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December 16, 2014

Mr. Alan Conroy
Executive Director
Kansas Public Employees Retirement System
611 S. Kansas Ave., Suite 100
Topeka, KS 66603-3803

Re: Reduction in Employer Contribution Rate for FY 2015, 2016, and 2017

Dear Alan:

Under current law, the employer contribution rate for KPERS is not necessarily the full actuarial required contribution (ARC). Based on legislation passed in 1993, the employer contribution rate certified by the KPERS 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. The statutory contribution rate for the Local group has been equal to the actuarial required contribution in the last two actuarial valuations. However, the statutory employer contribution rate for the State/School group is lower than the actuarial required contribution rate. The following table shows the actuarial required contribution and the statutory contribution rate for the State/School group in the last three valuations.

Valuation Date	Fiscal Year	Employer Contribution Rates	
		Actuarial	Statutory
12/31/2011	2015	14.34%	11.27%
12/31/2012	2016	14.95%	12.37%
12/31/2013	2017	14.85%	13.57%

Due to the lag between the valuation date and the effective date of the rates set by the valuation, each statutory rate above has been certified by the KPERS Board of Trustees as the employer contribution rate for the current and future fiscal years shown.

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You asked that we provide projection results assuming the State/School employer contribution rate previously set for FY 2015 will be lowered from 11.27% to 8.65% for the last half of the fiscal year and then set at 11.37% for both fiscal year 2016 and 2017 – i.e., 1% lower than the previously certified rates for those years. The 1.2% statutory cap on employer rate increases would then apply beginning in FY 2018. If this contribution scenario occurs, contributions to the State/School group would be lower in the short term, but result in higher contributions in subsequent years. This cost study quantifies the impact of the proposed reduction in employer contributions on contribution rates in later years and on the long term funding of the State/School group.

Cost Impact

We used the projection model prepared in conjunction with the December 31, 2013 actuarial valuation to measure the cost impact of the reduction in the employer contributions for the State/School group. Exhibit A shows the estimated State/School employer contribution rates and the corresponding dollar amounts of employer contributions under both the current statutory contribution rates and the proposed reduction to 8.65% for the last half of fiscal year 2015 and 11.37% for fiscal years 2016 and 2017. Reducing the employer contributions by these amounts in the short term has a relatively small impact on the funded ratio and the amount of the unfunded actuarial liability, but results in higher contributions in later years. The total employer contributions through FY 2036 under the current statutory contribution rates are \$15,417.41 million. Employer contributions over the same period if the employer contribution rates are modified as stated above are \$15,838.30 million, an increase of \$420.89 million.

Please note that the dollar amounts of employer contributions shown in the exhibits are future dollar amounts, calculated using the estimated employer contribution rate and projected payroll in future years. Due to the length of the projection period, the future payroll amounts grow significantly and the resulting contributions in nominal dollars in those years can appear very large.

The projections used in this cost study assume that all actuarial assumptions, including the 8% investment return assumption, are met each year in the future. The cost projections are sensitive to the assumptions used, particularly the investment return assumption. To the extent the 8% investment return assumption is not met in the future, the cost projections in these studies are expected to change. Further analysis can be provided upon request if it is deemed to be necessary or helpful.

Disclaimers, Caveats, and Limitations

The numerical charts that comprise this study are based primarily upon the December 31, 2013 valuation results, the actuarial assumptions used in that valuation (other than as noted elsewhere in this letter), and the projection model prepared by the System's actuary, Cavanaugh Macdonald Consulting, LLC. Significant items are noted below:

- The investment return in all future years is assumed to be 8% on a market value basis, unless otherwise indicated.
- All demographic assumptions regarding mortality, disability, retirement, salary increases, and termination of employment are assumed to hold true in the future. Please note that the actuarial assumption assumes that mortality will improve in the future (i.e. people will live longer).



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- The number of active members covered by KPERS in the future is assumed to remain level (neither growth nor decline in the active membership count). As active members leave covered employment, they are assumed to be replaced by new employees who have a similar demographic profile as recent new hires.
- The funding methods, including the entry age normal cost method, the asset smoothing method, and the amortization method and period, remain unchanged.
- For the current scenario, projections reflect the statutory caps, i.e. 0.9% in FY 2014, 1.0% in FY 2015, 1.1% in FY 2016 and an ultimate cap of 1.2% in FY 2017 and beyond. The alternate scenario is as described in this letter.
- We relied upon the membership data provided by KPERS for the actuarial valuation. The numerical results depend on the integrity of this information. If there are material inaccuracies in the data, the results presented herein may be different and the projections may need to be revised.

Models are designed to identify anticipated trends and to compare various scenarios rather than predicting some future state of events. The projections are based on the System's estimated financial status on December 31, 2013, and project future events using one set of assumptions out of a range of many possibilities. A different set of assumptions would lead to different results. The projections do not predict the System's financial condition or its ability to pay benefits in the future and do not provide any guarantee of future financial soundness of the System. Over time, a defined benefit plan's total cost will depend on a number of factors, including the amount of benefits paid, the number of people paid benefits, the duration of the benefit payments, plan expenses, and the amount of earnings on assets invested to pay benefits. These amounts and other variables are uncertain and unknowable at the time the projections were prepared. Because not all of the assumptions will unfold exactly as expected, actual results will differ from the projections. To the extent that actual experience deviates significantly from the assumptions, results could be significantly better or significantly worse than indicated in this study.

We are available to answer any questions on the material contained in this study or to provide explanations or further details upon request. We, Patrice A. Beckham F.S.A. and Brent A. Banister, F.S.A., are consulting actuaries with Cavanaugh Macdonald Consulting, LLC. We are also members of the American Academy of Actuaries and Fellows of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

If you have questions or need additional analysis, please let us know.

Sincerely,

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

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



Exhibit A
Current Plan vs. Reduction in FY 15, FY 16 and FY 17 Contribution Rates
State/School Group

(1) Fiscal Year	(2) Total Payroll	(3) <u>Employer Contribution Rate</u>		(5) <u>Employer Contribution Amount (\$M)</u>		
		(4) Reduced FY15/16/17	(6) Reduced FY15/16/17	(7) Difference		
		Current	Reduced FY15/16/17	Current	Reduced FY15/16/17	Difference
2015	\$ 4,440.00	11.27%	11.27%/8.65%	\$ 500.39	442.22	\$ (58.16)
2016	4,554.81	12.37% *	11.37% *	603.09	557.55	(45.55)
2017	4,663.16	13.57% *	11.37% *	673.35	570.76	(102.59)
2018	4,784.85	14.77% *	12.57% *	748.20	642.93	(105.27)
2019	4,918.20	14.83% *	13.77% *	772.01	719.65	(52.36)
2020	5,061.65	14.51% *	14.80% *	777.87	792.55	14.68
2021	5,215.15	14.19% *	14.71% *	784.31	811.43	27.12
2022	5,378.89	14.09% *	14.82% *	802.99	842.26	39.27
2023	5,552.28	13.96% *	14.81% *	826.85	874.04	47.19
2024	5,734.26	13.85% *	14.76% *	846.61	898.79	52.18
2025	5,925.05	13.72% *	14.67% *	866.70	922.99	56.29
2026	6,124.89	13.58%	14.55%	831.84	891.25	59.41
2027	6,334.01	13.41%	14.40%	849.37	912.08	62.71
2028	6,553.23	13.21%	14.22%	865.54	931.73	66.19
2029	6,782.71	12.98%	14.00%	880.10	949.28	69.18
2030	7,022.28	12.85%	13.88%	902.70	975.03	72.33
2031	7,271.88	12.74%	13.78%	926.12	1,001.75	75.63
2032	7,532.39	12.61%	13.66%	949.67	1,028.76	79.09
2033	7,804.13	4.97%	5.33%	387.51	415.60	28.09
2034	8,087.28	3.67%	3.92%	297.12	317.33	20.22
2035	8,382.76	2.36%	2.49%	197.81	208.71	10.90
2036	8,690.60	1.46%	1.51%	127.24	131.59	4.35

* Indicates additional contributions from ELARF are added to this contribution rate to get the total contribution amount shown.

Total \$ 15,417.41 \$ 15,838.30 \$ 420.89

This exhibit is an attachment to a letter that contains important information and explanations regarding the numbers shown. Therefore, the exhibit should only be considered with the accompanying letter from Cavanaugh Macdonald dated December 16, 2014.

All assumptions, including the 8% investment return, are assumed to be met each year in the future.

12/16/2014

Exhibit B



Kansas Public Employee Retirement System
Comparison of State/School Group Funded Status Measures
Current Plan vs. Reduction in FY 15, FY 16 and FY 17 Contribution Rates
(Dollar amounts in millions)

Valuation Date	Current Plan				Reduction in FY15, 16 and 17 Contribution Rates			
	Actuarial Liability	Actuarial Assets	Actuarial Liability	Funded Ratio	Actuarial Liability	Actuarial Assets	Actuarial Liability	Funded Ratio
12/31/2013	\$ 17,078.13	\$ 9,726.42	\$ 7,351.70	57.0%	\$ 17,078.13	\$ 9,726.42	\$ 7,351.70	57.0%
12/31/2014	17,783.41	10,473.40	7,310.01	58.9%	17,783.41	10,473.40	7,310.01	58.9%
12/31/2015	18,462.18	11,200.48	7,261.70	60.7%	18,462.18	11,115.76	7,346.42	60.2%
12/31/2016	19,111.31	12,105.39	7,005.92	63.3%	19,111.31	11,942.25	7,169.05	62.5%
12/31/2017	19,735.84	12,998.50	6,737.34	65.9%	19,735.84	12,714.38	7,021.46	64.4%
12/31/2018	20,337.87	13,764.98	6,572.90	67.7%	20,337.87	13,375.87	6,962.00	65.8%
12/31/2019	20,937.13	14,561.09	6,376.03	69.5%	20,937.13	14,120.78	6,816.34	67.4%
12/31/2020	21,528.52	15,374.70	6,153.82	71.4%	21,528.52	14,920.78	6,607.74	69.3%
12/31/2021	22,114.60	16,216.53	5,898.07	73.3%	22,114.60	15,760.68	6,353.92	71.3%
12/31/2022	22,701.02	17,100.20	5,600.82	75.3%	22,701.02	16,652.74	6,048.28	73.4%
12/31/2023	23,288.73	18,036.30	5,252.43	77.4%	23,288.73	17,604.64	5,684.09	75.6%
12/31/2024	23,881.04	19,026.87	4,854.17	79.7%	23,881.04	18,616.99	5,264.05	78.0%
12/31/2025	24,478.87	20,076.84	4,402.03	82.0%	24,478.87	19,694.26	4,784.61	80.5%
12/31/2026	25,085.06	21,134.99	3,950.07	84.3%	25,085.06	20,785.22	4,299.84	82.9%
12/31/2027	25,704.59	22,260.27	3,444.32	86.6%	25,704.59	21,949.46	3,755.13	85.4%
12/31/2028	26,339.22	23,456.75	2,882.48	89.1%	26,339.22	23,191.38	3,147.85	88.0%
12/31/2029	26,991.85	24,734.81	2,257.04	91.6%	26,991.85	24,521.71	2,470.14	90.8%
12/31/2030	27,678.56	26,106.63	1,571.93	94.3%	27,678.56	25,953.32	1,725.23	93.8%
12/31/2031	28,393.88	27,582.23	811.65	97.1%	28,393.88	27,497.02	896.86	96.8%
12/31/2032	29,139.65	28,870.28	269.37	99.1%	29,139.65	28,834.42	305.24	99.0%
12/31/2033	29,921.64	29,889.54	32.10	99.9%	29,921.64	29,875.98	45.66	99.8%
12/31/2034	30,744.24	30,864.34	(120.10)	100.4%	30,744.24	30,865.95	(121.71)	100.4%

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