Fiscal Impact Report

Senate Substitute for HB 2194 and House Substitute for HB 2333

Conference Committee on Senate Substitute for HB 2194

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Introduction

The information presented in this report was jointly prepared by the Kansas Public Employees Retirement System (KPERS or the System) and Cavanaugh Macdonald Consulting LLC (Cavanaugh Macdonald). This information is being provided to assist the Conference Committee on Senate Substitute for HB 2194 in its work of reconciling two bills relating to the long-term funding of KPERS – Senate Substitute for HB 2194 (Sub HB 2194), which was passed by the Senate, and House Substitute for HB 2333 (Sub HB 2333).

Cavanaugh Macdonald Statement of Assumptions, Scope, and Limitations of Projections

The numerical charts and graphs provided are based primarily upon the December 31, 2009, valuation results, the actuarial assumptions used in the valuation, and the projection model prepared by the System's actuary, Cavanaugh Macdonald . Significant items are noted below:

- Investment return in 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).
- Changes in the retirement plan eligibility and benefit amounts may have an effect on future retirement patterns. While the actuaries have attempted to reflect the change in retirement eligibility, how changes in the benefit amount – particularly lowering the benefit multiplier – may ultimately change retirement patterns has not been modeled. If lower benefits cause delayed retirement patterns, the cost of the defined benefit plan will be lower than indicated. Similarly, if changes in Social Security and/or Medicare are implemented to reduce benefits or delay eligibility for those programs, retirements from KPERS are likely to also be delayed, thereby lowering the cost of defined benefit plans. Because such changes cannot be reasonably anticipated, however, they are not reflected in this analysis.
- 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 employment, they are assumed to be replaced by new employees who have a similar demographic profile as recent new hires.
- Plan provisions remain unchanged except as proposed in the legislation under consideration.
- The funding methods including the entry age normal cost method, the asset smoothing method, and the amortization method and period remain unchanged.
- The state and local employers will continue to contribute as scheduled (with consideration to changes in the statutory caps in the legislation).
- The actuaries 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 this 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, 2009, and project future events using one set of assumptions out of a range of many possibilities. 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 made. 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 report.

KPERS' Long-Term Funding Status

As of its December 31, 2009, valuation, the Kansas Public Employees Retirement System had an unfunded actuarial liability (UAL) of $7.7 billion and a funded ratio of 64%. The KPERS' School Group was out of actuarial balance, i.e., the statutory employer contribution rate was not expected to equal the actuarially required contribution (ARC) rate before the end of the UAL's amortization period in FY 2033, and as a result, the UAL would not be fully paid by that date. While the valuation reflected a modest, short-term improvement in KPERS' funded status from the prior year, the System's fundamental, long-term shortfall remains, and the UAL will continue to grow. Even assuming an 8% investment return, KPERS' UAL and ARC rates are expected to rise significantly and its funded ratios to decline further as the remaining losses from 2008 are averaged into actuarial valuations over the next three years. See Appendices A-1 through A-4 for additional detail regarding the projected ARC rate, UAL, and funded ratio for the State Group, School Group, and Local Group.

A fundamental principle of sound funding for a defined benefit plan is to consistently pay the full ARC rate. Existing law limits increases in KPERS employer contributions to 0.6% per year. As a result of the statutory cap, employer contributions to KPERS have not equaled the full ARC rate for more than 15 years, and the current State/School Group statutory rate is 72% of the ARC rate. As a result, KPERS' current funding structure is not projected to reach the ARC rate or to generate enough contributions to pay off its UAL for the School Group within the amortization period ending in FY 2033. Therefore, additional contributions are needed as an initial step toward improving KPERS' long-term funding.

During the 2011 Legislative Session, both the Senate and House have dedicated substantial time and resources to considering a range of options for addressing KPERS' long-term funding shortfall. The Senate Select Committee on KPERS and the House Committee on Pensions and Benefits were established for this purpose. After extensive review of KPERS' status by both committees, each chamber has now passed a bill that includes additional employer contributions and changes in contributions or benefits for current and future members – Senate Substitute for HB 2194 (Sub HB 2194) and House Substitute for HB 2333 (Sub HB 2333). Key provisions of both bills are summarized in the next two sections, followed by a summary table providing a high-level comparison of their fiscal impact.

Senate Substitute for HB 2194:
Summary

Sub HB 2194 has three components:

Increased Employer Contributions. Raises the cap on employer contribution rate increases from 0.6% per year to 1.1% per year, beginning in FY 2014 (July 1, 2013, for the State and School Groups, and January 1, 2014, for the Local Group).

Increased Employee Contributions and Benefit Changes. Increases employee contribution rates and changes benefits, with differing provisions for Tier 1 and Tier 2.

- **Tier 1 Members.** Employee contributions for Tier 1 members increase by 1.0% on January 1, 2014, followed by an additional 1.0%, beginning January 1, 2015. By CY 2015, the contribution rate for Tier 1 would be 6.0%. Beginning January 1, 2014, Sub HB 2194 raises the benefits formula multiplier from 1.75% to 1.85% for all future years of service credited to Tier 1 members.
- **Tier 2 Members.** Subject to IRS approval of the election, Tier 2 members who are first hired before July 1, 2013, would be provided a 90-day period of time established by KPERS to choose between two options:
  - Option 1: Continue to pay a 6.0% employee contribution rate, but forego the cost-of-living adjustment (COLA) currently associated with Tier 2 and retain the existing 1.75% multiplier.
  - Option 2: Increase employee contributions by 2% (over the same two-year schedule as Tier 1 members), with an employee contribution rate of 8% by CY 2015. Retain the COLA and receive higher 1.85% multiplier for future service, effective January 1, 2014.

The selection of Option 1 or 2 would be a one-time, irrevocable election. Those Tier 2 members who fail to make the election would be defaulted to Option 1. All Tier 2 members who are first hired on or after July 1, 2013, would pay a 6.0% employee contribution rate, would be credited with service under a 1.75% multiplier, and would not receive a COLA during retirement.

KPERS Study Commission. Establishes an 11-member KPERS Study Commission to evaluate KPERS' long-term funding and recommend a plan for long-term sustainability of the System. In particular, the Commission is directed to study alternative plan designs, including defined benefit, defined contribution, and hybrid defined benefit/defined contribution plans. Four legislative leaders are each to appoint a legislator and an at-large member, and the Governor is to appoint three members, including at least one attorney. The Commission is to report its findings and recommendations before December 15, 2011. The effective date of remainder of the bill's substantive provisions is subject to certification by the Revisor of Statutes and Director of Legislative Research that the Legislature received and took action on the Commission's recommendations during the 2012 regular session. "Took action" is defined as having held one or more public committee hearings on the recommendations.

House Substitute for HB 2333: Summary

Key provisions of Sub HB 2333 include the following:

Increased Employer Contributions. Raises the cap on employer contribution rate increases from 0.6% per year to 0.8% per year, beginning in FY 2013 (July 1, 2012, for the State and School Groups, and January 1, 2013, for the Local Group).

Reduced Benefit Formula Multiplier. For both Tier 1 and Tier 2 active members, reduces the benefits formula multiplier from 1.75% to 1.40% for all years of service earned on and after July 1, 2012.

Sale of State Surplus Real Estate. Provides for 80% of the proceeds from sale of surplus real estate under K.S.A. 75-6609 to be applied toward the unfunded actuarial liability of the State and School Groups.

Defined Contribution (DC) Plan for Future Members. On and after July 1, 2013, establishes a mandatory DC plan for all new members of KPERS and inactive, nonvested KPERS members who return to covered employment (new Tier 3). Subject to IRS approval, current Tier 1 and Tier 2 members would have a 90-day period in which to make an irrevocable election to switch to Tier 3.

- **Employee Contributions.** Active members would be required to contribute 6.0% of their compensation to their individual mandatory contribution accounts. The contributions would be pre-tax for federal income tax purposes. All employee contributions vest immediately.
- **Employer DC Contributions.** Employers would contribute 3.0% of each active member's compensation to an employer contribution account for that member. Employer contributions would vest after five years of service.
- **Plan Administration.** KPERS would be responsible for oversight of the plan, with authority to contract for plan administration, including investment, recordkeeping, education and communication services. Contracts for these and related services are to be awarded through a competitive proposal process.
- **Investments.** KPERS would be responsible for selecting and reviewing the suitability of investment alternatives offered to Tier 3 members. Tier 3 members would choose how to invest their contributions and any vested employer contributions in one or more of the investment options offered through the DC plan.
- **Additional Employer Funding Rates.** Employers would contribute a percentage of Tier 3 active members' compensation for three additional funding elements, at rates determined by the Board. These additional funding elements include a plan funding rate to help fund the KPERS' closed defined benefit (DB) plan for Tier 1 and Tier 2 members; a death and long-term disability rate to pay for Tier 3 members' death and disability benefits; and an administrative expense rate for the Tier 3 DC plan.

Fiscal Impact Summary Table

	Baseline	Sub HB 2194	Sub HB 2333
ARC Rate and Date			
State Group	11.8% in FY 2018	9.46% in FY 2014	9.4% in FY 2013
School Group	None prior to 2033 (Statutory rate of 21.37% in FY 2033)	15.70% in FY 2019	15.88% in FY 2022
Local Group	10.58% in CY 2018	8.74% in CY 2014	9.7% in CY 2015
Maximum ARC Rate			
State Group	Same as ARC rate above.	10.61% in FY 2016	10.9% in FY 2016
School Group	N.A.	15.88% in FY 2021	15.9% in FY 2023
Local Group	Same as ARC rate above	9.32% in FY 2015	Same as ARC rate above
Funded Ratios - Lowest			
State Group	67% in FY 2014	68% in FY 2014	67% in FY 2014
School Group	47% in FY 2014	48% in FY 2014	47% in FY 2014
Local Group	58% in CY 2013	60% in CY 2013	57% CY 2013
Funded Ratios – Number of Years Below 60%/80%			
State Group	0 years below 60% 11 years below 80%	0 years below 60% 11 years below 80%	0 years below 60% 10 years below 80%
School Group	15 years below 60% 20 years below 80%	10 years below 60% 17 years below 80%	12 years below 60% 18 years below 80%
Local Group	2 years below 60% 12 years below 80%	0 years below 60% 11 years below 80%	1 year below 60% 11 years below 80%

	Baseline			Sub HB 2194			Sub HB 2333		
Maximum UAL									
State Group	$1.35 billion in FY 2014			$1.27 billion in FY 2014			$1.37 billion in FY 2014		
School Group	$8.28 billion in FY 2023			$7.21 billion in FY 2018			$7.34 billion in FY 2018		
Local Group	$1.81 billion in CY 2013			$1.71 billion in CY 2013			$1.88 billion in CY 2013		
Total Contributions – FY 12-16 (In Millions)		Contributions	Additional $ vs. Baseline		Contributions	Additional $ vs. Baseline		Contributions	Additional $ vs. Baseline
State/School Group	FY 2012	$401.6	--	FY 2012	$401.6	--	FY 2012	$401.6	--
	FY 2013	$440.3	--	FY 2013	$440.3	--	FY 2013	$449.7	$9.4
	FY 2014	$481.4	--	FY 2014	$505.6	$24.1	FY 2014	$500.0	$18.6
	FY 2015	$524.9	--	FY 2015	$574.6	$49.7	FY 2015	$554.9	$30.0
Local Group	CY 2012	$130.1	--	CY 2012	$130.1	--	CY 2012	$130.1	--
	CY 2013	$145.6	--	CY 2013	$145.6	--	CY 2013	$149.2	$3.7
	CY 2014	$161.8	--	CY 2014	$165.6	$3.8	CY 2014	$168.8	$7.0
	CY 2015	$179.1	--	CY 2015	$182.7	$3.6	CY 2015	$191.9	$12.8
Total Contributions – FY 11-33 (In Millions)	Contributions		Additional $ vs. Baseline	Contributions		Additional $ vs. Baseline	Contributions		Additional $ vs. Baseline
State/School Group	$23,048.8		--	$20,057.1		$(2,991.7)	$20,887.7		$(2,161.1)
Local Group	$ 4,667.4		--	$ 4,031.2		$ (636.2)	$ 4,434.8		$ (232.6)

Senate Substitute for House Bill 2194[1]: Fiscal Impact

In evaluating the fiscal impact of Sub HB 2194, projections are provided for the following actuarial and funding measures:

- Actuarially required contribution rate
- Funded ratio
- Unfunded actuarial liability
- Employer contributions
- Employee contributions

Actuarially Required Contribution (ARC) Rate

As noted previously, the statutory contribution rates for all three KPERS groups are less than their actuarial rates due to the 0.6% statutory cap on annual increases in KPERS' employer contribution rates. Sub HB 2194 is projected to reduce the maximum ARC rate and to reach the "ARC date" (the point at which the margin between the statutory rate and the ARC rate is eliminated) more quickly than under current law (the Baseline).

- The **State Group** is projected to reach its ARC rate of 9.46% in FY 2014 and its maximum ARC rate of 10.61% in FY 2016. Under current law, the State's ARC rate is not projected to reach the ARC date until FY 2018 at 11.8%.
- The **School Group** is projected to reach its ARC rate of 15.70% in FY 2019, with a maximum ARC rate of 15.88% two years later. Under current law, it is not projected to reach the ARC rate before the end of the UAL amortization period, even with a statutory rate of 21.37%.
- The **Local Group** is projected to reach its ARC date in CY 2014 at a rate of 8.74%, followed by a maximum ARC rate of 9.32% a year later. Under current law, the ARC rate is projected to be 10.58% at an ARC date of CY 2018.

Graphs of the projected ARC rates and dates for each KPERS group are provided in Appendices B-1 through B-3.

Unfunded Actuarial Liability (UAL)

Based on the December 31, 2009, valuation, the UAL is projected to increase as follows under Sub HB 2194.

	State Group		School Group		Local Group	
	Baseline	**Sub HB 2194**	**Baseline**	**Sub HB 2194**	**Baseline**	**Sub HB 2194**
Projected Maximum UAL (in millions)	$1,348.51	$1,273.25	$8,278.95	$7,210.18	$1,810.5	$1,705.17
Year of Projected Maximum	FY 2014	FY 2014	FY 2023	FY 2018	CY 2013	CY 2013

[1] In general, this fiscal note is based on the same actuarial assumptions as were used in the 12/31/2009 actuarial valuation, which are shown in Appendix C of that report. The analysis contained in the fiscal note is not intended to give an exact calculation of costs. It should be considered to involve estimates.

The actuarial valuation process and models on which these projections are based rely on a number of assumptions about future contingent events, relating to both demographic and investment return experience. Two key assumptions are an average annual investment return of 8.0% and annual growth in payroll of 4.0%. If experience varies significantly with respect to either of these assumptions, the actual ARC rates, employer contributions and employee contributions may differ substantially.

Under the status quo or "baseline," the State/School group is out of actuarial balance, and as a result, the UAL would not be fully paid by 2033. With the additional contributions provided under Sub HB 2194, the UAL is amortized during the remainder of the amortization period. A graph of projected UAL balances and a detailed schedule of the UAL's amortization under Sub HB 2194 are provided in Appendices B-1 through B-4.

Funded Ratio

For public pension plans, a funded ratio of 80% and rising is considered to indicate adequate funding, and funded ratios of 60% or below are considered to reflect severe underfunding requiring prompt remedial action. Under the Baseline, the funded ratios for the State Group and Local Group are projected to remain below 80% for 11 and 12 years, respectively, while the School Group is projected to remain below 60% for 15 years. As a result, the School Group in particular, and the KPERS plan generally, remain at risk of further deterioration in its funded status if another significant economic downturn occurs within the next 10 to 15 years.

Sub HB 2194 has little impact on the projected funded ratios for the State Group and Local Group, but is projected to move the School Group toward a 60% funded ratio over a shorter period of time. The State and Local Groups are projected remain below 80% funded for another 11 years, and the School Group is projected to remain below a 60% funded ratio for another 10 years. Therefore, the School Group would continue to be vulnerable to future economic downturns for an extended period of time, until increased contribution levels have had an opportunity to compound and the effects of plan design changes are more fully reflected. Graphs of the projected funded ratios for each KPERS group, compared to their projected funded ratios under the Baseline, are provided in Appendices B-1 through B-3.

Employer Contributions

The following tables summarize projected employer contributions for the State and School Groups combined and for the Local Group in the fiscal year in which Sub HB 2194 is effective (FY 2014), the following three fiscal years, and over the period of FY 2011 through FY 2033. See Appendices B-5 and B-6 for additional year-by-year detail.

Sub HB 2194 Estimated Effect on the State and School Group (in Millions)

Employer Contributions	0.6% Cap		Sub HB 2194		Additional Contributions	
FY 2014 Increase over Prior FY	$	41.08	$	65.22	$	24.14
FY 2014 Total Contributions	$	481.42	$	505.56	$	24.14
FY 2015 Increase over Prior FY	$	43.50	$	69.02	$	25.52
FY 2015 Total Contributions	$	524.92	$	574.58	$	49.66
FY 2016 Increase over Prior FY	$	46.08	$	73.10	$	27.02
FY 2016 Total Contributions	$	571.00	$	647.68	$	76.68
FY 2017 Increase over Prior FY	$	48.82	$	77.46	$	28.64
FY 2017 Total Contributions	$	619.82	$	725.14	$	105.32
Total Employer Contributions: FY 2011-2033	**$**	**23,048.75**	**$**	**20,057.01**	**$**	**(2,991.74)**

Sub HB 2194 Estimated Effect on the Local Group (in Millions)

Employer Contributions	0.6% Cap	Sub HB 2194	Additional Contributions
CY 2014 Increase over Prior CY	$ 16.28	$ 20.07	$ 3.79
CY 2014 Total Contributions	$ 161.83	$ 165.62	$ 3.79
CY 2015 Increase over Prior CY	$ 17.25	$ 17.06	$ (0.19)
CY 2015 Total Contributions	$ 179.08	$ 182.68	$ 3.60
CY 2016 Increase over Prior CY	$ 18.25	$ 3.51	$ (14.74)
CY 2016 Total Contributions	$ 197.33	$ 186.19	$ (11.12)
CY 2017 Increase over Prior CY	$ 19.29	$ 5.06	$ (14.23)
CY 2017 Total Contributions	$ 216.62	$ 191.25	$ (25.37)
Total Employer Contributions: CY 2011-2033	**$ 4,667.37**	**$ 4,031.24**	**$ (636.13)**

Employee Contributions

For FY 2014, the following three fiscal years, and over the period of FY 2011 through FY 2033, an estimate follows of the effect on total employee contributions from phasing in a 2% increase in employee contribution rates for Tier 1 members. All employees who become members of Tier 2 on and after July 1, 2013, will pay at the existing 6.0% employee contribution rate, and any Tier 2 members eligible to make an election who fail to do so will also be defaulted to the 6.0% rate. Of the remaining members of Tier 2 (those hired before July 1, 2013, who actively choose between the options), it is not possible to project how many would elect the higher 8.0% rate and how many would choose to remain at the 6.0% rate and forego a COLA. Therefore, for purposes of this estimate, it is assumed that all Tier 2 members remain at the existing 6.0% employee contribution rate. Additional year-by-year detail is provided in Appendix B-7, and examples of the impact on members are shown in Appendix B-8.

Sub HB 2194 Estimated Effect on State and School Employees (in Millions)

Employee Contributions	Current Rates	Sub HB 2194	Additional Contributions
FY 2014 Increase over Prior FY	$ 10.67	$ 29.20	$ 18.53
FY 2014 Total Contributions	$ 215.60	$ 234.13	$ 18.53
FY 2015 Increase over Prior FY	$ 11.02	$ 46.00	$ 34.98
FY 2015 Total Contributions	$ 226.62	$ 280.13	$ 53.51
FY 2016 Increase over Prior FY	$ 11.45	$ 26.59	$ 15.14
FY 2016 Total Contributions	$ 238.07	$ 306.72	$ 68.65
FY 2017 Increase over Prior FY	$ 11.91	$ 9.25	$ (2.66)
FY 2017 Total Contributions	$ 249.98	$ 315.97	$ 65.99
Total Employee Contributions: FY 2011-2033	**$ 7,596.16**	**$ 8,528.28**	**$ 932.12**

Sub HB 2194 Estimated Effect on Local Employees (in Millions)

Employee Contributions	Current Rates	Sub HB 2194	Additional Contributions
CY 2014 Increase over Prior CY	$ 4.68	$ 18.28	$ 13.60
CY 2014 Total Contributions	$ 86.50	$ 100.10	$ 13.60
CY 2015 Increase over Prior CY	$ 4.77	$ 17.46	$ 12.69
CY 2015 Total Contributions	$ 91.27	$ 117.56	$ 26.29
CY 2016 Increase over Prior CY	$ 4.87	$ 4.00	$ (0.87)
CY 2016 Total Contributions	$ 96.14	$ 121.56	$ 25.42
CY 2017 Increase over Prior CY	$ 5.00	$ 4.14	$ (0.86)
CY 2017 Total Contributions	$ 101.14	$ 125.70	$ 24.56
Total Employee Contributions: CY 2011-2033	**$ 3,072.81**	**$ 3,438.49**	**$ 365.67**

Impact on Members of Multiplier Change

See Appendix B-9 for examples of the impact on the annual retirement benefits due to increasing the multiplier from 1.75% to 1.85% for future service on and after July 1, 2012. (Only affects Tier 1 members and those Tier 2 members who opt to pay the additional 2% in employee contributions.)

House Substitute for House Bill 2333[2]: Fiscal Impact

The projected fiscal impact of Sub HB 2333 is provided for the following actuarial and funding measures:

- Actuarially required contribution rate
- Funded ratio
- Unfunded actuarial liability
- Employer contributions
- Employee contributions

Actuarially Required Contribution (ARC) Rate

Sub HB 2333 is projected to reduce the maximum ARC rate and to reach the "ARC date" more quickly than under the Baseline.

- The **State Group** is projected to reach its ARC rate of 9.41% in FY 2013 and its maximum ARC rate of 10.92% in FY 2016. Under current law, the State's ARC rate is not projected to reach the ARC date until FY 2018 at 11.8%.
- The **School Group** is projected to reach its ARC rate of 15.88% in FY 2021, with a maximum ARC rate of 15.9% one year later. Under current law, it is not projected to reach the ARC rate before the end of the UAL amortization period, even with a statutory rate of 21.37%.
- The **Local Group** is projected to reach its ARC date in CY 2015 at a rate of 9.7%. Under current law, the ARC rate is projected to be 10.58% at an ARC date of CY 2018.
- Graphs of the projected ARC rates and dates for each KPERS group are provided in Appendices C-1 through C-3.

Unfunded Actuarial Liability (UAL)

Based on the December 31, 2009, valuation, the State-School Group UAL is projected to increase as follows under Sub HB 2333.

	State Group		School Group		Local Group	
	Baseline	**Sub HB 2333**	**Baseline**	**Sub HB 2333**	**Baseline**	**Sub HB 2333**
Projected Maximum UAL (in millions)	$1,348.51	$1,366.78	$8,278.95	$7,339.23	$1,810.5	$1,882.10
Year of Projected Maximum	FY 2014	FY 2014	FY 2023	FY 2018	CY 2013	CY 2013

[2] In general, this fiscal note is based on the same actuarial assumptions as were used in the 12/31/2009 actuarial valuation, which are shown in Appendix C of that report. The analysis contained in the fiscal note is not intended to give an exact calculation of costs. It should be considered to involve estimates.

The actuarial valuation process and models on which these projections are based rely on a number of assumptions about future contingent events, relating to both demographic and investment return experience. Two key assumptions are an average annual investment return of 8.0% and annual growth in payroll of 4.0%. If experience varies significantly with respect to either of these assumptions, the actual ARC rates, employer contributions and employee contributions may differ substantially.

The results for the State and Local Groups are counter-intuitive, as the projected maximum UAL for Sub HB 2333 is slightly higher than the Baseline. This anomaly is a function of the way in which the actuarial model allocates future liabilities in the year in which the lower 1.40% multiplier is implemented. However, with the additional contributions and reduction in liabilities provided under Sub HB 2333, the UAL is amortized during the remainder of the amortization period at a lower total cost than under the Baseline. For example, the State-School Group's total payments toward the UAL from FY 2011 through FY 2033 are projected to be $1.35 billion less under Sub HB 2333 than the status quo. These savings represent 62% of the projected total reduction in expenditures under Sub HB 2333 for that period. A graph of projected UAL balances and a detailed schedule of the UAL's amortization under Sub HB 2333 are provided in Appendices C-1 through C-4.

Funded Ratio

The funded ratios for each KPERS group are projected to remain at low levels for an extended period of time. The State and Local Groups are projected to remain below 80% funded for another 10 and 11 years respectively, and the School Group is projected to remain below a 60% funded ratio for another 12 years. Graphs of the projected funded ratios for each KPERS group are provided in Appendices C-1 through C-3.

Employer Contributions

The following tables summarize projected employer contributions for the State and School Groups combined and for the Local Group in the fiscal year in which Sub HB 2333 is effective (FY 2013), the following three fiscal years, and over the period of FY 2011 through FY 2033. See Appendices C-5 and C-6 for additional year-by-year detail.

Sub HB 2333 Estimated Effect on the State and School Group (In Millions)

State/School Employer Contributions		Baseline		Sub HB 2333		Additional Contributions
FY 2013 Increase over Prior FY	$	38.76	$	48.16	$	9.40
FY 2013 Total Contributions	$	440.34	$	449.74	$	9.40
FY 2014 Increase over Prior FY	$	41.08	$	50.26	$	9.18
FY 2014 Total Contributions	$	481.42	$	500.00	$	18.58
FY 2015 Increase over Prior FY	$	43.50	$	54.89	$	11.39
FY 2015 Total Contributions	$	524.92	$	554.89	$	29.97
FY 2016 Increase over Prior FY	$	46.08	$	63.22	$	17.14
FY 2016 Total Contributions	$	571.00	$	618.11	$	47.11
Total State/School Employer Contributions: FY 2011-2033	**$**	**23,048.75**	**$**	**20,887.67**	**$**	**(2,161.08)**

Sub HB 2333 Estimated Effect on the Local Group (In Millions)

Local Employer Contributions	Baseline		Sub 2333		Additional Contributions	
CY 2013 Increase over Prior FY	$	15.45	$	19.12	$	3.67
CY 2013 Total Contributions	$	145.55	$	149.22	$	3.67
CY 2014 Increase over Prior FY	$	16.28	$	19.57	$	3.29
CY 2014 Total Contributions	$	161.83	$	168.79	$	6.96
CY 2015 Increase over Prior FY	$	17.25	$	23.13	$	5.88
CY 2015 Total Contributions	$	179.08	$	191.92	$	12.84
CY 2016 Increase over Prior FY	$	18.25	$	0.73	$	(17.52)
CY 2016 Total Contributions	$	197.33	$	192.65	$	(4.68)
Total Local Employer Contributions: CY 2011-2033	**$**	**4,667.37**	**$**	**4,434.77**	**$**	**(232.60)**

Employee Contributions

Employee contributions are not increased under the provisions of Sub HB 2333.

Impact on Members of Multiplier Change

See Appendix C-7 for examples of the impact on annual retirement benefits due to lowering the multiplier from 1.75% to 1.40% for future service on and after July 1, 2012.

DC Member Benefits

See Appendix C-9 for examples of the potential benefit levels for Tier 3 members of the DC plan created by Sub HB 2333.

Issues Related to Addition of a Defined Contribution Plan

As amended by the House Committee of the Whole, Sub HB 2333 provides for the establishment of a defined contribution plan for all new members of KPERS, effective July 1, 2013 (new Tier 3). A new DC plan not only represents a fundamentally different approach to retirement plan funding, benefits, and administration compared to the existing DB plan, but it also involves closing the existing plan to new members. Closing a DB plan to new members would involve a range of funding, financial reporting, and administrative considerations. Therefore, these major plan design changes would require a more comprehensive analysis and identification of legal, financial, funding, administrative, and technical issues during the two-year implementation period.

Two such issues were raised by members of the Conference Committee during its initial meeting, and a third may also be helpful in evaluating the impact of the various plan design options under consideration by the Conference Committee. They are addressed by Cavanaugh Macdonald as follows:

- How does adding a defined contribution plan impact the cost of Sub for HB 2333?
- What Governmental Standards Accounting Board requirements apply to a closed defined benefit plan?
- What is the impact of closing the existing KPERS defined benefit plan on cash flow for the System?

An analysis of these issues by KPERS' actuarial consulting firm, Cavanaugh Macdonald , is provided in Appendix D. Due to their technical nature, a primer describing several relevant actuarial concepts precedes the analysis.

In addition, KPERS requested its tax counsel, Ice-Miller LLP, to provide information on relevant federal requirements related to the funding of closed DB plans. Ice-Miller's response is provided under Appendix E.

Investment Return Sensitivity

The purpose of an actuarial valuation is to provide a timely best estimate of the ultimate costs of a retirement system.

- Actuarial valuations of KPERS are prepared annually to determine the employer contribution rate required to fund the System on an actuarial basis, i.e. where the current assets plus future contributions, along with investment earnings will be sufficient to provide the benefits promised by the System.
- The valuation requires the use of certain underlying assumptions, both demographic and economic.
- The determination of the employer actuarial contribution rate is dependent on the assumptions the actuary uses to project the expected benefit payments in future years and then to discount the value of those future benefits to the valuation date to determine a present value (lump sum value).

The investment return assumption is one of the primary determinants in the allocation of the expected cost of the System's benefits, providing a discount of the estimated future benefit payments to reflect the time value of money. Therefore, the investment return assumption has a direct impact on the calculation of liabilities, normal costs and contribution rates. The current investment return assumption is 8.0% per year, net of all investment-related and administrative expenses.

Reviews of this assumption and all other actuarial assumptions are performed every three years to determine whether emerging experience differs from the assumption and to make modifications, if necessary. KPERS is currently in the process of conducting this "experience study," along with an "asset/liability study," which is used to establish the framework for the asset allocation of the System's portfolio. It is expected that both of these studies will be concluded by July 2011.

If the investment return assumption is lowered as a result of these studies, it will be reflected in the December 31, 2010, actuarial valuation and will decrease the funded ratio, increase the unfunded actuarial liability (UAL) and increase the actuarial contribution rate. To illustrate the impact of the return assumption, the following chart shows the actuarially required contribution rates for the State/School group under the Baseline, Sub HB 2194, and Sub HB 2333, using the current 8% assumption and two alternative investment return assumptions. These projections are based on the December 31, 2009, valuation, and no change to the amortization period is reflected.

State-School Group Actuarially Required Rate as of 12/31/09 Valuation

Interest Rate Assumption:	**8.00%**	**7.50%**	**7.00%**
Baseline	13.46%	15.30%	17.23%
S Sub HB 2194	13.59%	15.40%	17.32%
Hs Sub HB 2333	13.44%	15.26%	17.18%

Projected ARC rates and dates for the State-School Group are shown below for the Baseline, Sub HB 2194, and Sub HB 2333, using the same three interest rate assumptions.

State-School Group Actuarially Required Rate as of ARC Date

Interest Rate Assumption:	**8.00%**		**7.50%**		**7.00%**	
	Date	**Rate**	**Date**	**Rate**	**Date**	**Rate**
Baseline	None	None	None	None	None	None
S Sub HB 2194	FY 2019	15.70%	FY 2022	19.07%	FY 2027	23.93%
Hs Sub HB 2333	FY 2021	15.88%	FY 2026	19.82%	None	None

Fiscal Impact on KPERS, State Agency, and Local Unit Operations and Administration

Sub HB 2194

If Sub HB 2194 is enacted, the Retirement System anticipates incurring one-time costs for additional actuarial services and for communications, printing, and information system modifications such as software design and development to implement the new contribution rates, benefits formula multiplier, and election process.

- In order to provide the Study Commission with requested data, actuarial projections of alternative plan designs, and estimates of their impact on the existing Plan, as well as related support, additional actuarial services beyond the scope of KPERS' current contract would be required. However, it is not possible to estimate these additional fees, as they are dependent on the nature and extent of services required to respond to requests for data and projections from the Commission.
- The estimated cost to modify the information system as needed to implement Sub HB 2194 would be approximately $55,000. This cost includes alterations to accommodate the higher employer contribution cap, as well as the employee contribution increases and 1.85% multiplier for Tier 1 members and those Tier 2 members who opt to retain their COLA. Additional modifications would be needed to administer the one-time, irrevocable election for eligible Tier 2 members and to establish a separate benefit and contribution structure for those who are not eligible for this election. These election modifications would need to provide for identifying eligible Tier 2 members, tracking those members who respond and those who do not, maintaining records of the election, and processing future contributions and benefit calculations accordingly. By way of contrast, the one-time cost to modify the information system in order to provide for a change in the employer contribution cap, a 2% increase in employee contribution rates for both Tier 1 and Tier 2, and an increase in the multiplier to 1.85% for both Tiers is estimated to be $20,000.
- No estimate is currently available regarding the additional communication and printing costs associated with informing Tier 2 members about the election and assisting them in understanding the implications of each option.

These expenses would need to be considered for inclusion in the KPERS' FY 2013 budget. Sub HB 2194 could be implemented within currently approved staffing levels.

Other state agencies (most notably the Department of Administration) and each local unit of government is also likely to have some one-time costs associated with changes to their payroll and human resources systems in order to accommodate the differences in various employee contribution rates for Tier 1 members and the subsets of Tier 2 members. No estimates of these costs are available.

Sub HB 2333: DB plan components

If Sub HB 2333 is enacted, the Retirement System anticipates incurring one-time costs for information system modifications such as software design and development to implement the increased employer contribution cap and the change to a 1.4% benefits formula multiplier. The cost to modify the information system is estimated to be $20,000 in FY 2012.

This expense would need to be considered for inclusion in the omnibus appropriations bill as an addition to KPERS' FY 2012 budget.

Sub HB 2333: DC plan component

Service provider contract and other services contracts. The new DC plan established by Sub HB 2333 authorizes the KPERS Board to contract for plan administration, consulting, investment, educational, recordkeeping or other services for the Tier 3 DC plan. These contracts are to be awarded using a competitive proposal process.

Many of the day-to-day responsibilities associated with establishing and maintaining the individual DC plan member accounts would be performed by the service provider, including investing plan assets in accordance with plan documents and member direction, crediting deferrals, employer contributions, and rollovers, valuing assets in each member's account, processing distributions, providing guidance and assistance to members on a personal basis and through phone and electronic communications, and providing communication and education services. Payment sources (such as asset-based or per account or per transaction fees) and amounts for service provider costs would be negotiated as part of the competitive proposal process.

Administrative Expense Funding Sources. Although the service provider contract would cover many day-to-day operational responsibilities, there would be administrative and operation costs to KPERS for a range of plan management and oversight functions. Like the existing KPERS DB plan and the State's 457 plan, the DC plan's assets must be held in trust for the exclusive benefit of the plan's members, and therefore, plan assets may only be used to cover expenses attributable to KPERS' management and oversight functions for the DC plan.

Consistent with this principle, Sub HB 2333 provides that a separate account for paying plan administrative expenses may be established within the DC plan. Administrative expenses may be funded through a combination of assessments of fees on DC plan member accounts, negotiated vendor reimbursements, the administrative expense rate paid by employers on active member compensation, forfeited employer contributions from nonvested members and earnings on those contributions. Because it is not possible to fully identify and estimate the administrative and operational costs that would be associated with implementation of Sub HB 2333 and with ongoing operations, no estimates are available of the level at which the administrative expense rate would be set.

Funding for Start-up Expenses. A number of operational and contractual expenses would be incurred during the two fiscal years prior to implementation of the DC plan. Anticipated costs for services necessary to implement a DC plan include filing the new plan with the IRS, legal issues, actuarial, consulting, and accounting services, communications, information technology (integrating the new plan with the current computer system), preparing and executing a Request for Proposals for many of these services, as well as for the third-party service provider, and staff time to carry out each of these tasks.

An appropriate source of funding for expenses incurred in implementing the DC plan would need to be available in FY 2012 and FY 2013. Sub HB 2333 authorizes expenditure of forfeited employer contributions for the Plan's start up expenses. This authority would provide a mechanism to reimburse the original source of funding for start-up costs. However, Sub HB 2333 does not specify such a funding source.

KPERS staff consulted its outside tax counsel, Ice Miller LLP, on the issue of funding a new DC plan's start-up costs without violating the Internal Revenue Code rules on using trust fund assets. According to tax counsel, the Legislature may provide funding by either appropriating state funds to

pay for such costs, or may expand the language in Sub HB 2333 to include an immediate employer surcharge to cover start-up costs. The employer surcharge would need to remain in place for three years in order to ensure adequate funding of all the basic services.

Information Technology Costs. A key cost component would be information technology costs, particularly during the start-up and implementation phase. Although most responsibilities for recordkeeping, investment management, and communication/education services would be handled by a third-party administrator, implementation of Sub HB 2333 would involve major changes to KPERS' information systems. In particular, new processes would need to be established to calculate, remit, and reconcile the four different contribution elements in Sub HB 2333, and to coordinate them with and through the third-party record keeper. A very preliminary estimate of costs associated with modifications to KPERS' information systems is $277,500. If the portion of Sub HB 2333 permitting Tier 1 and 2 members to opt into the Tier 3 DC plan is approved by the IRS and implemented, then additional changes to the information system would be required. The approximate cost for these information system changes is $75,600. Given the number of administrative, procedural, and policy decisions that would be required to implement Sub HB 2333, these estimates are subject to change.

KPERS' Operational and Contractual Services Costs. Additional costs for contractual services (e.g., investment consultants, legal, actuarial, and auditing services), communications, and staffing would be incurred. But given the wide range of administrative, procedural, and policy decisions yet to be considered, and therefore, meaningful estimates of additional operations costs cannot be projected at this time. Implementation of the election option for Tiers 1 and 2 would entail additional costs, including for expenses to provide for sufficient communication, education, and objective counseling to allow those members to make an informed decision.

Costs to Other State Agencies and to Local Units. The cost estimates provided above are limited to those that would impact KPERS' budget and do not address the costs to the Department of Administration and other state agencies or to local units of government. Although no estimate is available of costs to the State and local units associated with changes to their payroll and accounting systems, modifications would be required. In particular, each employer's payroll system would need to have the capability to promptly remit and reconcile the four separate contribution rate elements for the payroll. The employer DC account contribution would be transmitted to a third-party record keeper each payroll period, while the plan funding rate, death and disability rate, and administrative expense rate would be paid to KPERS on the same basis.

In order to ensure these payments are made on a timely basis, implementation of Sub HB 2333 would entail a shift from the long-standing process used for KPERS' DB plan reporting and reconciliation. Tier 1 and Tier 2 members' compensation, employer contributions, and contributions are reported and reconciled annually. Reporting of compensation and contribution amounts for Tier 3 members would be required each payroll period so that employer DC contributions are promptly credited to member accounts in accordance with federal law and so that KPERS can calculate and collect the other three contribution rates on a timely basis. This shift is likely to entail IT and other operations costs for each employer.

State General Fund Cash Flow. As noted above, employer contributions to DC member accounts must be made each payroll period. Currently, the State's funding for school employer contributions to KPERS is paid on a quarterly basis. Therefore, a policy decision would need to be made as to how this mismatch in cash flow would be addressed.

Appendices

Appendix A: Baseline

1. State Group: ARC Rate/Date; Funded Ratio; UAL
2. School Group: ARC Rate/Date; Funded Ratio; UAL
3. Local Group: ARC Rate/Date; Funded Ratio; UAL
4. State-School Group: UAL Amortization Schedule

Appendix B: Senate Substitute for HB 2194

1. State Group: ARC Rate/Date; Funded Ratio; UAL
2. School Group: ARC Rate/Date; Funded Ratio; UAL
3. Local Group: ARC Rate/Date; Funded Ratio; UAL
4. State-School Group: UAL Amortization Schedule
5. State/School Group: Contribution Detail, FY 2011-2033
6. Local Group: Contribution Detail, FY 2011-2033
7. Tier 1 & 2 Members: Additional Contributions, FY 2011-2033
8. Examples: Effect of Increased Member Contributions
9. Examples: Effect of Increasing Multiplier on Benefit

Appendix C: House Substitute for HB 2333

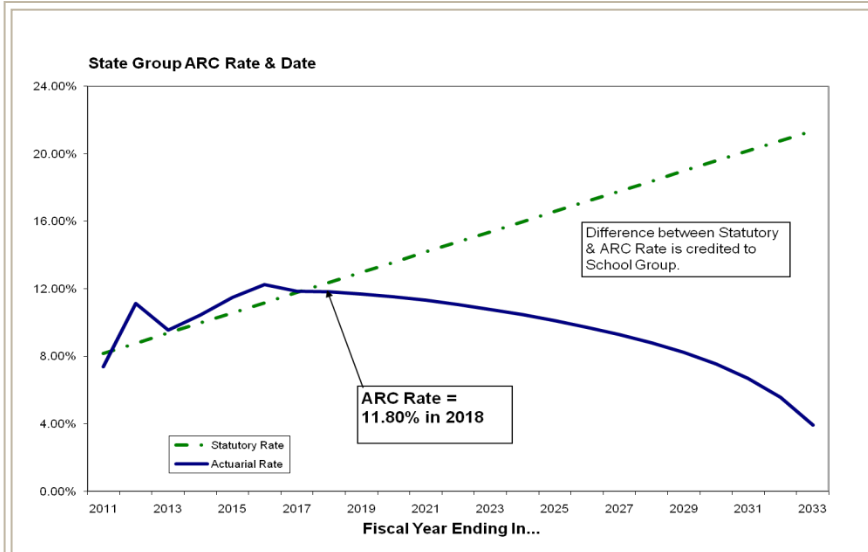
1. State Group: ARC Rate/Date; Funded Ratio; UAL
2. School Group: ARC Rate/Date; Funded Ratio; UAL
3. Local Group: ARC Rate/Date; Funded Ratio; UAL
4. State-School Group: UAL Amortization Schedule
5. State/School Group: Contribution Detail, FY 2011-2033
6. Local Group: Contribution Detail, FY 2011-2033
7. Examples: Effect of Decreasing Multiplier on Benefit
8. Examples: Potential Benefit Levels for DC Plan Members

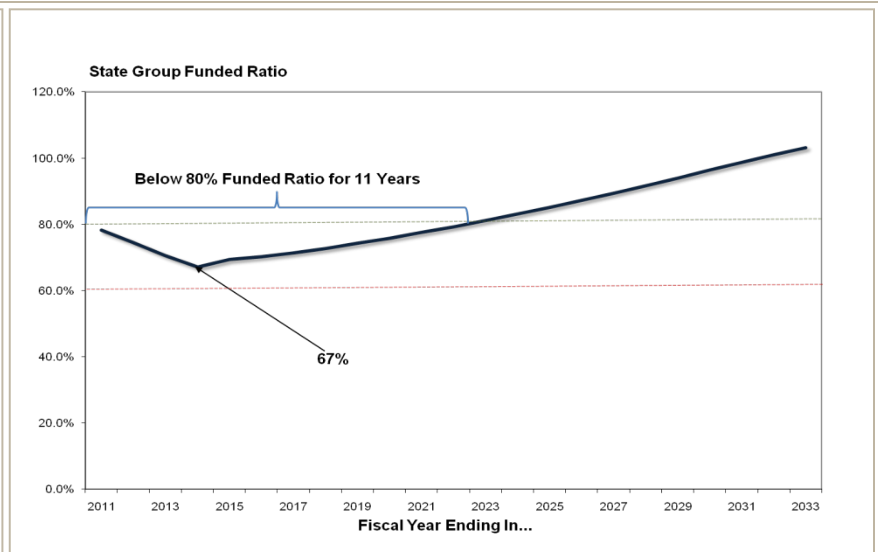
Appendix D: Cavanaugh Macdonald Consulting LLC Supplemental Information

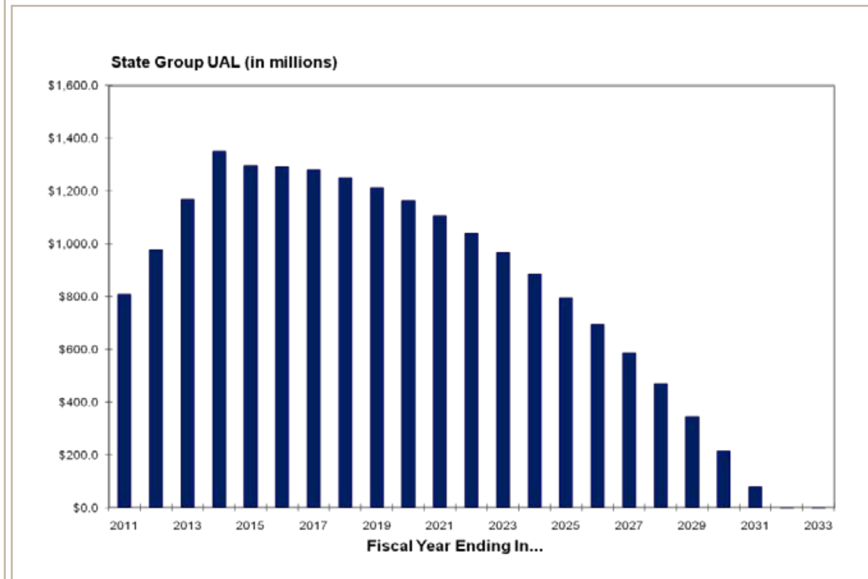
Appendix E: Ice-Miller LLP Supplemental Information

State Group: Baseline Projections

▪**No change in the .6% employer rate increase cap. Assumes average annual investment return of 8%.**







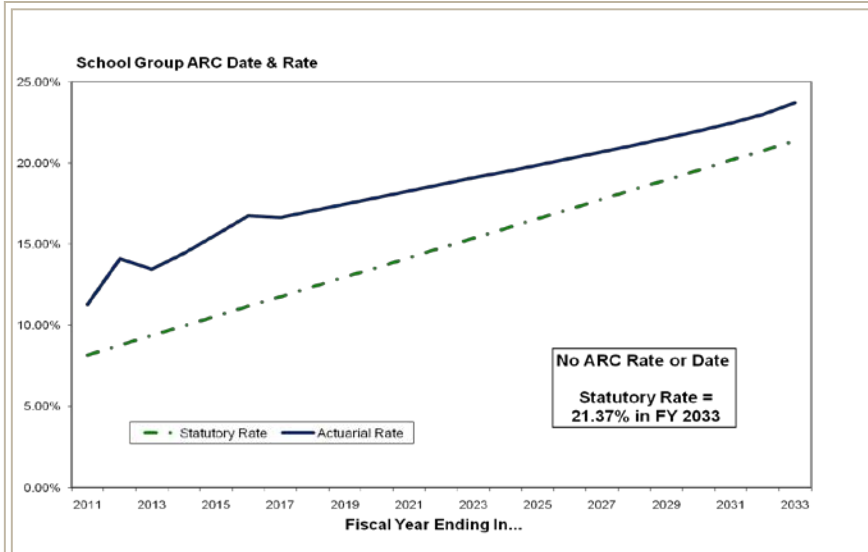
▪The projected ARC rate of 11.8% is 44% higher than the State/School rate paid by state agencies in FY 2011 (8.17%).

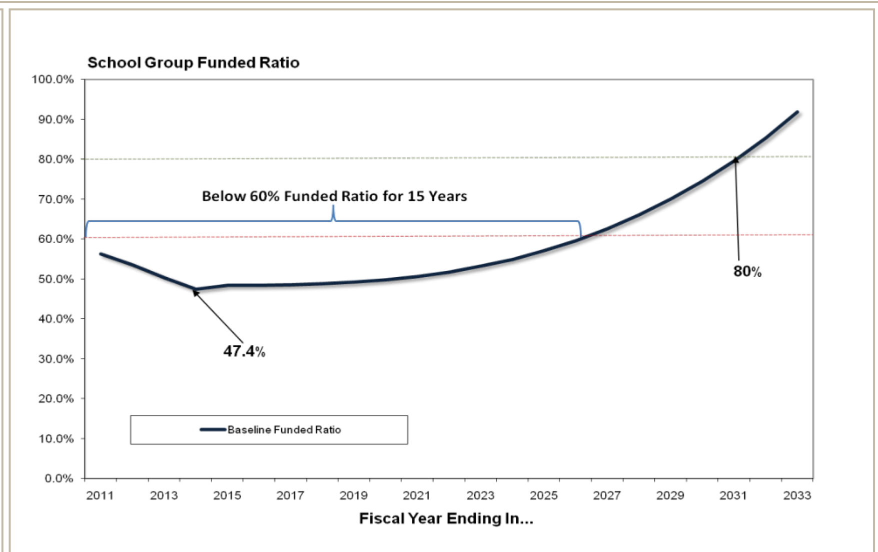
▪Funded ratios reach a low of 67% in FY 2014. They are projected to reach 80% in FY 2023.

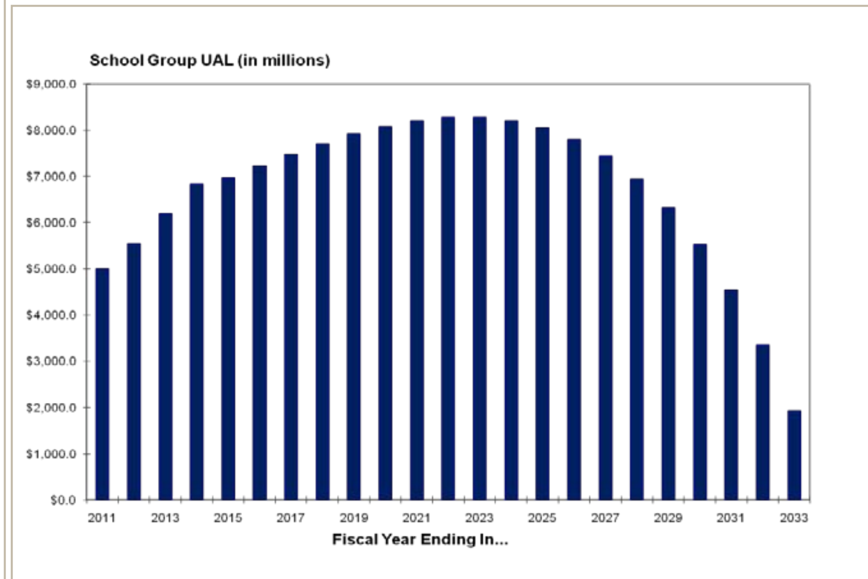
▪The projected UAL rises by 67% to $1.35 billion in FY 2014.

School Group: Baseline Projections

▪**No change in the .6% employer rate increase cap. Assumes average annual investment return of 8%.**



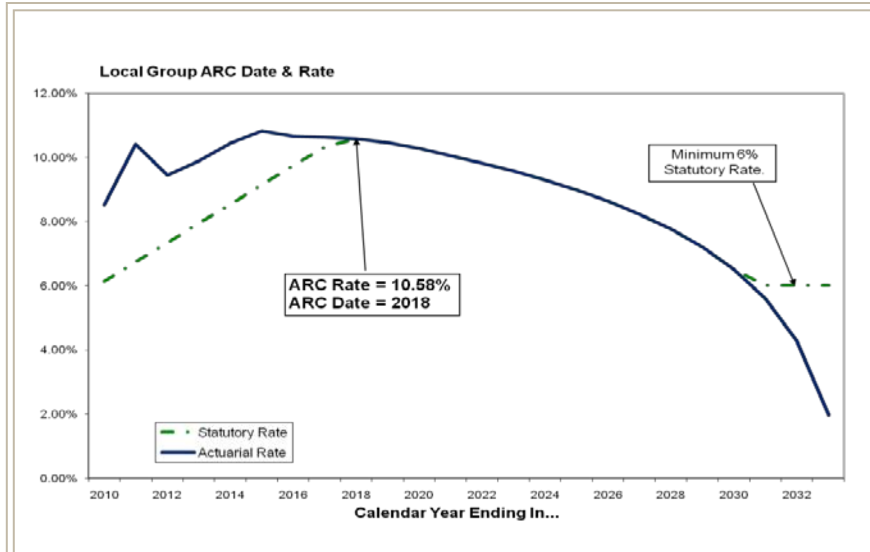


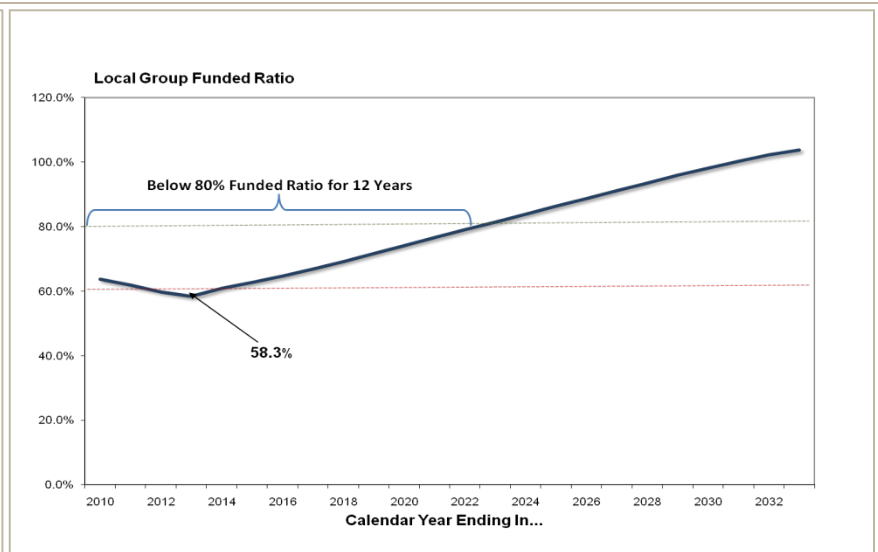


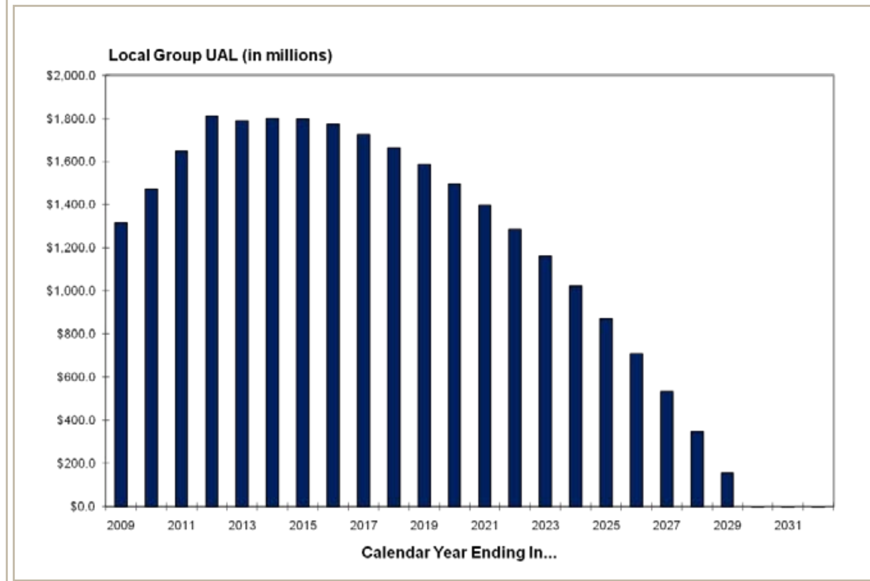
- The School Group is still not in actuarial balance by FY 2033, despite a peak statutory rate of 21.37%.
- Funded ratio projections reach a low of 47% in FY 2014 and remain below 50% until FY 2021.
- The funded ratio is not projected to reach 60% until FY 2027 and only reaches 80% in FY 2032.
- The projected UAL rises 66% to $8.3 billion in FY 2023.

Local Group: Baseline Projections

▪**No change in the .6% employer rate increase cap. Assumes average annual investment return of 8%.**







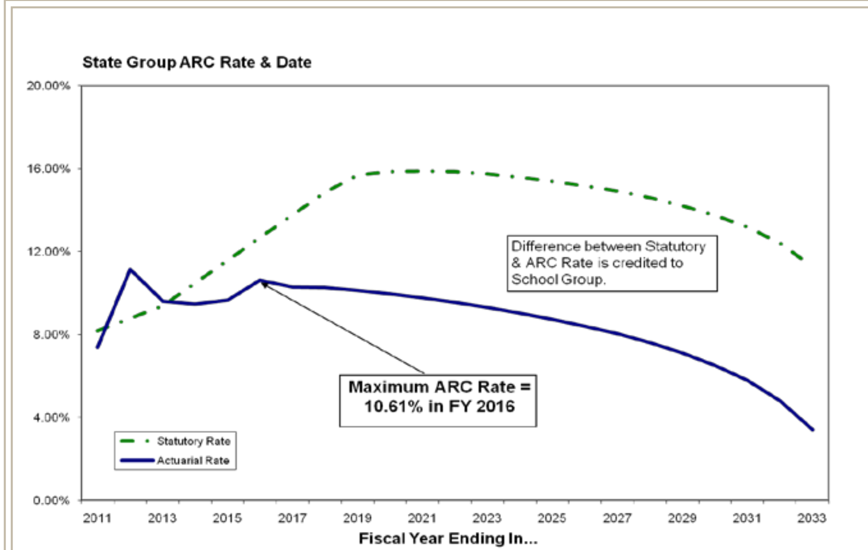
- The Local Group ARC rate is projected to rise by 72% to 10.58% in CY 2018.
- The projected funded ratio will fall to 58% by CY 2013, regaining 60% the next year.
- The funded ratio is projected to reach 80% by CY 2023.
- The UAL is projected to increase by 38% to $1.8 billion in CY 2013.

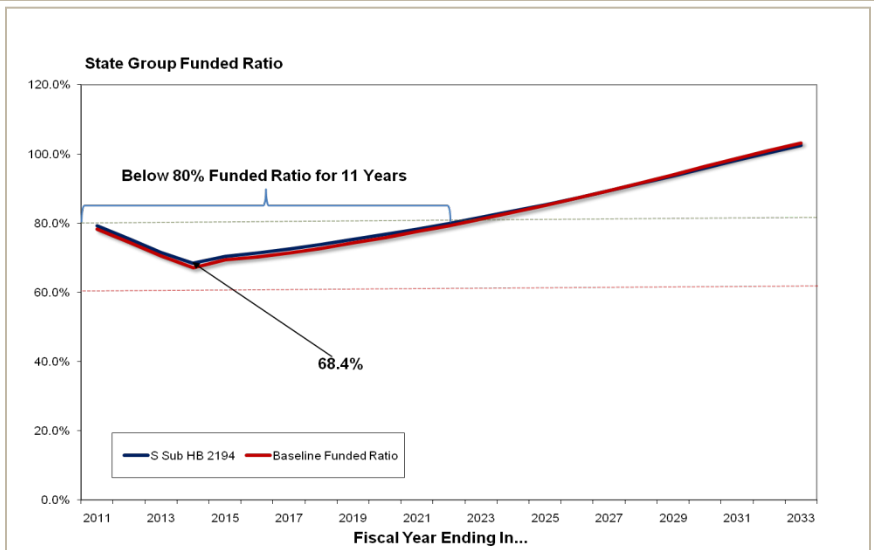
Kansas Public Employee Retirement System
Projected Amortization of
State/School Group UAL
Under Current Law

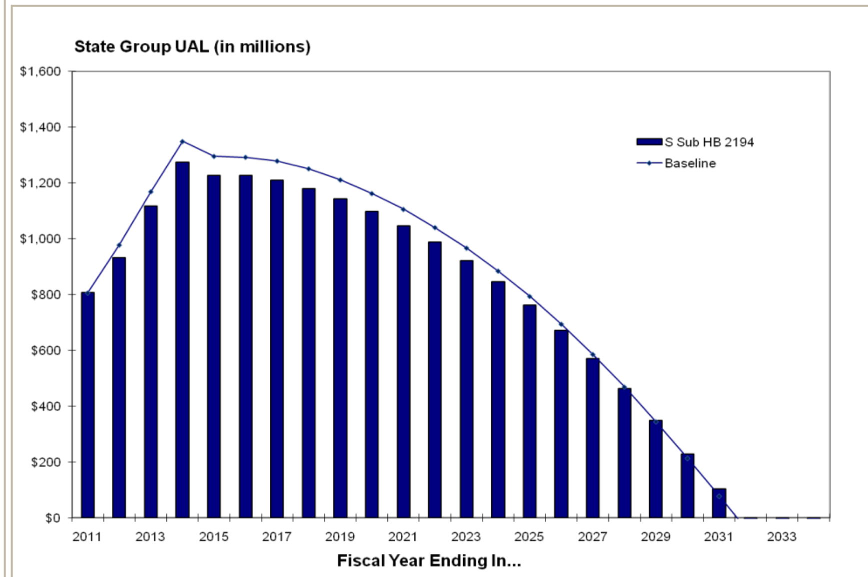
1-Jan Year	Baseline (In Millions) UAL Balance on Jan 1	Payment in Year
2010	5,805.1	149.4
2011	6,534.6	187.9
2012	7,366.6	226.7
2013	8,188.3	267.3
2014	8,268.1	309.8
2015	8,521.7	354.4
2016	8,758.7	401.4
2017	8,962.5	450.9
2018	9,128.2	503.4
2019	9,248.5	558.9
2020	9,315.4	617.6
2021	9,320.0	679.7
2022	9,256.1	745.6
2023	9,113.5	815.1
2024	8,881.0	888.8
2025	8,548.0	966.8
2026	8,099.3	1,049.2
2027	7,524.6	1,136.5
2028	6,806.7	1,228.8
2029	5,928.8	1,326.4
2030	4,871.3	1,429.6
2031	3,614.8	1,538.7
2032	2,135.7	1,653.9
2033	408.3	424.3

State Group: Senate Substitute for HB 2194

- **Raise employer rate increase cap to 1.1%, effective July 1, 2013. Employee contributions and benefit levels vary by Tier and membership date. Assumes average annual investment return of 8.0%.**







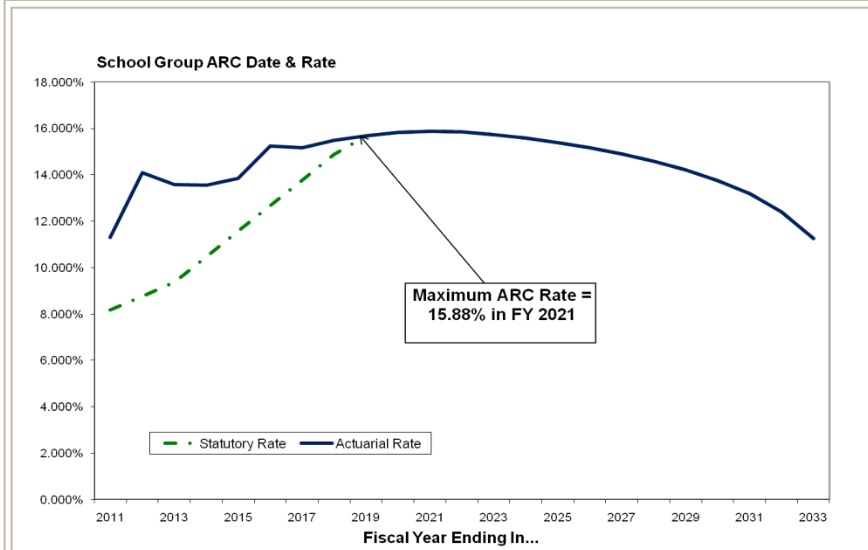
- The projected ARC rate of 9.46% in FY 2014 is 2.34% less than the Baseline ARC rate of 11.8% in FY 2018. The ARC rate continues rising to a high of 10.61% in FY 2016.

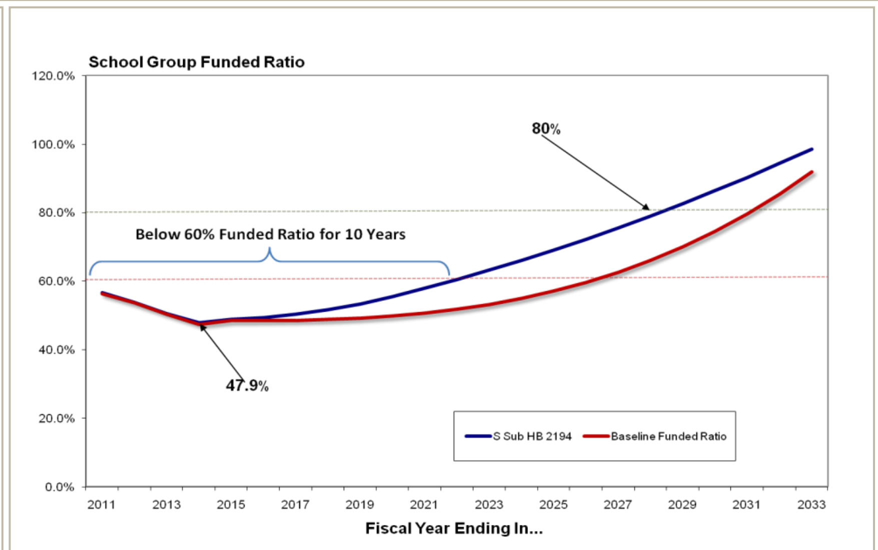
- The funded ratio is projected to reach a low of 68% in FY 2014. It is projected to reach 80% in FY 2023, the same year as the Baseline.

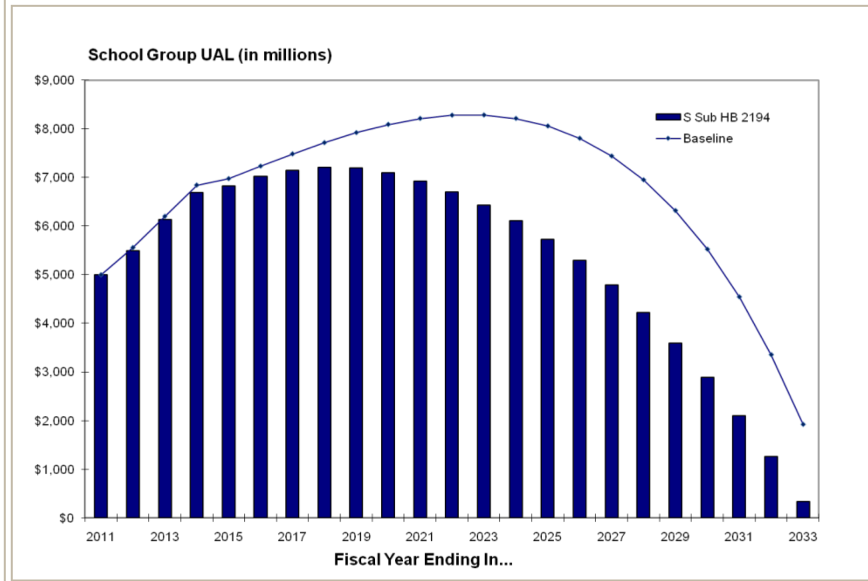
- The projected UAL rises by 57.9% to $1.27 billion in FY 2014.

School Group: Senate Substitute for HB 2194

▪**Raise employer rate increase cap to 1.1%, effective July 1, 2013. Employee contributions and benefit levels vary by Tier and membership date. Assumes average annual investment return of 8.0%.**



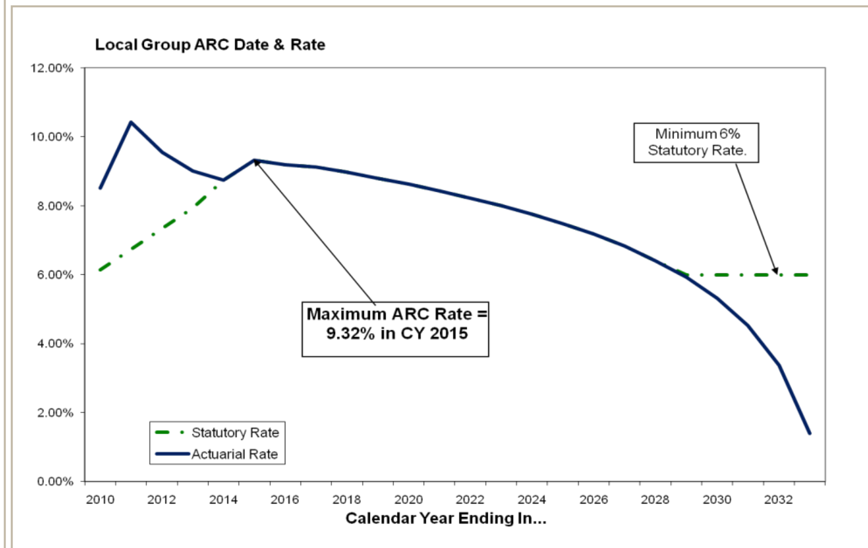


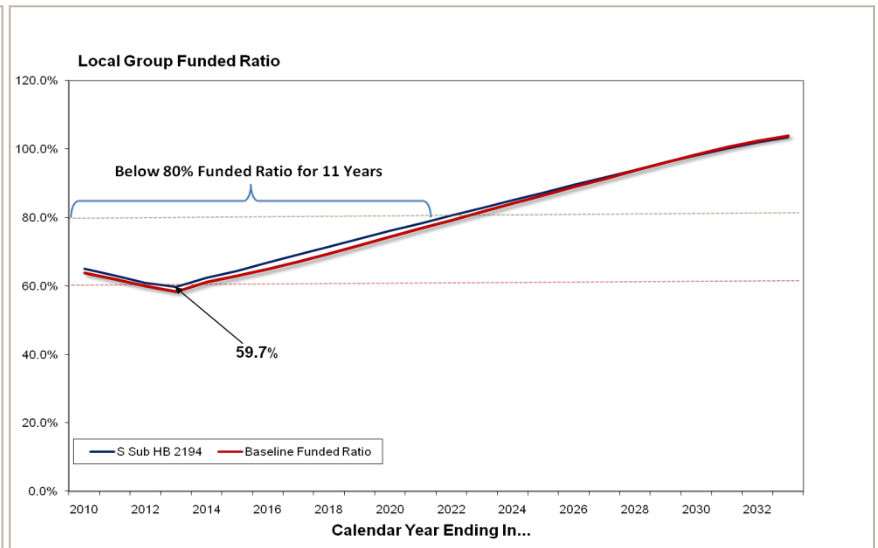


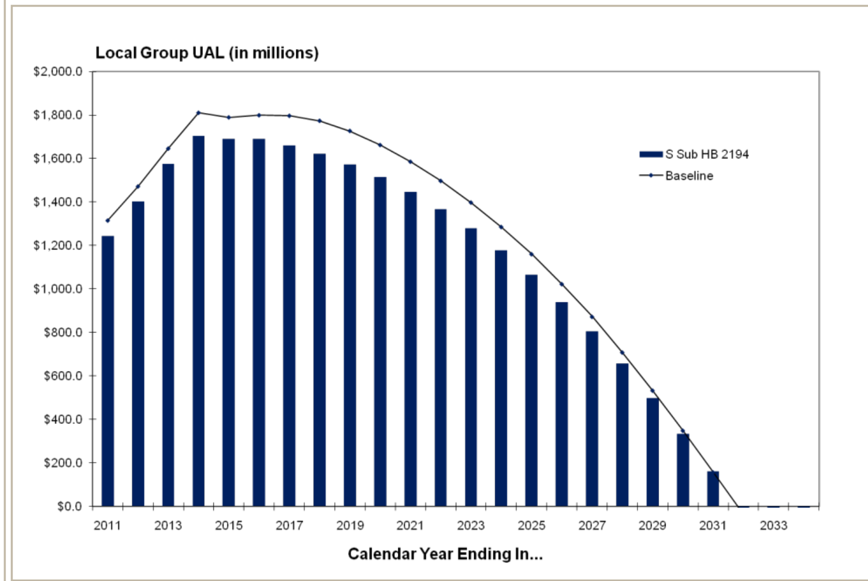
- The School group is in actuarial balance at an ARC rate of 15.70% in FY 2019, which rises to a high of 15.88% in FY 2021. Under the Baseline, the statutory rate reaches 21.37% in FY 2033.
- The funded ratio is projected to reach a low of 47.9% in FY 2014. It is projected to reach 80% in FY 2029, three years earlier than the Baseline.
- The projected UAL rises by 44.2% to $7.21 billion in FY 2018.

Local Group: Senate Substitute for HB 2194

▪**Raise employer rate increase cap to 1.1%, effective January 1, 2014. Employee contributions and benefit levels vary by Tier and membership date. Assumes average annual investment return of 8.0%.**







▪The projected ARC rate of 8.74% in CY 2014 is 1.84% less than the Baseline ARC rate of 10.58% in FY 2018. The ARC rate continues rising to a high of 9.32% in FY 2015.

▪The funded ratio is projected to reach a low of 59.7% in CY 2013. It is projected to reach 80% in CY 2022, one year earlier than the Baseline.

▪The projected UAL rises by 29.6% to $1.71 billion in CY 2013.

Kansas Public Employee Retirement System
Projected Amortization of
State/School Group UAL
Under Senate Sub for HB 2194

	Sub for HB 2194 (In Millions)	
1-Jan Year	UAL Balance on Jan 1	Payment in Year
2010	5,805.1	149.4
2011	6,419.3	178.7
2012	7,247.0	220.6
2013	7,967.3	259.6
2014	8,057.2	367.0
2015	8,252.1	475.2
2016	8,358.0	551.1
2017	8,388.9	631.4
2018	8,334.5	709.0
2019	8,189.9	763.9
2020	7,970.6	799.0
2021	7,690.9	830.2
2022	7,352.0	858.0
2023	6,952.5	883.1
2024	6,489.2	906.6
2025	5,960.1	928.2
2026	5,359.1	947.8
2027	4,686.5	964.2
2028	3,938.1	976.0
2029	3,112.9	981.8
2030	2,209.6	978.3
2031	1,232.9	959.7
2032	191.3	198.8
2033	-	

Kansas Public Employees Retirement System
Analysis of Additional Contributions Under Senate Sub for HB 2194[1]
State and School Groups FY 2011 - 2033

	Baseline				Senate Substitute for HB 2194						
Fiscal Year	**State/School Group Statutory Employer Rate**	**State Employer Contributions (in millions)**	**School Employer Contributions (in millions)**	**Total Employer Contributions (in millions)**	**State/School Group Statutory Employer Rate**	**State Employer Contributions (in millions)**	**School Employer Contributions (in millions)**	**Total Employer Contributions (in millions)**	**Year-over-Year Increase (in millions)**	**Additional Contributions from Current Cap (in millions)**	
2011	8.17%	$ 87.1	$ 277.4	$ 364.5	8.17%	$ 87.1	$ 277.4	$ 364.5		$ -	
2012	8.77%	96.2	305.4	401.6	8.77%	96.2	305.4	401.6	37.1	-	
2013	9.37%	105.5	334.9	440.3	9.37%	105.5	334.9	440.3	38.8	-	
2014	9.97%	115.4	366.0	481.4	10.47%	121.2	384.4	505.6	65.2	**24.1**	
2015	10.57%	125.9	399.0	524.9	11.57%	137.8	436.8	574.6	69.0	**49.7**	
2016	11.17%	137.0	434.0	571.0	12.67%	155.5	492.2	647.7	73.1	**76.7**	
2017	11.77%	148.9	471.0	619.8	13.77%	174.2	551.0	725.1	77.5	**105.3**	
2018	12.37%	161.4	510.2	671.6	14.87%	194.0	613.3	807.3	82.2	**135.7**	**867.2**
2019 [2]	12.97%	174.7	551.9	726.5	**15.70%**	211.4	667.8	879.2	71.9	**152.7**	
2020	13.57%	188.8	596.1	784.8	15.84%	220.3	695.8	916.1	36.9	**131.3**	
2021	14.17%	203.8	643.0	846.8	15.88%	228.4	720.7	949.2	33.1	**102.4**	
2022	14.77%	219.7	692.8	912.6	15.84%	235.7	743.2	978.9	29.8	**66.4**	
2023	15.37%	236.7	745.7	982.4	15.73%	242.2	763.1	1,005.3	26.4	**22.9**	
2024	15.97%	254.8	801.7	1,056.5	15.58%	248.5	781.9	1,030.5	25.1	**(26.0)**	
2025	16.57%	274.1	861.0	1,135.1	15.39%	254.5	799.5	1,054.0	23.5	**(81.1)**	
2026	17.17%	294.5	923.8	1,218.3	15.16%	260.0	815.7	1,075.8	21.8	**(142.6)**	
2027	17.77%	316.2	990.3	1,306.5	14.90%	265.2	830.6	1,095.8	20.1	**(210.7)**	
2028	18.37%	339.3	1,060.6	1,400.0	14.58%	269.4	842.0	1,111.4	15.6	**(288.6)**	
2029	18.97%	363.9	1,135.1	1,499.0	14.21%	272.6	850.2	1,122.8	11.4	**(376.2)**	
2030	19.57%	389.9	1,213.8	1,603.7	13.75%	274.0	852.9	1,126.9	4.0	**(476.8)**	
2031	20.17%	417.5	1,296.9	1,714.4	13.18%	272.8	847.3	1,120.1	(6.7)	**(594.3)**	
2032	20.77%	446.7	1,384.9	1,831.6	12.41%	266.8	827.3	1,094.1	(26.0)	**(737.5)**	
2033 [3]	21.37% [0]	477.5	1,477.8	1,955.4	11.26%	251.6	778.6	1,030.2	(63.9)	**(925.2)**	
FY '11-'33		**$ 5,575.6**	**$ 17,473.2**	**$ 23,048.8**		**$ 4,845.0**	**$ 15,212.1**	**$ 20,057.1**		**$ (2,991.7)**	

[1] Key Funding and Benefit Provisions:
- 1.1% Employer Contribution Rate Increase Cap, Effective FY 2014 for State and School Groups and CY 2014 for Local Groups
- Tier 1: 2% Employee Contribution Increase and 1.85% Multiplier
- Tier 2: Option of 6% Contribution with 1.75% Multiplier and No COLA --OR-- a 2% Increase to 8% Contribution with COLA and 1.85% multiplier.
- All new members on and after 7/1/13 would be at the 6% Contribution Rate with 1.75% Multiplier and No COLA.
- Employee contribution increases are phased in with two 1.0% increases on 1/1/14 and 1/1/15.

These projections assume an 8.0% average investment return and that all Tier 2 members select the 6.0% contribution rate.

[2] The School Group reaches an ARC rate of 15.70% in FY 2019 under Senate Substitute for HB 2194. The State Group reaches an ARC rate of 9.46% in FY 2014, but continues paying at the State/School Group statutory rate until the School Group reaches ARC.

[3] Under the Baseline, the School Group does not reach ARC before FY 2033, despite a statutory rate of 21.37%. The State Group reaches an ARC rate of 11.8% in FY 2018, but continues paying at the State/School Group statutory rate until the School Group reaches ARC.

Kansas Public Employees Retirement System
Analysis of Additional Employer Contributions under Senate Substitute for HB 2194[1]
Local Group FY 2011-2033

	Baseline		Senate Substitute for HB 2194				
Calendar Year	**Local Group Employer Rate**	**Employer Contributions (in millions)**	**Local Group Employer Rate**	**Employer Contributions (in millions)**	**Year-over-Year Increase**	**Additional Contributions from Current Cap**	
2011	6.74%	$ 115.8	6.74%	$ 115.8		**$ -**	
2012	7.34%	$ 130.1	7.34%	$ 130.1	$ 14.3	**$ -**	
2013	7.94%	$ 145.6	7.94%	$ 145.6	$ 15.5	**$ -**	**$ 7.4**
2014 [2]	8.54%	$ 161.8	**8.74%** [2]	$ 165.6	$ 20.1	**$ 3.8**	
2015	9.14%	$ 179.1	9.32%	$ 182.7	$ 17.1	**$ 3.6**	
2016	9.74%	$ 197.3	9.19%	$ 186.2	$ 3.5	**$ (11.1)**	
2017	10.34%	$ 216.6	9.13%	$ 191.3	$ 5.1	**$ (25.4)**	
2018 [3]	**10.58%** [3]	$ 229.2	8.97%	$ 194.4	$ 3.2	**$ (34.7)**	
2019	10.46%	$ 234.4	8.80%	$ 197.1	$ 2.7	**$ (37.2)**	
2020	10.28%	$ 238.2	8.62%	$ 199.8	$ 2.7	**$ (38.4)**	
2021	10.06%	$ 241.2	8.43%	$ 202.1	$ 2.3	**$ (39.2)**	
2022	9.83%	$ 244.0	8.22%	$ 204.1	$ 2.0	**$ (39.9)**	
2023	9.57%	$ 246.0	8.00%	$ 205.6	$ 1.5	**$ (40.5)**	
2024	9.29%	$ 247.4	7.75%	$ 206.3	$ 0.8	**$ (41.1)**	
2025	8.98%	$ 247.7	7.48%	$ 206.5	$ 0.2	**$ (41.2)**	
2026	8.64%	$ 247.0	7.17%	$ 205.1	$ (1.3)	**$ (41.8)**	
2027	8.23%	$ 244.1	6.83%	$ 202.5	$ (2.6)	**$ (41.6)**	
2028	7.77%	$ 238.9	6.41%	$ 197.2	$ (5.3)	**$ (41.6)**	
2029	7.21%	$ 229.9	5.93% [4]	$ 189.1	$ (8.1)	**$ (40.8)**	
2030	6.51%	$ 215.5	5.32%	$ 176.1	$ (13.0)	**$ (39.4)**	
2031	5.59% [4]	$ 192.2	4.53%	$ 155.7	$ (20.3)	**$ (36.5)**	
2032	4.27%	$ 152.4	3.38%	$ 120.4	$ (35.3)	**$ (32.0)**	
2033	1.97%	$ 73.1	1.40%	$ 52.0	$ (68.4)	**$ (21.1)**	
				$ -			
FY '11-'33		**$ 4,667.4**		**$ 4,031.2**		**$ (636.1)**	

[1] Key Funding and Benefit Provisions:
-- 1.1% Employer Contribution Rate Increase Cap, Effective FY 2014 for State and School Groups and CY 2014 for Local Groups
-- Tier 1: 2% Employee Contribution Increase and 1.85% Multiplier
-- Tier 2: Option of 6% Contribution with 1.75% Multiplier and No COLA --OR-- a 2% Increase to 8% Contribution with COLA and 1.85% multiplier.
-- All new members on and after 7/1/13 would be at the 6% Contribution Rate with 1.75% Multiplier and No COLA.
-- Employee contribution increases are phased in with two 1.0% increases on 1/1/14 and 1/1/15.
These projections assume an 8.0% average investment return and that all Tier 2 members select the 6.0% contribution rate.

[2] Local Group reaches an ARC rate of 8.74% in CY 2014 under Senate Substitute for HB 2194.

[3] Local Group reaches an ARC rate of 10.58% in CY 2018 under the Baseline.

[4] Per K.S.A. 74-49,211, on and after July 1, 2009, the employer contribution rate may not be less than the employee contribution rate. As a result, actual employer contributions would be at a rate that is no less than 6.0% in this and following years.

Kansas Public Employees Retirement System
Analysis of Additional Employee Contributions Under Senate Substitute for HB 2194[1]
Tier 1 and Tier 2 Combined

State's Fiscal Year(1)	Employee Contributions: Current Statutory Rates (in millions)			Employee Contributions: 1% increases on 1/1/2014 and 1/1/2015 for a total 2% increase (in millions)			Additional Contributions (in millions)		
	State/School	Local	Total	State/School	Local	Total	State/School	Local	Total
2011	184.2	72.5	256.7	184.2	72.5	256.7	-	-	-
2012	194.6	77.1	271.7	194.6	77.1	271.7	-	-	-
2013	204.9	81.8	286.7	204.9	81.8	286.7	-	-	-
2014 (2)	215.6	86.5	302.1	234.1	100.1	334.2	18.5	13.6	32.1
2015	226.6	91.3	317.9	280.1	117.6	397.7	53.5	26.3	79.8
2016	238.1	96.1	334.2	306.7	121.6	428.3	68.6	25.4	94.0
2017	250.0	101.1	351.1	316.0	125.7	441.7	66.0	24.6	90.6
2018	262.4	106.3	368.7	325.8	130.0	455.7	63.4	23.7	87.1
2019	275.4	111.6	387.0	336.1	134.4	470.5	60.7	22.8	83.5
2020	288.9	117.2	406.0	347.0	139.0	486.1	58.1	21.9	80.0
2021	302.9	122.9	425.8	358.6	143.9	502.4	55.6	21.0	76.6
2022	317.6	128.8	446.4	370.7	148.9	519.7	53.2	20.1	73.3
2023	332.7	135.0	467.7	383.5	154.2	537.7	50.8	19.2	70.0
2024	348.5	141.4	489.9	396.9	159.7	556.7	48.4	18.4	66.8
2025	364.9	148.0	512.9	411.0	165.5	576.5	46.1	17.5	63.6
2026	381.9	154.9	536.8	425.7	171.6	597.3	43.8	16.7	60.5
2027	399.6	162.0	561.6	441.1	177.9	619.0	41.6	15.8	57.4
2028	417.9	169.5	587.3	457.3	184.5	641.8	39.4	15.0	54.4
2029	436.9	177.2	614.1	474.1	191.4	665.5	37.2	14.3	51.5
2030	456.6	185.2	641.8	491.7	198.6	690.3	35.0	13.5	48.5
2031	477.1	193.5	670.6	510.0	206.2	716.2	32.9	12.7	45.6
2032	498.4	202.1	700.5	529.1	214.0	743.1	30.7	11.9	42.6
2033	520.5	211.0	731.5	549.0	222.2	771.2	28.5	11.2	39.7
FY '11-'33	$ 7,596.2	$ 3,072.8	$ 10,669.0	$ 8,528.3	$ 3,438.5	$ 11,966.8	$ 932.1	$ 365.7	$ 1,297.9

[1] Key Funding and Benefit Provisions:
-- 1.1% Employer Contribution Rate Increase Cap, Effective FY 2014 for State and School Groups and CY 2014 for Local Groups
-- Tier 1: 2% Employee Contribution Increase and 1.85% Multiplier
-- Tier 2: Option of 6% Contribution with 1.75% Multiplier and No COLA --OR-- a 2% Increase to 8% Contribution with COLA and 1.85% multiplier.
-- All new members on and after 7/1/13 would be at the 6% Contribution Rate with 1.75% Multiplier and No COLA.
-- Employee contribution increases are phased in with two 1.0% increases on 1/1/14 and 1/1/15.
These projections assume an 8.0% average investment return and that all Tier 2 members select the 6.0% contribution rate.

(2) Increased employee contributions are proposed to begin on January 1, 2014, of State and School Fiscal Year 2014 and Local Fiscal/Calendar Year 2014. The increase in the benefit formula multiplier is also effective January 1, 2014, for future service only.

Effect of Increased Member Contributions

- The following table shows the impact of increasing the employee contribution rate by 2.0% over two years for a Tier 1 and a Tier 2 member, each earning $40,000.

Annual KPERS Contribution

	Tier 1 Member		**Tier 2 Member***	
Current Rate:	4.0%	$1,600	6.0%	$2,400
Rate effective 1/1/2014	5.0%	$2,000	7.0%	$2,800
Increase	1.0%	$ 400	1.0%	$ 400
Rate effective 1/1/2014	5.0%	$2,000	7.0%	$2,800
Rate effective 1/1/2015	6.0%	$2,400	8.0%	$3,200
Increase	1.0%	$ 400	1.0%	$ 400
Total Increase	**2.0%**	**$ 800**	**2.0%**	**$ 800**

*Assumes IRS approval of one-time, irrevocable option for members of Tier 2 as of July 1, 2013, to increase contributions by 2.0%, receive a 1.85% multiplier for future service, and retain existing 2.0% COLA.

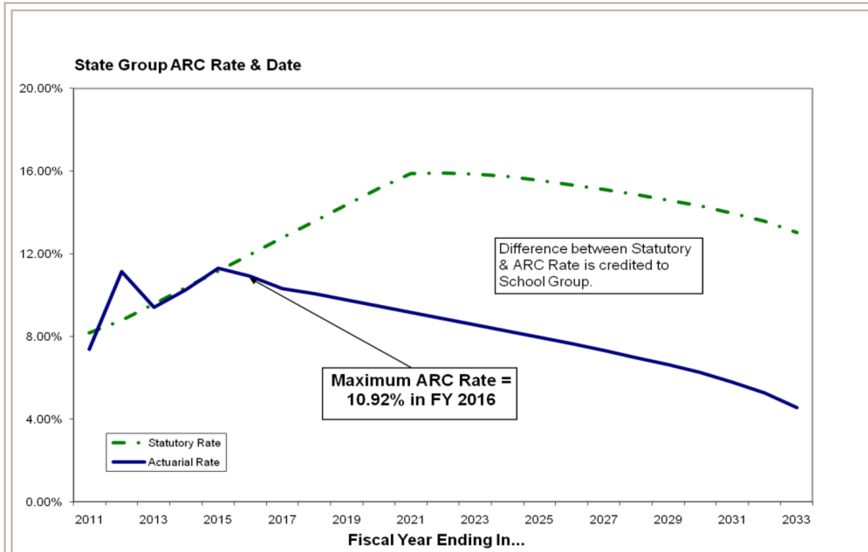
Effect of Increasing Multiplier on Benefit

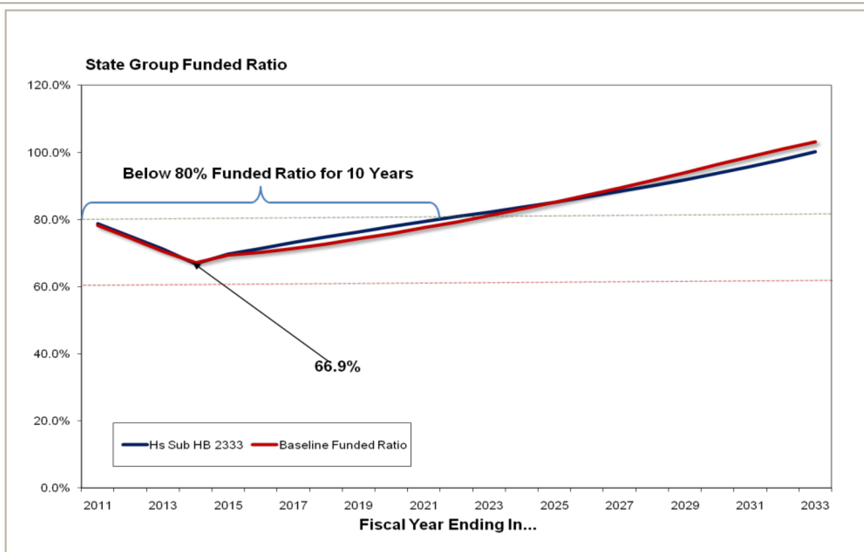
- The following table shows the impact of increasing the benefit multiplier factor to 1.85% for all future service, assuming an average final salary of $40,000.

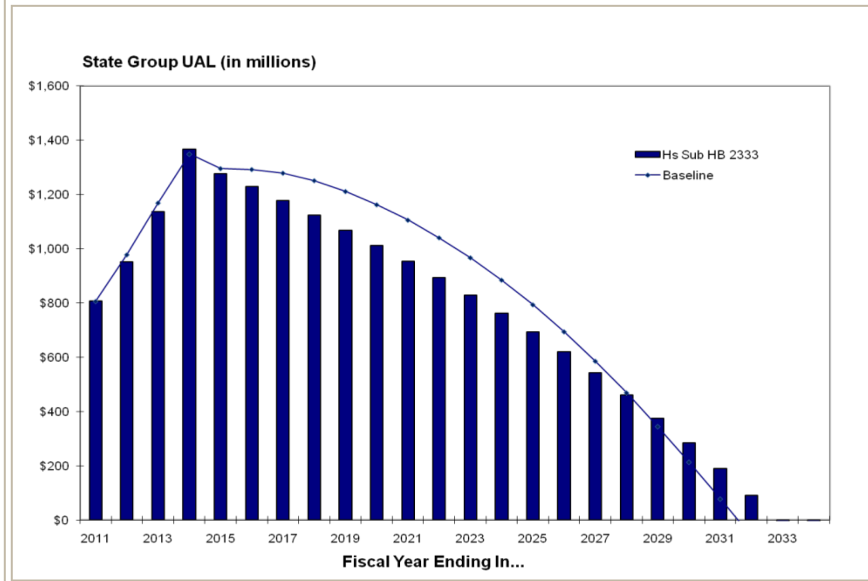
	Years of Service	X	Multiplier	X	Final Average Salary	=	Annual Benefit: Subtotal		Annual Benefit: Total
Current Law	30	X	1.75%	X	$40,000	=			$21,000
Example 1:	25	X	1.75%	X	$40,000	=	$17,500.00	=	$21,200
	5		1.85%		$40,000		$3,700.00		
Example 2:	15	X	1.75%	X	$40,000	=	$10,500.00	=	$21,600
	15		1.85%		$40,000		$11,100.00		
Example 3:	5	X	1.75%	X	$40,000	=	$3,500.00	=	$22,000
	25		1.85%		$40,000		$18,500.00		
Example 4:	30	X	1.85%	X	$40,000	=			$22,200

State Group: House Substitute for HB 2333

- **As of July 1, 2012, raises employer increase cap to 0.8% and decreases the multiplier to 1.40% for future service. Adds defined contribution plan for new hires, effective July 1, 2013. Assumes 8.0% investment return.**







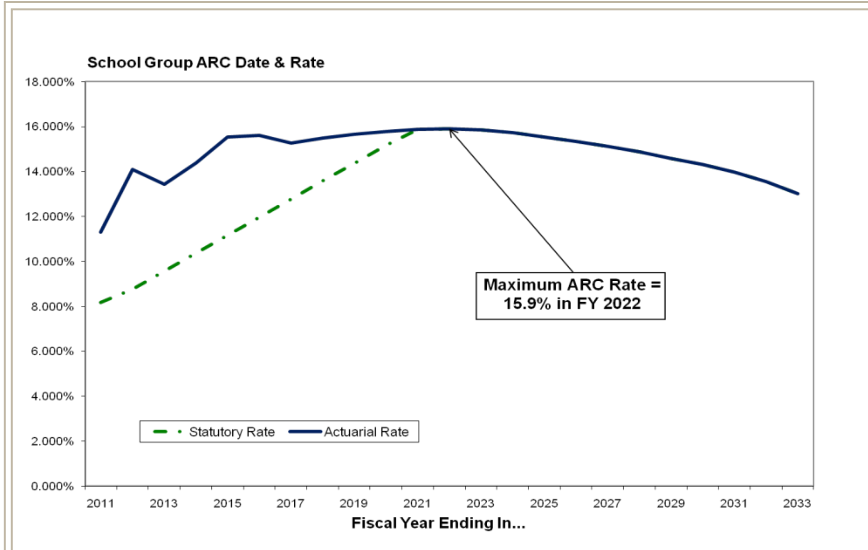
- The projected ARC rate of 9.4% in FY 2013 is 2.4% less than the Baseline ARC rate of 11.8% in FY 2018. The ARC rate continues rising to a high of 10.9% in FY 2016.

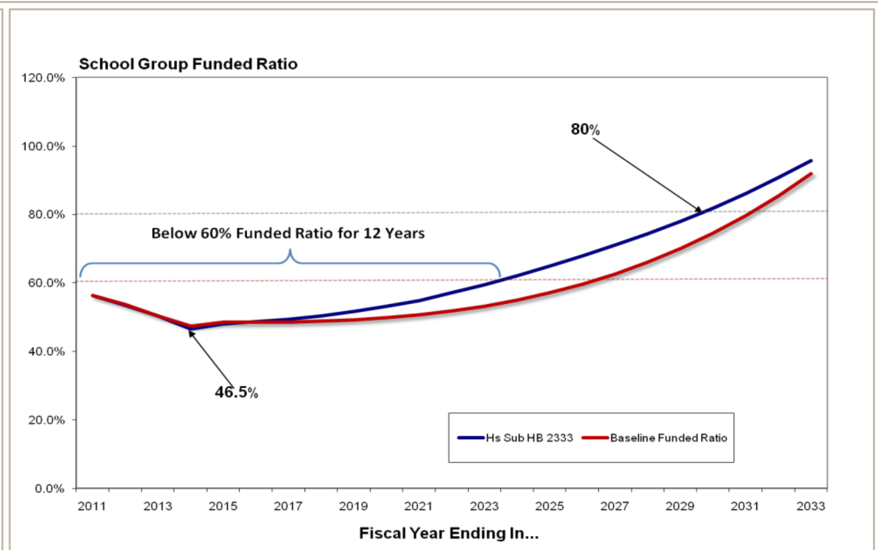
- The funded ratio is projected to reach a low of 67% in FY 2014. It is projected to reach 80% in FY 2022, one year earlier than the Baseline.

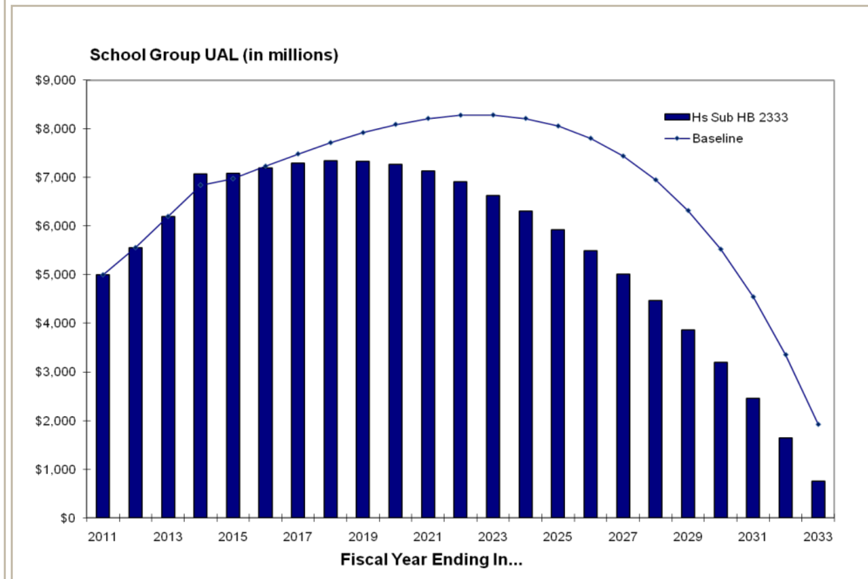
- The projected UAL rises by 69.5% to $1.37 billion in FY 2014.

School Group: House Substitute for HB 2333

▪**As of July 1, 2012, raises employer increase cap to 0.8% and decreases the multiplier to 1.40% for future service. Adds defined contribution plan for new hires, effective July 1, 2013. Assumes 8.0% investment return.**



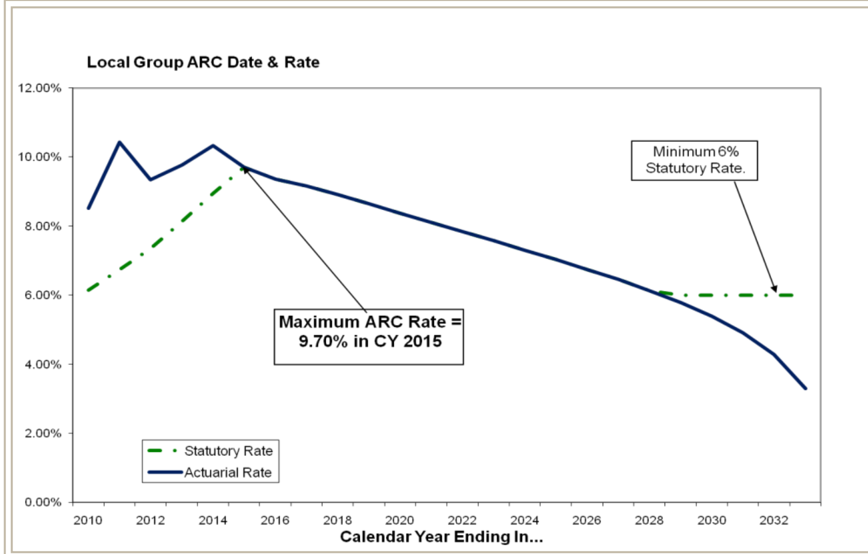


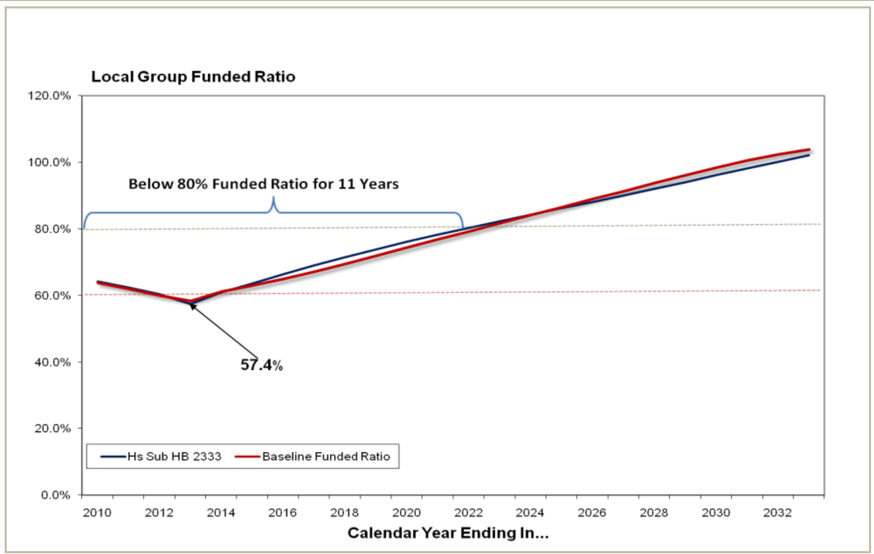


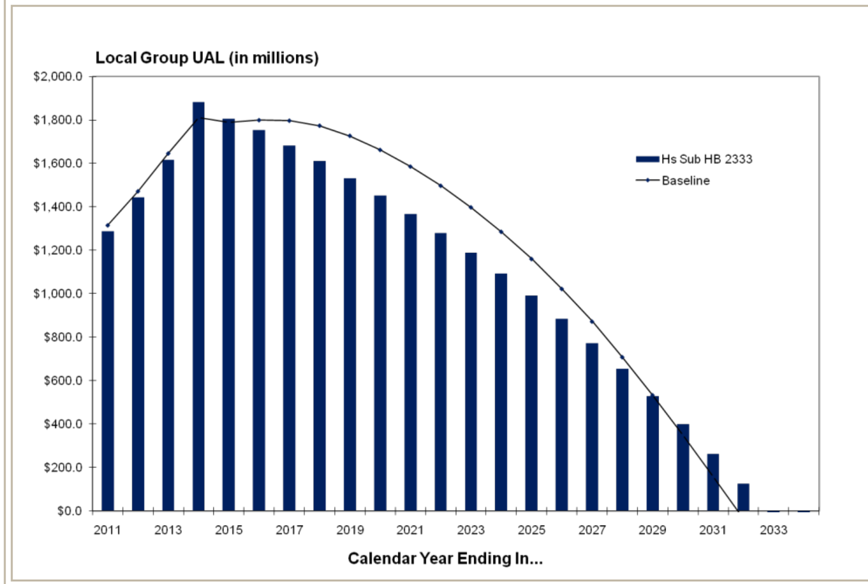
- The School Group is actuarial balance with a projected ARC rate of 15.88% in FY 2022 and rises to a high of 15.9% a year later. Under the Baseline, the statutory rate reaches 21.37% in FY 2033.
- The funded ratio is projected to reach a low of 46.5% in FY 2014. It is projected to reach 80% in FY 2030, two years earlier than the Baseline.
- The projected UAL rises by 46.8% to $7.34 billion in FY 2018.

Local Group: House Substitute for HB 2333

- **As of January 1, 2013, raises employer increase cap to 0.8%. Decreases the multiplier to 1.40% for future service on and after July 1, 2012. Adds defined contribution plan for new hires, effective July 1, 2013. Assumes 8.0% investment return.**







- The projected ARC rate of 9.7% in FY 2015 is 0.88% lower than the 10.6% ARC rate under the Baseline.
- The funded ratio is projected to reach a low of 57.4% in CY 2013. It is projected to reach 80% in CY 2022, one year earlier than the Baseline.
- The projected UAL rises by 43.1% to $1.88 billion in CY 2013.

Kansas Public Employee Retirement System
Projected Amortization
of State/School Group UAL
Under House Sub for HB 2333

	Sub for HB 2333 (In Millions)	
1-Jan Year	UAL Balance on Jan 1	Payment in Year
2010	5,805.1	149.4
2011	6,505.5	187.9
2012	7,333.7	231.3
2013	8,439.8	355.0
2014	8,353.7	404.3
2015	8,424.2	455.9
2016	8,468.5	516.7
2017	8,462.1	577.1
2018	8,401.3	641.3
2019	8,277.7	709.8
2020	8,081.7	780.0
2021	7,804.1	831.2
2022	7,460.3	862.2
2023	7,065.7	890.1
2024	6,617.6	914.4
2025	6,115.3	937.4
2026	5,553.7	959.6
2027	4,931.6	981.0
2028	4,243.3	1,001.5
2029	3,484.3	1,020.5
2030	2,650.6	1,036.8
2031	1,739.4	1,048.3
2032	748.6	777.9
2033	-	

Kansas Public Employee Retirement System
Comparison of State/School Group Employer Contributions for Retirement Benefits
Baseline (Current Law) versus House Substitute for HB 2333
(Assumes 8.0% Average Annual Investment Return)

	Payroll		Baseline					New Design [(1)]						Difference [(2)]	
FYE	Tier 1/2	Tier 3	Employer Rate-DB	Normal Cost Rate	Normal Cost [(2)]	UAL Payment [(2)]	Total Cost [(2)]	Employer Rate-DB	DB Normal Cost Rate	DB Normal Cost [(2)]	UAL Payment [(2)]	DC Contribution [(2)]	Total Cost [(2)]		
2011	4,461.035	0.000	8.17%	4.48%	199.660	164.806	364.467	8.17%	4.48%	199.660	164.806	0.000	364.467	0.000	
2012	4,579.019	0.000	8.77%	4.32%	197.624	203.956	401.580	8.77%	4.32%	197.624	203.956	0.000	401.580	0.000	
2013	4,699.485	0.000	9.37%	4.18%	196.613	243.729	440.342	9.57%	4.18%	196.613	253.128	0.000	449.741	9.399	
2014	4,742.831	85.836	9.97%	4.06%	196.064	285.355	481.418	10.37%	2.51%	119.162	378.266	2.575	500.003	18.585	
2015	4,624.142	341.990	10.57%	3.94%	195.722	329.198	524.920	11.17%	2.45%	113.283	431.352	10.260	554.895	29.974	
2016	4,436.156	675.787	11.17%	3.84%	196.072	374.932	571.004	11.97%	2.43%	107.581	490.255	20.274	618.109	47.105	
2017	4,266.326	999.794	11.77%	3.73%	196.429	423.393	619.822	12.77%	2.39%	102.002	550.111	29.994	682.107	62.285	$725.9
2018	4,108.707	1,320.546	12.37%	3.63%	197.258	474.341	671.599	13.57%	2.35%	96.677	613.556	39.616	749.850	78.251	
2019	3,959.047	1,642.632	12.97%	3.54%	198.223	528.315	726.538	14.37%	2.31%	91.466	681.104	49.279	821.849	95.311	
2020	3,814.993	1,968.590	13.57%	3.45%	199.287	585.545	784.832	15.17%	2.26%	86.137	752.324	59.058	897.518	112.686	
2021	3,676.246	2,299.590	14.17%	3.36%	201.024	645.752	846.776	15.88%	2.21%	81.220	815.438	68.988	965.646	118.870	
2022	3,541.602	2,637.017	14.77%	3.28%	202.539	710.043	912.582	15.90%	2.15%	76.073	846.787	79.111	1,001.970	89.388	
2023	3,409.287	2,982.528	15.37%	3.20%	204.674	777.748	982.422	15.86%	2.09%	71.293	875.468	89.476	1,036.237	53.815	
2024	3,279.015	3,336.499	15.97%	3.13%	207.050	849.448	1,056.498	15.73%	2.03%	66.603	900.048	100.095	1,066.746	10.248	
2025	3,152.391	3,697.772	16.57%	3.07%	209.973	925.099	1,135.072	15.54%	1.97%	62.101	922.578	110.933	1,095.613	(39.459)	
2026	3,029.107	4,066.663	17.17%	3.00%	212.810	1,005.534	1,218.344	15.34%	1.91%	57.765	944.752	122.000	1,124.517	(93.827)	
2027	2,908.362	4,444.121	17.77%	2.94%	216.273	1,090.263	1,306.536	15.11%	1.84%	53.645	965.765	133.324	1,152.734	(153.802)	
2028	2,790.249	4,830.787	18.37%	2.89%	220.028	1,179.957	1,399.984	14.87%	1.79%	49.871	985.953	144.924	1,180.747	(219.237)	
2029	2,674.251	5,227.562	18.97%	2.84%	224.068	1,274.906	1,498.974	14.59%	1.73%	46.212	1,004.584	156.827	1,207.624	(291.351)	
2030	2,558.969	5,635.666	19.57%	2.78%	227.831	1,375.859	1,603.690	14.31%	1.66%	42.552	1,021.264	169.070	1,232.886	(370.805)	
2031	2,443.646	6,056.249	20.17%	2.73%	232.445	1,481.984	1,714.429	13.97%	1.61%	39.315	1,033.004	181.687	1,254.006	(460.422)	
2032	2,328.355	6,489.994	20.77%	2.69%	237.501	1,594.070	1,831.571	13.56%	1.55%	36.060	1,036.465	194.700	1,267.224	(564.346)	
2033	2,211.820	6,938.176	21.37%	2.65%	242.880	1,712.475	1,955.354	13.03%	1.49%	32.861	1,020.595	208.145	1,261.601	(693.753)	
					4,812.047	18,236.706	23,048.753			2,025.777	16,891.557	1,970.334	20,887.668	(2,161.084)	

[(1)] Raise employer cap to 0.8%, effective FY 2013.
Lower multiplier for both Tiers to 1.4% for future service only (on and after 7/1/12).
Close DB Plan and Establish DC Plan with 3% Employer DC Contribution and a Plan Funding Rate for Closed DB Plan, Effective 7/1/13.
[(2)] In millions.

Kansas Public Employee Retirement System
Comparison of Local Group Employer Contributions for Retirement Benefits
Baseline (Current Law) versus House Substitute for HB 2333
(Assumes 8.0% Average Annual Investment Return)

Calender	Payroll		Baseline					New Design [1]						Difference [2]	
Year	Tier 1/2	Tier 3	Employer Rate-DB	Normal Cost Rate	Normal Cost [2]	UAL Payment [2]	Total Cost [2]	Employer Rate-DB	DB Normal Cost Rate	DB Normal Cost [2]	UAL Payment [2]	DC Contribution [2]	Total Cost [2]		
2011	1,717.541	0.000	6.74%	3.92%	67.243	48.520	115.762	6.74%	3.92%	67.243	48.520	0.000	115.762	0.000	
2012	1,772.455	0.000	7.34%	3.78%	66.927	63.171	130.098	7.34%	3.78%	66.927	63.171	0.000	130.098	0.000	
2013	1,833.184	0.000	7.94%	3.65%	66.948	78.607	145.555	8.14%	2.24%	41.142	108.079	0.000	149.221	3.666	$23.5
2014	1,815.266	79.717	8.54%	3.54%	64.322	97.509	161.831	8.94%	2.19%	39.684	126.717	2.392	168.793	6.961	
2015	1,723.672	235.666	9.14%	3.45%	59.405	119.679	179.083	9.70%	2.17%	37.446	147.405	7.070	191.921	12.838	
2016	1,645.442	380.488	9.74%	3.36%	55.245	142.080	197.326	9.36%	2.15%	35.421	145.810	11.415	192.646	(4.680)	
2017	1,577.253	517.698	10.34%	3.27%	51.587	165.031	216.618	9.16%	2.12%	33.397	147.305	15.531	196.233	(20.384)	
2018	1,516.313	650.094	10.58%	3.19%	48.335	180.816	229.151	8.91%	2.08%	31.499	147.591	19.503	198.594	(30.557)	
2019	1,459.883	780.592	10.46%	3.11%	45.403	188.965	234.369	8.65%	2.04%	29.772	147.443	23.418	200.633	(33.736)	
2020	1,405.829	911.468	10.28%	3.04%	42.720	195.445	238.164	8.37%	1.99%	27.988	146.974	27.344	202.306	(35.858)	
2021	1,355.146	1,042.798	10.06%	2.97%	40.288	200.947	241.234	8.11%	1.94%	26.271	146.921	31.284	204.475	(36.759)	
2022	1,306.701	1,175.786	9.83%	2.91%	38.053	205.945	243.998	7.84%	1.88%	24.503	146.738	35.274	206.514	(37.484)	
2023	1,258.121	1,311.969	9.57%	2.86%	35.944	210.089	246.033	7.58%	1.83%	22.972	146.371	39.359	208.702	(37.331)	
2024	1,211.203	1,450.998	9.29%	2.81%	33.990	213.386	247.376	7.30%	1.77%	21.386	145.617	43.530	210.533	(36.843)	
2025	1,165.685	1,593.126	8.98%	2.75%	32.105	215.552	247.657	7.03%	1.71%	19.988	144.754	47.794	212.536	(35.121)	
2026	1,120.663	1,738.878	8.64%	2.71%	30.340	216.618	246.958	6.75%	1.65%	18.522	143.671	52.166	214.359	(32.599)	
2027	1,076.127	1,888.606	8.23%	2.67%	28.692	215.429	244.121	6.45%	1.59%	17.082	141.899	56.658	215.639	(28.482)	
2028	1,033.198	2,041.915	7.77%	2.63%	27.159	211.696	238.855	6.13%	1.53%	15.821	139.021	61.257	216.099	(22.756)	
2029	991.062	2,199.318	7.21%	2.59%	25.709	204.196	229.906	5.78%	1.47%	14.610	134.799	65.980	215.388	(14.518)	
2030	949.683	2,361.119	6.51%	2.56%	24.343	191.145	215.487	5.38%	1.42%	13.513	128.494	70.834	212.842	(2.646)	
2031	908.850	2,527.575	5.59%	2.53%	23.038	169.199	192.237	4.90%	1.36%	12.388	118.879	75.827	207.094	14.857	
2032	867.339	2,699.552	4.27%	2.50%	21.700	130.721	152.421	4.28%	1.30%	11.312	103.043	80.987	195.341	42.920	
2033	825.757	2,877.181	1.97%	2.48%	20.476	52.651	73.127	3.29%	1.25%	10.325	72.398	86.315	169.038	95.911	
					949.970	3,717.397	4,667.367			639.213	2,941.618	853.936	4,434.768	(232.599)	

[1] Raise employer cap to 0.8%, effective FY 2013.
Lower multiplier for both Tiers to 1.4% for future service only (on and after 7/1/12).
Close DB Plan and Establish DC Plan with 3% Employer DC Contribution and a Plan Funding Rate for Closed DB Plan, Effective 7/1/13.
[2] In millions.

Effect of Decreasing Multiplier on Benefit

- The following table shows the impact of decreasing the benefit multiplier factor to 1.40% for all future service.

	Years of Service	X	Multiplier	X	Final Average Salary	=	Annual Benefit: Subtotal		Annual Benefit: Total
Current Law	30	X	1.75%	X	$40,000	=			$21,000
Example 1:	25	X	1.75%	X	$40,000	=	$17,500.00	=	$20,300
	5		1.40%		$40,000		$2,800.00		
Example 2:	15	X	1.75%	X	$40,000	=	$10,500.00	=	$18,900
	15		1.40%		$40,000		$8,400.00		
Example 3:	5	X	1.75%	X	$40,000	=	$3,500.00	=	$17,500
	25		1.40%		$40,000		$14,000.00		
Example 4:	30	X	1.40%	X	$40,000	=			$16,800

Potential Benefit Levels for DC Ú|æ} ÁMembers

- Unlike the KPERS Tier 1 and Tier 2 DB plans, the ultimate benefit level for Tier 3 DC members with like salary, age and years of service at retirement cannot be determined in advance. Among other factors, it would be dependent on the individual member's –
  - Investment returns during the asset accumulation phase prior to retirement.
  - Investment returns during retirement.
  - Choices regarding the method and timing of distributions during retirement.
- The following table provides examples of potential DC account assets at retirement and monthly retirement benefit levels for DC members retiring at age 65 with a $40,000 final salary, an average 7.0% return prior to retirement and a 5.0% return following retirement.

	Years of Service	Total @ Retirement	Monthly Benefit
Example 1 (KPERS' average):	22	$107,922	$718
Example 2:	30	$167,202	$1,112
Example 3:	20	$95,092	$633
Example 4:	10	$40,831	$272

Note: The monthly benefit amount was projected using the "1994 Group Annuity Table for Females."

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

April 22, 2011

Mr. Glenn Deck
Executive Director
Kansas Public Employees Retirement System
611 South Kansas Avenue, Suite 100
Topeka, KS 66603

Re: Report to Conference Committee

Dear Glenn:

Cavanaugh Macdonald Consulting, LLC was asked to prepare several items as part of the report to the Conference Committee on Senate Substitute for HB 2194. Those items are attached to this letter and include:

- General background on actuarial funding and terminology to assist the Committee members with understanding key technical concepts necessary to analyze the fiscal results; and
- Questions related to closing the defined benefit plan (no new hires become members of the DB plan). The specific requests with respect to closing the plan were:
    - (1) How does the addition of a DC plan impact the costs under HB 2333?
    - (2) What Governmental Accounting Standards Board (GASB) requirements apply and how do they impact KPERS' funding?
    - (3) What is the impact on cash flow of closing the plan?

The materials prepared specifically for this report can be found in the following pages.

The numerical results presented in this document are based on the long-term funding projections developed using the December 31, 2009, valuation results. The projections are prepared using actuarial assumptions, as described in Appendix C of the December 31, 2009 actuarial valuation report, unless otherwise noted. The financial projections and demographic modeling represent a single scenario from a wide range of possibilities. The future is uncertain, and the System's experience will differ from those assumptions, possibly significantly. Actual experience which is significantly different than that expected, based on the actuarial assumptions, may result in financial projections that are very different from those included in this document.

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We, Patrice A. Beckham and Brent A. Banister, are actuaries for Cavanaugh Macdonald Consulting, LLC. We are also members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Please let us know if you have any questions or need anything else.

Sincerely,

Patrice A. Beckham, FSA, MAAA
Consulting Actuary

Brent A. Banister, FSA, MAAA
Senior Actuary

General Background on Actuarial Funding

Overview

The systematic financing of a defined benefit pension plan requires that contributions be made in an orderly fashion while a member is actively employed, so that the accumulation of these contributions, together with investment earnings, should be sufficient to provide the promised benefits and cover administration expenses. The actuarial valuation is the process used to determine when and how much money should be contributed; i.e., as part of the budgeting process.

The actuarial valuation does not impact the amount of benefits paid or the actual cost of those benefits. In the long run, actuaries cannot change the costs of the pension plan, regardless of the funding method used or the assumptions selected. However, actuaries do influence the incidence of costs by their choice of methods and assumptions.

The purpose of an actuarial valuation is to provide a timely best estimate of the ultimate costs of a retirement system. Actuarial valuations of the Kansas Public Employees Retirement System (KPERS or the System) are prepared annually to determine the employer contribution rate required to fund the System on an actuarial reserve basis, i.e. where the current assets plus future contributions, along with investment earnings will be sufficient to provide the benefits promised by the System. To estimate the obligations of the System, the valuation requires the use of certain assumptions with respect to the occurrence of future events such as rates of death, termination of employment, retirement age, and salary changes.

The determination of the employer actuarial contribution rate is dependent upon the assumptions the actuary uses to project the expected benefit payments in future years and then to discount the value of those future benefits to the valuation date to determine a present value (lump sum value). Actuarial assumptions are a critical part of the valuation process and the funding of the System. If the assumptions are too conservative, the estimated cost of the plan is too high and the computed contribution rate will decrease over time. If the assumptions are too liberal, the estimated cost of the plan is too low and the computed contribution rate will increase over time. Either approach is inconsistent with the funding goal of establishing contributions that are level as a percent of payroll over time.

The actuarial valuation process develops the actuarial contribution rate, which for KPERS and most public defined benefit plans, is the sum of two items:
(1) the normal cost rate and
(2) the payment on the unfunded actuarial liability (UAL).

These components are defined and discussed below to enhance the reader's understanding of each and its impact on the System's long term funding.

Normal Cost

As mentioned earlier, the goal of pension plan funding is to fund the ultimate cost of the benefits to be received from the system over the member's working career. The methodology used to accomplish this is called an actuarial cost method. Different methods exist, but the one used by KPERS spreads the cost of the ultimate benefit equally, as a percentage of payroll, from the employee's hire date to the end of his employment. The term, "normal cost" is used to describe the annual cost allocated to each year of service worked by the employee. Only active members have a normal cost, since they are the only members working in the current plan year. The normal cost rate is impacted by:

- Demographics of the active members
- Benefits provided to members
- Actuarial assumptions
- Actuarial methodology

Active Member Demographics. As stated above, the demographic composition of the active member group impacts the normal cost rate of the plan. Generally speaking, the normal cost rate is lower for employees who become members at younger ages as compared to those who become members at older ages, and it is higher for females than males, since females typically live longer. It is important to recognize that, in the valuation process, the normal cost calculations are performed individually for each active member, summed and then divided by total payroll to determine the normal cost rate for the entire group. Therefore, the System's normal cost rate is a weighted average of the individual rates for all active members of the System. To the extent the demographics of the group change, the normal cost rate can also be expected to change.

Benefits. The benefits provided by the plan directly determine the normal cost rate. In general, the higher the benefit formula or the earlier the retirement age, the higher the normal cost rate. For example, the increase in the benefit formula from 1.75% to 1.85% for Tier 1 members in Sub HB 2194 results in higher benefits ultimately being paid. Therefore, the normal cost rate must be higher for Tier 1 members under Sub HB 2194 than the current plan in order to accumulate additional assets at retirement to pay the higher benefit amounts. On the other hand, Sub HB 2194 eliminates the cost of living adjustment (COLA) for Tier 2 members and Sub HB 2333 lowers the benefit multiplier from 1.75% to 1.4% for all members. As a result, the normal cost rate for these benefit structures is lower because the benefits ultimately expected to be paid are lower than the current plan, and less money needs to be accumulated to pay the expected benefit payments.

The following table shows both the total and employer normal cost rate for new hires in the System based on the current Tier 2 benefit structure, Sub HB 2194 and Sub HB 2333 (before the DC plan was added). The normal cost rates in the table assume an 8% rate of return, an ongoing DB plan (new hires continue to come into the DB plan under all three benefit structures), and the continued use of the entry age normal cost method. The normal cost rates reported are those estimated in the model for 2043, which is after most of the current members are no longer active.

	Current Plan (Tier 2)	Sub HB 2194	Sub HB 2333 (before DC plan added)
Total Normal Cost Rate	8.40%	7.50%	6.90%
Less Member Contribution Rate	(6.00%)	(6.00%)	(6.00%)
Employer Normal Cost Rate	2.40%	1.50%	0.90%

Actuarial Assumptions. The normal cost rate is also impacted by the actuarial assumptions used in the valuation. The table below shows the impact of different assumptions on the normal cost rate.

Assumption	Change	Impact on Normal Cost
Retirement	Earlier	Increase
Salary Increase	Higher	Increase
Mortality	Lower (live longer)	Increase
Termination of Employment	Lower	Increase
Investment Return	Lower	Increase

Of course, changes in the opposite direction decrease the normal cost rate.

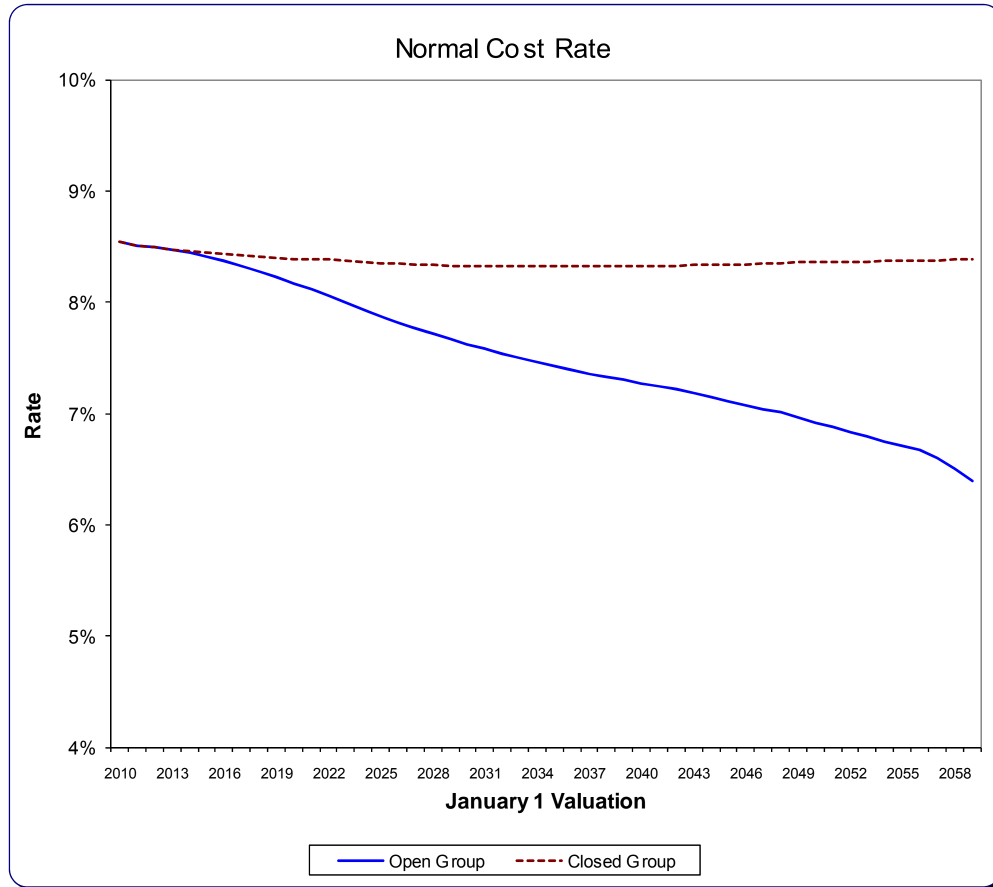
The assumption with the most impact is the investment return assumption. Because of the long tail on the expected benefit payments for current active members, a relatively small change in the investment return assumption can have a significant impact on the normal cost rate. This is illustrated in the following table, which shows the total normal cost rate for Tier 2 using three different investment return assumptions, 8.0%, 7.5% and 7.0%. Note that these projections are long term estimates determined after a sufficient group of new hires have entered the plan and the demographics of the group have stabilized. The employer portion of the normal cost rate may be calculated by subtracting the employee contribution rate from the total normal cost rate.

	Estimated Normal Cost Rate		
	8.0%	**7.5%**	**7.0%**
Total Normal Cost (Tier 2)	8.40%	9.40%	10.60%
Employee Contribution	6.00%	6.00%	6.00%
Employer Normal Cost	2.40%	3.40%	4.60%

Actuarial Methods. The choice of actuarial methodology also impacts the normal cost rate, but that discussion is highly technical and outside the scope of this document.

Impact of Closing Plan to New Hires. When a defined benefit plan is closed to new hires, it impacts the ongoing cost (normal cost rate) of the plan in future years because the demographics

of the active members in the DB plan is different than it would have been if the plan had not been closed. As long as new hires are joining the plan, the normal cost rate tends to be stable. However, that is not the case when the plan is closed. In KPERS' situation, the normal cost rate would decline as shown in the graph below.

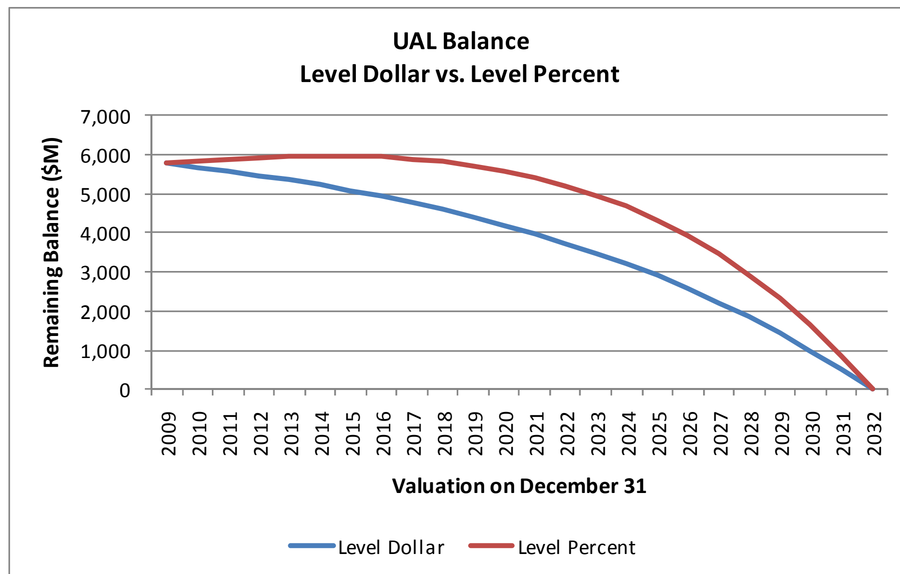


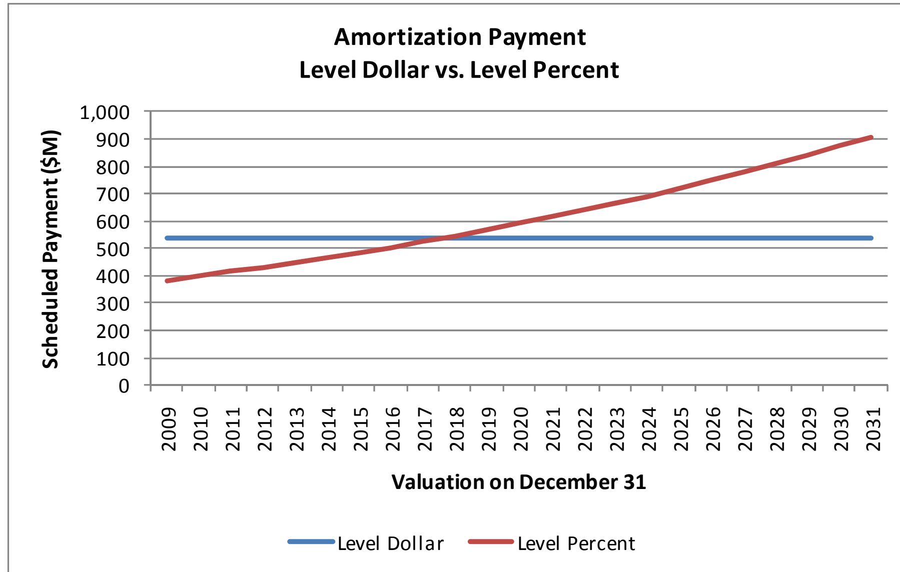
Unfunded Actuarial Liability (UAL)

As described earlier, a "normal cost" is assigned to each year of service that a member works in covered employment. The accumulated value of all the normal costs for past years of service for all members, including retirees and inactive vested members, is called the actuarial liability or accrued liability. It is sometimes referred to as the "past service liability" because it references the portion of the total benefit cost that has been allocated to past years of service. The difference between the actuarial liability and actuarial value of assets is called the unfunded actuarial liability (UAL). This amount represents the difference between the value of the plan's assets and where they theoretically should be (actuarial liability), if all assumptions had been met in the past.

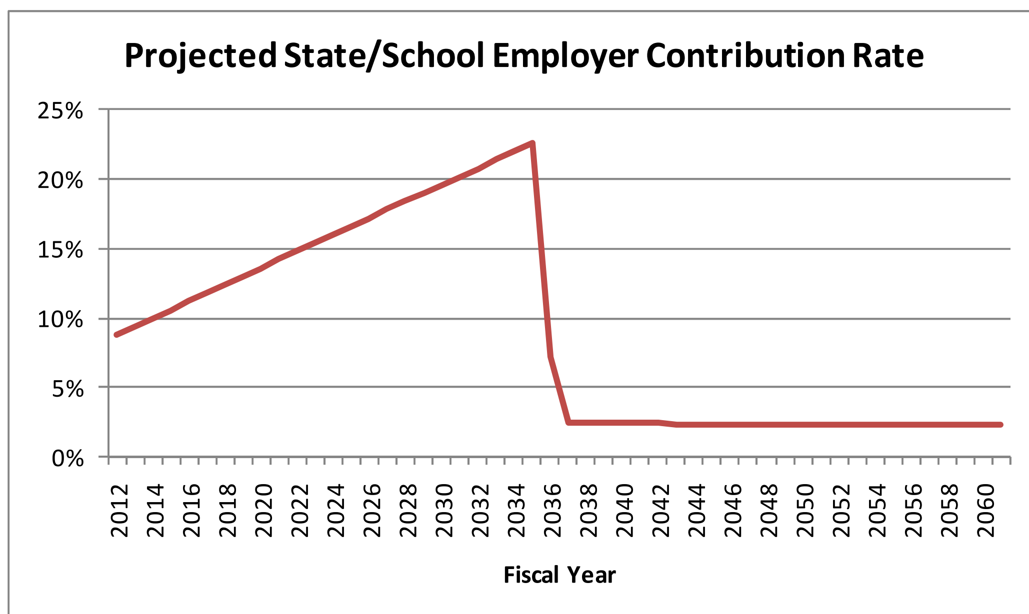
The existence of an UAL is not necessarily problematic and does not automatically mean the plan is "underfunded." The key factor is whether the UAL can be financed in an appropriate time period at an affordable contribution rate. The UAL is normally scheduled to be paid off over a number of years using either a level percent of payroll or a level-dollar method, and either an open or closed amortization period. The level percent of payroll method creates a contribution pattern that is expected to increase each year as the underlying active member payroll grows, and it will generate a lower dollar contribution during the early years of an amortization schedule than the level dollar method does. KPERS uses the level percent of payroll amortization methodology and a closed 40-year period that began in 1993 (23 remaining years as of the December 31, 2009, actuarial valuation).

The following graphs illustrate the difference in the amortization payment schedule on the UAL as a level percent of pay versus a level dollar amount and the scheduled UAL balance under each approach. To simplify the illustration and focus solely on the difference in the payment methodology, the graphs below are based on the December 31, 2009, State/School Group UAL amount and remaining amortization period (23 years). They also assume the full ARC is paid in each future year.





Once the UAL is paid off, only the cost of the benefits allocated to the current year of service (the normal cost) must be paid in future years. In the projection of costs for KPERS, the employer contribution drops dramatically after the UAL is assumed to be eliminated. This is true for all of the DB plans studied in this legislative session. With a 6% employee contribution rate, most of the benefit structures have a long term employer cost of 1.0% to 2.5% (see earlier table of employer normal costs). The projected decrease in the employer contribution rate for the current plan after the UAL is paid off is shown in the following graph for the State/School Group:



Closing the Defined Benefit Plan to New Hires

There are key questions that need to be addressed when analyzing the impact of closing the defined benefit plan and replacing it with a defined contribution (DC) plan as in Sub HB 2333. Three of these questions are addressed in the following pages.

How Does the Addition of a DC Plan Impact the Costs under Sub HB 2333?

UAL. When a defined benefit plan is closed to new hires, the unfunded actuarial liability (UAL) at that time is not reduced because that liability "belongs" to the current members and is unchanged by closing the plan. Therefore, the UAL must still be funded in order for the plan to be actuarially sound in the long term. If the UAL payment is calculated using the total payroll of members in both the DB and DC plans, the dollar amount of the payroll is the same as if the DB plan were still open. As a result, the UAL is amortized at approximately the same rate of pay as would occur if the DB plan had not been closed to new hires. The actuarial liability will be lower in future years if the plan is closed to new hires because a different population is covered by the plan, but the financing of the UAL can still be accomplished in a manner similar to an open plan. If the payroll of the new hires is not included in determining the UAL payment rate, the contribution rate will increase significantly as the covered pay used in the denominator will be smaller for a closed plan. When the plan is closed to new entrants, the amortization method and period for purposes of funding the UAL should be reviewed to ensure they are still appropriate.

Normal Cost. As discussed above, the UAL must be paid off in the future regardless of whether the current plan remains in place or a change is made to the plan benefits for new hires. Therefore, any cost savings come as a result of the difference in the cost of benefits for new hires. In evaluating a change in the plan design, the relevant comparison is the cost for new hires in the current (open) defined benefit plan and the cost in the proposed (new) plan, whether it is a DB or DC plan. By reducing the employer cost for new hires, additional monies can be used to finance the UAL or fewer contribution dollars can be contributed by the employer.

For comparisons of two different DB plans, the cost of new hires is measured by the employer portion of the normal cost rate for each DB benefit structure. For comparisons of a DC plan (with a closed DB plan) to an open DB plan, the cost of new hires is measured by the employer normal cost rate for the open DB plan and the employer DC contribution rate for the DC plan. For example, the long term employer normal cost rate for new hires (who become members of Tier 2) in the **current** KPERS DB plan is 2.42%. Therefore, a DC plan would have to provide for an employer contribution rate around that level to have about the same long-term cost as the current KPERS DB plan.

The actuarial assumptions used in the DB plan impact the total normal cost rate and, therefore, the employer portion of the normal cost rate. Since future returns are unknown in the DB plan, the true cost of the DB plan cannot be computed with accuracy in advance. The investment return assumption is the best estimate of the long-term rate of return, as measured over a 30+ year timeframe, which represents the average duration of the funds to be invested. The uncertainty in the actual rate of return in the next 30+ years makes a direct comparison of DB and DC plan costs more difficult. While the contribution to the DC plan is fixed, and therefore known in advance, the cost of the DB plan will vary depending on actual returns and demographic experience. If the actual returns in the future are higher than the actuarial assumed rate of return, the true cost of the DB plan will be lower than the normal cost rate. If actual returns in the future are lower than the actuarial assumed rate of return, the true cost of the DB plan will be higher than the normal cost rate.

Therefore, the projected cost of new hires is affected by the interest rate assumption, as shown in the table below. Because it takes many years before the majority of the active membership and covered payroll is attributable to members hired after July 1, 2013, the following normal cost rates shown are long-term estimates based on the ultimate normal cost rate for new hires once the current members are no longer active. The table shows the estimated normal cost rate for the current Tier 2 benefit structure and the two proposed modified DB structures considered in the 2011 legislative session, based on three different investment return assumptions:

Estimated Total Normal Cost Rate			
	8.0%	**7.5%**	**7.0%**
Current Plan (Tier 2)	8.40%	9.40%	10.60%
Sub HB 2194	7.50%	8.30%	9.30%
Sub HB 2333 (Without DC Plan)	6.90%	7.70%	8.60%

Impact of Sub HB 2333 Modifications to the DB Plan

Sub HB 2333 would provide for a decrease in the benefit multiplier from 1.75% for each year of service to 1.40% for all KPERS members, both Tier 1 and Tier 2. The change would be applied only to years of service in the future, i.e. the 1.75% benefit multiplier still applies to past years of service. The impact of Sub HB 2333 on the DB plan (before the DC Plan was added) would be to significantly reduce the long-term normal cost rate for new hires. For example, the projected normal cost rate falls from 8.40% to 6.90% (see table above), assuming an 8% rate of return on investments. The employee contribution rate for new hires is 6% so the projected employer cost for new hires would be lowered from 2.40% (8.40% - 6.00%) for the current Tier 2 benefit structure to 0.90% (6.90% - 6.00%) under Sub HB 2333 (before the DC plan was added). The following table shows the projected employer normal cost rate under Sub HB 2333 (without the DC Plan) at the same three interest rate assumptions used previously.

Projected Normal Cost Rate			
	8.0%	**7.5%**	**7.0%**
Sub HB 2333 (Without DC Plan)	6.90%	7.70%	8.60%
Employee Contribution	(6.00%)	(6.00%)	(6.00%)
Employer Normal Cost	0.90%	1.70%	2.60%

In order to keep the combined, long-term cost of the DB and DC plans in Sub HB 2333 at about the same level as the costs expected if the modified DB plan (with a 1.40% multiplier) was to remain open to new hires, the DC plan would have to have an employer DC contribution rate that is approximately the projected employer normal cost rate shown in the table above. Therefore, at a lower assumed rate of return a three percent DC contribution rate is less likely to result in a projected increase in costs, as show in the following table.

Projected Sub HB 2333 DB vs DC Employer Cost			
	8.0%	**7.5%**	**7.0%**
Employer DB Normal Cost Rate (Without DC plan)	0.90%	1.70%	2.60%
Employer DC Contribution Rate	3.00%	3.00%	3.00%

Based on an 8% assumption, the DC plan would need to be approximately 1% of pay in order for projected costs in the long run to be comparable. However, based on a 7.5% assumed rate of return, an employer contribution of approximately 2% in the DC plan would produce projected costs that are roughly equivalent to the long-term DB costs. Based on a 7% assumption, a contribution of approximately 3% would be expected to result in costs that are about equal to the DB plan in the long term.

What GASB Requirements Apply and How Do They Impact KPERS' Funding?

Governmental Accounting Standard Number 25 (GASB 25) provides guidance for the preparation of governmental pension plan financial statements. It contains procedures regarding the calculation of pension costs to be recognized in different time periods.[1] This is strictly related to accounting for pension benefits, and does not represent a requirement to fund the plan under the standard. It does, however, provide one frame of reference with respect to the funding of the UAL. The key measurement in GASB 25 is the Annual Required Contribution (ARC). The Standard sets out rules regarding the amortization of the unfunded actuarial liability for the Annual Required Contribution (ARC). In general, the standard provides that the UAL may be amortized as a level-dollar amount or as a level percent of payroll. However, it states that if the level percentage of payroll method is used, projected decreases in the payroll should be reflected if no new members are permitted to enter the plan. Therefore, for GASB reporting purposes, the ARC would have to be amortized as a level dollar amount or over a decreasing payroll stream, if the percent of payroll method is used. The Standard is silent regarding the amortization period, other than the maximum period of 30 years.

To illustrate the potential impact on the ARC, the following graphs shows the amortization of the UAL at 12/31/09 under three methods:

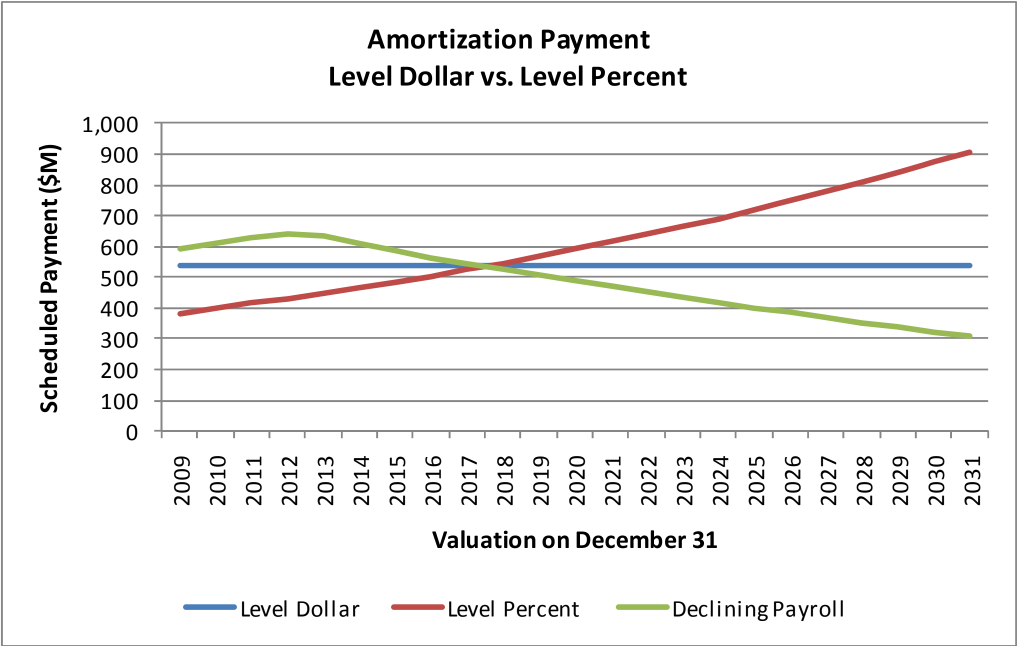
[1] GASB is reviewing the current standards (GASB 25 and 27) and is expected to release proposed revisions this summer.

(1) Red Line: level percent of payroll with an increasing payroll growth assumption of 4% (current methodology),

(2) Green Line: level percent of payroll with a decreasing payroll growth assumption, and

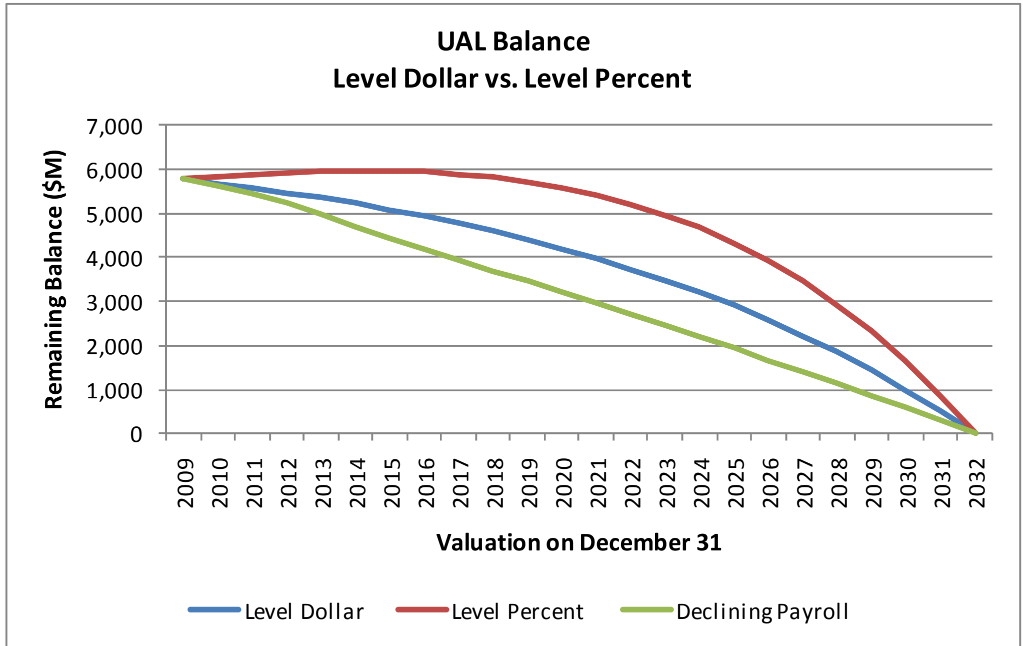
(3) Blue Line: level-dollar amortization.

The dollar amount of the UAL payment under each amortization methodology is shown in the first graph, and the UAL balance using each method is shown in the second graph. The amortization period from the December 31, 2009, valuation, 23 years, is used in the calculations for all three methods.



The dollar amount of the amortization payment, at five year intervals, is shown in the following table. A complete schedule of payments for the entire amortization period can be found at the end of this section.

	Amortization Payment		
Year	**Level Percent of Pay (Increasing Payroll)**	**Level Dollar**	**Level Percent of Pay (Decreasing Payroll)**
2010	$383	$536	$596
2015	466	536	613
2020	568	536	507
2025	691	536	419
2030	840	536	339



The UAL balance, at five year intervals, is shown in the following table. A complete amortization schedule showing the UAL balance each year can be found at the end of this section.

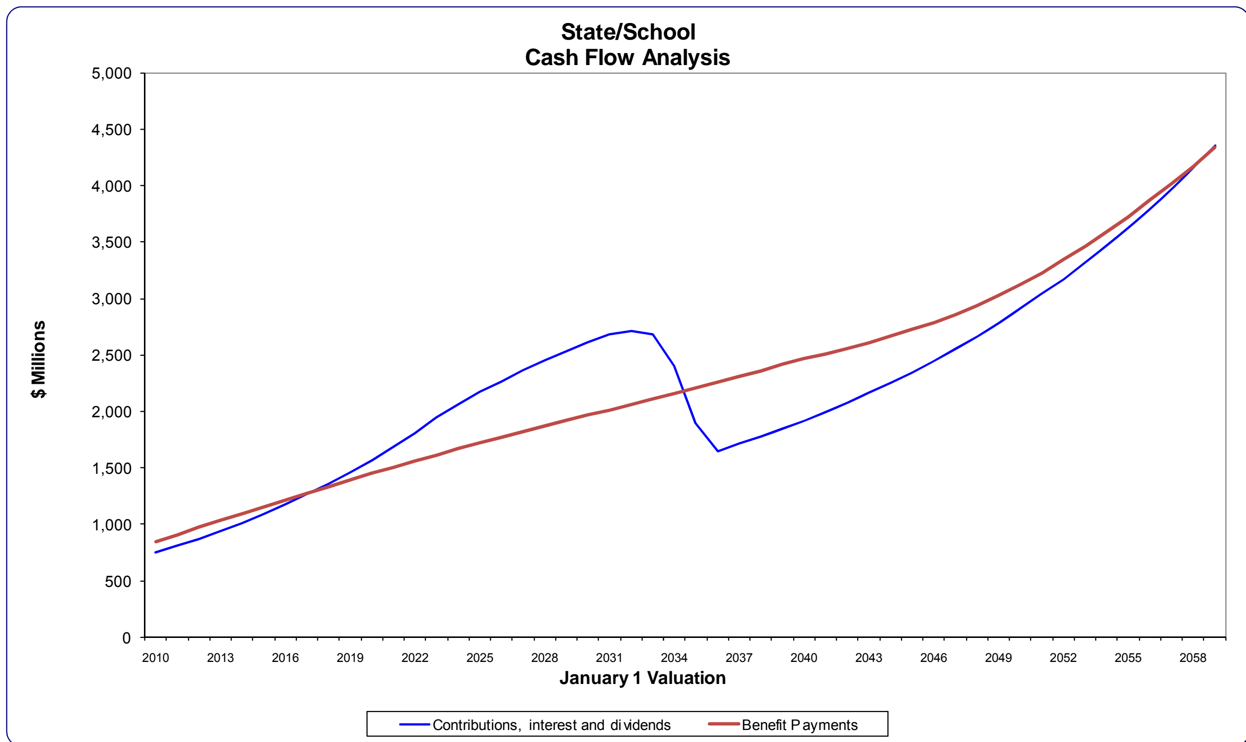
	UAL Balance		
Year	**Level Percent of Pay (Increasing Payroll)**	**Level Dollar**	**Level Percent of Pay (Decreasing Payroll)**
2009	$5,805	$5,805	$5,805
2014	5,976	5,223	4,733
2019	5,718	4,405	3,467
2024	4,675	3,203	2,204
2029	2,337	1,436	868

It is important to note that the rules in place under GASB 25 apply to the accounting of pension benefits and are not required to be used to fund the plan. Therefore, absent a requirement in state law or city ordinance, a retirement system does not have to contribute the amount of the ARC. However, the ARC must be calculated in accordance with GASB 25 and used in exhibits in the financial statements of the system and employer. To the extent the actual cash contributions are less than the amount determined under GASB 25, it is reflected and disclosed in the GASB 25 exhibits. This is the same situation that has occurred with respect to the KPERS contribution for the last 16 years, i.e. the full ARC has not been contributed.

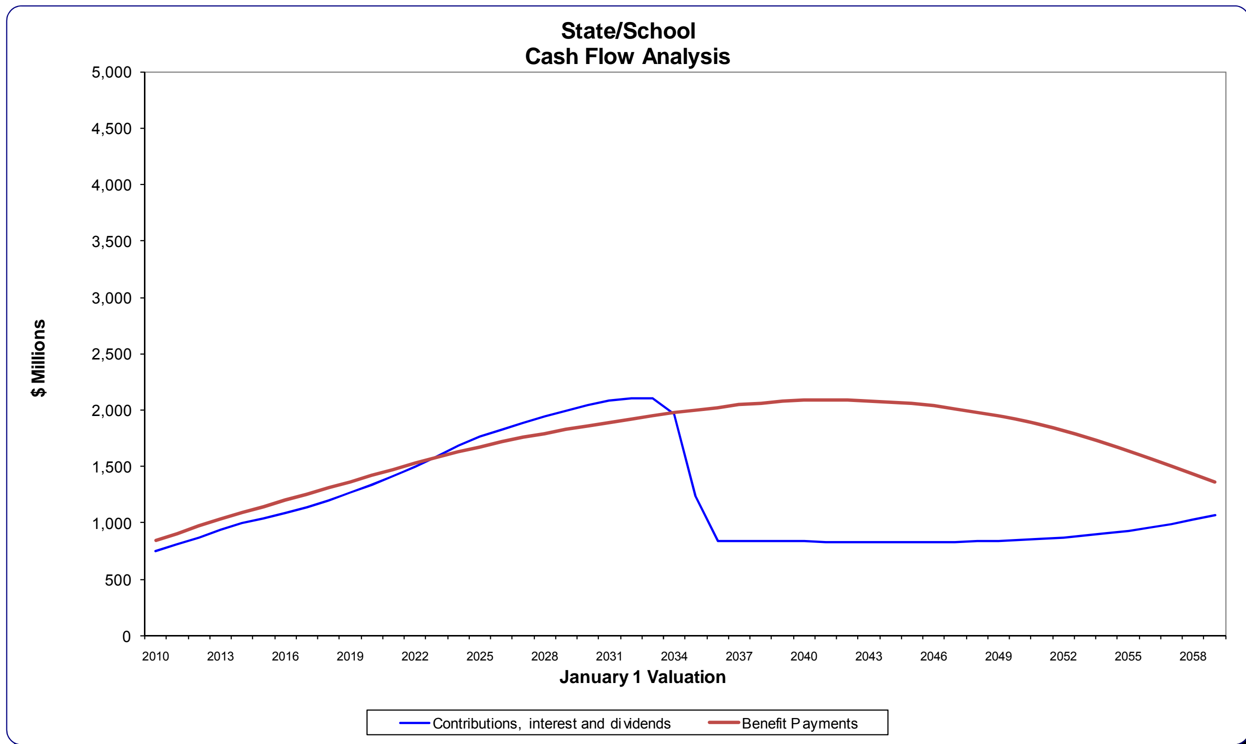
What is the Impact of Closing the Plan on Cash Flow

When a DB plan is closed to new hires, the net cash flow (contributions less benefit payments) is usually projected to become progressively more negative. The effect is due to a greater reduction in contributions in future years relative to the reduction in the amount of future benefit payments. Nearly all mature, ongoing DB plans experience negative cash flow. This is to be expected and is the reason the benefits are funded in advance. However, in an open plan, the degree of negative cash flow is limited due to new hires replacing those retiring and maintaining a stable flow of incoming contributions. A concern with negative cash flow is that when the degree of negative cash flow exceeds income attributable to interest and dividends earned on the invested assets, the selling of invested assets is required to satisfy the need for cash. This, in turn, may require a change in the asset allocation of the Fund and, consequently, result in a lower rate of return on assets. A lower rate of return on plan assets means that higher contributions will be required to provide the same amount of benefits.

The following graph shows the expected contributions, interest and dividends (blue line) compared to expected benefit payments (red line), assuming the current defined benefit plan remains open and there is no change in the benefit structure. Please note that the point in time where the blue line drops below the red line does **not** indicate that benefit payments cannot be made. Instead, it indicates that assets would have to be liquidated to help make benefit payments.



The graph below illustrates the impact of closing the defined benefit plan to new members. Again, the blue line is the sum of contributions, interest and dividends and the red line is expected benefit payments. Please note that the point in time where the blue line drops below the red line does **not** indicate that benefit payments cannot be made. Instead it indicates that assets would have to be liquidated to help make benefit payments.



The System's current asset mix reflects its position as an institutional investor with a very long time horizon. In anticipation of the closed plan moving into a negative cash flow situation, the target asset mix would be rebalanced to produce a greater degree of liquidity, reflect a shorter time horizon for investment, and the resulting lower risk tolerance level. The System's ability to invest in illiquid asset classes, such as private equity and real estate, would be reduced. The System's shorter time horizon for investment would dictate a reduction in the higher return producing asset classes, which produces more volatility of returns. The System's need to hold more cash equivalents to meet outgoing cash flows would also reduce the total return of the investment portfolio.

As a result, the return on the portfolio would be expected to be lower than the investment return assumption on an ongoing basis. The lower investment return would result in higher contributions needed to provide the same benefits. Since the point in time when the asset allocation would need to be changed is far in the future, it is impossible to predict the many variables that would impact the decision, making it difficult to reasonably quantify the potential cost impact.

Detail of Amortization Methodology

UAL Balance

	UAL Balance		
Year	Level Percent of Pay (Increasing Payroll)	Level Dollar	Level Percent of Pay (Decreasing Payroll)
2010	$5,805	$5,805	$5,805
2011	5,844	5,685	5,650
2012	5,897	5,582	5,465
2013	5,938	5,472	5,249
2014	5,965	5,352	4,998
2015	5,976	5,223	4,733
2016	5,969	5,084	4,474
2017	5,942	4,933	4,219
2018	5,893	4,770	3,968
2019	5,819	4,595	3,717
2020	5,718	4,405	3,467
2021	5,585	4,200	3,217
2022	5,419	3,979	2,966
2023	5,214	3,740	2,714
2024	4,968	3,481	2,460
2025	4,675	3,203	2,204
2026	4,332	2,902	1,945
2027	3,932	2,577	1,683
2028	3,470	2,225	1,416
2029	2,941	1,846	1,145
2030	2,337	1,436	868
2031	1,650	994	585
2032	874	516	296
2033	0	0	0

Detail of Amortization Methodology

UAL Payment Schedule

	UAL Payments		
Year	Level Percent of Pay (Increasing Payroll)	Level Dollar	Level Percent of Pay (Decreasing Payroll)
2010	$383	$536	$596
2011	399	536	613
2012	415	536	628
2013	431	536	645
2014	449	536	640
2015	466	536	613
2016	485	536	589
2017	505	536	567
2018	525	536	547
2019	546	536	527
2020	568	536	507
2021	590	536	489
2022	614	536	471
2023	638	536	453
2024	664	536	436
2025	691	536	419
2026	718	536	402
2027	747	536	386
2028	777	536	370
2029	808	536	355
2030	840	536	339
2031	874	536	323
2032	909	536	308
2033	0	0	0

April 14, 2011

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Via E-mail and U.S. Mail

Mr. Glenn Deck
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Re: Funding Requirements for Frozen Plans

Dear Glenn:

We have been asked by the Kansas Public Employees Retirement System ("KPERS") to reply to a legislative question as to the funding requirements that would apply if Kansas law were amended to close the KPERS defined benefit ("DB") plan so that no new employees became members of the DB plan as of a particular date. The specific question is whether there is a requirement under federal law that any unfunded accrued liability of the closed DB plan must be funded within 10 years after the plan is closed. It is our understanding that participants in the closed DB plan would continue to accrue service.

The KPERS DB plan is a qualified governmental defined benefit plan under Internal Revenue Code ("Code") Sections 401(a) and 414(d). KPERS has three component plans – Judges, which is a single employer component; KPERS, which is a multiple employer, cost-sharing component; and KP&F, which is a multiple employer, cost-sharing component.

FEDERAL LAW

The KPERS DB plan is not subject to the minimum funding standards that apply to private sector plans because it is a governmental defined benefit plan. See Code Section 412(e)(2)(C). Instead, the KPERS DB plan is subject to the pre-ERISA standards which dealt with vesting, but did not deal with funding. See Code Sections 411(e)(1)(A) and 411(e)(2). Under the pre-ERISA standards, so long as full vesting is provided upon termination or discontinuance of contributions, the plan need only be funded to meet current or near future benefit commitments, provided that funds are actually set aside to meet those commitments. Rev. Rul. 71-91 (plan that contained no funding arrangement but provided that employer would pay monthly pension benefit to employee directly did not qualify under Code Section 401(a)). This standard has been met by KPERS. There is no federal law requirement that would specify a

particular period during which the unfunded accrued liability must be funded for a governmental defined benefit plan.

ACCOUNTING STANDARDS

We want to make you aware of financial reporting standards that have been adopted by the Government Accounting Standards Board ("GASB"). It is important to realize that the GASB statements do not impose actual funding requirements; instead they impose standards for financial reporting on funding status and progress. However, we thought you might wish to be aware of the developments in reporting as well. Under GASB Statements 25 and 27, governmental pension plans and governmental employers report the amortization of their unfunded accrued liability for a period not to exceed 30 years. GASB is in the process of revising these statements and has set forth GASB "Preliminary Views" on Statements 25 and 27. Those Preliminary Views will eventually result in new statements on or about June 2012. Under the Preliminary Views, there will be changes in the financial reporting of governmental pension liabilities for both plans and employers. If the Preliminary Views are adopted as GASB's final position on governmental pension liability reporting, it is anticipated that governmental employers and pension plans will report changes in accrued liability over the working lifetime of current employees. Commentators have estimated that this will be a period of 10-15 years, although the actual period would have to be determined on a case-by-case basis. At this time it is not clear how that GASB position would translate to unfunded liabilities that exist at the time of the adoption of the new statements. In prior analogous situations, there has been a transition period for the recalculation and restatement of pension liabilities. The application of the statements will vary depending on whether a governmental pension plan is a single employer or a cost-sharing, multiple employer plan. Therefore, the impact of the GASB statements could vary with each component of KPERS. Ultimately, the revised GASB statements would apply whether the KPERS DB plan is closed to new participants or continues in its current manner.

SUMMARY

There is no federal law that requires the unfunded accrued liability of the KPERS DB plan to be amortized over a 10-year period, if the DB plan were closed to new participants or otherwise.

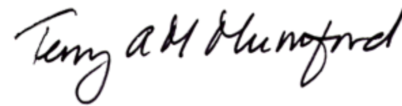
There are financial reporting standards (GASB Statements 25 and 27) which apply to the financial statements issued by KPERS and its participating employers. These statements are undergoing review, which may result in a change in how unfunded accrued liability is reported by KPERS and its participating employers. These statements would apply whether or not the DB plan is closed to new participants.

Please let us know if this letter responds to your questions.

Very truly yours,

ICE MILLER LLP

Mary Beth Braitman



Terry A.M. Mumford

/jls

CIRCULAR 230 DISCLOSURE

Except to the extent that this advice concerns the qualification of any qualified plan, to ensure compliance with recently-enacted U.S. Treasury Department Regulations, we are now required to advise you that, unless otherwise expressly indicated, any federal tax advice contained in this communication, including any attachments, is not intended or written by us to be used, and cannot be used, by anyone for the purpose of avoiding federal tax penalties that may be imposed by the federal government or for promoting, marketing, or recommending to another party any tax-related matters addressed herein.