.25%



With earnings of only 6.25%, this projection shows a decrease in the Plan's funded status from the current 93% down to 81% by the end of the period. Even though the scheduled contributions being projected remain unchanged regardless of the investment scenario, the key driver of this result is the significant 2008 loss on market value of assets doesn't get fully recognized until after 2008 due to the 5-year smoothing method.

SECTION II ASSETS

Pension System assets play a key role in the financial operation of the Plan 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 Plan assets including:

- **Disclosure** of Plan assets as of May 1, 2007 and May 1, 2008;
- 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 Plan's expected **cash flows** for the next ten years.

Disclosure

There are two types of asset values disclosed in the valuation, the market value of assets and the actuarial value of assets. The market value represents "snap-shot" or "cash-out" values which provide 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 long-range planning 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, 2007 and 2008.

TABLE II-1			
Statement of Assets at Market Value as of April 30,			
Assets	2007	2008	% Change
Cash	\$ 10,636,157	\$ 14,610,755	37.37%
Stock and Collective Trusts	450,026,168	415,264,451	(7.72%)
Accounts Receivable	1,625,072	1,170,803	(27.95%)
Interest and Dividends	165,154	113,946	(31.01%)
Contributions Received	469,354	548,701	16.91%
Expenses	(1,053,725)	(809,605)	(23.17%)
Purchase of Investments	(1,866,318)	(1,682,755)	(9.84%)
Health Assets	(1,770,808)	(1,578,902)	(10.84%)
Market Value of Assets	\$ 458,231,054	427,637,394	(6.68%)

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**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, 2007 and April 30, 2008.

TABLE II-2	
Changes in Market Values	
Value of Assets – April 30, 2007	\$ 458,231,054
<u>Additions</u>	
Member Contributions	4,804,960
Employer Contributions	9,937,683
Interest and Dividends	2,993,696
Investment Return	<u>(20,633,776)</u>
Total Additions	(2,897,438)
<u>Deductions</u>	
Benefit Payments	(24,951,351)
Administrative Expenses	<u>(2,744,870)</u>
Total Deductions	(27,696,222)
Value of Assets – April 30, 2008	\$ 427,637,394

**SECTION II
ASSETS**

Actuarial Value of Assets

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

A preliminary actuarial value of assets is calculated as the sum of the beginning of the year actuarial value of assets, the net new money and the expected return on an actuarial basis. The gains and losses over the last 4 years are recognized over the next 5 year period. The gain or loss of each year is the excess of market value of assets over the preliminary value of assets, minus the sum of the unrecognized gains and losses from each of the 4 years. Finally, an adjustment is made so that the final actuarial value of assets is at least 85% but no more than 110% of the market value.

**TABLE II-3
Development of Actuarial Value of Assets**

1.	Actuarial Value of Assets at May 1, 2007		\$	412,407,949
2.	Employer and Employee Contributions		\$	14,742,642
3.	Benefit Payments			(24,951,351)
4.	Expenses			<u>(2,744,870)</u>
5.	Net Cash Flow (2+3+4)		\$	(12,953,579)
6.	Expected Value of investment return at 8.00%			32,592,143
7.	Actual investment return on Market Value			<u>(20,384,951)</u>
8.	Investment gain/(loss) for the year (7-6)		\$	(52,977,094)
9.	Investment gain/(loss) from current and prior years to be recognized in the plan year ending April 30, 2008			
		Total Gain/ <u>(Loss)</u>		<u>Deferred to Future Years</u>
	Plan Year End			
	April 30, 2008	\$ (52,977,094)	80%	\$ (42,381,675)
	April 30, 2007	14,308,187	60%	8,584,912
	April 30, 2006	36,535,226	40%	14,614,090
	April 30, 2005	(1,944,981)	20%	(388,996)
	April 30, 2004	<u>70,114,301</u>	0%	<u>0</u>
	Total	\$ 66,035,639		\$ (19,571,669)
10.	Market Value of Assets for Year ending April 30, 2008 :		\$	427,637,394
11.	Preliminary Actuarial Value of Assets on May 1, 2008 (10 - 9 deferred):			447,209,063
12.	110% of MV, Upper Limit for Actuarial Value			470,401,134
13.	85% of MV, Lower Limit for Actuarial Value			363,491,785
14.	Actuarial Value of Assets on May 1, 2008		\$	447,209,064

**SECTION II
ASSETS**

Investment Performance

The market value of assets (MVA) returned -4.50% during 2008, which is lower than the assumed 8.00% return. A return of 11.05% on the actuarial value of assets (AVA) is primarily the result of the asset smoothing method being utilized for the calculation of the actuarial value of assets.

Projection of Plan's Future Cash Flows

Table II-4 Projection of Plan's Expected Cash Flows			
Year Beginning May 1,	Expected Benefit Payments	Expected Contributions*	Net Cash Flow
2008	\$ (26,867,272)	\$ 14,915,622	\$ (11,951,650)
2009	(28,215,785)	15,363,091	(12,852,694)
2010	(29,603,773)	15,823,984	(13,779,789)
2011	(30,738,625)	16,298,703	(14,439,922)
2012	(31,804,904)	16,787,664	(15,017,240)
2013	(32,772,475)	17,291,294	(15,481,181)
2014	(33,810,871)	17,810,033	(16,000,838)
2015	(35,008,223)	18,344,334	(16,663,889)
2016	(36,512,046)	18,894,664	(17,617,382)
2017	(38,227,913)	19,461,504	(18,766,409)

* Expected contributions include City contributions and Member contributions. For illustration purposes, we have assumed the City contribution rate will be based on the scheduled contribution rates and that payroll will increase at the actuarially assumed rate of 3.00% per year.

SECTION III LIABILITIES

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

- **Disclosure** of Plan liabilities at May 1, 2007 and May 1, 2008;
- 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 All 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 and GASB disclosures, 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 Plan, assuming no future accruals of benefits. These liabilities are also required for accounting purposes (FAS 35) 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**.

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**SECTION III
LIABILITIES**

**TABLE III-1
Liabilities/Net (Surplus)/Unfunded**

	May 1, 2007	May 1, 2008
<u>Present Value of Future Benefits</u>		
Active Participant Benefits	\$ 292,899,506	\$ 324,210,033
Retiree and Inactive Benefits	<u>268,351,609</u>	<u>281,001,508</u>
Present Value of Future Benefits (PVB)	\$ 561,251,115	\$ 605,211,541
<u>Actuarial Liability</u>		
Present Value of Future Benefits (PVB)	\$ 561,251,115	\$ 605,211,541
Present Value of Future Normal Costs (PVFNC)	<u>113,311,999</u>	<u>126,477,091</u>
Actuarial Liability (AL = PVB – PVFNC)	447,939,116	478,734,450
Actuarial Value of Assets (AVA)	<u>412,407,949</u>	<u>447,209,064</u>
Net (Surplus)/Unfunded (AL – AVA)	\$ 35,531,167	\$ 31,525,386
<u>Present Value of Accrued Benefits</u>		
Present Value of Future Benefits (PVB)	561,251,115	\$ 605,211,541
Present Value of Future Benefit Accruals (PVFBA)	<u>137,549,156</u>	<u>152,291,054</u>
Present Value of Accrued Benefits (PVAB=PVB–PVFBA)	423,701,959	452,920,487
Market Value of Assets (MVA)	458,231,054	427,637,394
Net Unfunded/(Surplus)	\$ (34,529,095)	\$ 25,283,093

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
- Plan 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 Plan. 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, 2007 and May 1, 2008.

TABLE III-2	
	Actuarial Liability
Liabilities May 1, 2007	\$ 447,939,116
Liabilities May 1, 2008	478,734,450
Liability Increase (Decrease)	30,795,334
Change Due to:	
Plan Amendments	0
Assumption Changes	13,467,693
Actuarial (Gain)/Loss	(3,634,384)
Benefits Accumulated and Other Sources	20,962,025

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**SECTION III
LIABILITIES**

In addition, we breakdown the change in accrued 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, 2008	
Turnover	\$ 167,253
Retirement	(1,486,426)
Pre-retirement mortality	(26,990)
Post-retirement mortality	(1,632,058)
Salary increase less than expected for continuing actives	(1,316,794)
New entrants	578,953
Data adjustments & miscellaneous changes	<u>81,678</u>
Total (Gain)/Loss	\$ (3,634,384)

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 Plan. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both stable and predictable.

For this Plan, the funding method employed is the **Entry Age Actuarial Cost Method**. Under this method, there are two primary components to the total contribution: the **normal cost rate (employee and employer)**, and the **unfunded actuarial liability rate (UAL rate)**. The normal cost rate is determined by taking the value, as of entry age into the plan, 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 EAN actuarial liability and the actuarial value of assets is the unfunded actuarial liability.

The unfunded actuarial liability is amortized over a 30-year fixed level percent of payroll for 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 5/1/2009, recognizing monthly payments. Payroll is expected to increase 3.0% per year.

Table IV-1 below presents and compares the employer contribution rates for the Plan for this valuation and the prior one.

Table IV-1		
Employer Contribution Rate		
	May 1, 2007	May 1, 2008
Entry Age Normal Cost Rate	13.17%	14.77%
Amortization Payment	4.50%	3.75%
Actuarially Determined Contribution	17.67%	18.52%

**SECTION IV
CONTRIBUTIONS**

**TABLE IV-2
Development of Plan Contribution Rate
as of May 1, 2008**

As % of Payroll

1. Normal Cost (Monthly):	
a. Total Normal Cost	24.32%
b. Expected Members Contribution	9.55%
c. Employer Paid Normal Cost (a) – (b)	14.77%
2. Amortization of Unfunded Liability	
a. Actuarial Liability	\$ 478,734,450
b. Actuarial Value of Assets	447,209,064
c. Unfunded Liability (a) – (b)	\$ 31,525,386
d. Amortization of Unfunded Liability	3.75%
3. Total Employer Contribution Rate (1) + (2d)	18.52%
4. Scheduled City Contributions (19.6% of payroll)	19.60%

SECTION V
ACCOUNTING STATEMENT INFORMATION

Statement No. 35 of the Financial Accounting Standards Board requires the Plan to disclose certain information regarding its funded status. Statement No. 25 of the Governmental Accounting Standards Board (GASB) establishes standards for disclosure of pension information by public employee retirement systems (PERS) and governmental employers in notes to financial statements and supplementary information.

The FASB-35 disclosures provide a quasi “snap shot” view of how the Plan’s assets compare to its liabilities if contributions stopped and accrued benefit claims had to be satisfied. However, due to potential legal requirements and the possibility that alternative interest rates would have to be used to determine the liabilities, these values may not be a good indication of the amount of money it would take to buy the benefits for all members if the Plan were to terminate.

The GASB-25 actuarial liability is the same as the actuarial liability amount calculated for funding purposes.

Both the present value of accrued benefits (FASB-35) and the actuarial liability (GASB-25) are determined assuming that the Plan is on-going and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities are discounted at the assumed valuation interest rate of 7.75% per annum.

FASB Statement No. 35 specifies that a comparison of the present value of accrued (accumulated) benefits with the market value of the assets as of the valuation date must be provided. GASB Statement No. 25 requires the actuarial liability be compared with the actuarial value of assets for funding purposes. The relevant amounts as of May 1, 2008 are exhibited in Table V-1. Finally, Table V-2 reconciles the FASB-35 liabilities determined as of the prior valuation, May 1, 2007, to the liabilities as of May 1, 2008.

Tables V-3 through V-5 are exhibits to be used with the City’s CAFR report. Table V-3 is the Note to Required Supplementary Information, Table V-4 is a history of gains and losses in actuarial liability, and Table V-5 is the Solvency Test which shows the portion of actuarial liability covered by assets.

Finally, Tables V-6 and V-7 are additional GASB supplemental exhibits. Table V-6 shows historical GASB ARC information, compared to what the City actually contributed. Table V-7 shows historical UAL information, funding ratios, and the UAL as a percent of payroll.

CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
MAY 1, 2008 ACTUARIAL VALUATION REPORT

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-1		
Accounting Statement Information		
	May 1, 2007	May 1, 2008
A. FASB No. 35 Basis		
1. Present Value of Benefits Accrued and Vested to Date		
a. Members Currently Receiving Payments	267,977,444	\$ 280,651,734
b. Former Vested Members	374,165	349,774
c. Active Members	155,350,350	171,918,979
2. Total Present Value of Accrued Benefits (1(a) + 1(b) + 1(c))	\$ 423,701,959	\$ 452,920,487
3. Assets at Market Value	458,231,054	427,637,394
4. Unfunded Present Value of Accrued Benefits (2 – 3)	\$ (34,529,095)	\$ 25,283,093
5. Ratio of Assets to Present Value of Benefits (3 / 2)	108.1%	94.4%
B. GASB No. 25 Basis		
1. Actuarial Liabilities for retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$ 268,351,609	\$ 281,001,508
2. Actuarial Liabilities for current employees	179,587,507	197,732,942
3. Total Actuarial Liability (1 + 2)	\$ 447,939,116	\$ 478,734,450
4. Net Actuarial Assets available for benefits	412,407,949	447,209,064
5. Unfunded Actuarial Liability (3 – 4)	\$ 35,531,167	\$ 31,525,386

CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-2	
Statement of Changes in Total Actuarial Present Value of All Accrued Benefits	
	Accumulated Benefit Obligation (FASB 35)
Actuarial Present Value of Accrued Benefits at April 30, 2007	423,701,959
Increase (Decrease) During Years Attributable to:	
Passage of Time and Gains/Losses	31,724,213
Benefit Paid – FY 2008	(25,900,176)
Assumption Change	13,400,019
Benefits Accrued	9,994,472
Net Increase (Decrease)	29,218,528
Actuarial Present Value of Accrued Benefits at April 30, 2008	452,920,487

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-3
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, 2008
Actuarial cost method	Entry age
Amortization method	30-year fixed level percent of pay amortization of the May 1, 2008 UAL and a 20-year fixed level percent of pay amortization for changes to the UAL on and after 5/1/2009
Remaining amortization period for May 1, 2008 UAL	30-years
Asset valuation method	5-Year smoothed market
Actuarial assumptions:	
Investment rate of return	7.75%
Projected salary increases	3.0%
Cost-of-living adjustments	3.0% simple

The actuarial assumptions used have been recommended by the actuary and adopted by the Plan's Board of Trustees.

The rate of employer contributions to the Plan is composed of the normal cost 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 funds accumulated as of the same date is the unfunded actuarial liability.

CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-4
ANALYSIS OF FINANCIAL EXPERIENCE

Gain and Loss in 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	2006	2007	2008
Investment Income	\$ 32,655	\$ 10,762	\$ 12,418
Combined Liability Experience	<u>7,349</u>	<u>7,563</u>	<u>3,634</u>
Gain (or Loss) During Year from Financial Experience	40,004	18,325	16,052
Non-Recurring Gain (or Loss) Items	<u>0</u>	<u>0</u>	<u>(13,468)</u>
Composite Gain (or Loss) During Year	\$ 40,004	\$ 18,325	\$ 2,584

Table V-5
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	52,254	268,352	127,333	412,408	100%	100%	72%
2008	55,234	281,002	142,499	447,209	100%	100%	78%

CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-6			
Supplementary Information Required by GASB - Schedule of City Contributions			
Plan Year Ended April 30	Annual Required Contributions	Actual Contributions	Percentage Contributed
2000	\$6,798,148	\$6,798,148	100.0%
2001	\$6,990,611	\$6,990,611	100.0%
2002	\$7,709,082	\$7,709,082	100.0%
2003	\$8,215,224	\$8,215,224	100.0%
2004	\$9,632,622	\$8,455,725	87.8%
2005	\$9,808,923	\$8,743,431	89.1%
2006	\$9,807,644	\$9,087,549	92.7%
2007	\$9,419,485	\$9,466,685	100.5%
2008	\$8,734,919	\$9,937,683	113.8%
2009	\$9,476,409	--	--

** Actual contributions are shown for the plan years ended April 30, 2000 through April 30, 2003 since the effective amortization period is allowable by GASB. The annual required contribution for the plan years ended April 30, 2004 and beyond is based on a 30-year amortization period which is allowable by GASB.*

CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-7
Supplementary Information Required by GASB - 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)
5/1/1999	\$260,479,078	\$269,962,700	\$9,483,622	96.49%	\$33,092,300	28.66%
5/1/2000	\$310,012,225	\$326,277,600	\$16,265,375	95.01%	\$33,712,200	48.25%
5/1/2001	\$314,419,934	\$334,755,400	\$20,335,466	93.93%	\$36,046,956	56.41%
5/1/2002	\$313,619,727	\$358,688,291	\$45,068,564	87.44%	\$41,698,908	108.08%
5/1/2003	\$306,204,360	\$371,993,884	\$65,789,524	82.31%	\$42,315,396	155.47%
5/1/2004	\$318,841,561	\$384,247,836	\$65,406,275	82.98%	\$43,920,060	148.92%
5/1/2005	\$332,415,711	\$392,856,425	\$60,440,714	84.62%	\$45,700,578	132.25%
5/1/2006	\$381,404,249	\$434,033,285	\$52,629,036	87.87%	\$47,022,072	111.92%
5/1/2007	\$412,407,949	\$447,939,116	\$35,531,167	92.07%	\$49,420,823	71.90%
5/1/2008	\$447,209,064	\$478,734,450	\$31,525,386	93.41%	\$51,168,515	61.61%

* Not less than zero.

CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Firefighters' Retirement System			
Active Member Data			
	May 1, 2007	May 1, 2008	% Change
<u>Total</u>			
Count	928	932	0.4%
Average Current Age	38.0	38.3	0.8%
Average Service	12.0	12.4	3.1%
Average Valuation Pay	\$ 53,255	\$ 54,902	3.1%
Annual Compensation	\$ 49,420,823	\$ 51,168,515	3.5%

CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
MAY 1, 2008 ACTUARIAL VALUATION REPORT

APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Firefighters' Pension System			
Table of Plan Coverage			
	5/1/2007	5/1/2008	% change
Active Members in Valuation			
Number	928	932	0.4%
Average Age	37.95	38.26	0.8%
Average Service	12.00	12.37	3.1%
Total Payroll	\$49,420,823	\$51,168,515	3.5%
Average anticipated payroll	\$53,255	\$54,902	3.1%
Account Balance	\$52,254,329	\$55,233,802	5.7%
Eligible to Retire On:			
Normal Pension	106	92	-13.2%
Deferred Pension	373	414	11.0%
Total Active Vested Members	479	506	5.6%
Vested Terminated Members	0	0	N/A
Deaths During the Plan Year			N/A
Pensioners:			
Number in Pay Status			
Retirees	417	409	-1.9%
Disabled Retirees	250	255	2.0%
Total	667	664	-0.4%
Average Age	66.2	66.7	0.7%
Average Monthly Benefit	\$2,651	\$2,754	3.9%
Beneficiaries in Pay Status*	205	203	-1.0%
Members Due Refunds	9	8	-11.1%
New Disabilities	8	12	50.0%
Eligible to Retire on Normal Pension	4	11	175.0%

*Widows, QDROs, and Children

CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Firefighters' Pension System			
Summary of Participant Data			
1. Retired Participants as of Valuation Date (including 203 beneficiaries in payment status)			867
2. Members Active During Year End May 1, 2008			932
Fully Vested		506	
Non-vested		426	
3. Members Due Refunds as of May 1, 2008			8

CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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**APPENDIX A
MEMBERSHIP INFORMATION**

**Kansas City Firefighters' Pension Plan Distribution of Active Members
by Age and Service as of May 1, 2008**

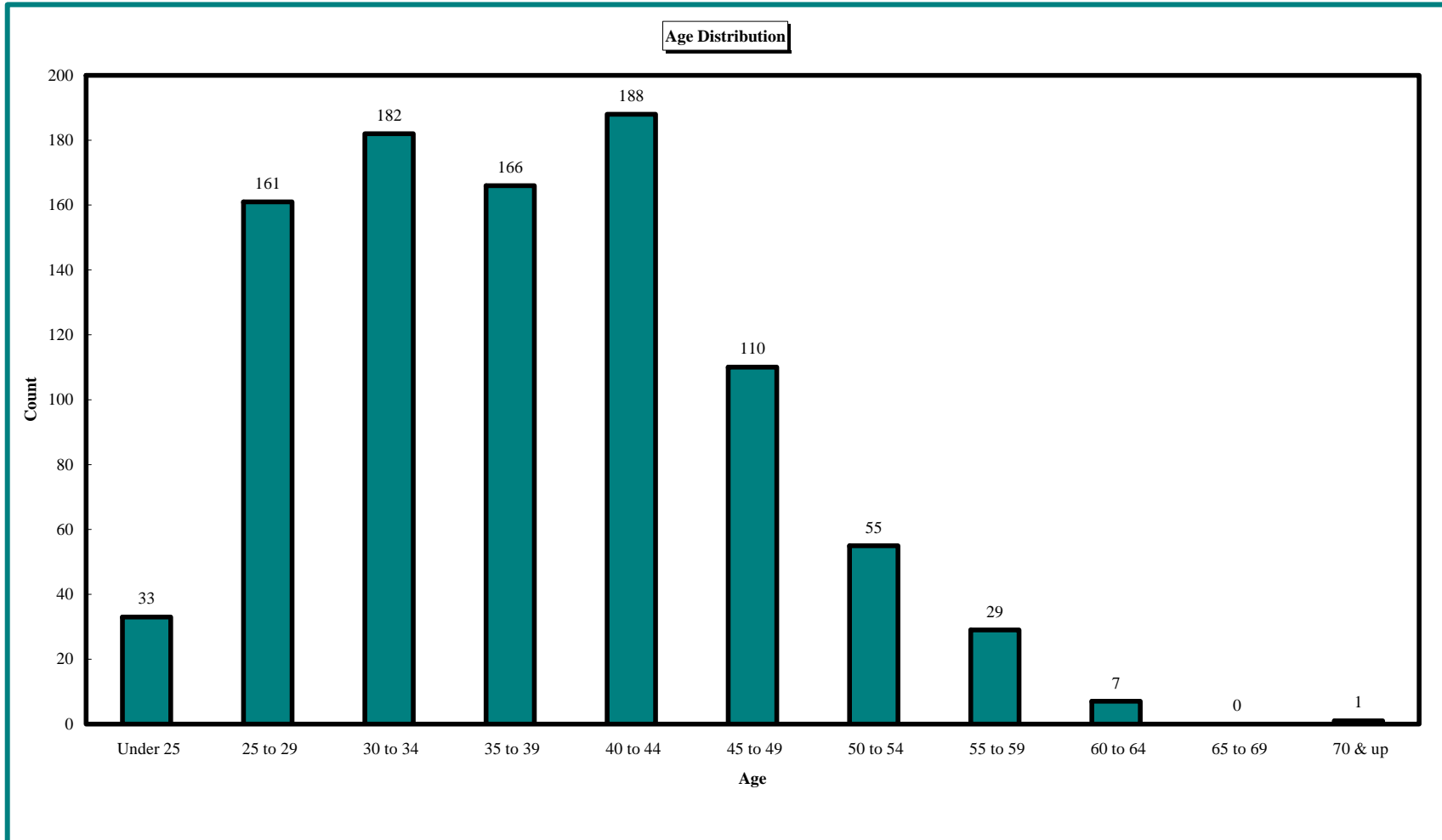
COUNTS BY AGE/SERVICE

Age	Service										Total
	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	
Under 25	14	19	0	0	0	0	0	0	0	0	33
25 to 29	11	111	39	0	0	0	0	0	0	0	161
30 to 34	2	86	58	35	1	0	0	0	0	0	182
35 to 39	1	4	52	74	35	0	0	0	0	0	166
40 to 44	0	1	19	58	78	31	1	0	0	0	188
45 to 49	0	3	4	11	39	43	10	0	0	0	110
50 to 54	0	0	1	0	0	6	10	38	0	0	55
55 to 59	0	0	0	1	0	1	5	20	2	0	29
60 to 64	0	0	1	1	0	0	0	1	3	1	7
65 to 69	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	1	1
Total	28	224	174	180	153	81	26	59	5	2	932

CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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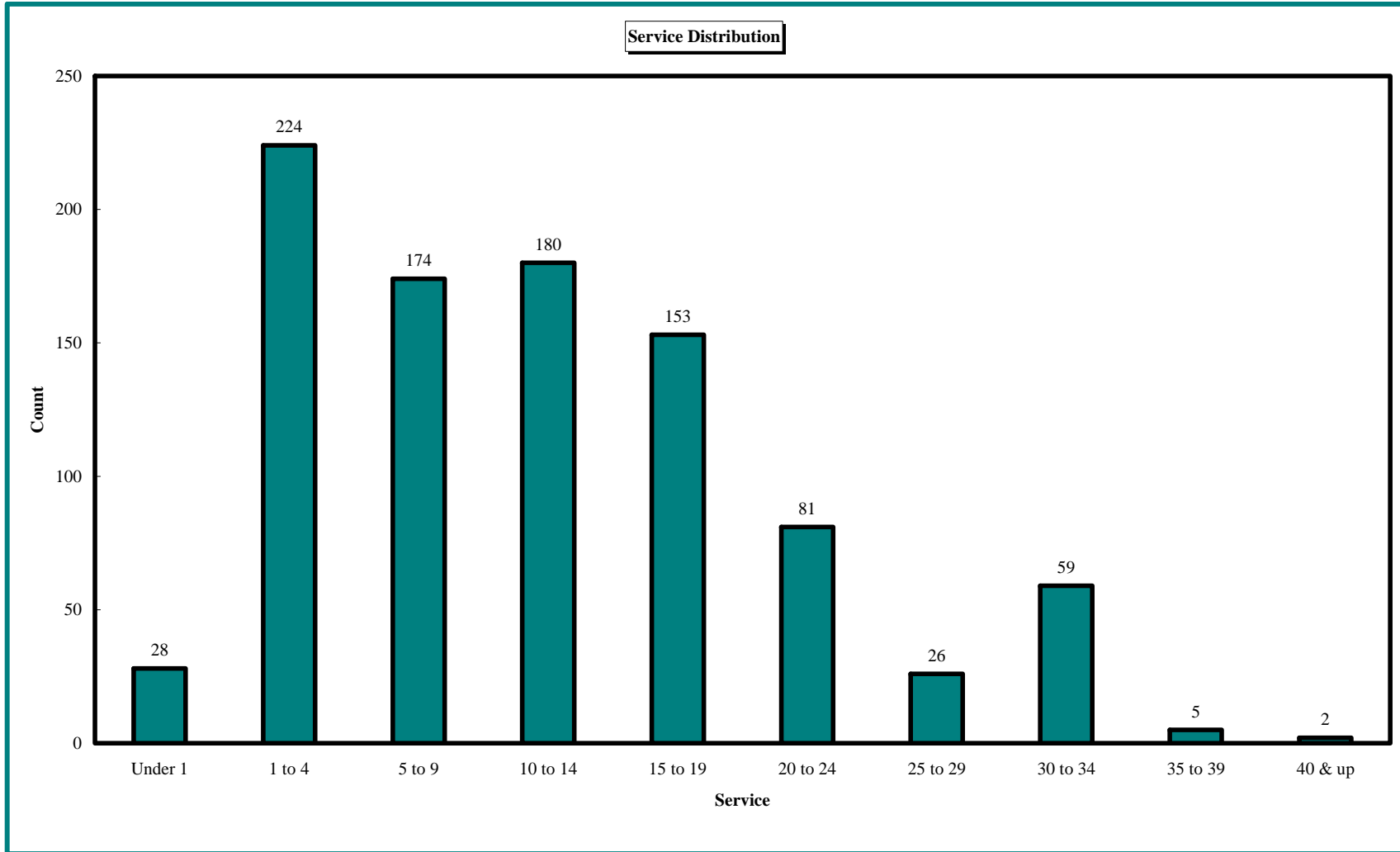
APPENDIX A
MEMBERSHIP INFORMATION

**Kansas City Firefighters' Pension Plan Distribution of Active Members
by Age as of May 1, 2008**



APPENDIX A
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**Kansas City Firefighters' Pension Plan Distribution of Active Members
by Service as of May 1, 2008**



**CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
MAY 1, 2008 ACTUARIAL VALUATION REPORT**

**APPENDIX A
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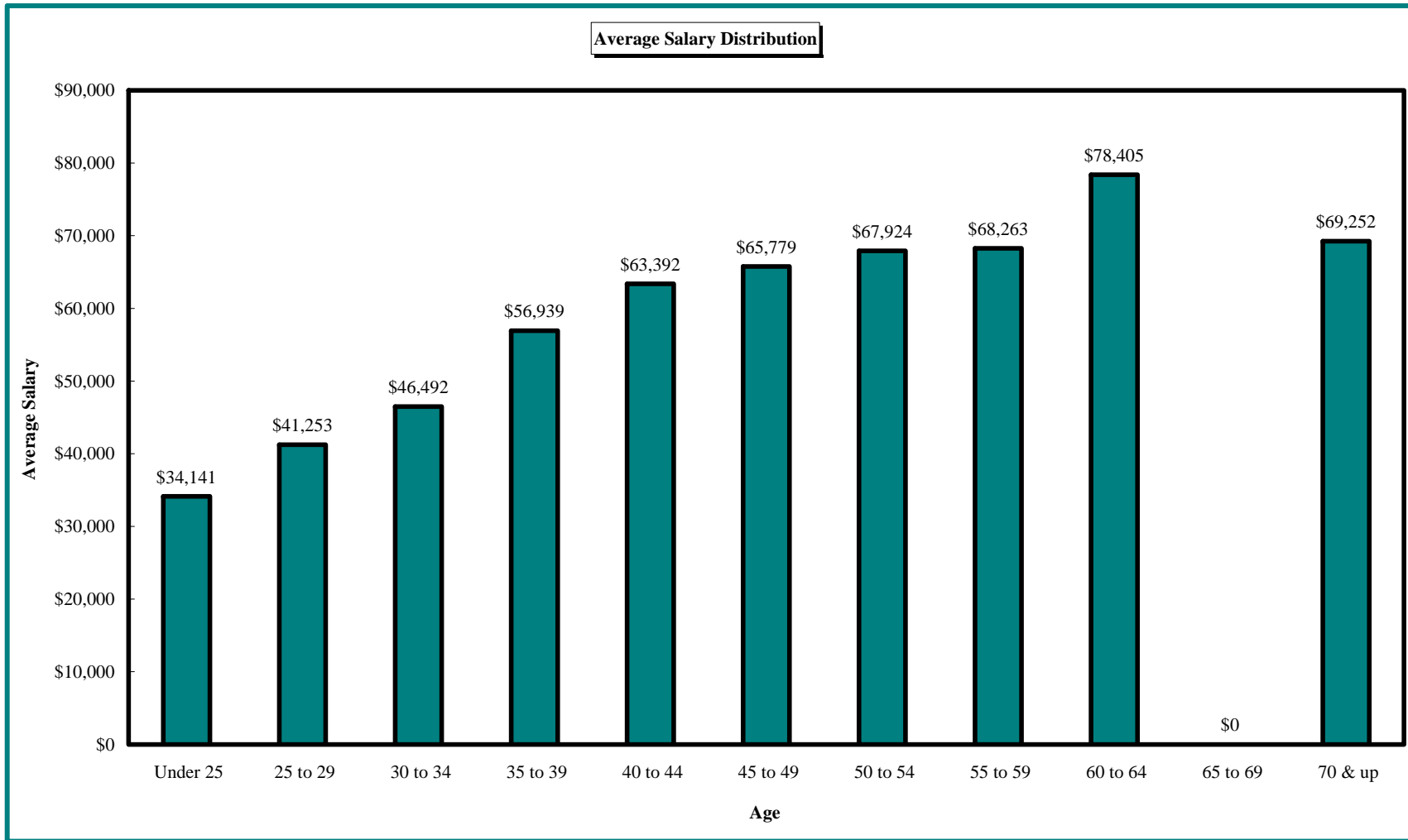
**Kansas City Firefighters' Pension Plan Distribution of Active Members
by Age and Service as of May 1, 2008**

AVERAGE SALARY BY AGE/SERVICE

Age	Service										Total
	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	
Under 25	\$30,408	\$36,891	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$34,141
25 to 29	\$30,408	\$40,120	\$47,535	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$41,253
30 to 34	\$45,060	\$40,261	\$48,054	\$58,721	\$66,564	\$0	\$0	\$0	\$0	\$0	\$46,492
35 to 39	\$49,548	\$42,576	\$49,170	\$59,303	\$65,334	\$0	\$0	\$0	\$0	\$0	\$56,939
40 to 44	\$0	\$42,576	\$48,216	\$59,556	\$66,747	\$71,913	\$69,252	\$0	\$0	\$0	\$63,392
45 to 49	\$0	\$48,908	\$50,127	\$57,999	\$65,767	\$68,606	\$73,549	\$0	\$0	\$0	\$65,779
50 to 54	\$0	\$0	\$58,008	\$0	\$0	\$71,726	\$67,488	\$67,700	\$0	\$0	\$67,924
55 to 59	\$0	\$0	\$0	\$63,864	\$0	\$69,252	\$64,183	\$69,423	\$68,574	\$0	\$68,263
60 to 64	\$0	\$0	\$148,740	\$59,712	\$0	\$0	\$0	\$69,252	\$67,292	\$69,252	\$78,405
65 to 69	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
70 & up	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$69,252	\$69,252
Total	\$32,138	\$40,073	\$48,972	\$59,219	\$66,173	\$70,111	\$69,251	\$68,310	\$67,805	\$69,252	\$54,902

APPENDIX A
MEMBERSHIP INFORMATION

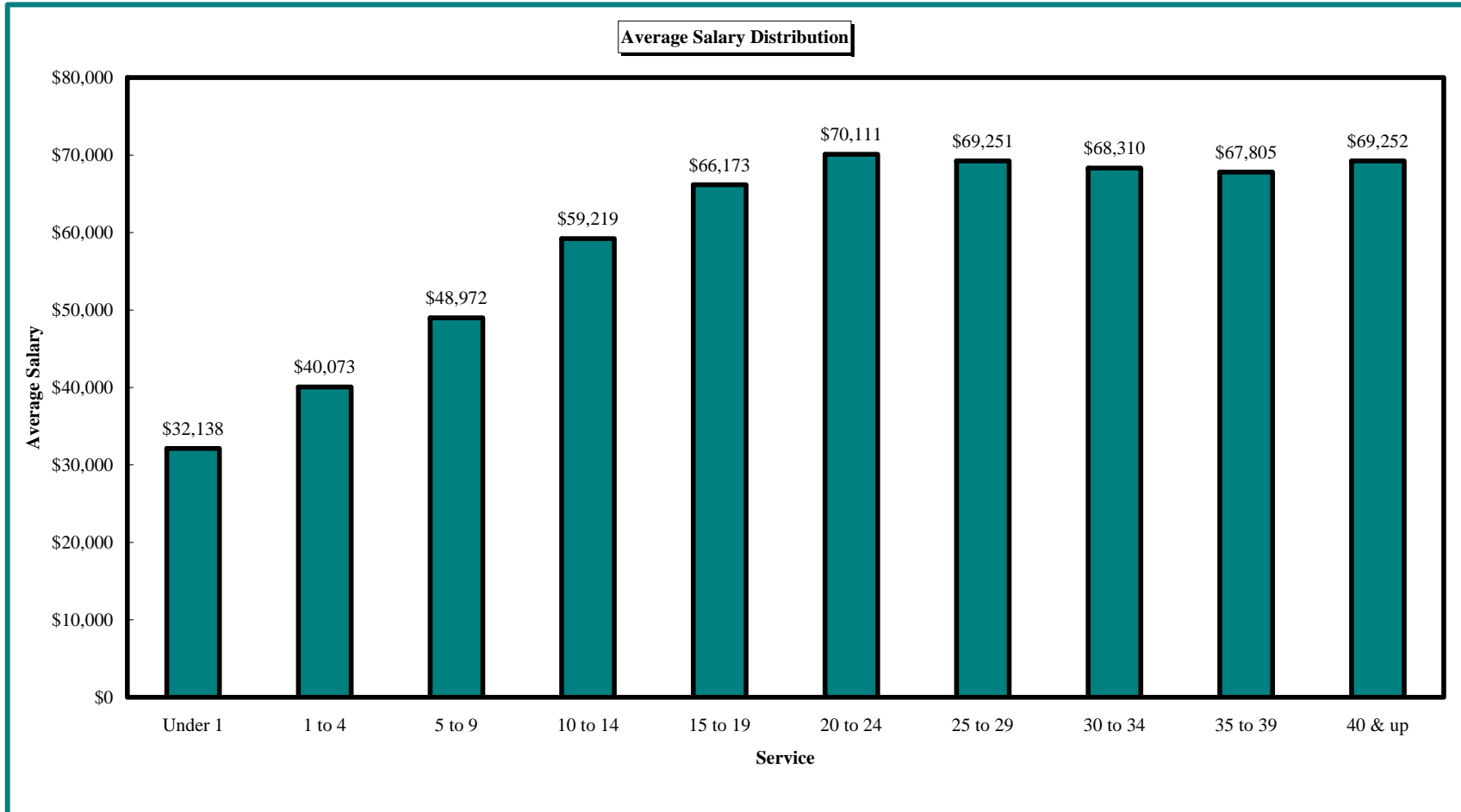
Kansas City Firefighters' Pension Plan Distribution of Active Members
by Age as of May 1, 2008



CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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APPENDIX A
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**Kansas City Firefighters' Pension Plan Distribution of Active Members
by Service as of May 1, 2008**



**CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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**APPENDIX A
MEMBERSHIP INFORMATION**

Kansas City Firefighters' Pension System Pensions in Payment Status by Type and Monthly Amount							
Monthly Amount	Total	Normal	Early	Disability	Vested	Widows & QDROs	Children
Total	867	387	1	256	22	190	11
Under \$500	46	0	0	1	8	28	9
\$500-1,000	108	3	0	12	9	82	2
1,000-1,500	85	27	0	18	1	39	0
1,500-2,000	113	75	0	21	1	16	0
2,000-2,500	109	75	0	21	3	10	0
2,500-3,000	107	59	0	43	0	5	0
3,000-3,500	156	79	0	74	0	3	0
3,500-4,000	64	28	1	32	0	3	0
4,000-4,500	44	24	0	18	0	2	0
4,500-5,000	16	9	0	6	0	1	0
5,000 & over	19	8	0	10	0	1	0

During the year ended April 30, 2008 there were 31 new pensions awarded (2 Normal, 1 Early, 12 Disabled, and 16 Widows, QDROs, and Children)

**CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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**APPENDIX A
MEMBERSHIP INFORMATION**

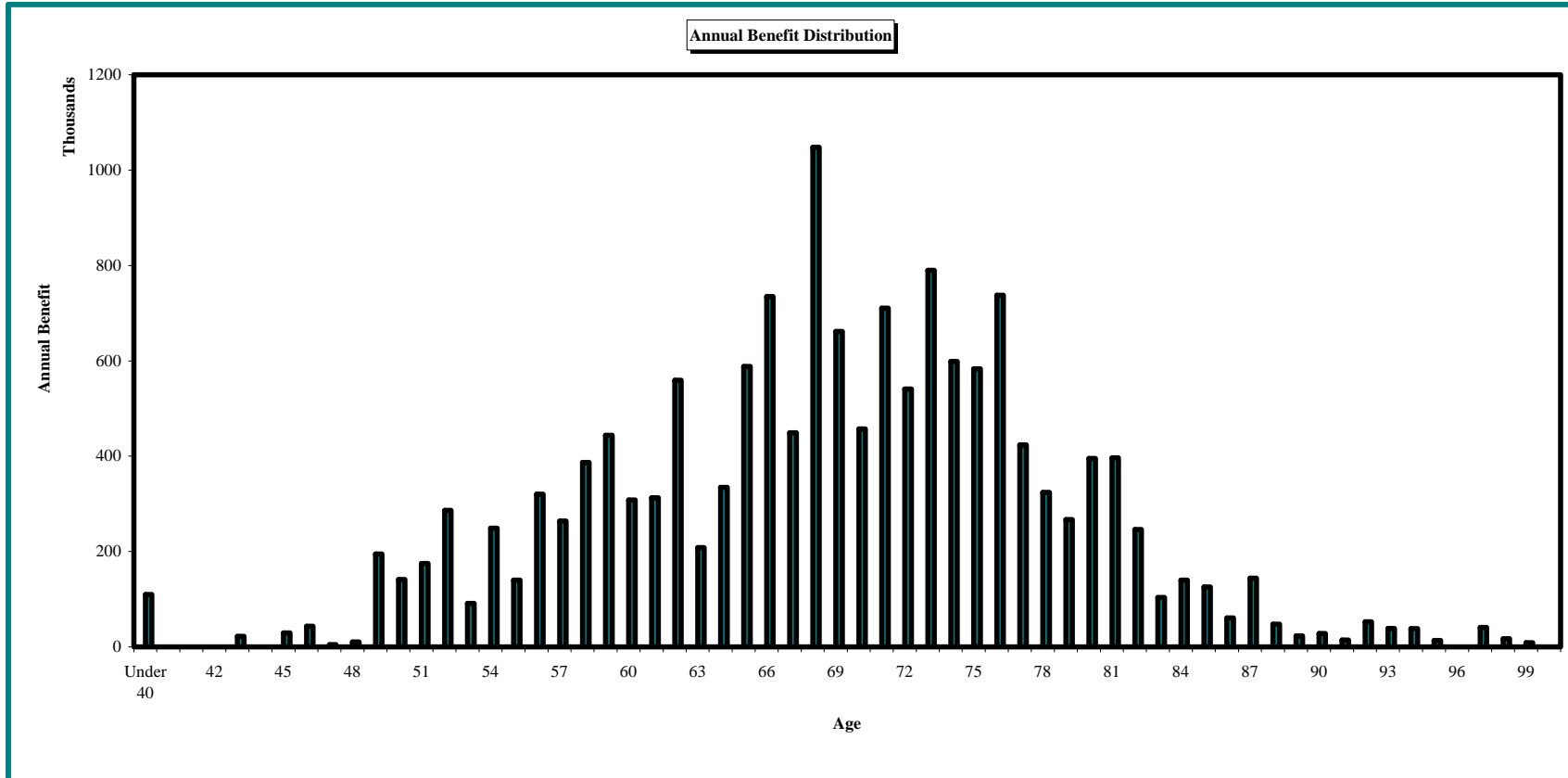
**Kansas City Firefighters' Pension Plan Distribution of Retired Members
and Survivors as of May 1, 2008**

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	16	\$90,575	73	28	\$789,758
25	3	\$19,364	74	22	\$598,812
26	0	\$0	75	23	\$583,283
27	0	\$0	76	31	\$737,487
28	0	\$0	77	19	\$423,668
29	0	\$0	78	18	\$323,937
30	0	\$0	79	12	\$266,747
31	0	\$0	80	28	\$395,430
32	0	\$0	81	23	\$396,585
33	0	\$0	82	11	\$246,438
34	0	\$0	83	8	\$103,592
35	0	\$0	84	8	\$140,120
36	0	\$0	85	8	\$125,807
37	0	\$0	86	5	\$60,609
38	0	\$0	87	11	\$143,968
39	0	\$0	88	5	\$47,564
40	0	\$0	89	3	\$22,791
41	0	\$0	90	2	\$27,827
42	0	\$0	91	1	\$14,429
43	1	\$22,201	92	4	\$52,315
44	0	\$0	93	2	\$38,443
45	1	\$28,978	94	1	\$37,920
46	1	\$43,190	95	2	\$13,512
47	1	\$4,268	96	0	\$0
48	1	\$10,149	97	2	\$40,724
49	6	\$194,515	98	1	\$17,050
50	5	\$141,425	99	1	\$8,371
51	4	\$174,757	100	0	\$0
52	9	\$286,340	101	0	\$0
53	3	\$91,107	102	0	\$0
54	9	\$249,010	103	0	\$0
55	5	\$139,916	104	0	\$0
56	8	\$320,248	105	0	\$0
57	8	\$263,781	106	0	\$0
58	13	\$386,561	107	0	\$0
59	11	\$443,535	108	0	\$0
60	8	\$308,251	109	0	\$0
61	11	\$312,570	110	0	\$0
62	19	\$559,489	111	0	\$0
63	7	\$208,172	112	0	\$0
64	11	\$334,808	113	0	\$0
65	18	\$588,107	114	0	\$0
66	22	\$734,605	115	0	\$0
67	14	\$449,259	116	0	\$0
68	30	\$1,047,995	117	0	\$0
69	24	\$661,519	118	0	\$0
70	18	\$457,160	119	0	\$0
71	27	\$710,384	120	0	\$0
72	19	\$540,840			
Totals				612	\$15,480,268

CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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APPENDIX A
MEMBERSHIP INFORMATION

**Kansas City Firefighters' Pension Plan Distribution of Retired Members and Survivors
as of May 1, 2008**



**CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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**APPENDIX A
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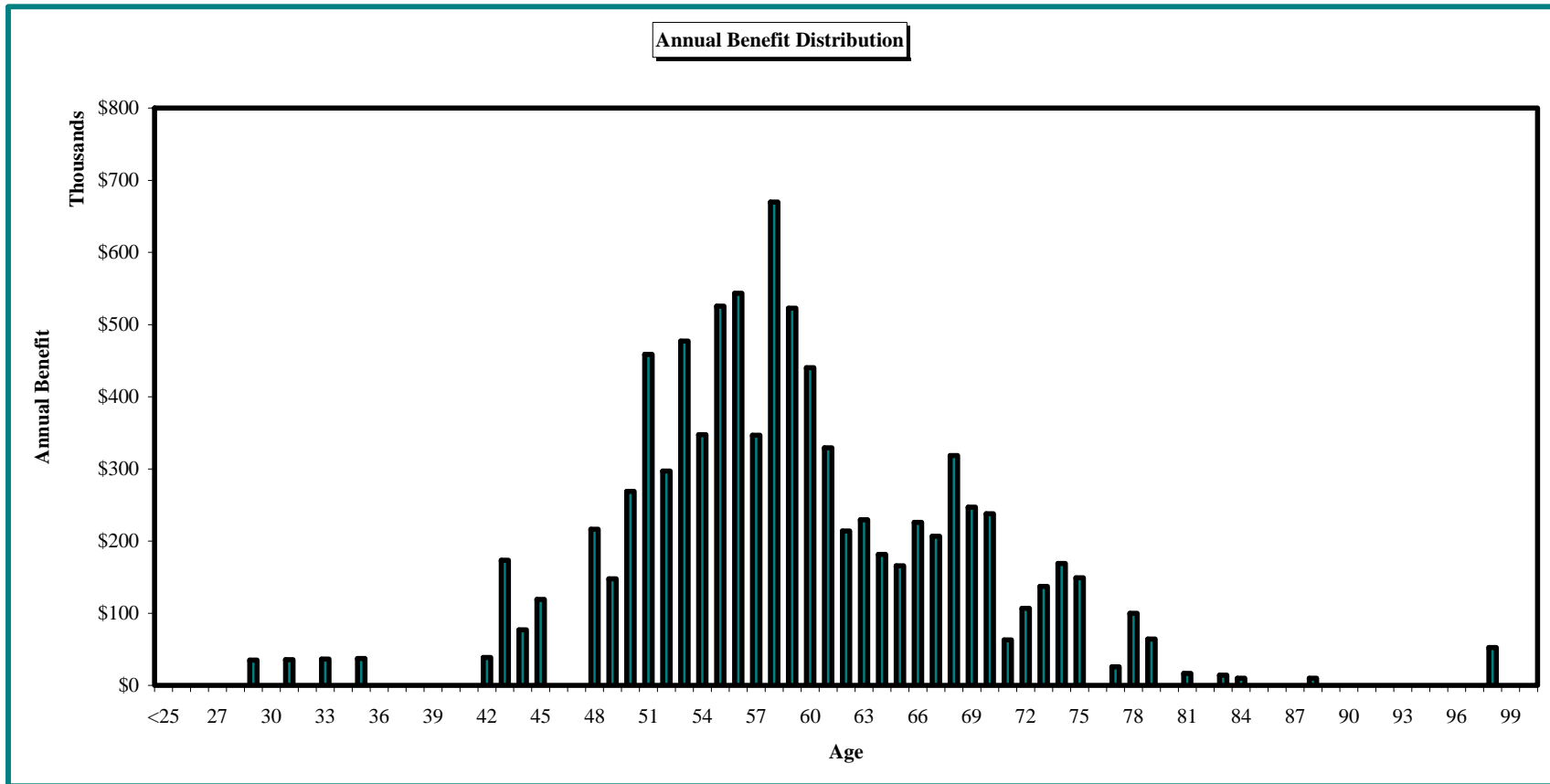
**Kansas City Firefighters' Pension Plan Distribution of Disabled Members
as of May 1, 2008**

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	\$0	73	7	\$137,325
25	0	\$0	74	6	\$169,194
26	0	\$0	75	7	\$149,221
27	0	\$0	76	0	\$0
28	0	\$0	77	2	\$25,715
29	1	\$35,180	78	3	\$99,882
30	0	\$0	79	2	\$64,141
31	1	\$35,497	80	0	\$0
32	0	\$0	81	1	\$16,786
33	1	\$36,501	82	0	\$0
34	0	\$0	83	1	\$14,259
35	1	\$37,506	84	1	\$9,818
36	0	\$0	85	0	\$0
37	0	\$0	86	0	\$0
38	0	\$0	87	0	\$0
39	0	\$0	88	1	\$9,988
40	0	\$0	89	0	\$0
41	0	\$0	90	0	\$0
42	1	\$38,737	91	0	\$0
43	4	\$173,444	92	0	\$0
44	2	\$77,101	93	0	\$0
45	3	\$119,074	94	0	\$0
46	0	\$0	95	0	\$0
47	0	\$0	96	0	\$0
48	5	\$216,318	97	0	\$0
49	4	\$147,812	98	1	\$52,447
50	7	\$268,872	99	0	\$0
51	12	\$458,818	100	0	\$0
52	8	\$297,020	101	0	\$0
53	13	\$477,053	102	0	\$0
54	8	\$347,532	103	0	\$0
55	12	\$525,547	104	0	\$0
56	13	\$543,268	105	0	\$0
57	10	\$346,499	106	0	\$0
58	18	\$669,879	107	0	\$0
59	13	\$522,561	108	0	\$0
60	10	\$440,185	109	0	\$0
61	8	\$329,309	110	0	\$0
62	6	\$214,032	111	0	\$0
63	7	\$229,414	112	0	\$0
64	5	\$181,619	113	0	\$0
65	5	\$165,806	114	0	\$0
66	6	\$226,119	115	0	\$0
67	5	\$206,760	116	0	\$0
68	10	\$318,477	117	0	\$0
69	9	\$247,093	118	0	\$0
70	8	\$237,952	119	0	\$0
71	3	\$63,158	120	0	\$0
72	4	\$106,943			
			Totals	255	\$9,089,864

CITY OF KANSAS CITY, MISSOURI FIREFIGHTERS' PENSION SYSTEM
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APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Firefighters' Pension Plan Distribution of Disabled Members
as of May 1, 2008



**APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS**

A. Demographic Assumptions

1. Mortality Rates

a. Rates before Retirement

Healthy: 1983 Group Annuity Mortality Table with 5% of deaths assumed to be Duty related

Disabled: 1983 Group Annuity Mortality Table

Rates before Retirement (Sample rates shown below):				
Age	Mortality		Rate (%)	
	Male	Female	Disability	Withdrawal
20	0.04%	0.02%	0.03%	2.50%
25	0.05%	0.03%	0.05%	2.50%
30	0.06%	0.03%	0.13%	1.69%
35	0.09%	0.05%	0.30%	1.05%
40	0.12%	0.07%	0.60%	0.75%
45	0.22%	0.10%	1.12%	0.75%
50	0.39%	0.16%	1.90%	0.52%
55	0.61%	0.25%	4.50%	---
60	0.92%	0.42%	7.60%	---

2. Percentage of Disability Retirements that are Duty Related

Disability Retirement Rates (Duty Related)	
Age	Annual Rate (%)
20 - 24	75.0%
25 - 29	66.7
30 - 34	70.6
35 - 39	78.9
40 - 44	81.1
45 - 49	81.9
50 - 54	80.3
55 - 59	78.2
60 and up	75.4

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3. Retirement Rates for Active Employees

Rates of Active Employees	
Years of Service	Rate (%)
25	10%
26	10
27	5
28	5
29	15
30	25
31	50
32	50
33	50
34	50
35 years, or age 65 if earlier	100

4. Retirement Age for Inactive Vested Members

50

5. Unknown Data for Members

Same as those exhibited by members with similar known characteristics.

6. Percent Married

94% of active participants

7. Age of Spouse

Females four years younger than males

8. Eligible Children

None

9. Net Investment Return

7.75% net of investment fees and administrative expenses, including inflation at 3.00%.

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ACTUARIAL ASSUMPTIONS AND METHODS**

10. Salary Increase

Age	Rate (%)
Less than 25	3.0%
25 – 29	8.0 %
30 – 34	6.0%
35 - 39	5.0%
40 – 44	4.0%
45 – 49	3.5%
50 – 54	3.5%
55 – 59	3.5%
60 – 64	3.5%
65 and up	3.0%

B. Actuarial Methods

1. Funding 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.

2. Actuarial Value of Assets

A preliminary actuarial value of assets is calculated as the sum of the beginning of the year actuarial value of assets, the net new money and the expected return on an actuarial basis. The gains and losses over the last 4 years are recognized over the next 5 year period. The gain or loss of each year is the excess of market value of assets over the preliminary value of assets, minus the sum of the unrecognized gains and losses from each of the 4 years. Finally, an adjustment is made so that the final actuarial value of assets is at least 85% but no more than 110% of the market value.

3. Amortization of Unfunded Actuarial Liability/(Surplus)

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 5/1/2009. Under the layered approach, the May 1, 2008 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 3.0% per year.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

4. Changes in Assumptions

- a. Asset Smoothing Method: The minimum asset corridor changed from 90% to 85%.
- b. 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 5/1/2009.
- c. Investment Assumption: Changed from 8.00% to 7.75%.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

1. Plan Year

May 1 through April 30.

2. Membership

All Firefighters become members as a condition of employment. Membership begins on the first day of employment.

3. Creditable Service

Total creditable service is defined as the sum of the service as a Firefighter after becoming a member after July 1, 1953, plus any service earned prior to July 1, 1953, if continuous.

4. Contributions

Pension System: Employees contribute 9.55% of base salary. The City currently contributes 19.6% of payroll.

Interest on Employee Contributions: 3.0% per year.

Health Insurance Subsidy: Effective January 1, 2001, the City contribution is 2% of base salary and the employee contribution is 1% of base salary.

Contributions and benefits for the Health Insurance Subsidy are separately accounted for under the plan. The assets, liabilities, contributions, and benefits of the Health Insurance Subsidy are excluded from this valuation.

5. Normal Retirement

Age Requirement: None.

Service Requirement: 25 years of service.

Amount: The base pension is 2.5% of average final compensation per year of credible service to a maximum of 80%. Average final compensation is defined as the average of the two highest years of base compensation in the last ten years. The minimum retirement benefit is \$600 per month.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

6. Duty Disability Benefit

Age Requirement: None.

Service Requirement: None.

Amount: The pension is 62.5% of average final compensation at disability with a minimum 62.5% of the current maximum salary payable to the rank of a firefighter. The current maximum monthly salary as of May 1, 2008 is \$4,554.

7. Non-duty Disability:

Age Requirement: Less than 65.

Service Requirement: 10 years of service.

Amount: The pension is 25% of the average final compensation plus 2.5% of average final compensation per year of creditable service in excess of 10 years, not to exceed 80% of average final compensation.

8. Vesting

Age Requirement: None.

Service Requirement: 10 years of service.

Amount: 2.5% of average final compensation per year of creditable service, not to exceed 62.5% of average final compensation, payable at age 50.

If the employee dies in a deferred status, before age 50, the beneficiary receives a lump sum equal to member contributions with interest. If such death occurs after age 50, the widow and children receive the same benefits as for pre-retirement non-duty death, but reduced by the ratio of the member's service to 25 years.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

9. Withdrawal (Refund) Benefits

Age Requirement: None.

Service Requirement: Less than 10 years of creditable service.

Amount: If an employee terminates before becoming eligible for a deferred pension, he or she receives a return of member contributions with interest. This benefit is reduced by a service charge of 10%, 8%, 6%, 4% or 2% if employee withdrawals with less than one year, two year, three years, four years, or five years of employment respectively.

10. Pre-Retirement Duty Death Benefits

Age Requirement: None.

Service Requirement: None.

Funeral Benefit: A lump-sum payment of \$2,000.

Surviving Spouse Benefit: 100% of the accrued pension is paid with a minimum of 62.5% of the average final compensation. The surviving spouse's benefit for spouses of active firefighters eligible for a service pension is 100% of the regular pension reduced for the election of optional 100% joint and survivor coverage. The minimum benefit is \$275 per month.

Child's Benefit: If there is no surviving spouse or the spouse dies or remarries, the spouse's benefit is divided equally to the children and paid until age 18 (or 21 if a student). If a surviving spouse exists, \$100 per month is paid until age 18 (or age 21 if a student).

Return of Contribution: A return of accumulated contributions is guaranteed. If there is no surviving spouse or dependent children, or if the spouse remarries, the accumulated contributions or the unpaid balance thereof shall be paid to the City or to a named beneficiary.

11. Pre-Retirement Non-duty Death Benefits

Age Requirement: None.

Service Requirement: None.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

Funeral Benefit:	A lump-sum payment of \$2,000.
Surviving Spouse Benefit:	50% of the accrued pension is paid with a minimum of 25% of average final compensation payable for the life of the surviving spouse. The surviving spouse's benefit for active firefighters eligible for a service pension is 100% of the regular pension, reduced for the election of optional 100% joint and survivor coverage. The minimum benefit is \$275 per month.
Child's Benefit:	If no surviving spouse or the spouse dies, the spouse's benefit is divided equally to the children and paid until age 18 (or 21 if student). If a surviving spouse exists, \$100 per month is paid until age 18 (or 21 if student).
Return of Contributions:	A return of accumulated contributions is guaranteed. If there is no surviving spouse or dependent children, or if the surviving spouse is no longer eligible to receive payments because of remarriage, the accumulated contributions or the unpaid balance thereof shall be paid to the City or to a named beneficiary.

12. Post-Retirement Death Benefit

Age Requirement:	None.
Service Requirement:	None.
Amount:	If married, pension benefits are paid in the form of a Joint and 50% Survivor annuity or in any other available optional form elected by the member and spouse in an actuarially equivalent amount. The minimum benefit is \$275. Payments equal to the amount of the member's accumulated contribution are guaranteed. In addition, a lump-sum funeral benefit of \$2,000 is paid.

13. Cost-of-Living Adjustment (COLA)

A maximum increase of 3% of the original pension (prior to election of option) will be made annually. This does not apply to funeral benefits. Members must retire on or before January 1st, in order to receive a COLA in the next year.

14. Changes Since Last Valuation

There have been no changes in the plan provisions since the preceding actuarial valuation.