

Summary of Proposed KPERS Plan Design Legislation

The following summary represents KPERS' understanding of proposed KPERS plan design legislation currently under consideration by the Senate Select Committee on KPERS. The legislation, as proposed by Senator Steve Morris and Senator Laura Kelly, includes a new cash balance plan for future members of KPERS and key provisions from 2011 Senate Substitute for HB 2194.

Cash Balance Plan Overview

A "cash balance" plan is a type of *defined benefit* plan that includes elements of a *defined contribution* plan. Cash balance plans tend to share risks between employers and employees to a greater degree than either traditional defined benefit plans or defined contribution plans. Employer contributions are established based on an actuarial valuation. Contributions vary, depending on the plan's actual experience compared to actuarial assumptions. Conservative features and assumptions can be built into the plan.

Each participant has a hypothetical account.

- Each account receives credits – employee contributions and employer pay credits.
- Each account receives a guaranteed interest crediting rate on a periodic basis and may include additional discretionary dividends.
- During the employee's working years, the value of the benefit is expressed as an account value – the total accumulated employee contributions and employer pay credits, plus interest credits.

At retirement, the ending account balance is annuitized to create a guaranteed monthly income. This requires an investment return assumption and a mortality assumption.

Relationship to Existing Defined Benefit Plan

- The new cash balance plan is established as a new tier (Tier 3) within the existing defined benefit plan, based on Internal Revenue Code §§401(a) and 414(d).
- The plan is part of the existing KPERS trust, and the existing defined benefit plan remains open.
- Assets are comingled and can be used to pay the benefits of any tier.
- All funding is determined on an aggregate basis.
 - A single actuarial employer contribution rate for each KPERS group (State, School, State/School, and Local) is calculated and applied to the payroll for all three Tiers.
 - For both the existing defined benefit plan and for the cash balance contribution rate, there is not a separate employer contribution specifically calculated and attributed to each Tier 3 member. However, "employer pay credits" are recorded in each member's hypothetical account for the cash balance plan.

Cash Balance Plan Effective Date and Eligibility

- The new cash balance plan is effective on and after July 1, 2014.
- It applies only to new hires on and after the effective date and to nonvested members who are inactive on the effective date and subsequently return to service.

"Retirement Annuity Account" and "Annuity Savings Account"

- A hypothetical account is established for each member, consisting of two elements – a "retirement annuity account" and an "annuity savings account."



- An “employer credit” equal to 4.0% of member compensation is recorded on a quarterly basis in the retirement annuity account.
- Each member contributes 6% of compensation into the member’s annuity savings account.

Interest Credits

- A fixed interest credit is applied quarterly to both the retirement annuity account and the annuity savings account.
- The interest credit is based on years of service as follows:
 - Years 1-19 6.0%
 - Years 20 through 29 6.25%
 - Years 30 plus 6.50%
- The Legislature reserves the right to adjust the interest crediting rate prospectively.
- The KPERS Board has the authority to grant discretionary dividends after taking the KPERS’ funding, market conditions, actual investment returns, and other relevant factors into account.
 - The discretionary dividends are credited only to the account balances of members with at least 10 years of service.
 - The maximum dividend is 4%.
 - The member must have an account balance at the time discretionary dividends are issued.

Vesting and Retirement Eligibility

- Members vest after five years of service.
- Members are eligible for retirement at age 65 with five years of service or at 60 with 30 years of service.
- There are no early retirement provisions.
- Members of Corrections Group A (primarily correction officers and supervisors) are eligible for retirement at age 55 with 10 years of service. Members of Corrections Group B (other correction institution employees who generally have regular contact with inmates) are eligible at age 60 with 10 years of service.

Retirement Benefits

- At retirement, the member’s retirement annuity account and annuity savings account are converted to a guaranteed monthly benefit using a 6.0% interest rate and mortality rates adopted by the Board.
- The Legislature reserves the right to adjust the 6.0% interest crediting rate prospectively, and the Board may prospectively change the mortality rate tables.
- The default form of distribution is an annuity with five years life certain (i.e., if the member dies within five years of retirement, the member’s benefit is paid to the beneficiary for the remainder of that period).
- Optional forms of payment are those available under Tier 2.
 - 50%, 75% or 100% joint and survivor options.
 - 5-, 10- or 15-year life certain options.
 - Partial lump sum payment in increments of 10%, up to a maximum of 30%.
 - Self-funded “cost of living adjustment” (COLA) feature, in which the account value is converted to a benefit amount that increases by a fixed percent each year over time. This feature can be added to any of the other optional forms of payment.

Termination Before Retirement Eligibility

- **Nonvested** members who terminate may withdraw member contributions plus interest credits (annuity savings account balance). Membership, the retirement annuity account (employer credits), and service credits are forfeited.
- **Vested** members who terminate prior to retirement eligibility may either –

- Withdraw their annuity savings account balance (member contributions and interest credits), but then forfeit membership, all employer credits, and service.
- Leave the annuity savings account balance until eligible to draw a benefit on or after reaching retirement age. Interest credits continue to be applied to the member's retirement annuity account and annuity savings account.

Death and Disability

- Disabled members receive service credit for the entire period of disability, as well as the total pay credit (employer credit and an amount equal to the employee contribution).
- The salary on which the credits are based is the member's pay at the beginning of the disability, adjusted after five years for the lesser of the increase in the Consumer Price Index for Urban Consumers, minus 1%, or 4% per annum.
- A retiree death benefit of \$4,000 would be provided to the beneficiary.

Provisions of HB 2194

- Raises the cap on employer contribution rate increases from the current 0.6 percent to –
 - FY 2014: 0.9%
 - FY 2015: 1.0%
 - FY 2016: 1.1%
 - FY 2017+: 1.2%
- For both Tiers, there is a 90-day election starting July 2013 to choose between the options shown below:
 - **Tier 1 Members: Contribution Increase or Benefit Decrease** (future service only) –

5% contribution in 2014 and 6% contribution in 2015+	1.85% multiplier	default option
– or –		
4% contribution	1.4% multiplier	

- **Tier 2 Members: Benefit Decrease or Lose COLA** (future service only, except COLA) –

6% contribution	1.75% multiplier Lose COLA (for all service, not just future)	default option
– or –		
6% contribution	1.4% multiplier Keep COLA	

- The election of the benefit or contribution change is pending IRS approval.
- The multiplier change does not affect service already earned.
- The changes are effective January 2014.

X



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March 23, 2012

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

Re: Cost Projections under HB 2194, HB 2545, and Senate Cash Balance Plan Design (Prepared at request of President Morris/Senator Kelly)

Dear Alan:

As you requested, we have performed a cost study to compare the estimated employer costs under HB 2194, HB 2545, and the Cash Balance Plan prepared at the request of President Morris and Senator Kelly (referred to in this letter as "Senate Cash Balance Plan (Morris/Kelly)"). The cost estimates for HB 2194 and HB 2545 shown in the attached exhibits are the same as those provided in our cost study letter for the Study Commission Plan, dated January 23, 2012. The basic plan provisions of the Senate Cash Balance Plan (Morris/Kelly), on which our cost projections are based, are set out below. For purposes of the cost projections for the proposed cash balance plan, the effective date of the new plan design is January 1, 2014. All employees hired on or after that date become members of KPERS Tier 3. Current members of KPERS on January 1, 2014 remain members of Tier 1 or 2.

Cash Balance Plan Design

A summary of basic plan provisions upon which our cost projections are based include:

- The employer credit to the cash balance account is 4% per year.
- The guaranteed interest credit is 6% per year with interest credited quarterly. Discretionary dividends may be granted by the KPERS Board of Directors after taking the funding, market conditions, actual investment returns, and other relevant factors into account. The discretionary dividends will only be credited to the account balances of members with at least 10 years of service. The maximum dividend is 4%.
- Employee contribution rate is 6% of pay.
- 100% vesting after five (5) years of service.
- Normal retirement date is earlier of age 60 with 30 years of service or age 65 with 5 years of service
- No early retirement provision.

3906 Raynor Pkwy, Suite 106, Bellevue, NE 68123

Phone (402) 905-4461 • Fax (402) 905-4464

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- Upon termination of employment, a vested member may elect to withdraw their employee account balance, but will forfeit the benefit payable from the employer account value. If the member leaves their employee contributions in the System, they may retire upon reaching normal retirement age with benefits based on the total account value (employer plus employee).
- When the member retires at normal retirement age, the member can elect to receive 10%, 20% or 30% of the total account balance (employee and employer) as a lump sum. The remaining balance must be converted to a monthly benefit, based on the form of payment selected by the member. The annuity amount is determined by the annuity conversion factors which are based on a 6% interest rate and a mortality table selected by the Board.
- Normal form of payment is a five year certain and life annuity.
- If a member dies prior to reaching the normal retirement age of 65, no benefit is payable and the account balance is forfeited unless (i) the member is vested; (ii) the member has at least five (5) years of service at death; and (iii) the member's spouse at the time of death is designated as the sole primary beneficiary. In that case, the spouse shall receive a benefit when the member would have reached his normal retirement age.
- If a member becomes disabled while actively working, such member shall be given participating service credit for the entire period of his disability. Such member's account shall be credited with both the employee contribution and the employer credit until the earliest of (i) death; (ii) attainment of normal retirement age; or (iii) the date the member is no longer entitled to receive disability benefits.
- A benefit of \$4,000 is payable upon a retired member's death.

Statutory Contribution Cap

In KPERS, the employers do not necessarily contribute the full actuarial contribution rate. Based on legislation passed in 1993, the employer contribution rates certified by the Board may not increase by more than the statutory cap. The current statutory cap, which has been changed periodically, is 0.60% for the State, School and Local groups. Senate Substitute for HB 2194 increased the statutory cap over a four year period beginning with 0.9% in FY 2014 to an ultimate cap of 1.2% in FY 2017.

HB 2545 eliminates the statutory cap on employer contributions, effective July 1, 2013. Therefore, this provision is reflected in the cost projections for HB 2545.

The increases in the statutory cap on the employer contribution rate contained in Senate Substitute for HB 2194 are maintained in the cost projections of the proposed Senate Cash Balance Plan (Morris/Kelly).

Senate Substitute for HB 2194

The cost projections for HB 2194 shown in this study are based on the default elections provided under Senate Substitute for HB 2194 as passed by the 2011 Legislature. In addition, the projections for HB 2545 and the Senate Cash Balance Plan (Morris/Kelly) also reflect the default benefit provision changes for KPERS Tier 1 and 2 members included in Senate Substitute for HB 2194.



Actuarial Assumptions and Methods

In general, the same actuarial methods and assumptions that were used in the December 31, 2010 actuarial valuation were used in these cost projections unless otherwise noted. In addition, the actuarial assumptions used to generate the cost projections for HB 2545 are the same as those outlined in our letter dated January 23, 2012. They include an 8% assumption for the interest crediting rate and annuity conversion factors based on a 6.5% postretirement interest rate and the RP 2000 Mortality Table projected to 2035. Because retirement eligibility requirements are different under both HB 2545 and the Senate Cash Balance Plan (Morris/Kelly) than those in the current plan and the benefits provided are also different, the retirement patterns are expected to change. Cavanaugh Macdonald selected retirement rates under HB 2545 and the Senate Cash Balance Plan (Morris/Kelly) that we believe are reasonable given the limited knowledge we have at this time about behaviors that will occur many years in the future. However, actual experience may vary, at times significantly, from the assumptions used in these projections. If it does, the cost projections will also be impacted.

The Senate Cash Balance Plan (Morris/Kelly) provides for a guaranteed interest credit of 6%, but also provides that a dividend may be granted at the discretion of the KPERS Board of Directors subject to certain conditions. Discretionary dividends may be granted by the KPERS Board of Directors after taking the funding, market conditions, actual investment returns, and other relevant factors into account. The discretionary dividends will only be credited to the account balances of members with at least 10 years of service. The maximum dividend in any given year is 4%. Therefore, an assumption is needed to anticipate the long term effective interest crediting rate, reflecting both the guaranteed rate and the dividends. Due to time constraints related to the modeling of costs, there was insufficient time to perform a comprehensive analysis to determine the expected total interest crediting rate, including the additional dividends that may be granted by the Board. Based on very limited analysis, an assumption of 6.0% for the first 10 years of employment and 8% thereafter was used for purposes of this cost study. If this Cash Balance plan design moves forward, further modeling of the expected rates of return on the KPERS portfolio and the resulting dividend crediting rate should be completed so the actuarial assumption can be further refined. Any change in this assumption will impact the cost projections attached to this letter. If all other plan design parameters and actuarial assumptions are unchanged, a lower interest crediting rate will reduce the costs and a higher assumed crediting rate will increase the costs shown in the attached exhibits.

All vested members in the proposed Cash Balance Plan are assumed to leave their employee account balance in the Cash Balance Plan when they terminate employment and receive benefits based upon the total account value at normal retirement age. Any modification of this provision, such as giving vested terminated members part or all of the account value due to employer credits at termination, would impact the cost projections. In addition, the assumption for the portion of the retirement benefit paid as a lump sum at normal retirement was set to 30% of the account balance.

HB 2545 and the proposed Cash Balance Plan are both defined benefit plans so our modeling assumes that the new tier will be combined with the existing KPERS Tiers 1 and 2 in one system with one trust. However, separate employer contribution rates will continue to be determined for the State/School group and the Local group. The actuarial valuation will reflect the future benefit payments for Tier 3 members along with those for Tier 1 and 2 members and one overall employer contribution rate will be developed for each group, which includes the UAL payment, to be paid on all covered payroll (Tier 1, Tier 2 and Tier 3 members). From an actuarial perspective, the valuation process is unchanged other than reflecting the new benefit structure for Tier 3 members.

The amortization period used in the cost projections remained at a closed 22 year period starting on December 31, 2010. In order to mitigate the impact of the time lag between the valuation date and the



fiscal year in which the contribution rate is effective, the amortization period was set to an open ten year period in 2030 for all cost projections.

Results

The cost impact of the various proposed plan designs will unfold over time as current Tier 1 and Tier 2 members leave covered employment and are replaced by Tier 3 members. Therefore, a projection of costs over a long period of time is necessary to see the long term impact of the proposed change. The cost estimates for HB 2194, HB 2545, and the proposed Senate Cash Balance Plan (Morris/Kelly) are reflected in the attached exhibits which show the expected employer contribution rate under each plan design by year for the State/School and Local groups (Exhibits A1 and A2) and the estimated dollar amount of employer contributions in each future year (Exhibits B1 and B2). The projections assume that all actuarial assumptions, including the 8% investment return assumption, are met in the future. Please note that the dollar amounts of employer contributions shown are future dollar amounts, calculated using the estimated employer contribution rate and projected payroll in future years. Due to the length of the projection period, the future payroll amounts grow significantly and the resulting contributions in nominal dollars in those years can appear very large. In order to provide a method for more direct comparison of results, the present value of the difference in the employer contributions has been included in the right hand column for each set of projected contributions on Exhibits B1 and B2 by year and in the aggregate. The employer contribution rate also provides a reliable way to compare the cost of various plan designs in the future. Exhibits C1 and C2 split the projected employer contributions into normal cost and UAL payments by year and in total for HB 2194 and the proposed Senate Cash Balance Plan (Morris/Kelly).

The cost projections attached to this letter are based on one set of actuarial assumptions, which include an 8% assumed rate of investment return. The cost projections for the various plan designs are sensitive to the assumptions used, particularly the investment return assumption. However, the impact of different assumptions varies for each of the three plan designs because they are different from each other. Further analysis can be provided upon request if it is deemed to be necessary or helpful.

It should also be noted that the different plan designs reflected in HB 2194, HB 2545, and the proposed Senate Cash Balance Plan (Morris/Kelly) do not provide the same amount of retirement benefits. This, in turn, has an impact on the cost of the plan designs. Therefore, the cost projections should not be evaluated in isolation from the benefit amounts provided by each plan design.

Disclaimers, Caveats, and Limitations

The numerical charts that comprise this study are based primarily upon the December 31, 2010 valuation results, the actuarial assumptions used in the valuation (other than as noted in this letter), and the projection model prepared by the System's actuary, Cavanaugh Macdonald Consulting, LLC. Significant items are noted below:

- Investment return in all future years is assumed to be 8% on a market value basis, unless otherwise indicated.
- All demographic assumptions regarding mortality, disability, retirement, salary increases, and termination of employment are assumed to hold true in the future. Please note that the actuarial assumption assumes that mortality will improve in the future (i.e. people will live longer).
- Changes in the retirement plan eligibility and benefit amounts may have an effect on future termination and retirement patterns. While we have attempted to reflect the change in retirement eligibility under HB 2545 and the Senate Cash Balance Plan (Morris/Kelly), how changes in the benefit structure may ultimately impact termination of employment patterns cannot be known at this time. Therefore, no changes have been modeled.





- 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 for Tiers 1 and 2 are modified in accordance with Senate Substitute for HB 2194, for all three projections. Tier 3 benefits are provided under either HB 2545 or the proposed Senate Cash Balance Plan (Morris/Kelly) as described earlier in this letter. There are no other benefit changes reflected in future years.
- The projections for the proposed Senate Cash Balance Plan (Morris/Kelly) reflect the assumed total interest credits (guaranteed plus discretionary) of 6.0% for the first ten years of employment and 8.0% thereafter. If the actual interest credits and dividends granted are more than assumed, it will generally increase the cost of the plan. If actual interest credits granted are less than assumed each year, the cost of the plan will be lower, all other factors being equal.
- The funding methods including the entry age normal cost method, the asset smoothing method, and the amortization method and period remain unchanged other than as noted elsewhere in this letter.
- The state and local employers will contribute as scheduled under HB 2194 (with consideration to changes in the statutory caps in that legislation) and with no statutory cap under HB 2545. The projections for the Senate Cash Balance Plan (Morris/Kelly) reflect the same statutory cap as HB 2194.
- We relied upon the membership data provided by KPERS for the actuarial valuation. The numerical results depend on the integrity of this information. If there are material inaccuracies in 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, 2010, and project future events using one set of assumptions out of a range of many possibilities. A different set of assumptions would lead to different results. The projections do not predict the System's financial condition or its ability to pay benefits in the future and do not provide any guarantee of future financial soundness of the System. Over time, a defined benefit plan's total cost will depend on a number of factors, including the amount of benefits paid, the number of people paid benefits, the duration of the benefit payments, plan expenses, and the amount of earnings on assets invested to pay benefits. These amounts and other variables are uncertain and unknowable at the time the projections were 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 study.

We, Patrice A. Beckham, FSA and Brent A. Banister, FSA, are consulting actuaries with Cavanaugh Macdonald Consulting, LLC. We are members of the American Academy of Actuaries, Fellows of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

If you have any questions or additional information is needed, please let us know. We are available to provide additional analysis or explanation.

Sincerely,

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

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



Exhibit A1
 KPERs Contribution Rate Projections under HB 2194, HB 2545, and Senate Cash Balance Plan (Morris/Kelly)
 State/School Group

Fiscal Year	Total Payroll (\$M)	Employer Contribution Rate		Senate		Employer Contribution Rate	
		HB 2194	HB 2545	HB 2194	Cash Balance	HB 2545	Cash Balance
2012	\$ 4,465.19	8.77%	8.77%	8.77%	9.37%	8.77%	9.37%
2013	4,609.30	9.37%	9.37%	9.37%	9.37%	9.37%	9.37%
2014	4,742.86	10.27%	13.44%	10.27%	10.27%	13.44%	10.27%
2015	4,889.77	11.27%	13.61%	11.27%	11.27%	13.61%	11.27%
2016	5,048.36	12.37%	14.83%	12.37%	12.37%	14.83%	12.37%
2017	5,217.25	13.57%	14.79%	13.57%	13.57%	14.79%	13.57%
2018	5,396.09	14.46%	14.65%	14.46%	14.65%	14.65%	14.65%
2019	5,583.80	14.67%	14.74%	14.67%	14.94%	14.74%	14.94%
2020	5,786.83	14.80%	14.79%	14.80%	15.13%	14.79%	15.13%
2021	5,999.32	14.83%	14.84%	14.83%	15.28%	14.84%	15.28%
2022	6,223.41	14.84%	14.89%	14.84%	15.35%	14.89%	15.35%
2023	6,455.61	14.81%	14.92%	14.81%	15.40%	14.92%	15.40%
2024	6,704.71	14.76%	14.93%	14.76%	15.42%	14.93%	15.42%
2025	6,962.16	14.70%	14.93%	14.70%	15.42%	14.93%	15.42%
2026	7,231.45	14.62%	14.93%	14.62%	15.41%	14.93%	15.41%
2027	7,512.93	14.54%	14.91%	14.54%	15.41%	14.91%	15.41%
2028	7,806.93	14.45%	14.88%	14.45%	15.40%	14.88%	15.40%
2029	8,113.92	14.34%	14.83%	14.34%	15.39%	14.83%	15.39%
2030	8,433.95	14.21%	14.77%	14.21%	15.36%	14.77%	15.36%
2031	8,767.29	14.08%	14.67%	14.08%	15.33%	14.67%	15.33%
2032	9,114.66	13.90%	14.53%	13.90%	15.30%	14.53%	15.30%
2033	9,476.23	5.45%	6.70%	5.43%	6.56%	6.70%	6.56%
2034	9,852.28	3.93%	5.35%	3.93%	5.11%	5.35%	5.11%
2035	10,243.64	2.42%	4.00%	2.42%	4.00%	4.00%	4.00%
2036	10,650.79	1.38%	3.07%	1.38%	2.59%	3.07%	2.59%
2037	11,073.56	0.90%	2.68%	0.90%	2.15%	2.68%	2.15%
2038	11,513.15	0.58%	2.43%	0.58%	1.89%	2.43%	1.89%
2039	11,970.93	0.41%	2.32%	0.41%	1.76%	2.32%	1.76%
2040	12,448.09	0.33%	2.28%	0.33%	1.73%	2.28%	1.73%
2041	12,947.04	0.29%	2.30%	0.29%	1.74%	2.30%	1.74%
2042	13,469.39	0.26%	2.33%	0.26%	1.78%	2.33%	1.78%
2043	14,014.53	0.25%	2.38%	0.25%	1.82%	2.38%	1.82%
2044	14,581.39	0.31%	2.43%	0.31%	1.87%	2.43%	1.87%
2045	15,170.09	0.34%	2.48%	0.34%	1.92%	2.48%	1.92%
2046	15,786.74	0.37%	2.54%	0.37%	1.98%	2.54%	1.98%
2047	16,410.26	0.40%	2.58%	0.40%	2.03%	2.58%	2.03%
2048	17,057.88	0.42%	2.64%	0.42%	2.07%	2.64%	2.07%
2049	17,727.69	0.46%	2.67%	0.46%	2.11%	2.67%	2.11%
2050	18,423.67	0.48%	2.73%	0.48%	2.15%	2.73%	2.15%
2051	19,147.45	0.52%	2.76%	0.52%	2.17%	2.76%	2.17%
2052	19,899.69	0.54%	2.81%	0.54%	2.18%	2.81%	2.18%
2053	20,682.16	0.56%	2.85%	0.56%	2.20%	2.85%	2.20%
2054	21,496.61	0.59%	2.89%	0.59%	2.20%	2.89%	2.20%
2055	22,344.49	0.61%	2.92%	0.61%	2.21%	2.92%	2.21%
2056	23,227.14	0.63%	2.95%	0.63%	2.21%	2.95%	2.21%
2057	24,145.92	0.65%	2.97%	0.65%	2.20%	2.97%	2.20%
2058	25,102.38	0.68%	2.99%	0.68%	2.18%	2.99%	2.18%
2059	26,098.07	0.69%	3.02%	0.69%	2.17%	3.02%	2.17%
2060	27,134.62	0.71%	3.04%	0.71%	2.15%	3.04%	2.15%

This exhibit is an attachment to a letter that contains important information and explanations regarding the numbers shown. Therefore, the exhibit should only be considered with the accompanying letter from Caymanagh Macdonald dated March 23, 2012.
 All assumptions, including the 8% investment return, are assumed to be met each year in the future.

Exhibit A2
 KPERs Contribution Rate Projections under HB 2194, HB 2545, and Senate Cash Balance Plan (Morris/Kelly)
 Local Group

Fiscal Year	Total Payroll (\$M)	Employer Contribution Rate		Employer Contribution Rate		Employer Contribution Rate	
		HB 2194	HB 2545	HB 2194	Cash Balance	HB 2545	Cash Balance
2012	5	7.34%	7.34%	7.34%	7.34%	7.34%	7.34%
2013	1,726.92	7.94%	7.94%	7.94%	7.94%	7.94%	7.94%
2014	1,777.74	8.63%	8.63%	8.63%	8.64%	8.91%	8.64%
2015	1,834.05	9.12%	9.47%	9.12%	9.16%	9.43%	9.16%
2016	1,893.42	9.00%	9.45%	9.00%	9.11%	9.45%	9.11%
2017	1,953.65	9.00%	9.53%	9.00%	9.18%	9.53%	9.18%
2018	2,020.46	9.00%	9.60%	9.00%	9.24%	9.60%	9.24%
2019	2,087.94	8.99%	9.67%	8.99%	9.31%	9.67%	9.31%
2020	2,158.09	8.98%	9.72%	8.98%	9.35%	9.72%	9.35%
2021	2,231.91	8.98%	9.80%	8.98%	9.41%	9.80%	9.41%
2022	2,309.17	8.98%	9.87%	8.98%	9.48%	9.87%	9.48%
2023	2,389.76	8.98%	9.93%	8.98%	9.54%	9.93%	9.54%
2024	2,474.65	8.97%	9.99%	8.97%	9.60%	9.99%	9.60%
2025	2,563.71	8.98%	10.04%	8.98%	9.66%	10.04%	9.66%
2026	2,656.71	8.97%	10.10%	8.97%	9.73%	10.10%	9.73%
2027	2,753.93	8.97%	10.14%	8.97%	9.79%	10.14%	9.79%
2028	2,856.33	8.96%	10.19%	8.96%	9.85%	10.16%	9.85%
2029	2,963.32	8.94%	10.19%	8.94%	9.92%	10.19%	9.92%
2030	3,075.51	8.93%	10.20%	8.93%	10.00%	10.20%	10.00%
2031	3,192.38	8.91%	10.15%	8.91%	10.09%	10.18%	10.09%
2032	3,313.68	8.89%	10.11%	8.89%	10.18%	10.18%	10.18%
2033	3,440.20	8.87%	10.07%	8.87%	10.27%	10.16%	10.27%
2034	3,571.81	8.85%	10.03%	8.85%	10.36%	10.14%	10.36%
2035	3,709.17	8.83%	10.00%	8.83%	10.44%	10.12%	10.44%
2036	3,851.93	8.81%	9.97%	8.81%	10.52%	10.10%	10.52%
2037	4,001.21	8.79%	9.94%	8.79%	10.60%	10.08%	10.60%
2038	4,157.18	8.77%	9.91%	8.77%	10.68%	10.06%	10.68%
2039	4,319.48	8.75%	9.88%	8.75%	10.76%	10.04%	10.76%
2040	4,488.52	8.73%	9.85%	8.73%	10.84%	10.02%	10.84%
2041	4,663.81	8.71%	9.82%	8.71%	10.92%	10.00%	10.92%
2042	4,846.82	8.69%	9.79%	8.69%	11.00%	9.98%	11.00%
2043	5,037.31	8.67%	9.76%	8.67%	11.08%	9.96%	11.08%
2044	5,233.49	8.65%	9.73%	8.65%	11.16%	9.94%	11.16%
2045	5,442.03	8.63%	9.70%	8.63%	11.24%	9.92%	11.24%
2046	5,656.91	8.61%	9.67%	8.61%	11.32%	9.90%	11.32%
2047	5,879.63	8.59%	9.64%	8.59%	11.40%	9.88%	11.40%
2048	6,110.89	8.57%	9.61%	8.57%	11.48%	9.86%	11.48%
2049	6,351.53	8.55%	9.58%	8.55%	11.56%	9.84%	11.56%
2050	6,602.17	8.53%	9.55%	8.53%	11.64%	9.82%	11.64%
2051	6,862.33	8.51%	9.52%	8.51%	11.72%	9.80%	11.72%
2052	7,131.79	8.49%	9.49%	8.49%	11.80%	9.78%	11.80%
2053	7,414.16	8.47%	9.46%	8.47%	11.88%	9.76%	11.88%
2054	7,707.23	8.45%	9.43%	8.45%	11.96%	9.74%	11.96%
2055	8,012.19	8.43%	9.40%	8.43%	12.04%	9.72%	12.04%
2056	8,329.45	8.41%	9.37%	8.41%	12.12%	9.70%	12.12%
2057	8,659.60	8.39%	9.34%	8.39%	12.20%	9.68%	12.20%
2058	9,003.17	8.37%	9.31%	8.37%	12.28%	9.66%	12.28%
2059	9,360.70	8.35%	9.28%	8.35%	12.36%	9.64%	12.36%
2060	9,732.77	8.33%	9.25%	8.33%	12.44%	9.62%	12.44%

This exhibit is an attachment to a letter that contains important information and explanations regarding the numbers shown. Therefore, the exhibit should only be considered with the accompanying letter from Cavanaugh Macdonald dated March 23, 2012.
 All assumptions, including the 9% investment return, are assumed to be met each year in the future.

Exhibit B1
KPERS Cost Projections under HB 2194, HB 2545, and Senate Cash Balance Plan (Morris/Kelly)
State/School Group

Fiscal Year	Total Payroll (\$M)	HB 2194 vs HB 2545			HB 2194 vs Senate Cash Balance			HB 2545 vs Senate Cash Balance				
		Employer Contribution Amount (\$M)	Present Value	% of Difference	Employer Contribution Amount (\$M)	Present Value	% of Difference	Employer Contribution Amount (\$M)	Present Value	% of Difference		
2012	4,463.19	391.60	391.60	-	391.60	391.60	-	391.60	391.60	-		
2013	4,609.30	431.89	431.89	-	431.89	431.89	-	431.89	431.89	-		
2014	4,742.86	487.09	487.09	-	487.09	487.09	-	487.09	487.09	-		
2015	4,889.77	531.08	531.08	-	531.08	531.08	-	531.08	531.08	-		
2016	5,048.36	624.48	624.48	-	624.48	624.48	-	624.48	624.48	-		
2017	5,217.35	707.98	707.98	-	707.98	707.98	-	707.98	707.98	-		
2018	5,396.09	780.44	780.44	-	780.44	780.44	-	780.44	780.44	-		
2019	5,583.80	819.50	819.50	-	819.50	819.50	-	819.50	819.50	-		
2020	5,786.83	856.63	856.63	-	856.63	856.63	-	856.63	856.63	-		
2021	5,999.32	890.84	890.84	-	890.84	890.84	-	890.84	890.84	-		
2022	6,223.41	923.50	923.50	-	923.50	923.50	-	923.50	923.50	-		
2023	6,458.61	956.42	956.42	-	956.42	956.42	-	956.42	956.42	-		
2024	6,704.71	989.41	989.41	-	989.41	989.41	-	989.41	989.41	-		
2025	6,962.16	1,023.12	1,023.12	-	1,023.12	1,023.12	-	1,023.12	1,023.12	-		
2026	7,231.45	1,057.31	1,057.31	-	1,057.31	1,057.31	-	1,057.31	1,057.31	-		
2027	7,512.93	1,092.05	1,092.05	-	1,092.05	1,092.05	-	1,092.05	1,092.05	-		
2028	7,806.93	1,127.87	1,127.87	-	1,127.87	1,127.87	-	1,127.87	1,127.87	-		
2029	8,113.92	1,163.67	1,163.67	-	1,163.67	1,163.67	-	1,163.67	1,163.67	-		
2030	8,433.95	1,198.79	1,198.79	-	1,198.79	1,198.79	-	1,198.79	1,198.79	-		
2031	8,767.29	1,234.26	1,234.26	-	1,234.26	1,234.26	-	1,234.26	1,234.26	-		
2032	9,114.66	1,269.68	1,269.68	-	1,269.68	1,269.68	-	1,269.68	1,269.68	-		
2033	9,476.23	1,305.32	1,305.32	-	1,305.32	1,305.32	-	1,305.32	1,305.32	-		
2034	9,852.28	1,341.15	1,341.15	-	1,341.15	1,341.15	-	1,341.15	1,341.15	-		
2035	10,243.64	1,377.17	1,377.17	-	1,377.17	1,377.17	-	1,377.17	1,377.17	-		
2036	10,650.79	1,413.46	1,413.46	-	1,413.46	1,413.46	-	1,413.46	1,413.46	-		
2037	11,073.56	1,450.02	1,450.02	-	1,450.02	1,450.02	-	1,450.02	1,450.02	-		
2038	11,513.15	1,486.85	1,486.85	-	1,486.85	1,486.85	-	1,486.85	1,486.85	-		
2039	11,970.93	1,523.96	1,523.96	-	1,523.96	1,523.96	-	1,523.96	1,523.96	-		
2040	12,448.09	1,561.34	1,561.34	-	1,561.34	1,561.34	-	1,561.34	1,561.34	-		
2041	12,947.04	1,600.00	1,600.00	-	1,600.00	1,600.00	-	1,600.00	1,600.00	-		
2042	13,469.39	1,639.05	1,639.05	-	1,639.05	1,639.05	-	1,639.05	1,639.05	-		
2043	14,014.53	1,678.50	1,678.50	-	1,678.50	1,678.50	-	1,678.50	1,678.50	-		
2044	14,581.39	1,718.35	1,718.35	-	1,718.35	1,718.35	-	1,718.35	1,718.35	-		
2045	15,170.09	1,758.60	1,758.60	-	1,758.60	1,758.60	-	1,758.60	1,758.60	-		
2046	15,780.74	1,800.00	1,800.00	-	1,800.00	1,800.00	-	1,800.00	1,800.00	-		
2047	16,410.26	1,842.35	1,842.35	-	1,842.35	1,842.35	-	1,842.35	1,842.35	-		
2048	17,069.88	1,885.65	1,885.65	-	1,885.65	1,885.65	-	1,885.65	1,885.65	-		
2049	17,757.69	1,929.90	1,929.90	-	1,929.90	1,929.90	-	1,929.90	1,929.90	-		
2050	18,473.67	1,975.10	1,975.10	-	1,975.10	1,975.10	-	1,975.10	1,975.10	-		
2051	19,217.43	2,021.25	2,021.25	-	2,021.25	2,021.25	-	2,021.25	2,021.25	-		
2052	19,989.69	2,068.35	2,068.35	-	2,068.35	2,068.35	-	2,068.35	2,068.35	-		
2053	20,782.16	2,116.40	2,116.40	-	2,116.40	2,116.40	-	2,116.40	2,116.40	-		
2054	21,496.61	2,165.40	2,165.40	-	2,165.40	2,165.40	-	2,165.40	2,165.40	-		
2055	22,344.49	2,215.35	2,215.35	-	2,215.35	2,215.35	-	2,215.35	2,215.35	-		
2056	23,227.14	2,266.25	2,266.25	-	2,266.25	2,266.25	-	2,266.25	2,266.25	-		
2057	24,145.92	2,318.10	2,318.10	-	2,318.10	2,318.10	-	2,318.10	2,318.10	-		
2058	25,102.38	2,370.90	2,370.90	-	2,370.90	2,370.90	-	2,370.90	2,370.90	-		
2059	26,098.07	2,424.65	2,424.65	-	2,424.65	2,424.65	-	2,424.65	2,424.65	-		
2060	27,134.62	2,479.35	2,479.35	-	2,479.35	2,479.35	-	2,479.35	2,479.35	-		
Total	\$ 22,140.94	\$ 33,030.06	\$ 10,898.12	\$ 1,065.89	\$ 22,140.94	\$ 30,141.29	\$ 8,000.34	\$ 717.29	\$ 33,039.06	\$ 30,141.29	\$ (2,897.77)	\$ (348.60)

This exhibit is an attachment to a letter that contains important information and explanations regarding the numbers shown. Therefore, the exhibit should only be considered with the accompanying letter from Camaragh Macdonald dated March 23, 2012. All assumptions, including the 8% investment return, are assumed to be met each year in the future.

Exhibit B2
KPERs Cost Projections under HB 2194, HB 2545, and Senate Cash Balance Plan (Morris/Kelly)
Local Group

Fiscal Year	Total General (\$MM)	Employer Contribution Amount (\$MM)			Present Value of Difference	Employer Contribution Amount (\$MM)			Present Value of Difference	Employer Contribution Amount (\$MM)			Present Value of Difference
		HB 2194	HB 2545	Difference		HB 2194	Cash Balance	Difference		HB 2545	Cash Balance	Difference	
2012	1,678.75	123.22	125.22	-	123.22	123.22	-	123.22	123.22	-	123.22	123.22	-
2013	1,726.92	137.12	137.12	-	137.12	137.12	-	137.12	137.12	-	137.12	137.12	-
2014	1,777.74	153.84	158.39	-4.55	153.84	153.64	0.20	153.84	153.64	0.20	153.84	153.64	0.20
2015	1,834.05	167.36	173.71	-6.35	167.36	167.92	-0.56	167.36	167.92	-0.56	167.36	167.92	-0.56
2016	1,893.42	178.80	178.80	-	178.80	172.43	6.37	178.80	172.43	6.37	178.80	172.43	6.37
2017	1,955.65	181.84	186.32	-4.48	176.01	179.43	-3.42	176.01	179.43	-3.42	176.01	179.43	-3.42
2018	2,020.46	187.74	193.92	-6.18	181.84	186.72	-4.88	181.84	186.72	-4.88	181.84	186.72	-4.88
2019	2,087.94	193.71	201.89	-8.18	187.74	194.28	-6.54	187.74	194.28	-6.54	187.74	194.28	-6.54
2020	2,158.09	200.84	209.84	-9.00	193.71	201.76	-8.05	193.71	201.76	-8.05	193.71	201.76	-8.05
2021	2,231.91	206.30	218.79	-12.49	200.50	210.08	-9.58	200.50	210.08	-9.58	200.50	210.08	-9.58
2022	2,309.17	207.43	227.86	-20.43	207.43	218.86	-11.43	207.43	218.86	-11.43	207.43	218.86	-11.43
2023	2,389.76	214.33	237.32	-22.99	214.53	227.91	-13.38	214.53	227.91	-13.38	214.53	227.91	-13.38
2024	2,474.65	222.08	247.11	-25.02	222.08	237.50	-15.42	222.08	237.50	-15.42	222.08	237.50	-15.42
2025	2,563.71	228.12	257.51	-29.39	228.12	247.70	-19.58	228.12	247.70	-19.58	228.12	247.70	-19.58
2026	2,656.71	235.33	268.22	-32.89	235.33	258.47	-23.14	235.33	258.47	-23.14	235.33	258.47	-23.14
2027	2,753.93	247.50	279.24	-31.74	247.50	265.02	-17.52	247.50	265.02	-17.52	247.50	265.02	-17.52
2028	2,856.33	255.91	290.34	-34.43	255.91	274.64	-18.73	255.91	274.64	-18.73	255.91	274.64	-18.73
2029	2,963.32	265.02	302.01	-36.99	265.02	284.39	-19.37	265.02	284.39	-19.37	265.02	284.39	-19.37
2030	3,075.51	274.64	313.69	-39.05	274.64	294.09	-20.45	274.64	294.09	-20.45	274.64	294.09	-20.45
2031	3,192.38	284.39	324.92	-40.52	284.39	304.46	-20.07	284.39	304.46	-20.07	284.39	304.46	-20.07
2032	3,313.68	290.34	334.92	-44.58	290.34	314.32	-24.00	290.34	314.32	-24.00	290.34	314.32	-24.00
2033	3,440.20	298.49	344.92	-46.43	298.49	324.21	-25.72	298.49	324.21	-25.72	298.49	324.21	-25.72
2034	3,571.81	307.51	354.92	-47.41	307.51	334.19	-26.68	307.51	334.19	-26.68	307.51	334.19	-26.68
2035	3,709.17	317.51	364.92	-47.41	317.51	344.17	-26.66	317.51	344.17	-26.66	317.51	344.17	-26.66
2036	3,851.93	328.43	374.92	-46.49	328.43	354.15	-25.72	328.43	354.15	-25.72	328.43	354.15	-25.72
2037	4,001.21	340.34	384.92	-44.58	340.34	364.13	-23.79	340.34	364.13	-23.79	340.34	364.13	-23.79
2038	4,157.18	353.25	394.92	-41.67	353.25	374.11	-20.86	353.25	374.11	-20.86	353.25	374.11	-20.86
2039	4,319.48	367.16	404.92	-37.76	367.16	384.09	-17.93	367.16	384.09	-17.93	367.16	384.09	-17.93
2040	4,488.52	382.08	414.92	-32.84	382.08	394.07	-11.99	382.08	394.07	-11.99	382.08	394.07	-11.99
2041	4,663.81	401.91	424.92	-22.99	401.91	404.05	-2.14	401.91	404.05	-2.14	401.91	404.05	-2.14
2042	4,846.82	421.88	434.92	-13.04	421.88	414.03	7.85	421.88	414.03	7.85	421.88	414.03	7.85
2043	5,037.51	441.88	444.92	-2.04	441.88	424.01	117.87	441.88	424.01	117.87	441.88	424.01	117.87
2044	5,235.49	461.88	454.92	7.96	461.88	434.00	127.88	461.88	434.00	127.88	461.88	434.00	127.88
2045	5,442.03	481.88	464.92	16.96	481.88	444.00	137.88	481.88	444.00	137.88	481.88	444.00	137.88
2046	5,656.91	501.88	474.92	26.96	501.88	454.00	147.88	501.88	454.00	147.88	501.88	454.00	147.88
2047	5,879.63	521.88	484.92	36.96	521.88	464.00	157.88	521.88	464.00	157.88	521.88	464.00	157.88
2048	6,110.89	541.88	494.92	46.96	541.88	474.00	167.88	541.88	474.00	167.88	541.88	474.00	167.88
2049	6,351.53	561.88	504.92	56.96	561.88	484.00	177.88	561.88	484.00	177.88	561.88	484.00	177.88
2050	6,602.17	581.88	514.92	66.96	581.88	494.00	187.88	581.88	494.00	187.88	581.88	494.00	187.88
2051	6,862.33	601.88	524.92	76.96	601.88	504.00	197.88	601.88	504.00	197.88	601.88	504.00	197.88
2052	7,132.79	621.88	534.92	86.96	621.88	514.00	207.88	621.88	514.00	207.88	621.88	514.00	207.88
2053	7,414.16	641.88	544.92	96.96	641.88	524.00	217.88	641.88	524.00	217.88	641.88	524.00	217.88
2054	7,707.23	661.88	554.92	106.96	661.88	534.00	227.88	661.88	534.00	227.88	661.88	534.00	227.88
2055	8,012.19	681.88	564.92	116.96	681.88	544.00	237.88	681.88	544.00	237.88	681.88	544.00	237.88
2056	8,328.45	701.88	574.92	126.96	701.88	554.00	247.88	701.88	554.00	247.88	701.88	554.00	247.88
2057	8,656.60	721.88	584.92	136.96	721.88	564.00	257.88	721.88	564.00	257.88	721.88	564.00	257.88
2058	9,093.17	741.88	594.92	146.96	741.88	574.00	267.88	741.88	574.00	267.88	741.88	574.00	267.88
2059	9,539.70	761.88	604.92	156.96	761.88	584.00	277.88	761.88	584.00	277.88	761.88	584.00	277.88
2060	9,996.77	781.88	614.92	166.96	781.88	594.00	287.88	781.88	594.00	287.88	781.88	594.00	287.88
Total	\$ 5,744.57	\$ 9,437.77	\$ 3,693.20	\$ 364.86	\$ 5,744.57	\$ 8,415.42	\$ 2,670.85	\$ 245.53	\$ 9,437.77	\$ 8,415.42	\$ (1,023.35)	\$ (119.34)	
Present Value at 8% as of July 1, 2011	\$ 2,961.12	\$ 2,425.98	\$ 364.86	\$ 2,961.12	\$ 2,306.65	\$ 245.53	\$ 2,425.98	\$ 2,306.65	\$ 2,961.12	\$ 2,306.65	\$ (119.34)	\$ (119.34)	

This exhibit is an attachment to a letter that contains important information and explanations regarding the numbers shown. Therefore, the exhibit should only be considered with the accompanying letter from Caravanough Macdonald dated March 23, 2012. All assumptions, including the 8% investment return, are assumed to be met each year in the future.

Exhibit C1

Kansas Public Employee Retirement System
Comparison of State/School Group Employer Contributions for Retirement Benefits
HB 2194 versus Senate Cash Balance Plan (Morris/Kelly)

Table with columns: Year, Payroll (\$M), Tier 3, Employer Rate-DB, Normal Cost Rate, Normal Cost (\$), UAL Payment (\$), Total Cost (\$), Employee Rate-DB, DB Normal Cost Rate, DB Normal Cost (\$), UAL Payment (\$), Total Cost (\$), Difference (\$), Present Value of Difference. Rows include years 2012 through 2060 and summary rows for Effective 1/1/14 and In millions.

This exhibit is an attachment to a letter that contains important information and explanations regarding the numbers shown. Therefore, the exhibit should only be considered with the accompanying letter from Campaign Media/Political dated March 23, 2012. All assumptions, including the 0% investment return, are assumed to be met each year in the future.



