City of Kansas City, Missouri
Firefighters' Pension System

Actuarial Valuation as of May 1, 2011

Produced by Cheiron

September 15, 2011

CHEIRON Classic Values, Innovative Advice

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APPENDICES

September 15, 2011

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, 2011. 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- 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), a summary of pertinent plan provisions (Appendix C), and a glossary of terms (Appendix D).

The results of this report rely on future plan experience conforming to the underlying assumptions. To the extent that the actual plan experience deviates from the underlying assumptions, the results would vary accordingly. The actuarial assumptions have been approved by the Board upon recommendation of the prior actuary. We believe that the economic actuarial assumptions are reasonable. However, since an experience study has not been performed by us since assuming work for the System, we are unable to comment on the reasonableness of the demographic actuarial assumptions.

The purpose of this report is to present the annual actuarial valuation of the City of Kansas City, Missouri Firefighters' Pension System. This report is for the use of the Firefighters' Pension Board and its auditors in preparing financial reports in accordance with applicable law and accounting requirements. Any other user of this report is not an intended user and is considered a third party.

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. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice #23.

We hereby certify that, to the best of our knowledge, this report and its contents, which are work products of Cheiron, Inc., are 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 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 report does not provide any legal services or advice.

This report was prepared solely for the Firefighters' Pension System for the purposes described herein, except that the plan auditor may rely on this report solely for the purpose of completing an audit related to the matters herein. This valuation report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

Sincerely,
Cheiron

Stephen McElhaney, FSA, MAAA	Katie Dobbs, FSA, MAAA
Principal Consulting Actuary	Consulting 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 2012, 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 May 1, 2011 valuation represents Cheiron's fifth valuation performed for KCFPS and there have been no changes since the prior year. Therefore the methodology, plan provisions, and assumptions reflected in this valuation are the same as in the May 1, 2010 valuation.

B. Key Findings of this Valuation

The key results of the May 1, 2011 actuarial valuation are as follows:

- The actuarially determined City contribution rate increased from 24.70% as of May 1, 2010 to 27.02% as of May 1, 2011. The actual rate that the City is scheduled to use for the current year is 19.60% of payroll. We believe that such rate will need to be increased in the future in order to sustain the System over the long term.

- The FPS's unfunded actuarial liability increased from $81 million on May 1, 2010 to $96 million on May 1, 2011.

- The FPS's funding ratio, the ratio of assets over liabilities decreased from 84.3% as of May 1, 2010 to 81.8% as of May 1, 2011.

- The primary factor in the increase in the Plan's funded status was an overall experience loss of $14.0 million.
    - During the year ended April 30, 2011, the Plan's assets returned 13.88% on a market value basis. The return on the actuarial asset value (i.e. incorporating asset smoothing) was 2.42% (as compared to 7.75% assumed). This resulted in an actuarial loss on investments of $22.8 million. In addition, the plan experienced a loss of $2.2 million due to the difference between actual and recommended contributions.

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BOARD SUMMARY

  - On the liability side, the System experienced an actuarial gain of $11.0 million. The majority of this gain was due to salaries being frozen, resulting in a gain of $7.6 million. The remaining was due to the assumptions made on rates of mortality, retirement, disability and withdrawal.

- As of May 1, 2011 the actuarial value of assets exceeds the market value by $20.0 million. The Plan will recognize this difference as deferred asset losses and gains are recognized over the next 4 years.

On the following page 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 years.

SECTION I
BOARD SUMMARY

Table I-1
City of Kansas City, Missouri Firefighters' Pension System
Summary of Principal Plan Results

Valuation as of:	**May 1, 2010**	**May 1, 2011**	**% Change**
Participant Counts			
Active Participants	903	933	3.32%
Disabled Participants	271	280	3.32%
Retirees and Beneficiaries	592	588	(0.68%)
Terminated Vested Participants	1	1	0.00%
Inactive Participants	5	7	40.00%
Total	**1,772**	**1,809**	**2.09%**
Annual Salaries of Active Members	$ 51,934,305	$ 51,983,293	0.09%
Annual Retirement Allowances for Retired Members and Beneficiaries	$ 26,505,387	$ 27,676,349	4.42%
Assets and Liabilities			
Actuarial Liability (AL)	$ 516,599,916	$ 528,481,037	2.30%
Actuarial Value of Assets	435,427,953	432,540,955	(0.66%)
Unfunded Actuarial Liability (UAL)	$ 81,171,963	$ 95,940,082	18.19%
Funded Ratio	84.3%	81.8%	
Present Value of Accrued Benefits (PVAB)	$ 489,079,216	$ 503,999,330	3.05%
Market Value of Assets	374,721,914	412,542,872	10.09%
Unfunded PVAB	$ 114,357,302	$ 91,456,458	(20.03%)
Accrued Benefit Funding Ratio	76.6%	81.9%	
Contributions as a Percentage of Payroll	**Fiscal Year 2011**	**Fiscal Year 2012**	
Normal Cost Contribution	14.78%	15.17%	
Unfunded Actuarial Liability Contribution	9.92%	11.85%	
Total City Contribution	24.70%	27.02%	
Annual Required Contribution (GASB)	$ 12,827,773	$ 14,045,886	9.50%

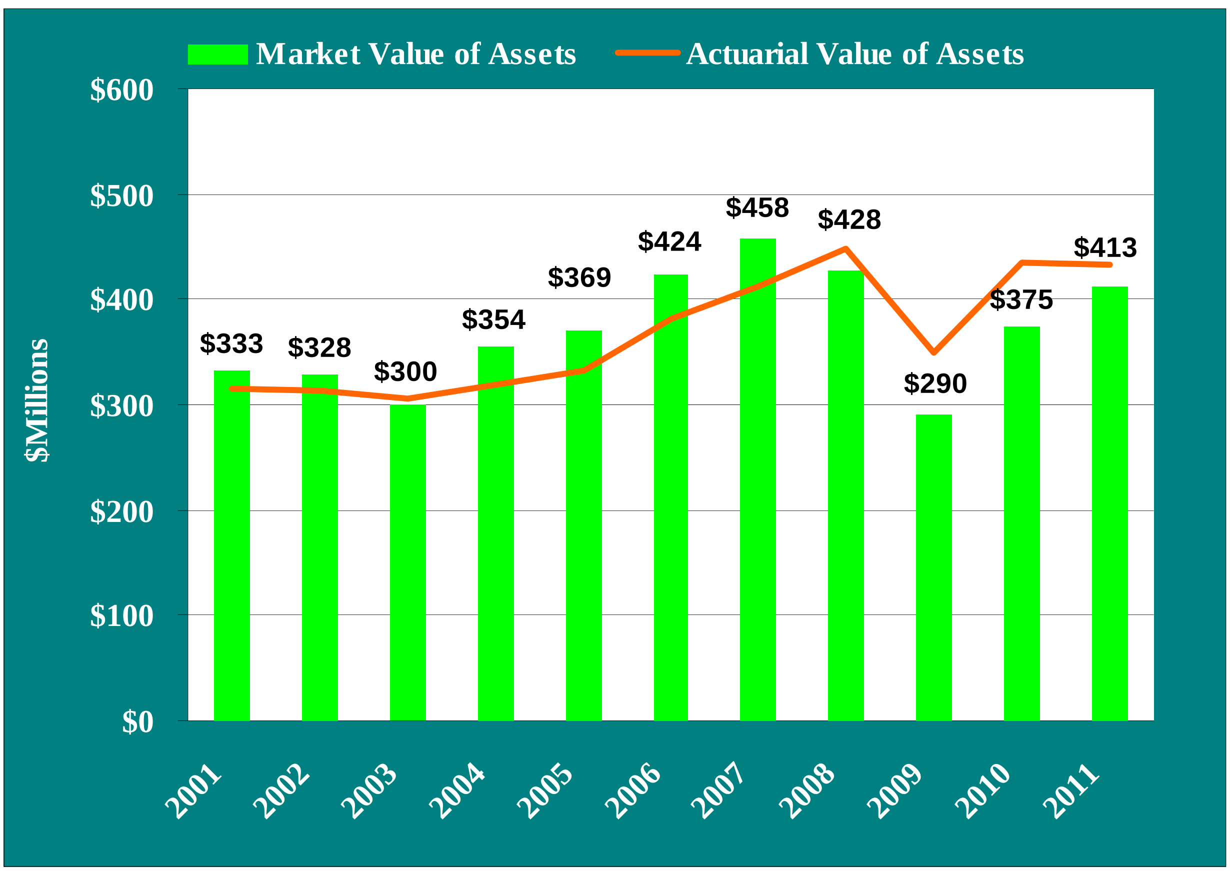
SECTION I
BOARD SUMMARY

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

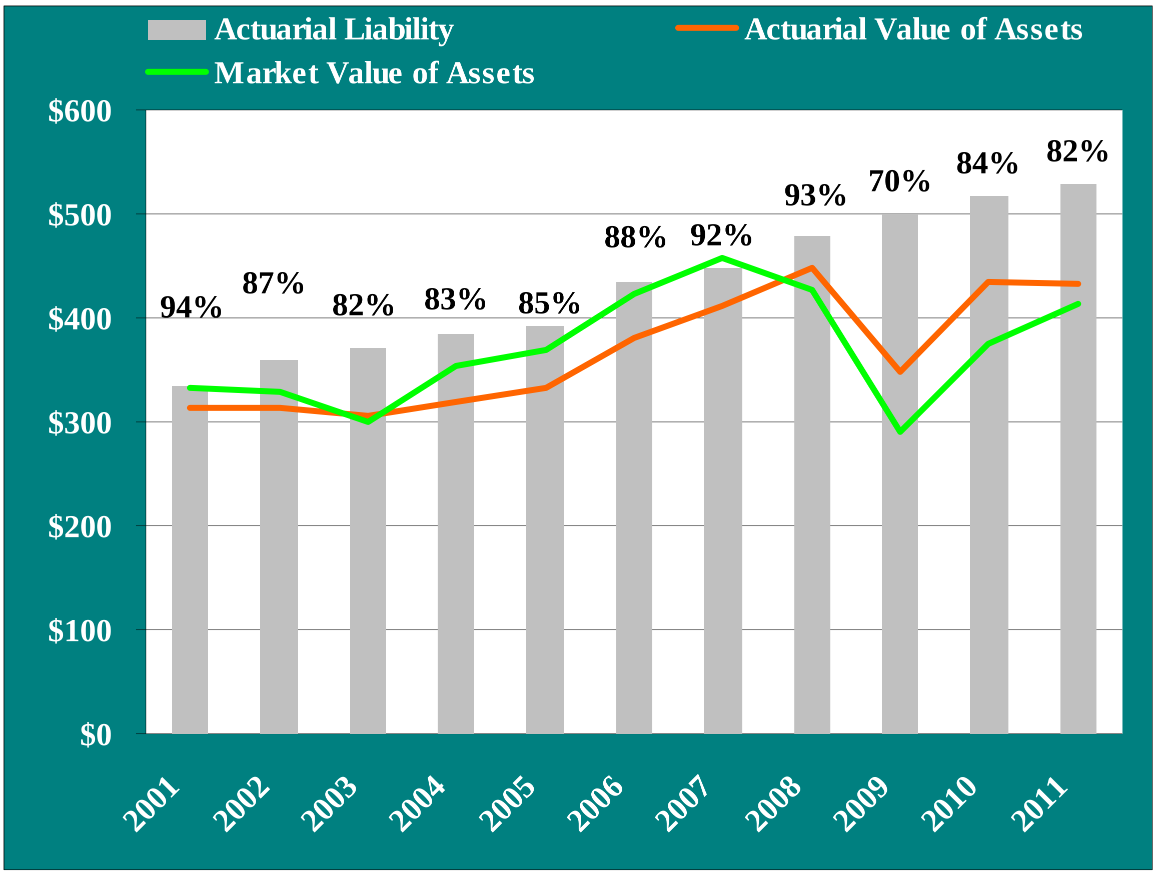
The market value of assets (MVA) had a gain on investments in 2011, returning 13.88%. With the asset smoothing method in place, the actuarial value of assets has tracked a slightly smoother path through the volatility of the market value of assets. As can be seen in the graph, the actuarial value of assets (AVA) decreased slightly from 2010 to 2011 due to the continued recognition of the 2008 and 2009 losses.



SECTION I
BOARD SUMMARY

Assets and Liabilities

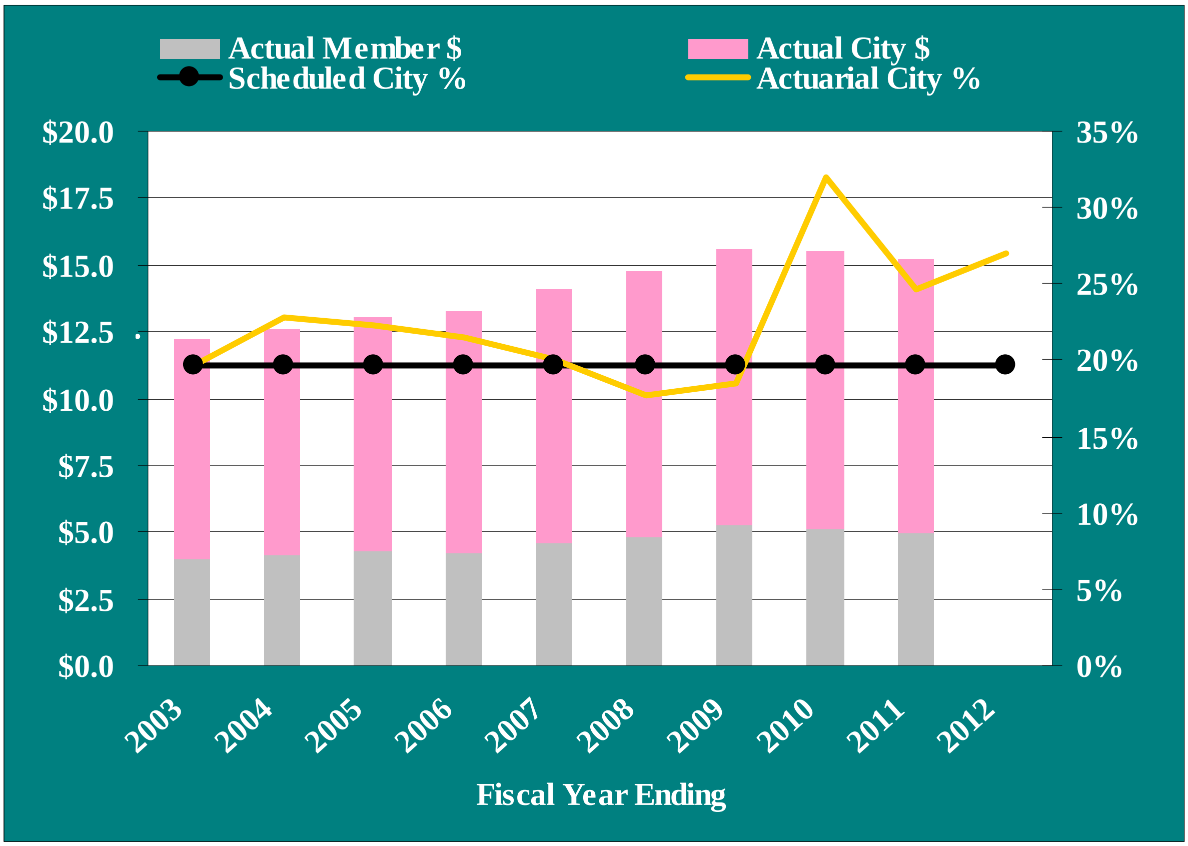
The chart below compares the market value of assets, the actuarial value of assets, and the actuarial liabilities, as well as the funded ratio (actuarial value of assets / actuarial liability), sometimes referred to as the benefit security ratio. This chart shows the Plan's funding ratio decreasing over the past year to 82% due to the continued recognition of the 2008 and 2009 market losses.



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 2003. 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.



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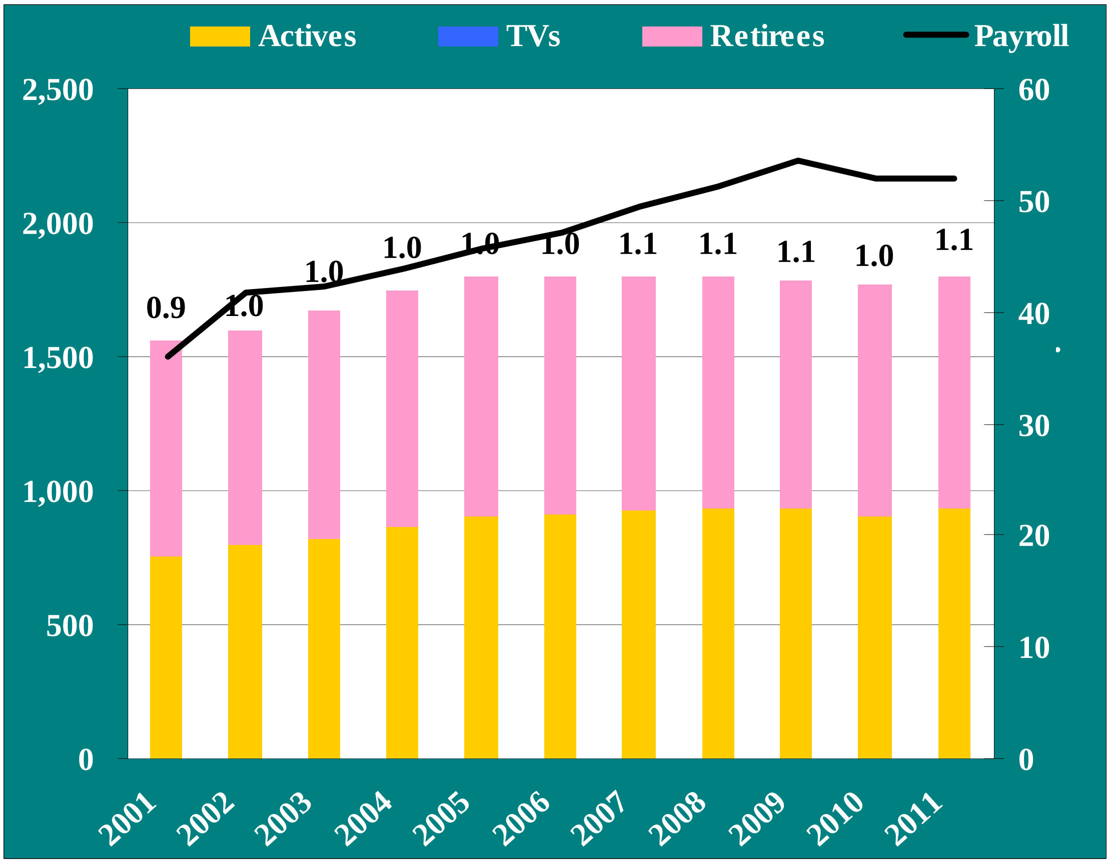
BOARD SUMMARY

Participant Trends



This chart provides a measure for the maturity in the Plan, by comparing the ratio of active members to inactive members (retirees and terminated-vesteds). The System's active-to-inactive ratio remains fairly consistent from 0.9 actives supporting each inactive member to 1.1 actives supporting each inactive member today.

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BOARD SUMMARY

D. Future Expected Financial Trends

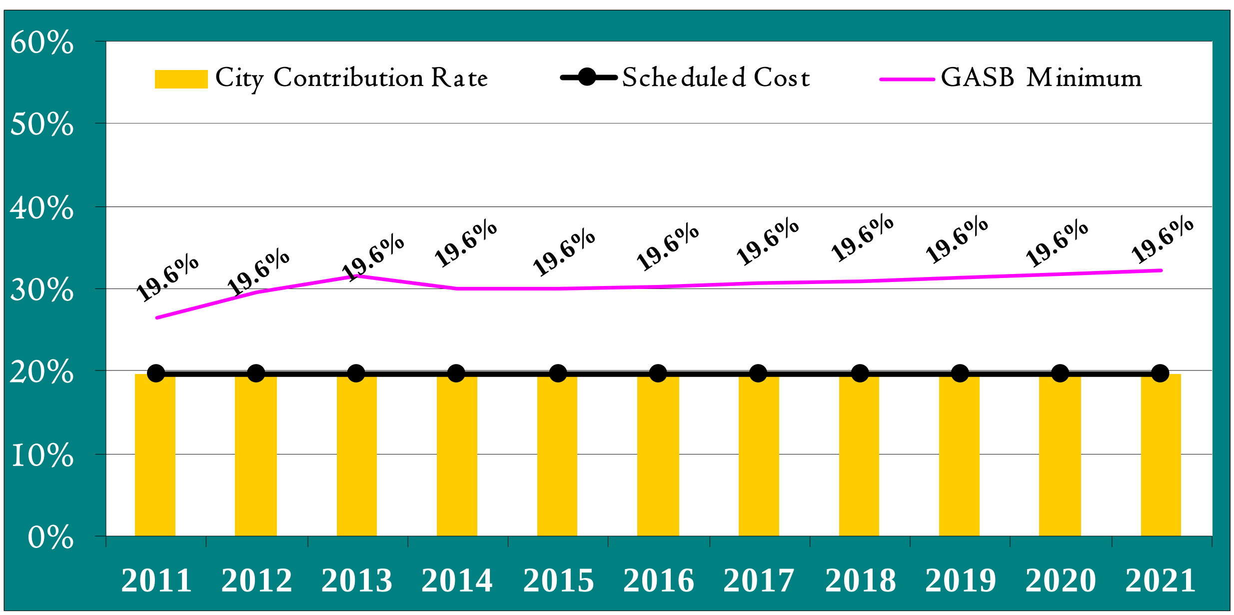
The analysis of projected financial trends is perhaps the most important component of this valuation. In this Section, we present the implications of the May 1, 2011 valuation results in terms of (1) the projected City's contributions and (2) projected Plan's funded status (ratio of assets over liabilities). For each projection set we assume three future different investment return scenarios: baseline returns of 7.75%, optimistic returns of 9.25%, and pessimistic returns of 6.25%. Finally, since the City has historically contributed on the basis of a "scheduled cost" of 19.6%, we also show the impact on these projections if the City were to contribute the actuarially computed rate that comes out of each valuation as described in Section IV. As can be seen in the charts that follow, the difference in the Plan's projected financial status, between paying the scheduled cost and the actuarially computed costs, are very dramatic.

1. Contribution Rate Projections

The first set of charts shows the City's scheduled cost (black line) which never changes, the GASB Minimum cost (pink line) which is Normal cost plus 30-year amortization of the UAL (shown for comparison purposes), and the actual City contribution rate (gold bars). The years shown in the charts are plan years beginning May 1st.

a. Assuming the City always pays the scheduled cost:

Baseline Returns of 7.75%



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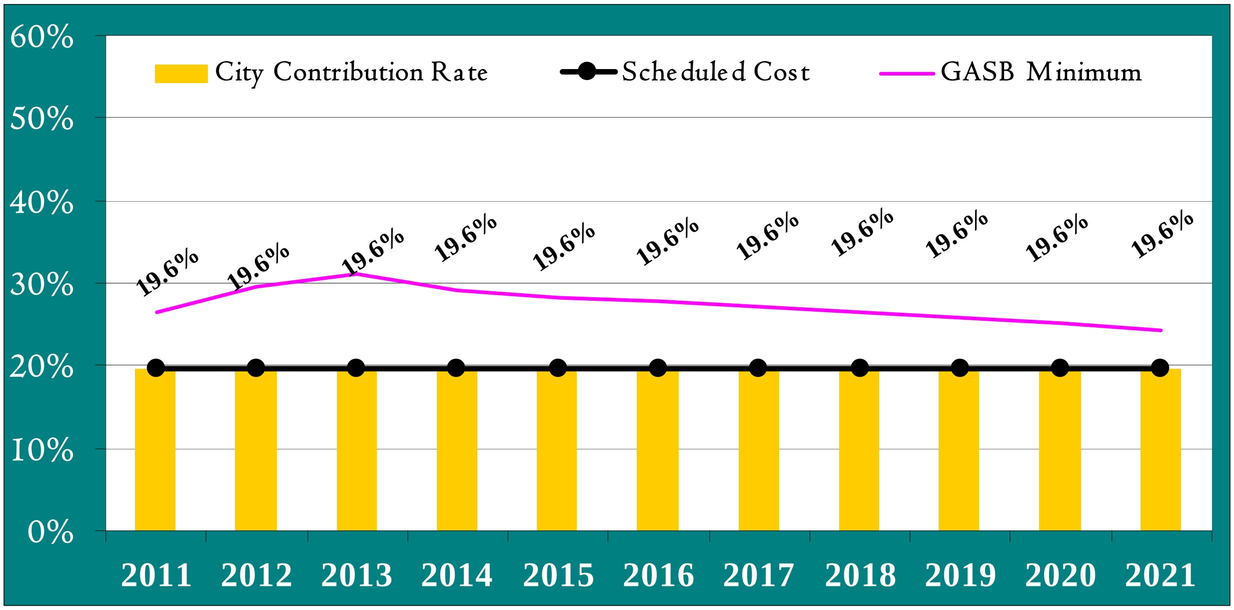
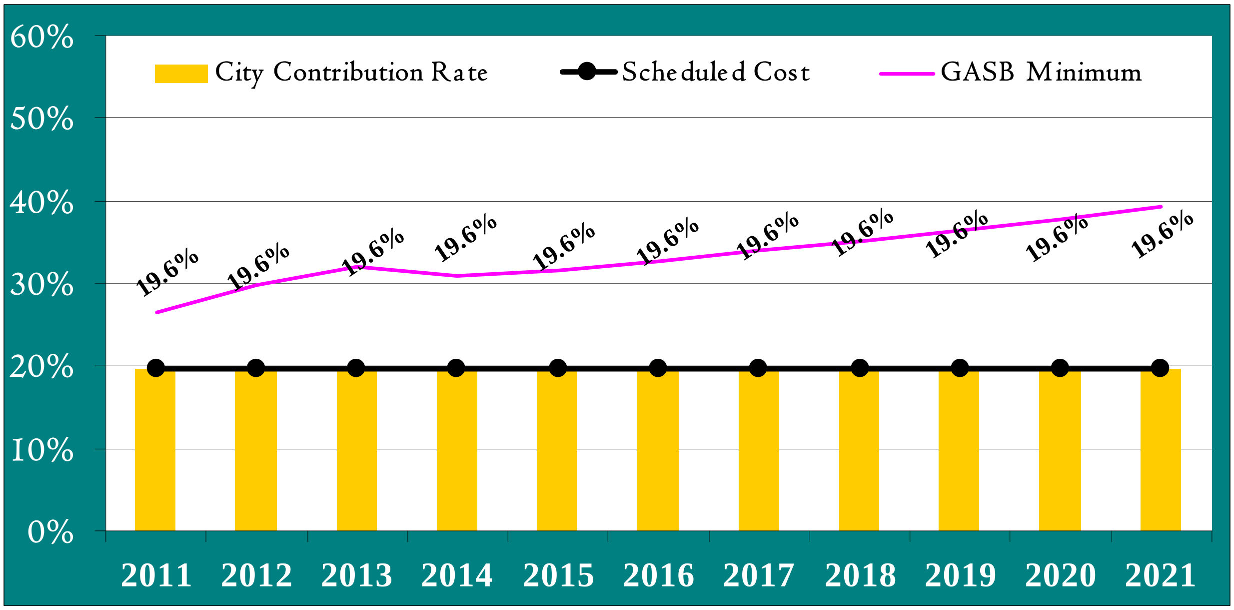
Optimistic Returns of 9.25%



Pessimistic Returns of 6.25%



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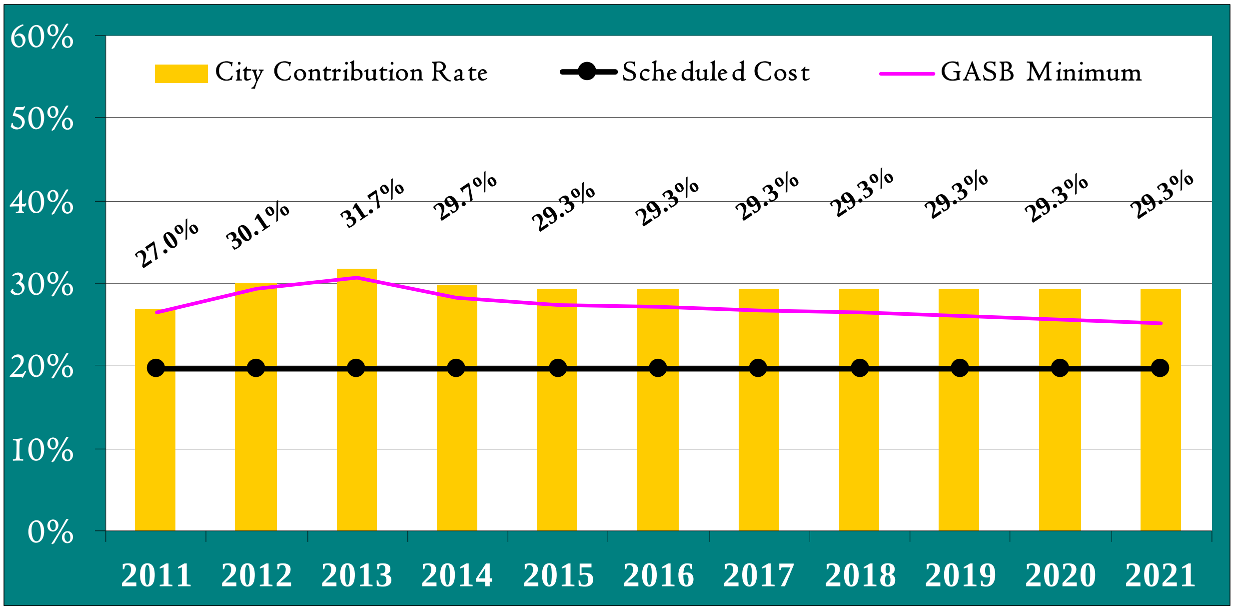
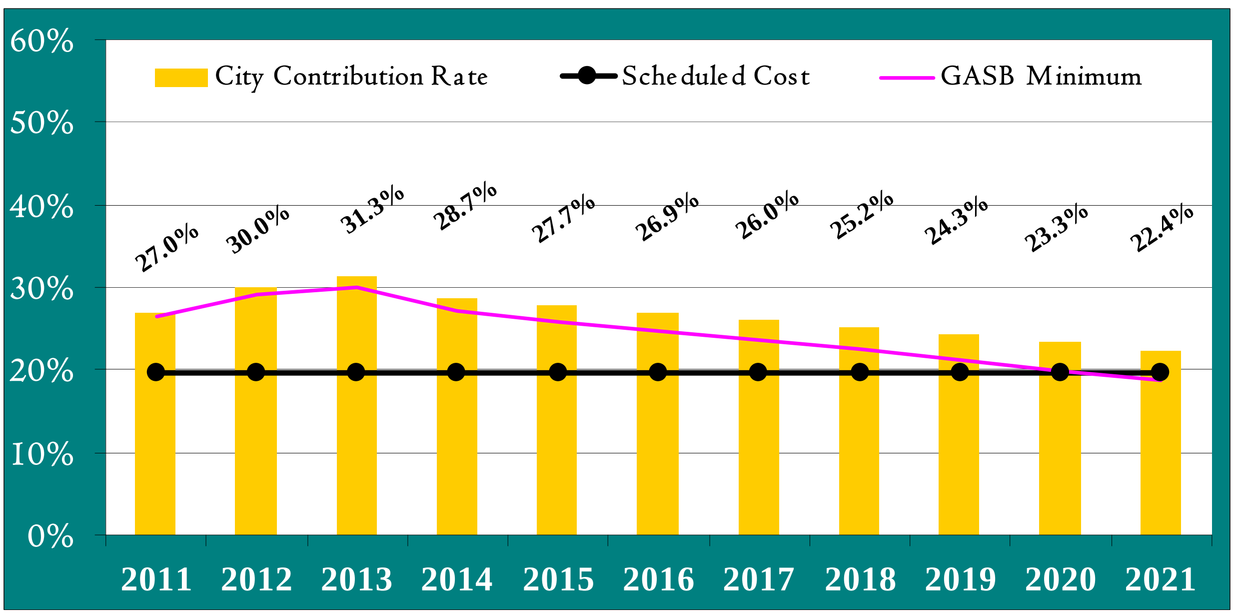
BOARD SUMMARY

b. *Assuming the City always pays the actuarially computed contribution*

Baseline Returns of 7.75%



Optimistic Returns of 9.25%



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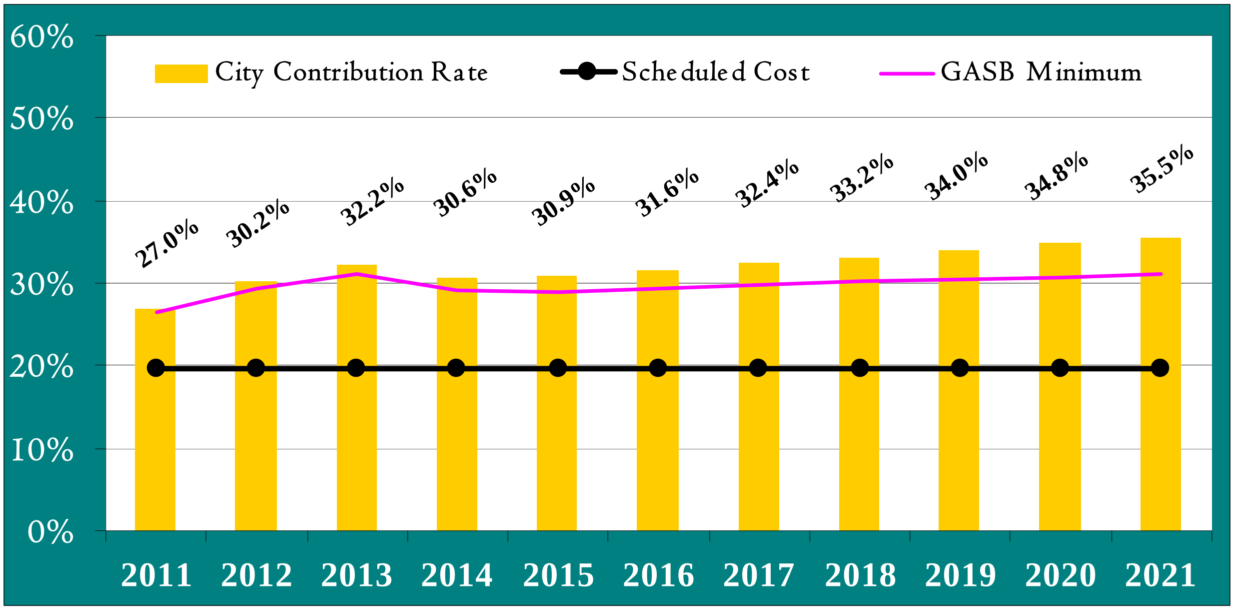
Pessimistic Returns of 6.25%



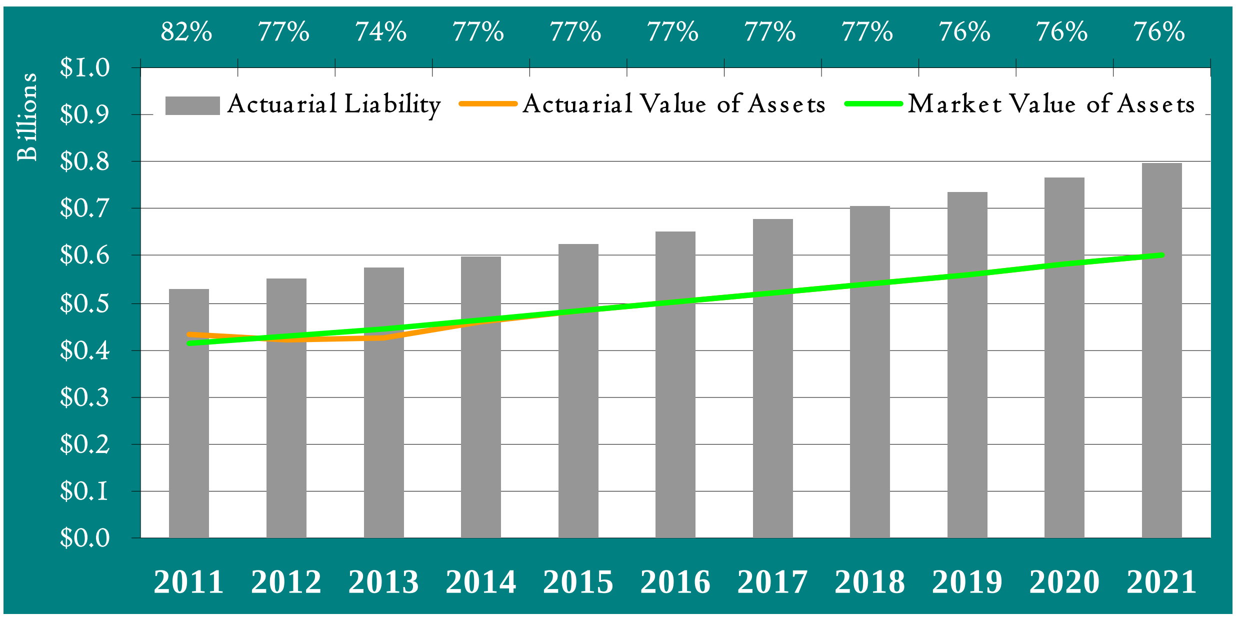
SECTION I
BOARD SUMMARY

2. Asset and Liability Projections:

This next set of projection charts compare the market value of assets (green line) and the actuarial or smoothed value of assets (gold line) to the Plan's actuarial liabilities (gray bars). In addition at the top of each chart, we show the Plan's funded ratio (ratio of actuarial value of assets to actuarial liabilities). The years shown in the charts are plan years beginning May 1st.

a. Assuming the City always pays the scheduled cost

Baseline Returns of 7.75%



Under the assumption that the assets will earn the assumed rate of return of 7.75%, the funded ratio decreases gradually over the next 10 years. Contributions will need to be increased to sustain the fund over the long term, unless asset returns exceed the assumed rate.

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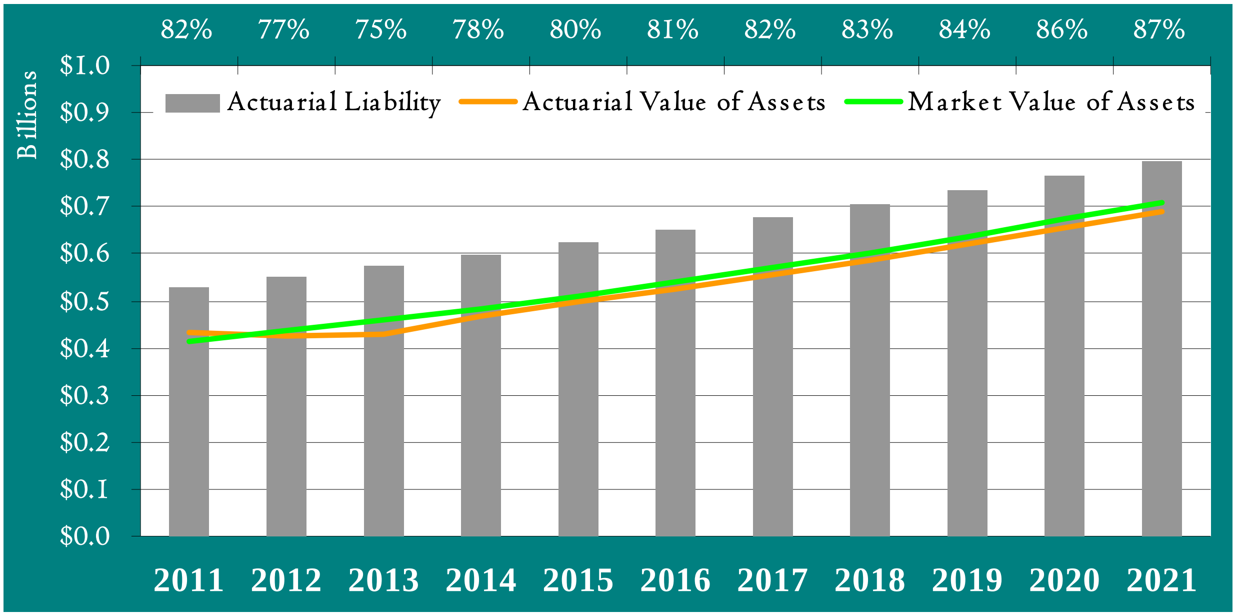
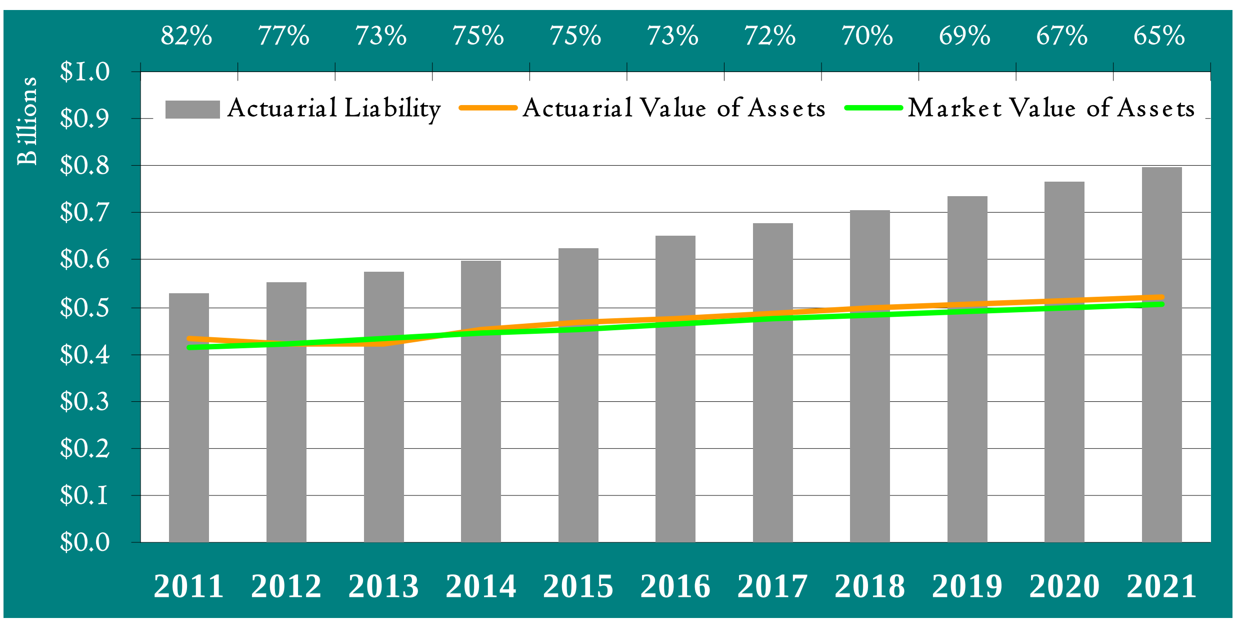
BOARD SUMMARY

Optimistic Returns of 9.25%



If the assets earn 9.25% per year for the next 10 years (i.e., 1.5% above the assumed rate of return), the funded ratio will increase from 82% to 87%.

Pessimistic Returns of 6.25%



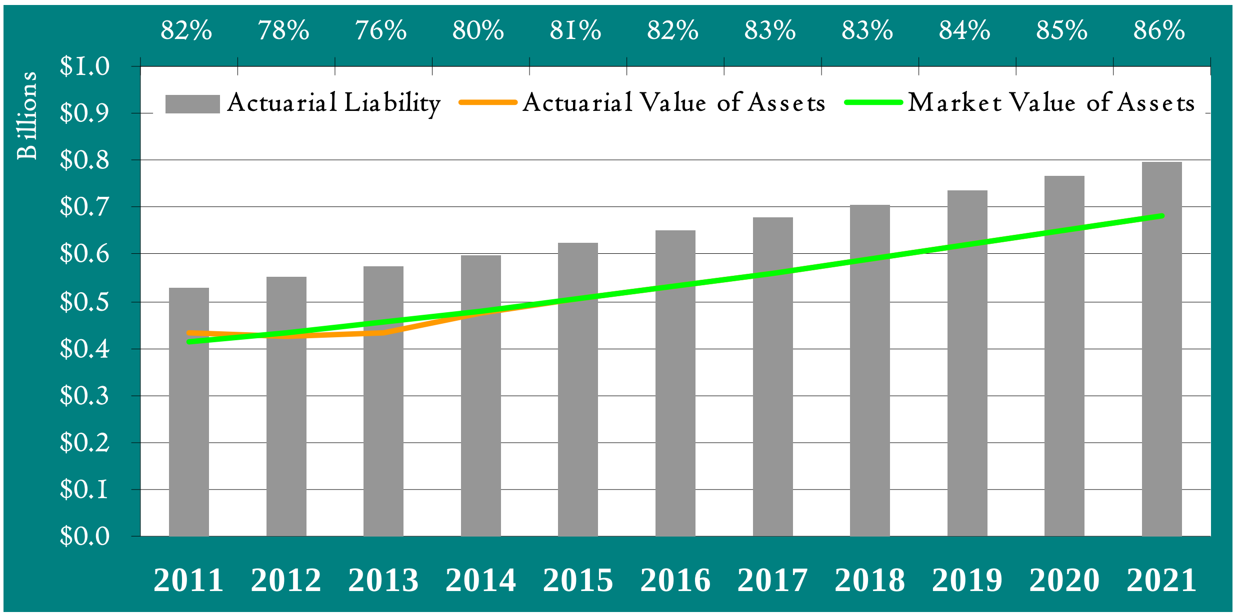
If the assets earn only 6.25% over the next 10 years (i.e., 1.5% below the assumed rate of return, the funded ratio would decline to 65% in that time period.

SECTION I
BOARD SUMMARY

b. *Assuming the City always pays the actuarially computed contribution*

If the City always pays the actuarially computed contribution, then the funded ratio would be expected to increase over the next 10 years as long as the asset return is at or above the assumed rate of 7.75%. However, for a return of 6.25% (i.e. 1.5% less than the assumed rate of return) the funded ratio would decrease over this time period. These observations are shown in the charts that follow.

Baseline Returns of 7.75%



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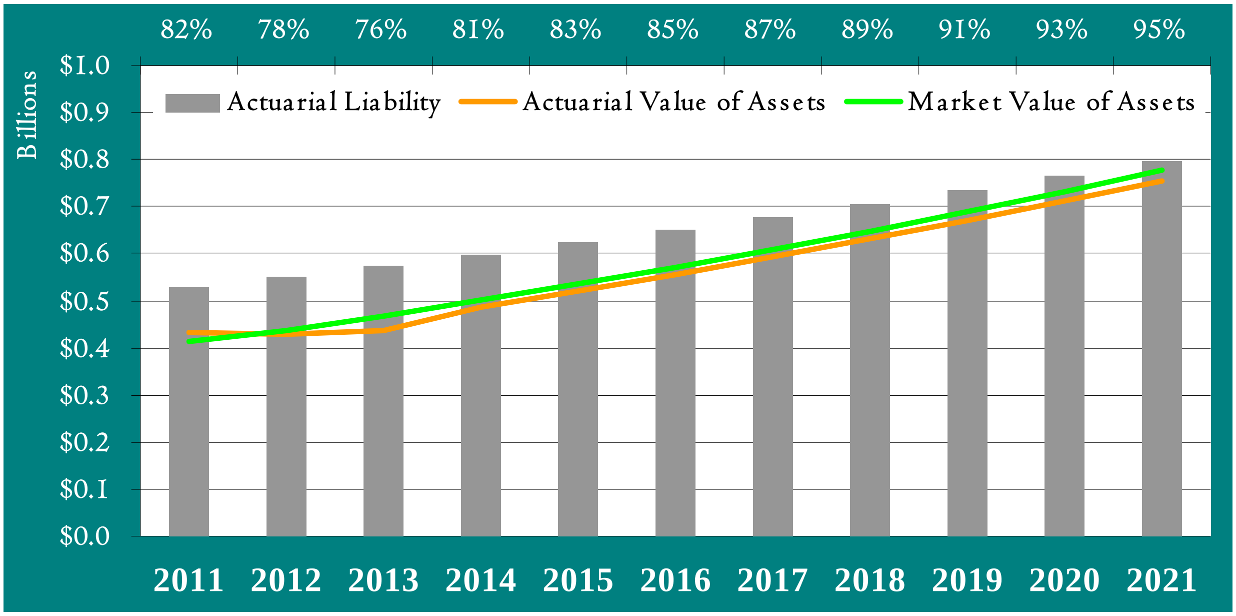
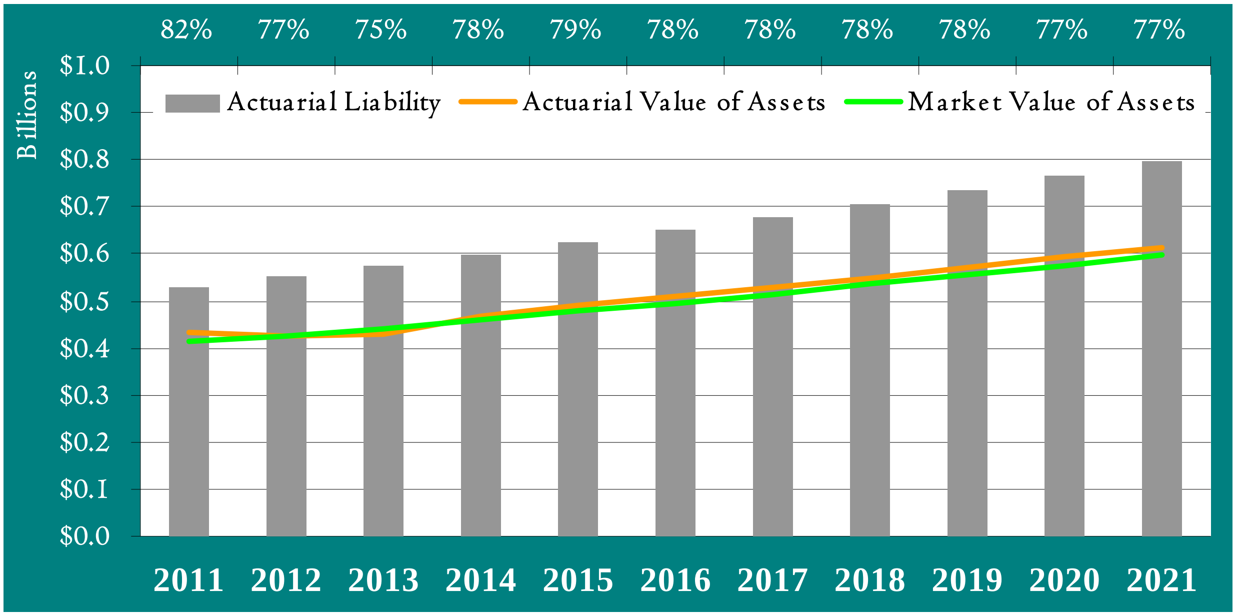
Optimistic Returns of 9.25%



Pessimistic Returns of 6.25%



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, 2010 and May 1, 2011;
- 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 flow** 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 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, 2010 and April 30, 2011.

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

Assets	**2010**	**2011**	**% Change**
Cash	$ 11,137,331	$ 10,627,353	(4.58%)
Stock and Collective Trusts	364,047,491	402,868,644	10.66%
Accounts Receivable	3,101,223	3,536,182	14.03%
Interest and Dividends Receivable	64,947	66,176	1.89%
Contributions Receivable	971,420	954,273	(1.77%)
Expenses Payable	(420,150)	(353,192)	(15.94%)
Purchase of Investments	(2,763,818)	(3,094,612)	11.97%
Health Assets	(1,416,530)	(2,061,952)	45.56%
Market Value of Assets	**$ 374,721,914**	**$ 412,542,872**	**10.09%**

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, 2010 and April 30, 2011.

TABLE II-2
Changes in Market Values

Value of Assets – April 30, 2010		**$ 374,721,914**
Additions		
Member Contributions	$ 4,910,598	
Employer Contributions	10,297,638	
Interest and Dividends	1,780,891	
Investment Return	51,373,542	
Total Additions	**$ 68,362,669**	
Deductions		
Benefit Payments	$ (28,480,289)	
Expenses	(2,061,422)	
Total Deductions	**$ (30,541,711)**	
Value of Assets – April 30, 2011		**$ 412,542,872**

SECTION II
ASSETS

Actuarial Value of Assets

The next table, Table II-3, shows how the actuarial value of assets is 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 80% but no more than 120% of the market value.

TABLE II-3
Development of Actuarial Value of Assets

1.	Actuarial Value of Assets at May 1, 2010			$ 435,427,953
2.	Employer and Employee Contributions			15,208,236
3.	Benefit Payments			(28,480,289)
4.	Net Cash Flow (2+3)			$ (13,272,053)
5.	Expected Value of investment return at 7.75%			33,240,970
6.	Actual investment return on Market Value			51,093,011
7.	Investment gain/(loss) for the year (6-5)			$ 17,852,041
8.	Investment gain/(loss) from current and prior years to be recognized in the plan year ending April 30, 2011			
	Plan Year End	Total Gain/ (Loss)	Deferral Percentage	Deferred to Future Years
	April 30, 2011	$ 17,852,041	80%	$ 14,281,633
	April 30, 2010	68,503,925	60%	41,102,355
	April 30, 2009	(161,966,630)	40%	(64,786,652)
	April 30, 2008	(52,977,094)	20%	(10,595,419)
	April 30, 2007	14,308,187	0%	0
	Total	$ (114,279,571)		$ (19,998,083)
9.	Market Value of Assets for Year ending April 30, 2011 :			$ 412,542,872
10.	Preliminary Actuarial Value of Assets on May 1, 2011 (9 - 8 deferred):			432,540,955
11.	120% of MV, Upper Limit for Actuarial Value			$ 495,051,446
12.	80% of MV, Lower Limit for Actuarial Value			330,034,298
13.	**Actuarial Value of Assets on May 1, 2011**			**$ 432,540,955**

SECTION II
ASSETS

Investment Performance

The market value of assets (MVA) returned 13.88% during 2011, which is higher than the assumed 7.75% return. A return of 2.42% on the actuarial value of assets (AVA) is primarily the result of the asset smoothing method, which includes the application of the corridor implemented in 2009, 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 ($ thousands)

Year Beginning May 1,	Expected Benefit Payments	Expected Contributions*	Net Cash Flow
2011	$ (30,264)	$ 15,153	$ (15,111)
2012	(31,477)	15,608	(15,869)
2013	(32,607)	16,076	(16,531)
2014	(33,586)	16,558	(17,028)
2015	(34,678)	17,055	(17,623)
2016	(36,055)	17,567	(18,488)
2017	(37,627)	18,094	(19,533)
2018	(39,494)	18,637	(20,857)
2019	(41,625)	19,196	(22,429)
2020	(43,896)	19,772	(24,124)

* 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, 2010 and May 1, 2011;
- 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 (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, 2010	May 1, 2011
Present Value of Future Benefits		
Active Participant Benefits	$ 339,949,505	$ 342,042,928
Retiree and Inactive Benefits	297,376,606	309,206,977
Present Value of Future Benefits (PVB)	**$ 637,326,111**	**$ 651,249,905**
Actuarial Liability		
Present Value of Future Benefits (PVB)	$ 637,326,111	$ 651,249,905
Present Value of Future Normal Costs (PVFNC)	120,726,195	122,768,868
Actuarial Liability (AL = PVB – PVFNC)	**516,599,916**	**528,481,037**
Actuarial Value of Assets (AVA)	435,427,953	432,540,955
Net (Surplus)/Unfunded (AL – AVA)	**$ 81,171,963**	**$ 95,940,082**
Present Value of Accrued Benefits		
Present Value of Future Benefits (PVB)	$ 637,326,111	$ 651,249,905
Present Value of Future Benefit Accruals (PVFBA)	148,246,895	147,250,575
Present Value of Accrued Benefits (PVAB=PVB–PVFBA)	**489,079,216**	**503,999,330**
Market Value of Assets (MVA)	374,721,914	412,542,872
Net Unfunded/(Surplus)	**$ 114,357,302**	**$ 91,456,458**

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, 2010 and May 1, 2011.

TABLE III-2

	Actuarial Liability
Liabilities May 1, 2010	$ 516,599,916
Liabilities May 1, 2011	528,481,037
Liability Increase/(Decrease)	11,881,121
Change Due to:	
Plan Amendments	0
Assumption Changes	0
Actuarial (Gain)/Loss	(11,031,953)
Benefits Accumulated and Other Sources	22,913,074

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, 2011

Turnover	$	744,244
Retirement		(3,543,628)
Disability		193,067
Pre-retirement mortality		22,710
Post-retirement mortality		(1,520,314)
Salary increase more/(less) than expected for continuing actives		(7,584,026)
New entrants		448,084
Data Composition & Miscellaneous changes		207,910
Total (Gain)/Loss	**$**	**(11,031,953)**

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 Entry Age 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 30-year fixed level percent of payroll amortization method for changes to the UAL for the years on and after May 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

	FY ending 2011	**FY ending 2012**
Entry Age Normal Cost Rate	14.78%	15.17%
Amortization Payment	9.92%	11.85%
Actuarially Determined Contribution	24.70%	27.02%

SECTION IV
CONTRIBUTIONS

TABLE IV-2
Development of Plan Contribution Rate
as of May 1, 2011

	As % of Payroll*
1. Normal Cost (Monthly):	
a. Total Normal Cost	24.72%
b. Expected Members Contribution	9.55%
c. Employer Paid Normal Cost (a) – (b)	15.17%
2. Amortization of Unfunded Liability *(see TABLE IV-3 below)*	11.85%
3. Total Employer Contribution Rate (1) + (2)	27.02%
4. Scheduled City Contributions (19.6% of payroll)	19.60%

* *Total payroll is $51,983,293, and the annual required contribution for plan year ending April 30, 2012 is $14,045,886 based on the total employer contribution rate.*

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	30	$ 31,525,386	27	$ 32,542,824	$ 2,098,721	15.506
(Gain)/Loss*	5/1/2009	30	$119,805,172	28	$ 122,519,955	$ 7,743,416	15.822
(Gain)/Loss*	5/1/2010	30	$(72,293,282)	29	$ (73,150,338)	$ (4,536,467)	16.125
(Gain)/Loss*	5/1/2011	30	$ 14,027,641	30	$ 14,027,641	$ 854,608	16.414
Total					**$ 95,940,082**	**$ 6,160,278**	

* *Also includes differences between the Annual Required Contribution and the actual contributions made.*

SECTION V
ACCOUNTING STATEMENT INFORMATION

Topic 960 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 Topic 960 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 (Topic 960) 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.

Topic 960 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, 2011 are exhibited in Table V-1. Finally, Table V-2 reconciles the Topic 960 liabilities determined as of the prior valuation, May 1, 2010, to the liabilities as of May 1, 2011.

Tables V-3 through V-5 are exhibits to be used with the 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 Annual Required Contribution information, compared to what the City actually contributed. Table V-7 shows historical unfunded actuarial liability (UAL) information, funding ratios, and the UAL as a percent of payroll.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-1
Accounting Statement Information

	May 1, 2010	May 1, 2011
A. Topic 960 Basis		
1. Present Value of Benefits Accrued to Date		
a. Members Currently Receiving Payments	$ 297,033,955	$ 308,630,305
b. Former Vested Members	342,651	576,672
c. Active Members	191,702,610	194,792,353
2. Total Present Value of Accrued Benefits (1(a) + 1(b) + 1(c))	$ 489,079,216	$ 503,999,330
3. Assets at Market Value	374,721,914	412,542,872
4. Unfunded Present Value of Accrued Benefits (2 – 3)	$ 114,357,302	$ 91,456,458
5. Ratio of Assets to Present Value of Benefits (3 / 2)	76.6%	81.9%
B. GASB No. 25 Basis		
1. Actuarial Liabilities for retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$ 297,376,606	$ 309,206,977
2. Actuarial Liabilities for current employees	219,223,310	219,274,060
3. Total Actuarial Liability (1 + 2)	$ 516,599,916	$ 528,481,037
4. Net Actuarial Assets available for benefits	435,427,953	432,540,955
5. Unfunded Actuarial Liability (3 – 4)	$ 81,171,963	$ 95,940,082

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-2
Statement of Changes in Total Actuarial Present Value of All Accrued Benefits

	Accumulated Benefit Obligation
Actuarial Present Value of Accrued Benefits at April 30, 2010	489,079,216
Increase/(Decrease) during Years Attributable to:	
Passage of Time and Gains/Losses	36,225,557
Benefit Paid – FY 2011	(29,563,308)
Assumption Change	0
Benefits Accrued	8,257,865
Net Increase/(Decrease)	14,920,114
Actuarial Present Value of Accrued Benefits at April 30, 2011	503,999,330

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, 2011
Actuarial cost method	Entry age
Amortization method	30-year closed level percent of pay amortization for changes to the UAL on or after 5/1/2008
Remaining amortization period for the UAL	Weighted average of 27.0 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
Inflation	3.0%

The actuarial assumptions used have been based upon recommendations 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.

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	2007	2008	2009	2010	2011
Investment Income[1]	$ 10,762	$ 12,418	$ (121,621)	$ 64,430	$ (25,060)
Combined Liability Experience	7,563	3,634	1,816	7,863	11,032
Gain/(or Loss) during Year from Financial Experience	$ 18,325	$ 16,052	$ (119,805)	$ 72,293	$ (14,028)
Non-Recurring Gain/(or Loss) Items	0	(13,468)	0	0	0
Composite Gain/(or Loss) during Year	$ 18,325	$ 2,584	$ (119,805)	$ 72,293	$ (14,028)

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%
2009	59,927	284,711	155,555	348,489	100%	100%	2%
2010	57,842	297,377	161,381	435,428	100%	100%	50%
2011	66,618	309,207	152,656	432,541	100%	100%	37%

[1] Investment experience includes the differences in actual and recommended contributions.

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
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	$10,319,886	108.9%
2010	$17,123,835	$10,465,322	61.1%
2011	$12,827,773	$10,297,638	80.3%
2012	$14,045,886	--	--

* Actual contributions are shown for the plan year ended 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 the actuarially computed contribution. The actuarially computed contribution for the current year is described in Section IV, Table IV-2.

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)
5/1/2002	$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%
5/1/2009	$348,489,209	$500,193,509	$151,704,300	69.67%	$53,612,509	282.96%
5/1/2010	$435,427,953	$516,599,916	$81,171,963	84.29%	$51,934,305	156.30%
5/1/2011	$432,540,955	$528,481,037	$95,940,082	81.85%	$51,983,293	184.56%

** Not less than zero.*

APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Firefighters' Pension System
Table of Plan Coverage

	5/1/2010	5/1/2011	% change
Active Members in Valuation			
Number	903	933	3.3%
Average Age	39.68	39.51	-0.4%
Average Service	13.79	13.51	-2.0%
Total Payroll	$51,934,305	$51,983,293	0.1%
Average Anticipated Payroll	$57,513	$55,716	-3.1%
Account Balance	$57,841,800	$66,617,795	15.2%
Eligible to Retire on:			
Normal Pension	72	80	11.1%
Deferred Pension	448	417	-6.9%
Total Active Vested Members	520	497	-4.4%
Vested Terminated Members	1	1	0.0%
Deaths During the Plan Year	21	34	61.9%
Pensioners:			
Number in Pay Status			
Retirees	386	369	-4.4%
Duty Disabled Retirees	81	81	0.0%
Non-duty Disabled Retirees	190	199	4.7%
Total	**657**	**649**	**-1.2%**
Average Age	67.3	67.5	0.2%
Average Monthly Benefit	$2,980	$3,120	4.7%
Beneficiaries in Pay Status*	206	219	6.3%
Members Due Refunds	5	7	40.0%
New Disabilities	19	14	-26.3%
Eligible to Retire on Normal Pension	13	12	-7.7%

**Widows, QDROs, and Children*

APPENDIX A
MEMBERSHIP INFORMATION

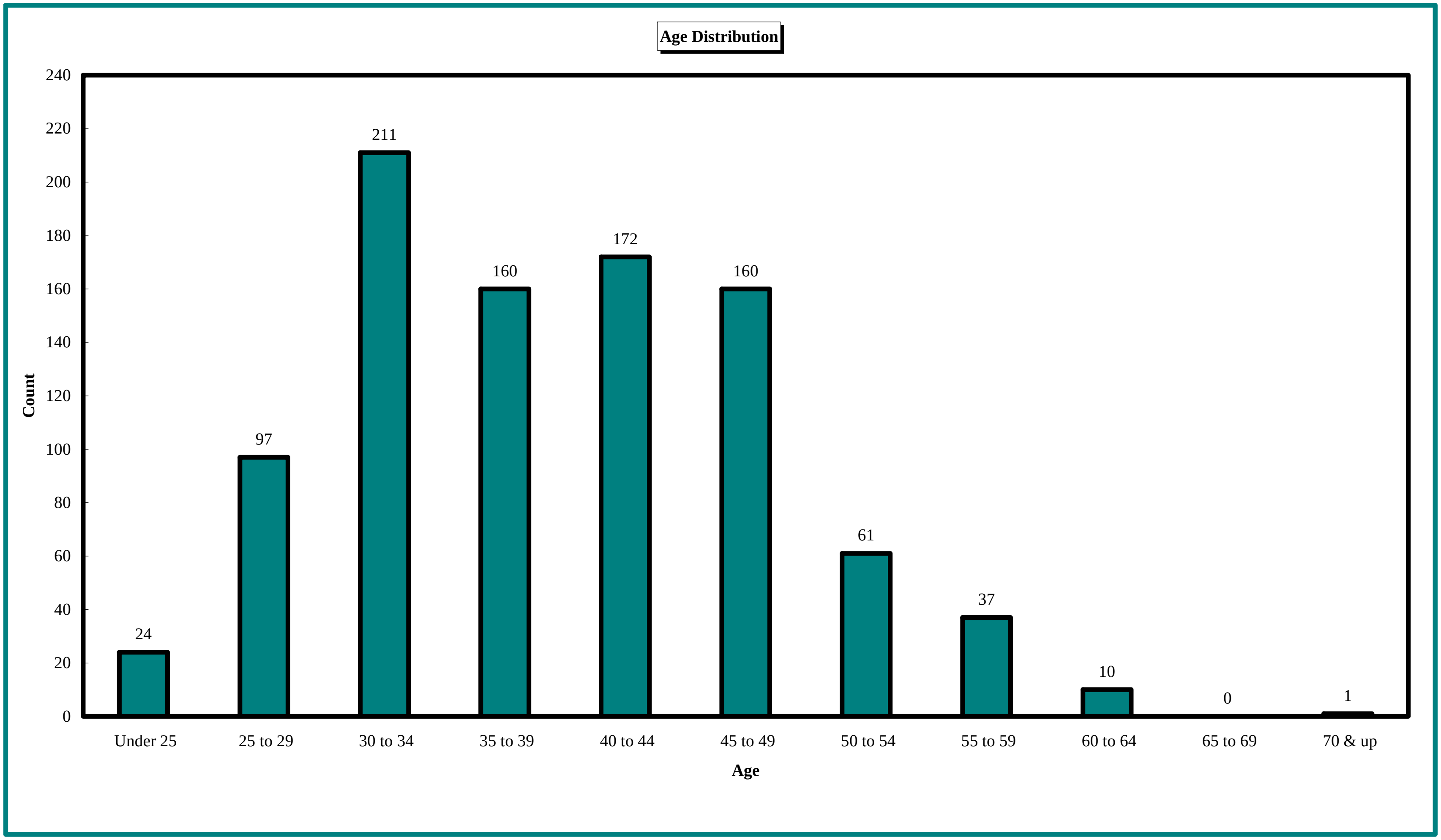
Kansas City Firefighters' Pension Plan Distribution of Active Members by Age and Service as of May 1, 2011

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	10	14	0	0	0	0	0	0	0	0	24
25 to 29	21	44	32	0	0	0	0	0	0	0	97
30 to 34	11	38	148	14	0	0	0	0	0	0	211
35 to 39	0	3	71	48	38	0	0	0	0	0	160
40 to 44	0	0	35	34	70	33	0	0	0	0	172
45 to 49	0	0	8	13	36	93	10	0	0	0	160
50 to 54	0	0	1	3	1	31	12	13	0	0	61
55 to 59	0	0	0	1	1	0	4	29	2	0	37
60 to 64	0	0	0	1	0	0	0	4	4	1	10
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	42	99	295	114	146	157	26	46	6	2	933

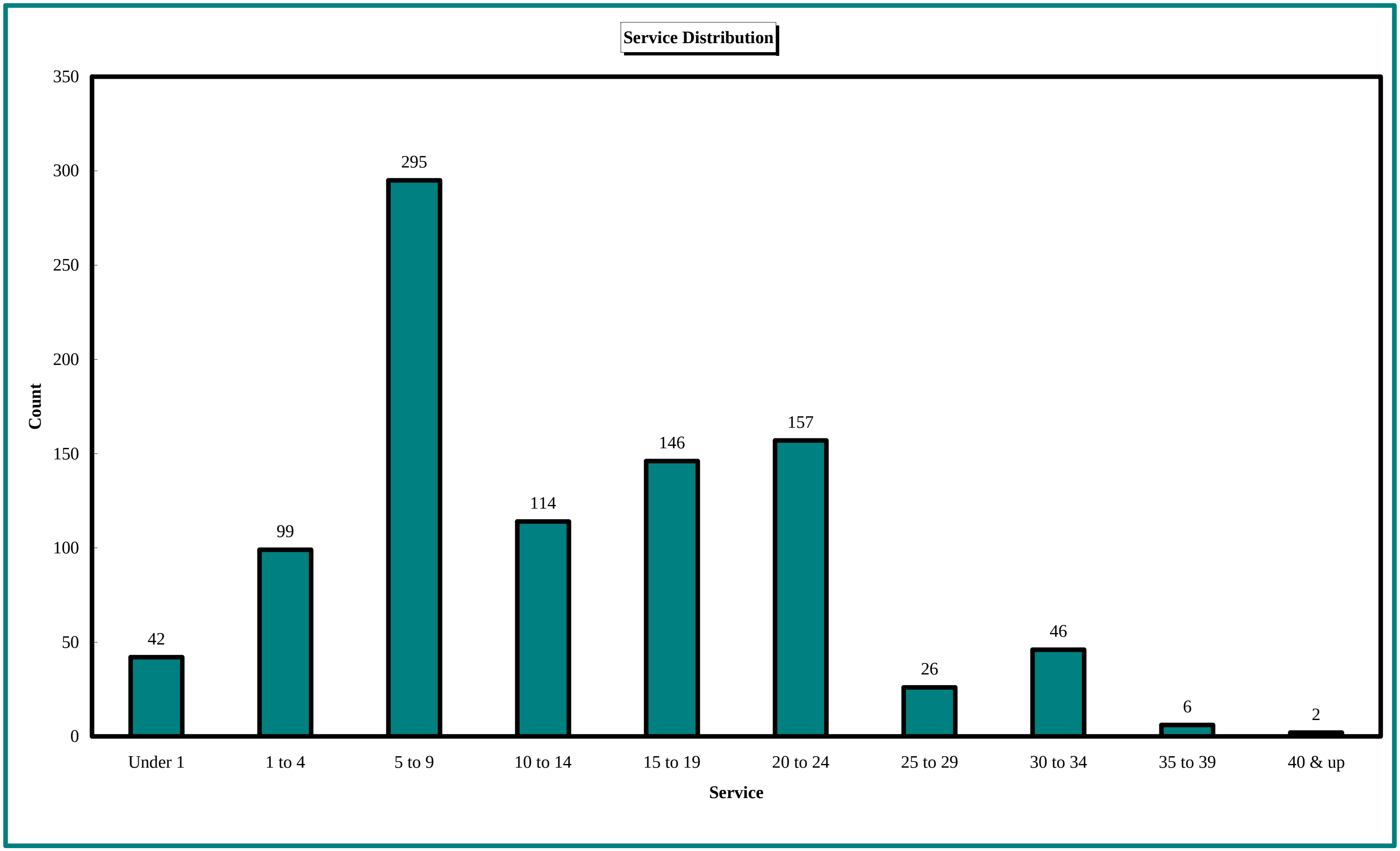
APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Firefighters' Pension Plan Distribution of Active Members by Age as of May 1, 2011



APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Firefighters' Pension Plan Distribution of Active Members by Service as of May 1, 2011



APPENDIX A
MEMBERSHIP INFORMATION

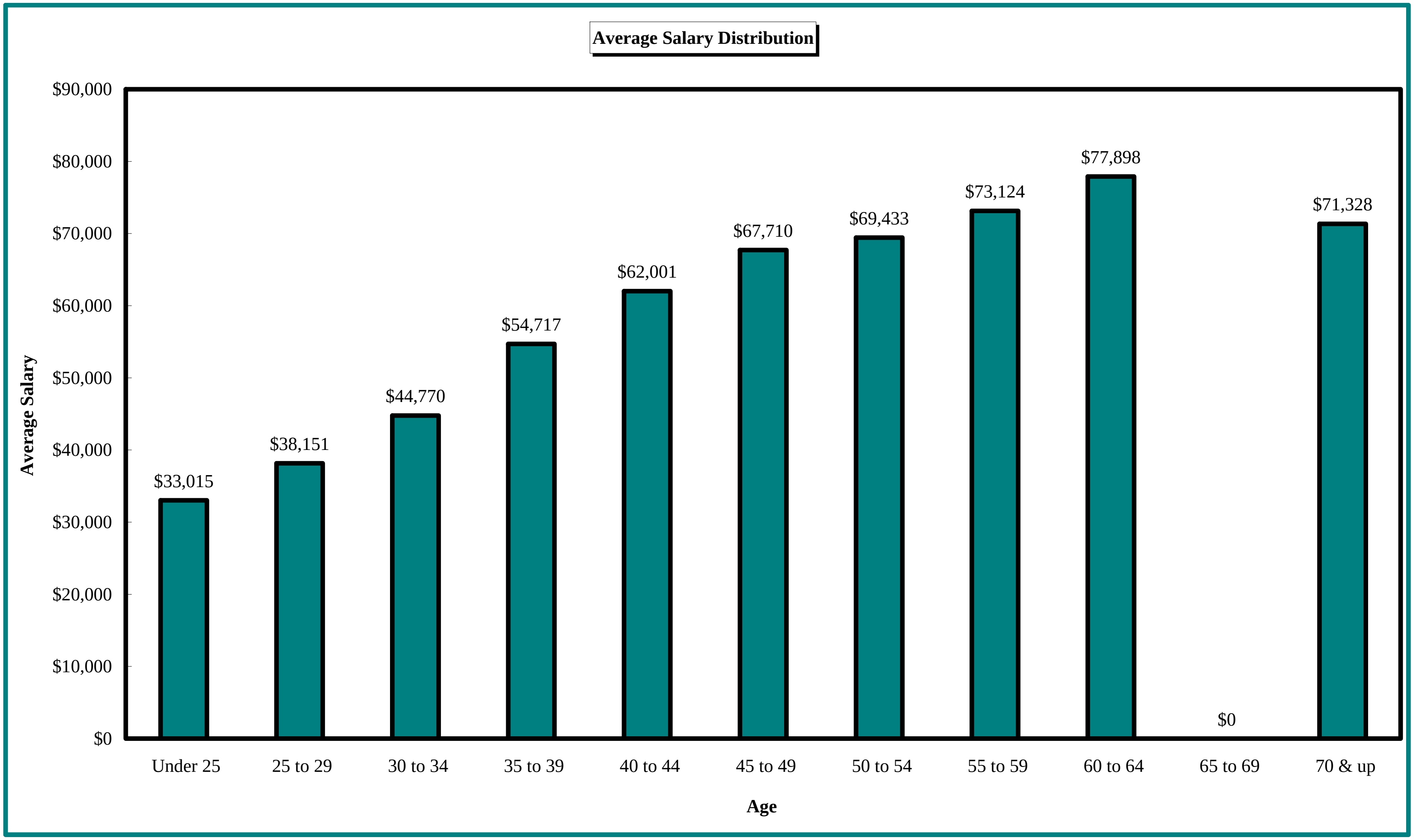
Kansas City Firefighters' Pension Plan Distribution of Active Members by Age and Service as of May 1, 2011

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	$31,320	$34,226	$0	$0	$0	$0	$0	$0	$0	$0	$33,015
25 to 29	$31,320	$36,168	$45,359	$0	$0	$0	$0	$0	$0	$0	$38,151
30 to 34	$32,112	$36,488	$46,637	$57,459	$0	$0	$0	$0	$0	$0	$44,770
35 to 39	$0	$38,640	$47,935	$58,195	$64,264	$0	$0	$0	$0	$0	$54,717
40 to 44	$0	$0	$50,180	$59,049	$64,992	$71,235	$0	$0	$0	$0	$62,001
45 to 49	$0	$0	$50,546	$59,147	$65,253	$69,702	$82,896	$0	$0	$0	$67,710
50 to 54	$0	$0	$51,036	$57,420	$68,556	$69,047	$71,497	$72,701	$0	$0	$69,433
55 to 59	$0	$0	$0	$61,500	$67,212	$0	$76,608	$72,644	$81,888	$0	$73,124
60 to 64	$0	$0	$0	$153,204	$0	$0	$0	$68,799	$69,813	$71,328	$77,898
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	$71,328	$71,328
Total	$31,527	$36,091	$47,352	$59,310	$64,906	$69,895	$76,668	$72,326	$73,838	$71,328	$55,716

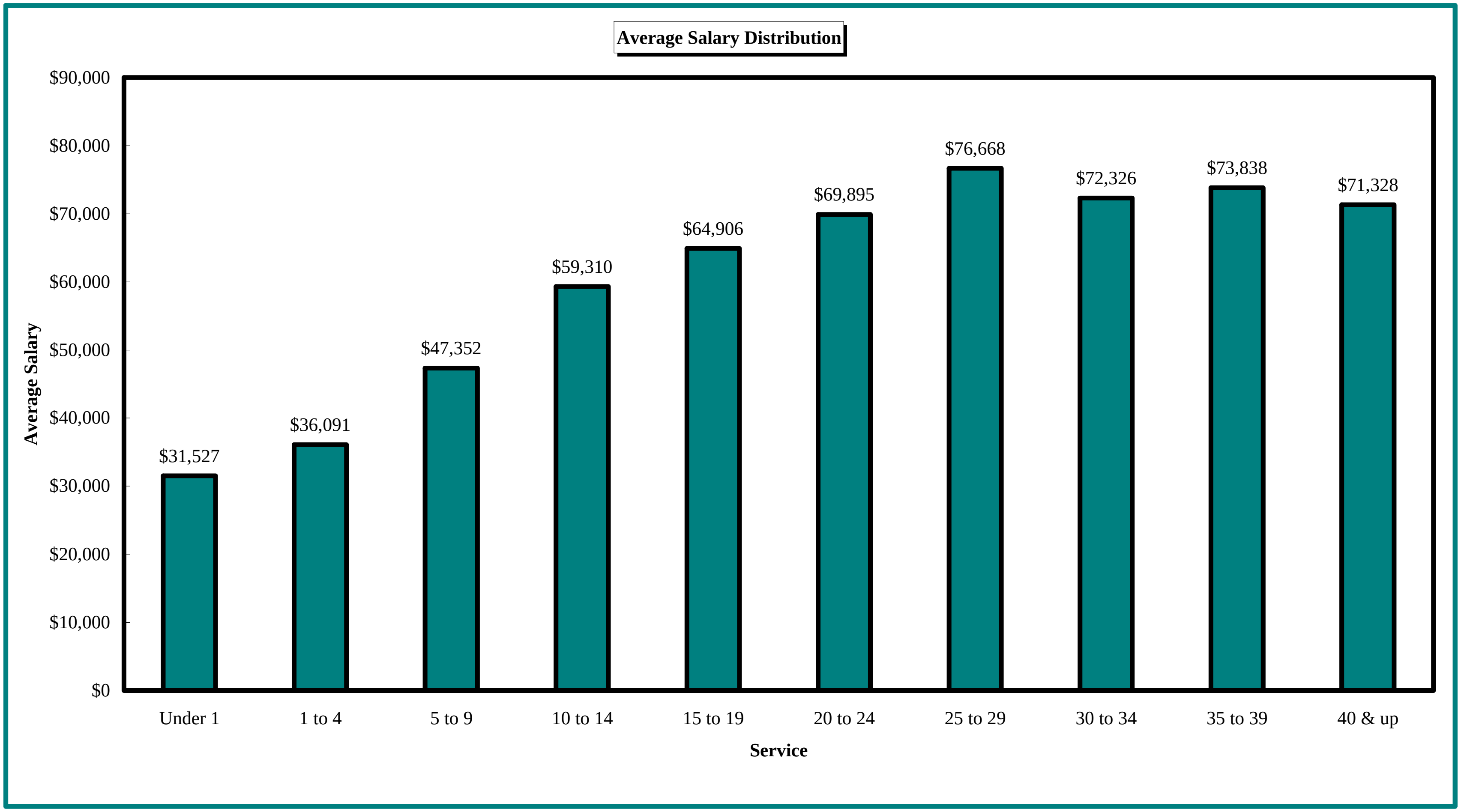
APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Firefighters' Pension Plan Distribution of Active Members by Age as of May 1, 2011



APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Firefighters' Pension Plan Distribution of Active Members by Service as of May 1, 2011



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	**868**	**349**	**1**	**280**	**19**	**211**	**8**
Under $500	39	0	0	0	5	27	7
$500-1,000	92	1	0	8	7	75	1
1,000-1,500	80	15	0	13	2	50	0
1,500-2,000	93	49	0	18	1	25	0
2,000-2,500	77	53	0	10	3	11	0
2,500-3,000	99	54	0	38	0	7	0
3,000-3,500	160	76	0	76	1	7	0
3,500-4,000	94	42	1	49	0	2	0
4,000-4,500	65	26	0	36	0	3	0
4,500-5,000	40	21	0	17	0	2	0
5,000 & over	29	12	0	15	0	2	0

During the year ended April 30, 2011 there were 42 new pensions awarded (7 Normal, 14 Disabled, and 21 Widows, QDROs, and Children)

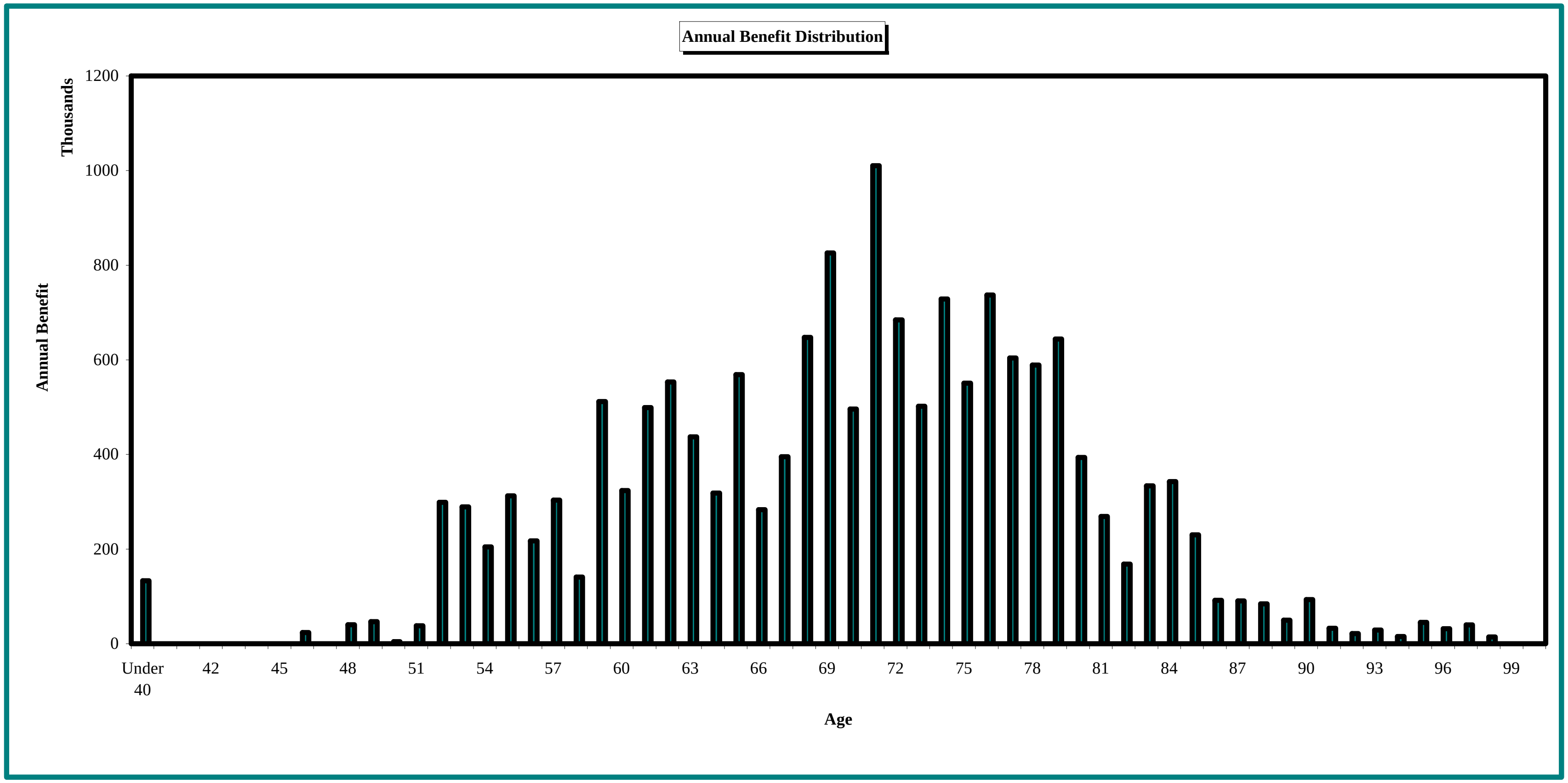
APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Firefighters' Pension Plan Distribution of Retired Members and Survivors as of May 1, 2011

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	11	$74,940	73	19	$502,033
25	0	$0	74	27	$728,513
26	2	$31,100	75	20	$550,685
27	1	$7,211	76	25	$737,027
28	3	$20,131	77	22	$603,891
29	0	$0	78	23	$588,947
30	0	$0	79	27	$644,300
31	0	$0	80	18	$393,825
32	0	$0	81	15	$268,936
33	0	$0	82	9	$168,073
34	0	$0	83	23	$333,550
35	0	$0	84	19	$342,723
36	0	$0	85	11	$230,007
37	0	$0	86	6	$91,992
38	0	$0	87	5	$90,442
39	0	$0	88	5	$84,548
40	0	$0	89	3	$49,592
41	0	$0	90	7	$93,469
42	0	$0	91	4	$32,749
43	0	$0	92	2	$21,443
44	0	$0	93	2	$29,138
45	0	$0	94	1	$15,288
46	1	$23,986	95	3	$45,338
47	0	$0	96	1	$31,910
48	1	$40,398	97	1	$40,019
49	1	$46,856	98	2	$14,187
50	1	$4,268	99	0	$0
51	1	$38,114	100	0	$0
52	7	$298,672	101	2	$43,610
53	8	$289,509	102	1	$18,011
54	5	$204,633	103	0	$0
55	9	$312,818	104	0	$0
56	5	$217,440	105	0	$0
57	9	$303,872	106	0	$0
58	5	$140,946	107	0	$0
59	11	$511,768	108	0	$0
60	9	$324,040	109	0	$0
61	15	$499,327	110	0	$0
62	13	$553,324	111	0	$0
63	10	$437,279	112	0	$0
64	11	$318,595	113	0	$0
65	18	$568,833	114	0	$0
66	9	$283,517	115	0	$0
67	13	$395,131	116	0	$0
68	19	$647,361	117	0	$0
69	23	$825,768	118	0	$0
70	15	$496,227	119	0	$0
71	26	$1,010,318	120	0	$0
72	23	$684,539			
			Totals	588	$16,405,167

APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Firefighters' Pension Plan Distribution of Retired Members and Survivors as of May 1, 2011



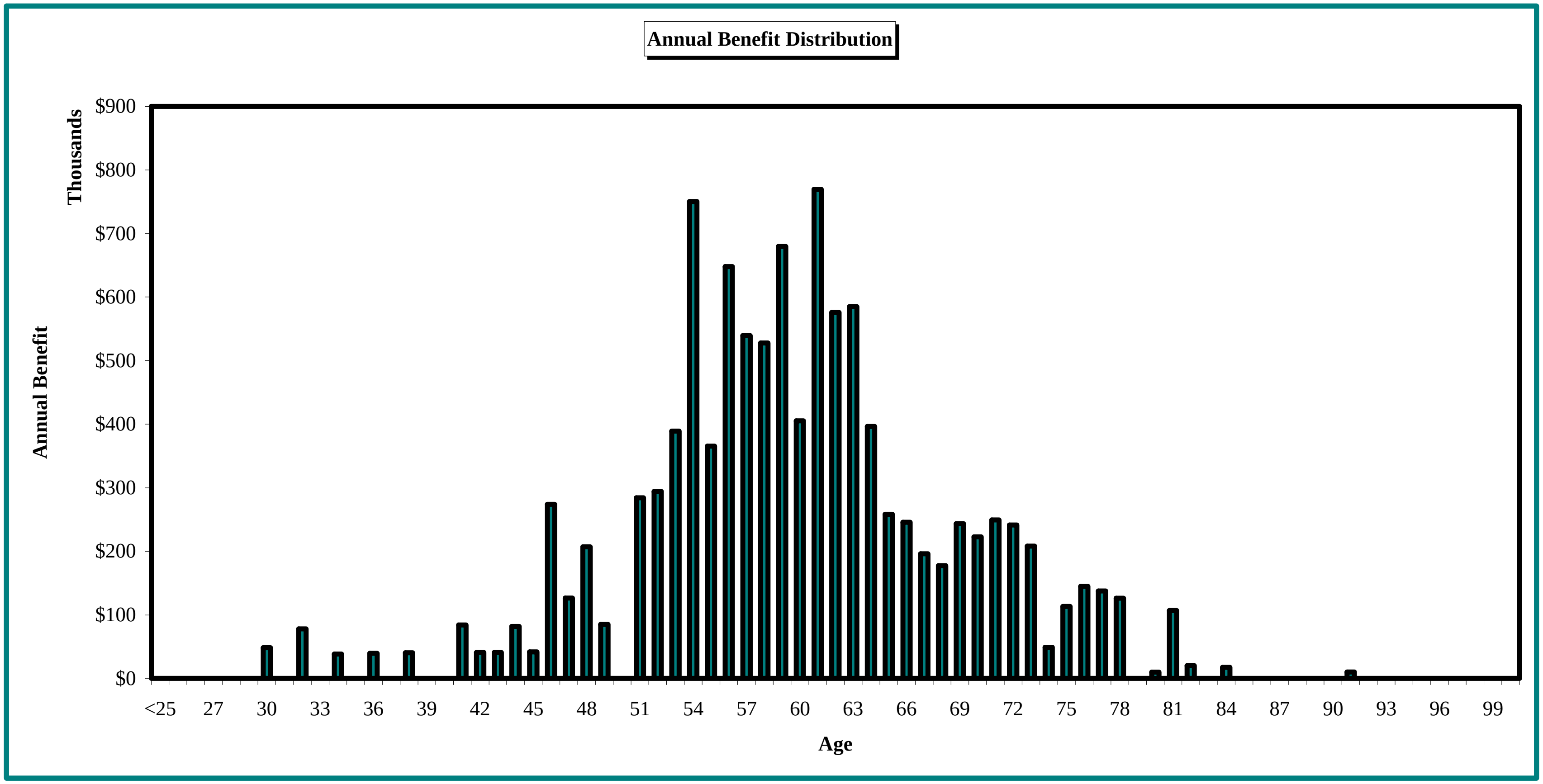
APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Firefighters' Pension Plan Distribution of Disabled Members as of May 1, 2011

Age	Count	Annual Benefit	Age	Count	Annual Benefit
<25	0	$0	73	6	$208,173
25	0	$0	74	2	$48,834
26	0	$0	75	4	$113,422
27	0	$0	76	7	$144,972
28	0	$0	77	5	$137,624
29	0	$0	78	6	$126,080
30	1	$48,416	79	0	$0
31	0	$0	80	1	$9,974
32	2	$77,844	81	3	$106,847
33	0	$0	82	1	$20,140
34	1	$38,511	83	0	$0
35	0	$0	84	1	$17,508
36	1	$39,514	85	0	$0
37	0	$0	86	0	$0
38	1	$40,521	87	0	$0
39	0	$0	88	0	$0
40	0	$0	89	0	$0
41	2	$84,132	90	0	$0
42	1	$40,744	91	1	$10,197
43	1	$40,679	92	0	$0
44	2	$81,755	93	0	$0
45	1	$41,692	94	0	$0
46	6	$274,080	95	0	$0
47	3	$126,490	96	0	$0
48	5	$206,802	97	0	$0
49	2	$85,010	98	0	$0
50	0	$0	99	0	$0
51	6	$284,073	100	0	$0
52	7	$294,294	101	1	$56,364
53	9	$389,324	102	0	$0
54	17	$750,580	103	0	$0
55	9	$365,501	104	0	$0
56	15	$648,123	105	0	$0
57	11	$539,499	106	0	$0
58	11	$527,942	107	0	$0
59	15	$679,452	108	0	$0
60	10	$405,224	109	0	$0
61	19	$769,598	110	0	$0
62	13	$575,812	111	0	$0
63	12	$584,892	112	0	$0
64	9	$396,486	113	0	$0
65	6	$258,068	114	0	$0
66	7	$245,791	115	0	$0
67	5	$196,080	116	0	$0
68	5	$177,340	117	0	$0
69	6	$243,483	118	0	$0
70	5	$222,577	119	0	$0
71	8	$249,446	120	0	$0
72	8	$241,270			
			Totals	280	$11,271,180

APPENDIX A
MEMBERSHIP INFORMATION

Kansas City Firefighters' Pension Plan Distribution of Disabled Members as of May 1, 2011



APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

1. Mortality Rates

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

Disabled: 1983 Group Annuity Mortality Table

	Mortality (sample rates)	
Age	**Male**	**Female**
20	0.04%	0.02%
25	0.05%	0.03%
30	0.06%	0.03%
35	0.09%	0.05%
40	0.12%	0.07%
45	0.22%	0.10%
50	0.39%	0.16%
55	0.61%	0.25%
60	0.92%	0.42%

2. Disability and Withdrawal Rates

Rates before Retirement (sample rates)		
Age	**Disability**	**Withdrawal**
20	0.03%	2.50%
25	0.05%	2.50%
30	0.13%	1.69%
35	0.30%	1.05%
40	0.60%	0.75%
45	1.12%	0.75%
50	1.90%	0.52%
55	4.50%	---
60	7.60%	---

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

3. 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

4. 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

5. Retirement Age for Inactive Vested Members

50

6. Unknown Data for Members

Same as those exhibited by members with similar known characteristics

7. Percent Married

94% of active participants

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

8. Age of Spouse

Females four years younger than males

9. Eligible Children

None

10. Net Investment Return

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

11. Salary Increase

Age	Rate (%)
Less than 25	8.0%
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%

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

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 80% but no more than 120% of the market value.

3. Amortization of Unfunded Actuarial Liability/(Surplus)

30-year layered amortization method – level percent of pay. Under the layered approach, the May 1, 2008 unfunded actuarial liability is written down over a 30-year period and all future changes to the unfunded actuarial liability establish new 30-year amortization periods. Payroll is expected to increase 3.0% per year.

4. Changes in Assumptions

None.

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:	Members 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 creditable 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, 2011 is $5,125.

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, with a minimum of $600 per month.

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.

9. Withdrawal (Refund) Benefits

Age Requirement:	None.
Service Requirement:	Less than 10 years of creditable service.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

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 withdraws with less than one year, two years, 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 for a period of ten years. 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.
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,

APPENDIX C
SUMMARY OF PLAN PROVISIONS

	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 a student). If a surviving spouse exists, $100 per month is paid until age 18 (or 21 if a 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, not less than 25% of the retiree's final average compensation per month. 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

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

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)	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. 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.

12. Unfunded Actuarial Liability

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

13. 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.

14. Funded Percentage

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

APPENDIX D
GLOSSARY OF TERMS

15. 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.

16. Investment Return Assumption

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