POLICE AND FIRE RETIREMENT SYSTEM OF WICHITA, KANSAS

ACTUARIAL VALUATION REPORT

AS OF DECEMBER 31, 2009

Prepared by:

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Police and Fire Retirement System of Wichita, Kansas
Actuarial Valuation Report
as of December 31, 2009

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March 31, 2010

The Board of Trustees
Police and Fire Retirement System of Wichita, Kansas
City Hall, 12th Floor
Wichita, KS 67202

Dear Members of the Board:

At your request, we have performed an annual actuarial valuation of the Police and Fire Retirement System of Wichita, Kansas as of December 31, 2009 for determining the contribution rate for fiscal year 2011. The major findings of the valuation are contained in this report. This report reflects the benefit provisions in effect as of December 31, 2009. There was no change in plan provisions from the prior valuation. This valuation reflects the new assumptions adopted by the Board as a result of the experience study conducted in 2009.

In preparing this report, we relied, without audit, on information (some oral and some written) supplied by the System's staff. This information includes, but is not limited to, plan provisions, member data and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board (ASB) and the applicable Guides to Professional Conduct, amplifying Opinions and Supporting Recommendations of American Academy of Actuaries.

We further certify that all costs, liabilities, rates of interest and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations of future experience); and which, in combination, offer our best estimate of anticipated experience affecting the System. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions. The Board of Trustees has the final decision regarding the appropriateness of the assumptions and adopted them as outlined in Appendix C.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

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Actuarial computations presented in this report are for purposes of determining the actuarial contribution rates for funding the System. Actuarial computations presented in this report under GASB Statements No. 25 and 27 are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and of GASB Statements No. 25 and 27. Determinations for purposes other than these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work product was prepared exclusively for the Police and Fire Retirement System of Wichita, Kansas for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the Police and Fire Retirement System of Wichita, Kansas operations, and uses data from the Police and Fire Retirement System of Wichita, Kansas, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

We would like to express our appreciation to Barbara Davis, Pension Manager, and to members of her staff, who gave substantial assistance in supplying the data on which this report is based.

I, Patrice A. Beckham, F.S.A. am a member of the American Academy of Actuaries and a Fellow of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I, Brent A. Banister, F.S.A. am a member of the American Academy of Actuaries and a Fellow of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

We herewith submit the following report and look forward to discussing it with you.

Respectfully submitted,

MILLIMAN, INC.

Patrice Beckham

Brent A. Banister

Patrice A. Beckham, F.S.A.
Consulting Actuary

Brent A. Banister, F.S.A.
Consulting Actuary

SECTION 1

BOARD SUMMARY

OVERVIEW

This report presents the results of the December 31, 2009 actuarial valuation of the Police and Fire Retirement System of Wichita, Kansas (WPF). The primary purposes of performing a valuation are to:

- to estimate the liabilities for the benefits provided by the System,
- determine the employer contribution rates required to fund the System on an actuarial basis,
- disclose certain asset and liability measures as of the valuation date,
- to monitor any deviation between actual plan experience and experience predicted by the actuarial assumptions, so that recommendations for assumption changes can be made when appropriate,
- to analyze and report on any significant trends in contributions, assets and liabilities over the past several years.

There was no change in the benefit provisions from the last valuation. This valuation reflects the new set of actuarial assumptions adopted by the Board as the result of the experience study prepared in 2009. The changes to the assumptions included:

- Decrease in the general wage growth assumption from 4.5% to 4.0% as a result of decreasing the price inflation assumption from 4.0% to 3.5%.
- Lower retirement rates for Plan A and extend them to 35 years of service. Lower rates of retirement for Plan C members at ages before 53 and ages 58-60 and increase rates at ages 56 and 57.
- Increase in the rates of termination of employment for ages under 44 and decrease rates at ages over 44.
- Lower assumption for indexation of benefits for terminated vested members from 4.5% to 4.0% to be consistent with general wage growth assumption.

The net impact of all assumption changes, first reflected in this valuation, was a small decrease of $3.2 million in the unfunded actuarial liability (UAL) and a decrease of 0.60% in the normal cost rate.

The System had an unfunded actuarial liability of $24.2 million in the December 31, 2008 valuation, which has increased in the December 31, 2009 valuation to an unfunded actuarial liability of $39.4 million. A detailed analysis of the change in the unfunded actuarial liability from December 31, 2008 to December 31, 2009 is shown on page 4. The actuarial valuation results provide a “snapshot” view of the Plan’s financial condition on December 31, 2009. The valuation results reflect net unfavorable experience for the past plan year as demonstrated by an unfunded actuarial liability that was higher than expected based on the actuarial assumptions used in the December 31, 2008 actuarial valuation. Unfavorable experience on the actuarial value of assets resulted in a loss of $19.4 million and favorable experience on liabilities resulted in a gain of $2.8 million. Net experience was an actuarial loss of $16.6 million.

The Plan uses an asset smoothing method in the valuation process. As a result, the plan’s funded status and the actuarial contribution rate are based on the actuarial (smoothed) value of assets – not the market value. Significant investment losses in 2008 resulted in a deferred (unrecognized) loss of $116 million in the December 31, 2008 valuation. Due to the magnitude of the deferred loss, there was a loss on the actuarial value of assets this year despite a return on market value of 21%. The loss recognized in the December 31, 2009 valuation was less than it would have been if the rate of return in 2009 had been lower. On the valuation date, the actuarial value of assets exceeds the market value by about $58 million or 14%, so there are still significant deferred investment losses.

Actual returns over the next few years will determine if and how, the $58 million of deferred investment loss is recognized. For example, a return of 22% on the market value of assets in 2010 would be necessary to attain a return of 7.75% on the actuarial value of assets.

In the following pages the change in the assets, liabilities, and contributions of the Plan over the last year are discussed in more detail.

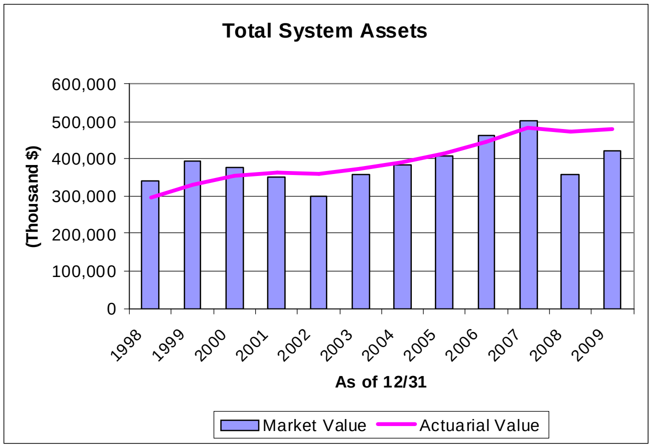
ASSETS

As of December 31, 2009, the System had total assets, when measured on a market value basis, of $422 million. This was an increase of $66 million from the December 31, 2008 figure of $356 million. The market value of assets is not used directly in the calculation of the City's contribution rate. An asset valuation method, which smoothes the effect of market fluctuations, is used to determine the value of assets used in the valuation, called the "actuarial value of assets". The actuarial value of assets is equal to the expected value (calculated using the actuarial assumed rate of 7.75%) plus 25% of the difference between the market and expected value. See Table 3 on page 13 for a detailed development of the actuarial value of assets. Because part of the deferred investment loss from 2008 was recognized this year, the rate of return on the actuarial value of assets was 4%. Even with strong returns in 2009, the actuarial value of assets remains 14% higher than the actual market value.

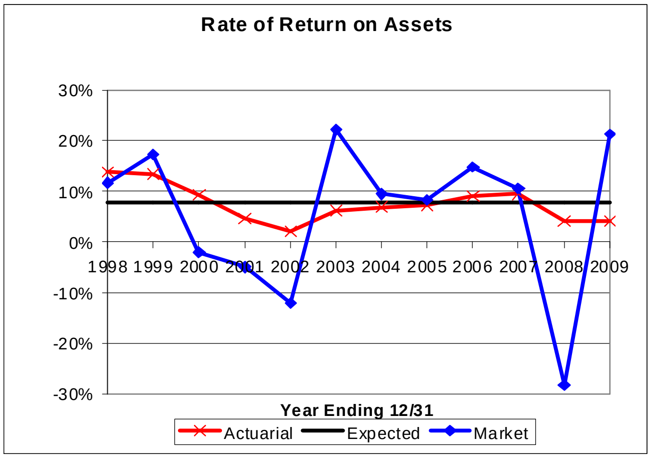
The components of the change in the market and actuarial value of assets for the Retirement System (in millions) are set forth below:

	Market Value ($M)	Actuarial Value ($M)
Assets, December 31, 2008	$356.1	$472.3
• City and Member Contributions	15.5	15.5
• Benefit Payments and Refunds	(24.2)	(24.2)
• Investment Loss (net of expenses)	75.0	17.0
Assets, December 31, 2009	$422.4	$480.6

The unrecognized investment losses represent about 14% of the market value of assets. Unless offset by future investment gains or other favorable experience, the recognition of the $58 million loss is expected to have a significant impact on the future funded ratio and actuarial contribution requirement. If the deferred losses were recognized immediately in the actuarial value of assets, the funded percentage would decrease from 92% to 81% and the actuarially determined contribution rate would increase from 22.0% to 28.4%.



The actuarial value of assets has both exceeded the market value and been less than the market value of assets, which is expected when using a smoothing method.



The rate of return on the actuarial value of assets has been less volatile than the market value return, which is the main reason for using an asset smoothing method.

LIABILITIES

The actuarial liability is that portion of the present value of future benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and the asset value at the same date is referred to as the unfunded actuarial liability (UAL), or (surplus) if the asset value exceeds the actuarial liability. The unfunded actuarial liability will be reduced if the employer's contributions exceed the employer's normal cost for the year, after allowing for interest earned on the previous balance of the unfunded actuarial liability. Benefit improvements, experience gains and losses, and changes in actuarial assumptions and procedures will also impact the total actuarial liability and the unfunded portion thereof.

The Actuarial Liability and Unfunded Actuarial Liability for the System as of December 31, 2009 are:

Actuarial Liability	$519,934,254
Actuarial Value of Assets	480,555,562
Unfunded Actuarial Liability/(Surplus)	39,378,692

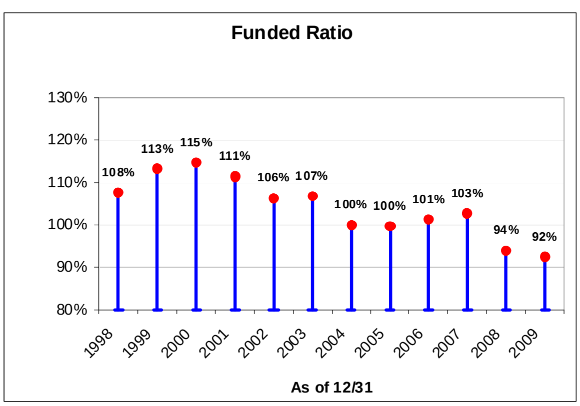
Between December 31, 2008 and December 31, 2009, the change in the unfunded actuarial liability for the System was as follows (in millions):

	$(M)
UAL, December 31, 2008	24.2
+ Normal cost for year	14.9
+ Assumed investment return for year	3.0
- Actual contributions (member + City)	15.5
- Assumed investment return on contributions	0.6
= Expected Unfunded Actuarial Liability, December 31, 2009	26.0
+ Change from amendments	0.0
+ Change from assumption changes	(3.2)
= Expected UAL after changes	22.8
Actual UAL, December 31, 2009	39.4
Experience gain/(loss) (Expected UAL – Actual UAL)	(16.6)

The experience loss for the 2009 plan year of $16.6 million was the result of an actuarial loss of $19.4 million on System assets (actuarial value) and a small actuarial gain of $2.8 million on System liabilities.

Analysis of the unfunded actuarial liability strictly as a dollar amount can be misleading. Another way to evaluate the unfunded actuarial liability and the progress made in its funding is to track the funded status, the ratio of the actuarial value of assets to the actuarial liability. This information for recent years is shown below (in millions). Historical information is shown in the graph following the chart.

	12/31/05	12/31/06	12/31/07	12/31/08	12/31/09
Actuarial Liability ($M)	$414.0	$439.2	$468.1	$496.6	$519.9
Actuarial Value of Assets ($M)	412.8	444.5	480.8	472.3	480.6
Funded Ratio (Actuarial Value)	99.7%	101.2%	102.7%	95.1%	92.4%
Funded Ratio (Market Value)	98.2%	104.9%	107.6%	71.7%	81.2%



Over the past decade, the funded status of the Retirement System has both improved and declined. The assumption changes and actuarial loss in 2004 caused the funded ratio to decline sharply. The strong asset performance in 2006 and 2007 returned the System to a surplus funded situation. The significant decline in the stock market in 2008 again dropped the funded ratio. If the stock market does not continue to rebound, the recognition of the deferred investment losses will continue to lower the System's funded status.

As mentioned earlier in this report, due to the asset smoothing method there is about a $58 million difference between the actuarial and market value of assets. To the extent there is not favorable investment experience to offset the deferred losses, the $58 million loss will be recognized in future years and the System's funded status will decline. The System's funded status will be heavily dependent on investment returns in the next few years.

CONTRIBUTION RATES

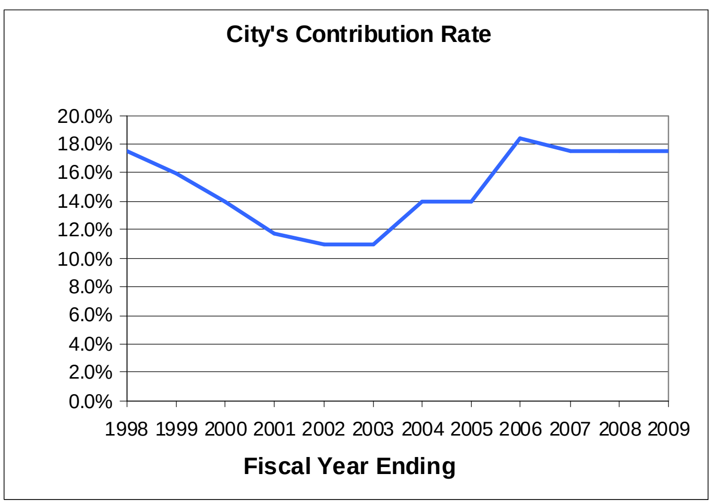
Generally, contributions to the System consist of:

- a "normal cost" for the portion of projected liabilities allocated to service of members during the year following the valuation date, by the actuarial cost method,
- an "unfunded actuarial liability or (surplus) contribution" for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets.

Contribution rates are computed with the objective of developing costs that are level as a percentage of covered payroll. The contribution rate for fiscal year 2011 is computed based on the December 31, 2009 actuarial valuation.

As of December 31, 2009, the actuarial liability exceeds the actuarial value of assets so an unfunded actuarial liability (UAL) exists. In accordance with State statutes, the UAL is to be amortized over a rolling 20-year period. Amortization of the UAL results in a contribution to fund the UAL in addition to the normal cost rate. This valuation indicates the City's contribution should be 22.0% of pay (17.7% employer normal cost rate plus 4.3% UAL contribution).

A summary of the City's historical contribution rate for the system is shown below:



COMMENTS

The stock market losses in 2008 are still impacting most public retirement plans. The December 31, 2009 valuation reflected a loss on the actuarial value of assets despite a return on market value of 21%, due to the use of an asset smoothing method, which smoothes out the peaks and valleys of investment returns. The System utilizes an asset smoothing method that determines the actuarial value of assets as 75% of the expected value (using the 7.75% actuarial assumed rate of return) and 25% of actual market value. Because part of the 2008 deferred loss was recognized this year, the rate of return on the actuarial value of assets for the 2009 plan year was about 4% despite a return on market value of 21%.

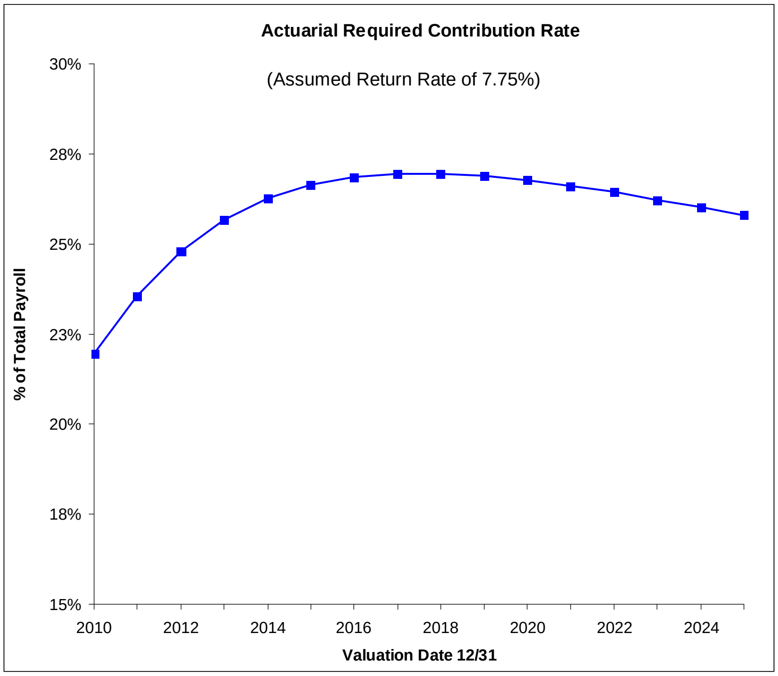
Given the size of the deferred investment loss ($58M), the System's funded status could decrease and the actuarial contribution rate increase in future valuations absent favorable experience to offset the impact of the deferred losses. The City should be prepared for significantly higher contribution rates in the next few years, and perhaps longer depending on future rates of return.

While the use of an asset smoothing method is a common procedure for public retirement systems, it is important to identify the potential impact of the deferred (unrecognized) investment experience. The key valuation results from the December 31, 2009 actuarial valuation are shown below using both the actuarial value of assets and the pure market value.

	Using Actuarial Value of Assets	**Using Market Value of Assets**
Actuarial Liability	$519,934,254	$519,934,254
Asset Value	480,555,562	422,379,231
Unfunded Actuarial Liability	$ 39,378,692	$ 97,555,023
Funded Ratio	92.4%	81.2%
Normal Cost Rate	24.7%	24.7%
UAL Contribution Rate	4.3%	10.7%
Total Contribution Rate	29.0%	35.4%
Employee Contribution Rate	(7.0%)	(7.0%)
Employer Contribution Rate	22.0%	28.4%

The asset smoothing method impacts only the timing of recognizing the actual market experience on the assets. Due to deferred investment experience from 2008, the actuarial value of assets exceeds the pure market value by 14%, despite strong returns in 2009. If there are not higher returns than 7.75% consistently over the next few years, the $58 million of deferred investment experience will be recognized and the ultimate impact on the employer contribution rate can be expected to be similar to the column shown above using market value of assets.

The graph on the following page shows the expected increase in the employer contribution rate in future years if 7.75% is earned in all future years and the full actuarial contribution rate is made by the City in all future years.



We conclude this Board Summary with the following exhibit which compares the principal results of the current and prior actuarial valuations.

SUMMARY OF PRINCIPAL RESULTS

1. PARTICIPANT DATA		12/31/2009 Valuation		12/31/2008 Valuation	% Change
Number of:					
Active Members					
Police		641		625	2.6%
Fire		459		451	1.8%
Total		1,100		1,076	2.2%
Retired Members and Beneficiaries		873		840	3.9%
Inactive Members		36		38	(5.3)%
Total Members		2,009		1,954	2.8%
Annual Valuation Payroll of Active Members					
Police	$	38,810,793	$	36,468,890	6.4%
Fire		25,483,123		24,483,548	4.1%
Total		64,293,916		60,952,438	5.5%
Annual Retirement Payments for Retired Members and Beneficiaries	$	21,357,571	$	19,492,053	9.6%
2. ASSETS AND LIABILITIES					
Total Actuarial Liability	$	519,934,254	$	496,561,146	4.7%
Market Value of Assets		422,379,231		356,056,234	18.6%
Actuarial Value of Assets		480,555,562		472,345,191	1.7%
Unfunded Actuarial Liability/(Surplus)	$	39,378,692	$	24,215,955	62.6%
Funded Ratio		92.4%		95.1%	(2.8)%
3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL					
Normal Cost		24.7%		25.1%	(1.6)%
Member Financed		7.0%		7.0%	0.0%
Employer Normal Cost		17.7%		18.1%	(2.2)%
Amortization of Unfunded Actuarial Liability or (Surplus)		4.3%		2.7%	59.3%
Employer Contribution Rate		22.0%		20.8%	5.8%

SECTION 2

SCOPE OF THE REPORT

This report presents the actuarial valuation of the Police and Fire Retirement System of Wichita, Kansas (WPF) as of December 31, 2009. This valuation was prepared at the request of the System's Board of Trustees. The report is based on plan provisions and actuarial assumptions that are unchanged from last year.

Please pay particular attention to our cover letter, where the guidelines employed in the preparation of this report are outlined. We also comment on the sources and reliability of both the data and the actuarial assumptions upon which our findings are based. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the findings which result from this valuation is presented in the previous section. Section 3 describes the assets and investment experience of the System. Sections 4 and 5 describe how the obligations of the System are to be met under the actuarial cost method in use. Section 6 includes the information required for the financial reporting standards established by the Governmental Accounting Standards Board (GASB).

This report includes several appendices:

- Appendix A — Schedules of valuation data classified by various categories of members.
- Appendix B — A summary of the current benefit structure, as determined by the provisions of governing law on December 31, 2009.
- Appendix C — A summary of the actuarial methods and assumptions used to estimate liabilities and determine contribution rates.
- Appendix D — A glossary of actuarial terms.

SECTION 3

ASSETS

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is December 31, 2009. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the System, which are generally in excess of assets. The actuarial process then leads to a method of determining the contributions needed by members and the employer in the future to balance the System assets and liabilities.

Market Value of Assets

The current market value represents the "snapshot" or "cash-out" value of System assets as of the valuation date. In addition, the market value of assets provides a basis for measuring investment performance from time to time. At December 31, 2009, the market value of assets for the System was $422 million. Table 1 is a comparison, at market values, of System assets as of December 31, 2009, and December 31, 2008, in total and by investment category. Table 2 summarizes the change in the market value of assets from December 31, 2008 to December 31, 2009.

Actuarial Value of Assets

Neither the market value of assets, representing a "cash-out" value of System assets, nor the book values of assets, representing the cost of investments, may be the best measure of the System's ongoing ability to meet its obligations.

To arrive at a suitable value for the actuarial valuation, a technique for determining the actuarial value of assets is used which dampens swings in the market value while still indirectly recognizing market values. This methodology, first adopted in the December 31, 2002 valuation, smoothes market experience by recognizing 25% of the difference between the expected value (based on the actuarial assumption) and market value. Table 3 shows the development of the actuarial value of assets (AVA) as of December 31, 2009.

TABLE 1

WICHITA POLICE AND FIRE RETIREMENT SYSTEM

ANALYSIS OF NET ASSETS AT MARKET VALUE

	As of December 31, 2009		As of December 31, 2008	
	Amount ($ Millions)	**% of Total**	**Amount ($ Millions)**	**% of Total**
Cash and Equivalents	$ 0.2	0.0 %	$ 0.2	0.1 %
Government Securities	28.5	6.7	29.0	8.1
Corporate debt	48.4	11.5	47.7	13.4
Mortgage Backed Securities	51.7	12.2	61.7	17.3
Pooled Funds	62.1	14.7	41.5	11.7
Domestic Equity	144.7	34.3	107.3	30.1
International Equity	79.1	18.7	60.5	17.0
Real Estate	13.3	3.1	24.8	7.0
Securities Lending Collateral Pool	67.3	15.9	52.1	14.6
Other	0.4	0.1	0.5	0.1
Receivables	6.2	1.5	8.2	2.3
Liabilities	(79.5)	(18.8)	(77.4)	(21.7)
Total	$ 422.4	99.9 %	$ 356.1	100.0 %

TABLE 2

WICHITA POLICE AND FIRE RETIREMENT SYSTEM

SUMMARY OF CHANGES IN NET ASSETS DURING YEAR ENDED DECEMBER 31, 2009

(Market Value)

1. Market Value of Assets as of December 31, 2008	$	356,056,234
2. Contributions:		
a. Members	$	4,443,524
b. City		11,034,552
c. Other		0
d. Total	$	15,478,076
[2(a) + 2(b) + 2(c)]		
3. Investment Income:		
a. Interest and Dividends	$	11,861,117
b. Net Appreciation in Fair Value		65,037,661
c. Commission Recapture		51,242
d. Securities Lending Income		358,980
e. Total	$	77,309,000
[3(a) + 3(b) + 3(c) + 3(d)]		
4. Expenditures:		
a. Refunds of Member Contributions	$	295,424
b. Benefits Paid:		
(1) Pension and Death Benefits		20,412,223
(2) Back DROP Payments		3,444,839
c. Administrative Expenses		502,963
d. Investment Expenses		1,808,630
e. Total	$	26,464,079
[4(a) + 4(b) + 4(c) + 4(d)]		
5. Net Change: [2(d) + 3(e) - 4(e)]	$	66,322,997
6. Market Value of Assets as of December 31, 2009	$	422,379,231
(1) + (5)		

TABLE 3

WICHITA POLICE AND FIRE RETIREMENT SYSTEM

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

As of December 31, 2009

1. Actuarial Value of Assets as of December 31, 2008	$	472,345,191
2. Actual Contribution/Disbursements		
a. Contributions	$	15,478,076
b. Benefit Payments and Refunds		(24,152,486)
c. Net	$	(8,674,410)
3. Expected Value of Assets as of December 31, 2009 [(1) x 1.0775] + [(2c) x $(1.0775)^{.5}$]	$	499,947,672
4. Market Value of Assets as of December 31, 2009	$	422,379,231
5. Difference Between Market and Expected Values (4) - (3)	$	(77,568,441)
6. Actuarial Value of Assets as of December 31, 2009 (3) + [(5) x 25%]	$	480,555,562
7. Actuarial Value of Assets divided by Market Value of Assets (6) / (4)		113.8%
8. Market Value of Assets less Actuarial Value of Assets (4) - (6)	$	(58,176,331)

SECTION 4

SYSTEM LIABILITIES

In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of assets of the System as of the valuation date, December 31, 2009. In this section, the discussion will focus on the commitments of the System, which are referred to as its liabilities.

Table 4 contains an analysis of the actuarial present value of all future benefits (PVFB) for contributing members, inactive members, retirees and their beneficiaries.

The liabilities summarized in Table 4 include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes the measurement of both benefits already earned and future benefits to be earned. For all members, active and retired, the value extends over benefits earnable and payable for the rest of their lives and for the lives of the surviving beneficiaries.

All liabilities reflect the benefit provisions in place as of December 31, 2009.

Actuarial Liability

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. An actuarial cost method is a mathematical technique that allocates the present value of future benefits into annual costs. In order to do this allocation, it is necessary for the funding method to "breakdown" the present value of future benefits into two components:

(1) that which is attributable to the past and

(2) that which is attributable to the future.

Actuarial terminology calls the part attributable to the past the "past service liability" or the "actuarial liability". The portion allocated to the future is known as the present value of future normal costs, with the specific piece of it allocated to the current year being called the "normal cost". Table 5 contains the calculation of actuarial liability for the System. The Entry Age Normal actuarial cost method is used to develop the actuarial liability.

TABLE 4

WICHITA POLICE AND FIRE RETIREMENT SYSTEM

PRESENT VALUE OF FUTURE BENEFITS (PVFB)
AS OF DECEMBER 31, 2009

		Plans A and B		Plan C		Total
1. Active employees						
a. Retirement Benefit	$	25,931,354	$	326,791,546	$	352,722,900
b. Pre-Retirement Death Benefit		48,092		5,177,293		5,225,385
c. Withdrawal Benefit		0		13,038,562		13,038,562
d. Disability Benefit		306,770		55,468,223		55,774,993
e. Total	$	26,286,216	$	400,475,624	$	426,761,840
2. Inactive Vested Members	$	0	$	9,978,618	$	9,978,618
3. Inactive Nonvested Members	$	0	$	0	$	0
4. In Pay Members						
a. Retirees	$	150,376,921	$	30,090,795	$	180,467,716
b. Disabled Members		19,369,343		23,806,042		43,175,385
c. Beneficiaries		19,418,484		4,258,462		23,676,946
d. Total	$	189,164,748	$	58,155,299	$	247,320,047
5. Total Present Value of Future Benefits (1e) + (2) + (3) + (4d)	$	215,450,964	$	468,609,541	$	684,060,505

TABLE 5

WICHITA POLICE AND FIRE RETIREMENT SYSTEM

ACTUARIAL LIABILITY
AS OF DECEMBER 31, 2009

	Plans A and B	Plan C	Total
1. Active employees			
a. Present Value of Future Benefits	$ 26,286,216	$ 400,475,624	$ 426,761,840
b. Present Value of Future Normal Costs	1,073,855	163,052,396	164,126,251
c. Actuarial Liability (1a) - (1b)	$ 25,212,361	$ 237,423,228	$ 262,635,589
2. Inactive Vested Members	$ 0	$ 9,978,618	$ 9,978,618
3. Inactive Nonvested Members	$ 0	$ 0	$ 0
4. In Pay Members			
a. Retirees	$ 150,376,921	$ 30,090,795	$ 180,467,716
b. Disabled Members	19,369,343	23,806,042	43,175,385
c. Beneficiaries	19,418,484	4,258,462	23,676,946
d. Total	$ 189,164,748	$ 58,155,299	$ 247,320,047
5. Total Actuarial Liability (1c) + (2) + (3) + (4d)	$ 214,377,109	$ 305,557,145	$ 519,934,254

SECTION 5

EMPLOYER CONTRIBUTIONS

The previous two sections were devoted to a discussion of the assets and liabilities of the System. A comparison of Tables 3 and 4 indicates that current assets fall short of meeting the present value of future benefits (total liability). This is expected in all but a completely closed fund, where no further contributions are anticipated. In an active system, there will almost always be a difference between the actuarial value of assets and total liabilities. This deficiency has to be made up by future contributions and investment returns. An actuarial valuation sets out a schedule of future contributions that will deal with this deficiency in an orderly fashion.

The method used to determine the incidence of the contributions in various years is called the actuarial cost method. Under an actuarial cost method, the contributions required to meet the difference between current assets and current liabilities are allocated each year between two elements: (1) the normal cost rate and (2) the unfunded actuarial liability contribution rate.

The term "fully funded" is often applied to a system in which contributions at the normal cost rate are sufficient to pay for the benefits of existing employees as well as for those of new employees. More often than not, systems are not fully funded, either because of past benefit improvements that have not been completely funded or because of actuarial deficiencies that have occurred because experience has not been as favorable as anticipated. Under these circumstances, an unfunded actuarial liability (UAL) exists. Likewise, when the actuarial value of assets is greater than the actuarial liability, a surplus exists.

Description of Contribution Rate Components

The Entry Age Normal (EAN) actuarial cost method is used for the valuation. Under this method, the normal cost for each year from entry age to assumed exit age is a constant percentage of the member's year by year projected compensation. The portion of the present value of future benefits not provided by the present value of future normal costs is the actuarial liability. The unfunded actuarial liability/(surplus) represents the difference between the actuarial liability and the actuarial value of assets as of the valuation date. The unfunded actuarial liability is calculated each year and reflects experience gains/losses.

In general, contributions are computed in accordance with a level percent-of-payroll funding objective. The contribution rates based on this December 31, 2009 actuarial valuation will be used to determine employer contribution rates to the Police and Fire Retirement System of Wichita, Kansas for fiscal year 2011. In this context, the term "contribution rate" means the percentage, which is applied to a particular active member payroll to determine the actual employer contribution amount (i.e., in dollars) for the group.

As of December 31, 2009, the valuation assets were less than the actuarial liability so an unfunded actuarial liability exists. State statutes require any unfunded actuarial liability in municipal police and fire retirement systems to be amortized over a rolling 20-year period. The amortization of the UAL results in an employer contribution that is more than the employer normal cost rate.

Contribution Rate Summary

In Table 6, the amortization payment related to the unfunded actuarial liability/(surplus), as of December 31, 2009, is developed. Table 7 develops the normal cost rate for the System. The derivation of the contribution rate for the City is shown in Table 8. Table 9 shows the historical summary of the City's contribution rates. Table 10 develops the experience gain/(loss) for the year ended December 31, 2009.

The rates shown in this report are based on the actuarial assumptions and cost methods described in Appendix C.

TABLE 6

WICHITA POLICE AND FIRE RETIREMENT SYSTEM

DECEMBER 31, 2009 VALUATION

DERIVATION OF UNFUNDED ACTUARIAL LIABILITY CONTRIBUTION RATE

1. Actuarial Accrued Liability	$	519,934,254	
2. Actuarial Value of Assets	$	480,555,562	
3. Unfunded Actuarial Liability/(Surplus)	$	39,378,692	
4. Payment (Adjusted to Mid-Year) to Amortize Unfunded Actuarial Liability/(Surplus) Over 20 Years *	$	2,802,627	
5. Total Projected Payroll for the Year	$	65,724,611	
6. Amortization Payment as a Percent of Payroll		4.3	%

* In accordance with State statutes, unfunded actuarial liability/(surplus) may be amortized over a rolling 20-year period. The Board has elected to use this period.

TABLE 7

WICHITA POLICE AND FIRE RETIREMENT SYSTEM

DECEMBER 31, 2009 VALUATION

DERIVATION OF NORMAL COST RATE

Normal Cost for Year End December 31, 2009			
Service pensions	$	10,774,686	
Disability pensions		3,524,929	
Survivor pensions		347,524	
Termination benefits			
- Deferred service pensions		574,922	
- Return of member contributions		401,996	
Total Normal Cost	$	15,624,057	
Covered Payroll for Members Under Certain Retirement Age	$	63,247,843	*
Total Normal Cost Rate for Year		24.7%	

* Effective with the 12/31/05 valuation, this amount includes payroll for all Plan A members who are past certain retirement age under Plan A assumptions, but not under Plan C assumptions.

TABLE 8

WICHITA POLICE AND FIRE RETIREMENT SYSTEM
EMPLOYER CONTRIBUTION RATES
FOR FISCAL YEAR
COMMENCING IN 2011

	Contribution Requirement as % of Payroll
Normal Cost	
Service pensions	17.1 %
Disability pensions	5.6 %
Survivor pensions	0.5 %
Termination benefits	
- Deferred service pensions	0.9 %
- Return of member contributions	0.6 %
Total Normal Cost	24.7 %
Unfunded Actuarial Liability	
Retired members and beneficiaries (1)	0.0 %
Active and former members (2)	4.3 %
Total UAL Contribution	4.3 %
Total Contribution Requirement	
Member Financed Portion (3)	7.0 %
City Financed Portion	22.0 %
Total	29.0 %

(1) Actuarial accrued liability for retired members and beneficiaries was fully funded as of December 31, 2009.

(2) The excess of the actuarial liability over actuarial value of assets is amortized as a level percent of active member payroll over a rolling 20-year period.

(3) The weighted average of member contribution rates: 8.0% for Plan A, 6.0% for Plan B, and 7.0% for Plan C.

TABLE 9

WICHITA POLICE AND FIRE RETIREMENT SYSTEM

HISTORICAL SUMMARY OF CITY CONTRIBUTION RATES

Contribution rates are computed in accordance with a level percent of payroll funding objective. As of December 31, 2009, the actuarial liability exceeds the actuarial value of assets and the System has unfunded actuarial liability (UAL). The UAL is amortized as a level percent of pay over a rolling 20-year period.

		City Contributions as Percents of Active Member Pensionable Payroll	
Valuation Date	**Fiscal Year**	**Funding Objective**	**Amortization (Credit)/Payment**
11/30/90	1992	23.4%	-%
11/30/91	1993	22.9	-
11/30/92	1994	23.3	-
11/30/93	1995	22.7	-
11/30/94	1996	22.6	-
12/31/95	1997	18.3*	-
12/31/96	1998	17.5	-
12/31/97	1999	15.2 – 15.9	(0.7)
12/31/98	2000	12.3 – 15.9	(3.6)
12/31/99**	2001	9.6 – 16.8	(7.2)
12/31/00	2002	8.2 – 16.8	(8.7)
12/31/01	2003	10.0 – 16.8	(6.8)
12/31/02	2004	14.0 – 17.0	(3.0)
12/31/03	2005	13.6 – 17.0	(3.4)
12/31/04#	2006	18.4	0.1
12/31/05	2007	17.5	0.2
12/31/06	2008	16.8 – 17.5	(0.7)
12/31/07	2009	16.0 – 17.5	(1.5)
12/31/08	2010	20.8	2.7
12/31/09##	2011	22.0	4.3

* Reflects allocation of assets to fully fund retired life liabilities.
** Includes benefit provision and assumption changes and 1% decrease in member contribution rate.
# Reflects assumption changes and elimination of surplus assets.
Reflects assumption changes

TABLE 10

WICHITA POLICE AND FIRE RETIREMENT SYSTEM

DERIVATION OF SYSTEM EXPERIENCE GAIN/(LOSS)

			($M) Year Ended 12/31/09
(1)		UAL* at start of year	24.2
(2)	+	Normal cost for year	14.9
(3)	+	Assumed investment return on (1) & (2)	3.0
(4)	-	Actual contributions (member + City)	15.5
(5)	-	Assumed investment return on (4)	0.6
(6)	=	Expected UAL at end of year	26.0
(7)	+	Increase (decr.) from amendments	0.0
(8)	+	Increase (decr.) from assumption changes	(3.2)
(9)	=	Expected UAL after changes	22.8
(10)	=	Actual UAL at year end	39.4
(11)	=	Experience gain (loss) (9) – (10)	(16.6) **
(12)	=	Percent of beginning of year AL	3.3%

* *Unfunded Actuarial Liability/(Surplus)*

** *This amount reflects the net impact of about $19.4 million loss on the actuarial value of assets and a $2.8 million gain on liabilities.*

SECTION 6

ACCOUNTING INFORMATION

The actuarial liability is a measure intended to help the reader assess (i) a retirement system's funded status on an on-going concern basis, and (ii) progress being made toward accumulating the assets needed to pay benefits as due. Allocation of the actuarial present value of projected benefits between past and future service was based on service using the Entry Age Normal actuarial cost method. Assumptions, including projected pay increases, were the same as used to determine the System's level percent of payroll annual required contribution between entry age and assumed exit age. Entry age was established by subtracting credited service from current age on the valuation date.

The preceding methods comply with the financial reporting standards established by the Governmental Accounting Standards Board.

The Entry Age Normal actuarial liability was determined as part of an actuarial valuation of the plan as of December 31, 2009. Significant actuarial assumptions used in determining the actuarial liability include:

(a) a rate of return on the investment of present and future assets of 7.75% per year compounded annually,

(b) projected salary increases of 4.00% per year compounded annually, (3.50% attributable to inflation, and 0.50% attributable to productivity),

(c) additional projected salary increases of 1.0% to 2.75% per year attributable to seniority/merit, and

(d) the assumption that benefits will increase 2.0% per year of retirement, non-compounded commencing 36 months after retirement.

Actuarial Liability:	
Active members	$ 262,635,589
Retired members and beneficiaries currently receiving benefits	247,320,047
Vested terminated members not yet receiving benefits	9,978,618
Total Actuarial Liability	$ 519,934,254
Actuarial Value of Assets (market value was $422,379,231)	$ 480,555,562
Unfunded Actuarial Liability	$ 39,378,692

During the year ended December 31, 2009, the Plan experienced a net increase of $23 million in the actuarial liability.

TABLE 11

WICHITA POLICE AND FIRE RETIREMENT SYSTEM

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Liability (AL) (b)	Unfunded AL (UAL) (b)–(a)	Funded Ratio (a)/(b)	Active Member Covered Payroll (c)	UAL as a Percentage of Active Member Covered Payroll ((b-a)/c)
11/30/90*	$136,766	$173,071	$ 36,305	79.0%	$ 22,408	162.0%
11/30/91	152,162	183,423	31,261	83.0	23,675	132.0
11/30/92	165,132	198,656	33,524	83.1	25,000	134.1
11/30/93	180,457	208,966	28,509	86.4	26,008	109.6
11/30/94	192,668	220,596	27,928	87.3	27,819	100.4
12/31/95*	213,431	231,372	17,941	92.2	29,749	60.3
12/31/96	237,554	247,408	9,854	96.0	33,366	29.5
12/31/97	262,815	258,706	(4,109)	101.6	35,502	(11.6)
12/31/98	295,625	274,900	(20,725)	107.5	36,566	(56.7)
12/31/99*	330,072	291,633	(38,439)	113.2	37,969	(101.2)
12/31/00	354,044	308,894	(45,150)	114.6	38,613	(116.9)
12/31/01	362,493	325,335	(37,158)	111.4	42,286	(87.9)
12/31/02	361,687	340,524	(21,163)	106.2	45,696	(46.3)
12/31/03	374,171	350,444	(23,726)	106.8	45,876	(51.7)
12/31/04*	392,485	393,387	902	99.8	50,414	1.8
12/31/05	412,823	414,027	1,204	99.7	52,207	2.3
12/31/06	444,498	439,179	(5,319)	101.2	53,530	(9.9)
12/31/07	480,820	468,115	(12,705)	102.7	57,310	(22.2)
12/31/08	472,345	496,561	24,216	95.1	60,282	40.2
13/31/09*	480,556	519,934	39,379	92.4	63,479	62.0

Rounded dollar amounts are in thousands.

**After changes in benefits and/or actuarial assumptions and/or actuarial cost methods.*

Analysis of the dollar amounts of actuarial value of assets, actuarial liability, or unfunded actuarial liability in isolation can be misleading. Expressing the actuarial value of assets as a percentage of the actuarial liability provides one indication of the System's funded status on an on-going concern basis. Analysis of this percentage over time indicates whether the System is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the plan's funding. The unfunded actuarial liability and annual covered payroll are both affected by inflation. Expressing the unfunded actuarial liability as a percentage of covered payroll approximately adjusts for the effects of inflation and aids analysis of the progress being made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the plan's funding.

TABLE 12

WICHITA POLICE AND FIRE RETIREMENT SYSTEM

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year	Actuarial Valuation Date	Annual Required Contribution	Percent Contribution
1995	11/30/93	$7,391,786	100.0%
1996	11/30/94	7,186,932	100.0
1997	12/31/95	6,343,027	100.0
1998	12/31/96	6,427,744	100.0
1999	12/31/97	6,043,455	100.0
2000	12/31/98	5,540,575	100.0
2001	12/31/99	4,796,863	100.0
2002	12/31/00	4,746,504	100.0
2003	12/31/01	5,043,505	100.0
2004	12/31/02	6,925,467	100.0
2005	12/31/03	7,308,916	100.0
2006	12/31/04	9,849,536	100.0
2007	12/31/05	10,029,253	100.0
2008	12/31/06	10,549,401	100.0
2009	12/31/07	11,034,552	100.0

Notes to Required Supplementary Information
Summary of Actuarial Methods and Assumptions

Valuation Date	December 31, 2009
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level percent of payroll, open
Remaining Amortization Period	20 years
Asset Valuation Method	Expected Value + 25% of (Market – Expected Values)
Actuarial Assumptions:	
Investment Rate of Return*	7.75%
Projected Salary Increases*	5.00% - 6.75%
* Includes Inflation of	3.50%
Cost-of-Living Adjustments	2.00% non-compounding commencing 36 months after retirement

TABLE 13

WICHITA POLICE AND FIRE RETIREMENT SYSTEM

SOLVENCY TEST

Valuation Date	Aggregate Actuarial Liability For: (1) Active Member Contributions	(2) Retirants and Beneficiaries*	(3) Active Members (Employer Financed Portion)	Reported Valuation Assets	Portion of Actuarial Liabilities Covered by Reported Assets: (1)	(2)	(3)
11/30/93	$17,293,762	$120,075,516	$71,956,393	$180,457,134	100.0%	100.0%	59.9%
11/30/94	18,003,627	127,670,273	74,921,662	192,667,974	100.0	100.0	62.7
12/31/95	19,597,012	132,215,980	79,559,050	213,431,416	100.0	100.0	77.4
12/31/96	20,807,624	141,902,560	84,497,686	237,553,602	100.0	100.0	88.6
12/31/97	22,518,199	146,068,362	90,119,236	262,814,796	100.0	100.0	104.6
12/31/98	23,845,658	157,021,415	94,033,095	295,624,986	100.0	100.0	122.0
12/31/99	24,759,118	170,478,501	96,395,412	330,071,866	100.0	100.0	139.9
12/31/00	27,152,206	183,463,718	98,277,967	354,044,311	100.0	100.0	145.9
12/31/01	27,694,761	183,034,623	114,605,637	362,493,060	100.0	100.0	132.4
12/31/02	34,440,696	182,063,498	124,019,921	361,687,109	100.0	100.0	117.1
12/31/03	37,027,041	186,930,565	126,486,746	374,170,781	100.0	100.0	118.8
12/31/04	40,959,525	201,051,248	151,375,876	392,484,697	100.0	100.0	99.4
12/31/05	44,057,922	210,560,068	159,408,592	412,822,760	100.0	100.0	99.2
12/31/06	48,361,719	216,449,174	174,368,239	444,497,827	100.0	100.0	103.1
12/31/07	53,686,866	230,893,426	183,534,348	480,820,001	100.0	100.0	106.9
12/31/08	58,050,319	238,590,747	199,920,080	472,345,191	100.0	100.0	87.9
12/31/09	60,326,408	257,298,665	202,309,181	480,555,562	100.0	100.0	80.5

During the twelve months ended December 31, 2009, the Wichita Police and Fire Retirement System of Wichita, Kansas generated a net experience loss of $16.6 million dollars. The amount is 3.3% of the actuarial liability at the beginning of the year.

**Includes vested terminated members*

APPENDIX A

SUMMARY OF MEMBERSHIP DATA

MEMBER DATA RECONCILIATION

December 31, 2008 to December 31, 2009

The number of members included in the valuation, as summarized in the table below, is in accordance with the data submitted by the System for members as of the valuation date.

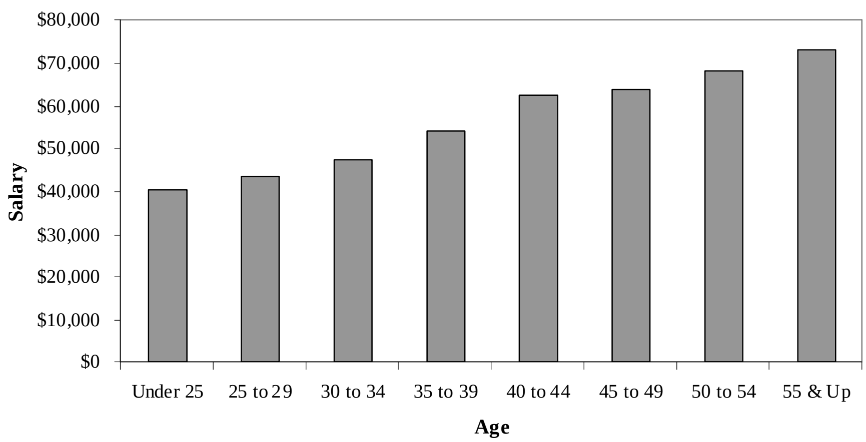
	Active Participants		**Retirees & Beneficiaries**		**Terminated Vested**		**Total**
	Police	**Fire**	**Police**	**Fire**	**Police**	**Fire**	
Members as of 12/31/08	625	451	412	428	26	12	1,954
New Members	+43	+38	+5	+8	0	0	+94
Transfers	+1	+1	0	0	0	0	+2
Terminations							
Refunded	-12	-4	0	0	-1	0	-17
Deferred Vested	0	-1	0	0	0	+1	0
Completion of payments to minor child	0	0	-1	-1	0	0	-2
Retirements							
Service	-11	-24	+12	+25	-1	-1	0
Disability	-5	-2	+5	+2	0	0	0
Deaths							
Cashed Out	0	0	0	0	0	0	0
With Beneficiary	0	0	-5	-6	0	0	-11
Without Beneficiary	0	0	-7	-4	0	0	-11
Data Adjustments	0	0	0	0	+1	-1	0
Members as of 12/31/09	**641**	**459**	**421**	**452**	**25**	**11**	**2,009**

APPENDIX A (continued)

WICHITA POLICE AND FIRE RETIREMENT SYSTEM
SUMMARY OF ACTIVE MEMBERS
as of December 31, 2009

	Number			Valuation Salaries		
Age	Fire	Police	Total	Fire	Police	Total
Under 25	16	8	24	$ 625,121	$ 346,740	$ 971,861
25 to 29	72	80	152	2,949,402	3,632,219	6,581,621
30 to 34	60	102	162	2,632,039	5,051,391	7,683,430
35 to 39	76	144	220	3,843,743	8,079,911	11,923,654
40 to 44	64	137	201	3,788,674	8,793,070	12,581,744
45 to 49	74	85	159	4,534,356	5,587,378	10,121,734
50 to 54	72	64	136	4,617,660	4,663,017	9,280,677
55 & Up	25	21	46	1,798,461	1,573,874	3,372,335
Total	459	641	1,100	$ 24,789,456	$ 37,727,600	$ 62,517,056

Average Salary by Age



APPENDIX A (continued)

WICHITA POLICE AND FIRE RETIREMENT SYSTEM
SUMMARY OF ACTIVE MEMBERS
as of December 31, 2009

Police

	Number			Valuation Salaries		
Age	Male	Female	Total	Male	Female	Total
Under 25	7	1	8	$ 302,288	$ 44,452	$ 346,740
25 to 29	68	12	80	3,107,143	525,076	3,632,219
30 to 34	84	18	102	4,163,925	887,466	5,051,391
35 to 39	120	24	144	6,744,898	1,335,013	8,079,911
40 to 44	129	8	137	8,323,436	469,634	8,793,070
45 to 49	81	4	85	5,326,411	260,967	5,587,378
50 to 54	56	8	64	4,065,418	597,599	4,663,017
55 & Up	20	1	21	1,496,198	77,676	1,573,874
Total	565	76	641	$ 33,529,717	$ 4,197,883	$ 37,727,600

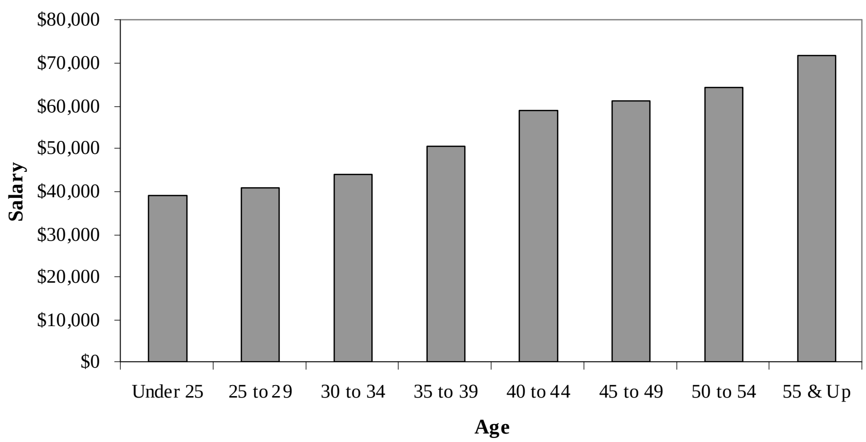
APPENDIX A (continued)

WICHITA POLICE AND FIRE RETIREMENT SYSTEM
SUMMARY OF ACTIVE MEMBERS
as of December 31, 2009

Fire

	Number			Valuation Salaries		
Age	Male	Female	Total	Male	Female	Total
Under 25	16	0	16	$ 625,121	$ -	$ 625,121
25 to 29	70	2	72	2,868,257	81,145	2,949,402
30 to 34	59	1	60	2,585,230	46,809	2,632,039
35 to 39	76	0	76	3,843,743	-	3,843,743
40 to 44	63	1	64	3,733,308	55,366	3,788,674
45 to 49	72	2	74	4,417,575	116,781	4,534,356
50 to 54	71	1	72	4,542,293	75,367	4,617,660
55 & Up	25	0	25	1,798,461	-	1,798,461
Total	452	7	459	$ 24,413,988	$ 375,468	$ 24,789,456

Average Salary by Age



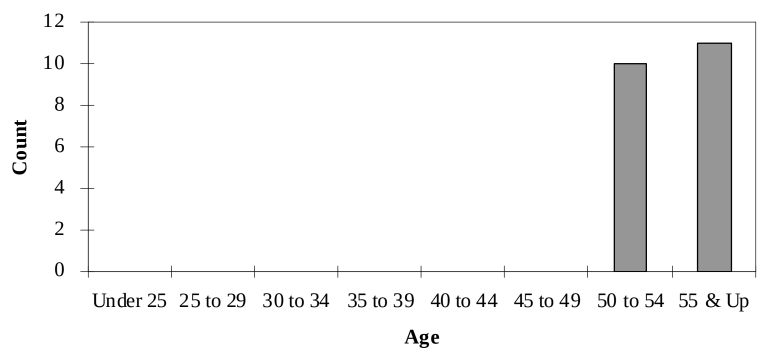
APPENDIX A (continued)

WICHITA POLICE AND FIRE RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS
as of December 31, 2009

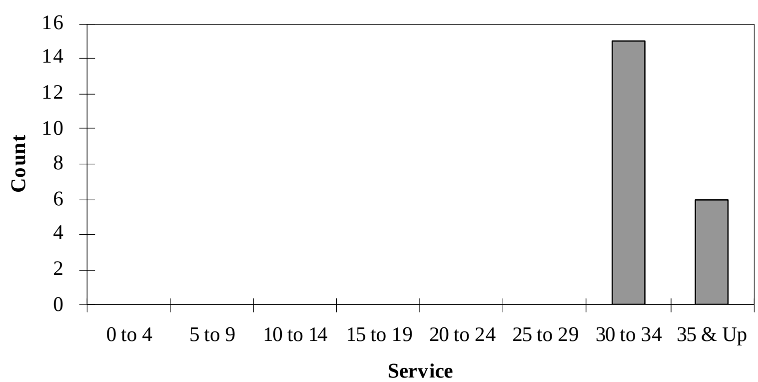
Fire - Plan A

	Years of Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0	0
45 to 49	0	0	0	0	0	0	0	0	0
50 to 54	0	0	0	0	0	0	10	0	10
55 & Up	0	0	0	0	0	0	5	6	11
Total	0	0	0	0	0	0	15	6	21

Age Distribution



Service Distribution



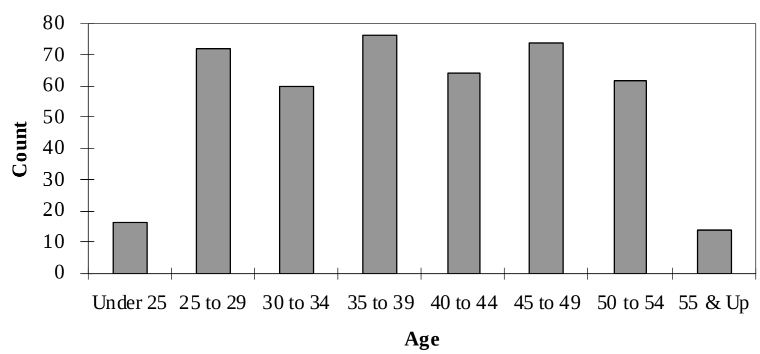
APPENDIX A (continued)

WICHITA POLICE AND FIRE RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS
as of December 31, 2009

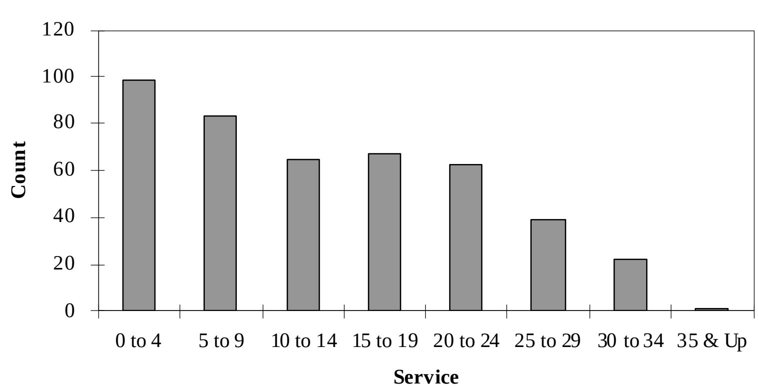
Fire - Plan C

	Years of Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	16	0	0	0	0	0	0	0	16
25 to 29	49	23	0	0	0	0	0	0	72
30 to 34	21	34	5	0	0	0	0	0	60
35 to 39	11	20	32	12	1	0	0	0	76
40 to 44	2	2	18	28	13	1	0	0	64
45 to 49	0	3	5	18	31	16	1	0	74
50 to 54	0	1	5	9	14	17	16	0	62
55 & Up	0	0	0	0	3	5	5	1	14
Total	99	83	65	67	62	39	22	1	438

Age Distribution



Service Distribution



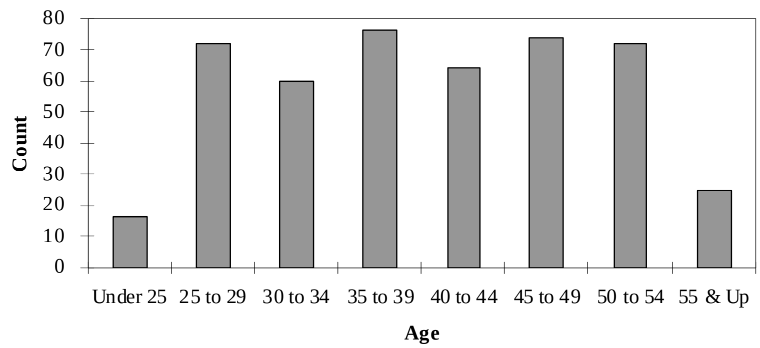
APPENDIX A (continued)

WICHITA POLICE AND FIRE RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS
as of December 31, 2009

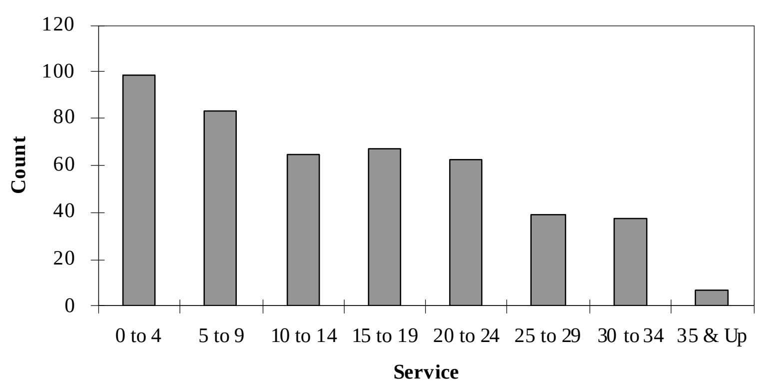
Fire

	Years of Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	16	0	0	0	0	0	0	0	16
25 to 29	49	23	0	0	0	0	0	0	72
30 to 34	21	34	5	0	0	0	0	0	60
35 to 39	11	20	32	12	1	0	0	0	76
40 to 44	2	2	18	28	13	1	0	0	64
45 to 49	0	3	5	18	31	16	1	0	74
50 to 54	0	1	5	9	14	17	26	0	72
55 & Up	0	0	0	0	3	5	10	7	25
Total	99	83	65	67	62	39	37	7	459

Age Distribution



Service Distribution



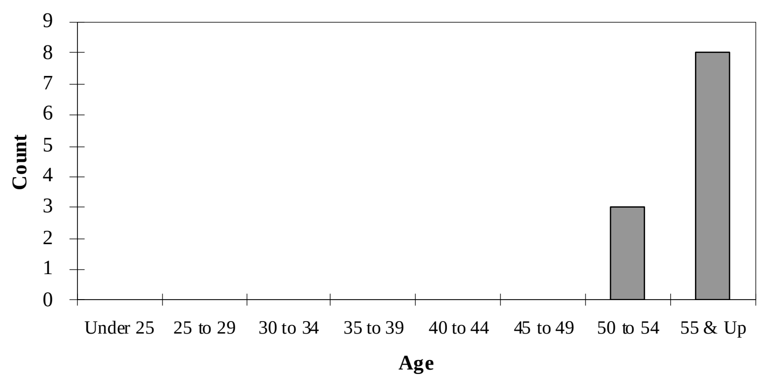
APPENDIX A (continued)

WICHITA POLICE AND FIRE RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS
as of December 31, 2009

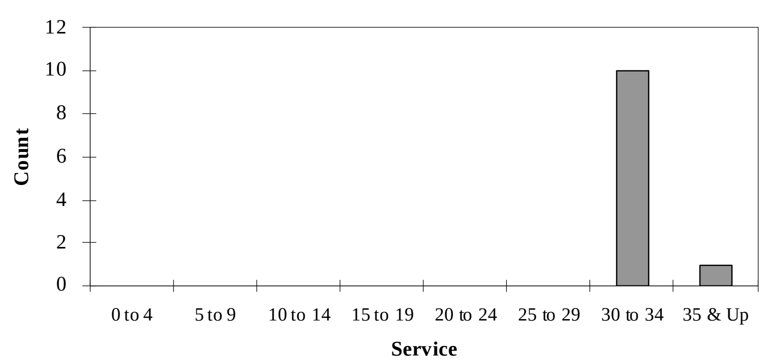
Police - Plan A

	Years of Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0	0
45 to 49	0	0	0	0	0	0	0	0	0
50 to 54	0	0	0	0	0	0	3	0	3
55 & Up	0	0	0	0	0	0	7	1	8
Total	0	0	0	0	0	0	10	1	11

Age Distribution



Service Distribution



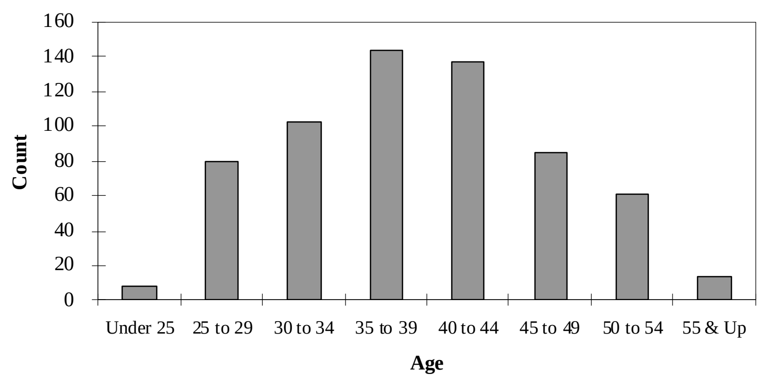
APPENDIX A (continued)

WICHITA POLICE AND FIRE RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS
as of December 31, 2009

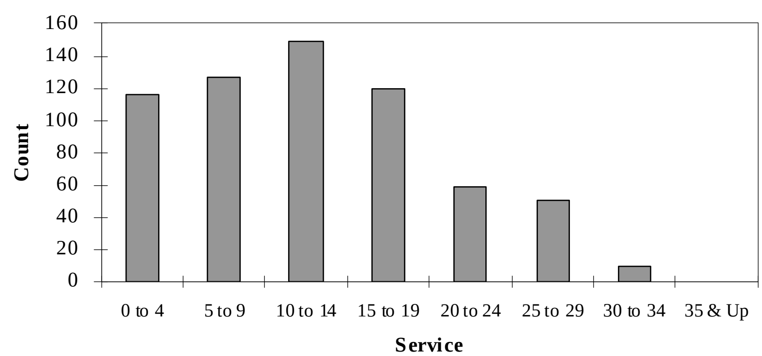
Police - Plan C

	Years of Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	8	0	0	0	0	0	0	0	8
25 to 29	63	17	0	0	0	0	0	0	80
30 to 34	31	52	19	0	0	0	0	0	102
35 to 39	8	41	81	14	0	0	0	0	144
40 to 44	2	10	37	77	11	0	0	0	137
45 to 49	3	5	8	22	37	10	0	0	85
50 to 54	1	1	4	5	7	38	5	0	61
55 & Up	0	1	0	1	3	3	5	0	13
Total	116	127	149	119	58	51	10	0	630

Age Distribution



Service Distribution



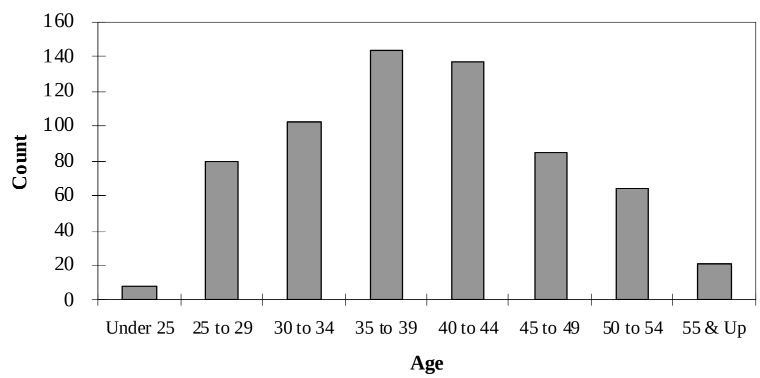
APPENDIX A (continued)

WICHITA POLICE AND FIRE RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS
as of December 31, 2009

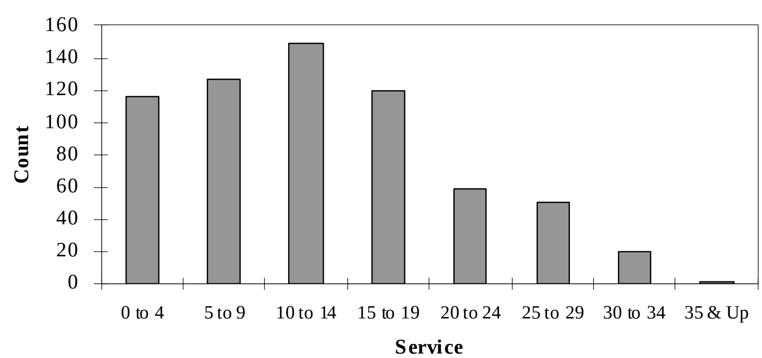
Police

	Years of Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	8	0	0	0	0	0	0	0	8
25 to 29	63	17	0	0	0	0	0	0	80
30 to 34	31	52	19	0	0	0	0	0	102
35 to 39	8	41	81	14	0	0	0	0	144
40 to 44	2	10	37	77	11	0	0	0	137
45 to 49	3	5	8	22	37	10	0	0	85
50 to 54	1	1	4	5	7	38	8	0	64
55 & Up	0	1	0	1	3	3	12	1	21
Total	116	127	149	119	58	51	20	1	641

Age Distribution



Service Distribution



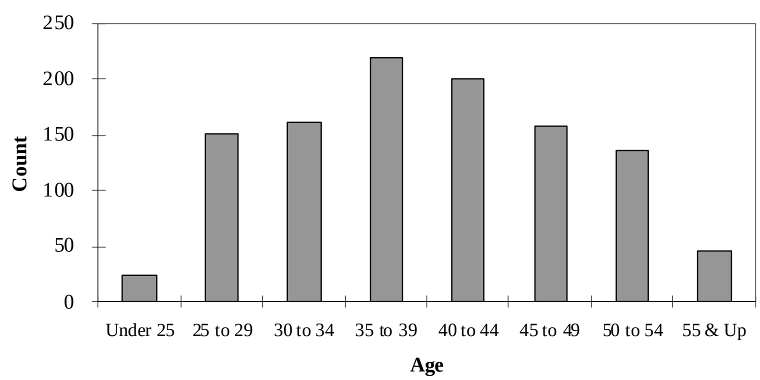
APPENDIX A (continued)

WICHITA POLICE AND FIRE RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS
as of December 31, 2009

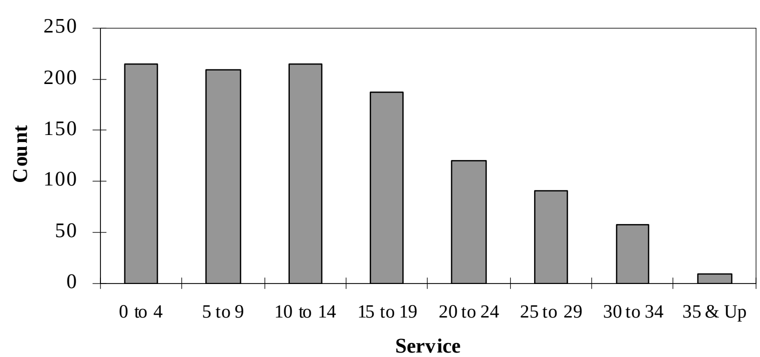
Fire & Police

	Years of Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	24	0	0	0	0	0	0	0	24
25 to 29	112	40	0	0	0	0	0	0	152
30 to 34	52	86	24	0	0	0	0	0	162
35 to 39	19	61	113	26	1	0	0	0	220
40 to 44	4	12	55	105	24	1	0	0	201
45 to 49	3	8	13	40	68	26	1	0	159
50 to 54	1	2	9	14	21	55	34	0	136
55 & Up	0	1	0	1	6	8	22	8	46
Total	215	210	214	186	120	90	57	8	1,100

Age Distribution



Service Distribution



APPENDIX A (continued)

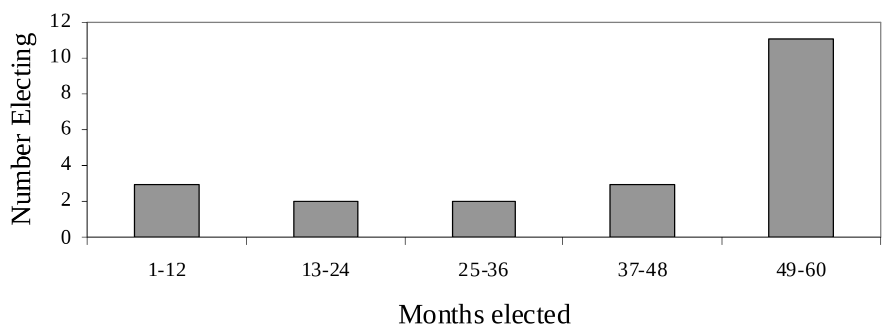
WICHITA POLICE AND FIRE RETIREMENT SYSTEM
BackDROP Experience for the 2009 Plan Year

Fire

Number Electing BackDROP

	Final Benefit as a Proportion of Final Average Pay					
Age	Under 55%	55%-60%	60%-65%	65%-70%	70%-75%	Total
Under 55	2	1	0	1	6	10
55-59	0	1	0	2	6	9
60-64	0	0	0	0	2	2
65+	0	0	0	0	0	0
Total	2	2	0	3	14	21

Distribution of BackDROP Election Period



APPENDIX A (continued)

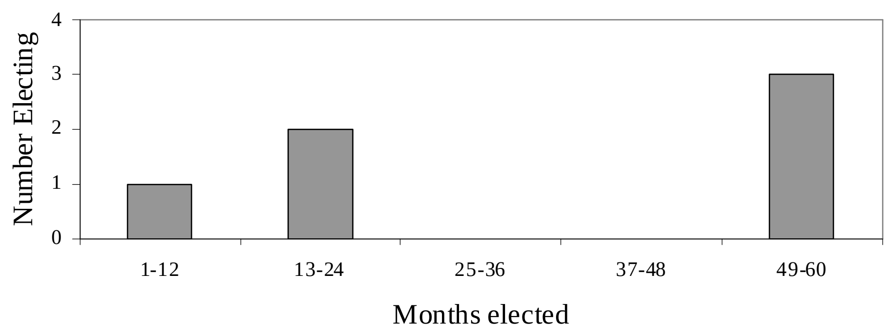
WICHITA POLICE AND FIRE RETIREMENT SYSTEM
BackDROP Experience for the 2009 Plan Year

Police

Number Electing BackDROP

	Final Benefit as a Proportion of Final Average Pay					
Age	Under 55%	55%-60%	60%-65%	65%-70%	70%-75%	Total
Under 55	0	1	0	0	2	3
55-59	0	0	0	0	2	2
60-64	0	0	0	0	1	1
65+	0	0	0	0	0	0
Total	0	1	0	0	5	6

Distribution of BackDROP Election Period



APPENDIX A (continued)

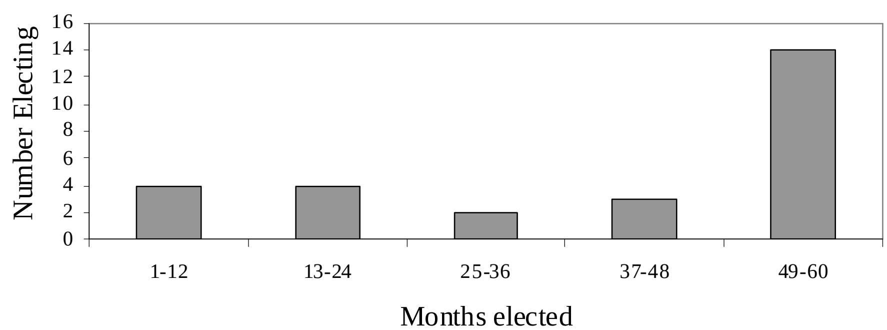
WICHITA POLICE AND FIRE RETIREMENT SYSTEM
BackDROP Experience for the 2009 Plan Year

Fire & Police

Number Electing BackDROP

Age	Final Benefit as a Proportion of Final Average Pay					Total
	Under 55%	55%-60%	60%-65%	65%-70%	70%-75%	
Under 55	2	2	0	1	8	13
55-59	0	1	0	2	8	11
60-64	0	0	0	0	3	3
65+	0	0	0	0	0	0
Total	2	3	0	3	19	27

Distribution of BackDROP Election Period

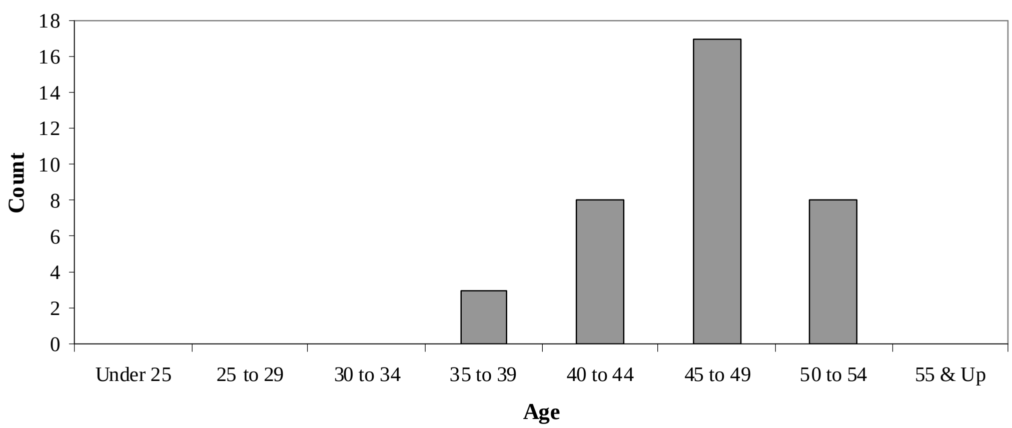


APPENDIX A (continued)

WICHITA POLICE AND FIRE RETIREMENT SYSTEM
SUMMARY OF DEFERRED VESTED MEMBERS
as of December 31, 2009

	Number			Current Monthly Benefit at Retirement		
Age	Fire	Police	Total	Fire	Police	Total
Under 25	0	0	0	$ -	$ -	$ -
25 to 29	0	0	0	-	-	-
30 to 34	0	0	0	-	-	-
35 to 39	0	3	3	-	3,998	3,998
40 to 44	3	5	8	3,428	9,290	12,717
45 to 49	5	12	17	12,132	33,419	45,551
50 to 54	3	5	8	3,361	8,187	11,548
55 & Up	0	0	0	-	-	-
Total	11	25	36	$ 18,921	$ 54,893	$ 73,814

Age Distribution

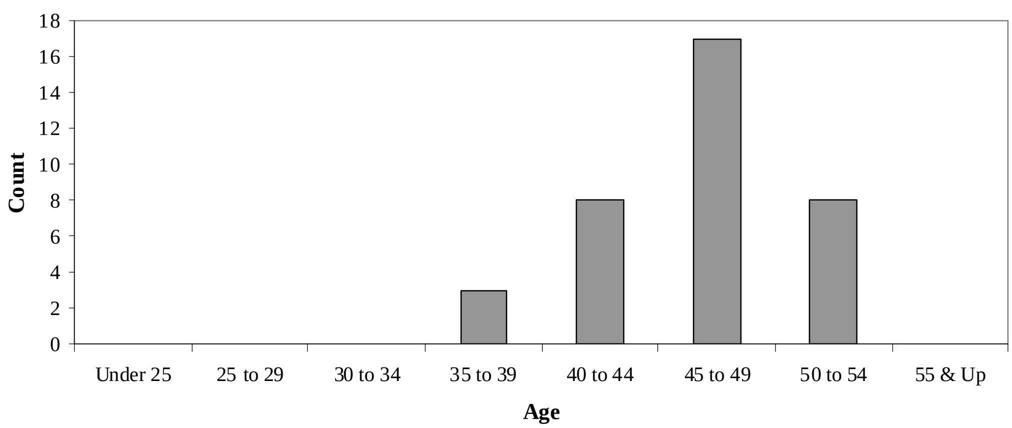


APPENDIX A (continued)

WICHITA POLICE AND FIRE RETIREMENT SYSTEM
SUMMARY OF DEFERRED VESTED MEMBERS
as of December 31, 2009

	Number			Current Monthly Benefit at Retirement		
Age	Male	Female	Total	Male	Female	Total
Under 25	0	0	0	$ -	$ -	$ -
25 to 29	0	0	0	-	-	-
30 to 34	0	0	0	-	-	-
35 to 39	2	1	3	2,865	1,132	3,998
40 to 44	8	0	8	12,717	-	12,717
45 to 49	16	1	17	42,245	3,305	45,551
50 to 54	7	1	8	10,481	1,067	11,548
55 & Up	0	0	0	-	-	-
Total	33	3	36	$ 68,309	$ 5,505	$ 73,814

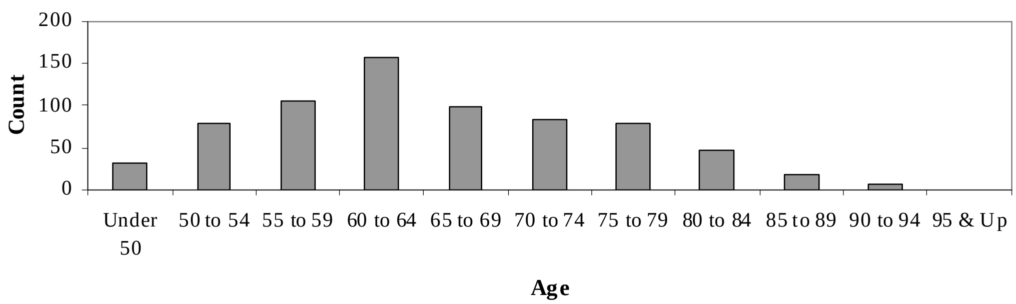
Age Distribution



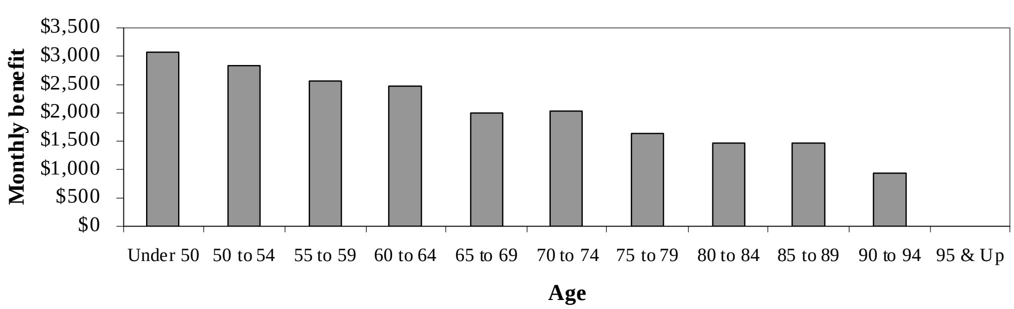
WICHITA POLICE AND FIRE RETIREMENT SYSTEM
SUMMARY OF RETIRED MEMBERS
as of December 31, 2009

	Number			Monthly Benefit		
Age	Fire	Police	Total	Fire	Police	Total
Under 50	6	24	30	$ 18,719	$ 73,862	$ 92,582
50 to 54	39	40	79	109,523	115,011	224,534
55 to 59	47	57	104	118,878	147,365	266,243
60 to 64	90	67	157	229,306	158,532	387,837
65 to 69	51	47	98	104,193	92,051	196,244
70 to 74	44	39	83	93,114	77,190	170,305
75 to 79	46	33	79	77,256	53,339	130,594
80 to 84	27	20	47	40,059	28,561	68,620
85 to 89	7	10	17	8,821	16,057	24,878
90 to 94	4	3	7	3,730	2,892	6,622
95 & Up	0	0	0	-	-	-
Total	361	340	701	$ 803,598	$ 764,860	$ 1,568,459

Age Distribution



Average Benefit

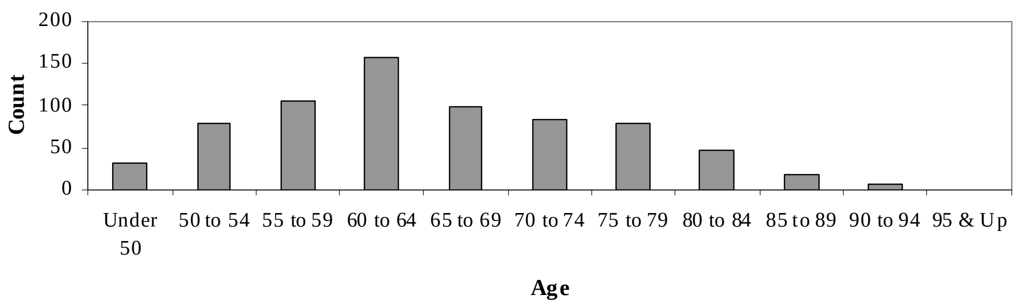


APPENDIX A (continued)

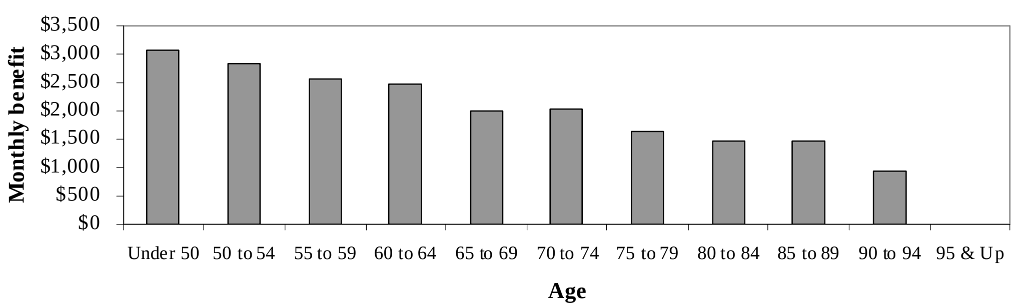
WICHITA POLICE AND FIRE RETIREMENT SYSTEM
SUMMARY OF RETIRED MEMBERS
as of December 31, 2009

	Number			Monthly Benefit		
Age	Male	Female	Total	Male	Female	Total
Under 50	25	5	30	$ 78,327	$ 14,255	$ 92,582
50 to 54	79	0	79	224,534	-	224,534
55 to 59	103	1	104	263,632	2,611	266,243
60 to 64	154	3	157	382,183	5,654	387,837
65 to 69	96	2	98	192,835	3,410	196,244
70 to 74	80	3	83	165,728	4,576	170,305
75 to 79	77	2	79	127,223	3,371	130,594
80 to 84	47	0	47	68,620	-	68,620
85 to 89	17	0	17	24,878	-	24,878
90 to 94	6	1	7	5,803	818	6,622
95 & Up	0	0	0	-	-	-
Total	684	17	701	$ 1,533,763	$ 34,695	$ 1,568,459

Age Distribution



Average Benefit

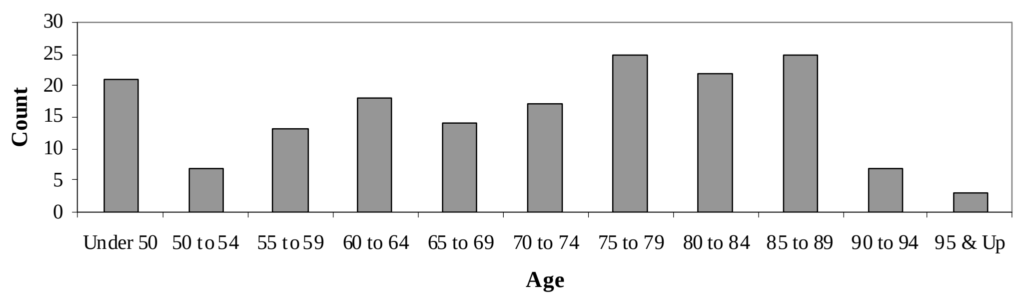


APPENDIX A (continued)

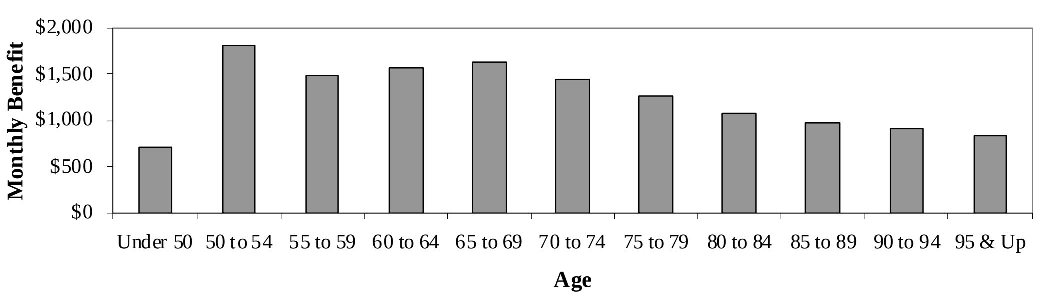
WICHITA POLICE AND FIRE RETIREMENT SYSTEM
SUMMARY OF BENEFICIARIES
as of December 31, 2009

	Number			Monthly Benefit		
Age	Fire	Police	Total	Fire	Police	Total
Under 50	8	13	21	$ 6,232	$ 8,851	$ 15,083
50 to 54	4	3	7	8,927	3,788	12,714
55 to 59	7	6	13	8,852	10,381	19,232
60 to 64	8	10	18	12,564	15,739	28,303
65 to 69	5	9	14	8,329	14,410	22,739
70 to 74	9	8	17	11,799	12,693	24,492
75 to 79	13	12	25	19,130	12,673	31,803
80 to 84	14	8	22	13,436	10,226	23,662
85 to 89	20	5	25	20,164	4,256	24,420
90 to 94	2	5	7	1,571	4,798	6,369
95 & Up	1	2	3	818	1,703	2,521
Total	91	81	172	$ 111,821	$ 99,518	$ 211,339

Age Distribution



Average Benefit

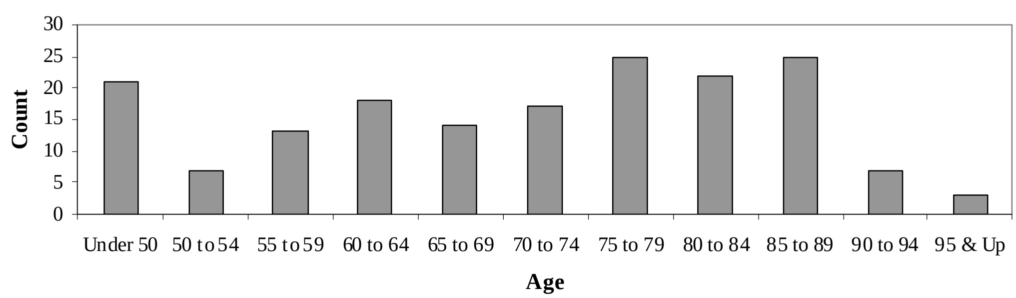


APPENDIX A (continued)

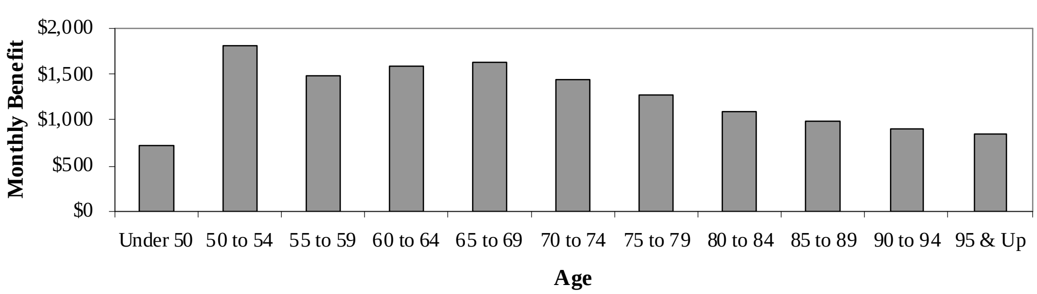
WICHITA POLICE AND FIRE RETIREMENT SYSTEM
SUMMARY OF BENEFICIARIES
as of December 31, 2009

	Number			Monthly Benefit		
Age	Male	Female	Total	Male	Female	Total
Under 50	11	10	21	$ 4,285	$ 10,798	$ 15,083
50 to 54	0	7	7	-	12,714	12,714
55 to 59	0	13	13	-	19,232	19,232
60 to 64	1	17	18	2,118	26,185	28,303
65 to 69	0	14	14	-	22,739	22,739
70 to 74	0	17	17	-	24,492	24,492
75 to 79	0	25	25	-	31,803	31,803
80 to 84	0	22	22	-	23,662	23,662
85 to 89	0	25	25	-	24,420	24,420
90 to 94	0	7	7	-	6,369	6,369
95 & Up	0	3	3	-	2,521	2,521
Total	12	160	172	$ 6,404	$ 204,935	$ 211,339

Age Distribution



Average Benefit



APPENDIX B

SUMMARY OF BENEFIT PROVISIONS (DECEMBER 31, 2009)

Plan A is applicable to members who entered the System between January 1, 1965 and December 31, 1978 and members who entered prior to January 1, 1965 and elected Plan A coverage.

Plan B is applicable to members who entered the System prior to January 1, 1965 and elected Plan B coverage.

Plan C is applicable to members entering the System after December 31, 1978.

Service Retirement

Eligibility – Plan A and Plan B: 20 years of service, without regard to age.

Eligibility – Plan C: 30 years of service, without regard to age; or 20 years of service and attainment of age 50 years; or, if 10 or more years of service but less than 20, age 55.

Amount of Pension – all plans: Service times 2.5% of Final Average Salary to a maximum of 75% of Final Average Salary.

Final Average Salary – all plans: average for the 3 consecutive years of service which produce the highest average and which are within the last 10 years of service.

Deferred Retirement (Vested Termination)

Eligibility – all plans: 10 years of service (does not include survivor benefits if service is less than 20 years).

Amount of Pension – all plans: 2.5% of Final Average Salary times years of service with payment deferred until age 55 (age 50 for Plan C members with 20 or more years of service). Vested deferred pensions for Plan C are adjusted during the deferral period based on changes in National Average Earnings, up to 5.5% annual adjustments (effective for post-1999 terminations).

Service-Connected Disability

Eligibility – all plans: permanent inability to perform the duties of position; no service retirement.

Amount of Pension – all plans: 75% of final salary rate if accident, 50% if disease.

Miscellaneous Conditions – all plans: pension plus earnings from gainful employment cannot exceed current salary for rank held at time of disability. Pension recomputed at age 55 using service retirement formula, updated final average salary and service credit for period of disability.

Non-Service Disability

Eligibility – all plans: permanent inability to perform duties of position; requires 7 years of service and under age 55 years old.

Amount of Pension – all plans: 30% of Final Average Salary plus 1% of Final Average Salary times service over 7 years; maximum is 50% of Final Average Salary.

Miscellaneous Conditions – all plans: pension plus earnings from gainful employment cannot exceed current salary for rank held at time of disability.

Service-Connected Death

Eligibility – all plans: death resulting directly from service-connected causes; no service requirement.

Amount of Pension – all plans: surviving spouse – 50% of final salary plus 10% of final salary for each child under age 18 years to a maximum of 75% of final salary; terminates upon remarriage prior to age 40 years for pensions effective prior to January 1, 2000.

Children (no surviving spouse's pension payable) – 20% of final salary for each child under age 18 to a maximum of 60% of final salary.

Non-Service Death

Eligibility – Plan A and Plan C: death after 3 years of service.

Eligibility – Plan B: death after 20 years of service.

Amount of Pension – Plan A and Plan C: surviving spouse – 35% of Final Average Salary plus 1% of Final Average Salary times Service over 3 years to a maximum of 50% of Final Average Salary, plus 10% of Final Average Salary for each child under age 18 to an overall maximum of 66⅔% of Final Average Salary. Terminates upon remarriage prior to age 40 years for pensions effective prior to January 1, 2000.

Children (no surviving spouse's pension payable) – 15% of Final Average Salary for each child under age 18 years to a maximum of 50% of Final Average Salary.

Amount of Pension – Plan B: surviving spouse – 50% of final salary.

Children (no surviving spouse's pension payable) – children under age 18 share equally a benefit of 50% of final salary.

Death After Retirement

Eligibility – all plans: surviving spouse must have been married to retired employee for one year or more at time of death, if retired after January 1, 2000. If retired prior to January 1, 2000, must have been married to retired employee at retirement. Member must have retired with at least 20 years of service.

Amount of Pension – Plan A and Plan C: surviving spouse – 35% of Final Average Salary plus 1% of Final Average Salary times Service over 3 years to a maximum of 50% of Final Average Salary, plus 10% of Final Average Salary for each child under age 18 to an overall maximum of 66⅔% of Final Average Salary. Post-retirement adjustments are granted from date of retirement to date of death. Terminates upon remarriage prior to age 40 years for those retiring prior to January 1, 2000.

Children (no surviving spouse's pension payable) – 15% of Final Average Salary for each child under age 18 years to a maximum of 50% of Final Average Salary.

Amount of Pension – Plan B: surviving spouse – 50% of final salary.

Children (no surviving spouse's pension payable) – children under age 18 share equally a benefit of 50% of final salary.

Non-Vested Termination

Eligibility – all plans: termination of employment and no pension is or will become payable.

Amount of Benefit – all plans: refund of member's contributions plus 5% annual interest.

Funeral Benefit

Eligibility – Plan A and Plan C: death of member who retired after November 21, 1973.

Amount of Benefit – Plan A and Plan C: $750.

Eligibility – Plan B: death of retired member.

***Amount of Benefit – Plan B*:** $100 if member retired on or prior to November 21, 1973; $750 if member retired after November 21, 1973.

Post-Retirement Adjustments of Pensions

Eligibility – all Plans: Completion of 36 months of retirement.

Annual Amount – all Plans: 2% of the base amount of benefit (increases are not compounded).

Back DROP (Deferred Retirement Option Plan)

Eligibility: Member must be eligible to retire under service retirement provisions at the effective date of the Back DROP.

Amount: Under the Back DROP, the member may elect a benefit based on a retirement date up to 60 months prior to the current date. The monthly benefit is computed based on Service, Final Average Salary and benefit formula at the selected prior date. The DROP account available to the retiring member is the computed benefit multiplied by the number of months of Back DROP plus applicable post-retirement adjustments and 5% annual interest, compounded monthly. Members are eligible to elect a sixty month Back DROP beginning January 1, 2003.

Employee Contributions

Plan A: 8% of salary.
Plan B: 6% of salary.
Plan C: 7% of salary.

These member contribution rates include the 1% decrease effective in 1998 in recognition of the full funding of actuarial liabilities.

City Contributions

Actuarially determined amounts sufficient to satisfy K.S.A. 1977 Suppl. 12-5002.

Unused Sick Leave

Each bi-weekly service credit of accumulated unused sick leave is converted to a service credit for the purpose of computing annual benefit amounts.

APPENDIX C

ACTUARIAL COST METHOD AND ASSUMPTIONS

Actuarial Cost Method

The actuarial cost method is a procedure for allocating the actuarial present value of pension benefits and expenses to time periods. The method used for the valuation is known as the Entry Age Normal actuarial cost method, and has the following characteristics.

(i) The annual normal costs for each individual active member are sufficient to accumulate the value of the member's pension at time of retirement.

(ii) Each annual normal cost is a constant percentage of the member's year-by-year projected covered compensation.

(iii) Normal costs for Plans A and B (closed plans) were based on Plan C (open plan) assumptions and benefit conditions.

The Entry Age Normal actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's assumed pensionable compensation rates between the entry age of the member and the assumed exit ages. By applying the Entry Age Normal cost method in the fashion described in (iii), the ultimate normal cost will remain level as a percent of active member payroll (if actuarial assumptions are realized) as Plan A and Plan B members leave active status and are replaced by members entering Plan C.

The portion of the actuarial present value allocated to the valuation year is called the normal cost. The portion of the actuarial present value not provided for by the actuarial present value of future normal costs is called actuarial liability. Deducting actuarial assets from the actuarial liability determines the unfunded actuarial liability or (surplus). The unfunded actuarial liability/(surplus) is financed as a level percent of member payroll over an open 20-year period.

Actuarial Assumptions

Retirement System contribution requirements and actuarial present values are calculated by applying experience assumptions to the benefit provisions and membership information of the Retirement System, using the actuarial cost method.

The principal areas of risk which require experience assumptions about future activities of the Retirement System are:

(i) long-term rate of investment return to be generated by the assets of the System

(ii) patterns of pay increases to members

(iii) rates of mortality among members, retirants and beneficiaries

(iv) rates of withdrawal of active members

(v) rates of disability among active members

(vi) the age patterns of actual retirements.

In making a valuation, the monetary effect of each assumption is calculated for as long as a present covered person survives - - a period of time which can be as long as a century.

Actual experience of the Retirement System will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experiences. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time-to-time one or more of the assumptions are modified to reflect experience trends (but not random or temporary year-to-year fluctuations). A complete review of the actuarial assumptions was completed in 2009. The use of updated assumptions was effective with the December 31, 2009 valuation.

Investment Return Rate (net of administrative expenses). This assumption is 7.75% a year, compounded annually, and consists of 3.50% long-term price inflation and a 4.25% real rate of return over price inflation. This assumption, used to equate the value of payments due at different points in time, was adopted by the Board and was first used for the December 31, 1980 valuation, although the allocation between inflation and real return has changed periodically, most recently with the December 31, 2009 valuation.

Salary Increase Rates. These rates are used to project current pay amounts to those upon which a benefit will be based.

Years of Service	Annual Rate of Salary Increase for Sample Ages			
	Inflation	Productivity	Merit & Longevity	Total
1	3.50%	0.50%	2.75%	6.75%
5	3.50%	0.50%	2.75%	6.75%
10	3.50%	0.50%	2.75%	6.75%
15	3.50%	0.50%	2.75%	6.75%
20	3.50%	0.50%	1.0%	5.00%
25	3.50%	0.50%	1.0%	5.00%
30	3.50%	0.50%	1.0%	5.00%

This assumption was first used for the December 31, 2009 valuation.

APPENDIX C (continued)

The salary increase assumptions will produce 4.5% annual increases in active member payroll (the inflation rate plus the productivity rate) given a constant active member group size. This is the same payroll growth assumptions used to amortize the unfunded actuarial liability. The real rate of return over assumed wage growth is 3.25% per year.

Changes actually experienced in average pay and total payroll have been as follows:

	Year Ended					**5 Year (Average) Compounded Annual Increase**
	12/31/09	**12/31/08**	**12/31/07**	**12/31/06***	**12/31/05**	
Average pay	3.2%	6.4%	5.6%	4.1%	2.3%	4.3%
Total payroll	5.5%	4.8%	6.7%	7.1%	1.0%	5.0%

* Includes estimated GPA increase of 3% for 2007.

Mortality Table. This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each pension payment being made after retirement.

Healthy Retirees and Beneficiaries: RP-2000 Healthy Annuitant Table for Males and Females.
Disabled Retirees: RP-2000 Disabled Table for Males and Females.
Active Members: RP-2000 Employee Table for Males and Females.

The RP-2000 Tables are used with generational mortality.

Sample Ages(1)	**Present Value of $1 Monthly for Life**		**Future Life Expectancy (Years)**	
	Men	**Women**	**Men**	**Women**
50	$138.63	$141.98	32.3	34.6
55	132.05	135.41	27.6	29.7
60	122.80	127.04	23.0	25.1
65	111.13	116.91	18.5	20.7
70	97.31	104.80	14.5	16.7
75	81.63	90.90	10.9	13.0
80	65.36	75.76	7.9	9.8
85	49.97	60.20	5.6	7.1

(1) Ages in 2000

These tables were first used for the December 31, 2004 valuation.

APPENDIX C (continued)

Rates of Retirement. This assumption is used to measure the probability of eligible members retiring from active employment.

Percent Retiring within Year

Plans A & B			**Plan C**		
Service of Member	**Police**	**Fire**	**Age of Member**	**Police**	**Fire**
28 or less	5%	5%	50	10%	5%
29	5	5	51	10	5
30	10	5	52	10	5
31	10	5	53	10	10
32	30	25	54	10	10
33	50	25	55	10	10
34	50	25	56	30	20
35	100	100	57	30	20
Over 35	100	100	58	30	20
			59	30	20
			60	100	100
			Over 60	100	100

These rates were first used for the December 31, 2009 valuation.

Rates of Separation from Active Membership. This assumption measures the probabilities of a member terminating employment. The rates do not apply to members who are eligible to retire.

Sample Ages	Years of Service	Percent Separating Within Year	
		Police	Fire
ALL	0	10.00%	8.00%
	1	8.00	6.00
	2	6.00	4.50
	3	4.00	3.00
	4	3.00	2.00
25	Over 4	3.00	1.00
30		3.00	1.00
35		2.50	0.95
40		1.90	0.85
45		0.70	0.50
50		0.0	0.0
55		0.0	0.0

These rates were first used for the December 31, 2009 valuation.

APPENDIX C (continued)

Forfeiture of Vested Benefits. The assumption is that a percentage of the actuarial present value of vested termination benefits will be forfeited by a withdrawal of accumulated contributions.

Years of Service	% Forfeiting
10 - 14	100
15	0

This table was first used for the December 31, 2004 valuation.

Rates of Disability. This assumption measures the probability of a member becoming disabled.

Sample	Percent Becoming Disabled Within Year	
Ages	Police	Fire
20	0.10%	0.09%
25	0.16	0.14
30	0.33	0.30
35	0.55	0.49
40	0.77	0.68
45	0.98	0.87
50	1.20	1.06
55	1.42	1.14

These rates were first used for the December 31, 1999 valuation.

Rates of Recovery from Disability. Assumed to be zero.

Administrative Expenses. Assumed to be paid from investment earnings.

Active Member Group Size. Assumed to remain constant.

Vested Deferred Pensions. Amounts for Plan C are assumed to increase during the deferral period at 4.0% per year. This assumption was changed with the December 31, 2009 valuation.

APPENDIX C (continued)

Miscellaneous and Technical Assumptions

Marriage Assumption:	80% of participants are assumed to be married for purposes of death benefits. In each case, the male was assumed to be 3 years older than the female.
Service Related Death and Disability:	All active member deaths and 75% of active member disablements are assumed to be service related.
Pay Increase Timing:	Assumed to occur mid-year.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year at the start of the year in which the decrement is assumed to occur.
Benefit Service:	Service calculated to the nearest month, as of the decrement date, is used to determine the amount of benefit payable.
Other:	The turnover decrement does not operate during retirement eligibility.
Miscellaneous Loading Factors:	The calculated normal retirement benefits were increased by 4% to account for the inclusion of unused sick leave in the calculation of Service Credit. This assumption was changed with the December 31, 2004 valuation.

APPENDIX D

GLOSSARY OF TERMS

Actuarial Liability	The difference between the actuarial present value of system benefits and the actuarial value of future normal costs. Also referred to as "accrued liability" or "actuarial accrued liability."
Actuarial Assumptions	Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
Accrued Service	Service credited under the system which was rendered before the date of the actuarial valuation.
Actuarial Equivalent	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate assumptions.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement system benefit between future normal cost and actuarial accrued liability. Sometimes referred to as the "actuarial funding method."
Experience Gain (Loss)	The difference between actual experience and actuarial assumptions anticipated experience during the period between two actuarial valuation dates.
Actuarial Present Value	The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.
Amortization	Paying off an interest-discounted amount with periodic payments of interest and principal, as opposed to paying off with lump sum payment.
Normal Cost	The actuarial present value of retirement system benefits allocated to the current year by the actuarial cost method.

Unfunded Actuarial Liability

The difference between actuarial liability and the valuation assets.

Most retirement systems have an unfunded actuarial liability. They arise each time new benefits are added and each time an actuarial loss is realized.

The existence of unfunded actuarial liability is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial liability does not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial liability and the trend in its amount.