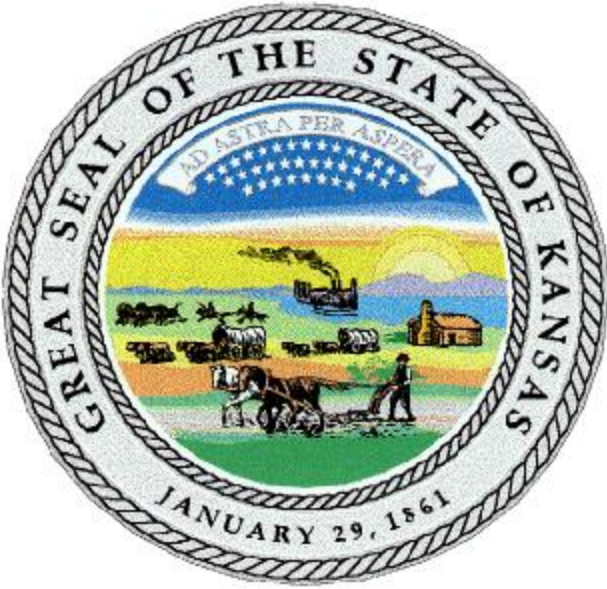


***Kansas Public Employees
Retirement System***



Valuation Report as of December 31, 2002



Kansas Public Employees Retirement System Actuarial Valuation Report

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July 2, 2003

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, 2002. The major findings of the valuation are contained in this report. There was no change in actuarial assumptions and methods from the prior valuation. The report does reflect several legislative changes, which are outlined on page 1 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.

Actuarial computations presented in this report are 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. Any distribution of this report must be in its entirety including this cover letter, unless prior written consent from Milliman USA is obtained.

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, 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 USA, Inc.

Sincerely,

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

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 under one plan: the Kansas Public Employees Retirement System (KPERs), the Kansas Police and Firefighter's Retirement System (KP&F) and the Kansas Retirement System for Judges (Judges). This report presents the results of the December 31, 2002 actuarial valuations for each of the Systems. The primary purposes of performing 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,
- 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 were no changes in the actuarial assumptions, methods or procedures from the last valuation for KPERs. Although the cost method was not changed for KP&F and Judges, we are recommending that the Supplemental UAL and "frozen actuarial liability" for KP&F and Judges respectively be reset as of December 31, 2002. Additional discussion on this topic is included later in this Board Summary. The 2003 Legislature passed the 2003 KPERs Omnibus Bill, which contained several provisions that are reflected in this report:

- Members of the TIAA group (who previously had a separate valuation and contribution rate) were made special members of KPERs. Most of the members were transferred to the State/School group but those employed by the KU Hospital Authority were transferred to the Local group. The legislation effecting this change also provided that bonds will be issued, in addition to a \$2 million cash payment, to fully fund the existing unfunded actuarial liability for this group as of December 31, 2002. The report reflects the bond proceeds as a receivable.
- The 13th check for pre-July 2, 1987 retirees is now a permanent benefit. The legislation also provided for bonds to be issued to finance this benefit improvement for State employees (including State employees of KP&F and Judges). The debt service payments on the bond issue will be paid from an increase in the state's employer contribution rate beginning in FY2005. The resulting increase in the unfunded actuarial liability for Local employers is to be paid off over a 10 year period beginning in 2005 by an increase in the employer contribution. The contribution rates developed in this valuation report reflect the bond proceeds as a receivable and determine the appropriate contribution rate for each group based on the applicable statutory provisions.
- The statutory cap for the State/School group will increase to 0.40% in FY2006, with subsequent increases of 0.50% in FY2007 and 0.60% in FY2008 and beyond.
- Up to \$500 million in pension obligation bonds are authorized to be issued for the purpose of reducing a portion of the unfunded actuarial liability for the State/School group. The issuance of the bonds is dependent upon approval or recommendation by several entities during the process. Due to the contingent nature of the bond issue, the valuation report does not reflect a future bond issue for the State/School group.

The valuation results provide a "snapshot" view of the System's financial condition on December 31, 2002. The unfunded actuarial liability for the System as a whole increased by \$1.049 billion, due to various factors, the most significant of which was the actuarial loss from investment return on the actuarial value of assets. A detailed analysis of the change in the unfunded actuarial liability from December 31, 2001 to December 31, 2002 is shown on page 7.

In KPERS, State/School and Local employers do not 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 is currently 0.20% for State/School, will be increased to 0.40% in FY2006, 0.50% in FY2007 and 0.60% in FY 2008. The statutory cap for Local remains at 0.15%. Based on the results of the current valuation and assuming an 8% return on the market value of assets in 2003 and beyond and that all other assumptions are met in the future, the statutory and actuarial contribution rates will not converge before 2033, the end of the amortization period. As a result, the unfunded actuarial liability will grow steadily and the actuarial contribution rate will increase significantly.

The valuation shows that the current assets plus the present value of future contributions are not equal to the present value of future benefits and thus the System is not in "actuarial balance." Due to negative investment experience and the delayed reflection of market experience in the actuarial value of assets, it is expected that additional actuarial losses will be reflected in the unfunded actuarial liability over the next few years, which will exacerbate the long term funding concerns. While the 2003 Legislature increased future contribution rates by ultimately raising the statutory cap to 0.60%, the statutory and actuarial rates are still not projected to converge. Therefore, we recommend the System's funding policy continue to be studied in order to address this issue. In our opinion, additional areas of study should include:

- Actuarial cost method
- Asset smoothing method including use of a corridor and smoothing factor
- Reamortization of the UAL including reset date, amortization method and period
- Statutory caps (especially for Local employers since no change has been made)

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. Actuarial contribution rates consist of a normal cost rate and an amortization payment. The contribution rates in the December 31, 2002 valuation will set rates for fiscal year end 2006 for the State and 2005 for Local employers.

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

System	December 31, 2002 Valuation		Difference
	Actuarial	Statutory	
State/School	9.14%	5.27% ¹	3.87%
Local	5.44%	3.41% ¹	2.03%
Police & Fire -Uniform Rates ²	11.63%	11.63%	0.00%
Judges	21.97%	21.97%	0.00%

System	December 31, 2001 Valuation ³		Difference
	Actuarial	Statutory	
State/School	7.69%	4.78%	2.91%
Local	4.64%	3.22%	1.42%
TIAA	2.76%	2.76%	0.00%
Police & Fire -Uniform Rates	9.47%	9.47%	0.00%
Judges	18.67%	18.67%	0.00%

¹ Rates, by statute, are allowed to increase by a maximum of 0.40% and 0.15% per year plus the cost of any benefit enhancements for State and Local employers respectively.

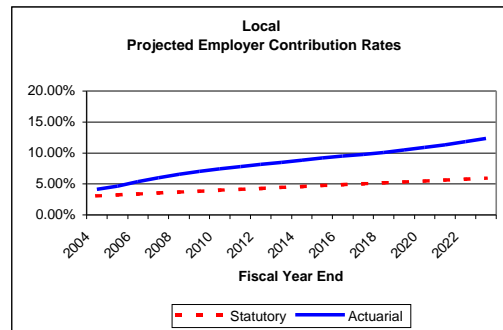
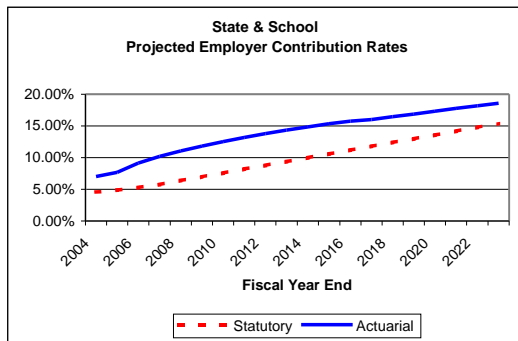
² For KP&F, the statutory contribution rate is equal to the "Uniform" rate. The rate shown is for local employers. The rate for State employers is 11.93% which includes a payment of 0.90% for the debt service payment on the bonds issued for the 13th check. The uniform rate does not include the payment required to amortize the unfunded past service liability or any 15% excess benefit liability determined separately for each employer. (See Table 12).

³ Does not reflect the change in contribution rates for the State for FY2005 due to the debt service payment on bonds expected to be issued in 2003.

Employer Contribution Rates for the Correctional Employee Groups are shown below:

	<u>Actuarial</u>	<u>Statutory</u>
Retirement Age 55:	9.61%	5.74%
Retirement Age 60:	9.47%	5.60%

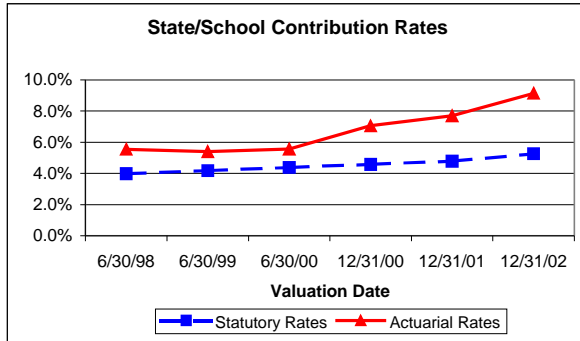
As mentioned earlier, State/School and Local employers do not contribute the full actuarial contribution rate. Based on the current valuation, there is a difference (shortfall) between the actuarial and statutory contribution rates of 3.87% and 2.03% respectively for the State/School and Local groups. Assuming an 8% return on the market value of assets for 2003 and beyond, and that all other actuarial assumptions are met in the future, the statutory and actuarial contribution rates will not converge before the end of the current amortization period.



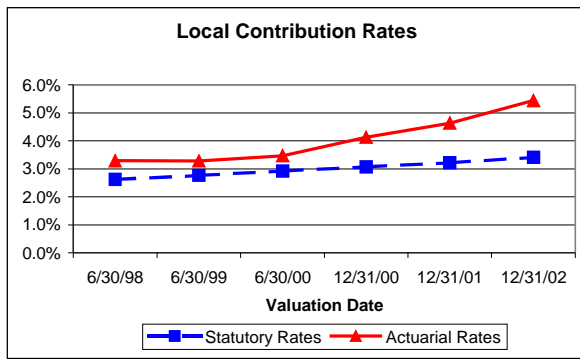
Employer contribution rates for all groups increased in the 2002 valuation as compared to the 2001 valuation. The negative investment experience during calendar year 2002, coupled with the deferred investment losses from prior years, was the most significant factor contributing to the increase in contribution rates. As the remainder of the deferred investment loss is recognized in the actuarial value of assets in future years, contribution rates can be expected to continue to increase.

For the State/School and Local groups, the impact of negative experience is reflected in the unfunded actuarial liability (UAL). The result is the actuarial loss increases the payment on the UAL, but the normal cost rate is not impacted. However, actuarial gains/losses are reflected in the normal cost rate rather than the unfunded actuarial liability under the actuarial cost methods currently used for KP&F and Judges. This essentially funds the gain/loss over the average future working lifetime of actives members. For KP&F the average future working lifetime is about 13 years and for Judges it is around 10 years. Funding actuarial losses over a relatively short period results in significant increases in the normal cost rate. Due to the significant investment losses in the past three years, we recommend the UAL for both KP&F and Judges be reset to the UAL under the traditional entry age normal method as of December 31, 2002. The impact of this change is to shift a portion of future costs from the normal cost to the UAL, where it is paid off over a longer period. The net result of this change is a lower actuarial contribution rate.

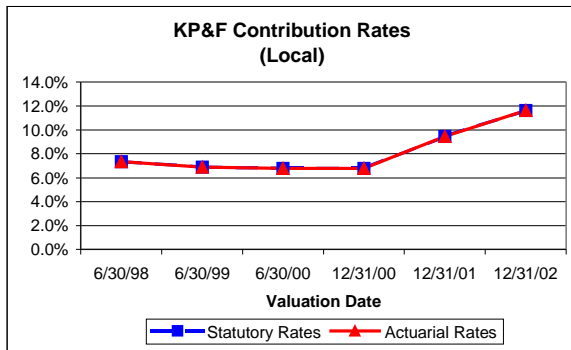
Historical contribution rates for each group are shown below:



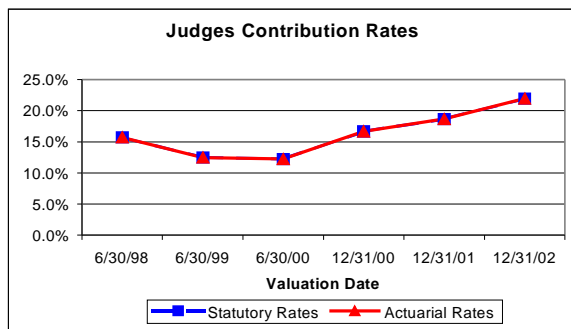
Recent investment experience has resulted in an increase in the actuarial contribution rate. As the deferred investment loss is reflected in future valuation results, the gap between the statutory and actuarial rate is expected to increase.



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.



The rate for KP&F is heavily impacted by investment experience. The low investment return on the actuarial value of assets in recent years has resulted in significant increases in the contribution rate. This can be expected to continue as investment losses from prior years are recognized in the actuarial value of assets.



The Judges System has a small membership and therefore is subject to greater volatility. Significant changes in the actuarial assumptions in the December 31, 2000 valuation and investment experience in recent years have resulted in an increase in costs.

EXPERIENCE - ALL SYSTEMS COMBINED
December 31, 2001 – December 31, 2002

Several factors contributed to the change in the Systems' assets, liabilities, and actuarial contribution rates between the December 31, 2001 and December 31, 2002 actuarial valuations. On the following pages each component is examined.

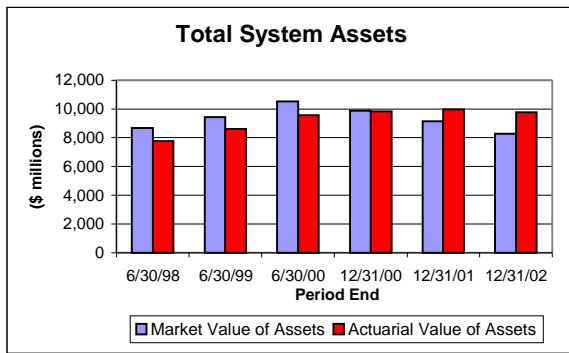
ASSETS

As of December 31, 2002, the System had total funds when measured on a market value basis, of \$8.241 billion, excluding receivables and assets held for the Group Insurance and Optional Life reserves. This was a decrease of \$0.905 billion from the December 31, 2001 figure of \$9.146 billion. The components of the change in the market value of assets for the Retirement System (in millions) are set forth below:

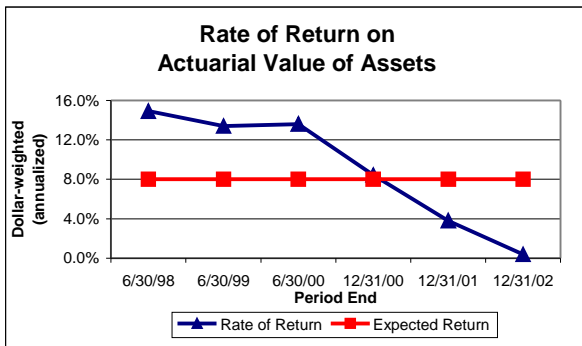
	Market Value \$(millions)
Assets, December 31, 2001	\$9,146
• Employer and Member Contributions	418
• Benefit Payments and Expenses	(674)
• Investment Income	(649)
Assets, December 31, 2002	\$8,241
• Receivables	42
Adjusted Assets, December 31, 2002	\$8,283

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 actuarial value of assets is equal to the expected asset value, based on the assumed interest rate, plus 1/3 of the difference between the actual market value and the expected asset value. See Table 3 for the detailed development of the actuarial value of assets as of December 31, 2002 for each System. The actuarial value of assets as of December 31, 2002, including receivables, was \$9.785 billion. The annualized dollar-weighted rate of return for 2002 measured on the actuarial value of assets was 0.8% and, measured on the market value of assets as reported by KPERS, was -6.9%.

Due to the asset smoothing method, there is \$1.5 billion of deferred investment loss that has not yet been recognized. Absent investment returns significantly in excess of 8% in the next few years to offset this deferred investment loss it will gradually be reflected in the actuarial value of assets. As this occurs through the smoothing method, the valuation results will show an actuarial loss on assets even if the 8% return occurs.



Due to rates of return in the 1990's in excess of the actuarial assumption, the market value generally exceeded the actuarial value of assets. The market experience over the last 3 years reversed that trend. The actuarial value of assets now exceeds the market value by \$1.5 billion.



The rate of return on the actuarial (smoothed) value of assets exceeded the assumed rate of 8% until 2001. Rates are expected to remain well below 8% for the short term 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 projected 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. The unfunded actuarial liability will be reduced if the employer's contributions exceed the employer's normal cost for the year, after allowing for interest earned on the previous balance of the unfunded actuarial liability. Benefit improvements, experience gains and losses, and changes in actuarial assumptions and procedures will also impact the total actuarial liability and the unfunded portion thereof.

The Actuarial Liability and the Unfunded Actuarial Liability for all Systems (\$millions) are:

	<u>State/School</u>	<u>Local</u>	<u>KP&F</u>	<u>Judges</u>
Actuarial Liability	\$ 9,189	\$ 1,859	\$ 1,468	\$ 97
Actuarial Value of Assets	\$ 6,950	\$ 1,519	\$ 1,235	\$ 80
Unfunded Actuarial Liability	\$ 2,239	\$ 340	\$ 233*	\$ 17

*Includes UAL for prior service being paid off by individual employers.

See Tables 4 and 5 for the detailed development of the actuarial liability by System. The calculation of the Unfunded Actuarial Liability by System is shown in Tables 8 and 9.

When the actuarial cost method was changed by the Legislature in 1993, the payment methodology for the unfunded actuarial liability (UAL) for most of the groups 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. Both the State/School and Local groups had a small liability loss in addition to a large loss on asset experience. Retiree mortality, termination of employment experience and service purchases contributed to the actuarial loss.

Between December 31, 2001 and December 31, 2002 the change in the unfunded actuarial liabilities for the System as a whole was as follows (in millions):

	<u>\$millions</u>
Unfunded Actuarial Liability, December 31, 2001	\$ 1,780
<ul style="list-style-type: none"> • effect of contribution cap/time lag • expected increase due to amortization method • loss from investment return • liability experience • all other experience • change in benefit provisions (13th check) • change in actuarial assumptions • transfer of TIAA members • 13th check bond proceeds • TIAA bond proceeds • re-establishment of UAL (KP&F/Judges) 	143 21 644 68* 0 37 0 0 (25) (16) 177
Unfunded Actuarial Liability, December 31, 2002	\$ 2,829

*Liability loss is about 0.60% of total actuarial liability.

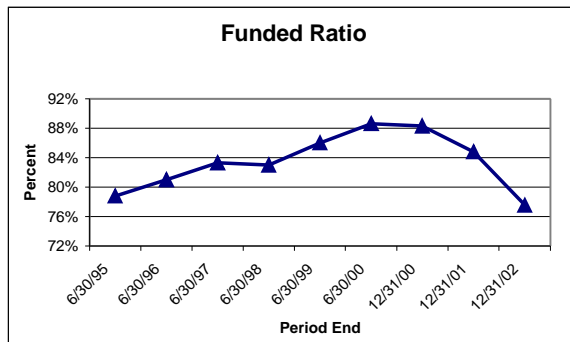
A detailed summary of the change in the unfunded actuarial liability by System is shown on page 9.

As mentioned earlier in this report, there is currently \$1.5 billion of deferred investment loss which will eventually be recognized in the actuarial value of assets in the next few years. As the prior investment losses are recognized, the UAL will increase by that amount. If the assumed rate of 8% is not met on the market value of assets it will result in an additional increase in the UAL and an additional amount of deferred investment loss to be recognized later.

Given the current funded status of the System (including the deferred investment loss) and the scheduled increases in employer contribution rates, the unfunded actuarial liability is expected to continue to grow. This does not reflect the impact of any pension obligation bonds that may be issued in the future. Assuming an 8% return on the market value of assets for 2003 and all future years and assuming all other actuarial assumptions are met, the UAL for the State/School group is expected to exceed \$6 billion with a resulting estimated funded ratio of around 55% by 2013. This dramatic deterioration in the System's financing supports our continuing concerns about the long term funding of the System and the need to continue to consider additional changes in the funding plan, as previously discussed.

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. This information is shown below (in millions).

	6/30/97	6/30/98	6/30/99	6/30/00	12/31/00	12/31/01	12/31/02
Funded Ratio	83.3%	83.0%	86.0%	88.6%	88.3%	84.8%	77.6%
Unfunded Actuarial Liability (UAL)	\$1,376	\$1,591	\$1,397	\$1,233	\$1,305	\$1,780	\$2,829



Although the funded status of the System generally improved in the last half of the 1990's, recent changes in actuarial valuation procedures coupled with low investment returns have significantly reduced the funded ratio.

CONTRIBUTIONS

Generally, contributions to the System consist of:

- a "normal cost" for the portion of projected liabilities allocated to service of members during the year following the valuation date, by the actuarial cost method,
- an "unfunded actuarial liability 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 each June 30. Therefore, the death and disability contribution rate is not reflected in this report.

Different actuarial cost methods are used for KPERS, KP&F and Judges (see Appendix C). Under the cost methods for KP&F and Judges, actuarial losses are funded over the future working lifetime of active members. The significant losses on the actuarial value of assets in the past two years have resulted in a significant increase in the contribution rate each year. To address this issue in the short term, we recommend the UAL be reset as of December 31, 2002 for both KP&F and Judges. However, the innate weakness of an aggregate type cost method will continue to exist and will likely create additional challenges in future years (due to the deferred losses) if unchanged. Other acceptable cost methods are available which would reflect future actuarial gains/losses in the unfunded actuarial liability. Because the UAL is financed over a longer period, this should reduce the spike in the contribution rate due to plan asset experience. We recommend the Board study this issue further before the next actuarial valuation is completed.

The change in the actuarial contribution rate from December 31, 2001 to December 31, 2002 and the primary components thereof are shown in the table on page 10.

SUMMARY OF CHANGE IN UNFUNDED ACTUARIAL LIABILITY
DECEMBER 31, 2002 VALUATION

\$(millions)	State/School	Local	TIAA	KP&F*	Judges*	Total
UAL in 12/31/01 Valuation Report	\$1,506.0	\$185.3	\$19.8	\$58.8	\$10.2	\$1,780.1
• Effect of contribution cap/timing	121.3	18.5	3.4	0.0	0.0	143.2
• Expected increase due to method	29.6	3.4	(9.1)	(2.9)	(0.1)	20.9
• Actual vs Expected experience						
• Investment return	532.0	110.3	1.4	0.0	0.0	643.7
• Demographic experience	48.8	18.1	0.5	0.0	0.0	67.4
• All other experience	0.8	0.3	0.0	(0.8)	0.0	0.3
• Change in assumptions	0.0	0.0	0.0	0.0	0.0	0.0
• Change in benefit provisions (13 th check)	22.7	4.1	0.4	9.6	0.2	37.0
• Expected bond proceeds (13 th check)	(22.4)	0.0	(0.4)	(1.9)	(0.2)	(24.9)
• Transfer of TIAA members	15.6	0.4	(16.0)	0.0	0.0	0.0
• Expected TIAA bond proceeds	(15.6)	(0.4)	0.0	0.0	0.0	(16.0)
• Re-establishment of UAL	0.0	0.0	0.0	169.7	7.3	177.0
UAL in 12/31/02 Valuation Report	\$2,238.8	\$340.0	\$0.0	\$232.5	\$17.4	\$2,828.7

*The UAL for Judges and KP&F is frozen and as such reflects only changes due to assumption changes or changes in benefit provisions. The UAL was re-established as of December 31, 2002.

**SUMMARY OF
CHANGES IN ACTUARIAL CONTRIBUTION RATE
BY SYSTEM
AS OF DECEMBER 31, 2002**

Percentage of Payroll	State/School	Local	KP&F*	Judges
Actuarial Contribution Rate in 12/31/01 Valuation	7.69%	4.64%	9.47%	18.67%
Change Due to Amortization of UAL				
• effect of contribution cap/time lag	0.20	0.09	0.00	0.00
• amortization method	0.05	0.02	0.00	0.00
• investment experience	0.89	0.56	0.00	0.00
• liability experience	0.08	0.09	0.00	0.00
• all other experience	0.00	(0.06)	(0.03)	0.00
• assumption change	0.00	0.00	0.00	0.00
• changes in benefit provisions (13 th check)	0.09	0.04	0.33	0.14
• re-establishment of UAL			3.03	2.84
Change in Normal Cost Rate	0.14	0.06	(1.17)	0.32
Actuarial Contribution Rate in 12/31/02 Valuation	9.14%	5.44%	11.63%	21.97%

* Contribution rate for Local employers only.

SUMMARY OF HISTORICAL CHANGES IN TOTAL SYSTEM UAL
as of
DECEMBER 31, 2002 VALUATION

\$(millions)	As Reported on Valuation Date										
	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	Total
Actual Experience vs Assumed											
• Investment	\$(102)	\$(143)	\$(280)	\$(323)	\$(413)	\$(360)	\$(441)	\$(23)	\$350	\$644	\$(1,100)
• Other	320	72	136	157	104	46	99	84	(9)	68	1,077
Assumption Changes	0	(96)	0	0	350	0	0	(206)	0	0	48
Changes in Data/Procedures	244	0	0	0	0	21	71	145**	5	177**	663
Effect of Contribution Cap/Lag	*	95	70	63	54	78	66	60	115	143	744
Amortization Method	*	47	38	35	32	30	22	12	14	21	251
Change in Benefit Provisions	75	0	0	0	88	0	19	0	0	37	219
Bond Issue	0	0	0	0	0	0	0	0	0	(41)	(41)
Total	\$537	\$(25)	\$(36)	\$(68)	\$215	\$(194)	\$(164)	\$72	\$475	\$1,048	\$1,861

*Not calculated for this year

**Includes the impact of re-establishing the KP&F Supplemental Actuarial Liability. 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 actuarial procedures is also included.

Unfunded actuarial liability 6/30/93 : \$968 million

Unfunded actuarial liability 12/31/02 : \$2,829 million

SUMMARY OF PRINCIPAL RESULTS
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM
(STATE/SCHOOL)

	12/31/2002 **	12/31/01	% Change
	Valuation	Valuation	
1. PARTICIPANT DATA			
Number of:			
Active Members	105,263	105,252	0.0 %
Retired Members and Beneficiaries	43,136	41,307	4.4
Inactive Members	<u>30,590</u>	<u>28,899</u>	5.9
Total Members	<u><u>178,989</u></u>	<u><u>175,458</u></u>	2.0
Projected Annual Salaries of Active Members	\$ 3,373,166,160	\$ 3,287,503,319	2.6
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 447,360,185	\$ 413,415,607	8.2
2. ASSETS AND LIABILITIES			
Total Actuarial Liability	\$ 9,189,098,277	\$ 8,590,033,174	7.0
Assets for Valuation Purposes	6,950,298,376	7,084,047,416	(1.9)
Unfunded Actuarial Liability	2,238,799,901	1,505,985,758	48.7
3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL			
Normal Cost	5.17%	5.03%	
Amortization of Unfunded Actuarial and Supplemental Liability	<u>3.97%</u>	<u>2.66%</u>	
Actuarial Contribution Rate	9.14%	7.69%	
Statutory Employer Contribution Rate*	<u>5.27%</u>	<u>4.78%</u>	

* Statutory Employer Contribution Rate exceeds last year's rate by the statutory rate increase limit of 0.4% plus a payment of 0.09% for the debt service payment on the bonds issued for the 13th check liability. This rate does not include the 0.60% contribution rate for the Death and Disability Program.

** Reflects addition of TIAA members as special KPERS members.

SUMMARY OF PRINCIPAL RESULTS
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM
(STATE AND SCHOOL SPLIT FOR INFORMATIONAL PURPOSES **)

	12/31/02 State	12/31/02 School
1. PARTICIPANT DATA		
Number of:		
Active Members	24,934	80,109
Retired Members and Beneficiaries	13,247	29,151
Inactive Members	<u>5,612</u>	<u>24,872</u>
Total Members	<u><u>43,793</u></u>	<u><u>134,132</u></u>
Projected Annual Salaries of Active Members	\$ 838,397,642	\$ 2,534,768,517
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 132,595,231	\$ 311,503,562
2. ASSETS AND LIABILITIES		
Total Actuarial Liability	\$ 2,415,071,587	\$ 6,736,497,855
Assets for Valuation Purposes	2,309,556,304	4,603,213,237
Unfunded Actuarial Liability	105,515,283	2,133,284,618
3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL		
Normal Cost	4.83%	5.29%
Amortization of Unfunded Actuarial and Supplemental Liability	<u>1.06%</u>	<u>4.89%</u>
Actuarial Contribution Rate	5.89%	10.18%
Statutory Employer Contribution Rate*	<u>5.27%</u>	<u>5.27%</u>

* Statutory Employer Contribution Rate exceeds last year's rate by the statutory rate increase limit of 0.4% plus a payment of 0.09% for the debt service payment on the bonds issued for the 13th check liability. This rate does not include the 0.60% contribution rate for the Death and Disability Program.

** TIAA members not reflected in either group. Split assumes 66.59% of the State/School assets are allocated to the School group based on analysis provided by KPERs.

SUMMARY OF PRINCIPAL RESULTS
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM
(LOCAL)

	12/31/02	12/31/01	
	Valuation	Valuation	% Change
1. PARTICIPANT DATA			
Number of:			
Active Members	35,235	33,757	4.4 %
Retired Members and Beneficiaries	10,969	10,704	2.5
Inactive Members	<u>8,838</u>	<u>8,161</u>	8.3
Total Members	<u><u>55,042</u></u>	<u><u>52,622</u></u>	4.6
Projected Annual Salaries of Active Members	\$ 1,153,168,204	\$ 1,068,242,752	8.0
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 78,602,629	\$ 73,591,887	6.8
2. ASSETS AND LIABILITIES			
Total Actuarial Liability	\$ 1,858,721,775	\$ 1,704,422,253	9.1
Assets for Valuation Purposes	1,518,684,533	1,519,102,089	(0.0)
Unfunded Actuarial Liability	340,037,242	185,320,164	83.5
3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL			
Normal Cost	3.67%	3.61%	
Amortization of Unfunded Actuarial and Supplemental Liability	<u>1.77%</u>	<u>1.03%</u>	
Actuarial Contribution Rate	5.44%	4.64%	
Statutory Employer Contribution Rate*	<u>3.41%</u>	<u>3.22%</u>	

* Statutory Employer Contribution Rate exceeds last year's rate by the statutory rate increase limit of 0.15% plus a contribution rate of 0.04% to fund the increase in the UAL resulting from the 13th check. This rate does not include the 0.60% contribution rate for the Death and Disability Program.

SUMMARY OF PRINCIPAL RESULTS
KANSAS POLICE AND FIREFIGHTER'S RETIREMENT SYSTEM

	12/31/02 Valuation	12/31/01 Valuation	% Change
1. PARTICIPANT DATA			
Number of:			
Active Members	6,548	6,405	2.2 %
Retired Members and Beneficiaries	3,338	3,211	4.0
Inactive Members	<u>961</u>	<u>855</u>	12.4
Total Members	<u><u>10,847</u></u>	<u><u>10,471</u></u>	3.6
Projected Annual Salaries of Active Members	\$ 317,784,548	\$ 297,722,078	6.7
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 69,902,312	\$ 64,295,036	8.7
2. ASSETS AND LIABILITIES			
Total Actuarial Liability	\$ 1,467,979,675	\$ 1,318,343,709	11.4
Assets for Valuation Purposes	1,235,479,858	1,259,442,200	(1.9)
Unfunded Actuarial Liability	232,499,817 *	58,901,509	294.7
3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL			
Normal Cost	7.85%	9.02%	
Amortization of Unfunded Actuarial and Supplemental Liability	<u>3.78%</u>	<u>0.45%</u>	
Actuarial Contribution Rate (Local Employers)	11.63%	9.47%	
Statutory Employer Contribution Rate**	<u>11.63%</u>	<u>9.47%</u>	

* The Supplemental Unfunded Actuarial Liability was reset as of December 31, 2002. This figure includes \$44,875,545 of UAL that will be paid by individual employers for prior service credit upon affiliation.

** 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.

SUMMARY OF PRINCIPAL RESULTS

KANSAS RETIREMENT SYSTEM FOR JUDGES

	12/31/02 Valuation	12/31/01 Valuation	% Change
1. PARTICIPANT DATA			
Number of:			
Active Members	248	252	(1.6) %
Retired Members and Beneficiaries	154	147	4.8
Inactive Members	15	18	(16.7)
Total Members	417	417	0.0
Projected Annual Salaries of Active Members	\$ 21,784,017	\$ 21,577,514	1.0
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 4,597,899	\$ 4,256,204	8.0
2. ASSETS AND LIABILITIES			
Total Actuarial Liability	\$ 97,798,899	\$ 92,017,634	6.3
Assets for Valuation Purposes	80,399,421	81,847,643	(1.8)
Unfunded Actuarial Liability	17,399,478 *	10,169,991	71.1
3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL			
Normal Cost	15.00%	14.68%	
Amortization of Unfunded Actuarial and Supplemental Liability	<u>6.97%</u>	<u>3.99%</u>	
Actuarial Contribution Rate	21.97%	18.67%	
Statutory Employer Contribution Rate**	<u>21.97%</u>	<u>18.67%</u>	

* The "frozen" Unfunded Actuarial Liability was reset as of December 31, 2002.

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

SUMMARY OF PRINCIPAL RESULTS
ALL SYSTEMS COMBINED

	12/31/02 Valuation	12/31/01 Valuation	% Change
1. PARTICIPANT DATA			
Number of:			
Active Members	147,294	145,910	0.9 %
Retired Members and Beneficiaries	57,597	56,115	2.6
Inactive Members	<u>40,404</u>	<u>38,056</u>	6.2
Total Members	<u><u>245,295</u></u>	<u><u>240,081</u></u>	2.2
Projected Annual Salaries of Active Members	\$ 4,865,902,928	\$ 5,116,384,351	(4.9)
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 600,463,025	\$ 558,772,421	7.5
2. ASSETS AND LIABILITIES			
Total Actuarial Liability	\$ 12,613,598,626	\$ 11,743,051,755	7.4
Assets for Valuation Purposes	9,784,862,188	9,962,917,897	(1.8)
Unfunded Actuarial Liability	2,828,736,438	1,780,133,858	58.9

SECTION 2

SCOPE OF THE REPORT

This report presents the actuarial valuation of the Kansas Public Employees Retirement System (KPERS) as of December 31, 2002. This valuation was requested by the System's Board.

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

A summary of the findings 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, 2002.
- Appendix C A summary of the actuarial methods and assumptions used to estimate liabilities and determine contribution rates.
- Appendix D A glossary of actuarial terms.

SECTION 3

ASSETS

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is December 31, 2002. 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 thus leads to a method of determining the contributions needed by members and their employers in the future to balance the System assets and liabilities.

Market Value of Assets

The current market value represents the "snapshot" or "cash-out" value of System assets as of the valuation date. In addition, market values of assets provide a basis for measuring investment performance from time to time. At December 31, 2002 the market value of assets (excluding receivables) for the Retirement System was \$8.241 billion. Table 1 is a comparison, at market values, of System assets as of December 31, 2002, and December 31, 2001, in total and by investment category. Table 2 summarizes the change in the market value of assets from December 31, 2001 to December 31, 2002 by System.

On the valuation date there were receivables to be reflected. These include:

- the bond proceeds to finance the unfunded actuarial liability for the TIAA group,
- the bond proceeds to finance the additional liability created by making the 13th check permanent, and
- the payoff of the existing UAL in KP&F by Franklin County. The receivables are included in both the market value of assets and actuarial value of assets.

Actuarial Value of Assets

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

To arrive at a suitable value for the actuarial valuation, a technique for determining the actuarial value of assets is used which dampens swings in the market value while still indirectly recognizing market values. The specific technique follows:

- Step 1** Determine the expected value of plan assets at the current valuation date using the actuarial assumption for investment return and the actual receipts and disbursements of the fund for the previous 12 months.
- Step 2** Subtract the expected value determined in Step 1 from the total market value of the Fund at the current valuation date.
- Step 3** Divide the difference between market and expected values determined in Step 2 by 3.
- Step 4** Add the expected value of Step 1 and the result of Step 3 to determine the actuarial value of assets.

Table 3 shows the development of the actuarial value of assets (AVA) as of December 31, 2002.

The actuarial value of assets continues to exceed the market value as of the valuation date.

TABLE 1
ANALYSIS OF NET ASSETS AT MARKET VALUE

	December 31, 2002		December 31, 2001	
	<u>Amount</u> (\$ Millions)	<u>% of</u> <u>Total</u>	<u>Amount</u> (\$ Millions)	<u>% of</u> <u>Total</u>
Cash & Equivalents	\$ 276	3.3 %	\$ 507	5.5 %
Alternative Investments	473	5.7	487	5.2
Real Estate	625	7.5	657	7.1
Fixed Income	2,822	33.7	2,649	28.5
Domestic Equity Large Cap	2,399	28.8	2,394	25.8
International Equity	1,523	18.3	1,154	12.4
Domestic Equity Small Cap	223	2.7	1,431	15.5
Subtotal	\$ 8,341	100.0 %	\$ 9,279	100.0 %
Administrative Reserves	(14)		(14)	
Group Insurance and Optional Life Reserves	(86)		(119)	
NET ASSETS	\$ 8,241		\$ 9,146	
RECEIVABLES	42		0	
ADJUSTED NET ASSETS	\$ 8,283		\$ 9,146	

Allocation of Net Assets on December 31, 2002:

State/School	\$ 5,826
Local	1,297
TIAA	19
KP&F	1,032
Judges	67
Total Net Assets	\$ 8,241

TABLE 2
SUMMARY OF CHANGES IN KPERS ASSETS
DURING PERIOD ENDED DECEMBER 31, 2002

(Market Value)

	State/School	Local	TIAA	Total KPERS
Market Value of Assets as of January 1, 2002*	\$ 6,509,563,524	\$ 1,395,342,080	\$ 16,993,150	\$ 7,921,898,754
Accounting Adjustments	(6,361,982)	6,358,278	0	(3,704)
Contributions:				
Employee	131,251,148	44,110,327	0	175,361,475
Employee service purchases	9,883,150	3,056,893	0	12,940,043
Employer	135,975,472	32,709,360	6,854,297	175,539,129
Miscellaneous	73,605	(1,636)	0	71,969
Total Contributions	<u>277,183,375</u>	<u>79,874,944</u>	<u>6,854,297</u>	<u>363,912,616</u>
Total Investment Income	<u>(457,091,173)</u>	<u>(92,584,625)</u>	<u>(987,976)</u>	<u>(550,663,774)</u>
Total Income	<u>(179,907,798)</u>	<u>(12,709,681)</u>	<u>5,866,321</u>	<u>(186,751,158)</u>
Less Benefits:				
Retirement Benefits	(460,528,658)	(77,662,878)	(3,266,169)	(541,457,705)
Retirant Dividends	(4,844,507)	(846,876)	(100,212)	(5,791,595)
Withdrawals	(20,746,503)	(9,229,718)	0	(29,976,221)
Death Benefits	(10,852,873)	(4,224,877)	(174,000)	(15,251,750)
Total Benefits	<u>(496,972,541)</u>	<u>(91,964,349)</u>	<u>(3,540,381)</u>	<u>(592,477,271)</u>
Net Increase in Assets	(676,880,339)	(104,674,030)	2,325,940	(779,228,429)
Market Value of Assets as of December 31, 2002*	\$ 5,826,321,203	\$ 1,297,026,328	\$ 19,319,090	\$ 7,142,666,621
Transfer	19,262,731	495,152	(19,757,883)	0
Receivables	38,032,114	405,168	438,793	38,876,075
Adjusted Market Value of Assets	\$ 5,883,616,048	\$ 1,297,926,648	\$ 0	\$ 7,181,542,696

* Note: Assets exclude insurance and administrative reserves.



**TABLE 2 (cont.)
SUMMARY OF CHANGES IN KPERS ASSETS
DURING PERIOD ENDED DECEMBER 31, 2002**

(Market Value)

	KPERS	KP&F	Judges	Total
Market Value of Assets as of January 1, 2002*	\$ 7,921,898,754	\$ 1,149,732,145	\$ 74,599,904	\$ 9,146,230,803
Accounting Adjustments	(3,704)	0	0	(3,704)
Contributions:				
Employee	175,361,475	21,612,919	1,052,591	198,026,985
Employee service purchases	12,940,043	429,248	57,874	13,427,165
Employer	175,539,129	28,809,916	2,604,851	206,953,896
Miscellaneous	71,969	6,230	800	78,999
Total Contributions	<u>363,912,616</u>	<u>50,858,313</u>	<u>3,716,116</u>	<u>418,487,045</u>
Total Investment Income	<u>(550,663,774)</u>	<u>(92,100,053)</u>	<u>(6,155,409)</u>	<u>(648,919,236)</u>
Total Income	<u>(186,751,158)</u>	<u>(41,241,740)</u>	<u>(2,439,293)</u>	<u>(230,432,191)</u>
Less Benefits:				
Retirement Benefits	(541,457,705)	(70,748,926)	(4,986,644)	(617,193,275)
Retirant Dividends	(5,791,595)	(1,373,094)	(52,072)	(7,216,761)
Withdrawals	(29,976,221)	(3,190,265)	(114,878)	(33,281,364)
Death Benefits	(15,251,750)	(1,439,236)	(40,923)	(16,731,909)
Total Benefits	<u>(592,477,271)</u>	<u>(76,751,521)</u>	<u>(5,194,517)</u>	<u>(674,423,309)</u>
Net Increase in Assets	(779,228,429)	(117,993,261)	(7,633,810)	(904,855,500)
Market Value of Assets as of December 31, 2002*	\$ 7,142,666,621	\$ 1,031,738,884	\$ 66,966,094	\$ 8,241,371,599
Receivables	38,876,075	2,707,853	171,353	41,755,281
Adjusted Market Value of Assets	\$ 7,181,542,696	\$ 1,034,446,737	\$ 67,137,447	\$ 8,283,126,880

* Note: Assets exclude insurance and administrative reserves.

TABLE 3
DEVELOPMENT OF ACTUARIAL VALUE OF NET ASSETS

	State / School	Local	TIAA	KP&F	Judges	Total KPERS
1. Actuarial Value of Assets as of December, 2001* :	\$7,084,047,416	\$1,519,102,089	\$18,478,549	\$1,259,442,200	\$81,847,643	\$9,962,917,897
2. Actual Receipts/Disbursements						
a. Total Contributions	277,183,375	79,874,944	6,854,297	50,858,313	3,716,116	418,487,045
b. Receivable for 13th Check Bond Issue	22,422,735	0	438,793	1,867,119	171,353	24,900,000
c. Receivable for Affiliation Payoff	0	0	0	840,734	0	840,734
d. Benefit Payments	(496,972,541)	(91,964,349)	(3,540,381)	(76,751,521)	(5,194,517)	(674,423,309)
e. Net Change	(197,366,431)	(12,089,405)	3,752,709	(23,185,355)	(1,307,048)	(230,195,530)
3. Expected Actuarial Value of Assets as of December 31, 2002:	7,444,782,343	1,628,066,578	23,839,548	1,335,996,418	87,030,408	10,519,715,295
4. Market Value as of December 31, 2002:	5,848,743,938	1,297,026,328	19,757,883	1,034,446,737	67,137,447	8,267,112,333
5. Difference Between Market and Expected Values:	(1,596,038,405)	(331,040,250)	(4,081,665)	(301,549,681)	(19,892,961)	(2,252,602,962)
6. Actuarial Value of Assets as of December 31, 2002* (Expected + Difference/3):	\$6,912,769,541	\$1,517,719,828	\$22,478,993	\$1,235,479,858	\$80,399,421	\$9,768,847,641
7. Receivable for Bond Issue for TIAA UAL	15,609,379	405,168	0	0	0	16,014,547
8. Transfers	\$21,919,456	\$559,537	(\$22,478,993)	\$0	\$0	\$0
9. Adjusted Actuarial Value of Assets:	\$6,950,298,376	\$1,518,684,533	\$0	\$1,235,479,858	\$80,399,421	\$9,784,862,188
10 Rate of Return on Actuarial Value of Assets**	0.37%	0.71%	1.22%	-0.06%	-0.17%	0.37%

* Note: Assets exclude insurance and administrative reserves.

** Annualized dollar-weighted rate of return shown

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, 2002. 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 2001 Triennial Experience Study, as shown in Appendix C. This set of assumptions was adopted by the Board in September 2001 and was first used for the December 31, 2001 valuation.

The liabilities reflect the benefit structure in place as of December 31, 2002 plus the 2003 legislation that made the 13th check for pre-July 2, 1987 retirees a permanent benefit. The valuation also reflects a transfer of the liability for the TIAA group to the State/School and Local group as legislation was passed in 2003 making them special KPERS members.

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 5 contains the calculation of actuarial liabilities for all groups.

TABLE 4
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM
PRESENT VALUE OF FUTURE BENEFITS (PVFB)
AS OF DECEMBER 31, 2002

	State / School	Local	TIAA	Total KPERS
1. Active employees				
a. Retirement Benefit	\$ 6,868,056,690	\$ 1,605,377,899	\$ 10,217,923	\$ 8,483,652,512
b. Pre-Retirement Death Benefit	107,475,280	46,147,989	534,944	154,158,213
c. Withdrawal Benefit	450,981,117	199,724,046	688,478	651,393,641
d. Disability Benefit	234,036,377	79,114,123	1,275,339	314,425,839
e. Total	<u>7,660,549,464</u>	<u>1,930,364,057</u>	<u>12,716,684</u>	<u>9,603,630,205</u>
2. Inactive Vested Members	243,316,251	84,067,213	2,064,703	329,448,167
3. Inactive Nonvested Members	40,229,693	13,494,416	0	53,724,109
4. Deferred Disabled Members	120,909,204	34,559,366	210,777	155,679,347
5. Retirees	3,783,444,632	616,202,970	20,938,022	4,420,585,624
6. Beneficiaries	145,501,949	46,417,183	2,658,947	194,578,079
7. Unclaimed Account Reserve	<u>2,000,000</u>	<u>500,000</u>	<u>0</u>	<u>2,500,000</u>
8. Total PVFB	<u>\$ 11,995,951,193</u>	<u>\$ 2,725,605,205</u>	<u>\$ 38,589,133</u>	<u>\$ 14,760,145,531</u>

**TABLE 4 (cont.)
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM
PRESENT VALUE OF FUTURE BENEFITS (PVFB)
AS OF DECEMBER 31, 2002**

	KP&F	Judges
1. Active employees		
a. Retirement Benefit	\$ 964,916,219	\$ 85,973,864
b. Pre-Retirement Death Benefit	25,058,168	2,566,965
c. Withdrawal Benefit	34,730,638	109,349
d. Disability Benefit	144,640,232	0
e. Total	<u>1,169,345,257</u>	<u>88,650,178</u>
2. Inactive Vested Members	26,768,961	1,466,383
3. Inactive Nonvested Members	9,118,122	69,364
4. Disabled Members	98,097,979	371,651
5. Retirees	515,993,108	31,966,041
6. Beneficiaries	<u>76,421,580</u>	<u>7,656,874</u>
7. Total PVFB	<u>\$ 1,895,745,007</u>	<u>\$ 130,180,491</u>

TABLE 5
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM
ACTUARIAL LIABILITIES
AS OF DECEMBER 31, 2002

	State / School	Local	TIAA	Total KPERS
1. Active employees				
a. Retirement Benefit	\$ 4,320,354,758	\$ 876,805,477	\$ 10,217,923	\$ 5,207,378,158
b. Pre-Retirement Death Benefit	67,804,013	26,153,028	534,944	94,491,985
c. Withdrawal Benefit	285,039,800	116,329,307	592,885	401,961,992
d. Disability Benefit	142,969,142	43,228,110	1,275,339	187,472,591
e. Total	<u>4,816,167,713</u>	<u>1,062,515,922</u>	<u>12,621,091</u>	<u>5,891,304,726</u>
2. Inactive Members	404,455,148	132,120,995	2,275,480	538,851,623
3. Retirees	3,783,444,632	616,202,970	20,938,022	4,420,585,624
4. Beneficiaries	145,501,949	46,417,183	2,658,947	194,578,079
5. Unclaimed Account Reserve	<u>2,000,000</u>	<u>500,000</u>	<u>0</u>	<u>2,500,000</u>
6. Actuarial Liability	\$ 9,151,569,442	\$ 1,857,757,070	\$ 38,493,540	\$ 11,047,820,052
7. Transfer	37,528,835	964,705	(38,493,540)	0
8. Adjusted Actuarial Liability	<u>\$ 9,189,098,277</u>	<u>\$ 1,858,721,775</u>	<u>\$ 0</u>	<u>\$ 11,047,820,052</u>

**TABLE 5 (cont.)
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM
ACTUARIAL LIABILITIES
AS OF DECEMBER 31, 2002**

	KP&F	Judges	
1. Total Present Value of Future Benefits	\$ 1,895,745,007	\$ 130,180,491	
2. Present Value of Future Normal Cost	<u>427,765,332</u>	<u>32,381,592</u>	
3. Total Actuarial Liability (1) - (2)	<u>\$ 1,467,979,675</u>	<u>\$ 97,798,899</u>	

SECTION 5

EMPLOYER CONTRIBUTIONS

The previous two sections were devoted to a discussion of the assets and liabilities of the System. A comparison of Tables 3 and 4 indicates that current assets fall short of meeting the present value of future benefits (total liability). This is expected in all but a 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 unfunded actuarial liability contribution rate.

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

Description of Rate Components

KPERS

The Projected Unit Credit actuarial cost method is used for KPERS. Under that method, the normal cost for any year is equal to the actuarial present value of the portion of the projected benefit that is allocated to the current year of service. The actuarial present value of benefits allocated to prior years is 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 KPERS Act provides for the calculation of separate employer contribution rates for three groups: the State/School rate (for all State and School employees covered by the regular KPERS provisions), the Local rate (for all other covered employers), and the TIAA rate (for a closed group of members with previous service in the Regents institutions). The 2003 Legislature made the TIAA group special KPERS members. The assets and liabilities for the TIAA group are calculated in the December 31, 2002 valuation and transferred to the appropriate group (Local for the KU Hospital Authority group and State/School for the rest of the group). A separate contribution rate for TIAA members is not calculated.

Legislation provides that the employer rates of contribution recommended by the Board of Trustees for State Employers may not increase more than 0.2% each year (increasing to 0.40% in FY2006, 0.50% in FY2007 and 0.60% in FY2008 and later) and the rate for employers other than the State may not increase by more than 0.15%. Such limits on the increase in the statutory contribution rate do not apply to the increase in the employer contribution rate for benefit enhancements. The contribution rates in this report reflect an increase above the statutory rate to pay the debt service payment on the bonds issued to finance the increase in liability from making the 13th check permanent (for State employer) and an increase to fund the change in liability for Local employers. Although not shown in these rates, the total contribution rates for KPERS employers include the statutory employer contribution to the KPERS Group Life Insurance Reserve of 0.6% of members' compensation.

The contribution rates based on this December 31, 2002 actuarial valuation will be used to determine employer contribution rates to the Kansas Public Employees Retirement System for fiscal years beginning in 2005. 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.

For KPERS, the unfunded actuarial liability is amortized over a period originally set at 40 years beginning July 1, 1993. The annual amortization payments will increase 4% for each year remaining in the 40-year amortization period. 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 increase in the unfunded actuarial liability resulting from the 1998 COLA is amortized as a level percent of payroll 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.

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, as a percentage of payroll, plus
- (b) the 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.

The Aggregate Actuarial Cost Method with Supplemental Unfunded Actuarial Liability (UAL) is used for KP&F. This method develops a normal cost rate on a group, or aggregate, basis. The Supplemental Unfunded Liability was initially established in 1993 to reflect the increase in the actuarial liability due to the benefit enhancement package passed in that year. The Supplemental UAL is amortized over 40 years measured from July 1, 1993 with payments increasing 4% per year. As of December 31, 2000 the Supplemental UAL was re-established with the resulting UAL set to zero. The Supplemental UAL was again reset as of December 31, 2002. A separate amortization base was established for the ad hoc COLA granted in 1998. This UAL is amortized over 15 years with the payment increasing 4% per year. The COLA UAL amortization base and payments remain unchanged with the re-establishment of the Supplemental UAL.

The increase in the unfunded actuarial liability for Local employers, resulting from 2003 legislation making the 13th check for pre-July 2, 1987 retirees a permanent benefit, is funded over a 10 year period beginning in 2005.

Actuarial gains/losses are reflected in the calculation of the normal cost rate under this cost method.

Judges

The Frozen Entry Age Cost Method is used. The frozen unfunded actuarial liability (UAL) was established in 1993 with payments over 40 years as a level dollar amount. In general, the UAL is frozen and reflects changes only due to a change in plan provisions or actuarial assumptions. Due to significant changes in the asset value, the UAL was reset as of December 31, 2002.

The contribution rate in this report reflects the additional contribution necessary to pay the debt service payment on the bonds issued by the State to finance the increase in liability from making the 13th check permanent.

Actuarial gains/losses are reflected in the calculation of the normal cost rate under this cost method.

Contribution Rate Summary

In Table 6 the total actuarial contribution rates for KPERS, determined as of December 31, 2002, are presented. Bonds will be issued 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 FY2006 is shown in Table 7. The derivations of the contribution rates for the unfunded actuarial liability for the State/School, Local and TIAA groups are shown in Table 8. The contribution rates for employers who affiliated for prior service and are amortizing the payment of that liability over a period of years are shown in Table 9. Table 10 shows the derivation of the employer contribution rates for the KP&F and Judges. Table 11 shows the KP&F individual employer contribution rates for fiscal years beginning in 2004 and 2005 while Table 12 shows the calculation of the additional contribution rate due to amortization of prior service UAL or excess benefit liability for fiscal years beginning in 2005.

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 2005.

TABLE 6
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
ACTUARIAL EMPLOYER CONTRIBUTION RATES
FISCAL YEAR COMMENCING IN 2005

	Retirement Benefits					Total*
	Total Normal Cost	Employee Normal Cost	Employer Normal Cost	Unfunded Actuarial Liability	Debt Service Payment	
State / School **	9.17%	4.00%	5.17%	3.88%	0.09%	9.14%
Local	7.67%	4.00%	3.67%	1.77%	0.00%	5.44%
KP&F Uniform Contribution Rate						
State***	14.43%	6.58%	7.85%	3.18%	0.90%	11.93%
Local***	14.43%	6.58%	7.85%	3.78%	0.00%	11.63%
Judges	19.77%	4.77%	15.00%	6.83%	0.14%	21.97%

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

** For Correctional Employees, contribution rates of 9.61% and 9.47% apply for normal retirement ages of 55 and 60, respectively.

*** The total contribution rate is equal to the appropriate uniform contribution rate plus the payment, if any, required to amortize the unfunded past service liability or the 15% excess benefit liability determined separately for each employer.

**TABLE 7
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 intends to issue bonds in late summer of 2003. The debt service payment on the bonds will come from increased contribution rates for the KPERS State/School group, the State KP&F group and the Judges.

At the time the December 31, 2002 valuation report was prepared, the bonds had not been issued. Therefore, the following debt service payment schedule was provided to the System as the best estimate available. When the December 31, 2003 valuation is completed, this schedule will be updated to reflect the actual debt service payment.

	State/School	KPF (state)	Judges	Total
Bond Issue Balance	\$ 22,156,209	\$ 2,079,600	\$ 235,392	\$ 24,471,201
Scheduled Payments				
FYE 2006	2,904,302	267,394	30,267	3,201,963
FYE 2007	2,911,272	268,036	30,339	3,209,647
FYE 2008	2,915,970	268,468	30,388	3,214,826
FYE 2009	2,925,350	269,332	30,486	3,225,168
FYE 2010	2,930,298	269,788	30,538	3,230,624
FYE 2011	2,937,913	270,489	30,617	3,239,019
FYE 2012	2,939,400	270,626	30,632	3,240,658
FYE 2013	2,948,377	271,452	30,726	3,250,555
FYE 2014	2,954,658	272,030	30,791	3,257,479
Projected Payroll for FY 2005-06*	3,449,346,302	30,933,625	22,275,990	
Rate of Pay Required	0.09%	0.90%	0.14%	

* Assumes 1.5% annual payroll growth

TABLE 8
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM
DECEMBER 31, 2002 VALUATION
DERIVATION OF UNFUNDED ACTUARIAL LIABILITY RATES
FOR KPERS

	State / School	Local	KPF	Judges
1. Actuarial Accrued Liability	\$ 9,189,098,277	\$ 1,858,721,775	\$ 1,467,979,675	\$ 97,798,899
2. Actuarial Value of Assets	<u>6,950,298,376</u>	<u>1,518,684,533</u>	<u>1,235,479,858</u>	<u>80,399,421</u>
3. Unfunded Actuarial Liability	2,238,799,901	340,037,242	232,499,817	17,399,478
4. Payment to Amortize Unfunded Actuarial Liability	130,839,865	20,371,515	9,640,943	1,487,207
5. Total Projected Payroll	\$ 3,373,166,160	\$ 1,153,168,204	\$ 317,784,548	\$ 21,784,017
6. Amortization Payment as a Percent of Payroll	3.88%	1.77% *	3.03% **	6.83%

*Includes 0.04% to fund change by the 2003 Legislature making the retirant dividend permanent.

**Only includes UAL that is funded through the uniform rate. Additional payments for the 1998 COLA UAL or 13th check UAL are not shown here.

TABLE 9
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
DECEMBER 31, 2002 VALUATION
DERIVATION OF EMPLOYER CONTRIBUTION RATES
FOR KP&F AND JUDGES

	KP&F	Judges
1. Present Value of Future Benefits	\$ 1,895,745,007	\$ 130,180,491
2. Actuarial Value of Assets	1,235,479,858	80,399,421
3. 1998 COLA Unfunded Actuarial Liability	10,227,712	0
4. 13th Check Unfunded Actuarial Liability	7,651,970	0
5. Unfunded Actuarial Liability	44,875,545	0
6. Supplemental Unfunded Actuarial Liability	<u>44,875,545</u>	<u>17,399,478</u>
7. Present Value of Future Normal Cost	\$ 427,765,332	\$ 32,381,592
8. Present Value of Future Employee Contributions	<u>194,993,769</u>	<u>7,807,418</u>
9. Present Value of Future Employer Contributions	\$ 232,771,563	\$ 24,574,174
10. Present Value of Future Earnings	\$ 2,965,370,532	\$ 163,821,135
11. Employer Normal Cost Rate	7.85%	15.00%
12. 13th Check Unfunded Actuarial Liability Payment (Local Employers)	0.33%	--
13. Debt Service Payment for Bond Issue	--	0.14%
14. 1998 COLA Unfunded Actuarial Liability Payment (Local Employers)	0.42%	--
15. Supplemental Unfunded Actuarial Liability Payment	3.03%	6.83%
16. Total Local Employer Actuarial Rate	11.63% *	21.97% **

* This is the Uniform Contribution Rate for Local Employers. For State Employers the Uniform rate is 11.93%, which includes 0.90% for the debt service payment on the bonds issued for the 13th check. Individual employer contribution rates are developed in Tables 10 and 11.

** Does not include 0.4% for Group Insurance

**TABLE 10
LOCAL AFFILIATION COST FACTORS
FOR FISCAL YEAR BEGINNING IN 2005**

Employer	Total Estimated 2003 Annual Payroll	1/1/2005 Unfunded Actuarial Liability **	Payment on 1/1/2005 Unfunded Liability	Payment on Unfunded Liability as a % of Payroll	Total Rate for Years Commencing in 2004*	Total Rate for Years Commencing in 2005*
St. Francis Housing Authority	\$11,233	\$7,290	\$420	3.45%	6.66%	6.86%
City of Burden	\$105,152	\$14,375	\$827	0.73%	3.82%	4.14%
City of Longton	\$52,560	\$17,478	\$1,006	1.77%	4.85%	5.18%
Bourbon County RWD#2	\$100,252	\$101,288	\$5,831	5.38%	8.60%	8.79%
Towanda Township	\$31,769	\$8,271	\$475	1.38%	4.75%	4.79%
Ness City Public Library	\$31,211	\$2,773	\$159	0.47%	3.69%	3.88%
City of Herndon	\$7,705	\$32,772	\$1,888	22.65%	27.13%	26.06%
Hays Housing Authority	\$29,156	\$1,634	\$96	0.30%	3.51%	3.71%
Haysville Community Library	\$97,902	\$184,003	\$10,589	10.00%	12.66%	13.41%
Hamilton County Library	\$41,816	\$12,186	\$701	1.55%	5.75%	4.96%
Ellis Public Library	\$9,491	\$4,627	\$266	2.59%	5.86%	6.00%
Bucklin Public Library	\$13,329	\$11,519	\$664	4.60%	7.77%	8.01%
Elkhart Cemetery District	\$32,671	\$1,629	\$95	0.27%	3.51%	3.68%
Clay County Conservation District	\$24,941	\$51,256	\$2,953	10.95%	16.76%	14.36%
City of Linn Valley	\$6,120	\$905	\$52	0.79%	3.42%	4.20%
City of Blue Mound	\$57,777	\$2,575	\$146	0.23%	3.48%	3.64%
Kansas Workers' Risk Coop for Counties	\$243,733	\$46,703	\$2,681	1.02%	4.28%	4.43%
Lindsborg Community Library	\$18,744	\$3,220	\$183	0.90%	4.23%	4.31%
City of North Newton	\$222,650	\$148,299	\$8,422	3.50%	7.49%	6.91%
City of Arcadia	\$34,886	\$14,501	\$823	2.18%	4.18%	5.59%
Four County Mental Health	\$3,511,384	\$1,626,603	\$132,210	3.48%	6.86%	6.89%
City of Linwood	\$54,571	\$2,176	\$124	0.21%	3.43%	3.62%
Cottonwood Inc.	\$3,443,364	\$1,033,650	\$58,707	1.58%	4.80%	4.99%
Johnson County Fire District #2 Rural	\$1,574,746	\$404,276	\$22,961	1.35%	4.57%	4.76%
Basehor Community Library	\$75,621	\$51,403	\$2,919	3.57%	6.79%	6.98%
City of Gypsum	\$30,160	\$4,372	\$249	0.76%	3.98%	4.17%
Greenleaf Housing Authority	\$9,496	\$20,514	\$1,165	11.34%	14.56%	14.75%

**TABLE 10 (cont.)
LOCAL AFFILIATION COST FACTORS
FOR FISCAL YEAR BEGINNING IN 2005**

Employer	Total Estimated 2003 Annual Payroll	1/1/2005 Unfunded Actuarial Liability **	Payment on 1/1/2005 Unfunded Liability	Payment on Unfunded Liability as a % of Payroll	Total Rate for Years Commencing in 2004*	Total Rate for Years Commencing in 2005*
City of Salina	\$9,772,817	\$29,973	\$4,238	0.04%	3.25%	3.45%
City of Shawnee	\$5,467,620	\$10,359	\$1,362	0.02%	3.25%	3.43%
Unified Government - Wyandotte Co./ KCK	\$39,884,800	\$608,020	\$85,422	0.20%	3.39%	3.61%
Total	\$64,997,674	\$4,458,649	\$347,636			

*Basic local employer contribution rates excluding Death and Disability contribution: FY 2004: 3.22% FY 2005: 3.41%

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

TABLE 11
KP&F
EMPLOYER CONTRIBUTION RATES FOR FISCAL YEARS
COMMENCING IN CALENDAR YEARS 2004 AND 2005

Employer	Total Rate for Fiscal Year Commencing in 2004*	Recommended Total Rate for Fiscal Year Commencing in 2005
Douglas County Law Enforcement	12.97 %	14.48 %
Ford County	9.47	11.63
Franklin County Sheriff's Dept	9.47	11.63
Gray County Sheriff's Dept.	9.47	11.63
Harvey County Sheriff's Dept.	11.53	13.76
Johnson County Fire Dept.	9.47	11.63
Johnson County Fire No. 1	9.47	11.63
Johnson County Fire No. 2	9.47	11.63
Johnson County Park Commission	9.47	11.63
Johnson County Sheriff's Dept.	9.73	11.88
Labette County Sheriff's Dept.	12.65	14.50
Reno County Sheriff's Dept.	9.47	11.63
Riley County Law Enforcement	9.47	11.63
Sedgwick County Fire No. 1	9.88	12.01
Sedgwick County Sheriff's Dept.	9.74	11.89
Sedgwick County EMT's	9.98	12.10
Shawnee County Sheriff's Dept.	12.63	14.55
Sumner County Sheriff's Dept.	11.64	13.51
Unified Gov't of Wyandotte County	9.47	11.63
Unified Gov't of Wyandotte Co. - KCK	15.73	17.74
City of Abilene	9.47	11.63
City of Arkansas City	11.81	13.93
City of Atchison	11.13	13.24
City of Bonner Springs	9.47	11.63
City of Chanute	10.40	12.51
City of Cimarron	9.47	11.63
City of Coffeyville	15.83	18.16
City of Concordia	14.09	15.69
City of Derby	10.24	12.39
City of Dodge City	18.64	18.76
City of Emporia	12.57	14.63
City of Erie	9.47	11.63
City of Eudora	9.47	11.63
City of Fairway	10.07	12.18
City of Fort Scott	15.72	19.14

*Does not reflect re-certification of rates for State employers to include debt payment on 13th check bond issue.

TABLE 11 (cont.)
KP&F
EMPLOYER CONTRIBUTION RATES FOR FISCAL YEARS
COMMENCING IN CALENDAR YEARS 2004 AND 2005

Employer	Total Rate for Fiscal Year Commencing in 2004*	Recommended Total Rate for Fiscal Year Commencing in 2005
City of Herington	10.65 %	12.79 %
City of Hutchinson	16.37	18.08
City of Junction City	10.45	12.63
City of Lawrence	10.02	12.12
City of Leavenworth	10.16	12.34
City of Leawood	10.33	12.41
City of Lenexa	9.63	11.78
City of Manhattan	12.66	14.55
City of Merriam	10.02	12.14
City of McPherson	9.79	11.94
City of Mission	9.47	11.63
City of Newton EMTs	10.97	13.40
City of Newton	10.54	12.62
City of Olathe	9.56	11.71
City of Ottawa	9.47	11.63
City of Parsons	14.83	16.97
City of Pittsburg	13.16	15.18
City of Salina	12.98	15.04
City of Shawnee	10.03	12.12
City of Topeka	15.80	17.74
City of Wellington	13.30	15.29
City of Westwood	9.47	11.63
City of Winfield	13.88	16.02
Board of Regents Campus Police	9.16	11.93
Kansas Bureau of Investigation	10.08	12.90
Kansas Highway Patrol	11.15	13.84
Cowley County Sheriff's Dept	12.64	14.72
City of Gardner Public Safety Officers	9.47	11.63
City of Liberal Police & Firemen	9.47	11.63
City of Oswego	9.47	11.63
Leavenworth County	9.47	11.63
Pottawatomie County	9.47	11.63
City of Roeland Park	9.47	11.63
City of Edwardsville	13.09	15.04
City of Garden City	9.47	11.63
City of Lake Quivira	9.47	11.63

*Does not reflect re-certification of rates for State employers to include debt payment on 13th check bond issue.

TABLE 11 (cont.)
KP&F
EMPLOYER CONTRIBUTION RATES FOR FISCAL YEARS
COMMENCING IN CALENDAR YEARS 2004 AND 2005

Employer	Total Rate for Fiscal Year Commencing in 2004*	Recommended Total Rate for Fiscal Year Commencing in 2005
City of Paola	9.47	11.63
City of Winfield (EMS)	18.34	20.80
Miami County	0.00	11.63
Atchinson County	0.00	11.63
City of Park City	0.00	11.63
Dickinson County	0.00	11.63
Leavenworth County (EMS)	0.00	11.63
City of Basehor	0.00	11.63

*Does not reflect re-certification of rates for State employers to include debt payment on 13th check bond issue.

TABLE 12
KP&F EMPLOYER ADDITIONAL CONTRIBUTION RATES
FOR FISCAL YEARS BEGINNING IN 2005

Employer	Number of Employees	Total Estimated Annual 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	121	5,885,187	0	0	1,804,361	174,300	174,300	2.85 %
Ford County	58	1,996,163	0	0	0	0	0	0.00
Franklin County Sheriff's Dept	38	1,403,131	0	0	0	0	0	0.00
Gray County Sheriff's Dept.	5	203,792	0	0	0	0	0	0.00
Harvey County Sheriff's Dept.	30	1,039,750	0	0	17,914	23,100	17,914	2.13
Johnson County Fire Dept.	151	8,010,264	0	0	0	0	0	0.00
Johnson County Fire No. 1	14	588,815	0	0	0	0	0	0.00
Johnson County Fire No. 2	62	3,861,398	0	0	0	0	0	0.00
Johnson County Park Commission	15	670,542	0	0	0	0	0	0.00
Johnson County Sheriff's Dept.	407	25,530,429	0	0	480,368	65,200	65,200	0.25
Labette County Sheriff's Dept.	18	533,656	0	0	193,997	15,956	15,956	2.87
Reno County Sheriff's Dept.	61	2,243,688	0	0	0	0	0	0.00
Riley County Law Enforcement	90	3,949,164	0	0	0	0	0	0.00
Sedgwick County Fire No. 1	134	6,493,874	0	0	31,046	25,600	25,600	0.38
Sedgwick County Sheriff's Dept.	460	19,542,640	1,077	145	453,995	52,300	52,445	0.26
Sedgwick County EMT's	130	6,072,195	0	0	209,188	30,000	30,000	0.47
Shawnee County Sheriff's Dept.	113	4,908,786	0	0	1,493,575	149,000	149,000	2.92
Sumner County Sheriff's Dept.	17	571,355	0	0	105,648	11,200	11,200	1.88
Unified Gov't of Wyandotte County	753	3,155,450	0	0	0	0	0	0.00
Unified Gov't of Wyandotte Co. - KCK (incl.)		37,877,709	1,967,317	268,489	5,212,766	2,151,100	2,419,589	6.11
City of Abilene	22	856,331	0	0	0	0	0	0.00
City of Arkansas City	47	1,967,579	0	0	114,144	47,100	47,100	2.30
City of Atchison	43	1,643,083	0	0	66,896	27,600	27,600	1.61
City of Bonner Springs	24	1,159,986	0	0	0	0	0	0.00
City of Chanute	36	1,447,489	0	0	41,757	13,200	13,200	0.88
City of Cimarron	3	114,673	0	0	0	0	0	0.00

**TABLE 12 (cont.)
 KP&F EMPLOYER ADDITIONAL CONTRIBUTION RATES
 FOR FISCAL YEARS BEGINNING IN 2005**

Employer	Number of Employees	Total Estimated Annual 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	43	1,730,225	0	0	949,420	117,600	117,600	6.53 %
City of Concordia	9	283,845	0	0	96,800	12,000	12,000	4.06
City of Derby	33	1,432,906	0	0	104,893	11,400	11,400	0.76
City of Dodge City	71	2,793,523	0	0	2,242,088	207,300	207,300	7.13
City of Emporia	95	4,312,780	0	0	1,041,681	134,772	134,772	3.00
City of Erie	4	96,339	0	0	0	0	0	0.00
City of Eudora	8	348,329	0	0	0	0	0	0.00
City of Fairway	8	468,771	0	0	6,549	2,700	2,700	0.55
City of Fort Scott	29	901,831	0	0	569,297	70,500	70,500	7.51
City of Herington	8	241,091	0	0	22,416	2,900	2,900	1.16
City of Hutchinson	161	6,911,816	8,175	1,204	4,845,306	462,500	463,704	6.45
City of Junction City	90	3,443,255	0	0	87,084	35,900	35,900	1.00
City of Lawrence	262	14,642,875	0	0	182,288	75,200	75,200	0.49
City of Leavenworth	108	4,692,542	83,128	11,204	133,420	23,900	35,104	0.71
City of Leawood	105	5,642,222	0	0	422,217	45,900	45,900	0.78
City of Lenexa	150	8,976,502	0	0	96,866	13,900	13,900	0.15
City of Manhattan	67	2,730,181	0	0	369,895	82,900	82,900	2.92
City of Merriam	48	2,599,906	0	0	114,893	13,700	13,700	0.51
City of McPherson	45	1,799,810	0	0	13,963	5,800	5,800	0.31
City of Mission	24	1,178,628	0	0	0	0	0	0.00
City of Newton EMTs	9	412,319	0	0	74,749	7,600	7,600	1.77
City of Newton	60	2,639,722	0	0	65,651	27,100	27,100	0.99
City of Olathe	248	15,829,815	0	0	86,445	13,200	13,200	0.08
City of Ottawa	45	2,023,082	0	0	0	0	0	0.00
City of Parsons	40	1,355,812	0	0	182,449	75,300	75,300	5.34
City of Pittsburg	70	2,644,999	0	0	788,016	97,600	97,600	3.55
City of Salina	164	7,180,192	152,240	22,179	1,883,663	233,300	255,479	3.41

**TABLE 12 (cont.)
 KP&F EMPLOYER ADDITIONAL CONTRIBUTION RATES
 FOR FISCAL YEARS BEGINNING IN 2005**

Employer	Number of Employees	Total Estimated Annual 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	136	8,017,174	148,364	21,551	160,597	19,900	41,451	0.49 %
City of Topeka	518	25,974,421	559,628	78,457	13,229,747	1,577,100	1,655,557	6.11
City of Wellington	34	1,424,092	0	0	438,466	54,300	54,300	3.66
City of Westwood	8	436,117	0	0	0	0	0	0.00
City of Winfield	41	1,826,233	0	0	746,360	83,400	83,400	4.39
Board of Regents Campus Police	115	4,576,353	0	0	0	0	0	0.00
Kansas Bureau of Investigation	81	4,240,409	0	0	149,145	42,600	42,600	0.97
Kansas Highway Patrol	440	21,688,641	0	0	1,506,093	430,100	430,100	1.91
Cowley County Sheriff's Dept	34	1,111,054	0	0	426,054	35,698	35,698	3.09
City of Gardner Public Safety Officers	21	1,013,194	0	0	0	0	0	0.00
City of Liberal Police & Firemen	51	2,062,737	0	0	0	0	0	0.00
City of Oswego	5	142,594	0	0	0	0	0	0.00
Leavenworth County	55	2,286,164	0	0	0	0	0	0.00
Pottawatomie County	19	637,612	0	0	0	0	0	0.00
City of Roeland Park	15	652,804	0	0	0	0	0	0.00
City of Edwardsville	15	513,726	0	0	235,644	18,237	18,237	3.41
City of Garden City	77	3,187,725	0	0	0	0	0	0.00
City of Lake Quivira	2	92,381	0	0	0	0	0	0.00
City of Paola	15	682,835	0	0	0	0	0	0.00
City of Winfield (EMS)	8	399,806	0	0	457,806	38,158	38,158	9.17
Miami County	0	0	0	0	0	0	0	0.00
Atchinson County	0	0	0	0	0	0	0	0.00
City of Park City	0	0	0	0	0	0	0	0.00
Dickinson County	0	0	0	0	0	0	0	0.00
Leavenworth County (EMS)	0	0	0	0	0	0	0	0.00
City of Basehor	0	0	0	0	0	0	0	0.00

**APPENDIX A
SUMMARY OF MEMBERSHIP DATA**

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
ACTIVE MEMBER DATA

	12/31/02	12/31/01
State/School		
Number	105,043	105,252
Average Current Age	44.75	44.48
Average Service	10.81	10.58
Average Pay	\$32,045	\$31,235
 Local		
Number	35,221	33,757
Average Current Age	44.30	44.20
Average Service	9.01	9.01
Average Pay	\$32,728	\$31,645
 TIAA		
Number *	234	244
Average Current Age	51.32	50.46
Average Service	9.50	9.39
Average Pay	NA	NA
* Reflects Group A and Group B.		
 KPERS Total		
Number	140,498	139,253
Average Current Age	44.65	44.42
Average Service	10.36	10.20
Average Pay	\$32,163	\$31,279

**APPENDIX A
SUMMARY OF MEMBERSHIP DATA**

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
ACTIVE MEMBER DATA

	12/31/02	12/31/01
KP&F		
Number	6,548	6,405
Tier I	782	829
Tier II	5,766	5,576
Average Current Age	38.40	38.30
Average Service	10.59	10.56
Average Pay	\$48,532	\$46,483
 Judges		
Number	248	252
Average Current Age	55.00	54.36
Average Service	11.06	10.51
Average Pay	\$87,839	\$85,625
 System Total		
Number	147,294	145,910
Average Current Age	44.39	44.17
Average Service	10.37	10.21
Average Pay	\$32,984	\$32,041
 KP&F		
	<u>12/31/02</u>	
Social Security Coverage	<u>Yes</u>	<u>No</u>
Police	3,306	966
Fire	1,124	874
Medical	269	9
Total Number	4,699	1,849
Percentage	71.8%	28.2%

**APPENDIX A
SUMMARY OF MEMBERSHIP DATA**

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
INACTIVE MEMBER DATA

	12/31/02	12/31/01
State / School	30,484	28,899
Local	8,832	8,161
TIAA	<u>104</u>	<u>115</u>
KPERS Total	39,420	37,175
KP&F	961	855
Judges	<u>15</u>	<u>18</u>
System Total	40,396	38,048

**APPENDIX A
SUMMARY OF MEMBERSHIP DATA**

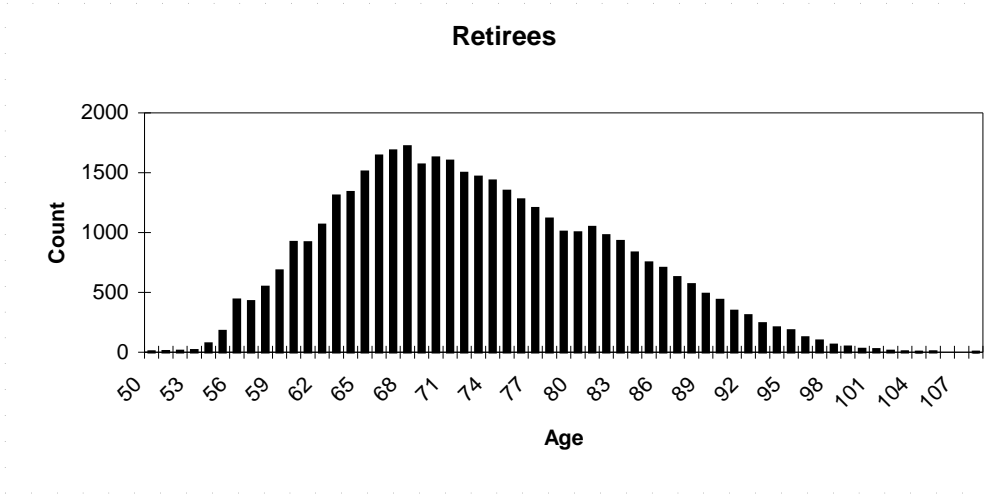
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
RETIREE AND BENEFICIARY MEMBER DATA

	12/31/02	12/31/01
State/School & Local		
Number	53,366	52,011
Average Benefit	\$9,795	\$9,364
Average Age	72.99	73.18
TIAA		
Number	739	746
Average Benefit	\$4,416	\$4,308
Average Age	79.22	78.72
KPERS Total		
Number	54,105	52,757
Average Benefit	\$9,721	\$9,292
Average Age	73.08	73.26
KP&F		
Number	3,338	3,211
Average Benefit	\$20,941	\$20,023
Average Age	60.90	68.30
Judges		
Number	154	147
Average Benefit	\$29,856	\$28,954
Average Age	72.80	73.50
System Total		
Number	57,597	56,115
Average Benefit	\$10,425	\$9,958
Average Age	72.37	72.97

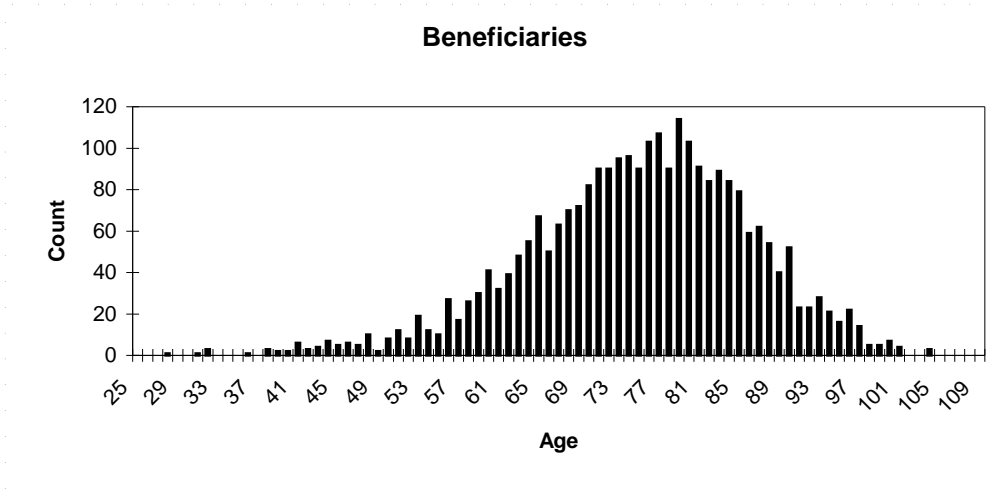
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS DISTRIBUTION OF RETIREES AND BENEFICIARIES

as of December 31, 2002

STATE/SCHOOL



Count: 39,672 Average age: 72.9 Average benefit: \$ 10,608



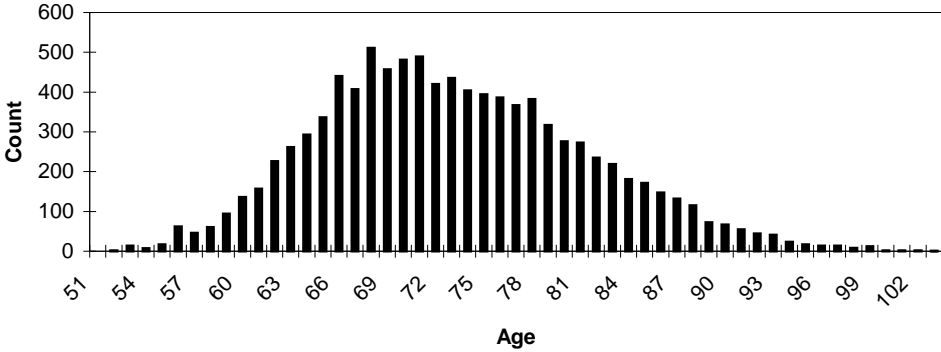
Count: 2,726 Average age: 74.2 Average benefit: \$ 6,882

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS DISTRIBUTION OF RETIREES AND BENEFICIARIES

as of December 31, 2002

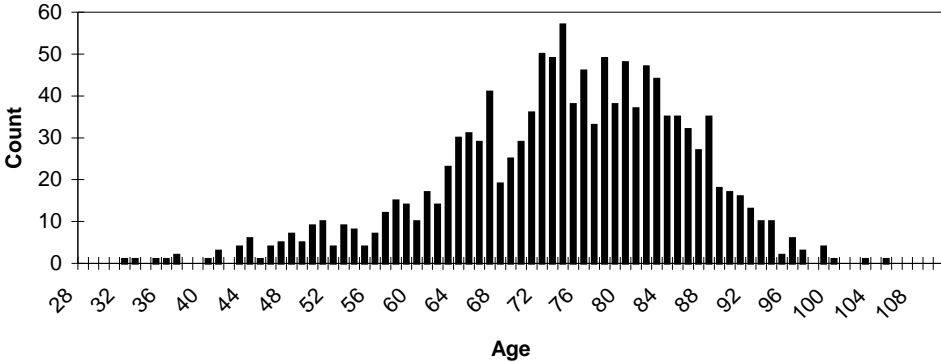
LOCAL

Retirees



Count: 9,725 Average age: 73.1 Average benefit: \$ 7,387

Beneficiaries



Count: 1,243 Average age: 74.1 Average benefit: \$ 4,807

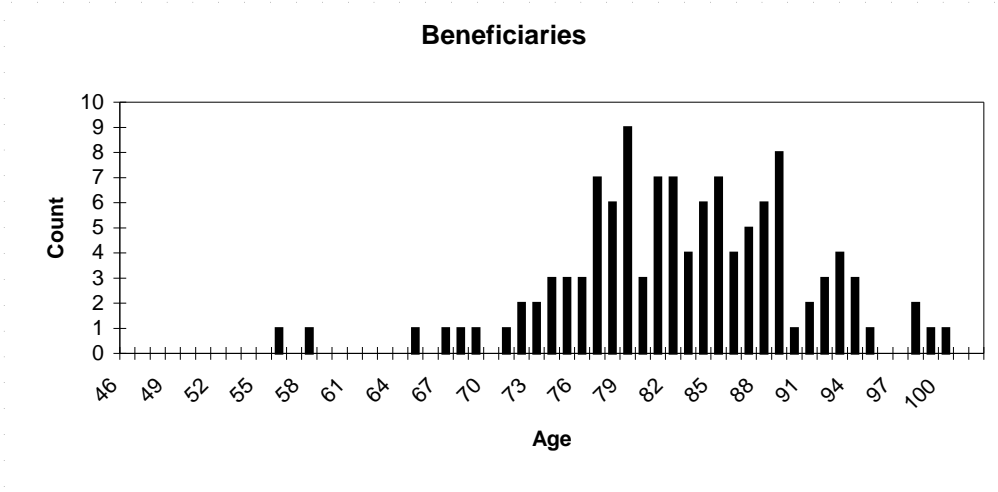
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS DISTRIBUTION OF RETIREES AND BENEFICIARIES

as of December 31, 2002

TIAA



Count: 619 Average age: 78.7 Average benefit: \$ 4,427



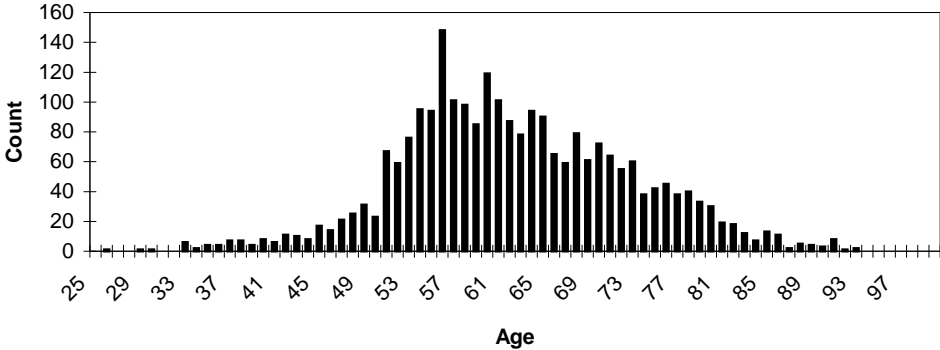
Count: 120 Average age: 81.9 Average benefit: \$ 3,574

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS DISTRIBUTION OF RETIREES AND BENEFICIARIES

as of December 31, 2002

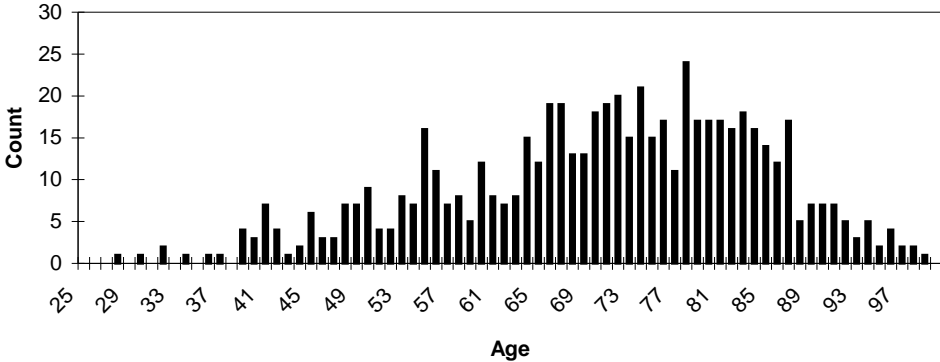
KP&F

Retirees



Count: 2,489 Average age: 62.5 Average benefit: \$ 23,966

Beneficiaries



Note: 233 beneficiaries under age 25 not shown on graph
 Count: 849 Average non-child age: 70.3 Average benefit: \$10,563

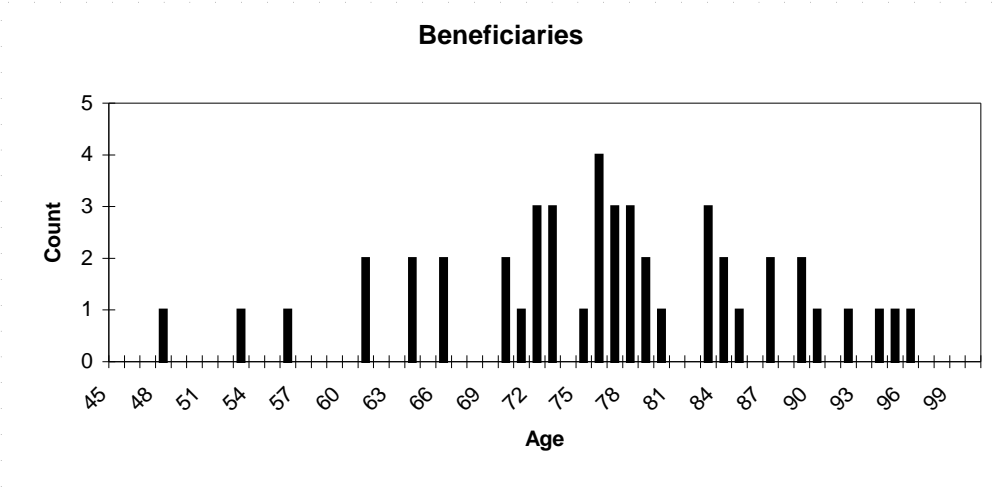
KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS DISTRIBUTION OF RETIREES AND BENEFICIARIES

as of December 31, 2002

JUDGES



Count: 107 Average age: 71.3 Average benefit: \$ 33,469



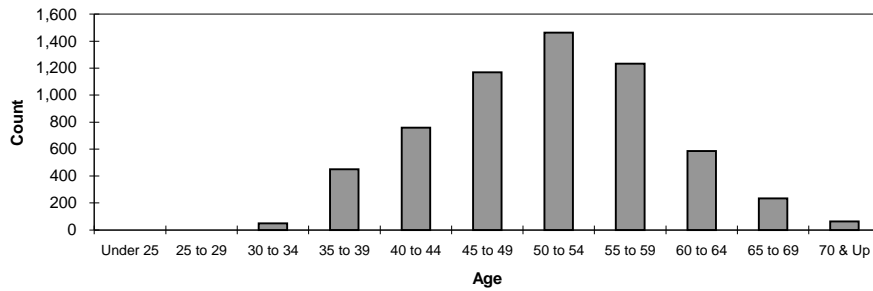
Count: 47 Average age: 76.3 Average benefit: \$ 21,631

**KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
DISTRIBUTION OF INACTIVE VESTED MEMBERS
as of December 31, 2002**

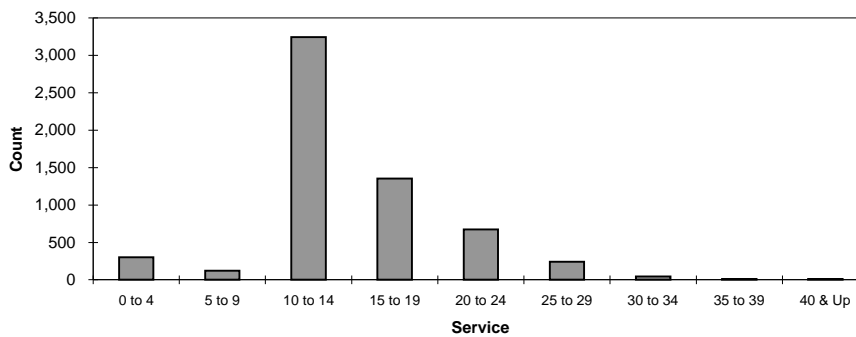
STATE/SCHOOL

Age	Service									Total
	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	
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	1	44	1	0	0	0	0	0	48
35 to 39	9	10	404	28	0	0	0	0	0	451
40 to 44	9	8	531	186	25	1	0	0	0	760
45 to 49	13	9	677	291	162	17	0	0	0	1,169
50 to 54	20	8	744	358	216	102	16	0	0	1,464
55 to 59	30	8	554	336	189	94	18	3	1	1,233
60 to 64	115	38	221	120	59	15	6	6	6	586
65 to 69	77	33	52	32	21	9	5	2	2	233
70 & Up	25	10	19	5	2	2	0	0	0	63
Total	300	125	3,246	1,357	674	240	45	11	9	6,007

Age Distribution



Service Distribution



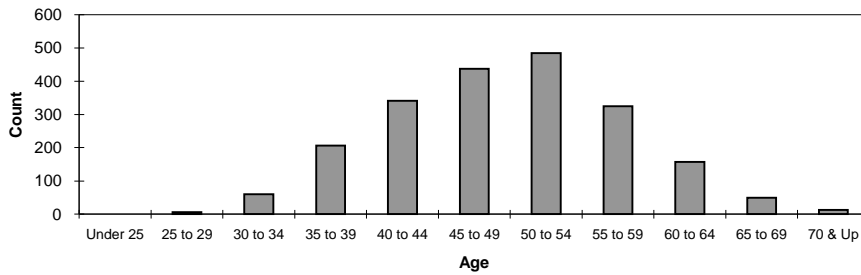
Nonvested: 22,373

**KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
DISTRIBUTION OF INACTIVE VESTED MEMBERS
as of December 31, 2002**

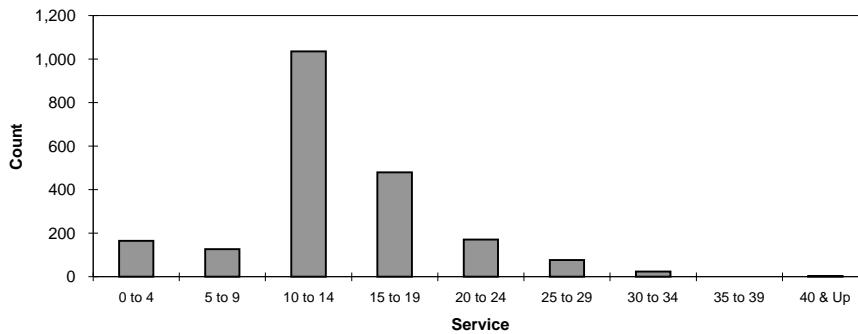
LOCAL

Age	Service									Total
	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	
Under 25	0	0	0	0	0	0	0	0	0	0
25 to 29	4	2	0	0	0	0	0	0	0	6
30 to 34	23	12	25	0	0	0	0	0	0	60
35 to 39	43	24	120	20	0	0	0	0	0	207
40 to 44	30	25	193	72	20	1	0	0	0	341
45 to 49	30	32	212	104	45	13	1	0	0	437
50 to 54	19	17	222	135	52	32	8	0	0	485
55 to 59	7	8	165	90	38	13	4	0	0	325
60 to 64	6	6	76	41	11	13	4	0	1	158
65 to 69	3	0	16	15	4	5	6	0	1	50
70 & Up	1	0	7	3	1	0	0	0	1	13
Total	166	126	1,036	480	171	77	23	0	3	2,082

Age Distribution



Service Distribution



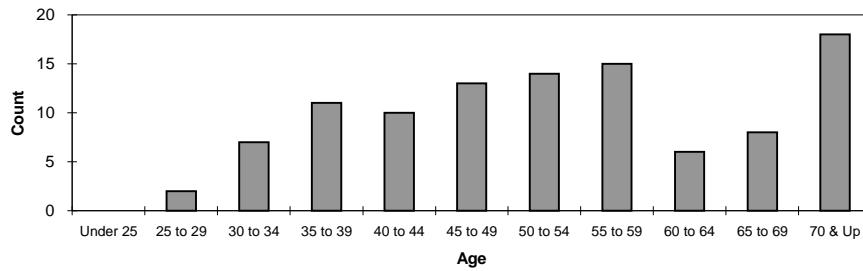
Nonvested: 6,024

**KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
DISTRIBUTION OF INACTIVE VESTED MEMBERS
as of December 31, 2002**

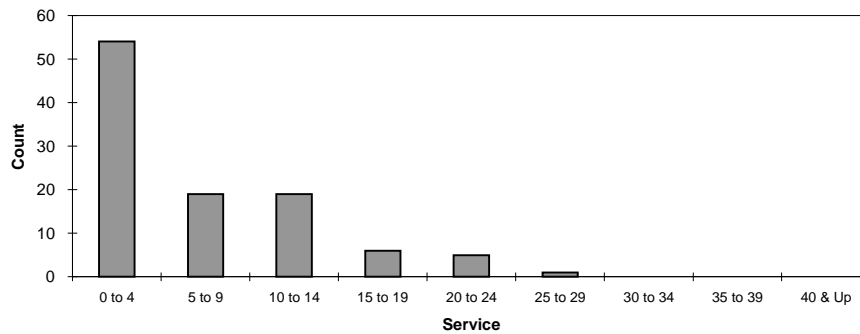
TIAA

Age	Service									Total
	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	
Under 25	0	0	0	0	0	0	0	0	0	0
25 to 29	2	0	0	0	0	0	0	0	0	2
30 to 34	6	1	0	0	0	0	0	0	0	7
35 to 39	6	1	4	0	0	0	0	0	0	11
40 to 44	3	4	2	1	0	0	0	0	0	10
45 to 49	5	3	3	1	1	0	0	0	0	13
50 to 54	7	1	2	2	2	0	0	0	0	14
55 to 59	5	3	3	1	2	1	0	0	0	15
60 to 64	4	0	1	1	0	0	0	0	0	6
65 to 69	6	1	1	0	0	0	0	0	0	8
70 & Up	10	5	3	0	0	0	0	0	0	18
Total	54	19	19	6	5	1	0	0	0	104

Age Distribution



Prior Service Distribution



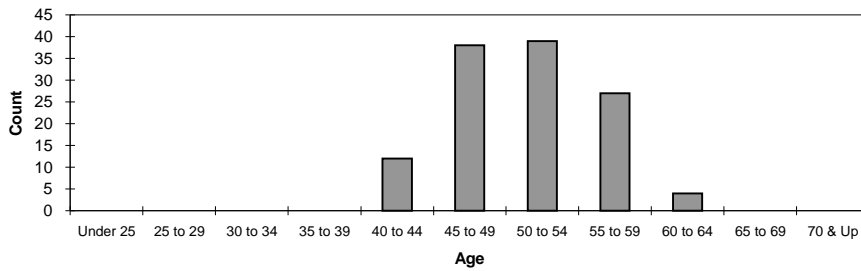
Nonvested: 0

**KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
DISTRIBUTION OF INACTIVE VESTED MEMBERS
as of December 31, 2002**

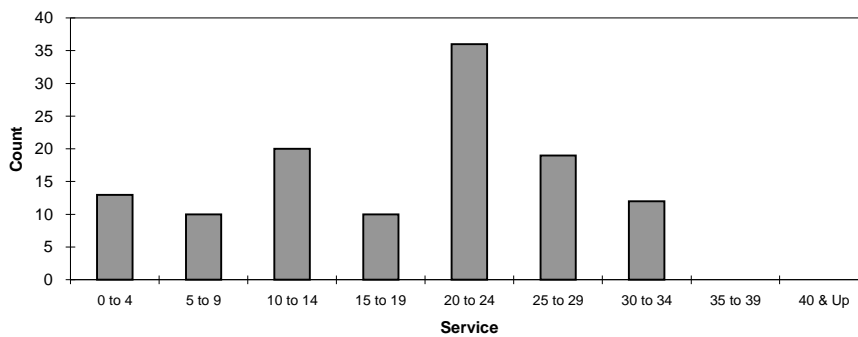
KP&F

Age	Service									Total
	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	
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	0	1	6	2	3	0	0	0	0	12
45 to 49	3	4	7	2	16	5	1	0	0	38
50 to 54	5	4	6	3	9	8	4	0	0	39
55 to 59	5	1	1	2	8	4	6	0	0	27
60 to 64	0	0	0	1	0	2	1	0	0	4
65 to 69	0	0	0	0	0	0	0	0	0	0
70 & Up	0	0	0	0	0	0	0	0	0	0
Total	13	10	20	10	36	19	12	0	0	120

Age Distribution



Service Distribution



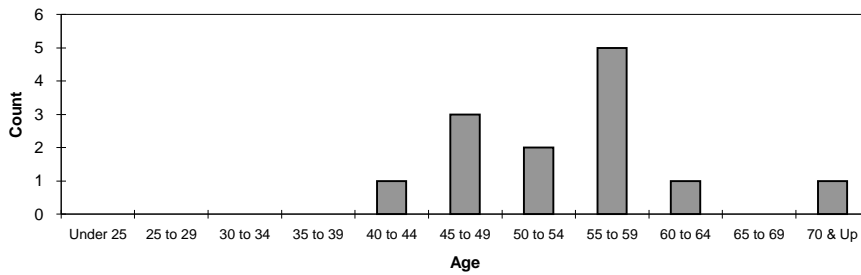
Nonvested: 841

**KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
DISTRIBUTION OF INACTIVE VESTED MEMBERS
as of December 31, 2002**

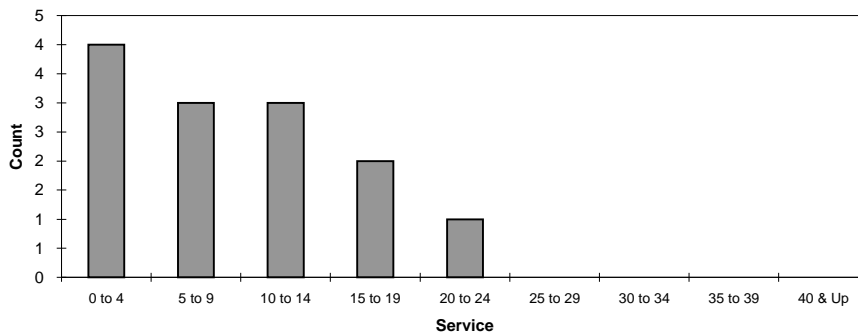
JUDGES

Age	Service									Total
	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	
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	0	2	0	0	0	0	0	2
55 to 59	1	2	1	0	1	0	0	0	0	5
60 to 64	0	1	0	0	0	0	0	0	0	1
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	3	3	2	1	0	0	0	0	13

Age Distribution



Service Distribution



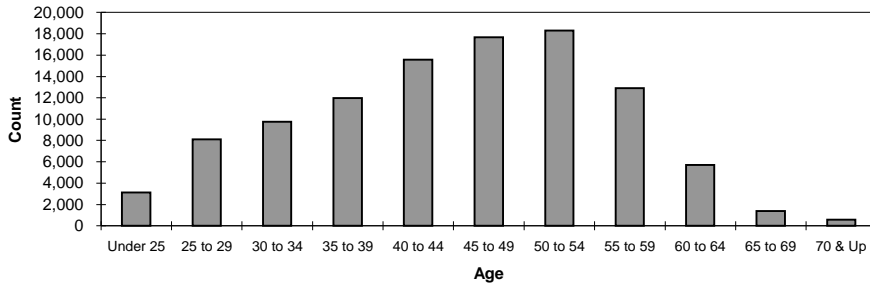
Nonvested: 2

**KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
DISTRIBUTION OF ACTIVE MEMBERS
as of December 31, 2002**

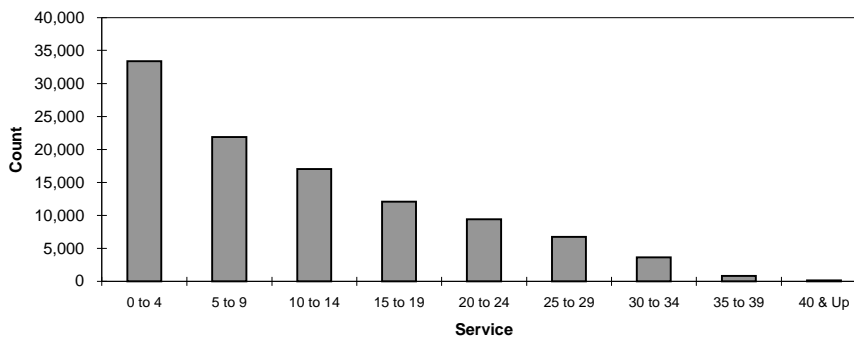
STATE/SCHOOL

Age	Service									Total
	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	
Under 25	3,072	42	0	0	0	0	0	0	0	3,114
25 to 29	6,476	1,617	10	0	0	0	0	0	0	8,103
30 to 34	4,432	4,082	1,208	19	0	0	0	0	0	9,741
35 to 39	4,675	2,996	3,068	1,191	33	0	0	0	0	11,963
40 to 44	4,688	3,618	2,782	2,889	1,530	65	0	0	0	15,572
45 to 49	4,004	3,649	3,263	2,255	2,851	1,604	45	0	0	17,671
50 to 54	2,802	2,871	3,336	2,583	2,225	2,888	1,545	30	0	18,280
55 to 59	1,821	1,688	2,100	2,031	1,782	1,505	1,580	378	13	12,898
60 to 64	899	874	928	874	823	540	371	344	71	5,724
65 to 69	322	293	249	184	125	96	48	42	40	1,399
70 & Up	196	138	88	58	35	25	20	6	12	578
Total	33,387	21,868	17,032	12,084	9,404	6,723	3,609	800	136	105,043

Age Distribution



Service Distribution

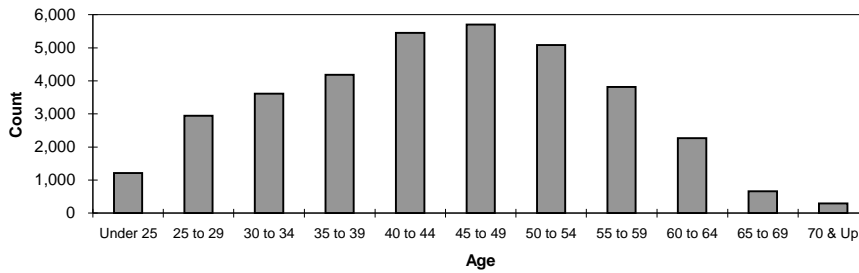


**KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
DISTRIBUTION OF ACTIVE MEMBERS
as of December 31, 2002**

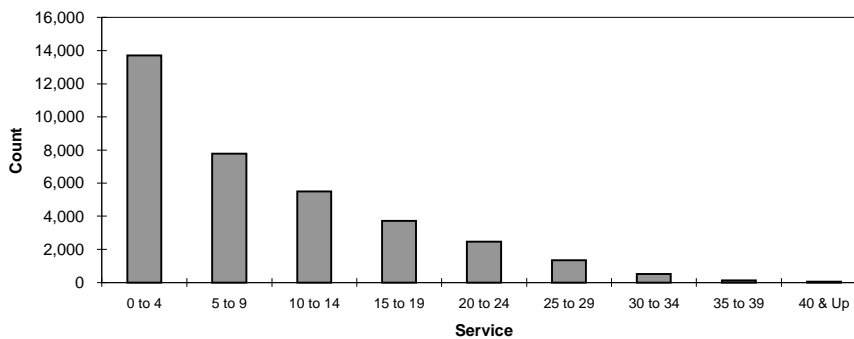
LOCAL

Age	Service									Total
	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	
Under 25	1,191	17	0	0	0	0	0	0	0	1,208
25 to 29	2,440	498	7	0	0	0	0	0	0	2,945
30 to 34	2,045	1,234	321	9	0	0	0	0	0	3,609
35 to 39	1,889	1,134	806	326	21	0	0	0	0	4,176
40 to 44	1,821	1,320	1,023	795	468	31	0	0	0	5,458
45 to 49	1,632	1,188	1,067	803	667	326	17	0	0	5,700
50 to 54	1,194	990	992	705	551	451	192	9	0	5,084
55 to 59	846	736	686	573	422	320	182	47	9	3,821
60 to 64	403	455	434	381	267	148	91	57	26	2,262
65 to 69	164	147	115	96	48	44	22	12	12	660
70 & Up	86	63	52	38	20	16	11	4	8	298
Total	13,711	7,782	5,503	3,726	2,464	1,336	515	129	55	35,221

Age Distribution



Service Distribution

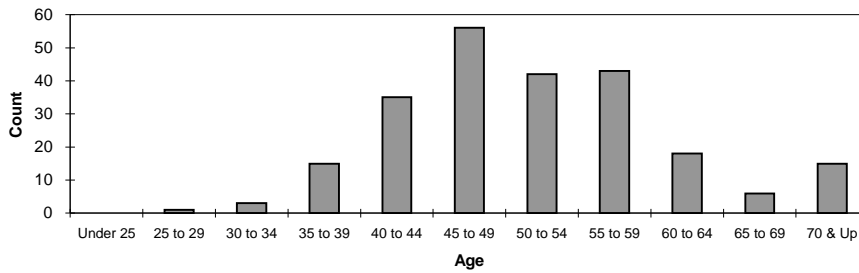


**KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
DISTRIBUTION OF ACTIVE MEMBERS
as of December 31, 2002**

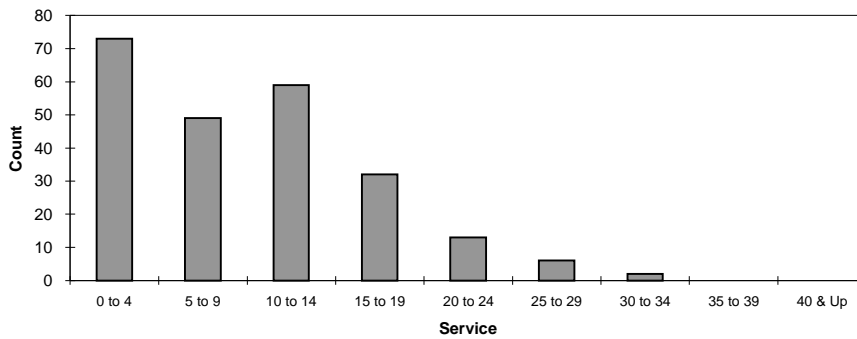
TIAA

Age	Service									Total
	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	
Under 25	0	0	0	0	0	0	0	0	0	0
25 to 29	1	0	0	0	0	0	0	0	0	1
30 to 34	2	1	0	0	0	0	0	0	0	3
35 to 39	9	4	2	0	0	0	0	0	0	15
40 to 44	15	10	6	4	0	0	0	0	0	35
45 to 49	17	12	14	12	1	0	0	0	0	56
50 to 54	7	8	13	6	6	2	0	0	0	42
55 to 59	6	6	19	6	2	4	0	0	0	43
60 to 64	2	4	4	3	4	0	1	0	0	18
65 to 69	4	0	1	1	0	0	0	0	0	6
70 & Up	10	4	0	0	0	0	1	0	0	15
Total	73	49	59	32	13	6	2	0	0	234

Age Distribution



Prior Service Distribution

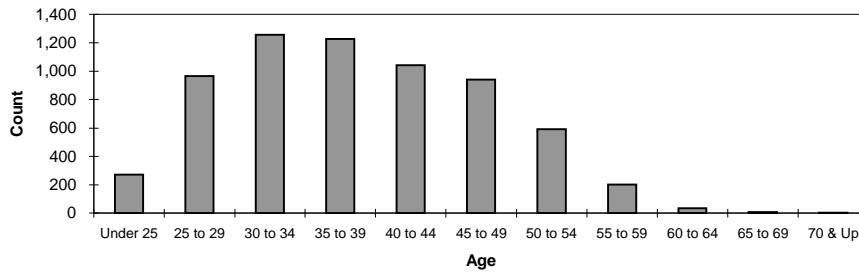


**KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
DISTRIBUTION OF ACTIVE MEMBERS
as of December 31, 2002**

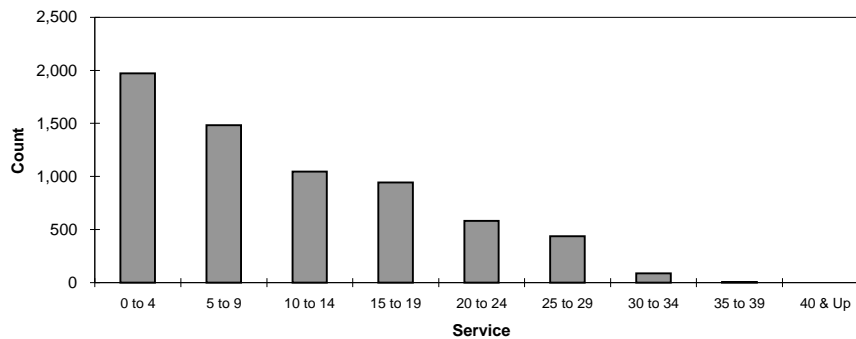
KP&F

Age	Service									Total
	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	
Under 25	271	0	0	0	0	0	0	0	0	271
25 to 29	739	227	0	0	0	0	0	0	0	966
30 to 34	523	603	129	3	0	0	0	0	0	1,258
35 to 39	226	368	415	216	4	0	0	0	0	1,229
40 to 44	103	143	253	399	141	4	0	0	0	1,043
45 to 49	57	71	120	192	293	205	4	0	0	942
50 to 54	26	43	82	100	115	180	47	0	0	593
55 to 59	21	18	32	25	27	42	35	2	0	202
60 to 64	3	4	13	5	2	4	1	2	0	34
65 to 69	1	2	2	1	0	1	0	0	0	7
70 & Up	1	2	0	0	0	0	0	0	0	3
Total	1,971	1,481	1,046	941	582	436	87	4	0	6,548

Age Distribution



Service Distribution

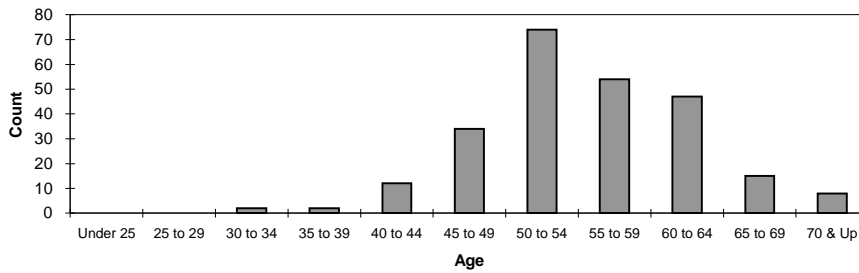


**KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEMS
DISTRIBUTION OF ACTIVE MEMBERS
as of December 31, 2002**

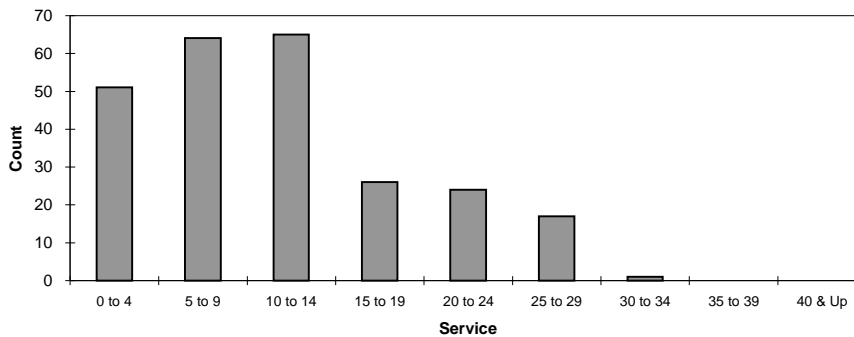
JUDGES

Age	Service									Total
	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	
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	1	1	0	0	0	0	0	0	0	2
35 to 39	0	1	1	0	0	0	0	0	0	2
40 to 44	9	2	1	0	0	0	0	0	0	12
45 to 49	11	11	11	1	0	0	0	0	0	34
50 to 54	19	18	21	10	4	2	0	0	0	74
55 to 59	5	17	13	5	10	4	0	0	0	54
60 to 64	4	10	13	7	7	6	0	0	0	47
65 to 69	2	3	3	2	2	2	1	0	0	15
70 & Up	0	1	2	1	1	3	0	0	0	8
Total	51	64	65	26	24	17	1	0	0	248

Age Distribution



Service Distribution



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 15 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 & FIREFIGHTER'S RETIREMENT SYSTEM

Normal Retirement

Tier I* - age 55 and 20 years of service. **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 no 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

15 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

KPERS

Rate of Investment Return	8.0%
Implicit Inflation Rate	3.5%
Rates of Mortality	School (Male): 1994 GAM Male Table School (Female): 1994 GAM Female Table -1 NonSchool (Male): 1994 GAM Male Table +2 NonSchool (Female): 1994 GAM Female Table +1
Disabled Life Mortality	1994 GAM Table Set forward 12 years

Rates of Salary Increase	<u>Years of Service</u>	<u>State</u>	<u>Rate of Increase*</u>	
			<u>School</u>	<u>Local</u>
	1	7.8%	9.8%	7.8%
	5	5.6%	6.7%	6.2%
	10	4.9%	5.1%	5.2%
	15	4.4%	4.6%	4.8%
	20	4.1%	4.1%	4.6%
	25	4.0%	4.0%	4.1%
	30	4.0%	4.0%	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 or more
25	23.0%	19.0%	13.0%	10.0%	10.0%
30	20.5%	17.2%	12.5%	10.0%	6.0%
35	19.7%	16.0%	12.0%	10.0%	4.3%
40	19.3%	15.6%	12.0%	10.0%	3.2%
45	18.8%	15.3%	12.0%	10.0%	2.6%
50	18.4%	14.9%	12.0%	10.0%	2.1%

School - Female
Years of Service

Age	<2	2	3	4	5 or more
25	26.0%	20.7%	17.5%	11.3%	11.5%
30	23.5%	16.2%	14.4%	9.2%	8.0%
35	20.0%	13.5%	12.5%	8.0%	4.8%
40	16.5%	11.3%	9.0%	7.3%	3.0%
45	14.0%	10.2%	8.7%	7.1%	2.0%
50	13.4%	9.9%	8.5%	7.0%	2.0%

State - Male
Years of Service

Age	<2	2	3	4	5 or more
25	18.0%	19.1%	16.3%	14.0%	10.0%
30	18.0%	15.3%	13.0%	11.1%	10.0%
35	15.0%	13.3%	11.4%	9.8%	5.9%
40	15.0%	12.0%	10.3%	8.8%	4.0%
45	13.0%	11.7%	10.0%	8.5%	3.0%
50	13.0%	11.4%	9.8%	8.4%	2.0%

State - Female
Years of Service

Age	<2	2	3	4	5 or more
25	25.0%	23.0%	19.1%	15.0%	16.9%
30	20.5%	18.9%	15.7%	12.3%	10.8%
35	17.8%	16.4%	13.4%	10.7%	6.6%
40	16.3%	15.0%	11.4%	9.8%	4.7%
45	15.8%	14.5%	10.2%	9.5%	3.5%
50	15.5%	14.3%	10.2%	9.3%	3.5%

Local - Male
Years of Service

Age	<2	2	3	4	5 or more
25	23.0%	19.5%	16.1%	15.0%	12.0%
30	18.0%	15.3%	12.6%	11.7%	9.5%
35	15.0%	12.0%	10.5%	9.8%	5.7%
40	12.5%	10.6%	8.8%	8.1%	4.1%
45	11.3%	10.0%	7.9%	7.3%	3.6%
50	11.0%	10.0%	7.7%	7.2%	3.2%

Age	Local - Female Years of Service				
	<2	2	3	4	5 or more
25	25.0%	22.5%	18.8%	15.8%	12.0%
30	20.0%	18.0%	15.0%	12.6%	8.8%
35	17.5%	15.8%	13.1%	11.0%	7.3%
40	15.8%	14.2%	11.9%	10.0%	5.5%
45	15.3%	13.8%	11.5%	9.6%	4.5%
50	15.0%	13.5%	11.3%	9.5%	4.0%

Retirement Rates

School

Age	Rule of 85	
	1st Year With 85 Points	After 1st Year With 85 Points
53	20%	10%
55	20%	15%
57	25%	15%
59	25%	25%
61	35%	35%

<u>Early Retirement</u>		<u>Normal Retirement</u>	
Age	Rate	Age	Rate
55	3%	62	40%
56	3%	63	30%
57	3%	64	35%
58	5%	65	40%
59	10%	66	20%
60	10%	67	20%
61	20%	68	20%
		69	20%
		70	100%

State

Age	Rule of 85	
	1st Year With 85 Points	After 1st Year With 85 Points
53	17%	15%
55	17%	15%
57	17%	15%
59	15%	15%
61	30%	25%

<u>Early Retirement</u>		<u>Normal Retirement</u>	
<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
55	3%	62	40%
56	3%	63	25%
57	3%	64	30%
58	3%	65	45%
59	5%	66	30%
60	7%	67	25%
61	20%	68	25%
		69	20%
		70	100%

Local

<u>Age</u>	<u>Rule of 85</u>	
	<u>1st Year With 85 Points</u>	<u>After 1st Year With 85 Points</u>
53	10%	5%
55	10%	10%
57	10%	10%
59	10%	15%
61	25%	25%

<u>Early Retirement</u>		<u>Normal Retirement</u>	
<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
55	3%	62	35%
56	3%	63	25%
57	3%	64	25%
58	3%	65	40%
59	5%	66	20%
60	5%	67	20%
61	15%	68	20%
		69	20%
		70	100%

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

<u>Age</u>	<u>Rate</u>
55	10%
58	15%
60	15%
62	35%
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>	<u>School</u>	<u>State</u>	<u>Local</u>
25	.025%	.036%	.030%
30	.025%	.146%	.065%
35	.035%	.230%	.097%
40	.050%	.305%	.130%
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.

KP & F

Rate of Investment Return 8.0%

Implicit Inflation Assumption 3.5%

Rates of Mortality 1994 GAM Table*
*70% of preretirement deaths assumed to be service related

Disabled Life Mortality 1994 GAM Table Set forward 12 years

Rates of Salary Increase	<u>Years of Service</u>	<u>Rate of Increase*</u>
	1	12.5%
	5	7.0%
	10	4.9%
	15	4.3%
	20	4.0%
	25	4.0%

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

Rates of Termination

Tier I: 3% for ages less than 41; 0% thereafter

	<u>Years of 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:	<u>Early Retirement</u>		<u>Normal Retirement</u>	
	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
	50	5%	55	60%
	51	5%	56	25%
	52	10%	57	20%
	53	20%	58	35%
	54	30%	59	65%
			60	100%

Tier II:	<u>Early Retirement</u>		<u>Normal Retirement</u>	
	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
	50	10%	50	45%
	51	10%	53	30%
	52	10%	55	30%
	53	10%	58	20%
	54	25%	60	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%
Implicit Inflation Assumption	3.5%
Rates of Mortality	1994 GAM Table
Rates of Salary Increase	5.5%
Rates of Termination	None assumed
Disabled Life Mortality	Same as Healthy Lives
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

KPERS

Under the Projected Unit Credit actuarial cost method, the normal cost for any year is equal to the actuarial present value of the benefits allocated to that year. The actuarial present value of benefits that are allocated to prior years is called the actuarial liability.

The portion of the actuarial liability in excess of plan assets is funded according to a schedule that is intended to amortize such unfunded actuarial liability fully after a period of years. This is in addition to each year's employer normal cost. Under this cost method, actuarial gains and losses are directly reflected in the size of the unfunded actuarial liability, which is recalculated each year.

For KPERS, the unfunded actuarial liability is amortized over a period originally set at 40 years beginning July 1, 1993. The annual amortization payments will increase 4% for each year remaining in the 40-year amortization period. 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

increase in the unfunded actuarial liability resulting from the 1998 COLA is amortized as a level percent of payroll over 15 years.

For the closed group of KPERS-TIAA members, the unfunded actuarial liability is amortized by annual level dollar payments over a period of 10 years from July 1, 1993. This period was extended by one year, effective with the 1998 actuarial valuation.

KP&F

The Aggregate Actuarial Cost Method with Supplemental Unfunded Actuarial Liability (UAL) is used for KP&F. This method develops a normal cost rate on a group, or aggregate, basis. The Supplemental Unfunded Liability was initially established in 1993 to reflect the increase in the actuarial liability (using the Projected Unit Credit cost method) due to the benefit enhancement package passed in that year. The Supplemental UAL is amortized over 40 years measured from July 1, 1993 with payments increasing 4% per year. A separate amortization base was established for the ad hoc COLA granted in 1998. This UAL is amortized over 15 years with the payment increasing 4% per year. As of December 31, 2000 the Supplemental UAL was re-established with the resulting UAL set to zero. The COLA UAL amortization base/payments remain unchanged.

Judges

The Frozen Entry Age Cost Method is used. The frozen unfunded actuarial liability (UAL) was established in 1993 with payments over 40 years as a level dollar amount. The UAL is frozen and reflects changes only due to a change in plan provisions or actuarial assumptions. Actuarial gains/losses are reflected in the calculation of the normal cost rate.

2. Asset Valuation Method

For actuarial purposes, assets are valued at expected value (based on the actuarial assumed rate of return) at the valuation date (based on the actuarial assumption) plus one-third of the difference between the market value and expected value.

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 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).