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February 28, 2013

Mr. George Hopkins
Executive Director
Arkansas Teacher Retirement System
1400 West Third Street
Little Rock, Arkansas 72201

Re: Senate Bill 123 – Member Contribution Rate

Dear Mr. Hopkins:

You have asked us for our analysis of Senate Bill (SB) 123 as it relates to the Arkansas Teacher Retirement System (ATRS).

SB 123 modifies Arkansas Code Section 24-7-406(b) to provide the Board of Trustees of ATRS the authority to set the member contribution rate between the current level of 6% of payroll and 7% of payroll.

SB 123 adds new subsections (b)(7) and (b)(8) which state that the member contribution rate is to remain at 6% of payroll unless increased by the Board and that the Board may increase or decrease the contribution rate through a Board resolution. The new contribution rate will apply to a complete fiscal year at a time and will remain in effect until again modified by the Board. However, the Board is restricted from increasing the rate unless

> *…the system's actuary certifies to the board that the amortization period exceeds 30 years and that in order to address an amortization period in excess of thirty (30) years to pay the unfunded liabilities of the system, the board determines that an increase in the member contribution rate is necessary.*

SB 123 allows for a potential increase in contributions to ATRS and any such increase would have a positive financial impact on ATRS. For example, if a 7% member contribution rate was adopted, the long term annual savings would be approximately 0.70% of payroll, based upon a 30 year amortization of unfunded liabilities. Further, a 7% of payroll member rate would reduce the amortization period from the present 100 year figure down to a level of 57 years, in the absence of any other changes in plan benefits or contribution rate levels. Our formal cost analysis of a 7% member contribution rate follows. Please see our comments on the last page of the enclosed analysis. In particular, we wish to point out that SB 123 is silent with regard to non-contributory members. Based on discussions with ATRS staff, we have assumed that non-contributory members would not be impacted by SB 123.

Please call if you have any questions regarding the calculations enclosed.

Please review this letter carefully to ensure that we have understood the bill properly. The analysis in this letter should not be relied upon if there is doubt about our understanding of the bill. Our analysis relates only to the plan changes described in this correspondence. In the event that other plan changes are being considered, it is very important to remember that the results of separate actuarial analyses cannot generally be added together to produce a total. The total can be considerably greater than the sum of the parts due to the interaction of various plan provisions with each other, and with the assumptions that must be used.

We did not review this bill for compliance with Federal, State, or local law or regulations, and internal revenue code provisions. Such a review was not within the scope of our assignment.

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.

Circular 230 Notice: Pursuant to regulations issued by the IRS, to the extent this communication (or any attachment) concerns tax matters, it is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding tax-related penalties under the Internal Revenue Code or (ii) marketing or recommending to another party any tax-related matter addressed within. Each taxpayer should seek advice based on the individual's circumstances from an independent tax advisor.

This communication shall not be construed to provide tax advice, legal advice or investment advice.

Sincerely,

Judith A. Kermans

Judith A. Kermans, EA, MAAA, FCA

Brian B. Murphy

Brian B. Murphy, FSA, EA, FCA, MAAA

JAK/BBM:rmn
Enclosures

cc: Gail Bolden, ATRS
Brian Murphy, GRS
Heidi Barry, GRS

ARKANSAS TEACHER RETIREMENT SYSTEM
SUPPLEMENTAL ACTUARIAL VALUATION AS OF JUNE 30, 2012
SENATE BILL 123

Requested By: Mr. George Hopkins, Executive Director

Date: February 28, 2013

Submitted By: Brian B. Murphy, FSA, EA, MAAA, FCA and
Judith A. Kermans, EA, MAAA, FCA Actuaries
Gabriel, Roeder, Smith & Company

This report contains an actuarial valuation of proposed changes in benefits for members of the Arkansas Teacher Retirement System. The actuaries issuing this report 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.

The supplemental valuation was based on the census data and actuarial methods and assumptions used in the June 30, 2012 actuarial valuation. The results of the supplemental valuation indicate what the June 30, 2012 valuation would have shown if the proposed benefit change had been in effect on that date. Supplemental valuations do not predict the result of future actuarial valuations. (Future activities can affect future valuation results in an unpredictable manner.) Rather, supplemental valuations give an indication of the probable effect of **only the benefit changes** on future valuations without comment on the complete end result of the future valuations.

These calculations are based upon assumptions regarding future events, which may or may not materialize. They are also based upon present and proposed plan provisions that are outlined in the valuation report. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important and relevant plan provisions are not described, or that conditions have changed since the calculations were made, you should contact the authors of this report prior to relying on information in the report.

If you have reason to believe that the information provided in this report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact the authors of the report prior to making such decision. Also, in the event that more than one plan change is being considered, it is very important to remember that the results of separate actuarial valuations cannot generally be added together to produce a total. The total can be considerably greater than the sum of the parts due to the interaction of various plan provisions with each other, and with the assumptions that must be used.

This report is intended to describe the financial effect of the proposed plan change. No statement in this report is intended to be interpreted as a recommendation in favor of the change, or in opposition to the change.

This report is intended to describe the financial effect of the proposed plan change on the Retirement System. Except as otherwise noted, potential effects on others benefit plans were not considered.

A review of the proposed provisions for compliance with Federal, State or local laws or regulations, specifically IRC §415 and rules related to the diminishment of benefits, was outside the scope of this assignment.

Actuarial assumptions and methods were consistent with those used in the regular actuarial valuation of the Retirement System on the valuation date, unless otherwise noted. Actuarial assumptions are adopted by the Retirement Board of Trustees. The assumptions used for this valuation include:

- An assumed rate of investment return of 8.0%.
- An entry-age normal cost valuation method.
- For purposes of amortizing unfunded accrued liabilities, payroll was assumed to increase 3.25% per year.

The amortization period as of the June 30, 2012 valuation is over 100 years, based upon a 14% employer contribution rate.

A brief summary of the data, as of June 30, 2012, used in this valuation is presented below.

	Active Members			
			Average in Years	
Group	**Number**	**Covered Payroll**	**Age**	**Service**
Education	34,591	$ 1,672,475,831	43.2	12.3
Support	36,604	773,904,943	46.7	8.0
Total	71,195	$ 2,446,380,774	45.0	10.1

	T-DROP Members		
Group	**Number**	**Account Balance**	**Covered Payroll**
Total	4,432	$510,753,765	$267,948,212

CURRENT: Member Contributions

The member contribution rate shall be 6% of annual salary for Contributory members. Non-contributory members do not contribute.

PROPOSED: Member Contributions

The member contribution rate shall be 6% of annual salary unless increased by the Board. The Board may set the member contribution rate between 6% and 7% if the amortization period is in excess of 30 years and the Board deems an increase necessary. Non-contributory members do not contribute.

Actuarial Statement of 7% of Payroll Member Rate (Maximum Savings)

		$ Millions		
	Valuation Date June 30, 2011	**Valuation Results**	**Proposal Results**	**Effect**
1)	Accrued Liabilities	$16,139.4	$16,135.1	
2)	Funding Value of Assets	11,483.9	11,483.9	
3)	UAAL $: (1) - (2)	$ 4,655.5	$ 4,651.2	$ (4.3)
4)	- % Funded: (2) / (1)	71%	71%	
5)	Member Contribution Rate (Wgt. Ave)	4.80%	5.60%	
6)	Employer Contribution Rate	14.00%	14.00%	
7)	Normal Cost	6.93%	6.23%	
8)	UAAL %: (6) - (7)	7.07%	7.77%	
9)	Amortization Years	**Over 100**	**57.00**	

The stand-alone effect of this proposal based upon a 30-year amortization of the change in the UAAL is (0.70%) of payroll.

1. The cost estimate shown above models the **MAXIMUM SAVINGS**. Smaller changes in the member rate would produce a smaller savings.

2. The actuarial calculations are based on the June 30, 2012 actuarial valuation. Please remember that these changes, if adopted, would likely impact the June 30, 2013 valuation. That valuation will be completed in the fall of 2013 and will be based on member data and financial results as of June 30, 2013, neither of which is available to us at this time.

3. Probabilities of retirement were not adjusted in connection with these proposals. If members retire at different ages or with different benefit amounts than expected, as a result of these changes, then the cost of the changes will be different than shown on the previous pages.

4. The bill is silent with regard to non-contributory members. It was assumed, based on discussions with ATRS staff, that non-contributory members were unaffected by the bill. If the amortization period exceeds 30 years, the Board can increase contributory member contribution rates to help pay the unfunded liabilities of the System, whereas, non-contributory members would not receive such an increase.