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Attachment 1
3-19-12

KANSAS PUBLIC EMPLOYEE RETIREMENT SYSTEM
CASH BALANCE PLAN DESIGN WORKSHEET
(Prepared at the Request of President Steve Morris and Senator Laura Kelly)

I. Establishing the Plan

Relationship to Existing Plan

	KPERS Tier 2: Parallel Provision	Considerations & Comments
Establish as a new tier within existing defined benefit plan.	Tier 2 was established within the existing KPERS system. One actuarial contribution rate is determined in the actuarial valuation process and applied to total covered payroll.	Cash balance plan is part of the same trust, and the existing defined benefit plan remains open. Assets are commingled and can be used to pay the benefits of any tier. All funding is determined on an aggregate basis. A single actuarial contribution rate is calculated to be applied to all covered payroll.

Eligibility

	KPERS Tier 2: Parallel Provision	Considerations & Comments
Apply to future hires only as of January 1, 2014.	Applied to future hires on/after July 1, 2009.	Simpler from an implementation, communication, and administrative standpoint to apply only to future members. Less legal risk.

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II. Accumulation Phase

Employee Contribution Rate		
	KPERS Tier 2: Parallel Provision	**Considerations & Comments**
6%	6%	The higher the employee contribution rate, the lower the employer normal cost rate for new hires, which permits more employer money to be used to pay off the unfunded actuarial liability or lowers the employer contribution rate.

Employer Credit*		
	KPERS Tier 2: Parallel Provision	**Considerations & Comments**
Fixed rate of 4% throughout career	N.A.	Simple to communicate and easy for member to understand. More predictable from a cost standpoint as it doesn't vary with the demographics of the covered population (*i.e.*, years of service).

*The employer credit is the amount recorded to each member's notional account. Actuarial required employer contributions are calculated as part of the annual valuation for the Plan as a whole and may be different than the employer credit.

Interest Credit		
	KPERS Tier 2: Parallel Provision	**Considerations & Comments**
Rate		
Fixed amount of 6% in statute. Consider including flexibility for the Board to reduce if determined necessary due to adverse market conditions and investment returns that threaten KPERS funding status in the absence of a change. Consider including a	Tier 2 employee contributions are credited with 4% interest annually. However, the benefit formula for the defined benefit plan is not based on the	By setting the interest crediting rate below the portfolio's assumed rate of return, the expected cost of providing the benefit is lower than the employer credit to the cash balance account.

Interest Credit

	KPERS Tier 2: Parallel Provision	Considerations & Comments
minimum floor based on a conservative external benchmark established by the Board.	employee account value, but solely on years of service, final average salary, and a fixed multiplier. Therefore, employee contributions are only paid out when the employee terminates membership without retiring (or a retiree dies before receiving retirement benefits equal to or greater than their contributions plus interest).	The interest crediting rate has a direct impact on the cost of the plan because it impacts the benefits ultimately paid to members. All other things being equal, the lower the interest crediting rate, the lower the cost of the plan. Lower contributions on behalf of the Tier 3 (cash balance plan) members allow more of total employer contribution dollars to be used to pay off the unfunded actuarial liability or the employer contribution rate to be lower. If the interest crediting rate is too low, the benefit provided may not be meaningful to members.
Frequency of Crediting		
Quarterly	Interest is credited on member contributions annually.	More frequent interest credits increase the administrative costs required to keep track of the account balances on an ongoing basis. More frequent crediting is likely to be attractive to the members, particularly if account balances are made available more often than annually. No significant actuarial cost impact.
Prorate the interest credit for members taking a distribution during quarter, based on the member's account balance at the end of the prior quarter.	Interest credited to employee contributions is not prorated. Contributions are credited with interest annually on June 30 based on the balance in the account on December 31 of the preceding year.	No significant cost impact. Improve the perception of "fairness" by members. Administration is slightly more complex.

Interest Credit

	KPERS Tier 2: Parallel Provision	Considerations & Comments
Discretionary Dividends		
Board to have discretion within guidelines established by statute, including: • Member must have a minimum of 10 years of service to be eligible for dividend. • Maximum dividend of 4%. • Board to consider funding, market conditions, investment returns, and other related factors.	N.A.	If the Board has discretion over granting of dividends, the Board has some control over the member's benefits. Can be minimized with guardrails/ guidance in the statutes. The Board's action must comply with fiduciary standards, so that the interests of the System are considered, as well as the interests of the members. Granting discretionary dividends may reduce the contributions used to fund the unfunded actuarial liability or result in higher employer costs, depending on how the plan is funded. Challenge is how to balance the need to strengthen KPERS funding with the benefits for Tier 3 members in the near term.

Employer Contribution

	KPERS Tier 2: Parallel Provision	Considerations & Comments*
Single, actuarially determined rate for all KPERS tiers.	Currently, one actuarial contribution rate is determined for both KPERS Tier 1 and Tier 2.	Would require additional actuarial and administrative work to isolate and track the costs of Tier 3 versus Tier 1 and 2, if desired. With this approach, the assumed rate of return is factored into the actuarial calculations and impacts the normal cost rate for Tier 3 members. To the extent that the normal cost rate is lower than Tier 2 members, the unfunded actuarial liability is either paid off more quickly or employer contributions are reduced.

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Employer Contribution

	KPERS Tier 2: Parallel Provision	Considerations & Comments*
		If actual investment experience is less than KPERS' assumed rate of return (not the cash balance plan's interest crediting rate), the unfunded actuarial liability will increase, as will the employer actuarial contribution rate.

III. Eligibility for Benefits

Vesting

	KPERS Tier 2: Parallel Provision	Considerations & Comments
Five years	Five years	Earlier vesting generally results in higher plan costs. Likewise, a longer vesting period generally results in lower costs.

Termination Before Vesting (Nonvested, Inactive)

	KPERS Tier 2: Parallel Provision	Considerations & Comments
Forfeiture of membership.		
Membership, employer credits, and service credits are forfeited if member contributions plus interest are withdrawn.	Member contributions may be withdrawn, at which point membership and all service credits are forfeited.	Must offer the member a return of employee contributions with interest. If the member takes a refund, all service credits are forfeited.
After five years, service credits are forfeited, even if contributions are not withdrawn.	After five years, service credits are forfeited, even if member contributions are not yet withdrawn.	Would need to state whether the interest would be based on the interest crediting rate or on some other rate. Applying a different interest rate on the employee contributions (payable upon withdrawal) than has been credited to the cash balance account to that point may be confusing to members.

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Termination Before Vesting (Nonvested, Inactive)

	KPERS Tier 2: Parallel Provision	Considerations & Comments
Interest credits. Interest credits continue accruing for up to five years following termination.	Member contributions continue to earn interest for up to five years.	
Return to service. Inactive, non-vested members who have not withdrawn their membership and who return to employment within five years following separation retain service credits earned during prior employment.	If the member returns to an eligible position in the five-year period immediately following termination, service credits earned during the prior employment are retained.	

Termination When Vested (Vested Inactive)

	KPERS Tier 2: Parallel Provision	Considerations & Comments
Members may – Withdraw employee contributions and interest, but forfeit all employer credits and service. –OR – Leave contributions and draw benefit on or after reaching retirement age. Interest credits continue to be applied to the member's cash balance account until retirement.	Members may – Withdraw member contributions, plus interest. Membership and service credits and earned benefits are forfeited. -OR- Leave contributions and draw benefit upon reaching retirement eligibility.	Maximizes the assets in the KPERS portfolio and provides ongoing professional investment management and guaranteed minimum return for member. Reduces portability for members changing careers, but account value still increases over time with interest credits. Reduces the possibility that the member might spend retirement assets before retirement, thereby ensuring the member will have some retirement benefits when they reach retirement age.

Death Prior to Retirement

	KPERS Tier 2: Parallel Provision	Considerations & Comments

Termination When Vested (Vested Inactive)

	KPERS Tier 2: Parallel Provision	Considerations & Comments
If not vested at time of death, assume beneficiary receives member contributions plus interest.	Beneficiary receives member contributions plus interest.	
If vested, but not yet at normal retirement age at time of death: Provide benefit for spouse named as sole beneficiary comparable to Tier 2, except use a five-year service requirement. *(Also consider whether to reduce the service requirement to five years for all Tiers 1 and 2.)*	Beneficiary receives member contributions at time of death, unless: • The member has at least 10 years of service – and – • The member's spouse is named as the member's sole, primary beneficiary. In that case, the spouse may receive the member's retirement benefit, beginning at the earliest date the member would have qualified for early retirement (age 55).	If the value of the cash balance account is provided to a named beneficiary for all members dying before retirement, the plan's cost increases. But given the low probability of death before retirement, a significant cost impact is not expected. Cost will be less if the beneficiary is required to wait until the member would have reached normal retirement age before the beneficiary receives the benefit.
If vested and at normal retirement age, but has not retired at time of death, assume spouse eligible to receive retirement benefit immediately.	Spouse begins receiving retirement benefit immediately.	

Normal Retirement Age (Non-forfeitable): Standard

	KPERS Tier 2: Parallel Provision	Considerations & Comments
65 years of service –AND– five years of service (vested) – OR. – Age 60 with 30 years of service.	Age 65 with five years of service (vested) –OR– Age 60 with 30 years of service.	Retirement eligibility is less critical under a cash balance plan because there is a direct reduction in the benefit amount for the member for early commencement. By starting benefits earlier, the amount in the cash balance account is smaller and the payout period is longer, both of which result in lower benefits for the member.

		The impact of the plan's retirement eligibility criteria on the plan's risk profile depends on the interest rate and mortality table used to convert the account balance into monthly income. If the interest rate is the same both pre and post-retirement, the cost impact of earlier commencement is smaller. If a lump sum option is an optional form of payment, earlier retirement would increase the cost of the plan. Funds leave the trust sooner, which reduces the System's ability to earn more than the assumption used in the annuity conversion factor (which is used to determine the benefit amount). Loss of those excess earning will increase the cost of the plan. The higher the percentage of benefit offered as a lump sum, the greater the cost impact.

Normal Retirement Age (Non-forfeitable): Correctional Officers		
	KPERS Tier 2: Parallel Provision	**Considerations & Comments**
Group A (primarily correction officers and supervisors): age 55 with 10 years of service. Group B (other correction institution employees that generally have regular contact with inmates): age 60 with 10 years of employment.	Group A (primarily correction officers and supervisors): age 55 with 10 years of service. Group B (other correction institution employees that have regular contact with inmates): age 60 with 10 years of service.	Without higher employer credits to the cash balance account, the member bears the entire cost of the earlier retirement ages because of a smaller account value and longer payout period.

Early Retirement Age	KPERS Tier 2: Parallel Provision	Considerations & Comments
No early retirement.	Age 55 with 10 years of service.	There is a very small cost impact from early retirement as long as the benefit must be paid as an annuity. The member bears the entire cost of the earlier retirement age because a smaller account value and longer payout period result in a lower benefit. If a lump sum option is offered, there will be a greater cost to early retirement. The higher the lump sum option, the greater the cost of the early retirement provision. Also, early retirement ultimately impacts KPERS cash flow, but the long-term impact is unknown at this time.

IV. Nature of Retirement Benefit

Default Form of Distribution	KPERS Tier 2: Parallel Provision	Considerations & Comments
Annuity with five years life certain (*i.e.*, if the member dies before end of the stated life certain period, the member's benefit is paid to the beneficiary for the remainder of that period).	Benefits paid for life of member only. Any member contributions remaining at time of death are paid to beneficiary, with interest.	Little impact as the present value of all forms of payment at retirement is equal to the account value.

Calculation of Benefit: Annuity Conversion Factor

	KPERS Tier 2: Parallel Provision	Considerations & Comments
Fixed rate of 6% established as part of plan design. Consider including flexibility for the Board to reduce if determined necessary due to adverse market conditions and investment returns that threaten KPERS funding status in the absence of a change. Consider including a minimum floor based on a conservative external benchmark established by the Board.	N.A.	Would need to find balance between setting a rate providing enough conservatism to minimize interest rate risk for the Plan vs. a rate that doesn't unnecessarily reduce lifetime benefit. Could provide a 13th check for retirees if actual experience in the long term was more favorable than assumed. Such a 13th check would only be granted for one year at a time and as the system's funding permits. Provides a more predictable benefit amount for employees and improves their ability to plan for retirement. Less uncertainty in funding because annuity conversion factors are known in advance, so there is no actuarial gain or loss from a member's retirement, as could occur with an external benchmark. However, actual investment experience that is lower than KPERS' assumed rate would negatively impact the System's funding.

Calculation of Benefit: Mortality Factor

	KPERS Tier 2: Parallel Provision	Considerations & Comments
Provide statutory authority for Board to select mortality tables to be used in annuitizing member account balances.	In consultation with KPERS' actuary, the KPERS Board currently selects mortality tables to be used in actuarial assumptions for valuations and, as needed, for actuarial calculations of individual member	K.S.A. 74-4901 *et seq.* provides this framework for Tiers 1 and 2.

Calculation of Benefit: Mortality Factor		
	KPERS Tier 2: Parallel Provision	**Considerations & Comments**
	benefits (*e.g.*, early retirement benefit reduction factors).	Creates the ability to reduce longevity risk for the System because the Board can quickly respond to changes in observed mortality experience (*e.g.*, if anti-selection became apparent the Board could change the mortality table for future retirees immediately). Creates some uncertainty about the amount of benefit payable to the member at retirement as the mortality table is subject to change, but this has a smaller impact on the benefit amount than the variability in the interest rate used in annuitizing the account balance (discussed earlier).

Benefit Options		
	KPERS Tier 2: Parallel Provision	**Considerations & Comments**
Establish optional forms of payment, including – Joint and survivor options at 50%, 75%, or 100% of maximum benefit.. Life or period certain options at 5, 10, or 15 years.	50%, 75% or 100% joint and survivor option. 5-, 10- or 15-year life certain options.	The impact of different forms of payments is minimal because the benefit amounts are all based on the account value and the actuarial factors. There is no increase in liability from the election of one form of payment vs. another. Members will prefer to have different options for payment post-retirement to permit them to select an option that best fits their personal situation.
Partial lump sum option in increments of 10%, up to a maximum of 30%.	Partial lump sum option payments are available in increments of 10%, up to a maximum of 30%.	Higher portions of the account value that can be paid as a lump sum tend to increase the cost of the plan. It can also create the potential for anti-selection where healthier members elect the annuity option and

Benefit Options

	KPERS Tier 2: Parallel Provision	Considerations & Comments
		unhealthy members elect a lump sum. Members find a partial or full lump sum option attractive.
"Self-funded, cost of living adjustment" (COLA) feature, in which the account value is converted to a benefit amount that increases a fixed percent each year over time. This feature can be added to any of the optional forms of payment.	Tier 2 currently includes a cost-of-living adjustment feature that is actuarially funded as part of the benefit structure. HB 2194 would require Tier 3 members to elect – (1) to have a 1.75% multiplier applied to future service, but to forego the cost of living adjustment feature, or (2) to retain the COLA with a lower, 1.40% multiplier. The Legislature may grant one-time, ad-hoc post-retirement benefit increases.	The impact of different forms of payments, both with and without a cost of living adjustment, is minimal because the benefit amounts are all based on the account value and the actuarial factors. There is no increase in liability from the election of a form of payment with a COLA because the member takes a reduced amount initially. Members often prefer to have different options for payment post-retirement to permit them to select an option that best fits their personal situation.

Retirement Benefits for Members on Disability*

	KPERS Tier 2: Parallel Provision	Considerations & Comments
Receives participating service credit for the entire period of disability. Receives the total pay credit (employee and employer contribution) during the disability. The salary on which the credits are based would be the member's pay at the beginning of the disability,	Receives participating service credit for the entire period of disability. For purposes of calculating the final average salary, the member's pay at the beginning of the disability is adjusted after five years for the lesser of the increase in the CPI for urban consumers, minus 1%, or 4% per annum.	Helps to provide a meaningful benefit at retirement for disabled members, which is necessary since disability benefits cease at normal retirement age. There is a cost related to providing this benefit, but because the probability of disability is low, the cost is relatively low.

Retirement Benefits for Members on Disability*	KPERS Tier 2: Parallel Provision	Considerations & Comments
adjusted after five years for the lesser of the increase in the CPI for urban consumers, minus 1%, or 4% per annum. All credits to the employer annuity account cease as of the earliest of the member's normal retirement age, death, or the date the member is no longer entitled to receive disability benefits.	Service credit ceases as of the earliest of the member's normal retirement age, death, or the date the member is no longer entitled to receive disability benefits.	

* This plan design element addresses retirement benefits that are accrued while on disability. In addition, it is assumed that the death and disability plan for Tier 1 and Tier 2 would apply to Tier 3. Members may remain on disability until the member dies, is no longer disabled, or if disability began before age 60, reaches earlier of age 65 or retirement. If the disability began at age 60 or after, disability benefits continue for five years or until retirement.

Retiree Death Benefit	KPERS Tier 2: Parallel Provision	Considerations & Comments
Provide death benefit of $4,000.	$4,000	Cash balance options modeled by Cavanaugh MacDonald have included a $4,000 death benefit. Provides minimal benefit to help with funeral costs. Provides consistency with Tier 1 and Tier 2.