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GASB STATEMENT NO. 67 REPORT

FOR THE

KANSAS PUBLIC EMPLOYEES

RETIREMENT SYSTEM

PREPARED AS OF JUNE 30, 2014

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November 6, 2014

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

Dear Members of the Board:

Presented in this report is information to assist the Kansas Public Employees Retirement System in meeting the requirements of the Governmental Accounting Standards Board (GASB) Statement No. 67. The information is presented for the period ending June 30, 2014.

The annual actuarial valuation used as a basis for the liabilities presented in this report was performed as of December 31, 2013. The valuation was based upon data, furnished by the Executive Director and KPERS staff, concerning active, inactive and retired members along with pertinent financial information. This information was reviewed for completeness and internal consistency, but was not audited by us. The valuation results depend on the integrity of the data. If any of the information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

To the best of our knowledge, this report is complete and accurate. The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial principles and practices, as well as in conformity with Actuarial Standards of Practice issued by the Actuarial Standards Board. The calculations are based on the current provisions of the System, and on actuarial assumptions that are internally consistent and individually reasonable based on the actual experience of the Plan. In addition, the calculations were completed in compliance with the laws governing the System and, in our opinion, meet the requirements of GASB 67. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

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Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of this valuation, an analysis of the range of results is not presented herein.

Respectfully submitted,

Patrice Beckham   Brent A. Banister

Patrice A. Beckham, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

Brent A. Banister, Ph.D., FSA, EA, FCA, MAAA
Chief Pension Actuary

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REPORT OF THE ANNUAL GASB STATEMENT NO. 67

REQUIRED INFORMATION FOR THE KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM

PREPARED AS OF JUNE 30, 2014

SECTION I – INTRODUCTION

The Governmental Accounting Standards Board issued Statement No. 67 (GASB 67), *"Financial Reporting for Pension Plans"*, in June 2012. The effective date for reporting under GASB 67 is plan years beginning after June 15, 2013 which is fiscal year end June 30, 2014 for the Kansas Public Employees Retirement System (System). Much of the information as of June 30, 2014 provided in this report is based on the data, assumptions and results of the annual actuarial valuation of the System performed as of December 31, 2013. The results of that valuation were detailed in a report dated July 8, 2014.

GASB 67 replaces GASB 25, and represents a significant departure from the requirements of that older statement. GASB 25 was issued as a "funding friendly" statement that required pension plans to report items consistent with the results of the plan's actuarial valuations, as long as those valuations met certain parameters. GASB 67 basically separates accounting from funding by creating disclosure and reporting requirements that may or may not be consistent with the basis used for funding the System.

A major change in GASB 67 is the requirement to determine the Total Pension Liability (TPL) utilizing the Entry Age Normal actuarial cost method. The Net Pension Liability (NPL) is then set equal to the TPL minus the System's Fiduciary Net Position (FNP) (basically the market value of assets). The benefit provisions recognized in the calculation of the TPL are summarized in Appendix B.

Among the assumptions needed for the liability calculation is a Single Equivalent Interest Rate (SEIR), as described by GASB 67. To determine the SEIR, the FNP must be projected into the future for as long as there are anticipated benefits payable under the plan's provisions applicable to the members and beneficiaries of the System on the Measurement Date. If the FNP is not projected to be depleted at any point in the future, the long term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR.

If, however, the FNP is projected to be depleted, the SEIR is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long term expected rate of return, and the present value determined by discounting those benefits after the date of depletion by a 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate. Our calculations indicate that the FNP is not projected to be depleted, so the bond rate is not used in the determination of the SEIR for either the June 30, 2013 or the June 30, 2014 Total Pension Liability.

The sections that follow provide the results of all of the necessary calculations, presented in the order laid out in GASB 67, for note disclosure and Required Supplementary Information (RSI).

SECTION II – FINANCIAL STATEMENT NOTES

The material presented herein will follow the order presented in GASB 67. Paragraph numbers are provided for ease of reference.

Paragraphs 30.a. (1)-(3): This information will be supplied by the System.

Paragraph 30.a. (4): The data required regarding the membership of the System were furnished by the System. The following table summarizes the membership of the System as of December 31, 2013, the most recent actuarial valuation, which was used to develop the June 30, 2014 Total Pension Liability.

Membership

	Inactive Members Or Their Beneficiaries Currently Receiving Benefits	Inactive Members Entitled To But Not Yet Receiving Benefits	Active Members	Total
State	18,413	7,180	23,117	48,710
School	46,191	24,038	85,752	155,981
Local	17,326	14,878	39,088	71,292
KP&F	4,670	1,382	7,224	13,276
Judges	243	6	265	514
Total	86,843	47,484	155,446	289,773

Paragraphs 30.a. (5)-(6) and Paragraphs 30.b.-f.: This information will be supplied by the System.

Paragraph 31.a. (1)-(4): This information is provided in the following table. As stated earlier, the NPL is equal to the TPL minus the FNP. That result, as of June 30, 2013 and June 30, 2014, is presented in the following table.

	Fiscal Year Ending June 30	
	2013	2014
Total Pension Liability		
State	$ 4,094,474,583	$ 4,151,485,723
School	12,848,035,637	13,259,837,215
Local	4,294,730,501	4,485,119,406
KP&F	2,640,335,398	2,764,723,716
Judges	160,021,365	166,425,408
Total Pension Liability	$ 24,037,597,484	$ 24,827,591,468
Fiduciary Net Position	14,390,212,800	16,535,796,558
Net Pension Liability	$ 9,647,384,684	$ 8,291,794,910
Ratio of Fiduciary Net Position to Total Pension Liability	59.87%	66.60%

Paragraph 31.b.: This paragraph requires information regarding the actuarial assumptions used to measure the TPL. The same set of actuarial assumptions was utilized in developing the TPL as of both June 30, 2013 and June 30, 2014 and is outlined in Appendix C. The Total Pension Liability was determined based on an actuarial valuation performed as of December 31 of the prior year and was then rolled forward to June 30 using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.00 percent
Salary increases	4.00 to 12.50 percent, including inflation
Investment rate of return	8.00 percent compounded annually, net of pension plan investment expense, and including inflation

Mortality	Mortality rates were based on the RP 2000 Mortality Tables, with age setbacks and age set forwards as well as other adjustments based on different membership groups. Future mortality improvements are anticipated using Scale AA. Different adjustments apply to pre-retirement versus post-retirement versus post-disability mortality tables. See Appendix C for more detailed descriptions.

The actuarial assumptions used in these valuations were based on the results of the last actuarial experience study report for calendar years 2007 through 2009, dated July 15, 2011.

Paragraph 31.b.(1)

(a) Discount rate. The discount rate used to measure the Total Pension Liability was 8.00 percent.

(b) Projected cash flows: The projection of cash flows used to determine the discount rate was based on member and Employer contributions as outline below:

In KPERS, the State, School and Local employers do not necessarily contribute the full actuarial contribution rate. Based on legislation passed in 1993, the employer contribution rates certified by the Board may not increase by more than the statutory cap. The current statutory cap is 0.90% for fiscal year 2014, 1.0% for fiscal year 2015, 1.1% for fiscal year 2016 and 1.2% for fiscal year 2017 and later. In addition, the statutory contribution rate for the State and School groups is determined using the combined results of the two groups. The expected KPERS employer statutory contribution rate was modeled for future years, assuming all actuarial assumptions are met in future years. Employers contribute the full actuarial contribution rate for KP&F and Judges. Future employer contribution rates were also modeled for KP&F and Judges.

For KPERS, KPERS 1 member contributions are 5% of compensation effective January 1, 2014 and increase to 6% effective January 1, 2015. KPERS 2 member contributions are 6% of compensation. For KP&F, member contributions are 7.15% of compensation, effective July 1, 2013. For Judges, member contributions are 6% of compensation, however upon reaching the maximum retirement benefit level of 70% of Final Average Salary, the contribution rate is reduced to 2%. The blended member contribution rate for Judges used in the projection of cash flows was 5.77%.

(c) Long term rate of return: The long-term expected rate of return on pension plan investments is reviewed as part of the triennial experience study. Please see the formal experience study report, dated July 15, 2011 for information on the development of the 8% assumed rate of return. Several factors are considered in evaluating the assumption including a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The assumption is intended to be a long term assumption and is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption or a fundamental change in the market rates of return in future years.

(d) Municipal bond rate: the discount rate determination does not use a municipal bond rate.

(e) Periods of projected benefit payments: Projected future benefit payments for all current plan members were projected through 2113.

(f) Assumed asset allocation: The target asset allocation and best estimates of arithmetic real rates of return for each major asset class, as provided by KPERS investment consultant, Pension Consulting Alliance, are summarized in the following table:

Asset Class	Long-Term Target Allocation	Long-Term Expected Real Rate of Return*
Global Equity	47.0%	6.00%
Fixed Income	14.0%	0.85
Yield Driven	8.0%	5.50
Real Return	11.0%	3.75
Real Estate	11.0%	6.65
Alternatives	8.0%	9.50
Cash Equivalents	1.0%	0.00
Total	100.0%	

*Arithmetic mean

(g): **Sensitivity analysis**: disclosure of the sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the Net Pension Liability of the System, calculated using the discount rate of 8.00 percent, as well as the System's Net Pension Liability calculated using a discount rate that is 1-percentage-point lower (7.00 percent) or 1-percentage-point higher (9.00 percent) than the current rate:

	1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
Net Pension Liability	$11,115,064,658	$8,291,794,910	$5,896,814,715

Paragraph 31.c.: The date of the actuarial valuation upon which the June 30, 2014 TPL is based is December 31, 2013. To determine the TPL, the liability was rolled forward six months to June 30, 2014 using standard actuarial formulae and the actuarial assumptions used in the valuation.

SECTION III – REQUIRED SUPPLEMENTARY INFORMATION

There are several tables of Required Supplementary Information (RSI) that need to be included in the System's financial statements:

Paragraphs 32.a.-c.: The required tables of schedules are provided in Appendix A.
Paragraph 32.d.: The money-weighted rates of return will be supplied by the System.

Paragraph 34: The following information should be noted regarding the information found in the RSI section, particularly the *Schedule of Employer Contributions*:

Changes of benefit terms: The following changes to the plan provisions were made as identified below. Legislative changes are typically reflected in the prior December 31 valuation.

2014: The 2014 Legislature passed HB 2533 which made changes to the KPERS 3 benefit structure, which is effective for new members on/after January 1, 2015. House Bill 2533 lowered the guaranteed interest crediting rate from 5.25% to 4.00%, replaced the discretionary dividend with a formulaic dividend, and set the annuity interest rate equal to the assumed rate of return less 2.00%. These changes did not impact the December 31, 2013 valuation because there were no KPERS 3 members in the System at that time.

2013: Sub HB 2333, passed by the 2012 Legislature, created a 90-day election period for KPERS 1 members of the system on July 1, 2013 to permit them to choose to (1) contribute 5% of compensation as employee contributions effective January 1, 2014 and 6% effective January 1, 2015 and receive a 1.85% multiplier for all years of future service or (2) continue to contribute 4% of compensation as employee contributions and receive a 1.40% multiplier for all years of future service. The election was subject to approval by the Internal Revenue Service, and if such approval was not granted, there was to be no election and the default option (option 1 above) was to apply. The IRS did not take action on KPERS' request to approve the election. Therefore, the default was implemented on January 1, 2014.

House Bill 2213 (HB 2213) was passed by the 2013 legislature and signed by the Governor on June 14, 2013. HB 2213 changed the effective date for the higher multiplier of 1.85% for all years of service for KPERS 2 members from July 1, 2014 to July 1, 2012.

HB 2213 also increased the cap on the maximum retirement benefit in KP&F from 80% to 90% of final average salary and increased the employee contribution rate from 7% of pay until the member has 32 years of service to 7.15% of pay for all years of service.

2012: The 2012 Legislature passed Sub House Bill 2333 (Sub HB 2333) which created a KPERS 3 retirement plan for new members effective January 1, 2015 which is a cash balance retirement plan. Correctional officers are not included in this new tier but will remain in KPERS 2. The employee contribution rate for KPERS 3 members is 6%. Employer credits will vary based on years of service: 3% of compensation for 1-4 years of service, 4% for 5-11 years, 5% for 12-23 years and 6% for 24 or more years of service. Interest credits are a guaranteed 5.25% on employee and employer account balances. Possible additional interest credits of 0% to 4% may be granted by the KPERS Board based on KPERS' actual investment returns and funding. Normal retirement age is age 60 with 30 years of service or age 65 with 5 years of service. The benefit is a guaranteed lifetime benefit based on the account balance at retirement. There is a partial lump sum option up to 30% at normal retirement age.

Sub HB 2333 also included changes for current KPERS 1 and KPERS 2 members. Sub HB 2333 created a 90-day election period for KPERS 1 members of the system on July 1, 2013 to permit them to choose to (1) contribute 5% of compensation as employee contributions effective January 1, 2014 and 6% effective January 1, 2015 and receive a 1.85% multiplier for all years of future service or (2) continue to contribute 4% of compensation as employee contributions and receive a 1.40% multiplier for all years of future service. Changes in the benefit multiplier are effective January 1, 2014 and impact only future years of service. The election was subject to approval by the Internal Revenue Service, with the provision that, if such approval was not granted, there would be no election and the default option (option 1 above) would apply.

Sub HB 2333 eliminated the cost of living adjustment (COLA) for KPERS 2 members, effective July 1, 2012. However, KPERS 2 members who retire after July 1, 2014 receive a higher multiplier of 1.85% for all years of service, not just future years of service (House Bill 2213 in the 2013 session changed the date from January 1, 2014 to July 1, 2012).

The bill also provided for increases in the statutory cap on the employer contribution rate. The cap increased from 0.6% per year to 0.9% in FY 2014, 1.0% in FY 2015, 1.1% in FY 2016 and 1.2% in FY 2017 and after.

Sub HB 2333 also provided for the State to make additional contributions beginning in FY 2014 to fund the unfunded actuarial liability (UAL) of the State/School group until their funded ratio reaches at least 80%. The additional contribution stream, which is to come from the Expanded Lottery Act Revenue Fund (ELARF), is determined as 50% of the money credited to the ELARF, after an annual reduction of $10.5 million.

2011: Senate Substitute for HB 2194 (Sub HB 2194) was passed by the 2011 Legislature, but its provisions were contingent on action by the 2012 Legislature. Therefore, the plan changes were not reflected in the formal valuation results in the December 31, 2010 valuation report. Sub HB 2194 contained significant changes for both KPERS employers and current and future members. The bill established a 13 member KPERS Study Commission to study alternative plan designs during the rest of 2011 and make a recommendation for plan design to the 2012 Legislature that would provide for the long term sustainability of the System. Report recommendations had to be voted on by the 2012 Legislature for other parts of the bill to become effective.

The bill provided for increases in the statutory cap on the employer contribution rate. The cap increased from 0.6% per year to 0.9% in FY 2014, 1.0% in FY 2015, 1.1% in FY 2016 and 1.2% in FY 2017 and after.

The law created a 90-day election period starting July 1, 2013 to permit KPERS 1 members to choose between a 6% contribution rate with a 1.85% multiplier for all years of future service or a 4% contribution and a 1.40% multiplier for all years of future service. Changes were effective January 1, 2014 and impacted only future service. The election was to be subject to approval by the Internal Revenue Service. If such approval was not granted, there was to be no election and the default option would apply.

The law also provided for a 90-day election period starting July 1, 2013 to permit KPERS 2 members at that time to choose between the 1.75% multiplier and losing the cost of living adjustment (COLA) for all service or a 1.40% multiplier for future years of service and keeping the COLA. The multiplier change was not to affect the service already earned by the members, but the COLA loss was for all service credit over the member's entire career. Changes were to be effective January 1, 2014. Similar to KPERS 1, the election was subject to approval by the Internal Revenue Service. If such approval was not granted, there would be no election and the default option would apply. New employees would automatically have a 6% contribution rate and the 1.75% multiplier with no COLA.

Inactive members returning to KPERS covered employment after July 2013 would receive the default option. Senate Substitute for HB 2194 also provided that 80% of the proceeds from excess real estate property sales would be used to pay down KPERS' unfunded actuarial liability.

2008: The 2008 Legislature passed House Bill 2390 which provided a $300 one-time benefit payment to all retirees who retired on or before July 1, 1998, and had ten or more years of service credit, and their joint survivors. The $300 payment was contingent on the State's receipt of adequate expanded gaming revenues.

2007: The 2007 Legislature passed Senate Bill 362 which contained the following provisions which impacted KPERS:

- All retirees who retired before July 1, 1997, with ten or more years of service, and their joint survivors were to receive a $300 one-time cost-of-living payment.

- A new plan design was applicable for KPERS members first employed on or after July 1, 2009. The key provisions of the plan design were:
  - ✓ First day membership for all groups (no waiting period)
  - ✓ Five year vesting
  - ✓ Benefit formula equal to 1.75% times Years of Service times Final Average Salary (averaged over five highest years)
  - ✓ Normal retirement at age 65 with five years of service, or age 60 with 30 years of service.
  - ✓ Early retirement at age 55 and 10 years of service with higher reductions for early commencement.
  - ✓ Automatic annual 2 percent cost-of-living adjustments beginning at age 65.
  - ✓ Employee contribution rate of 6 percent.

- Two enhancements applied to current employees:
    - ✓ Non-school members hired between July 1, 2008 and June 30, 2009 will become members of the current tier on July 1, 2009.
    - ✓ Five year vesting, effective July 1, 2009.

2006: The 2006 Legislature passed legislation containing the following provisions which impacted KPERS:

- Increased the minimum monthly retirement benefit for former members of the Kansas School Retirement System (KSRS) who retired before January 1, 1971, with at least 20 years of service, from $500 to $625 effective July 1, 2006 and to $750 effective July 1, 2007. The Legislature appropriated $300,000 to offset the increase in the unfunded actuarial liability for this benefit change.
- Increased the annual earnings limitation for KPERS retirees who return to work for their former employer from $15,000 to $20,000.
- Required KPERS participating employers to pay the actuarial employer contribution rate and statutory employee contribution rate when hiring KPERS retirees who retired from a different KPERS employer (for retirees first employed on or after July 1, 2006).
- Established a statutory rate cap on the annual employer contribution rate increases for the KPERS correctional officer groups.

2005: The 2005 Legislature passed legislation reducing the length of service required for a surviving spouse to be eligible for pre-retirement survivor death benefits from 15 to 10 years of service for members of KPERS or the Retirement System for Judges.

Changes in actuarial assumptions:

12/31/2011 valuation:

KPERS

o Lower the pre-retirement mortality rates for females in both State and School.
o Adjust early retirement rates for State and School.
o Adjust the ultimate retirement rates under Rule of 85 for State.
o Adjust the retirement rates for the Correctional Groups (C55 and C60)
o Value the greater of the refund value or present value of accrued benefit upon termination for active KPERS 2 members assumed to terminate in the future.
o Assume 12% of all future benefit payments will be paid as a lump sum.

KP&F

o Adjust the retirement rates for both KPERS 1 and KPERS 2
o Assume 12% of all future benefit payments will be paid as a lump sum.

Judges

o Lower retirement rates at most ages and extend rates down to ages 60.
o Assume 12% of all future benefit payments will be paid as a lump sum.

The requirement that the actuarial value of assets fall between 80% and 120% of market value (referred to as the "corridor") was eliminated.

12/31/2007 valuation:

KPERS

o Adjust the mortality rates to better fit observed patterns.
o Adjust some retirement rates.
o Change the termination of employment to be based solely on length of employment.
o Changes to the salary growth assumption (primarily for the School group).
o Minor adjustments to disability rates.
o Changes in the probability of electing a refund of contributions.

KP&F

o Adjust the mortality rates.
o Adjust some retirement rates.

Judges

o Adjust the mortality rates.
o Change the salary increase assumption from 5.5% to 4.5%.

12/31/2005 valuation:

Judges

o Retirement assumption changed from a single age to a set of retirement rates.

12/31/2004 valuation:

All Systems

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

KPERS

o Adjust retirement rates, with most significant changes for the State group.

o Extend the select period for termination of employment rates from 5 to 9 years.

KP&F

o Minor adjustment to retirement rates, generally lowering rates.

o Increase termination of employment rates for KPERS 2 members at lower durations and decrease them at higher durations.

Method and assumptions used in calculation of actuarially determined contributions.

The actuarially determined contribution rates in the schedule of employer contributions are calculated annually on each valuation date (December 31). There is a lag between the valuation date and the effective date the contribution rates are paid into the System. The lag for the State, School, Judges and KP&F – State is two and a half years. The lag for Local employers (KPERS and KP&F) is two years. For example, the results of the December 31, 2013 valuation set employer contribution rates for fiscal year 2017 for the State (July 1, 2016 to June 30, 2017) and 2016 for Local employers (calendar year 2016). The following actuarial methods and assumptions were used to determine actuarial contribution rates reported in the December 31, 2013 actuarial valuation:

Actuarial cost method	Entry age
Amortization method	Level percentage of payroll, closed (Level dollar for Judges)
Remaining amortization period	19 years
Asset valuation method	5-year smoothed value
Inflation	3.00 percent
Salary increase	4.00 to 12.50 percent, including inflation
Investment rate of return	8.00 percent compounded annually, net of investment expense, and including inflation

APPENDIX A

REQUIRED SUPPLEMENTARY INFORMATION

Exhibit A

GASB 67 Paragraph 32.a.
SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY
($ in Thousands)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Total Pension Liability										
Service Cost	$572,291									
Interest	1,866,797									
Benefit changes	0									
Difference between expected										
and actual experience	(216,248)									
Changes of assumptions	0									
Benefit payments	(1,375,875)									
Refunds of contributions	(56,971)									
Net change in Total Pension Liability	$789,994									
Total Pension Liability - beginning	$24,037,597									
Total Pension Liability - ending (a)	$24,827,591									
Plan Fiduciary Net Position										
Contributions – employer	$701,818									
Contributions – member	332,163									
Net investment income	2,553,843									
Benefit payments	(1,375,875)									
Administrative expense	(9,636)									
Refunds of contributions	(56,971)									
Other	242									
Net change in Plan Fiduciary Net Position	$2,145,584									
Plan Fiduciary Net Position – beginning	$14,390,213									
Plan Fiduciary Net Position - ending (b)	16,535,797									
Net Pension Liability - ending (a) - (b)	$8,291,794									

Exhibit A (Continued)

GASB 67 Paragraph 32.b.

SCHEDULE OF THE NET PENSION LIABILITY

($ in Thousands)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Total Pension Liability	$24,827,591									
Plan Fiduciary Net Position	16,535,797									
Net Pension Liability	$8,291,794									
Ratio of Plan Fiduciary Net Position to Total Pension Liability	66.60%									
Covered-employee payroll	$6,424,739									
Net Pension Liability as a percentage of covered-employee payroll	129.06%									

Exhibit B

GASB 67 Paragraph 32.c.

SCHEDULE OF EMPLOYER CONTRIBUTIONS

($ in Thousands)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Actuarially determined employer contribution	$842,286	$825,197	$843,362	$709,964	$682,062	$660,834	$607,662	$531,292	$471,424	$381,791
Contractually required contribution	668,811	617,925	568,015	525,727	492,006	449,236	395,752	339,509	298,712	261,962
Actual employer contributions	668,811	617,925	568,015	525,727	492,006	449,236	395,752	339,509	298,712	261,962
Annual contribution deficiency (excess)	173,475	207,272	275,347	184,237	190,056	211,598	211,910	191,783	172,712	119,829
Covered-employee payroll	$6,424,739	$6,523,850	$6,541,464	$6,483,143	$6,527,400	$6,403,432	$6,226,754	$6,032,223	$5,714,315	$5,413,662
Actual contributions as a percentage of covered-employee payroll	10.41%	9.47%	8.68%	8.11%	7.54%	7.02%	6.36%	5.63%	5.23%	4.84%

Note: the information presented in this table was provided by the System.

*Actuarial valuations are prepared annually for the System with separate contribution rates determined for the KPERS State/School group, KPERS Local group, Kansas Police and Fire Retirement System, and the Retirement System for Judges. The results of the annual actuarial valuation, performed as of the last day of each calendar year, sets the employer contribution rates for the fiscal year ending four years later than the year of the valuation for the state of Kansas and three years later than the year of the valuation for local employers. The Board certifies the employer contribution rates each year based on the results of the actuarial valuation. However, the full actuarial contribution rate is not contributed for all KPERS groups. Based on state statutes, the employer contribution rates certified by the Board for KPERS (State, School, Local) may not increase by more than the statutory cap which has been changed periodically, most recently in 2012. The recent history of the statutory cap is 0.9% for fiscal year 2014, 1.0% for fiscal year 2015, 1.1% for fiscal year 2016, and 1.2% for fiscal year 2017 and beyond. The full actuarial contribution rate, without regard to any caps, is paid by all employers who participate in KP&F and by the state of Kansas for the Judges System.

APPENDIX B

SUMMARY OF BENEFIT PROVISIONS VALUED

Plan Membership

The Kansas Public Employees Retirement System (the System), is an umbrella organization that administers the benefit structures for three distinct subgroups: 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 benefit structures are defined benefit, contributory plans. Separate actuarial valuations are performed for members of each subgroup to determine the employer contribution rate. All contributions and investment income from employees and employers of all these subgroups are held in a single trust so the System is a cost-sharing multiple employer plan. 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 who work at least 630 hours per year or 3.5 hours per day for at least 180 days are eligible for membership. Effective July 1, 2009, all employees become KPERS members on their date of employment. Prior to July 1, 2009 only School employees were covered immediately. There was a one-year service requirement for the State and Local group. Those who retire under the benefit provisions of one of the subgroups of the System may not become contributing members of that subgroup again.

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM

Summary of Provisions *

* Members who participate on or after July 1, 2009 are referred to as KPERS 2 members.

This valuation reflects the benefit structure in place as of December 31, 2013, as amended by House Bill 2533, passed by the 2014 Legislature. KPERS 3 benefits are not included as there were no such members in the valuation.

Normal Retirement

Eligibility – KPERS 1: (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.

KPERS 2: (a) Age 65 with 5 years of credited service or (b) age 60 with 30 years of credited service.

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 and before July 1, 2009, Final Average Salary equals the average of the three highest years of service, excluding add-ons, such as sick and annual leave. Effective July 1, 2009, (KPERS 2), Final Average Salary equals the average of the five highest years of salary, excluding additional compensation.

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 –

KPERS 1: Participating service credit is 1.75% of Final Average Salary for years of service prior to January 1, 2014. Participating service credit is 1.85% of Final Average Salary for years of service after December 31, 2013.

KPERS 2: For those retiring on or after January 1, 2012, participating service credit is 1.85% for all years of service.

<u>Early Retirement</u>

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

Benefit – KPERS 1: 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.

KPERS 2: The normal retirement benefit is reduced actuarially for early commencement. The reduction factor is 35% at age 60 and 57.5% at age 55. If the member has 30 years of credited service, the early retirement reduction is less (50% of regular reduction).

<u>Vesting Requirements</u>

Eligibility – Effective July 1, 2009, a member must have five years of credited service (ten years prior to July 1, 2009). Should the vested member terminate employment, the member must leave accumulated contributions on deposit with the 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 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.

<u>Other Benefits</u>

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 System. Inactive, nonvested 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 31 days after employment terminates, but it does not allow members to borrow from contributions.

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

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

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

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

Member Contributions

Prior to January 1, 2014, member contributions were 4% of compensation for KPERS 1. 2012 HB 2333 established an election by KPERS 1 members, contingent upon IRS approval, between different contribution rate and benefit levels. The legislation provided that, if the IRS rejected or did not take action to approve the election, KPERS 1 members would default to an increase in their employee contributions to 5% of compensation effective January 1, 2014, and 6% effective January 1, 2015, with an increase in the benefit multiplier to 1.85% beginning January 1, 2014, for future years of service only. The IRS did not take action on KPERS' request to approve the election, and therefore, the default was implemented on January 1, 2014.

The member contribution rate for KPERS 2 is 6% of compensation. Interest is credited to members' contribution accounts on June 30 each year, based on the 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 plant 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.

Cost of Living Adjustments (COLAs)

KPERS 2 Members Who Retired Prior to July 1, 2012: 2% cost-of-living adjustment (COLA) each year beginning at age 65 or the second July 1 after the member's retirement date, whichever is later. Other KPERS 2 members will not receive a COLA.

KANSAS POLICE & FIREMEN'S RETIREMENT SYSTEM

Normal Retirement

Tier I – age 55 and 20 years of service or 32 years of service (regardless of age).

Tier II – age 50 and 25 years of service, or age 55 and 20 years of service, or age 60 and 15 years of service.

Benefits – Benefits are based on the member's Final Average Salary. For those who were hired prior to July 1, 1993, Final Average Salary equals the average of the highest three of the last five years of credited participating service, including add-ons, such as sick and annual leave. For those who are hired on or after July 1, 1993, Final Average Salary equals the average of the highest three of the last five years of participating service, excluding add-ons, such as sick and annual leave. Benefits are based on a member's years of credited service and a multiplier of 2.5% of Final Average Salary for each year of credited service, to a maximum of 90% of Final Average Salary (first effective July 1, 2013).

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 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 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 System. Inactive, nonvested 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 7.15% of compensation, effective July 1, 2013.

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 in any employment administered by KPERS. The basic formula for those who were members prior to July 1, 1987, is 5% of Final Average Salary for each year of service up to ten years, plus 3.5% for each year of service greater than ten, to a maximum of 70% of Final Average Salary. For those who became members on or after July 1, 1987, the formula is 3.5% for each year, to a maximum benefit of 70% of Final Average Salary.

Early Retirement

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

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

Vesting Requirements

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

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

Other Benefits

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

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

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

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

Member Contributions

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

Employer Contributions

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

APPENDIX C

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

KPERS

Discount Rate 8.0%

Price Inflation 3.0%

Rates of Mortality:
Post-retirement

The RP-2000 Healthy Annuitant table was first adjusted by an age setback or set forward. Rates were further adjusted to fit actual experience. Generational mortality improvements were projected for future years using Scale AA.

Starting Table
School Males: RP-2000 M Healthy -2
School Females: RP-2000 F Healthy -2
State Males: RP-2000 M Healthy +2
State Females: RP-2000 F Healthy +0
Local Males: RP-2000 M Healthy +2
Local Females: RP-2000 F Healthy -1

Sample Rates (2000)

	School		State		Local	
Age	Male	Female	Male	Female	Male	Female
50	0.513%	0.183%	0.547%	0.218%	0.587%	0.204%
55	0.549%	0.226%	0.625%	0.328%	0.670%	0.278%
60	0.662%	0.384%	0.962%	0.577%	1.031%	0.481%
65	1.051%	0.664%	1.597%	0.964%	1.712%	0.817%
70	1.747%	1.074%	2.646%	1.557%	2.837%	1.318%
75	2.917%	1.792%	4.550%	2.614%	4.878%	2.215%
80	5.278%	3.643%	7.037%	4.567%	7.545%	4.171%
85	9.331%	6.751%	11.292%	7.977%	12.108%	7.508%
90	15.661%	11.589%	17.978%	13.563%	19.278%	12.869%
95	24.301%	18.407%	24.888%	20.034%	26.687%	19.742%
100	32.791%	24.186%	30.850%	24.459%	33.080%	24.990%

Pre-retirement

School Males: 70 % of RP-2000 M Employees -2
School Females: 50% of RP-2000 F Employees -2
State Males: 70% of RP-2000 M Employees +2
State Females: 50% of RP-2000 F Employees +0
Local Males: 90% of RP-2000 M Employees +2
Local Females: 90% of RP-2000 F Employees -1
Generational mortality improvements were projected for future years using Scale AA.

Disabled Life Mortality

RP-2000 Disabled Life Table with same age adjustments as used for Retiree Mortality. Generational mortality improvements were projected for future years using Scale AA.

Rates of Salary Increase

Years of Service	Rate of Increase*		
	School	State	Local
1	12.00%	10.50%	10.50%
5	6.55%	5.60%	6.20%
10	5.10%	4.90%	5.20%
15	4.60%	4.40%	4.80%
20	4.10%	4.10%	4.60%
25	4.00%	4.00%	4.10%
30	4.00%	4.00%	4.00%

*Includes general wage increase assumption of 4.0% (composed of 3.0% inflation and 1.0% productivity)

Rates of Termination

	School		State		Local	
Duration	Male	Female	Male	Female	Male	Female
0	21.00%	23.00%	17.00%	19.00%	20.00%	23.00%
1	18.00%	18.00%	14.50%	15.00%	16.00%	20.00%
2	14.00%	13.00%	12.00%	11.00%	13.20%	17.00%
3	10.00%	11.00%	10.00%	10.00%	11.00%	14.00%
4	8.00%	9.00%	8.00%	9.00%	9.60%	11.50%
5	6.50%	7.25%	7.00%	8.00%	8.30%	9.00%
6	5.50%	6.25%	6.00%	7.00%	7.10%	7.50%
7	5.00%	5.50%	5.20%	6.00%	6.00%	6.50%
8	4.50%	4.90%	4.60%	5.00%	5.00%	5.75%
9	4.00%	4.30%	4.10%	4.60%	4.40%	5.00%
10	3.60%	3.90%	3.90%	4.30%	3.80%	4.25%
11	3.20%	3.50%	3.70%	4.00%	3.50%	3.75%
12	2.90%	3.10%	3.50%	3.70%	3.30%	3.40%
13	2.60%	2.80%	3.30%	3.50%	3.10%	3.20%
14	2.40%	2.50%	3.10%	3.30%	2.90%	3.00%
15	2.20%	2.30%	2.90%	3.10%	2.70%	2.80%
16	2.00%	2.10%	2.70%	2.90%	2.50%	2.60%
17	1.80%	1.90%	2.50%	2.70%	2.30%	2.40%
18	1.60%	1.70%	2.30%	2.50%	2.10%	2.20%
19	1.50%	1.50%	2.10%	2.30%	1.90%	2.00%
20	1.40%	1.30%	1.90%	2.10%	1.80%	1.80%
21	1.30%	1.20%	1.70%	1.90%	1.70%	1.60%
22	1.20%	1.10%	1.50%	1.70%	1.60%	1.40%
23	1.10%	1.00%	1.30%	1.50%	1.50%	1.20%
24	1.00%	0.90%	1.10%	1.40%	1.40%	1.00%
25	0.90%	0.80%	0.90%	1.30%	1.30%	0.90%
26	0.80%	0.70%	0.70%	1.20%	1.20%	0.70%
27	0.70%	0.60%	0.60%	1.10%	1.10%	0.60%
28	0.60%	0.50%	0.50%	1.00%	1.00%	0.50%
29	0.50%	0.50%	0.50%	0.50%	0.90%	0.50%
30	0.50%	0.50%	0.50%	0.50%	0.80%	0.50%
30+	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Retirement Rates

School

	Rule of 85	
	1st Year	After 1st Year
Age	With 85 Points	With 85 Points
53	20%	18%
55	20%	18%
57	22%	18%
59	25%	23%
61	30%	30%

Early Retirement		Normal Retirement	
Age	Rate	Age	Rate
55	5%	62	30%
56	5%	63	25%
57	8%	64	35%
58	10%	65	35%
59	12%	66-71	25%
60	15%	72-74	20%
61	24%	75	100%

State

	Rule of 85	
	1st Year	After 1st Year
Age	With 85 Points	With 85 Points
53	10%	10%
55	15%	12%
57	15%	12%
59	15%	12%
61	30%	25%

Early Retirement		Normal Retirement	
Age	Rate	Age	Rate
55	5%	62	30%
56	5%	63	20%
57	5%	64	30%
58	6%	65	35%
59	10%	66-67	25%
60	10%	68-74	20%
61	20%	75	100%

Local

	Rule of 85	
	1st Year	After 1st Year
Age	With 85 Points	With 85 Points
53	11%	7%
55	13%	10%
57	13%	10%
59	15%	12%
61	25%	25%

Early Retirement		Normal Retirement	
Age	Rate	Age	Rate
55	5%	62	25%
56	5%	63	20%
57	5%	64	30%
58	5%	65	35%
59	7%	66	25%
60	7%	67-74	20%
61	20%	75	100%

- Inactive vested members – Age 62.

- For correctional employees with an age 55 normal retirement date -

Age	Rate
55	10%
58	10%
60	15%
62	35%
65	100%

- For correctional employees with an age 60 normal retirement date -

Age	Rate
60	10%
61	25%
62	45%
63	25%
64	35%
65	100%

- For TIAA employees – Age 66.

Rates of Disability

Age	School	State	Local
25	.025%	.036%	.030%
30	.028%	.102%	.065%
35	.034%	.161%	.097%
40	.058%	.244%	.143%
45	.110%	.376%	.209%
50	.213%	.511%	.363%
55	.362%	.720%	.600%
60	.680%	.920%	.850%

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

Probability of Vested Members Leaving Contributions With System

KPERS 1:

Age	School	State	Local
25	80%	65%	60%
30	80%	65%	60%
35	80%	65%	60%
40	80%	65%	60%
45	82%	75%	64%
50	87%	85%	74%
55	100%	100%	100%

KPERS 2: Members are assumed to elect to take a refund if it is more valuable than the deferred annuity. The comparison is based on 8% interest and a 50% Male/50% Female blend of the RP-2000 Combined Mortality Table, projected to 2045 (static).

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

KP&F

Discount Rate 8.0%

Price Inflation 3.0%

Rates of Mortality:

Post-retirement RP-2000 Healthy Annuitant Table. Generational mortality improvements were projected for future years using Scale AA.

Pre-retirement 90% of RP-2000 Employee Table* Generational mortality improvements were projected for future years using Scale AA. *70% of preretirement deaths assumed to be service related.

Disabled Life Mortality RP-2000 Disabled Life Table with generational mortality improvements using Scale AA.

Rates of Salary Increase

Years of Service	Rate of Increase*
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 3.0% inflation and 1.0% productivity)

Rates of Termination

Tier 1: 3% for ages less than 41; 0% thereafter

	Years of Service	Rate
Tier 2:	1	13.0%
	5	6.0%
	10	2.5%
	15	1.0%
	20	1.0%
	25	0.0%

Retirement Rates

Tier 1:

Early Retirement		Normal Retirement	
Age	Rate	Age	Rate
50	5%	55	40%
51	5%	56	40%
52	5%	57	40%
53	10%	58	35%
54	30%	59	45%
		60	50%
		61	20%
		62	100%

Tier 2:

Early Retirement		Normal Retirement	
Age	Rate	Age	Rate
50	10%	50	25%
51	10%	53	25%
52	10%	55	25%
53	10%	58	20%
54	20%	60	25%
		61	25%
		62	25%
		63	100%

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

Rates of Disability

Age	Rate*
22	.06%
27	.07%
32	.15%
37	.35%
42	.56%
47	.76%
52	.96%
57	1.00%

*90% assumed to be service-connected under KP & F Tier 1.

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

Judges

Discount Rate 8.0%

Price Inflation 3.0%

Rates of Mortality:

Post-retirement RP-2000 Healthy Annuitant Table, set back two years

Pre-retirement 70% of RP-2000 Employee Table, set back two years

Generational mortality improvements were projected for future years using Scale AA.

Rates of Salary Increase 4.5%

Rates of Termination None assumed

Disabled Life Mortality RP-2000 Disabled Life Table, set back two years, with generational mortality improvements using Scale AA.

Rates of Disability None assumed

Retirement Rates

Age	Rate
60-61	10%
62-65	20%
66-69	30%
70+	100%

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

TECHNICAL VALUATION PROCEDURES

Data Procedures

In-pay members:

If a birth date is not available, the member is assumed to have retired at 62. If a retirement date is also not available, the member is assumed to be 75.

If a beneficiary birth date is needed but not supplied, males are assumed to be 3 years older than females.

Not in-pay members:

If a birth date is not available, it is assigned according to the following schedule:

System	Active member age at hire	Inactive member age at valuation
KPERS	34.7	50
KP&F	27.5	49
Judges	43.4	54

If gender is not provided, it is assigned randomly with a 40% probability of being male and 60% probability of being female.

If salary information is not available for an active record, it is assigned according to the following schedule:

System	Salary
KPERS	$24,662
KP&F	$36,046
Judges	N/A

Salaries for first year members are annualized.

Other Valuation Procedures

No actuarial accrued liability in excess of the unclaimed member contribution balance is held for non-vested, inactive members. A reserve is also held for accounts that have been forfeited but could be reclaimed in the future.

Benefits above the projected IRC Section 415 limit for active participants are assumed to be immaterial for the valuation.

The compensation limitation under IRC Section 401(a) (17) is considered in this valuation. On a projected basis, the impact of this limitation is insignificant.

Salary increases are assumed to apply to annual amounts.

Decrements are assumed to occur mid-year, except that immediate retirement is assumed for those who are at or above the age at which retirement rates are 100%. Standard adjustments are made for multiple decrements. Withdrawal does not operate once early or unreduced retirement eligibility is met.

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