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February 1, 2019

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

Re: Cost Study on House Bill 2100

Dear Alan:

As you requested, we have completed an actuarial cost study to estimate the cost impact of House Bill 2100 (HB 2100). This bill provides for an *ad hoc* cost of living adjustment (COLA), commencing July 1, 2019, to members who retired on or before July 1, 2014 or their joint annuitants or beneficiaries. The amount of the COLA varies depending on the date of retirement (see table below), but in all cases the COLA amount is subject to a maximum of $150 per month.

Amount of *ad hoc* COLA	Eligibility Requirement	Retirees and Beneficiaries Count
0.0%	Retired after July 1, 2014	19,698
1.0%	Retired on or before July 1, 2014	27,090
2.0%	Retired on or before July 1, 2009	19,973
3.0%	Retired on or before July 1, 2004	33,046
	Total	**99,807**

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Cost Analysis

In order to complete this cost study, we estimated the actuarial liability at July 1, 2019 for the members eligible to receive a COLA using the results of the December 31, 2017 actuarial valuation. This projected liability was used to estimate the increase in the unfunded actuarial liability resulting from the *ad hoc* COLA. To the extent that actual experience is different from that assumed, the cost of the *ad hoc* COLA in HB 2100 may also be different.

HB 2100 did not specify the period over which to amortize the increase in the unfunded actuarial liability nor whether payments should be determined as a level-percent of covered payroll or as level-dollar amounts. Given that HB 2100 provides for an increase in benefits for current retirees, we believe a shorter amortization period is appropriate so our calculations reflect an amortization period of 15 years for the increase in the unfunded actuarial liability. This approach is also consistent with past *ad hoc* COLA adjustments. The amortization payments are determined using the same methodology as is used in the actuarial valuations, i.e. level-percent of payroll for all groups other than the Judges, who use a level-dollar amount.

The increase in the unfunded actuarial liability and the corresponding increase in the contribution rate are summarized in the table below:

	Estimated Increase in UAL ($M)	Contribution Rate Increase	Additional First-Year Contribution ($M)	Additional Second-Year Contribution ($M)
State	$ 32.6	0.31%	$ 3.03	$ 3.12
School	103.2	0.26%	9.60	9.89
State/School	135.7	0.27%	12.64	13.02
Local	23.8	0.12%	2.22	2.28
KP&F				
State	3.6	0.64%	0.34	0.35
Local	21.0	0.42%	1.96	2.02
Judges	1.5	0.57%	0.16	0.16
Total	**$185.7**		**$17.31**	**$17.83**

Note: Numbers may not add due to rounding. For all groups except Judges, payments are a level-percent of payroll so the dollar amount will increase 3.0% each year in the future. The amortization payment for Judges is calculated as a level-dollar payment so the payment amount remains the same, but the rate is expected to decrease over time. The initial amortization payment is assumed to be made in FY 2020 with recertified employer contribution rates. It is also assumed that employer contributions to amortize the increase in the unfunded actuarial liability are in addition to other employer contribution increases, regardless of the statutory cap.

The costs shown in the table above assume that all assumptions will be met exactly in each future year, including the assumed investment rate of return of 7.75%. HB 2100 increases the future benefit payments for KPERS and, therefore, increases the System's risk. The actual cost of the COLA granted under HB 2100 is dependent on actual investment and mortality experience that unfolds in the future, compared to the assumptions. If actual investment returns are lower than assumed or members live longer than expected, the cost of the COLA will be higher than anticipated. Once a COLA is granted, the benefit increase cannot be reduced or removed in the future. Therefore, lower investment returns or longer life expectancy would result in a higher unfunded actuarial liability and higher contributions to fund the COLA than shown in this cost study.

Data, Assumptions and Methodology

The analysis contained in this letter is based on the data and results of the December 31, 2017 actuarial valuation. To the extent that any of that data is inaccurate, our analysis may need to be revised. Unless otherwise noted, the assumptions and methods used in analyzing this proposal are the same as those used in the December 31, 2017 actuarial valuation and are shown in Appendix C of that report.

The comments and analysis contained in this letter are not intended to give exact calculations of costs. They should be considered to be estimates. The emerging costs will vary from those presented in this letter to the extent that actual experience differs from that projected by the actuarial assumptions. This cost analysis has been prepared in accordance with generally recognized and accepted actuarial 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 Statement of Actuarial Opinion of the American Academy of Actuaries.

We have not explored any legal issues with respect to the proposed plan changes. We are not attorneys and cannot give legal advice on such issues. We suggest that you review this proposal with counsel.

We, Patrice A. Beckham, FSA and Brent A. Banister, FSA, are consulting actuaries with Cavanaugh Macdonald Consulting, LLC. We are members of the American Academy of Actuaries, Fellows of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. We are available to answer any questions or provide additional analysis if needed.

If you have any questions or additional information is needed, please let us know.

Sincerely,

Patrice Beckham   Brent A. Banister

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

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