



# Cavanaugh Macdonald

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November 12, 2014

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

**Re: Use of Market Value of Assets in December 31, 2012 and 2013 Valuations**

Dear Alan:

As you are aware, the results of the annual actuarial valuation are used to set the employer contribution rates for all of the groups: KPERS (State, School, and Local), KP&F and Judges. The full actuarial required contribution rate (ARC) is contributed by the Kansas Police and Firemen's Retirement System and the Kansas Judges Retirement System. However, there is a statutory cap that limits the increase in the employer contribution rate for KPERS employers. The amount of the cap has varied over time and is currently 1.0% and 1.1% for fiscal years ending in 2015 and 2016, respectively, and 1.2% for fiscal years ending on or after 2017.

By statute, the actuarial methods used in the valuation process are reviewed and adopted by the KPERS Board of Trustees, upon recommendation of the actuary, as part of the triennial experience study. One of the actuarial methods used in the valuation is the actuarial asset valuation method (also referred to as the asset smoothing method). Due to the extreme volatility in market returns, many public retirement systems use an asset smoothing method to smooth out or average the actual investment experience over time, thereby mitigating the impact of market volatility on employer contribution rates.

At your request, we have recalculated the employer contribution rates from the December 31, 2012 and December 31, 2013 actuarial valuations using the market value of assets instead of the actuarial value of assets (smoothed value). These two valuations impact the employer contribution rates for fiscal years beginning in 2015 and 2016, respectively. For purposes of the calculations in this study the following assumptions were made:

- The state and school groups are funded separately,
- The current statutory cap that limits the increase in the employer contribution rate for KPERS continues to apply.

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**Results**

The following tables illustrate the differences in the valuation results if the market value of assets is used instead of the actuarial value of assets. The column marked "Revised" reflects the valuation results using the market value of assets.

**December 31, 2012 Valuation Results**

	Actuarial Required Contribution		Statutory Contribution		Difference*	FY 2016 Payroll	Estimated Savings
	Valuation	Revised	Valuation	Revised			
State	11.44%	10.62%	12.37%	10.62%	1.75%	\$1,008,299,158	\$ 17,645,235
School	16.00%	15.45%	12.37%	12.37%	0.00%	3,546,505,848	0
Local	9.48%	9.05%	9.48%	9.05%	0.43%	1,683,332,864	7,238,331
KP&F	21.36%	20.25%	21.36%	20.25%	1.11%	480,287,307	5,331,189
Judges	23.98%	22.22%	23.98%	22.22%	1.76%	30,175,574	531,090

**December 31, 2013 Valuation Results**

	Actuarial Required Contribution		Statutory Contribution		Difference *	FY 2017 Payroll	Estimated Savings
	Valuation	Revised	Valuation	Revised			
State	10.77%	8.91%	13.57%	8.91%	4.66%	\$1,036,107,821	\$ 48,282,624
School	16.03%	14.81%	13.57%	13.57%	0.00%	3,627,055,519	0
Local	9.18%	8.16%	9.18%	8.16%	1.02%	1,728,074,083	17,626,356
KP&F	20.42%	17.92%	20.42%	17.92%	2.50%	499,498,799	12,487,470
Judges	21.36%	17.34%	21.36%	17.34%	4.02%	31,382,597	1,261,580

\*Difference between statutory contribution rate using valuation (smoothed assets) and revised (market value of assets)

To the extent the deferred investment experience (currently a gain) is recognized immediately by using the market value of assets, the existing cushion for adverse investment experience is eliminated and future investment experience will have a greater impact on the employer contribution rates, increasing the volatility in those rates in future years. The impact of immediately recognizing the deferred investment gains is lower contributions in FY 2016 and 2017, but contributions in some future years will be higher as a result of this action. In addition, separate funding of the State and School groups will result in a slower improvement in the School group's funded status.

While we have provided the December 31, 2012 and December 31, 2013 valuation results using the market value of assets to determine the impact of a change to market value of assets at a single measurement date, additional analyses are necessary to more fully disclose the impact of such a dramatic change in the valuation process. Please see our letter dated November 10, 2014 for additional discussion and analysis of the potential impact of using the market value of assets in the valuation.



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### **Data, Assumptions and Methodology**

The cost estimates provided with this letter are based on the member data used in the December 31, 2012 and December 31, 2013 actuarial valuations. To the extent that any of that data is inaccurate, our calculations may need to be revised. With the exception of the asset valuation method, the assumptions and methods used in this study are the same as those used in the December 31, 2012 and December 31, 2013 actuarial valuations and are shown in Appendix C of those reports. The asset valuation method used is noted in the appropriate column where the "Valuation" indicates asset smoothing was used and "Revised" indicates the market value of assets was used.

The comments and analysis contained in this letter are not intended to give exact calculations of costs, but are intended to be used for comparative purposes. 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 information as needed.

Sincerely,

Handwritten signature of Patrice A. Beckham in cursive.

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

Handwritten signature of Brent A. Banister in cursive.

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

