



Kansas Public Employees Retirement System Actuarial Valuation Report

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July 6, 2005

Board of Trustees Kansas Public Employees Retirement System 611 S. Kansas Ave., Suite 100 Topeka, KS 66603

Dear Members of Board:

At your request, we have conducted our annual actuarial valuation of the Kansas Public Employees Retirement System as of December 31, 2004. The major findings of the valuation are contained in this report. The valuation reflects the impact of the changes in actuarial assumptions, as adopted by the Board in September, 2004. There was no change in the actuarial cost method and the asset valuation method from the prior valuation. There was only one minor change in the benefit provisions, which is discussed on page one of the report.

In preparing our 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, statutory 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. 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 principles prescribed by the Actuarial Standards Board (ASB) and the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries.

We hereby 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 internally consistent, individually reasonable (taking into account the experience of the Plan and reasonable expectations of future experience); and which, in combination, offer our best estimate of anticipated experience under the Plan. 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 indicated in Appendix C.

July 6, 2005 Page 2



Actuarial computations presented in this report are solely for purposes of determining the actuarial contribution rates for funding the System. Determinations for purposes other than this may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes. Reliance on information contained in this report by anyone for other than the intended purpose puts the relying entity at the risk of being misled.

Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Unless required by law, this report should not be distributed to other parties without our prior consent. We do not intend this report to benefit any third party, even if we permit the release of this report to a third party. This report should only be reviewed in its entirety.

We would like to express our appreciation to Glenn Deck, Executive Director of the System, and to members of his 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 respectfully submit the following report and look forward to discussing it with you.

MILLIMAN, Inc.

Sincerely,

strice Beckham

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

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

SECTION I **BOARD SUMMARY**

OVERVIEW

The Kansas Public Employees Retirement System is an umbrella organization which administers the following three statewide pension groups: the Kansas Public Employees Retirement System (KPERS), the Kansas Police and Firemen's Retirement System (KP&F) and the Kansas Retirement System for Judges (Judges). This report presents the results of the December 31, 2004 actuarial valuations for each of the Systems.

The primary purposes of performing actuarial valuations are to:

- determine the employer contribution rates required to fund each System on an actuarial • basis,
- determine the statutory employer contribution rates for each System, •
- disclose asset and liability measures as of the valuation date, ٠
- determine the experience of the System since the last valuation date, and •
- analyze and report on trends in System contributions, assets, and liabilities over the past • several years.

There was no change in the actuarial methods used in the valuation. However, there was a change in the set of actuarial assumptions used in the December 31, 2004 actuarial valuation. The Board of Trustees adopted the new set of assumptions in September, 2004, following the completion of the Triennial Experience Study. The changes recommended by Milliman, Inc. and adopted by the Board of Trustees were:

All Systems

Update the mortality table to a newer table (RP-2000) and use a generational projection • to estimate mortality improvements in future years.

KPERS

- Adjust retirement rates, with most significant changes for the State group. •
- Extend the select period for termination of employment rates from 5 to 9 years.

KP&F

- Minor adjustments to retirement rates, generally lowering rates. •
- Increase termination of employment rates for Tier II members at lower durations and decrease them at higher durations.

There was only one minor change in the benefit provisions as discussed in the second bullet point below. The 2005 Legislature passed legislation containing the following provisions:

- Clarified the determination of KPERS State Group and School Group employer • contributions by specifying that, in any year in which the State employer rate is less than the combined State/School rate, the Legislature shall appropriate a supplemental amount to the School group, equal to the difference between the State's contributions using the combined rate and contributions using the State Group rate.
- Reduced the length of service required for a surviving spouse to be eligible for pre-• retirement survivor death benefits from 15 to 10 years of service for members of KPERS or the Retirement System for Judges.
- Allowed KP&F affiliation and membership (future service only) for certified law enforcement officers employed by the State Fire Marshal's Office.



 Lifted the \$15,000 annual earnings limitation during fiscal years 2006 to 2008 for retired nurses who return to work for certain state institutions with employers making KPERS contribution. This effects a small group of members for a limited period and therefore had no measurable impact.

In KPERS, State, School and Local employers do not necessarily contribute the full actuarial contribution rate. Based on legislation passed in 1993, the employer contribution rates certified by the Board may not increase by more than the statutory cap. The statutory cap, which has been changed periodically, is currently 0.60% for FY2008 and later for the State and School groups and 0.50% in CY2007 and 0.60% in CY2008 and thereafter for Local Group.

The valuation results provide a "snapshot" view of the System's financial condition on December 31, 2004. The unfunded actuarial liability for the System as a whole increased by \$1,157 million due to various factors. The two most significant are the change in the actuarial assumptions and the actuarial loss on assets. A detailed analysis of the change in the unfunded actuarial liability from December 31, 2003 to December 31, 2004 is shown on page 5.

A summary of actuarial and statutory employer contribution rates for the Retirement System (excluding the statutory contribution for the Death and Disability Program) for the last two valuation dates follows:

| | December 31, | | |
|--|-----------------|--|----------------|
| System | Actuarial | Statutory | Difference |
| State | 6.99% | 6.37% ¹ | 0.62% |
| School Local | 11.47% 7.69% | 6.37% ¹ 4.31% ¹ | 5.10% 3.38% |
| Police & Fire - Uniform Rates ² | 13.32% | 13.32% | 0.00% |
| Judges | 22.38% | 22.38% | 0.00% |

| | December 31, | | |
|---|--|---|---|
| System | Actuarial | Statutory | Difference |
| State School Local Police & Fire - Uniform Rates Judges | 5.84% ³ 9.75% 6.24% 12.39% 19.11% | 5.77% 5.77% 3.81% 12.39% 19.11% | 0.00% 3.98% 2.43% 0.00% 0.00% |

By statute, rates are allowed to increase by a maximum of 0.60% for State and School for FY 2008 and 0.50% for Local for FY 2007 plus the cost of any benefit enhancements.

² For KP&F, the statutory contribution rate is equal to the "Uniform" rate. The rate shown is for local employers. The rate for State employers also is 13.32% this year, which includes a payment of 0.63% for the debt service payment on the bonds issued for the 13th check. The uniform rate does not include the payment required to amortize the unfunded past service liability or any 15% excess benefit liability determined separately for each employer. (See Table 13.)

³ The actuarial contribution rate was recertified to 5.84% after the December 31, 2003 valuation report was issued.

Prior actuarial valuation reports have addressed concerns about the long term funding of KPERS. KPERS' long term funding outlook has improved due to legislation, Board action and strong investment performance in 2003 and 2004. The State, School and Local groups are projected to reach equilibrium (actuarial and statutory contribution rate are equal) before the end of the amortization period (2033). Therefore the System is in actuarial balance over the long term if all actuarial assumptions are met. Despite the fact that the market value of assets is slightly higher than the actuarial value, if the assumed 8% investment return is achieved, an actuarial loss is expected in 2005. Subsequent years are expected to show actuarial asset gains. This is due to the use of an asset smoothing method and the delayed reflection of market experience in the actuarial value of assets. The experience loss on assets for 2005 will result in an increase in the UAL and a corresponding increase in the contribution for the UAL payment, but the System is expected to remain in actuarial balance. In addition, the shortfall between the actuarial and statutory contribution rates will produce additional increases the UAL. As a result, the actuarial contribution rate is expected to increase until equilibrium is reached.



EXPERIENCE - ALL SYSTEMS COMBINED

December 31, 2003 – December 31, 2004

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, 2004. 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 leads to a method of determining the contributions needed by members and employers in the future to balance the System assets and liabilities.

Changes in the Systems' assets and liabilities impacted the change in the actuarial contribution rates between the December 31, 2003 and December 31, 2004 actuarial valuations. On the following pages each component is examined and quantified.

ASSETS

As of December 31, 2004, the System had total funds when measured on a market value basis, of \$11.2 billion, excluding receivables and assets held for the Group Insurance and Optional Life reserves. This was an increase of \$1.4 billion from the December 31, 2003 figure of \$9.8 billion. The components of the change in the market value of assets for the Retirement System (in millions) are set forth below.

| | Market Value \$(millions) |
|---|------------------------------|
| Assets, December 31, 2003 | \$9,797 |
| Receivables (POB Proceeds) | 440 |
| Adjusted Assets, December 31, 2003 | 10,237 |
| Employer and Member Contributions | 481 |
| Benefit Payments and Expenses | (764) |
| Investment Income | 1,224 |
| Assets, December 31, 2004 | \$11,178 |

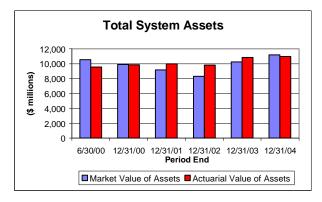
The market value of assets is not used directly in the calculation of contribution rates. An asset valuation method is used to smooth the effect of market fluctuations. The smoothing method calculates the difference between the actual return and the expected return (assumed rate of return) on the market value of assets each year. The difference is recognized equally over a five-year period. See Tables 3A through 3F and 4 for the detailed development of the actuarial value of assets as of December 31, 2004 for each group.

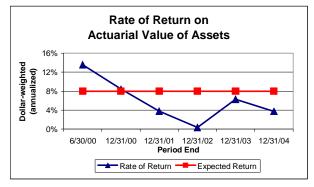
| | Actuarial Value \$(millions) |
|---|---------------------------------|
| Actuarial Value of Assets 12/31/03 | \$10,853 |
| Employer and Member Contributions | 481 |
| Benefit Payments and Expenses | (764) |
| Investment Income | 401 |
| Actuarial Value of Assets 12/31/04 | 10,971 |



The actuarial value of assets as of December 31, 2004, was \$10.971 billion. The annualized dollar-weighted rate of return for 2004 measured on the actuarial value of assets was approximately 3.7% and measured on the market value of assets, as reported by KPERS, was 12.6%.

Due to the use of an asset smoothing method, there is \$207 million of net deferred investment gain experience that has not yet been recognized. This deferred investment gain will gradually be reflected in the actuarial value of assets. If the actuarial assumed rate of 8% is met in the future, the smoothing method will generate an actuarial loss for 2005 and actuarial gains for the following three years.





Strong investment returns during 2003 and 2004 have narrowed the gap between the market value and actuarial value of assets. At the valuation date, the market value of assets is slightly larger than the actuarial value.

The rate of return on the actuarial (smoothed) value of assets exceeded the assumed rate of 8% until 2001. Rates are expected to remain below 8% for the next year as the deferred investment losses are reflected in the actuarial value of assets.

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 asset values at the same date is referred to as the unfunded actuarial liability (UAL). 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 methods will also impact the total actuarial liability (AL) and the unfunded portion thereof.

The Board adopted a new set of actuarial assumptions effective with the December 31, 2004 actuarial valuation. As a result there was a change in the actuarial liability for all groups. The change is summarized below:

| | State | <u>School</u> | Local | KP&F | <u>Judges</u> |
|------------------------------|---------|---------------|---------|---------|---------------|
| AL (baseline/no change) | \$2,887 | \$8,207 | \$2,409 | \$1,665 | \$ 109 |
| Assumption change | 65 | 264 | 113 | (7) | 2 |
| AL (after assumption change) | 2,952 | 8,471 | 2,522 | 1,658 | 111 |
| Benefit change* | 0 | 0 | 0 | 0 | 0 |
| Final AL | \$2,952 | \$8,471 | \$2,522 | \$1,658 | \$ 111 |

*Change in service requirement for preretirement survivor benefit from 15 to 10 years. Cost impacts rounds to \$0.



See Table 6 for the detailed development of the actuarial liability by System. The calculation of the Unfunded Actuarial Liability by System is shown in Table 8.

When the actuarial cost method was changed by the Legislature in 1993, the payment methodology for the unfunded actuarial liability (UAL) for all groups except the Judges System was set in statute as a level percentage of payroll over a 40 year closed period. Payments on the UAL increase four percent each year, the same as the payroll growth assumption. In the early years of the period, the payment is less than the interest accruing on the UAL. As a result, the dollar amount of UAL is expected to increase for many years before it begins to decline. In addition, with the planned difference in the statutory and actuarial contribution rates prior to convergence, the unfunded actuarial liability is expected to increase by an additional amount each year.

Other factors influencing the UAL from year to year include actual experience versus that expected based on the actuarial assumptions (both asset and liability), changes in actuarial assumptions, procedures or methods and changes in benefit provisions. The actual experience measured in this valuation is that which occurred during the prior plan year (calendar year 2004). The State, School and Local groups had a small net liability loss of \$20 million. Retiree mortality, retirement experience and service purchases resulted in an actuarial loss which was largely offset by a gain on salary experience. There was also an experience loss from investment return on the actuarial value of assets.

Between December 31, 2003 and December 31, 2004 the change in the unfunded actuarial liabilities for the System as a whole was as follows (in millions):

| | \$millions | | |
|---|------------|--|--|
| Unfunded Actuarial Liability, December 31, 2003 | \$ 3,586 | | |
| effect of contribution cap/time lag | 179 | | |
| expected increase due to amortization method | 68 | | |
| loss from investment return | 456 | | |
| demographic experience ¹ 20 | | | |
| all other experience | (4) | | |
| change in actuarial assumptions | 437 | | |
| change in benefit provisions ² | 1 | | |
| Final Unfunded Actuarial Liability, December 31, 2004 | \$ 4,743 | | |

¹Liability loss is about 0.12% of total actuarial liability.

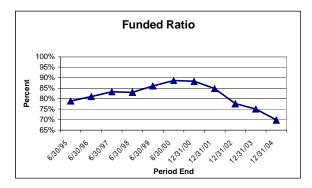
²Numbers may not add to prior numbers disclosed on page 4 due to rounding.

A detailed summary of the change in the unfunded actuarial liability by System is shown on page 11.

An evaluation of the unfunded actuarial liability on a pure dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both very large numbers) is reflected. 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. The change to the Entry Age Normal actuarial cost method in the 2003 valuation and the change in actuarial assumptions in the 2004 valuation both resulted in an increase in the UAL and a decrease in the funded status. The funded status information is shown below (in millions).

| | 6/30/99 | 6/30/00 | 12/31/00 | 12/31/01 | 12/31/02 | 12/31/03 | 12/31/04 |
|---------------------------------------|---------|---------|----------|----------|----------|----------|----------|
| Funded Ratio | 86.0% | 88.6% | 88.3% | 84.8% | 77.6% | 75.2% | 69.8% |
| Unfunded Actuarial Liability (UAL) | \$1,397 | \$1,233 | \$1,305 | \$1,780 | \$2,829 | \$3,586 | \$ 4,743 |





Due to strong investment returns, the funded status of the System generally improved in the last half of the 1990's. Recent changes in actuarial assumptions and methods, coupled with low investment returns, have significantly reduced the funded ratio.

Given the current funded status of the System, the amortization method and period, and the scheduled increases in employer contribution rates, the unfunded actuarial liability is expected to continue to grow and the funded ratio is expected to decline for many years.

CONTRIBUTION RATES

The funding objective of the System is to establish contribution rates that over time will remain relatively level, as a percentage of payroll, and to pay off the unfunded actuarial liability by 2033.

Generally, the actuarial contribution rates to the various Systems consist of:

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

There is also a statutory contribution rate that is used to finance the Death and Disability Program. Contributions for the Death and Disability Program are deposited in a separate trust fund, from which benefits are paid. A separate actuarial analysis and report is prepared for the Death and Disability Program on June 30 of each year. Therefore, the death and disability contribution rate is not reflected in this report.

The contribution rates in the December 31, 2004 valuation will set rates for fiscal year end 2008 for the State and 2007 for Local employers.

In KPERS, State, School and Local employers do not necessarily contribute the full actuarial contribution rate. Based on legislation passed in 1993, the employer contribution rates certified by the Board may not increase by more than the statutory cap. The statutory cap, which has been changed periodically, is 0.50% in FY2007 for State and School and 0.60% in FY 2008 and later. Legislation passed in 2004 increased the statutory cap for Local employers to 0.40% in CY 2006, 0.50% in CY2007 and 0.60% in CY2008 and thereafter.



A summary of the actuarial and statutory employer contribution rates for the System is shown below:

| | December 31, | | |
|---|--|--|---|
| System | Actuarial | Statutory | Difference |
| State School Local Police & Fire -Uniform Rates ² Judges | 6.99% 11.47% 7.69% 13.32% 22.38% | 6.37% ¹ 6.37% ¹ 4.31% ¹ 13.32% 22.38% | 0.62% 5.10% 3.38% 0.00% 0.00% |

By statute, rates are allowed to increase by a maximum of 0.60% for State and School for FY 2008 and 0.50% for Local for FY 2007 plus the cost of any benefit enhancements.

² For KP&F, the statutory contribution rate is equal to the "Uniform" rate. The rate shown is for local employers. The rate for State employers is 13.32% which includes a payment of 0.63% for the debt service payment on the bonds issued for the 13th check. The uniform rate does not include the payment required to amortize the unfunded past service liability or any 15% excess benefit liability determined separately for each employer. (See Table 13.)

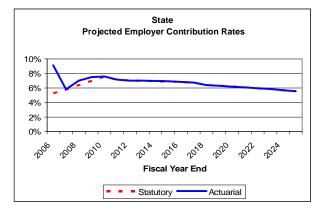
Separate employer contribution rates are calculated for two subgroups of the State. Two Correctional Employee Groups, one with normal retirement age 55 and the other with normal retirement age 60 have higher contribution rates to finance the earlier normal retirement age. The actuarial contribution rates for the Correctional Employee Groups are shown below:

| | Actuarial | State | Additional |
|--------------------|-----------|-------------|--------------|
| | Rate | <u>Rate</u> | Contribution |
| Retirement Age 55: | 8.90% | 6.99% | 1.91% |
| Retirement Age 60: | 8.84% | 6.99% | 1.85% |

The change in the actuarial contribution rate from December 31, 2003 to December 31, 2004 and the primary components thereof are shown in the table on page 12.

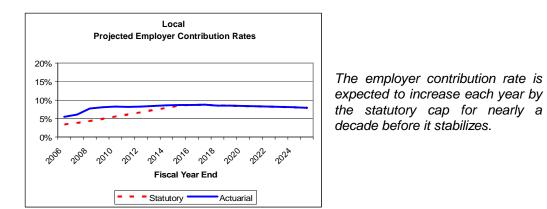
Due to statutory caps, the full actuarial contribution rate is not contributed for the State, School, and Local groups. Based on the current valuation, there is a difference (shortfall) between the actuarial and statutory contribution rates of 0.62%, 5.10% and 3.38% respectively for the State, School and Local groups. Assuming an 8% return on the market value of assets for 2005 and beyond, all other actuarial assumptions are met in the future, and the current level of statutory caps, the statutory and actuarial contribution rates will converge for the State group in 2009, the School group in 2019 and the Local group in 2015.

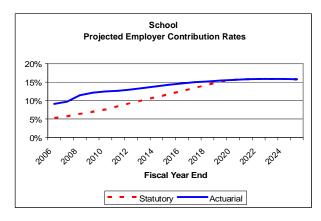
Despite a rate of return on the market value of assets of over 12% for 2004, there was an actuarial experience loss on the actuarial value of assets. The impact of negative experience is reflected in the unfunded actuarial liability (UAL). The result is an actuarial loss that increases the payment on the UAL. As the remainder of the deferred investment losses are recognized in the actuarial value of assets in future years, contribution rates can be expected to continue to increase, absent favorable experience to offset the previously unrecognized losses.



Due to the funded status of the Plan and the increase in amount of the statutory cap, the State employer contribution rate is expected to reach equilibrium in 2009, if all actuarial assumptions are met.

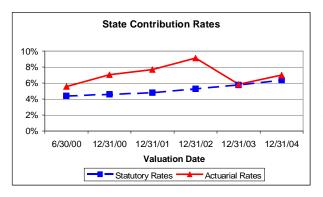






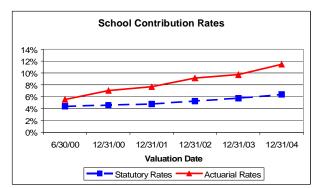
Given the significant difference between the statutory and the actuarial contribution rate, the statutory rate is expected to increase steadily before reaching equilibrium in 2019.

Historical contribution rates for each group are shown on the following pages. Please note that prior to the December 31, 2003 valuation, one contribution rate was developed for the State and School together as one group. Legislation passed in 2004 split the contribution rate calculations into two separate groups, although the statutory contributions are still determined on a combined basis. Significant changes in funding methods as well as a Pension Obligation Bond issue occurred in 2003 and actuarial assumptions were changed in the 2004 valuation. These changes impact the comparability of contribution rates between various valuation dates.

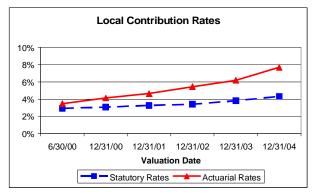


The split of the State group into a separate group with the 2003 valuation, coupled with the bond issue, lowered the actuarial contribution rate.

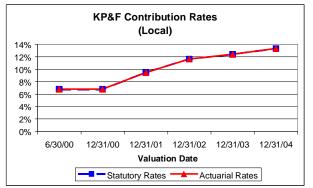




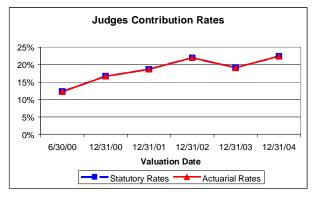
Due to investment experience, changes in actuarial methods and assumptions, and the magnitude of the difference between the actuarial and statutory contribution rates, the funded status of the School group has declined and the actuarial contribution rate has increased.



The Local contribution rate has also been impacted by recent investment performance. As a result, the difference between the statutory and actuarial contribution rate has increased. Legislation passed in 2004 provided for increased statutory caps, which should allow the statutory and actuarial rates to converge.



Strong investment returns before 2000 held employer contribution rates at a very low level. Investment experience since then has dramatically increased the contribution rates.



Significant changes in the actuarial assumptions in both the December 31, 2000 and 2004 valuations, coupled with investment experience in recent years have generally resulted in higher contribution rates.



In recent years, the Retirement System and the Legislature have given a high priority to the development of a comprehensive plan to address the long-term funding shortfall of KPERS. HB2014, which was passed by the 2003 Legislature, increased the statutory cap on the State/School employer contribution rate from 0.20% to 0.40% in FY2006, 0.50% in FY2007 and 0.60% in FY 2008 and beyond. It also authorized the issuance of up to \$500 million in pension obligation bonds (POBs). The POBs were sold and proceeds of \$440.2 million were received on March 10, 2004. The debt service payments on the bonds are paid by the State in addition to the regular KPERS employer contribution rate.

The 2004 Legislature passed SB520, which continued to address issues related to the long term funding of the System. It gave the KPERS Board of Trustees the authority to establish the actuarial cost method and amortization method/period. With this authority, the Board changed both the actuarial cost method and the asset valuation method with the December 31, 2003 actuarial valuation. SB520 also increased the statutory cap for Local employers from 0.15% to 0.40% in FY2006, 0.50% in FY2007 and 0.60% in FY2008 and beyond and also split the State/School group into separate groups for purposes of determining employer contribution rates.

The 2005 Legislature clarified the determination of KPERS State Group and School Group employer contributions by specifying that, in any year in which the State employer rate is less than the combined State/School rate, the Legislature shall appropriate a supplemental amount to the School group, equal to the difference between the State's contributions using the combined rate and contributions using the State Group rate.

With the current statutory caps, the State, School and Local groups are projected to reach equilibrium before the end of the amortization period. Since over the long term the statutory contribution rate is projected to converge with the actuarial contribution rate, the System is in actuarial balance. However, these projections assume that all actuarial assumptions are met in future years. To the extent that actual experience deviates from that expected, the date at which the rates are expected to converge, as well as the contribution rate, will vary.



SUMMARY OF CHANGE IN UNFUNDED ACTUARIAL LIABILITY

DECEMBER 31, 2004 VALUATION

| \$(millions) | State | School | Local | KP&F | Judges | Total |
|---|---------|-----------|---------|---------|--------|------------------------|
| UAL in 12/31/03 Valuation Report | \$226.8 | \$2,506.8 | \$587.9 | \$249.4 | \$15.3 | \$3,586.1 ¹ |
| Effect of contribution cap/timing | 9.3 | 127.5 | 35.3 | 6.0 | 0.5 | 178.6 |
| Expected increase due to method | 3.3 | 46.8 | 10.8 | 7.3 | (0.1) | 68.1 |
| Actual vs. Expected experience | | | | | | |
| Investment return | 114.1 | 214.4 | 63.9 | 60.0 | 3.8 | 456.2 |
| Demographic experience | 15.2 | (11.4) | 12.7 | 3.0 | (0.0) | 19.5 |
| All other experience | (0.7) | 2.6 | (0.0) | (5.5) | 0.0 | (3.6) |
| Change in assumptions | 65.0 | 263.9 | 112.8 | (7.5) | 2.5 | 436.7 |
| Change in benefit provisions | 0.3 | 0.3 | 0.3 | 0.0 | 0.0 | 0.9 |
| UAL in 12/31/04 Valuation Report | \$433.3 | \$3,150.9 | \$823.7 | \$312.7 | \$22.0 | \$4,742.6 |

¹May not add due to rounding.



SUMMARY OF CHANGES IN ACTUARIAL CONTRIBUTION RATE BY SYSTEM AS OF DECEMBER 31, 2004

| Percentage of Payroll | State | School | Local | KP&F ¹ | Judges |
|---|--------------------|--------|-------|-------------------|--------|
| Actuarial Contribution Rate in 12/31/03 Valuation | 5.21% ² | 9.75% | 6.24% | 12.39% | 19.11% |
| Change Due to Amortization of UAL | | | | | |
| effect of contribution cap/time lag | 0.06 | 0.28 | 0.17 | 0.10 | 0.19 |
| amortization method | 0.00 | 0.00 | 0.00 | 0.00 | (0.76) |
| investment experience | 0.79 | 0.48 | 0.31 | 1.01 | 1.47 |
| liability experience | 0.11 | (0.03) | 0.06 | 0.05 | (0.03) |
| all other experience | 0.02 | 0.10 | 0.05 | 0.15 | (0.35) |
| change in assumptions | 0.45 | 0.59 | 0.54 | (0.13) | 0.97 |
| change in benefit provisions | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Change in Normal Cost Rate | 0.35 | 0.30 | 0.32 | (0.25) | 1.78 |
| Actuarial Contribution Rate in 12/31/04 Valuation | 6.99% | 11.47% | 7.69% | 13.32% | 22.38% |

¹Contribution rate for Local employers only.

²Actuarial contribution rate was recertified to 5.84% after the December 31, 2003 valuation report was issued.



SUMMARY OF HISTORICAL CHANGES IN TOTAL SYSTEM UAL as of **DECEMBER 31, 2004 VALUATION**

| | | As Reported on Valuation Date | | | | | | | | | | | |
|--------------------------------|---------|-------------------------------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|---------|
| \$(millions) | 6/30/94 | 6/30/95 | 6/30/96 | 6/30/97 | 6/30/98 | 6/30/99 | 6/30/00 | 12/31/00 | 12/31/01 | 12/31/02 | 12/31/03 | 12/31/04 | Total |
| Actual Experience vs. Assumed | | | | | | | | | | | | | |
| Investment | \$(102) | \$(143) | \$(280) | \$(323) | \$(413) | \$(360) | \$(441) | \$(23) | \$350 | \$644 | \$140 | \$456 | \$(504) |
| • Other | 320 | 72 | 136 | 157 | 104 | 46 | 99 | 84 | (9) | 68 | (32) | 16 | 1,061 |
| Assumption Changes | 0 | (96) | 0 | 0 | 350 | 0 | 0 | (206) | 0 | 0 | 0 | 437 | 485 |
| Changes in Data/Procedures | 244 | 0 | 0 | 0 | 0 | 21 | 71 | 145** | 5 | 177** | (286)*** | 0 | 377 |
| Change in Cost Method | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,147 | 0 | 1,147 |
| Effect of Contribution Cap/Lag | * | 95 | 70 | 63 | 54 | 78 | 66 | 60 | 115 | 143 | 178 | 179 | 1,101 |
| Amortization Method | * | 47 | 38 | 35 | 32 | 30 | 22 | 12 | 14 | 21 | 47 | 68 | 366 |
| Change in Benefit Provisions | 75 | 0 | 0 | 0 | 88 | 0 | 19 | 0 | 0 | 37 | 3 | 1 | 223 |
| Bond Issue | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (41) | (440) | 0 | (481) |
| Total | \$537 | \$(25) | \$(36) | \$(68) | \$215 | \$(194) | \$(164) | \$72 | \$475 | \$1,048 | \$757 | \$1,157 | \$3,775 |

*Not calculated for this year.

**Reflects the impact of re-establishing the KP&F Supplemental Actuarial Liability at December 31, 2002. The additional unfunded actuarial liability as of December 31, 2000

for the State/School and Local groups not recognized in the prior valuation due to the phase-in of the change in actuarial procedures is included.

***Change in asset valuation method.

Unfunded actuarial liability 6/30/93: \$ 968 million Unfunded actuarial liability 12/31/04: \$4,743 million



A MILL MAN ALORAL PING

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM (STATE)

| 1. | . PARTICIPANT DATA | | PARTICIPANT DATA | | 12/31/2004 Valuation | | 12/31/2003 Valuation | % Chang | ge |
|----|---|----|------------------|----|-------------------------|-------|-------------------------|---------|----|
| | Number of: | | | | | | | | |
| | Active Members | | 24,592 | | 24,933 | (1.4) | % | | |
| | Retired Members and Beneficiaries | | 14,410 | | 14,137 | 1.9 | | | |
| | Inactive Members | - | 6,029 | _ | 5,913 | 2.0 | | | |
| | Total Members | = | 45,031 | _ | 44,983 | 0.1 | | | |
| | Projected Annual Salaries of Active Members | \$ | 851,655,056 | \$ | 833,252,904 | 2.2 | | | |
| | Annual Retirement Payments for Retired Members and Beneficiaries | \$ | 148,286,419 | \$ | 141,291,491 | 5.0 | | | |
| 2. | ASSETS AND LIABILITIES | | | | | | | | |
| | Total Actuarial Liability | \$ | 2,952,425,476 | \$ | 2,747,341,651 | 7.5 | | | |
| | Assets for Valuation Purposes | | 2,519,107,044 | | 2,520,572,847 | (0.1) | | | |
| | Unfunded Actuarial Liability | | 433,318,432 | | 226,768,804 | | | | |

3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL

| Normal Cost | 3.72% | 3.37% |
|--|--------------|--------------|
| Amortization of Unfunded Actuarial and Debt Service | <u>3.27%</u> | <u>1.84%</u> |
| Actuarial Contribution Rate | 6.99% | 5.21% ** |
| Statutory Employer Contribution Rate* | <u>6.37%</u> | <u>5.77%</u> |

* Statutory Employer Contribution Rate may not exceed last year's rate by more than rate increase limit of 0.60%. This rate does not include the contribution rate for the Death and Disability Program.

** The actuarial rate was recertified to 5.84% after the December 31, 2003 actuarial valuation was issued. The rate shown is the original rate.



KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM

| | | (SC | HOOL) | | | | |
|----|---|---------|---------------|-----|---------------|---------|----|
| | | | 12/31/2004 | | 12/31/2003 | | |
| | | | Valuation | | Valuation | % Chang | je |
| 1. | PARTICIPANT DATA | | | | | | |
| | Number of: | | | | | | |
| | Active Members | | 80,602 | | 80,169 | 0.5 | % |
| | Retired Members and Beneficiaries | | 31,378 | | 30,093 | 4.3 | |
| | Inactive Members | _ | 24,148 | | 24,999 | (3.4) | |
| | Total Members | = | 136,128 | · _ | 135,261 | 0.6 | |
| | Projected Annual Salaries of Active Members | \$ | 2,641,861,863 | \$ | 2,585,895,939 | 2.2 | |
| | Annual Retirement Payments for Retired Members and Beneficiaries | \$ | 358,909,034 | \$ | 332,917,524 | 7.8 | |
| 2. | ASSETS AND LIABILITIES | | | | | | |
| | Total Actuarial Liability | \$ | 8,470,506,029 | \$ | 7,794,261,207 | 8.7 | |
| | Assets for Valuation Purposes | | 5,319,627,299 | | 5,287,509,312 | 0.6 | |
| | Unfunded Actuarial Liability | | 3,150,878,730 | | 2,506,751,895 | | |
| 3. | EMPLOYER CONTRIBUTION RATES A | AS A PE | ERCENT OF PAY | ROL | L | | |

| Normal Cost | 4.24% | 3.95% |
|---|--------------|--------------|
| Amortization of Unfunded Actuarial and Debt Service | <u>7.23%</u> | <u>5.80%</u> |
| Actuarial Contribution Rate | 11.47% | 9.75% |
| Statutory Employer Contribution Rate* | <u>6.37%</u> | <u>5.77%</u> |

* Statutory Employer Contribution Rate may not exceed last year's rate by more than rate increase limit of 0.60%. This rate does not include the contribution rate for the Death and Disability Program.



KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM (STATE/SCHOOL)

| 1. | . PARTICIPANT DATA | | PARTICIPANT DATA | | 12/31/2004 Valuation | | 12/31/2003 Valuation | % Chang | je |
|----|---|----|------------------|----|-------------------------|-------|-------------------------|---------|----|
| | Number of: | | | | | | | | |
| | Active Members | | 105,194 | | 105,102 | 0.1 | % | | |
| | Retired Members and Beneficiaries | | 45,788 | | 44,230 | 3.5 | | | |
| | Inactive Members | - | 30,177 | _ | 30,912 | (2.4) | | | |
| | Total Members | = | 181,159 | _ | 180,244 | 0.5 | | | |
| | Projected Annual Salaries of Active Members | \$ | 3,493,516,919 | \$ | 3,419,148,843 | 2.2 | | | |
| | Annual Retirement Payments for Retired Members and Beneficiaries | \$ | 507,195,453 | \$ | 474,209,015 | 7.0 | | | |
| 2. | ASSETS AND LIABILITIES | | | | | | | | |
| | Total Actuarial Liability | \$ | 11,422,931,505 | \$ | 10,541,602,858 | 8.4 | | | |
| | Assets for Valuation Purposes | | 7,838,734,343 | | 7,808,082,159 | 0.4 | | | |
| | Unfunded Actuarial Liability | | 3,584,197,162 | | 2,733,520,699 | | | | |

3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL

| Normal Cost | 4.11% | 3.81% |
|---|--------------|--------------|
| Amortization of Unfunded Actuarial and Debt Service | <u>6.26%</u> | <u>4.83%</u> |
| Actuarial Contribution Rate | 10.37% | 8.64% ** |
| Statutory Employer Contribution Rate* | <u>6.37%</u> | <u>5.77%</u> |

* Statutory Employer Contribution Rate may not exceed last year's rate by more than rate increase limit of 0.60%. This rate does not include the contribution rate for the Death and Disability Program.

** The actuarial contribution rate for the State was recertified after the December 31, 2003 actuarial valuation was issued. The rate shown is the original rate.



KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM (LOCAL)

| 1. | PARTICIPANT DATA | | PARTICIPANT DATA | | 12/31/2004 Valuation | | 12/31/2003 Valuation | % Chang | je |
|----|---|----|------------------|----|-------------------------|-------|-------------------------|---------|----|
| | Number of: | | | | | | | | |
| | Active Members | | 35,585 | | 36,299 | (2.0) | % | | |
| | Retired Members and Beneficiaries | | 11,613 | | 11,279 | 3.0 | | | |
| | Inactive Members | - | 10,018 | _ | 9,301 | 7.7 | | | |
| | Total Members | = | 57,216 | = | 56,879 | 0.6 | | | |
| | Projected Annual Salaries of Active Members | \$ | 1,236,051,138 | \$ | 1,212,174,026 | 2.0 | | | |
| | Annual Retirement Payments for Retired Members and Beneficiaries | \$ | 88,302,227 | \$ | 83,190,648 | 6.1 | | | |
| 2. | ASSETS AND LIABILITIES | | | | | | | | |
| | Total Actuarial Liability | \$ | 2,522,397,478 | \$ | 2,234,229,454 | 12.9 | | | |
| | Assets for Valuation Purposes | | 1,698,668,607 | | 1,646,342,459 | 3.2 | | | |
| | Unfunded Actuarial Liability | | 823,728,871 | | 587,886,995 | | | | |

3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL

| Normal Cost | 3.68% | 3.36% |
|--|--------------|--------------|
| Amortization of Unfunded Actuarial and Supplemental Liability | <u>4.01%</u> | <u>2.88%</u> |
| Actuarial Contribution Rate | 7.69% | 6.24% |
| Statutory Employer Contribution Rate* | <u>4.31%</u> | <u>3.81%</u> |

* Statutory Employer Contribution Rate exceeds last year's rate by the statutory rate increase limit of 0.50%. This rate does not include the contribution rate for the Death and Disability Program.



KANSAS POLICE AND FIREMEN'S RETIREMENT SYSTEM

| 1. | PARTICIPANT DATA | | 12/31/2004 Valuation | | 12/31/2003 Valuation | % Chang | ge |
|----|---|--------|-------------------------|-----|-------------------------|---------|----|
| | Number of: | | | | | | |
| | Active Members | | 6,721 | | 6,494 | 3.5 | % |
| | Retired Members and Beneficiaries | | 3,558 | | 3,456 | 3.0 | |
| | Inactive Members | - | 1,056 | | 1,087 | (2.9) | |
| | Total Members | = | 11,335 | : = | 11,037 | 2.7 | |
| | Projected Annual Salaries of Active Members | \$ | 349,723,478 | \$ | 324,682,693 | 7.7 | |
| | Annual Retirement Payments for Retired Members and Beneficiaries | \$ | 77,962,447 | \$ | 73,469,109 | 6.1 | |
| 2. | ASSETS AND LIABILITIES | | | | | | |
| | Total Actuarial Liability | \$ | 1,657,628,308 | \$ | 1,562,157,258 | 6.1 | |
| | Assets for Valuation Purposes | | 1,344,909,124 | | 1,312,799,683 | 2.4 | |
| | Unfunded Actuarial Liability | | 312,719,184 | | 249,357,575 | | |
| 3. | EMPLOYER CONTRIBUTION RATES AS | S A PI | ERCENT OF PAY | ROL | L | | |
| | Normal Cost | | 7.98% | | 8.21% | | |

| Amortization of Unfunded Actuarial and Supplemental Liability | <u>5.34%</u> | <u>4.18%</u> |
|---|---------------|---------------|
| Actuarial Contribution Rate (Local Employers) | 13.32% | 12.39% |
| Statutory Employer Contribution Rate* | <u>13.32%</u> | <u>12.39%</u> |

* The Statutory Employer Contribution Rate is equal to the Actuarial Rate. This is referred to as the "Uniform" rate, and varies for State and Local employers. The total contribution is equal to the appropriate uniform rate plus the payment required to amortize any unfunded past service liability or 15% excess benefit liability, determined separately for each employer.



KANSAS RETIREMENT SYSTEM FOR JUDGES

| 1. | | | 12/31/2004 Valuation | | | % Chang | ge |
|----|---|----|-------------------------|------------|--------------|---------|----|
| | Number of: | | | | | | |
| | Active Members | | 251 | | 250 | 0.4 | % |
| | Retired Members and Beneficiaries | | | | 159 | 4.4 | |
| | Inactive Members | - | 18 | . <u>-</u> | 15 | 20.0 | |
| | Total Members | = | 435 | : <u>-</u> | 424 | 2.6 | |
| | Projected Annual Salaries of Active Members | \$ | 22,724,531 | \$ | 22,126,223 | 2.7 | |
| | Annual Retirement Payments for Retired Members and Beneficiaries | \$ | 5,215,006 | \$ | 4,843,692 | 7.7 | |
| 2. | ASSETS AND LIABILITIES | | | | | | |
| | Total Actuarial Liability | \$ | 111,135,185 | \$ | 101,556,700 | 9.4 | |
| | Assets for Valuation Purposes | | 89,114,503 | | 86,237,877 | 3.3 | |
| | Unfunded Actuarial Liability | | 22,020,682 | | 15,318,823 | | |
| 3. | EMPLOYER CONTRIBUTION RATES AS | AP | ERCENT OF PAY | RO | LL | | |
| | Normal Cost | | 13.84% | | 13.04% | | |
| | Amortization of Unfunded Actuarial and Supplemental Liability | | <u>8.54%</u> | | <u>6.07%</u> | | |
| | Actuarial Contribution Rate | | 22.38% | | 19.11% | | |

<u>22.38%</u>

<u>19.11%</u>

* Statutory Employer Contribution Rate is equal to the Actuarial Rate. This rate excludes the contribution for the Death and Disability Program.

Statutory Employer Contribution Rate*



ALL SYSTEMS COMBINED

| 1. | PARTICIPANT DATA | | 12/31/2004 Valuation | | 12/31/2003 Valuation | % Chang | ge |
|----|---|----|-------------------------|----|-------------------------|---------|----|
| | Number of: | | | | | | |
| | Active Members | | 147,751 | | 148,145 | (0.3) | % |
| | Retired Members and Beneficiaries | | 61,125 | | 59,124 | 3.4 | |
| | Inactive Members | - | 41,269 | - | 41,315 | (0.1) | |
| | Total Members | = | 250,145 | = | 248,584 | 0.6 | |
| | Projected Annual Salaries of Active Members | \$ | 5,102,016,066 | \$ | 4,978,131,785 | 2.5 | |
| | Annual Retirement Payments for Retired Members and Beneficiaries | \$ | 678,675,133 | \$ | 635,712,464 | 6.8 | |
| 2. | ASSETS AND LIABILITIES | | | | | | |
| | Total Actuarial Liability | \$ | 15,714,092,476 | \$ | 14,439,546,270 | 8.8 | |
| | Assets for Valuation Purposes | | 10,971,426,577 | | 10,853,462,178 | 1.1 | |
| | Unfunded Actuarial Liability | | 4,742,665,899 | | 3,586,084,091 | | |



SECTION 2

SCOPE OF THE REPORT

This report presents the actuarial valuation of the Kansas Public Employees Retirement System (KPERS) as of December 31, 2004. This valuation was prepared at the request of the System's Board of Trustees.

The reader is encouraged to review the actuarial certification letter, where the guidelines employed in the preparation of this report are outlined. Also included in this letter are comments 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 resulting 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.

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, 2004, as amended by changes enacted by the 2005 Legislature.
- 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

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, market values of assets provide a basis for measuring investment performance from time to time. At December 31, 2004 the market value of assets (excluding receivables) for the Retirement System was \$11.178 billion. Table 1 is a comparison, at market values, of System assets as of December 31, 2004, and December 31, 2003, in total and by investment category. Table 2 summarizes the change in the market value of assets from December 31, 2003 to December 31, 2004 by System.

Actuarial Value of Assets

Neither the market value of assets, representing a "cash-out" value of System assets, nor the book value 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. The asset smoothing method was implemented with the December 31, 2003 actuarial valuation.

Under the asset smoothing method, the difference between the actual return and the expected return (based on the actuarial assumed rate of return) on the market value of assets is calculated each year and recognized equally over a five year period.

Tables 3A through 3F and Table 4 show the development of the actuarial value of assets (AVA) as of December 31, 2004.



TABLE 1ANALYSIS OF NET ASSETS AT MARKET VALUE

| | December 31, 2004 | | | December 31, 2003 | | |
|---|--------------------------------|----------------------|---|--------------------------------|----------------------|---|
| | <u>Amount</u> (\$ Millions) | % of <u>Total</u> | | <u>Amount</u> (\$ Millions) | % of <u>Total</u> | |
| Cash & Equivalents | \$ 824.0 | 7.3 | % | \$ 488.8 | 5.0 | % |
| Alternative Investments | 522.0 | 4.7 | | 498.3 | 5.1 | |
| Real Estate | 813.0 | 7.2 | | 599.6 | 6.1 | |
| Fixed Income | 2,813.0 | 25.1 | | 2,794.7 | 28.2 | |
| Domestic Equity | 3,802.0 | 33.9 | | 3,448.4 | 35.0 | |
| International Equity | 2,443.0 | 21.8 | | 2,030.7 | 20.6 | |
| Subtotal | \$ 11,217 | 100.0 | % | \$ 9,861 | 100.0 | % |
| Administrative Reserves | (14) | | | (14) | | |
| Group Insurance and Optional Life Reserves | (25) | | | (50) | | |
| Net Assets | \$ 11,178 | | | \$ 9,797 | | |
| Receivables Adjusted Net Assets | \$ 0 11,178 | | | \$ 440 10,237 | | |

Allocation of Net Assets on December 31, 2004:

| State | \$ 2,554 |
|------------------|--------------|
| School | 5,428 |
| Local | 1,743 |
| KP&F | 1,363 |
| Judges | 90 |
| Total Net Assets | \$ 11,178 |



TABLE 2SUMMARY OF CHANGES IN KPERS ASSETSDURING PERIOD ENDED DECEMBER 31, 2004

(Market Value)

| | | State | | School | | Local | Total KPERS |
|---|----|---------------|----|---------------|----|---------------|---------------------|
| Market Value of Assets as of January 1, 2004* | \$ | 2,333,521,278 | \$ | 4,587,893,405 | \$ | 1,561,501,396 | \$ 8,482,916,079 |
| Receivables | | 36,515,432 | | 403,649,568 | | 0 | 440,165,000 |
| Adjusted Market Value of Assets | | 2,370,036,710 | | 4,991,542,973 | | 1,561,501,396 | 8,923,081,079 |
| Contributions: | | | | | | | |
| Employee | | 33,643,782 | | 102,236,331 | | 48,530,832 | 184,410,945 |
| Employee service purchases | | 3,614,126 | | 8,867,365 | | 3,671,909 | 16,153,400 |
| Employer | | 39,273,977 | | 120,971,196 | | 39,659,411 | 199,904,584 |
| Miscellaneous | | 102,451 | | 61,958 | | 0 | 164,409 |
| Total Contributions | | 76,634,336 | | 232,136,850 | | 91,862,152 | 400,633,338 |
| Total Investment Income | | 269,196,829 | | 605,888,683 | | 196,654,133 | 1,071,739,645 |
| Total Income | | 345,831,165 | | 838,025,533 | | 288,516,285 | 1,472,372,983 |
| Less Benefits: | | | | | | | |
| Annuity Retirement Benefits | | (141,981,780) | | (342,107,480) | | (84,604,327) | (568,693,587) |
| Partial Lump Sum Benefits | | (8,072,560) | | (33,327,663) | | (6,756,239) | (48,156,462) |
| Retirant Dividends | | (1,380,258) | | (2,749,154) | | (705,764) | (4,835,176) |
| Withdrawals | | (6,920,774) | | (17,913,327) | | (11,180,055) | (36,014,156) |
| Death Benefits | _ | (3,901,535) | _ | (5,896,734) | _ | (3,483,686) | (13,281,955) |
| Total Benefits | | (162,256,907) | | (401,994,358) | | (106,730,071) | (670,981,336) |
| Net Increase in Assets | | 183,574,258 | | 436,031,175 | | 181,786,214 | 801,391,647 |
| Market Value of Assets as of December 31, 2004* | \$ | 2,553,610,968 | \$ | 5,427,574,148 | \$ | 1,743,287,610 | \$ 9,724,472,726 |

* Note: Assets exclude insurance and administrative reserves.



TABLE 2 (cont.)SUMMARY OF CHANGES IN KPERS ASSETSDURING PERIOD ENDED DECEMBER 31, 2004

(Market Value)

| | | KPERS | KP&F | | Judges | | Total |
|---|----|---------------|---------------------|----|-------------|----|----------------|
| Market Value of Assets as of January 1, 2004* | \$ | 8,482,916,079 | \$ 1,232,406,980 | \$ | 81,081,078 | \$ | 9,796,404,137 |
| Receivables | | 440,165,000 | 0 | | 0 | | 440,165,000 |
| Adjusted Market Value of Assets | | 8,923,081,079 | 1,232,406,980 | | 81,081,078 | | 10,236,569,137 |
| Contributions: | | | | | | | |
| Employee | | 184,410,945 | 23,327,921 | | 1,105,873 | | 208,844,739 |
| Employee service purchases | | 16,153,400 | 555,460 | | 139,879 | | 16,848,739 |
| Employer | | 199,904,584 | 38,197,556 | | 3,845,027 | | 241,947,167 |
| Miscellaneous | | 164,409 | 13,206,933 | ** | 0 | | 13,371,342 |
| Total Contributions | _ | 400,633,338 | 75,287,870 | | 5,090,779 | | 481,011,987 |
| Total Investment Income | | 1,071,739,645 | 143,052,704 | | 9,586,295 | _ | 1,224,378,644 |
| Total Income | | 1,472,372,983 | 218,340,574 | | 14,677,074 | | 1,705,390,631 |
| Less Benefits: | | | | | | | |
| Annuity Retirement Benefits | | (568,693,587) | (75,108,666) | | (4,964,115) | | (648,766,368) |
| Partial Lump Sum Benefits | | (48,156,462) | (7,329,161) | | - | | (55,485,623) |
| Retirant Dividends | | (4,835,176) | (1,290,815) | | (44,599) | | (6,170,590) |
| Withdrawals | | (36,014,156) | (3,351,455) | | (262,379) | | (39,627,990) |
| Death Benefits | | (13,281,955) | (602,453) | | (4,000) | | (13,888,408) |
| Total Benefits | _ | (670,981,336) | (87,682,550) | | (5,275,093) | | (763,938,979) |
| Net Increase in Assets | | 801,391,647 | 130,658,024 | | 9,401,981 | | 941,451,652 |
| Market Value of Assets as of December 31, 2004* | \$ | 9,724,472,726 | \$ 1,363,065,004 | \$ | 90,483,059 | \$ | 11,178,020,789 |

* Note: Assets exclude insurance and administrative reserves.

** Includes payoff of remaining Unfunded Actuarial Liability by City of Topeka.



TABLE 3A CALCULATION OF EXCESS (SHORTFALL) INVESTMENT INCOME FOR ACTUARIAL VALUE OF NET ASSETS State*

| | | Plan Year End | | | | |
|----|---|-----------------|-----------------|-----------------|-----------------|--|
| | | 12/31/2001** | 12/31/2002** | 12/31/2003** | 12/31/2004 | |
| 1. | Market Value of Assets, beginning of year | \$2,381,631,948 | \$2,200,396,822 | \$1,983,632,519 | \$2,370,036,710 | |
| 2. | Contributions during year | 94,862,341 | 95,761,919 | 100,195,791 | 76,634,336 | |
| 3. | Benefits during year | (158,748,709) | (168,745,496) | (174,607,196) | (162,256,907) | |
| 4. | Expected net investment income | 188,024,263 | 173,168,565 | 155,771,406 | 186,243,922 | |
| 5. | Transfers and receivables | 0 | 12,803,341 | 36,515,432 | 0 | |
| 6. | Expected Value of Assets, end of year | \$2,505,769,843 | \$2,313,385,151 | \$2,101,507,952 | \$2,470,658,061 | |
| 7. | Market Value of Assets, end of year | 2,200,396,822 | 1,983,632,519 | 2,370,036,710 | 2,553,610,968 | |
| 8. | Excess (shortfall) of net investment income | (\$305,373,021) | (\$329,752,632) | \$268,528,758 | \$82,952,907 | |

* Includes asset values for the TIAA group

** Prior to 12/31/03, assets were combined for state and school. Numbers prior to this are based on the combined amounts, split in proportion to the 12/31/03 allocation.



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TABLE 3B CALCULATION OF EXCESS (SHORTFALL) INVESTMENT INCOME FOR ACTUARIAL VALUE OF NET ASSETS School

| | | Plan Year End | | | | |
|----|---|-----------------|-----------------|-----------------|-----------------|--|
| | | 12/31/2001* | 12/31/2002* | 12/31/2003* | 12/31/2004 | |
| 1. | Market Value of Assets, beginning of year | \$4,682,482,912 | \$4,326,159,852 | \$3,899,983,529 | \$4,991,542,973 | |
| 2. | Contributions during year | 186,507,110 | 188,275,753 | 196,993,109 | 232,136,850 | |
| 3. | Benefits during year | (312,112,925) | (331,767,426) | (343,292,008) | (401,994,358) | |
| 4. | Expected net investment income | 369,671,056 | 340,463,540 | 306,259,306 | 392,659,845 | |
| 5. | Transfers and receivables | 0 | 25,172,414 | 403,649,568 | 0 | |
| 6. | Expected Value of Assets, end of year | \$4,926,548,153 | \$4,548,304,133 | \$4,463,593,504 | \$5,214,345,310 | |
| 7. | Market Value of Assets, end of year | 4,326,159,852 | 3,899,983,529 | 4,991,542,973 | 5,427,574,148 | |
| 8. | Excess (shortfall) of net investment income | (\$600,388,301) | (\$648,320,604) | \$527,949,469 | \$213,228,838 | |

* Prior to 12/31/03, assets were combined for state and school. Numbers prior to this are based on the combined amounts, split in proportion to the 12/31/03 allocation.



TABLE 3C CALCULATION OF EXCESS (SHORTFALL) INVESTMENT INCOME FOR ACTUARIAL VALUE OF NET ASSETS State/School*

| | | Plan Year End | | | | |
|----|---|-----------------|-----------------|-----------------|-----------------|--|
| | | 12/31/2001 | 12/31/2002 | 12/31/2003 | 12/31/2004 | |
| 1. | Market Value of Assets, beginning of year | \$7,064,114,860 | \$6,526,556,674 | \$5,883,616,048 | \$7,361,579,683 | |
| 2. | Contributions during year | 281,369,451 | 284,037,672 | 297,188,900 | 308,771,186 | |
| 3. | Benefits during year | (470,861,634) | (500,512,922) | (517,899,204) | (564,251,265) | |
| 4. | Expected net investment income | 557,695,319 | 513,632,105 | 462,030,712 | 578,903,767 | |
| 5. | Transfers and receivables | 0 | 37,975,755 | 440,165,000 | 0 | |
| 6. | Expected Value of Assets, end of year | \$7,432,317,996 | \$6,861,689,284 | \$6,565,101,456 | \$7,685,003,371 | |
| 7. | Market Value of Assets, end of year | 6,526,556,674 | 5,883,616,048 | 7,361,579,683 | 7,981,185,116 | |
| 8. | Excess (shortfall) of net investment income | (\$905,761,322) | (\$978,073,236) | \$796,478,227 | \$296,181,745 | |
| | | | | | | |

* Includes asset values for the TIAA group



TABLE 3D CALCULATION OF EXCESS (SHORTFALL) INVESTMENT INCOME FOR ACTUARIAL VALUE OF NET ASSETS Local

| | | Plan Year End | | | | |
|----|---|-----------------|-----------------|-----------------|-----------------|--|
| | | 12/31/2001 | 12/31/2002 | 12/31/2003 | 12/31/2004 | |
| 1. | Market Value of Assets, beginning of year | \$1,498,000,095 | \$1,395,342,080 | \$1,297,926,648 | \$1,561,501,396 | |
| 2. | Contributions during year | 71,859,932 | 79,874,944 | 86,210,953 | 91,862,152 | |
| 3. | Benefits during year | (100,750,022) | (91,964,349) | (99,630,311) | (106,730,071) | |
| 4. | Expected net investment income | 118,706,635 | 111,153,093 | 103,307,684 | 124,336,836 | |
| 5. | Transfers and receivables | 0 | 900,320 | 0 | 0 | |
| 6. | Expected Value of Assets, end of year | \$1,587,816,640 | \$1,495,306,088 | \$1,387,814,974 | \$1,670,970,313 | |
| 7. | Market Value of Assets, end of year | 1,395,342,080 | 1,297,926,648 | 1,561,501,396 | 1,743,287,610 | |
| 8. | Excess (shortfall) of net investment income | (\$192,474,560) | (\$197,379,440) | \$173,686,422 | \$72,317,297 | |



TABLE 3E CALCULATION OF EXCESS (SHORTFALL) INVESTMENT INCOME FOR ACTUARIAL VALUE OF NET ASSETS KP&F

| | | Plan Year End | | | | |
|----|---|-----------------|-----------------|-----------------|-----------------|--|
| | | 12/31/2001 | 12/31/2002 | 12/31/2003 | 12/31/2004 | |
| 1. | Market Value of Assets, beginning of year | \$1,232,301,955 | \$1,149,732,145 | \$1,034,446,737 | \$1,232,406,980 | |
| 2. | Contributions during year | 48,285,229 | 50,858,313 | 51,088,147 | 75,287,870 | |
| 3. | Benefits during year | (70,152,742) | (76,751,521) | (79,934,661) | (87,682,550) | |
| 4. | Expected net investment income | 97,726,283 | 90,962,769 | 81,624,076 | 98,106,309 | |
| 5. | Transfers and receivables | 0 | 2,707,853 | 0 | 0 | |
| 6. | Expected Value of Assets, end of year | \$1,308,160,725 | \$1,217,509,559 | \$1,087,224,299 | \$1,318,118,609 | |
| 7. | Market Value of Assets, end of year | 1,149,732,145 | 1,034,446,737 | 1,232,406,980 | 1,363,065,004 | |
| 8. | Excess (shortfall) of net investment income | (\$158,428,580) | (\$183,062,822) | \$145,182,681 | \$44,946,395 | |



TABLE 3F CALCULATION OF EXCESS (SHORTFALL) INVESTMENT INCOME FOR ACTUARIAL VALUE OF NET ASSETS

Judges

| | | Plan Year End | | | | |
|----|---|----------------|----------------|--------------|--------------|--|
| | | 12/31/2001 | 12/31/2002 | 12/31/2003 | 12/31/2004 | |
| 1. | Market Value of Assets, beginning of year | \$79,533,257 | \$74,599,904 | \$67,137,447 | \$81,081,078 | |
| 2. | Contributions during year | 3,957,838 | 3,716,116 | 4,123,659 | 5,090,779 | |
| 3. | Benefits during year | (4,977,864) | (5,194,517) | (5,106,275) | (5,275,093) | |
| 4. | Expected net investment income | 6,322,644 | 5,909,994 | 5,332,447 | 6,479,256 | |
| 5. | Transfers and receivables | 0 | 171,353 | 0 | 0 | |
| 6. | Expected Value of Assets, end of year | \$84,835,875 | \$79,202,850 | \$71,487,278 | \$87,376,020 | |
| 7. | Market Value of Assets, end of year | 74,599,904 | 67,137,447 | 81,081,078 | 90,483,059 | |
| 8. | Excess (shortfall) of net investment income | (\$10,235,971) | (\$12,065,403) | \$9,593,800 | \$3,107,039 | |



TABLE 4DEVELOPMENT OF ACTUARIAL VALUE OF NET ASSETS

| | | State/School | | State | | School | | Local | | Total KPERS |
|----|---|---------------------|----|---------------|----|---------------|----|---------------|----|-----------------|
| 1. | Excess (shortfall) of investment income | | | | | | | | | |
| | a. Year ending 12/31/04 | \$ 296,181,745 | \$ | 82,952,907 | \$ | 213,228,838 | \$ | 72,317,297 | \$ | 368,499,042 |
| | b. Year ending 12/31/03 | 796,478,227 | | 268,528,758 | | 527,949,469 | | 173,686,422 | | 970,164,649 |
| | c. Year ending 12/31/02 | (978,073,236) | | (329,752,632) | | (648,320,604) | | (197,379,440) | | (1,175,452,676) |
| | d. Year ending 12/31/01 | (905,761,322) | | (305,373,021) | | (600,388,301) | | (192,474,560) | | (1,098,235,882) |
| | e. Total | \$ (791,174,586) | \$ | (283,643,988) | \$ | (507,530,598) | \$ | (143,850,281) | \$ | (935,024,867) |
| 2. | Deferral of excess (shortfall) of investment income | | | | | | | | | |
| | a. Year ending 12/31/04 (80%) | 236,945,396 | | 66,362,326 | | 170,583,070 | | 57,853,838 | | 294,799,234 |
| | b. Year ending 12/31/03 (60%) | 477,886,936 | | 161,117,255 | | 316,769,681 | | 104,211,853 | | 582,098,789 |
| | c. Year ending 12/31/02 (40%) | (391,229,295) | | (131,901,053) | | (259,328,242) | | (78,951,776) | | (470,181,071) |
| | d. Year ending 12/31/01 (20%) | (181,152,264) | | (61,074,604) | | (120,077,660) | | (38,494,912) | | (219,647,176) |
| | e. Total | \$ 142,450,773 | \$ | 34,503,924 | \$ | 107,946,849 | \$ | 44,619,003 | \$ | 187,069,776 |
| 3. | Market Value of Assets, end of year | \$ 7,981,185,116 | \$ | 2,553,610,968 | \$ | 5,427,574,148 | \$ | 1,743,287,610 | \$ | 9,724,472,726 |
| 4. | Actuarial Value of Assets, end of year | \$ 7,838,734,343 | \$ | 2,519,107,044 | \$ | 5,319,627,299 | \$ | 1,698,668,607 | \$ | 9,537,402,950 |
| 5. | Actuarial Value divided by market value | 98.2% | | 98.6% | | 98.0% | | 97.4% | | 98.1% |



TABLE 4 (cont.)DEVELOPMENT OF ACTUARIAL VALUE OF NET ASSETS

| | | | Total KPERS | KP&F | Judges | | Total |
|----|---|----|-----------------|---------------------|-------------------|----|-----------------|
| 1. | Excess (shortfall) of investment income | | | | | | |
| | a. Year ending 12/31/04 | \$ | 368,499,042 | \$ 44,946,395 | \$ 3,107,039 | \$ | 416,552,476 |
| | b. Year ending 12/31/03 | | 970,164,649 | 145,182,681 | 9,593,800 | | 1,124,941,130 |
| | c. Year ending 12/31/02 | | (1,175,452,676) | (183,062,822) | (12,065,403) | | (1,370,580,901) |
| | d. Year ending 12/31/01 | _ | (1,098,235,882) | (158,428,580) | (10,235,971) | | (1,266,900,433) |
| | e. Total | \$ | (935,024,867) | \$ (151,362,326) | \$ (9,600,535) | \$ | (1,095,987,728) |
| 2. | Deferral of excess (shortfall) of investment income | | | | | | |
| | a. Year ending 12/31/04 (80%) | | 294,799,234 | 35,957,116 | 2,485,631 | | 333,241,981 |
| | b. Year ending 12/31/03 (60%) | | 582,098,789 | 87,109,609 | 5,756,280 | | 674,964,678 |
| | c. Year ending 12/31/02 (40%) | | (470,181,071) | (73,225,129) | (4,826,161) | | (548,232,361) |
| | d. Year ending 12/31/01 (20%) | | (219,647,176) | (31,685,716) | (2,047,194) | _ | (253,380,086) |
| | e. Total | \$ | 187,069,776 | \$ 18,155,880 | \$ 1,368,556 | \$ | 206,594,212 |
| 3. | Market Value of Assets, end of year | \$ | 9,724,472,726 | \$ 1,363,065,004 | \$ 90,483,059 | \$ | 11,178,020,789 |
| 4. | Actuarial Value of Assets, end of year | \$ | 9,537,402,950 | \$ 1,344,909,124 | \$ 89,114,503 | \$ | 10,971,426,577 |
| 5. | Actuarial Value divided by market value | | 98.1% | 98.7% | 98.5% | | 98.2% |



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, 2004. 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 analysis is provided for each group.

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 measures 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, if an optional benefit is chosen, for the lives of the surviving beneficiaries.

The actuarial assumptions used to determine liabilities are based on the results of the 2004 Triennial Experience Study. This set of assumptions, as shown in Appendix C, was adopted by the Board in September 2004 and was first used for the December 31, 2004 valuation.

The liabilities reflect the benefit structure in place as of December 31, 2004 plus the provisions of 2005 legislation passed in May 2005 that provided earlier eligibility for pre-retirement death benefits payable to spouses.

Actuarial Liabilities

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 6 contains the calculation of actuarial liabilities for all groups.



TABLE 5 KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM PRESENT VALUE OF FUTURE BENEFITS (PVFB) AS OF DECEMBER 31, 2004

| | | State | | School | | Local | Total KPERS |
|--|----|---|----|--|------------|--|--|
| 1. Active employees | | | | | | | |
| a. Retirement Benefit b. Pre-Retirement Death Benefit c. Withdrawal Benefit d. Disability Benefit e. Total | \$ | 1,765,921,696 33,820,899 87,817,108 111,579,749 1,999,139,452 | \$ | 5,999,226,667 70,323,548 282,074,121 187,458,670 6,539,083,006 | \$ | 1,984,466,790 40,972,102 189,414,142 103,506,989 2,318,360,023 | \$ 9,749,615,153 145,116,549 559,305,371 402,545,408 10,856,582,481 |
| 2. Inactive Vested Members | | 112,798,998 | | 184,419,652 | | 106,578,970 | 403,797,620 |
| 3. Inactive Nonvested Members | | 7,860,414 | | 34,142,590 | | 16,977,114 | 58,980,118 |
| 4. Deferred Disabled Members | | 72,720,993 | | 91,457,670 | | 46,696,608 | 210,875,271 |
| 5. Retirees | | 1,153,025,269 | | 3,217,435,059 | | 695,900,390 | 5,066,360,718 |
| 6. Beneficiaries | | 75,691,033 | | 91,768,500 | | 52,957,964 | 220,417,497 |
| 7. Unclaimed Account Reserve | _ | 668,200 | - | 1,331,800 | . . | 500,000 | 2,500,000 |
| 8. Total PVFB | \$ | 3,421,904,359 | \$ | 10,159,638,277 | \$ | 3,237,971,069 | \$ 16,819,513,705 |



TABLE 5 (cont.) KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM PRESENT VALUE OF FUTURE BENEFITS (PVFB) AS OF DECEMBER 31, 2004

| | KP&F | | Judges |
|--|---|----|--|
| 1. Active employees | | | |
| a. Retirement Benefit b. Pre-Retirement Death Benefit c. Withdrawal Benefit d. Disability Benefit e. Total | \$ 1,093,300,304 21,221,900 39,139,786 164,346,507 1,318,008,497 | \$ | 96,375,697 1,415,178 40,556 0 97,831,431 |
| 2. Inactive Vested Members | 28,998,351 | | 1,891,678 |
| 3. Inactive Nonvested Members | 10,382,053 | | 109,124 |
| 4. Deferred Disabled Members | 103,211,648 | | 285,172 |
| 5. Retirees | 588,894,261 | | 36,920,892 |
| 6. Beneficiaries | 74,655,835 | - | 7,620,328 |
| 7. Total PVFB | \$ 2,124,150,645 | \$ | 144,658,625 |



TABLE 6 KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM ACTUARIAL LIABILITIES AS OF DECEMBER 31, 2004

| | | State | School | Local | Total KPERS |
|--|-----|---|---|---|--|
| 1. Present Value of Future Benefits | \$ | 3,421,904,359 | \$ 10,159,638,277 | \$ 3,237,971,069 | \$ 16,819,513,705 |
| 2. Present Value of Future Normal Costs for Active Members | | | | | |
| a. Retirement Benefit b. Pre-Retirement Death Benefit c. Withdrawal Benefit d. Disability Benefit e. Total | \$ | 323,150,819 8,659,225 98,254,041 39,414,798 469,478,883 | \$ 1,306,711,635 21,026,165 301,287,646 60,106,802 1,689,132,248 | \$ 496,743,435 13,031,266 167,876,368 37,922,522 715,573,591 | \$ 2,126,605,889 42,716,656 567,418,055 137,444,122 2,874,184,722 |
| 3. Total Actuarial Liability (1) - (2e) | \$_ | 2,952,425,476 | \$ 8,470,506,029 | \$ 2,522,397,478 | \$ 13,945,328,983 |



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TABLE 6 (cont.) KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM ACTUARIAL LIABILITIES AS OF DECEMBER 31, 2004

| | | KP&F | Judges |
|--|---------|--|--|
| 1. Present Value of Future Benefits | \$ | 2,124,150,645 | \$ 144,658,625 |
| 2. Present Value of Future Normal Costs for Active Members | | | |
| a. Retirement Benefit b. Pre-Retirement Death Benefit c. Withdrawal Benefit d. Disability Benefit e. Total | \$ _ | 318,231,553 13,179,141 50,052,816 85,058,827 466,522,337 | \$ 32,824,623 644,514 54,303 0 33,523,440 |
| 3. Total Actuarial Liability (1) - (2e) | \$_ | 1,657,628,308 | \$ 111,135,185 |



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 4 and 6 indicates that current assets fall short of meeting the present value of future benefits (total liability). This is expected in all but a fully closed down 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 and (2) the payment on the unfunded actuarial liability.

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 and/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.

Description of Rate Components

Commencing with the December 31, 2003 actuarial valuation, the actuarial cost method for all three systems was changed to the traditional Entry Age Normal (EAN) – level percent of pay cost method. Under the EAN cost method, the actuarial present value of each member's projected benefits allocates on a level basis over the member's compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial liability. The unfunded actuarial liability 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.

The contribution rates based on this December 31, 2004 actuarial valuation will be used to determine employer contribution rates to the Kansas Public Employees Retirement System for fiscal years beginning in 2007. 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.

KPERS

The law provides for the calculation of separate employer contribution rates for three groups: State, School and Local (for all other covered employers).

Legislation provides that the employer rates of contribution for the State and School recommended by the Board of Trustees for all groups may not increase more than 0.40% in FY2006, 0.50% in FY2007 and 0.60% in FY2008 and later. Contribution rates for the Local group cannot increase more than 0.40% in 2006, 0.50% in 2007 and 0.60% in 2008. Such limits on the increase in the statutory contribution rate do not apply to the increase in the employer



contribution rate for benefit enhancements. Although not shown in these rates, the total contribution rates for KPERS employers include the statutory employer contribution to the KPERS Group Life Insurance.

There are several components of the unfunded actuarial liability which are amortized over different periods. The increase in the unfunded actuarial liability resulting from the 1998 COLA is amortized over 15 years. The increase in the unfunded actuarial liability for Local employers resulting from 2003 legislation which made the 13th check for pre-July 2, 1987 retirees a permanent benefit is funded over a 10 year period beginning in 2005. The remainder of the unfunded actuarial liability is amortized over a period originally set at 40 years beginning July 1, 1993. At the December 31, 2004 valuation date, twenty-eight (28) years remain in that period.

The UAL is amortized as a level percentage of payroll. The payroll growth assumption is 4% so the annual amortization payments will increase 4% each year. As a result, if total payroll grows 4% per year, as assumed, the amortization payment will remain level as a percentage of total current payroll.

The actuarial contribution rate for KPERS is comprised of the normal cost rate and a contribution toward the unfunded actuarial liability. The State and School contribution rate includes an additional contribution necessary to pay the debt service payment on the bonds issued by the State in 2003 to finance the increase in liability from making the 13th check permanent.

Local employers who affiliate with KPERS for prior service on or after January 1, 1999 pay an additional employer contribution to finance their unfunded actuarial liability on their affiliation date.

KP&F

The actuarially determined contribution requirements for employers in KP&F are comprised of:

- (a) a "uniform" rate, determined separately for State and Local employers, which includes the normal cost and a UAL payment for the entire group, plus
- (b) any payment required to amortize the unfunded past service liability or any 15% excess benefit liability, which is determined separately for each participating employer.

For employers who enter KP&F for future service only, the total cost is the uniform contribution rate.

There are several components of the unfunded actuarial liability, which are amortized over different periods. The increase in the unfunded actuarial liability resulting from the 1998 COLA is amortized over 15 years. The increase in the unfunded actuarial liability for Local employers resulting from 2003 legislation which made the 13th check for pre-July 2, 1987 retirees a permanent benefit is funded over a 10 year period beginning in 2005. The remainder of the unfunded actuarial liability is amortized over a period originally set at 40 years beginning July 1, 1993. At the December 31, 2004 valuation date, twenty-eight (28) years remain in that period.

The UAL is amortized as a level percentage of payroll. The payroll growth assumption is 4% so the annual amortization payments will increase 4% each year. As a result, if total payroll grows 4% per year, as assumed, the amortization payment will remain level as a percentage of total current payroll.



Judges

The actuarial contribution rate for the Judges is comprised of the normal cost rate and a contribution toward the unfunded actuarial liability. The UAL is amortized over a 40 year period established in 1993 with payments determined as a level dollar amount. As of this valuation date, twenty-eight (28) years remain. The contribution rate includes an additional contribution necessary to pay the debt service payment on the bonds issued by the State in 2003 to finance the increase in liability from making the 13th check permanent.

Contribution Rate Summary

The normal cost rates for each System are developed in Table 7. Table 8 develops the actuarial contribution rate for the unfunded actuarial liability. Bonds were issued in 2003 by the State to finance the increase in the actuarial liability due to legislation making the 13th check for pre-July 2, 1987 retirees a permanent benefit. The debt service payment on the bonds is to be paid by an additional employer contribution to the System, effective July 1, 2004. The development of this debt service contribution rate for FY2008 is shown in Table 9. The total actuarial contribution rates determined as of December 31, 2004, are presented in Table 10. The contribution rates for local employers who affiliated with KPERS for prior service and are amortizing the payment of that liability over a period of years are shown in Table 11. Table 12 shows the KP&F individual employer contribution rates for fiscal years beginning in 2006 and 2007 while Table 13 shows the calculation of the additional contribution rate due to amortization of prior service UAL or excess benefit liability for fiscal years beginning in 2007.

The rates shown in this report, which are based on the actuarial assumptions and cost methods described in Appendix C, are applicable for determining employer contribution rates for fiscal years commencing in 2007.



TABLE 7 KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM NORMAL COST RATE AS OF DECEMBER 31, 2004

| | | State | | School | State/School | | Local |
|--|---------|--|-----|--|---|-----|--|
| 1. Normal Cost at Beginning of Year | | | | | | | |
| a. Retirement Benefit b. Pre-Retirement Death Benefit c. Withdrawal Benefit d. Disability Benefit e. Total | \$ _ | 44,272,401 1,197,624 12,438,139 5,379,474 63,287,638 | \$ | 163,278,880 2,733,861 35,625,351 7,796,121 209,434,213 | \$ 207,551,281 3,931,485 48,063,490 13,175,595 272,721,851 | \$ | 64,737,713 1,697,849 19,866,693 5,032,690 91,334,945 |
| 2. Estimated Covered Payroll for 2005 | \$ | 851,655,056 | \$ | 2,641,861,863 | \$ 3,493,516,919 | \$ | 1,236,051,138 |
| 3. Normal Cost Rate [(1e) / (2)] *1.08 ^{.5} | = | 7.72% | : = | 8.24% | 8.11% | . = | 7.68% |



TABLE 7 (cont.)KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMNORMAL COST RATEAS OF DECEMBER 31, 2004

| | | KP&F | | Judges |
|--|----|---|------------|--|
| 1. Normal Cost at Beginning of Year | | | | |
| a. Retirement Benefit b. Pre-Retirement Death Benefit c. Withdrawal Benefit d. Disability Benefit e. Total | \$ | 33,211,598 1,451,373 5,166,884 9,045,791 48,875,646 | \$ | 4,008,511 75,547 7,770 0 4,091,828 |
| 2. Estimated Covered Payroll for 2005 | \$ | 349,723,478 | \$ | 22,724,531 |
| 3. Normal Cost Rate [(1e) / (2)] *1.08 ^{.5} | _ | 14.52% | : <u>-</u> | 18.71% |



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TABLE 8 KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM UNFUNDED ACTUARIAL LIABILITY CONTRIBUTION RATES AS OF DECEMBER 31, 2004

| | | State | | School | | Local | KPF | | | Judges |
|---|----|---------------|----|---------------|-----|---------------|---------------------|----|----|-------------|
| 1. Actuarial Liability | \$ | 2,952,425,476 | \$ | 8,470,506,029 | \$ | 2,522,397,478 | \$ 1,657,628,308 | | \$ | 111,135,185 |
| 2. Actuarial Value of Assets | | 2,519,107,044 | - | 5,319,627,299 | · - | 1,698,668,607 | 1,344,909,124 | | - | 89,114,503 |
| 3. Unfunded Actuarial Liability (UAL) | | 433,318,432 | | 3,150,878,730 | | 823,728,871 | 312,719,184 | | | 22,020,682 |
| a. UAL for 1998 COLA | | 14,590,496 | | 35,721,560 | | 10,448,192 | 9,156,860 | | | 0 |
| b. UAL for 13th Check (2003) | | 0 | | 0 | | 3,663,487 | 6,861,100 | | | 0 |
| c. Prior service and other local employer UAL | | 0 | | 0 | | 5,542,463 | 24,719,851 | | | 0 |
| d. Remaining UAL | | 418,727,936 | | 3,115,157,170 | | 804,074,730 | 271,981,373 | | | 22,020,682 |
| 4. Payment to Amortize UAL (assumed mid-year) | | | | | | | | | | |
| a. UAL for 1998 COLA | | 2,154,943 | | 5,275,897 | | 1,543,146 | 1,313,460 | ** | | 0 |
| b. UAL for 13th Check (2003) | | 0 | | 0 | | 541,078 | 1,013,355 | ** | | 0 |
| c. Remaining UAL | | 24,703,586 | | 183,784,143 | | 47,437,794 | 14,276,502 | ** | | 1,917,406 |
| d. Total | _ | 26,858,529 | - | 189,060,040 | • - | 49,522,018 | 16,603,317 | ** | - | 1,917,406 |
| 5. Total Estimated Payroll for 2005 | \$ | 851,655,056 | \$ | 2,641,861,863 | \$ | 1,236,051,138 | \$ 311,034,911 | ** | \$ | 22,724,531 |
| 6. Amortization Payment as a Percent of Payroll | | 3.15% | | 7.16% | | 4.01% | 5.34% | ** | | 8.44% |

* These obligations are paid directly by the employer and do not enter into the overall amortization rates.

**Only includes local governments. State agencies have a different uniform rate.



TABLE 9 DEVELOPMENT OF CONTRIBUTION RATES FOR DEBT SERVICE PAYMENT ON BONDS

The 2003 Legislature made the retirant dividend (13th check) for pre-July 2, 1987 retirees a permanent benefit. To offset the estimated cost of the benefit enhancement the State issued bonds in the late summer of 2003. The debt service payment on the bonds will come from increased contribution rates for the KPERS State and School groups, the State KP&F group and the Judges.

| Original Rand Jacua Bragada | State \$ 7,793,450 | School | KPF (state) \$ 1,867,119 | Judges | Total \$ 24,900,000 |
|---------------------------------|-----------------------|---------------|-----------------------------|------------|------------------------|
| Original Bond Issue Proceeds | \$ 7,793,450 | \$ 15,068,078 | \$ 1,867,119 | \$ 171,353 | \$ 24,900,000 |
| Scheduled Payments | | | | | |
| FYE 2006 | 1,005,228 | 1,943,535 | 240,828 | 22,102 | 3,211,693 |
| FYE 2007 | 1,005,257 | 1,943,594 | 240,835 | 22,102 | 3,211,788 |
| FYE 2008 | 1,006,030 | 1,945,088 | 241,020 | 22,119 | 3,214,257 |
| FYE 2009 | 1,005,007 | 1,943,109 | 240,775 | 22,097 | 3,210,988 |
| FYE 2010 | 1,004,474 | 1,942,079 | 240,647 | 22,085 | 3,209,285 |
| FYE 2011 | 1,005,952 | 1,944,937 | 241,001 | 22,118 | 3,214,008 |
| FYE 2012 | 1,004,808 | 1,942,725 | 240,727 | 22,093 | 3,210,353 |
| FYE 2013 | 1,004,464 | 1,942,060 | 240,645 | 22,085 | 3,209,254 |
| FYE 2014 | 1,005,179 | 1,943,441 | 240,816 | 22,101 | 3,211,537 |
| Projected Payroll for FYE 2008* | 870,888,974 | 2,701,526,108 | 39,562,316 | 23,237,746 | |
| Rate of Pay Required | 0.12% | 0.07% | 0.63% | 0.10% | |

* Assumes 1.5% annual payroll growth



TABLE 10 KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM **ACTUARIAL EMPLOYER CONTRIBUTION RATES FISCAL YEAR COMMENCING IN 2007**

| | Total Normal Cost | Employee Normal Cost | Employer Normal Cost | Unfunded Actuarial Liability | Debt Service Payment | Total* |
|--|-------------------------|----------------------------|----------------------------|------------------------------------|----------------------------|------------------|
| State ** | 7.72% | 4.00% | 3.72% | 3.15% | 0.12% | 6.99% |
| School | 8.24% | 4.00% | 4.24% | 7.16% | 0.07% | 11.47% |
| State/School ** | 8.11% | 4.00% | 4.11% | 6.18% | 0.08% | 10.37% |
| Local | 7.68% | 4.00% | 3.68% | 4.01% | 0.00% | 7.69% |
| KP&F Uniform Contribution Ra State *** Local *** | te 14.52% 14.52% | 6.54% 6.54% | 7.98% 7.98% | 4.71% 5.34% | 0.63% 0.00% | 13.32% 13.32% |
| Judges | 18.71% | 4.87% | 13.84% | 8.44% | 0.10% | 22.38% |

Does not include the contribution to the Death and Disability Program. *

For Correctional Employees, employer contribution rates of 8.90% and 8.84% apply for normal retirement ages of 55 and 60, ** respectively.

The total contribution rate for each employer is equal to the appropriate uniform contribution rate (state or local) plus an additional rate, *** if applicable, required to amortize the unfunded past service liability or the 15% excess benefit liability, determined separately for each employer. (See Table 12)



TABLE 11LOCAL AFFILIATION COST FACTORSFOR FISCAL YEAR BEGINNING IN 2007

| Employer | Total Estimated 2007 Annual Payroll | 1/1/2007 Unfunded Actuarial Liability ** | Payment on 1/1/2007 Unfunded Liability | Payment on Unfunded Liability as % of Payroll | Total Rate for Years Commencing in 2006* | Total Rate for Years Commencing in 2007* |
|--|--|---|---|--|---|---|
| | · · · , · · · · | | , | ,,,,,,,,,, | | |
| St. Francis Housing Authority | \$12,696 | \$7,578 | \$454 | 3.58% | 7.41% | 7.89% |
| City of Burden | \$102,351 | \$14,945 | \$894 | 0.87% | 4.80% | 5.18% |
| City of Longton | \$85,551 | \$18,168 | \$1,089 | 1.27% | 4.64% | 5.58% |
| Bourbon County RWD#2 | \$143,985 | \$105,295 | \$6,307 | 4.38% | 8.23% | 8.69% |
| Towanda Township | \$38,776 | \$8,600 | \$514 | 1.33% | 5.15% | 5.64% |
| Ness City Public Library | \$36,512 | \$3,247 | \$172 | *** | *** | *** |
| City of Herndon | \$9,014 | \$38,386 | \$2,042 | *** | *** | *** |
| Hays Housing Authority | \$52,153 | \$1,694 | \$104 | 0.20% | 4.01% | 4.51% |
| Haysville Community Library | \$155,848 | \$191,291 | \$11,453 | 7.35% | 11.85% | 11.66% |
| Hamilton County Library | \$75,125 | \$12,668 | \$759 | 1.01% | 5.23% | 5.32% |
| Ellis Public Library | \$10,589 | \$4,810 | \$288 | 2.72% | 6.33% | 7.03% |
| Bucklin Public Library | \$15,582 | \$11,973 | \$718 | 4.61% | 8.60% | 8.92% |
| Elkhart Cemetery District | \$5,192 | \$1,692 | \$103 | 1.98% | 4.05% | 6.29% |
| Clay County Conservation District | \$26,566 | \$53,279 | \$3,194 | 12.02% | 9.02% | 16.33% |
| City of Linn Valley | \$28,905 | \$941 | \$57 | 0.20% | 4.00% | 4.51% |
| City of Blue Mound | \$69,479 | \$2,682 | \$158 | 0.23% | 4.05% | 4.54% |
| Kansas Workers' Risk Coop for Counties | \$273,867 | \$48,569 | \$2,899 | 1.06% | 4.85% | 5.37% |
| Lindsborg Community Library | \$17,089 | \$3,353 | \$198 | 1.16% | 4.85% | 5.47% |
| City of North Newton | \$310,109 | \$154,420 | \$9,110 | 2.94% | 6.99% | 7.25% |
| City of Arcadia | \$73,821 | \$15,101 | \$890 | 1.21% | 7.52% | 5.52% |
| Four County Mental Health | \$5,187,670 | \$1,605,988 | \$142,999 | 2.76% | 6.76% | 7.07% |
| City of Linwood | \$38,710 | \$2,265 | \$134 | 0.35% | 4.07% | 4.66% |
| Cottonwood Inc. | \$4,922,392 | \$1,076,308 | \$63,497 | 1.29% | 5.11% | 5.60% |
| Johnson County Fire District #2 Rural | \$1,665,442 | \$420,960 | \$24,835 | 1.49% | 5.25% | 5.80% |
| Basehor Community Library | \$87,979 | \$53,524 | \$3,157 | 3.59% | 7.22% | 7.90% |
| City of Gypsum | \$58,160 | \$4,552 | \$269 | 0.46% | 4.49% | 4.77% |
| Greenleaf Housing Authority | \$17,522 | \$21,361 | \$1,260 | 7.19% | 10.72% | 11.50% |



TABLE 11 (cont.)LOCAL AFFILIATION COST FACTORSFOR FISCAL YEAR BEGINNING IN 2007

| Employer | Total Estimated 2007 Annual Payroll | 1/1/2007 Unfunded Actuarial Liability ** | Payment on 1/1/2007 Unfunded Liability | Payment on Unfunded Liability as % of Payroll | Total Rate for Years Commencing in 2006* | Total Rate for Years Commencing in 2007* |
|--|--|---|---|--|---|---|
| City of Bentley | \$69,355 | \$36,494 | \$2,246 | 3.24% | 8.10% | 7.55% |
| Mulvane Public Library | \$56,537 | \$13,087 | \$806 | 1.43% | 6.93% | 5.74% |
| The Center for Counseling and Consultation | \$1,886,522 | \$1,100,126 | \$67,732 | 3.59% | 7.57% | 7.90% |
| Crawford County RWD #2 | \$33,161 | \$15,931 | \$4,167 | 12.57% | 17.53% | 16.88% |
| Doniphan County RFD #2 | \$69,947 | \$8,738 | \$538 | 0.77% | 4.61% | 5.08% |
| City of Denision | \$50,838 | \$19,290 | \$1,188 | 2.34% | 6.24% | 6.65% |
| Stanton County Recreation Commission | \$60,349 | \$23,756 | \$1,462 | 2.42% | 6.33% | 6.73% |
| City of Shawnee | \$7,177,162 | \$9,139 | \$1,362 | 0.02% | 3.83% | 4.33% |
| Unified Government - Wyandotte Co./ KCK | \$48,220,138 | \$565,453 | \$93,672 | 0.19% | 4.00% | 4.50% |
| Total | \$71,145,095 | \$5,675,664 | \$450,727 | | | |

*Basic local employer contribution rates excluding Death and Disability contribution: FY 2006: 3.81%

FY 2007: 4.31%

**Includes unfunded actuarial liability for prior service and for excess benefit liability

*** Payment to be fixed dollar amount



TABLE 12 KP&F EMPLOYER CONTRIBUTION RATES FOR FISCAL YEARS COMMENCING IN CALENDAR YEARS 2006 AND 2007

| Employer | Total Rate for Fiscal Year Commencing in 2006 | Recommended Total Rate for Fiscal Year Commencing in 2007 |
|-----------------------------------|---|---|
| Douglas County Law Enforcement | 15.99 % | 16.71 % |
| Ford County | 12.39 | 13.32 |
| Franklin County Sheriff's Dept | 12.39 | 13.32 |
| Gray County Sheriff's Dept. | 12.39 | 13.32 |
| Harvey County Sheriff's Dept. | 12.39 | 13.32 |
| Johnson County Fire Dept. | 12.39 | 13.32 |
| Johnson County Fire No. 1 | 12.39 | 13.32 |
| Johnson County Fire No. 2 | 12.39 | 13.32 |
| Johnson County Park Commission | 12.39 | 13.32 |
| Johnson County Sheriff's Dept. | 12.62 | 13.54 |
| Labette County Sheriff's Dept. | 14.98 | 15.63 |
| Reno County Sheriff's Dept. | 12.39 | 13.32 |
| Riley County Law Enforcement | 12.39 | 13.32 |
| Sedgwick County Fire No. 1 | 12.75 | 13.32 |
| Sedgwick County Sheriff's Dept. | 12.74 | 13.66 |
| Sedgwick County EMT's | 12.85 | 13.76 |
| Shawnee County Sheriff's Dept. | 15.21 | 16.00 |
| Sumner County Sheriff's Dept. | 14.13 | 14.99 |
| Unified Gov't of Wyandotte County | 12.39 | 13.32 |
| Unified Gov't of Wyandotte Co KCK | 18.67 | 16.82 |
| City of Abilene | 12.39 | 13.32 |
| City of Arkansas City | 14.60 | 14.58 |
| City of Atchison | 13.96 | 14.28 |
| City of Bonner Springs | 12.39 | 13.32 |
| City of Chanute | 13.23 | 14.19 |
| City of Cimarron | 12.39 | 13.32 |
| City of Coffeyville | 18.94 | 19.58 |
| City of Concordia | 16.61 | 17.33 |
| City of Derby | 13.16 | 14.02 |
| City of Dodge City | 19.52 | 20.20 |
| City of Emporia | 15.38 | 16.21 |
| City of Erie | 12.39 | 13.32 |
| City of Eudora | 12.39 | 13.32 |
| City of Fairway | 12.89 | 13.64 |
| City of Fort Scott | 17.95 | 19.99 |



TABLE 12 (cont.) KP&F EMPLOYER CONTRIBUTION RATES FOR FISCAL YEARS COMMENCING IN CALENDAR YEARS 2006 AND 2007

| | Total Rate for | Recommended Total |
|--|--------------------|----------------------|
| | Fiscal Year | Rate for Fiscal Year |
| Employer | Commencing in 2006 | Commencing in 2007 |
| City of Herington | 13.80 % | 14.56 % |
| City of Hutchinson | 18.88 | 19.56 |
| City of Junction City | 13.38 | 13.87 |
| City of Lawrence | 12.86 | 13.58 |
| City of Leavenworth | 13.20 | 14.10 |
| City of Leawood | 13.14 | 14.05 |
| City of Lenexa | 12.53 | 13.45 |
| City of Manhattan | 15.18 | 16.04 |
| City of Merriam | 12.86 | 13.80 |
| City of McPherson | 12.70 | 13.49 |
| City of Mission | 12.39 | 13.32 |
| City of Newton EMTs | 14.30 | 15.42 |
| City of Newton | 13.34 | 13.85 |
| City of Olathe | 12.47 | 13.40 |
| City of Ottawa | 12.39 | 13.32 |
| City of Parsons | 17.47 | 16.25 |
| City of Pittsburg | 15.88 | 16.62 |
| City of Salina | 15.69 | 16.59 |
| City of Shawnee | 12.99 | 13.92 |
| City of Topeka | 12.39 | 13.32 |
| City of Wellington | 15.87 | 16.63 |
| City of Westwood | 12.39 | 13.32 |
| City of Winfield | 17.00 | 17.58 |
| Board of Regents Campus Police | 12.52 | 13.32 |
| Kansas Bureau of Investigation | 13.46 | 14.22 |
| Kansas Highway Patrol | 14.25 | 14.73 |
| Cowley County Sheriff's Dept | 12.39 | 13.32 |
| City of Gardner Public Safety Officers | 12.39 | 13.32 |
| City of Liberal Police & Firemen | 12.39 | 13.32 |
| City of Oswego | 12.39 | 13.32 |
| Leavenworth County | 12.39 | 13.32 |
| Pottawatomie County | 12.39 | 13.32 |
| City of Roeland Park | 12.39 | 13.32 |
| City of Edwardsville Police | 15.28 | 16.71 |
| City of Garden City | 12.39 | 13.32 |
| City of Lake Quivira | 12.39 | 13.32 |



TABLE 12 (cont.) KP&F EMPLOYER CONTRIBUTION RATES FOR FISCAL YEARS COMMENCING IN CALENDAR YEARS 2006 AND 2007

| | Total Rate for Fiscal Year | Recommended Total Rate for Fiscal Year |
|-------------------------------------|-------------------------------|---|
| Employer | Commencing in 2006 | Commencing in 2007 |
| City of Paola | 12.39 | 13.32 |
| City of Winfield (EMS) | 22.14 | 22.72 |
| Miami County | 12.39 | 13.32 |
| Atchinson County | 12.39 | 13.32 |
| City of Park City | 12.39 | 13.32 |
| Dickinson County | 12.39 | 13.32 |
| Leavenworth County (EMS) | 12.39 | 13.32 |
| City of Basehor | 12.39 | 13.32 |
| City of Edwardsville Firemen | 20.08 | 19.14 |
| City of Marion | 12.39 | 13.32 |
| City of Overbrook | 12.39 | 13.32 |
| Leavenworth County Fire District #1 | 12.39 | 13.32 |
| Topeka-Tecumseh Fire District | 12.39 | 13.32 |
| City of Lansing | 12.39 | 13.32 |
| State Fire Marshall | 12.52 | 13.32 |



TABLE 13 KP&F EMPLOYER ADDITIONAL CONTRIBUTION RATES FOR FISCAL YEARS BEGINNING IN 2007

| Employer | Number of Employees | Total Estimated 2006 Payroll | Excess Benefit Liability | Payment on Excess Benefit Liability | Unfunded Prior Service Liability | Payment on Unfunded Liability* | Total Payment Amount | As Percent of Payroll |
|-----------------------------------|---------------------------|---------------------------------------|--------------------------------|--|---|--------------------------------------|----------------------------|--------------------------|
| Douglas County Law Enforcement | 83 | \$5,346,399 | \$0 | \$0 | \$1,713,059 | \$181,138 | \$181,138 | 3.39 % |
| Ford County | 52 | 2,214,540 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Franklin County Sheriff's Dept | 41 | 1,649,374 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Gray County Sheriff's Dept. | 6 | 251,199 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Harvey County Sheriff's Dept. | 27 | 1,161,823 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Johnson County Fire Dept. | 154 | 9,002,798 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Johnson County Fire No. 1 | 15 | 719,834 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Johnson County Fire No. 2 | 67 | 4,682,972 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Johnson County Park Commission | 15 | 791,429 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Johnson County Sheriff's Dept. | 431 | 31,500,474 | 0 | 0 | 413,835 | 67,758 | 67,758 | 0.22 |
| Labette County Sheriff's Dept. | 19 | 716,378 | 0 | 0 | 190,434 | 16,582 | 16,582 | 2.31 |
| Reno County Sheriff's Dept. | 66 | 2,867,090 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Riley County Law Enforcement | 96 | 4,760,320 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Sedgwick County Fire No. 1 | 130 | 7,780,429 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Sedgwick County Sheriff's Dept. | 300 | 16,055,838 | 942 | 145 | 412,053 | 54,352 | 54,497 | 0.34 |
| Sedgwick County EMT's | 129 | 7,139,218 | 0 | 0 | 176,605 | 31,177 | 31,177 | 0.44 |
| Shawnee County Sheriff's Dept. | 111 | 5,788,588 | 0 | 0 | 1,407,392 | 154,845 | 154,845 | 2.68 |
| Sumner County Sheriff's Dept. | 19 | 698,044 | 0 | 0 | 98,068 | 11,639 | 11,639 | 1.67 |
| Unified Gov't of Wyandotte County | 820 | 3,227,944 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Unified Gov't of Wyandotte Co KCK | 0 | 47,685,995 | 2,570,134 | 373,390 | 1,247,939 | 1,296,896 | 1,670,286 | 3.50 |
| City of Abilene | 22 | 966,052 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Arkansas City | 46 | 2,250,895 | 0 | 0 | 27,333 | 28,405 | 28,405 | 1.26 |
| City of Atchison | 41 | 1,739,836 | 0 | 0 | 16,027 | 16,656 | 16,656 | 0.96 |
| City of Bonner Springs | 24 | 1,258,263 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Chanute | 34 | 1,577,282 | 0 | 0 | 19,053 | 13,718 | 13,718 | 0.87 |
| City of Cimarron | 3 | 122,766 | 0 | 0 | 0 | 0 | 0 | 0.00 |



TABLE 13 (cont.) KP&F EMPLOYER ADDITIONAL CONTRIBUTION RATES FOR FISCAL YEARS BEGINNING IN 2007

| Employer | Number of Employees | Total Estimated 2006 Payroll | Excess Benefit Liability | Payment on Excess Benefit Liability | Unfunded Prior Service Liability | Payment on Unfunded Liability* | Total Payment Amount | As Percent of Payroll |
|-----------------------|---------------------------|---------------------------------------|--------------------------------|--|---|--------------------------------------|----------------------------|--------------------------|
| City of Coffeyville | 42 | \$1,951,762 | \$0 | \$0 | \$843,227 | \$122,214 | \$122,214 | 6.26 % |
| City of Concordia | 8 | 311,038 | 0 | 0 | 85,951 | 12,471 | 12,471 | 4.01 |
| City of Derby | 34 | 1,684,264 | 0 | 0 | 96,738 | 11,847 | 11,847 | 0.70 |
| City of Dodge City | 72 | 3,132,285 | 0 | 0 | 2,149,493 | 215,432 | 215,432 | 6.88 |
| City of Emporia | 97 | 4,852,031 | 0 | 0 | 912,265 | 140,059 | 140,059 | 2.89 |
| City of Erie | 4 | 123,418 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Eudora | 8 | 405,082 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Fairway | 8 | 509,139 | 0 | 0 | 1,574 | 1,636 | 1,636 | 0.32 |
| City of Fort Scott | 28 | 1,098,754 | 0 | 0 | 505,657 | 73,266 | 73,266 | 6.67 |
| City of Herington | 7 | 243,793 | 0 | 0 | 19,631 | 3,014 | 3,014 | 1.24 |
| City of Hutchinson | 159 | 7,727,888 | 6,933 | 1,204 | 4,612,604 | 480,644 | 481,848 | 6.24 |
| City of Junction City | 90 | 3,956,862 | 0 | 0 | 20,929 | 21,750 | 21,750 | 0.55 |
| City of Lawrence | 274 | 17,784,906 | 0 | 0 | 43,691 | 45,405 | 45,405 | 0.26 |
| City of Leavenworth | 108 | 5,291,117 | 109,101 | 16,613 | 101,933 | 24,838 | 41,451 | 0.78 |
| City of Leawood | 104 | 6,536,278 | 0 | 0 | 389,364 | 47,701 | 47,701 | 0.73 |
| City of Lenexa | 171 | 11,299,473 | 0 | 0 | 81,759 | 14,445 | 14,445 | 0.13 |
| City of Manhattan | 68 | 3,172,736 | 0 | 0 | 245,219 | 86,152 | 86,152 | 2.72 |
| City of Merriam | 46 | 2,961,922 | 0 | 0 | 103,235 | 14,237 | 14,237 | 0.48 |
| City of McPherson | 45 | 2,034,408 | 0 | 0 | 3,257 | 3,385 | 3,385 | 0.17 |
| City of Mission | 26 | 1,538,940 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Newton EMTs | 7 | 376,011 | 0 | 0 | 70,115 | 7,898 | 7,898 | 2.10 |
| City of Newton | 62 | 3,062,826 | 0 | 0 | 15,698 | 16,314 | 16,314 | 0.53 |
| City of Olathe | 255 | 17,942,892 | 0 | 0 | 71,177 | 13,718 | 13,718 | 0.08 |
| City of Ottawa | 46 | 2,347,534 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Parsons | 40 | 1,550,526 | 0 | 0 | 43,655 | 45,368 | 45,368 | 2.93 |
| City of Pittsburg | 69 | 3,071,009 | 0 | 0 | 699,893 | 101,429 | 101,429 | 3.30 |
| City of Salina | 160 | 8,098,514 | 129,631 | 22,179 | 1,673,019 | 242,452 | 264,631 | 3.27 |

TABLE 13 (cont.) KP&F EMPLOYER ADDITIONAL CONTRIBUTION RATES FOR FISCAL YEARS BEGINNING IN 2007

| Employer | Number of Employees | Total Estimated 2006 Payroll | Excess Benefit Liability | Payment on Excess Benefit Liability | Unfunded Prior Service Liability | Payment on Unfunded Liability* | Total Payment Amount | As Percent of Payroll |
|--|---------------------------|---------------------------------------|--------------------------------|--|---|--------------------------------------|----------------------------|--------------------------|
| City of Shawnee | 131 | \$9,024,852 | \$184,782 | \$33,095 | \$142,617 | \$20,681 | \$53,776 | 0.60 % |
| City of Topeka | 522 | 30,282,837 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Wellington | 34 | 1,705,537 | 0 | 0 | 389,447 | 56,430 | 56,430 | 3.31 |
| City of Westwood | 7 | 460,743 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Winfield | 42 | 2,033,643 | 0 | 0 | 683,205 | 86,672 | 86,672 | 4.26 |
| Board of Regents Campus Police | 125 | 5,482,717 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Kansas Bureau of Investigation | 76 | 4,896,658 | 0 | 0 | 78,267 | 44,271 | 44,271 | 0.90 |
| Kansas Highway Patrol | 532 | 31,688,642 | 0 | 0 | 790,530 | 446,973 | 446,973 | 1.41 |
| Cowley County Sheriff's Dept | 22 | 904,929 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Gardner Public Safety Officers | 26 | 1,338,259 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Liberal Police & Firemen | 52 | 2,311,494 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Oswego | 5 | 170,015 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Leavenworth County | 48 | 2,326,466 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Pottawatomie County | 21 | 814,262 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Roeland Park | 15 | 754,386 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Edwardsville Police | 15 | 559,863 | 0 | 0 | 233,888 | 18,952 | 18,952 | 3.39 |
| City of Garden City | 84 | 3,413,586 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Lake Quivira | 2 | 101,543 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Paola | 15 | 737,805 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Winfield (EMS) | 8 | 422,022 | 0 | 0 | 448,267 | 39,655 | 39,655 | 9.40 |
| Miami County | 41 | 1,939,373 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Atchinson County | 10 | 363,607 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Park City | 17 | 697,496 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Dickinson County | 14 | 560,170 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Leavenworth County (EMS) | 32 | 1,307,586 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Basehor | 6 | 210,076 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Edwardsville Firemen | 14 | 652,014 | 0 | 0 | 440,226 | 37,963 | 37,963 | 5.82 |
| City of Marion | 5 | 170,846 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Overbrook | 2 | 70,333 | 0 | 0 | 0 | 0 | 0 | 0.00 |



VIENCE BAR ADDRESS RING

TABLE 13 (cont.) KP&F EMPLOYER ADDITIONAL CONTRIBUTION RATES FOR FISCAL YEARS BEGINNING IN 2007

| Employer | Number of Employees | Total Estimated 2006 Payroll | Excess Benefit Liability | Payment on Excess Benefit Liability | Unfunded Prior Service Liability | Payment on Unfunded Liability* | Total Payment Amount | As Percent of Payroll |
|-------------------------------------|---------------------------|---------------------------------------|--------------------------------|--|---|--------------------------------------|----------------------------|--------------------------|
| Leavenworth County Fire District #1 | 2 | 80,765 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Topeka-Tecumseh Fire District | 5 | 296,429 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| City of Lansing | 2 | 105,604 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Total | 6,721 \$ 3 | 380,913,770 | \$ 3,001,522 | \$ 446,626 \$ | 21,718,329 \$ | 6 4,370,438 \$ | 4,817,064 | |

* Payments are based on a remaining 40-year amortization periods, except for Harvey County Sheriff's Department (20 years) and Sedgwick County EMTs (30 years). Payments are assumed to made throughout the year.

Payments for excess benefit liability are based on a remaining 15 year amortization period. Payments are assumed to made throughout the year.



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APPENDIX A SUMMARY OF MEMBERSHIP DATA

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM ACTIVE MEMBER DATA

| | 12/31/2004 | 12/31/2003 |
|---|---------------------------------------|---------------------------------------|
| State/School | | |
| Number Average Current Age Average Service Average Pay | 105,194 45.31 11.24 \$32,559 | 105,102 45.11 11.08 \$31,894 |
| State | | |
| Number Average Current Age Average Service Average Pay | 24,592 46.82 12.58 \$33,952 | 24,933 46.48 12.30 \$32,764 |
| School | | |
| Number Average Current Age Average Service Average Pay | 80,602 44.84 10.83 \$32,134 | 80,169 44.68 10.70 \$31,623 |
| Local | | |
| Number Average Current Age Average Service Average Pay | 35,585 45.09 9.68 \$34,054 | 36,299 44.53 9.14 \$32,739 |
| KPERS Total | | |
| Number Average Current Age Average Service Average Pay | 140,779 45.25 10.84 \$32,937 | 141,401 44.96 10.59 \$32,111 |



APPENDIX A SUMMARY OF MEMBERSHIP DATA

| KP&F | 12/31/2004 | 12/31/2003 |
|---------------------|------------|------------|
| Number | 6,721 | 6,494 |
| Tier I | 703 | 744 |
| Tier II | 6,018 | 5,750 |
| Average Current Age | 38.90 | 38.80 |
| Average Service | 10.90 | 10.95 |
| Average Pay | \$51,014 | \$49,017 |
| Judges | | |
| Number | 251 | 250 |
| Average Current Age | 55.51 | 55.10 |
| Average Service | 11.61 | 11.30 |
| Average Pay | \$88,761 | \$86,770 |
| System Total | | |
| Number | 147,751 | 148,145 |
| Average Current Age | 44.98 | 44.71 |
| Average Service | 10.85 | 10.60 |
| Average Pay | \$33,854 | \$32,944 |

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM ACTIVE MEMBER DATA



SUMMARY OF MEMBERSHIP DATA

| KANSAS PUBLIC | EMPLOYEES | RETIREMENT | SYSTEM |
|---------------|-------------|------------|--------|
| INA | ACTIVE MEMB | ER DATA | |

| State | | |
|--------------------|--------|--------|
| vested inactive | 2,050 | 1,935 |
| nonvested inactive | 2,869 | 2,883 |
| deferred disabled | 1,110 | 1,095 |
| School | | |
| vested inactive | 4,476 | 4,409 |
| nonvested inactive | 18,554 | 19,505 |
| deferred disabled | 1,118 | 1,085 |
| Local | | |
| vested inactive | 2,345 | 2,238 |
| nonvested inactive | 6,897 | 6,310 |
| deferred disabled | 776 | 753 |
| KPERS Total | | |
| vested inactive | 8,871 | 8,582 |
| nonvested inactive | 28,320 | 28,698 |
| deferred disabled | 3,004 | 2,933 |
| KP&F | | |
| vested inactive | 115 | 126 |
| nonvested inactive | 941 | 961 |
| deferred disabled | 187 | 185 |
| Judges | | |
| vested inactive | 14 | 12 |
| nonvested inactive | 4 | 3 |
| deferred disabled | 0 | 0 |
| System Total | | |
| vested inactive | 9,000 | 8,720 |
| nonvested inactive | 29,265 | 29,662 |
| deferred disabled | 3,191 | 3,118 |



APPENDIX A SUMMARY OF MEMBERSHIP DATA

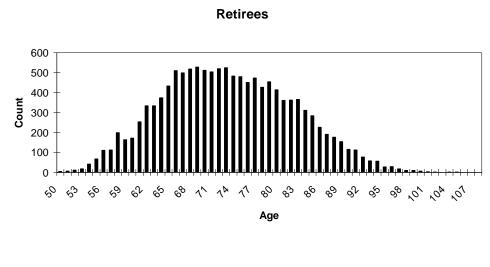
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM RETIREE AND BENEFICIARY MEMBER DATA

| | 12/31/2004 | 12/31/2003 |
|--|-----------------------------|-----------------------------|
| State | | |
| Number Average Benefit Average Age | 14,410 \$10,291 72.75 | 14,137 \$9,994 72.81 |
| School | | |
| Number Average Benefit Average Age | 31,378 \$11,438 72.62 | 30,093 \$11,063 72.81 |
| Local | | |
| Number Average Benefit Average Age | 11,613 \$7,604 73.24 | 11,279 \$7,376 73.30 |
| KPERS Total | | |
| Number Average Benefit Average Age | 57,401 \$10,374 72.78 | 55,509 \$10,042 72.91 |
| KP&F | | |
| Number Average Benefit Average Age | 3,558 \$21,912 61.60 | 3,456 \$21,258 61.20 |
| Judges | | |
| Number Average Benefit Average Age | 166 \$31,416 73.70 | 159 \$30,463 73.30 |
| System Total | | |
| Number Average Benefit Average Age | 61,125 \$11,103 72.13 | 59,124 \$10,752 72.23 |

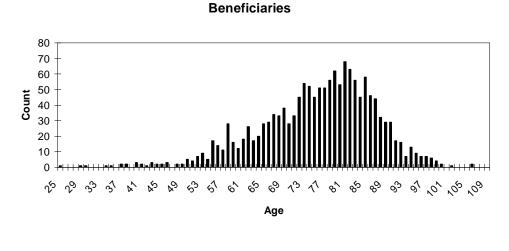


as of December 31, 2004





Count: 12,888 Average age: 73.3 Average benefit: \$ 10,659

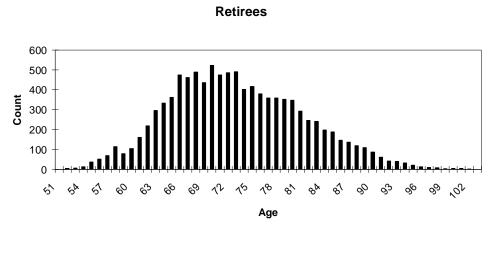




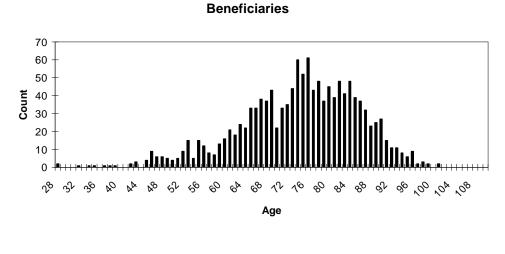


as of December 31, 2004





Count: 10,284 Average age: 73.1 Average benefit: \$ 7,907





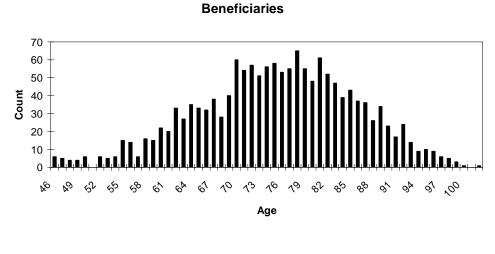


as of December 31, 2004

SCHOOL



Count: 29,835 Average age: 72.5 Average benefit: \$ 11,635

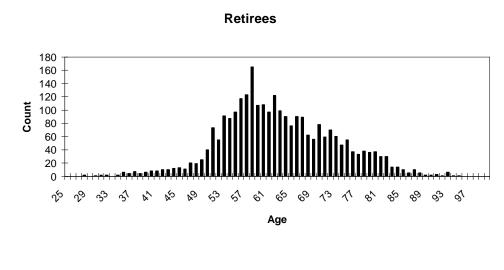




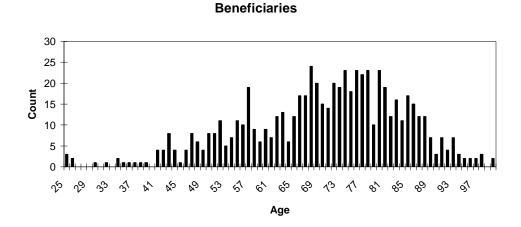


as of December 31, 2004

KP&F



Count: 2,701 Average age: 62.7 Average benefit: \$ 25,286



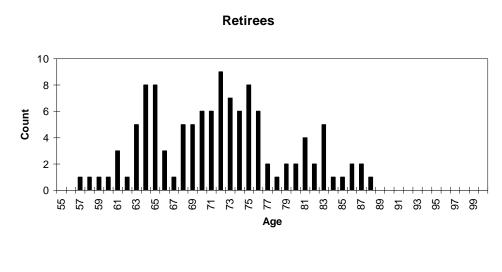
Note: 205 beneficiaries under age 25 not shown on graph

Count: 857 Average non-child age: 69.9 Average benefit: \$11,271

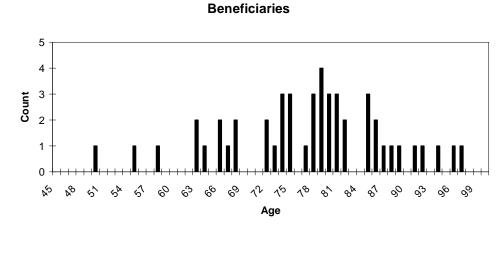


as of December 31, 2004











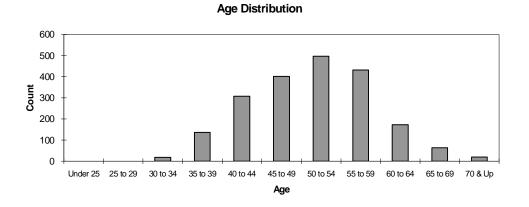


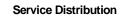
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM DISTRIBUTION OF INACTIVE VESTED MEMBERS

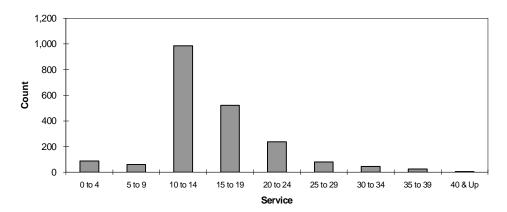
as of December 31, 2004

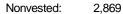
STATE

| | Service | | | | | | | | | |
|----------|---------|--------|----------|----------|----------|----------|----------|----------|---------|-------|
| Age | 0 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 to 34 | 3 | 2 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 35 to 39 | 8 | 8 | 104 | 17 | 0 | 0 | 0 | 0 | 0 | 137 |
| 40 to 44 | 14 | 9 | 198 | 70 | 16 | 1 | 0 | 0 | 0 | 308 |
| 45 to 49 | 10 | 11 | 200 | 127 | 41 | 12 | 0 | 0 | 0 | 401 |
| 50 to 54 | 18 | 10 | 225 | 133 | 75 | 20 | 13 | 3 | 0 | 497 |
| 55 to 59 | 17 | 7 | 175 | 111 | 72 | 26 | 13 | 11 | 0 | 432 |
| 60 to 64 | 6 | 7 | 56 | 53 | 20 | 10 | 13 | 6 | 2 | 173 |
| 65 to 69 | 4 | 1 | 12 | 12 | 11 | 10 | 7 | 4 | 3 | 64 |
| 70 & Up | 8 | 4 | 4 | 0 | 3 | 0 | 0 | 1 | 0 | 20 |
| Total | 88 | 59 | 987 | 523 | 238 | 79 | 46 | 25 | 5 | 2,050 |







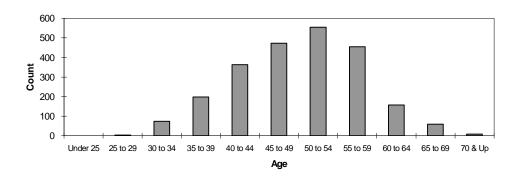




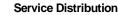
as of December 31, 2004

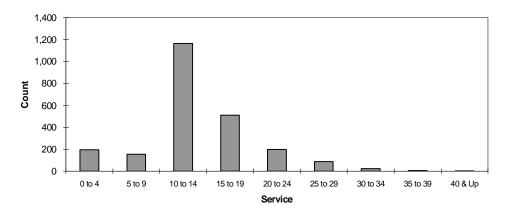
LOCAL

| | | | | | Ser | vice | | | | |
|----------|--------|--------|----------|----------|----------|----------|----------|----------|---------|-------|
| Age | 0 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 to 29 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 30 to 34 | 29 | 16 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 74 |
| 35 to 39 | 48 | 32 | 109 | 9 | 0 | 0 | 0 | 0 | 0 | 198 |
| 40 to 44 | 37 | 35 | 205 | 70 | 16 | 1 | 0 | 0 | 0 | 364 |
| 45 to 49 | 33 | 36 | 235 | 118 | 42 | 8 | 1 | 0 | 0 | 473 |
| 50 to 54 | 27 | 22 | 248 | 149 | 62 | 39 | 6 | 2 | 0 | 555 |
| 55 to 59 | 14 | 10 | 234 | 113 | 49 | 26 | 7 | 1 | 1 | 455 |
| 60 to 64 | 5 | 5 | 74 | 33 | 25 | 9 | 3 | 3 | 0 | 157 |
| 65 to 69 | 2 | 0 | 25 | 16 | 4 | 4 | 6 | 0 | 1 | 58 |
| 70 & Up | 0 | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 1 | 8 |
| Total | 197 | 156 | 1,164 | 511 | 198 | 87 | 23 | 6 | 3 | 2,345 |



Age Distribution







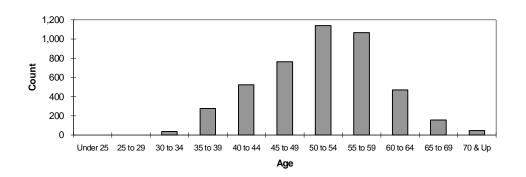
6,897



as of December 31, 2004

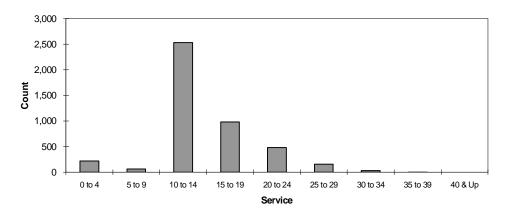
SCHOOL

| | Service | | | | | | | | | | |
|----------|---------|--------|----------|----------|----------|----------|----------|----------|---------|-------|--|
| Age | 0 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 30 to 34 | 2 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | |
| 35 to 39 | 7 | 1 | 251 | 17 | 0 | 0 | 0 | 0 | 0 | 276 | |
| 40 to 44 | 2 | 6 | 408 | 96 | 9 | 0 | 0 | 0 | 0 | 521 | |
| 45 to 49 | 5 | 1 | 462 | 192 | 94 | 8 | 0 | 0 | 0 | 762 | |
| 50 to 54 | 14 | 3 | 606 | 284 | 164 | 59 | 10 | 0 | 0 | 1,140 | |
| 55 to 59 | 10 | 1 | 531 | 273 | 158 | 81 | 13 | 0 | 0 | 1,067 | |
| 60 to 64 | 78 | 16 | 203 | 105 | 48 | 11 | 4 | 4 | 0 | 469 | |
| 65 to 69 | 77 | 28 | 24 | 14 | 10 | 1 | 3 | 0 | 0 | 157 | |
| 70 & Up | 26 | 9 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 46 | |
| Total | 221 | 65 | 2,531 | 982 | 483 | 160 | 30 | 4 | 0 | 4,476 | |



Age Distribution







l: 18,554



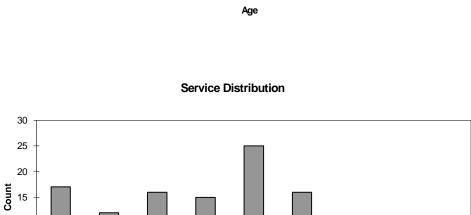
as of December 31, 2004

KP&F

| | Service | | | | | | | | | | |
|----------|---------|--------|----------|----------|----------|----------|----------|----------|---------|-------|--|
| Age | 0 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 30 to 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 35 to 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 40 to 44 | 2 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 6 | |
| 45 to 49 | 1 | 3 | 8 | 6 | 5 | 2 | 0 | 0 | 0 | 25 | |
| 50 to 54 | 5 | 4 | 3 | 1 | 16 | 12 | 3 | 0 | 0 | 44 | |
| 55 to 59 | 8 | 3 | 2 | 7 | 2 | 1 | 8 | 2 | 0 | 33 | |
| 60 to 64 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 6 | |
| 65 to 69 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | |
| 70 & Up | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total | 17 | 12 | 16 | 15 | 25 | 16 | 11 | 3 | 0 | 115 | |

50 40 40 50 20 10 0 Under 25 25 to 29 30 to 34 35 to 39 40 to 44 45 to 49 50 to 54 55 to 59 60 to 64 65 to 69 70 & Up Age

Age Distribution



Nonvested:

941

10 5 0

0 to 4

5 to 9

10 to 14

15 to 19

20 to 24

Service

25 to 29

30 to 34

35 to 39

40 & Up

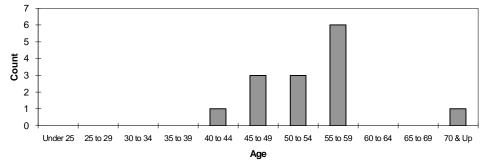


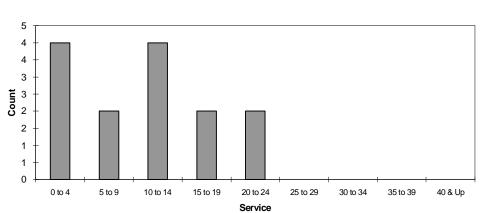
as of December 31, 2004

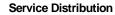
JUDGES

| | Service | | | | | | | | | | |
|----------|---------|--------|----------|----------|----------|----------|----------|----------|---------|-------|--|
| Age | 0 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 30 to 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 35 to 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 40 to 44 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 45 to 49 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| 50 to 54 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | |
| 55 to 59 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 6 | |
| 60 to 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 65 to 69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 70 & Up | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Total | 4 | 2 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 14 | |

Age Distribution







Nonvested:

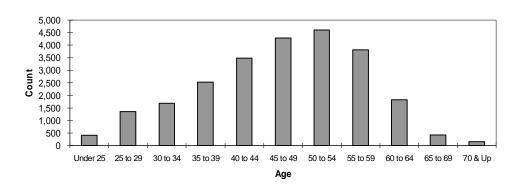
4



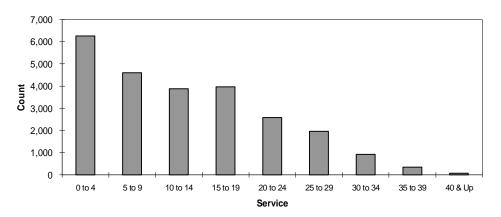
as of December 31, 2004

STATE

| | Service | | | | | | | | | | |
|----------|---------|--------|----------|----------|----------|----------|----------|----------|---------|--------|--|
| Age | 0 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 | 412 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 418 | |
| 25 to 29 | 1,080 | 268 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1,349 | |
| 30 to 34 | 856 | 674 | 157 | 5 | 0 | 0 | 0 | 0 | 0 | 1,692 | |
| 35 to 39 | 912 | 720 | 610 | 282 | 10 | 0 | 0 | 0 | 0 | 2,534 | |
| 40 to 44 | 801 | 689 | 677 | 850 | 413 | 57 | 0 | 0 | 0 | 3,487 | |
| 45 to 49 | 769 | 736 | 669 | 817 | 741 | 517 | 37 | 0 | 0 | 4,286 | |
| 50 to 54 | 668 | 643 | 718 | 840 | 617 | 739 | 351 | 24 | 0 | 4,600 | |
| 55 to 59 | 482 | 509 | 617 | 683 | 497 | 446 | 373 | 193 | 10 | 3,810 | |
| 60 to 64 | 196 | 254 | 326 | 377 | 234 | 160 | 131 | 108 | 41 | 1,827 | |
| 65 to 69 | 51 | 81 | 86 | 71 | 54 | 33 | 23 | 16 | 15 | 430 | |
| 70 & Up | 31 | 17 | 20 | 40 | 21 | 16 | 5 | 4 | 5 | 159 | |
| Total | 6,258 | 4,597 | 3,881 | 3,965 | 2,587 | 1,968 | 920 | 345 | 71 | 24,592 | |



Age Distribution



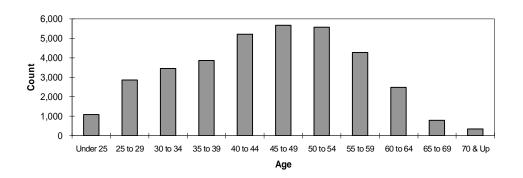
Service Distribution



as of December 31, 2004

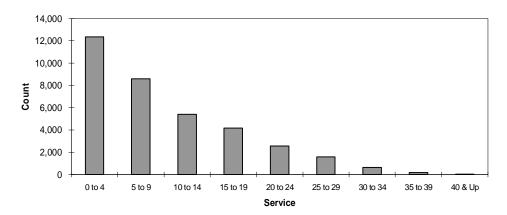
LOCAL

| | Service | | | | | | | | | | |
|----------|---------|--------|----------|----------|----------|----------|----------|----------|---------|--------|--|
| Age | 0 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 | 1,066 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,088 | |
| 25 to 29 | 2,274 | 588 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2,867 | |
| 30 to 34 | 1,758 | 1,364 | 314 | 11 | 0 | 0 | 0 | 0 | 0 | 3,447 | |
| 35 to 39 | 1,575 | 1,229 | 773 | 278 | 13 | 0 | 0 | 0 | 0 | 3,868 | |
| 40 to 44 | 1,520 | 1,412 | 952 | 869 | 401 | 41 | 0 | 0 | 0 | 5,195 | |
| 45 to 49 | 1,434 | 1,302 | 1,015 | 840 | 655 | 382 | 37 | 0 | 0 | 5,665 | |
| 50 to 54 | 1,215 | 1,069 | 1,002 | 883 | 616 | 516 | 245 | 14 | 0 | 5,560 | |
| 55 to 59 | 868 | 831 | 675 | 701 | 490 | 388 | 230 | 82 | 3 | 4,268 | |
| 60 to 64 | 414 | 482 | 459 | 436 | 297 | 192 | 116 | 64 | 27 | 2,487 | |
| 65 to 69 | 127 | 220 | 140 | 114 | 93 | 44 | 25 | 13 | 16 | 792 | |
| 70 & Up | 94 | 78 | 63 | 45 | 17 | 28 | 7 | 8 | 8 | 348 | |
| Total | 12,345 | 8,597 | 5,398 | 4,177 | 2,582 | 1,591 | 660 | 181 | 54 | 35,585 | |



Age Distribution



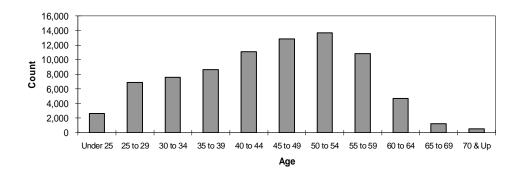




as of December 31, 2004

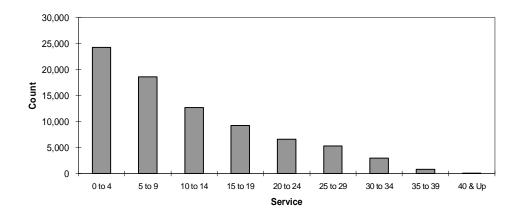
SCHOOL

| | Service | | | | | | | | | | |
|----------|---------|--------|----------|----------|----------|----------|----------|----------|---------|--------|--|
| Age | 0 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 | 2,611 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,650 | |
| 25 to 29 | 5,148 | 1,717 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 6,870 | |
| 30 to 34 | 3,004 | 3,586 | 973 | 4 | 0 | 0 | 0 | 0 | 0 | 7,567 | |
| 35 to 39 | 2,972 | 2,350 | 2,487 | 808 | 15 | 0 | 0 | 0 | 0 | 8,632 | |
| 40 to 44 | 3,303 | 2,842 | 1,848 | 2,071 | 992 | 21 | 0 | 0 | 0 | 11,077 | |
| 45 to 49 | 2,690 | 2,998 | 2,389 | 1,647 | 1,919 | 1,196 | 18 | 0 | 0 | 12,857 | |
| 50 to 54 | 2,030 | 2,334 | 2,387 | 2,072 | 1,416 | 2,142 | 1,289 | 6 | 0 | 13,676 | |
| 55 to 59 | 1,365 | 1,524 | 1,591 | 1,735 | 1,512 | 1,331 | 1,320 | 430 | 2 | 10,810 | |
| 60 to 64 | 699 | 721 | 720 | 745 | 644 | 524 | 267 | 315 | 46 | 4,681 | |
| 65 to 69 | 312 | 294 | 220 | 134 | 102 | 81 | 42 | 30 | 30 | 1,245 | |
| 70 & Up | 159 | 162 | 94 | 49 | 24 | 17 | 12 | 8 | 12 | 537 | |
| Total | 24,293 | 18,567 | 12,714 | 9,265 | 6,624 | 5,312 | 2,948 | 789 | 90 | 80,602 | |



Age Distribution

Prior Service Distribution



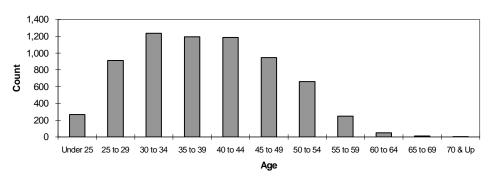


Actuance

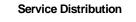
as of December 31, 2004

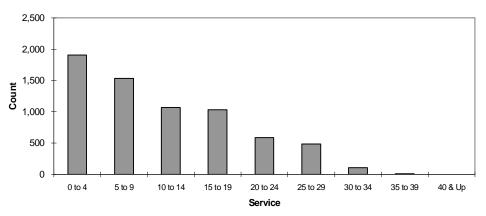
KP&F

| | Service | | | | | | | | | | |
|----------|---------|--------|----------|----------|----------|----------|----------|----------|---------|-------|--|
| Age | 0 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 | 268 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 268 | |
| 25 to 29 | 701 | 213 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 914 | |
| 30 to 34 | 441 | 626 | 172 | 0 | 0 | 0 | 0 | 0 | 0 | 1,239 | |
| 35 to 39 | 222 | 371 | 424 | 176 | 1 | 0 | 0 | 0 | 0 | 1,194 | |
| 40 to 44 | 138 | 176 | 256 | 431 | 185 | 3 | 0 | 0 | 0 | 1,189 | |
| 45 to 49 | 62 | 84 | 114 | 232 | 244 | 208 | 3 | 0 | 0 | 947 | |
| 50 to 54 | 42 | 35 | 56 | 123 | 126 | 215 | 65 | 0 | 0 | 662 | |
| 55 to 59 | 22 | 17 | 36 | 57 | 25 | 49 | 33 | 6 | 0 | 245 | |
| 60 to 64 | 8 | 6 | 7 | 10 | 4 | 8 | 3 | 2 | 0 | 48 | |
| 65 to 69 | 3 | 1 | 4 | 3 | 0 | 0 | 1 | 0 | 0 | 12 | |
| 70 & Up | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| Total | 1,907 | 1,532 | 1,069 | 1,032 | 585 | 483 | 105 | 8 | 0 | 6,721 | |







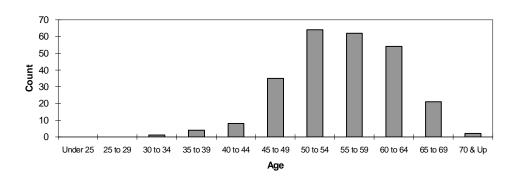




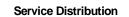
as of December 31, 2004

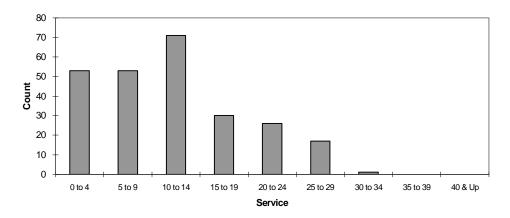
JUDGES

| | Service | | | | | | | | | | |
|----------|---------|--------|----------|----------|----------|----------|----------|----------|---------|-------|--|
| Age | 0 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 30 to 34 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 35 to 39 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| 40 to 44 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| 45 to 49 | 14 | 9 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 35 | |
| 50 to 54 | 16 | 14 | 18 | 10 | 5 | 1 | 0 | 0 | 0 | 64 | |
| 55 to 59 | 5 | 16 | 19 | 9 | 10 | 3 | 0 | 0 | 0 | 62 | |
| 60 to 64 | 5 | 10 | 16 | 5 | 8 | 10 | 0 | 0 | 0 | 54 | |
| 65 to 69 | 2 | 2 | 6 | 4 | 3 | 3 | 1 | 0 | 0 | 21 | |
| 70 & Up | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| Total | 53 | 53 | 71 | 30 | 26 | 17 | 1 | 0 | 0 | 251 | |



Age Distribution







Actuance

APPENDIX B

SUMMARY OF PLAN PROVISIONS

Plan Membership

The Kansas Public Employees Retirement System (the Retirement System, or, the System), is an umbrella organization administering three statewide retirement systems: the Kansas Public Employees Retirement System (KPERS), the Kansas Police and Firemen's Retirement System (KP & F), and the Kansas Retirement System for Judges. All three systems are defined benefit, contributory plans that cover substantially all public employees in Kansas. The Kansas Retirement System for Judges is a single employer plan, while the other two are cost-sharing, multiple employer plans. Participation by the State of Kansas is mandatory, whereas participation by local political subdivisions is optional but irrevocable once elected. Benefit payments are also provided for a certain group of legislative employees.

Employee Membership

Membership is mandatory for all employees in covered positions, except elected officials. A covered position for non-school employees is one that is covered by Social Security, is not seasonal or temporary, and requires at least 1,000 hours of work per year. School employees become KPERS members on their date of employment. School employees who work at least 630 hours per year or 3.5 hours per day for at least 180 days are eligible for membership. Non-school employees become KPERS members after one year of continuous employment. Those who retire under the provisions of the Retirement System may not become contributing members again.

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM Summary of Provisions

Normal Retirement

Eligibility- Eligibility is (a) Age 65, or (b) age 62 with ten years of credited service, or (c) any age when combined age and years of credited service equal 85 "points". Age is determined by the member's last birthday and is not rounded up.

Benefits -Benefits are based on the member's years of credited service, Final Average Salary (FAS), and a statutory multiplier. For those who were hired prior to July 1, 1993, Final Average Salary equals the greater of either: a four-year Final Average Salary, including add-ons, such as sick and annual leave; or a three-year Final Average Salary, excluding add-ons, such as sick and annual leave. For those who are hired on or after July 1, 1993, Final Average Salary equals the average of the three highest years of service, excluding add-ons, such as sick and annual leave.

Prior Service Credit - Prior service credit is 0.75% or 1% of Final Average Salary per year [School employees receive 0.75% Final Average Salary for each year of prior service that is not credited under the former Kansas School Retirement System (KSRS)].

Participating Service Credit - Participating service credit is 1.75% of Final Average Salary.



Early Retirement

Eligibility - Eligibility is age 55 and ten years of credited service.

Benefit - The normal retirement benefit is reduced 0.2% per month for each month between the ages of 60 and 62, plus 0.6% for each month between the ages of 55 and 60.

Vesting Requirements

Eligibility - A member must have ten years of credited service. Should the vested member terminate employment, the member must leave accumulated contributions on deposit with the Retirement System to be eligible for future benefits. If a vested member terminates employment and withdraws accumulated contributions, the member forfeits all rights and privileges under the Retirement System.

Benefit -Retirement benefits are payable when the vested member reaches normal retirement age, or reduced benefits are payable when the vested member reaches a specified early retirement age.

Other Benefits

Withdrawal Benefit - Members who terminate employment may withdraw contributions with interest after the last day on the employer's payroll. Withdrawing contributions forfeits all membership rights and benefits, which a member may have accrued prior to withdrawing their contributions from the Retirement System. Former members, who return to covered employment within five years after terminating employment, will not have lost any membership rights or privileges if they *haven't* withdrawn contributions. The Retirement Act provides for withdrawal of contributions 30 days after employment terminates, but it does not allow members to borrow from contributions.

Disability Benefit - Members receiving disability benefits under the KPERS Death and Disability Benefits Program continue to receive service credit under KPERS. If a disabled member retires after receiving disability benefits for at least five years immediately preceding retirement, the member's Final Average Salary is adjusted by the actuarial salary increase assumption rates in existence during the member's period of disability prior to July 1, 1993, 5% per year to July, 1998 and the change in CPI-U less 1%, not to exceed 4% after July, 1998.

Death Benefits - Pre-retirement death (non-service connected) - The member's accumulated contributions plus interest are paid in a lump sum to the designated beneficiary. In lieu of receiving the member's accumulated contributions, the surviving spouse of a member who is eligible to retire at death may elect to receive benefits under any survivor option. The spouse must be the member's sole designated beneficiary to exercise this option. If the member had at least 10 years of credited service, but had not reached retirement age, the spouse may elect to leave the member's contributions on deposit with the System and receive a monthly benefit to begin on the date the member would have been eligible to retire.

Service-connected accidental death - The member's accumulated contributions plus interest, plus lump sum amount of \$50,000, plus annual benefit based on 50% of Final Average Salary; reduced by Workers' Compensation benefits and subject to a minimum benefit of \$100 a month; are payable to a spouse, minor children, or dependent parents, for life, or until the youngest child reaches age 18 (or up to age 23 if they are full-time students), in this order of preference. The monthly accidental death benefit is in lieu of any joint/survivor benefit for which the surviving spouse would have been eligible.



Post-retirement death - A lump sum amount of \$4,000 is payable to the member's beneficiary. If the member has selected a retirement option, benefits are paid to the joint annuitant or the designated beneficiary. Under joint and survivor retirement options, if the joint annuitant predeceases the retired member, the reduced option benefit is increased to the amount the retired member would have received if no retirement option had been elected. Benefits payable to a joint annuitant cease at the joint annuitant's death. If a member does not select an option, the designated beneficiary receives the excess, if any, of the member's accumulated contributions plus interest over total benefits paid to date of death.

Member Contributions

Member contributions are 4% of compensation. Interest is credited to members' contribution accounts on June 30 each year, based on account balance as of the preceding December 31. Those who became members prior to July 1, 1993, have interest credited to their accounts at the rate of 8% per year. Those who become members on and after July 1, 1993, have interest credited to their accounts at the rate of 4% per year.

Employer Contributions

Rates are certified by the Board of Trustees, based on the results of annual actuarial valuations.

Board of Regents Plan Members (TIAA and equivalents)

Board of Regents plan members (TIAA and equivalents) do not make contributions to KPERS. They receive prior service benefits for service before 1962; the benefit is 1% of Final Average Salary for each year of credited prior service. Service after 1961 is counted for purposes of determining eligibility for vesting.

Correctional Members

Correctional employees, as certified to the Board of Trustees by the Secretary of Corrections, are defined in K.S.A. 74-4914a: (a) correctional officers, (b) certain directors and deputy directors of correctional institutions, (c) correctional power plan operators, (d) correctional industries employees, (e) correctional food service employees, and (f) correctional maintenance employees.

For groups (a) and (b) with at least three consecutive years of credited service, in such positions immediately preceding retirement, normal retirement age is 55 or Rule of 85 and early retirement requirements are age 50 with ten years of credited service. For groups (c), (d), (e), and (f) with at least three consecutive years of service in such positions immediately preceding retirement, normal retirement age is 60 or Rule of 85 and early retirement requirements are 55 with ten years of credited service.

KANSAS POLICE & FIREMEN'S RETIREMENT SYSTEM

Normal Retirement

Tier I* - age 55 and 20 years of service or 32 years of service (regardless of age). **Tier II**** - age 50 and 25 years of service, or age 55 and 20 years of service, or age 60 and 15 years of service.

Benefits - Benefits are based on the member's Final Average Salary. For those who were hired prior to July 1, 1993, Final Average Salary equals the average of the highest three of the last five years of credited participating service, including add-ons, such as sick and annual leave. For those who are hired on or after July 1, 1993, Final Average Salary equals the average of the highest three of the last five years of participating service, excluding add-ons, such as sick and annual leave. Benefits are based on a member's years of credited service and a multiplier of 2.5% of Final Average Salary for each year of credited service, to a maximum of 80% of Final Average Salary.

Local Plan - For members covered by local plan provisions on the employer's entry date, normal retirement is at age 50 with 22 years of credited service.



Early Retirement

Eligibility -Members must be at least age 50 and have 20 years of credited service.

Benefit - Normal retirement benefits are reduced 0.4% per month under age 55.

Vesting Requirements

Eligibility - Tier I *: The member must have 20 years of service credit; if terminating employment, the member must leave contributions on deposit with the Retirement System to be eligible for future benefits. Unreduced benefits are payable at age 55 or reduced benefits are payable as early as age 50.

Eligibility - Tier II**: The member must have 15 years of service credit to be considered vested. If terminating employment, the member must leave contributions on deposit with the Retirement System to be eligible for future benefits. A vested member may draw unreduced benefits as early as age 50 with 25 years of credited service, age 55 with 20 years of credited service, or age 60 with 15 years of credited service. A reduced benefit is available at age 50 with 20 years of credited service.

Other Benefits

Withdrawal Benefits - Members who terminate employment before retirement may withdraw contributions with interest after the last day on the employer's payroll. Withdrawal of contributions forfeits all membership rights and benefits, which a member may have accrued prior to withdrawing accumulated contributions from the Retirement System. Former members, who return to covered employment within five years after terminating employment, will not have lost any membership rights or privileges if they haven't withdrawn contributions.

Disability Benefits

Tier I*: Service-connected disability - There are no age or service requirements to be eligible for this benefit. There is an annual benefit of 50% of Final Average Salary, plus 10% of Final Average Salary for each dependent child under age 18 (or up to age 23 for full-time students), to a maximum of 75% of Final Average Salary. If dependent benefits aren't payable, the benefit is 50% of Final Average Salary or 2.5% for each year of credited service up to a maximum of 80% of Final Average Salary. Upon the death of a member after two years from the proximate cause of death which is the original service-connected disability, the same benefits are payable. Upon the death of a member after 2 years from a cause different than the disability for which the member is receiving service-connected disability benefits, the surviving spouse receives a lump sum payment of 50% of Final Average Salary. Additionally, a pension benefit of one-half the member's benefit is payable to either the spouse or to the dependent children.

Tier I*: Non-Service-connected disability – An annual benefit of 2.5% times years of credited service times Final Average Salary with a minimum of 25% of FAS and a maximum of 80% of FAS.

Tier II*: There is no distinction between service-connected and non-service-connected disability benefits. Annual benefit of 50% of Final Average Salary. Service Credit is granted during the period of disability. Disability benefits convert to age and service retirement at the earliest date the member is eligible for full retirement benefits. If the member is disabled for at least five years immediately preceding retirement, the member's Final Average Salary is adjusted during the period of Disability.



Death Benefits (Tier I* and Tier II**)

Active Member Service Connected Death - There is no age or service requirement. An annual benefit of 50% of Final Average Salary is payable to the spouse, plus 10% of Final Average Salary for each dependent child under age 18 [or up to age 23 if full time student(s)], to a maximum of 75% of Final Average Salary Active Member.

Active Member Non-Service Connected Death - A lump sum of 100% of Final Average Salary is payable to the spouse and a pension of 2.5% of Final Average Salary per year of credited service (to a maximum of 50%) is payable to the spouse. If there is no spouse, the monthly benefit is paid to the dependent children (age 18 or 23 if a full time student). If there is <u>no</u> surviving spouse or eligible children, the beneficiary will receive a lump sum payment of 100% of the member's current annual pay inclusive of the member's accumulated contributions.

Inactive Member Death - If an inactive member is eligible for retirement when death occurs, and the inactive member's spouse is the sole beneficiary, the spouse may elect to receive benefits as a joint annuitant under any option in lieu of a refund of the member's accumulated contributions.

Post-Retirement Death – There is a lump sum amount of \$4,000 payable, less any death benefit payable under local plan provisions. If the member has selected a retirement option, benefits are paid to the joint annuitant or the designated beneficiary. Under joint and survivor options, if the joint annuitant predeceases the retired member, the benefit is increased to the amount the retired member would have received if no option had been selected. Benefits payable to the joint annuitant cease when the joint annuitant dies. If no option is selected, the designated beneficiary receives the excess, if any, of the member's accumulated contributions over total benefits paid to the date of death. The surviving spouse of a transfer member (who was covered by local plan on the employer's entry date, who dies after retirement, and who has not elected a retirement benefit option) receives a lump sum payment of 50% of Final Average Salary. Additionally, a pension benefit of three-fourths of the member's benefit is payable either to the spouse or dependent children.

Classifications

*Tier I - Members have Tier I coverage if they were employed prior to July 1, 1989, and they did not elect

coverage under Tier II.

****Tier II -** Members have Tier II coverage if they were employed July 1, 1989, or later. This also includes members employed before July 1, 1989 who elected Tier II coverage.

Some KP&F members are considered either Tier I or Tier II Transfer or Brazelton members.

Transfer Member- member who is a former member of a local plan who elected to participate in KP&F. Former Kansas Highway Patrol and former Kansas Bureau of Investigation members are included in this group.

Brazelton member – member who participated in a class action lawsuit, whose contribution is lower, and whose benefits are offset by Social Security.

Member Contributions

Member contributions are 7% of compensation. For members with 32 years of credited service, the contribution rate is reduced to 2% of compensation.

Brazelton members contribute .008% with a Social Security offset. Benefits payable to these members are reduced by one-half of original Social Security benefits accruing from employment with the participating employer.

Employer Contributions



Individual rates are certified by the Board of Trustees for each participating employer based on the results of annual actuarial valuations.

KANSAS JUDGES RETIREMENT SYSTEM

Normal Retirement

Eligibility: - (a) Age 65, or (b) age 62 with ten years of credited service, or (c) any age when combined age and years of credited service equals 85 "points". Age is determined by the member's last birthday and is not rounded up.

Benefit - the benefit is based on the member's Final Average Salary, which is the average of the three highest years of service under any retirement system administered by KPERS. The basic formula for those who were members prior to July 1, 1987, is 5% of Final Average Salary for each year of service up to ten years, plus 3.5% for each year of service greater than ten, to a maximum of 70% of Final Average Salary. For those who became members on or after July 1, 1987, the formula is 3.5% for each year, to a maximum benefit of 70% of Final Average Salary.

Early Retirement

Eligibility - A member must be age 55 and have ten years of credited service to take early retirement.

Benefit - The retirement benefit is reduced to 0.2% per month for each month between the ages of 60 and 62, plus 0.6% per month for each month between the ages of 55 and 60.

Vesting Requirements

Eligibility - There is no minimum service requirement; however, if terminating employment, the member must leave contributions on deposit with the Retirement System in order to be eligible for future benefits. Eligible judges who have service credited under KPERS have vested benefits under both KPERS and the Retirement System for Judges when the combined total credited service equals ten years.

Benefit - Normal benefit accrued at termination is payable at age 62 or in reduced amount at age 55, provided the member has ten years of service credit. Otherwise, benefits are not payable until age 65.

Other Benefits

Disability Benefits - These benefits are payable if a member is defined as totally and permanently disabled as certified by the Supreme Court. The disability benefit, payable until age 65, is 3.5% of Final Average Salary for each year of service (minimum of 25% and maximum of 70% of Final Average Salary). Benefits are recalculated when the member reaches retirement age based on participating service credit for the period of disability. If a judge is disabled for at least five years immediately preceding retirement, the judge's Final Average Salary is adjusted.

Withdrawal Benefit - Members who terminate employment may withdraw contributions with interest, but forfeit any right to a future benefit.

Pre-retirement Death - A refund of the member's accumulated contributions is payable. In lieu of receiving the member's accumulated contributions, the surviving spouse of a member who is eligible to retire at death, may elect to receive benefits under any survivor benefit option. If the member had at least 10 years of credited service, but hadn't reached retirement age at the time of death, the spouse may elect a monthly benefit to begin on the date the member first would have been eligible to retire as long as the member's contributions aren't withdrawn.



Post-retirement Death - A lump sum death benefit of \$4,000 is payable to the member's beneficiary. If the member had selected an option with survivor benefits, those benefits are paid to the joint annuitant or to the member's designated beneficiary. Under retirement options with survivor benefits, if the joint annuitant predeceases the retired member, the retirement benefit is increased to the amount the retired member would have received if no survivor benefits had been elected. Benefits payable to a joint annuitant cease when the joint annuitant dies. If no option was chosen by the retired member, the member's designated beneficiary receives the excess, if any, of the member's accumulated contributions over the total benefits paid to the date of the retired member's death.

Member Contributions

Judges contributions are 6% of compensation. Upon reaching the maximum retirement benefit level of 70% of Final Average Salary, the contribution rate is reduced to 2%.

Employer Contributions

Rates are certified by the Board of Trustees, based on the results of annual actuarial valuations.



APPENDIX C

ACTUARIAL ASSUMPTIONS AND METHODS

<u>KPERS</u>

| Rate of Investment Return | 8.0% per annum, net of expenses | | | | | |
|--------------------------------------|---|--|---------------------------|------------|--|--|
| Implicit Inflation Rate | 3.5% | | | | | |
| Rates of Mortality (Post-retirement) | the following ad School (Male School (Fem State (Male): State (Fema Local (Male) | thy Annuitants Table (Generational) windjustments: le): Male Table -1 male): Female Table -2 e): Male Table +2 ale): Female Table +1 e): Male Table +2 ale): Female Table +0 | | | | |
| Rates of Mortality (Pre-retirement) | RP-2000 Emplo Same age adjus | | e (Generational) above | | | |
| Disabled Life Mortality | RP-2000 Disabl Same age adjus | | | | | |
| Rates of Salary Increase | Years of | | Rate of Increas | <u>se*</u> | | |
| | <u>Service</u> | <u>State</u> | <u>School</u> | Local | | |
| | 1 | 7.8% | 9.8% | 7.8% | | |
| | 5 | 5.6% | 6.7% | 6.2% | | |
| | 10 | 4.9% | 5.1% | 5.2% | | |
| | 15 | 4.4% | | 4.8% | | |
| | 20 | 4.1% | | 4.6% | | |
| | 25 | 4.0% | 4.0% | 4.1% | | |
| | 30 | 4.0% | 4.0% | 4.0% | | |
| | includes gener | al wage in | crease assumpti | on of 4.0% | | |

*Includes general wage increase assumption of 4.0% (composed of 3.5% inflation and 0.50% productivity)



Rates of Termination

| School – Male Years of Service | | | | | | | | | | |
|-----------------------------------|-------|-------|-------|------|------------|--|--|--|--|--|
| Age | <2 | 2 | 3 | 4 | 5 | | | | | |
| 25 | 23.0% | 18.0% | 12.0% | 8.5% | 8.0% | | | | | |
| 30 | 20.5% | 16.2% | 11.0% | 8.5% | 8.0% | | | | | |
| 35 | 19.7% | 15.9% | 10.0% | 8.5% | 7.5% | | | | | |
| 40 | 19.3% | 14.6% | 10.0% | 8.0% | 7.5% | | | | | |
| 45 | 18.8% | 14.3% | 10.0% | 8.0% | 7.0% | | | | | |
| 50 | 18.4% | 13.9% | 10.0% | 8.0% | 7.0% | | | | | |
| Age | 6 | 7 | 8 | 9 | 10 or more | | | | | |
| 25 | 7.5% | 7.4% | 7.0% | 6.7% | 6.0% | | | | | |
| 30 | 7.5% | 6.9% | 6.5% | 5.8% | 5.0% | | | | | |
| 35 | 7.0% | 6.4% | 5.8% | 4.7% | 3.6% | | | | | |
| 40 | 6.5% | 5.9% | 4.7% | 3.8% | 2.5% | | | | | |
| 45 | 6.0% | 5.5% | 4.1% | 3.3% | 1.9% | | | | | |
| 50 | 5.5% | 5.5% | 4.0% | 2.8% | 1.4% | | | | | |

School - Female

| | Years of Service | | | | | | | | | | | |
|-----|------------------|-------|-------|-------|------------|--|--|--|--|--|--|--|
| Age | <2 | 2 | 3 | 4 | 5 | | | | | | | |
| 25 | 26.0% | 20.7% | 17.5% | 11.2% | 10.6% | | | | | | | |
| 30 | 23.5% | 16.2% | 14.4% | 9.2% | 8.9% | | | | | | | |
| 35 | 20.0% | 13.5% | 12.5% | 8.0% | 7.3% | | | | | | | |
| 40 | 16.5% | 11.2% | 9.0% | 7.3% | 6.5% | | | | | | | |
| 45 | 14.0% | 10.2% | 8.7% | 7.1% | 6.2% | | | | | | | |
| 50 | 13.4% | 9.9% | 8.5% | 7.0% | 6.1% | | | | | | | |
| Age | 6 | 7 | 8 | 9 | 10 or more | | | | | | | |
| 25 | 10.0% | 9.4% | 8.7% | 8.1% | 7.5% | | | | | | | |
| 30 | 8.6% | 8.4% | 8.1% | 7.8% | 7.5% | | | | | | | |
| 35 | 6.6% | 5.9% | 5.1% | 4.4% | 3.7% | | | | | | | |
| 40 | 5.7% | 4.8% | 4.0% | 3.1% | 2.3% | | | | | | | |
| 45 | 5.3% | 4.5% | 3.6% | 2.7% | 1.8% | | | | | | | |
| 50 | 5.2% | 4.3% | 3.4% | 2.5% | 1.6% | | | | | | | |



| | | State Years of | - Male Service | | |
|-----|-------|-------------------|-------------------|-------|------------|
| Age | <2 | 2 | 3 | 4 | 5 |
| 25 | 18.0% | 18.0% | 15.8% | 14.0% | 13.3% |
| 30 | 18.0% | 15.0% | 12.0% | 11.2% | 11.2% |
| 35 | 15.0% | 12.0% | 9.6% | 9.6% | 9.6% |
| 40 | 15.0% | 10.3% | 8.1% | 8.1% | 8.1% |
| 45 | 13.0% | 10.0% | 7.5% | 7.0% | 7.0% |
| 50 | 13.0% | 10.0% | 7.5% | 7.0% | 7.0% |
| Age | 6 | 7 | 8 | 9 | 10 or more |
| 25 | 10.0% | 7.0% | 5.0% | 5.0% | 5.0% |
| 30 | 10.0% | 7.0% | 5.0% | 5.0% | 5.0% |
| 35 | 8.0% | 7.0% | 5.0% | 5.0% | 4.8% |
| 40 | 5.8% | 4.5% | 3.8% | 3.8% | 3.5% |
| 45 | 4.8% | 3.2% | 3.0% | 3.0% | 2.2% |
| 50 | 4.8% | 3.0% | 3.0% | 3.0% | 1.4% |

| | State | - | Fer | nale | |
|---|-------|---|-----|------|--|
| - | - | - | - | - | |

| | | Years of | Service | | |
|-----|-------|----------|---------|-------|------------|
| Age | <2 | 2 | 3 | 4 | 5 |
| 25 | 25.0% | 13.0% | 17.6% | 15.0% | 15.2% |
| 30 | 20.5% | 13.0% | 14.9% | 12.3% | 11.9% |
| 35 | 17.8% | 13.0% | 12.6% | 10.7% | 9.9% |
| 40 | 16.3% | 13.0% | 10.6% | 9.8% | 8.8% |
| 45 | 15.8% | 13.0% | 10.2% | 9.5% | 8.2% |
| 50 | 15.5% | 13.0% | 10.2% | 9.3% | 8.0% |
| Age | 6 | 7 | 8 | 9 | 10 or more |
| 25 | 15.3% | 15.5% | 15.7% | 15.7% | 15.9% |
| 30 | 11.5% | 11.1% | 10.4% | 10.4% | 9.8% |
| 35 | 9.1% | 8.3% | 7.2% | 7.2% | 6.0% |
| 40 | 7.8% | 6.7% | 5.2% | 5.2% | 3.7% |
| 45 | 7.0% | 5.7% | 3.9% | 3.9% | 2.0% |
| 50 | 6.8% | 5.5% | 3.6% | 3.6% | 1.7% |



| | | Local Years of | | | |
|-----|-------|---------------------|-------|-------|------------|
| Age | <2 | 2 | 3 | 4 | 5 |
| 25 | 23.0% | 19.5% | 16.1% | 14.9% | 12.3% |
| 30 | 18.0% | 15.3% | 12.6% | 11.7% | 9.4% |
| 35 | 15.0% | 12.0% | 10.5% | 9.7% | 7.5% |
| 40 | 12.5% | 10.6% | 8.7% | 8.1% | 5.9% |
| 45 | 11.3% | 10.0% | 7.9% | 7.3% | 5.1% |
| 50 | 11.0% | 10.0% | 7.7% | 7.2% | 4.9% |
| Age | 6 | 7 | 8 | 9 | 10 or more |
| 25 | 12.6% | 11.5% | 11.5% | 9.0% | 8.0% |
| 30 | 10.1% | 9.3% | 9.3% | 8.0% | 7.0% |
| 35 | 8.2% | 7.4% | 7.4% | 6.8% | 5.0% |
| 40 | 6.7% | 6.0% | 6.0% | 5.5% | 3.8% |
| 45 | 5.8% | 5.0% | 5.0% | 4.3% | 2.7% |
| 50 | 5.6% | 4.8% | 4.8% | 3.8% | 2.5% |
| | | Local - Years of | | | |
| Age | <2 | 2 | 3 | 4 | 5 |
| Age | ~2 | 2 | 5 | 4 | 5 |
| 25 | 25.0% | 22.5% | 18.8% | 15.7% | 14.1% |
| 30 | 20.0% | 18.0% | 15.0% | 12.6% | 11.5% |
| 35 | 17.5% | 15.7% | 13.1% | 11.0% | 10.0% |
| 40 | 15.8% | 14.2% | 11.9% | 10.0% | 8.9% |
| 45 | 15.3% | 13.8% | 11.5% | 9.6% | 8.6% |
| 50 | 15.0% | 13.5% | 11.2% | 9.4% | 8.4% |
| Age | 6 | 7 | 8 | 9 | 10 or more |
| Age | 0 | 7 | 0 | 9 | |
| 25 | 14.5% | 10.9% | 9.2% | 7.6% | 6.0% |
| 30 | 12.5% | 9.3% | 8.2% | 7.1% | 6.0% |
| 35 | 10.4% | 8.0% | 7.0% | 6.0% | 5.0% |
| 40 | 9.3% | 6.8% | 5.9% | 4.8% | 3.8% |
| | 8.0% | 6.0% | 5.5% | 4.4% | 3.4% |
| 45 | 0.0% | 0.0% | 5.5% | 4.4/0 | J.4 /0 |



Retirement Rates

<u>School</u>

| | R | Rule of 85 | | | |
|---|---------------------------------|---|---|--|--|
| Age | 1st Year With 85 Points | After 1st Ye <u>With 85 Poir</u> | | | |
| 53 55 57 59 61 | 20% 20% 22% 25% 30% | 15% 15% 15% 20% 35% | | | |
| Early Retiremen Age Rate 55 5% 56 5% 57 5% 58 5% 59 10% 60 10% 61 22% | | Normal Re Age 62 63 64 65 66 66 67-74 75 | etirement Rate 35% 25% 30% 35% 25% 20% 100% | | |

<u>State</u>

| | Rule of 85 | | | |
|------------|----------------|----------------|--|--|
| | 1st Year | After 1st Year | | |
| <u>Age</u> | With 85 Points | With 85 Points | | |
| 53 | 15% | 15% | | |
| 55 | 15% | 12% | | |
| 57 | 15% | 12% | | |
| 59 | 15% | 15% | | |
| 61 | 30% | 25% | | |

| Early Retirement | | <u>Normal Reti</u> | irement |
|------------------|-------------|--------------------|-------------|
| <u>Age</u> | <u>Rate</u> | Age | <u>Rate</u> |
| 55 | 5% | 62 | 35% |
| 56 | 5% | 63 | 20% |
| 57 | 5% | 64 | 30% |
| 58 | 5% | 65 | 40% |
| 59 | 6% | 66 | 30% |
| 60 | 7% | 67-74 | 20% |
| 61 | 20% | 75 | 100% |



<u>Local</u>

| | Rule of | f 85 |
|------------|----------------|----------------|
| | 1st Year | After 1st Year |
| <u>Age</u> | With 85 Points | With 85 Points |
| 53 | 11% | 10% |
| 55 | 11% | 10% |
| 57 | 11% | 10% |
| 59 | 11% | 12% |
| 61 | 30% | 25% |

| Early Retirement | | Normal Retirement | | |
|------------------|-------------|-------------------|------|--|
| <u>Age</u> | <u>Rate</u> | <u>Age</u> | Rate | |
| 55 | 5% | 62 | 30% | |
| 56 | 5% | 63 | 20% | |
| 57 | 5% | 64 | 30% | |
| 58 | 5% | 65 | 35% | |
| 59 | 5% | 66-74 | 20% | |
| 60 | 5% | 75 | 100% | |
| 61 | 15% | | | |

- Inactive vested members Age 62
- For correctional employees with an age 55 normal retirement date -

| <u>Age</u> | <u>Rate</u> |
|------------|-------------|
| 55 | 10% |
| 58 | 10% |
| 60 | 10% |
| 62 | 40% |
| 65 | 100% |

- For correctional employees with an age 60 normal retirement date Age 62.
- For TIAA employees Age 66.

Rates of Disability

| <u>Age</u> | School | <u>State</u> | <u>Local</u> |
|------------|----------------|----------------|----------------|
| 25 | .025% | .036% | .030% |
| 30 | .025% | .146% | .065% |
| 35 40 | .035% .050% | .230% .305% | .097% .130% |
| 40 45 | .096% | .376% | .190% |
| 50 | .213% | .511% | .330% |
| 55 | .452% | .892% | .600% |
| 60 | .850% | 1.400% | 1.200% |

Indexation of Final Average Salary for Disabled Members: 2.5% per year



Probability of Vested Members Leaving Contributions With System

| <u>Age</u> | <u>School</u> | <u>State</u> | <u>Local</u> |
|------------|---------------|--------------|--------------|
| 25 | 60% | 51% | 35% |
| 30 | 60% | 51% | 40% |
| 35 | 65% | 53% | 47% |
| 40 | 74% | 63% | 61% |
| 45 | 83% | 69% | 71% |
| 50 | 88% | 83% | 82% |
| 55 | 100% | 100% | 100% |

Marriage Assumption: 70% of all members are assumed married with male spouse assumed 3 years older than female.

<u>KP & F</u>

| Rate of Investment Return | 8.0% per annum, net of expenses |
|---------------------------------------|---|
| Implicit Inflation Assumption | 3.5% |
| Rates of Mortality (Post-Retirement) | RP-2000 Healthy Annuitants Table (Generational) Males and Females +1 |
| Rates of Mortality (Post-Retirement)* | RP-2000 Employees Table (Generational) Males and Females +1 % of preretirement deaths assumed to be service related |
| Disabled Life Mortality | RP-2000 Disableds Table(Generational) Males and Females +1 |



| Rates of Salary Increase | Years of <u>Service</u> | Rate <u>of Increase</u> * |
|--------------------------|--|------------------------------|
| | 1 | 12.5% |
| | 5 | 7.0% |
| | 10 | 4.9% |
| | 15 | 4.3% |
| | 20 | 4.0% |
| | 25 | 4.0% |
| | *Includes general wage incr (composed of 3.5% inflatior | |

Rates of Termination

| Tier I: | 3% for ages less that | 3% for ages less than 41; 0% thereafter | |
|----------|-----------------------|---|--|
| | Years of | Data | |
| | <u>Service</u> | <u>Rate</u> | |
| Tier II: | 1 | 13.0% | |
| | 5 | 6.0% | |
| | 10 | 2.5% | |
| | 15 | 1.0% | |
| | 20 | 1.0% | |
| | 25 | 0.0% | |

Retirement Rates

| Tier I: | Early Retirement | | Normal R | etirement |
|----------|------------------|------------------|------------|-------------|
| | Age | Rate | Age | <u>Rate</u> |
| | 50 | 5% | 55 | 50% |
| | 51 | 5% | 56 | 30% |
| | 52 | 10% | 57 | 20% |
| | 53 | 10% | 58 | 40% |
| | 54 | 30% | 59 | 30% |
| | | | 60 | 50% |
| | | | 61 | 20% |
| | | | 62 | 100% |
| Tier II: | Early Re | <u>etirement</u> | Normal R | etirement |
| | <u>Age</u> | Rate | <u>Age</u> | Rate |
| | 50 | 10% | 50 | 25% |
| | 51 | 10% | 53 | 15% |
| | 52 | 10% | 55 | 30% |
| | 53 | 10% | 58 | 20% |
| | 54 | 25% | 60 | 20% |
| | | | 61 | 60% |
| | | | 62 | 40% |
| | | | 63 | 100% |

Inactive Vested: Assumed to retire at later of (i) eligibility for unreduced benefits or (ii) age 55.



| Rates of Disability** | <u>Age</u> | <u>Rate</u> |
|-----------------------|------------|-------------|
| | 22 | .06% |
| | 27 | .07% |
| | 32 | .15% |
| | 37 | .35% |
| | 42 | .60% |
| | 47 | 1.00% |
| | 52 | 1.60% |
| | 57 | 2.55% |

**90% assumed to be service-connected under KP & F Tier I.

Marriage Assumption: 80% of all members assumed married with male spouse assumed to be three years older than female.

Judges

| Rate of Investment Return | 8.0% per annum, net of expenses |
|--|---|
| Implicit Inflation Assumption | 3.5% |
| Rates of Mortality: Post-retirement Pre-retirement | RP-2000 Healthy Annuitants Table (Generational) RP-2000 Employees Table (Generational) |
| Rates of Salary Increase | 5.5% |
| Rates of Termination | None assumed |
| Disabled Life Mortality | RP-2000 Disableds Table (Generational) |
| Rates of Disability | None assumed |
| Retirement Age | Age 64 or current age, if greater |

Marriage Assumption: 70% of all members are assumed married with male spouse assumed 3 years older than female.

Actuarial Methods

1. Funding Method

Under the EAN cost method, the actuarial present value of each member's projected benefits allocates on a level basis over the member's compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial liability. The unfunded actuarial liability 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.

There are several components of the unfunded actuarial liability which are amortized over different periods. The increase in the unfunded actuarial liability resulting from the 1998 COLA is amortized over 15 years. The increase in the unfunded actuarial liability for Local employers resulting from 2003 legislation which made the 13th check for pre-July 2, 1987 retirees a permanent benefit is



funded over a 10 year period beginning in 2005. The remainder of the unfunded actuarial liability is amortized over a period originally set at 40 years beginning July 1, 1993.

The UAL is amortized as a level percentage of payroll for all groups except Judges, who use a level dollar payment. The payroll growth assumption is 4% so the annual amortization payments will increase 4% each year. As a result, if total payroll grows 4% per year, as assumed, the amortization payment will remain level as a percentage of total current payroll.

2. Asset Valuation Method

For actuarial purposes, assets are valued using an asset smoothing method. The difference between the actual return and the expected return (based on the actuarial assumed rate of return) on the market value of assets is calculated each year and recognized equally over a five year period.



APPENDIX D

GLOSSARY OF TERMS

| Actuarial Accrued 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 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. |



APPENDIX D (continued)

Unfunded Actuarial Accrued Liability The

The difference between actuarial accrued liability and the valuation assets. Sometimes referred to as "unfunded actuarial liability" or "unfunded accrued liability".

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

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

