October 10, 2017

Ellen Suetholz
Kentucky Public Pension Coalition

Bob Wagoner
Kentucky Retired Teachers Association

Re: Review of Proposed Pension Reform in Kentucky

Dear Bob and Ellen:

Pension Trustee Advisors (PTA) have conducted a thorough review of PFM's Report #3 and recommendations for changes to the pension and retiree healthcare benefits for current and future Kentucky public employees.

The recommendations reflect the inadequate funded status of the numerous plans covering public employees in Kentucky and the need for substantive and immediate corrective actions to address the actuarial requirements of the plans.

We have some concerns with some of the recommendations and their characterizations in the very public debate that has occurred since the August 28 release of the report. Our major finding is that under the proposed changes, costs will increase and benefits will decrease.

Our concerns can be divided into two categories:

Pension Plan Benefit Considerations

I. Inadequate Benefit Levels
II. Lack of Disability Coverage
III. Inflation Protection
IV. Change in Retirement Age
V. More moderate changes are available
VI. Voluntary Buyouts
VII. Legal Risk of Inviolable Contract

Financial Considerations

VIII. Higher Costs of proposed DC Approach
IX. Inherent Viability of Defined Benefit (DB) Plans
X. Inefficiency of Defined Contribution Plans
XI. Significant Transfer from workers to financial sector if DB is abandoned
XII. Lack of Employed Funding of Current Plans
XIII. Need for Qualified Actuarial Analysis and Opinion
XIV. More Conservative Actuarial Assumptions and Methods
XV. Increased Cost to School Districts
XVI. Closing Plans could change Asset Allocation and Increase Long Term Costs

Pension Trustee Advisors, Inc. • 7600 E Arapahoe Road, Suite 125 • Centennial, CO 80112 • 303.263.2765
Website: pensiontrusteeadvisors.com • Email: flick@pensiontrusteeadvisors.com

Details for each of these concerns is provided below. PTA is available to discuss further with your organizations or decision makers and provide complete detail on our calculations if desired.

Summary of Findings

Pension Trustee Advisors has reviewed proposed changes to Kentucky's retirement and finds that the proposals will cost more to Kentucky's taxpayers and its employees while providing lower benefits. The increased taxpayer costs are from Social Security participation as well as replacing current programs with more expensive Defined Contribution plans. Increased worker costs are also due to Social Security and additional DC contributions necessary to get close to an adequate retirement income. The retirement income that can be expected from the new proposed program would likely not be as high as those estimated in the recent analysis due to lower investment returns, longer life expectancies and inflation that were not considered in that analysis. Furthermore, the proposed program would leave many disabled workers and survivors without meaningful protection.

Additionally, PTA estimates that while such a change would be a cost to Kentucky taxpayers and a cut in living standards for future retired Kentucky public workers, it would result in substantial income to Wall Street and private investment managers who would earn much more than under the current program.

Finally, PTA reiterates that the current poor funding status is due to years of government pension contributions below those required for actuarial soundness. Other states have sound financial position because they have prudently funded their defined benefit plans, despite similar demographics of an aging population.

PTA has extensive experience with pension reform, including serving the Kentucky Teachers Retirement Funding Work Group in 2015, creditors in the Detroit and Stockton bankruptcies, the Federal Oversight Board for Puerto Rico, and other groups for governments as well as labor organizations.

Pension Plan Benefit Considerations

I. Inadequate Benefit Levels

PFM has proposed that the current defined benefit (DB) model be replaced by a combination of Social Security coverage and a defined contribution (DC) plan for all but hazardous duty employees. PFM produced illustrations purporting to show that the new program provides adequate levels of benefits. Our calculations find that these are based on overly optimistic assumptions in terms of employee contribution levels, investment return (relative to the defined benefit plan) and life expectancy (particularly for women). This means that these employees will not be receiving adequate retirement benefits despite illustrations that they will.

Most new employees will be eligible for Social Security and a DC plan that will provide a fixed employer match of 2% of pay on a required 3% of pay employee contribution and a 50% match on additional employee contributions up to 6% of pay. Total employee contributions will be a maximum of 9% of pay and total employer contributions will be a maximum of 5% of pay to the DC plan. Both employee and employers will also contribute 6.2% of pay each to Social Security and 1.45% of pay to Medicare.

This recommendation is consistent with a typical corporate retirement program. Unlike DB plans, DC plans avoid any employer risk for adequacy and provide no fixed benefits at retirement. The benefits provided to the employee are based on the employee and employer funding and investment return earned. Benefits are fully portable in a DC plan.

New employees in positions not now covered by Social Security will be covered. Hazardous duty employees will continue to participate in a cash balance plan, which is a modified defined benefit plan with some DC characteristics.

This approach will result in inadequate benefits in most cases, when compared to the current program. This is contrary to figures developed in the report, which show adequate benefits in most cases. The differences in our analysis from PFM's are:

1. PFM assumes that the employee will earn annual investment returns in the defined contribution plans of 5.25%, as strong as the assumed returns from the Kentucky Employees Retirement System (KERS) defined benefit plan. Vast research proves that returns from individually directed defined contribution plans are lower than those from professionally managed defined benefit plans. We believe that Kentucky public employees will not be able to invest any stronger than average defined contribution plan participants relative to the professionals managing KERS. This means that either this assumption is optimistic or the assumed return for KERS is pessimistic. Either the analysis that the replacement DC plans is adequate is incorrect or the analysis that the KERS plans are more underfunded than reported is distorted. We suspect that it's actually a bit of both.

2. PFM does not address the impact of inflation on post-retirement benefit needs. For example, the purchasing power of a fixed benefit will decline by 26% after 15 years, meaning that an individual who replaces 80% of their income at retirement, would only be replacing 59% when adjusted for inflation, assuming a modest 2% annual inflation rate.

3. PFM's approach of a drawdown of a constant 8.5% of the DC balance at retirement for those retiring at age 60 and 9.0% at age 65 is optimistic and simplistic. A long standing adage in retirement plan management is that withdrawals of 4% are a reasonable approach to make one's retirement savings last their lifetime. Our calculations resulted in withdrawal rates ranging from 3.9% to 5.2% to meet that objective. PFM's analysis used 7.0% to 9.0%. Even based on optimistic investment returns of 5.25%, we calculate that funds would be depleted by age 83 for the age 65 retiree and by age 84 for the age 67 retiree. Based on the mortality tables used by the plan actuaries (and presumably by PFM in their calculations), 58% and 53% of KRS men would still be alive when the money runs out after retiring at ages 65 and 67 respectively. For female teachers, the figures are 68% and 63%. This means that under the proposed analysis (which is based on optimistic returns), well over half of the individuals will run out of money.

4. PFM does not consider that individuals must become more conservative in their investment decisions as they get older and cannot take the risk of weak returns.

We have recalculated the benefit adequacy figures using more realistic actuarial assumptions and methods which are more likely to ensure adequacy. The table below compares methods and assumptions by PFM with those used by PTA.

Actuarial Assumption or Method	PFM Approach	PTA Approach
Investment Return from Individually Managed DC Accounts	Same as Professionally Managed KRS	0.5% less than KRS
Change in Asset Allocation as Individuals age	None	Become more conservative to minimize risk – results in reduced return of 0.5%
Inflation Protection	None	Assume additional withdrawals from 2% inflation
Individuals who will deplete DC accounts before death	51% to 58% of men will run out, 63% to 69% of women will run out	Target only 25% running out and outliving savings

The impact of these more realistic method and assumptions are shown in the tables below:

KERS Non Hazardous Plan ($60,000 final pay)								
Employee	**Age**	**Service**	**From Social Security**	**From KERS DB Plan**	**From DC Plan per PFM**	**From DC Plan per PTA**	**PFM Reported Replacement Income Percentage**	**PTA Recalculated Replacement Income Percentage**
A – Tier 1	65	35	$21,300	$16,823	$17,335	$9,215	92%	79%
B – Tier 2	65	35	21,300	4,318	26,053	13,571	86%	65%
C – Tier 3	65	35	21,300	3,764	29,595	17,629*	91%	65%
D – New Hire	67	37	24,324	0	39,014	20,418	106%	75%

* Note - PTA calculation combines both Cash Balance (included under DB by PFM) and DC for Tier 3

A realistic analysis considering longevity, inflation, and realistic DC returns presents far different results than those used by PFM. Since the target replacement income for these KERS Non-Hazardous individuals was 78%, PFM concluded that all these example employees would attain this objective. We find that only the current Tier 1 employee (now aged 50) would attain the 78% objective. And that is only if he (the "she" would be more likely to outlive her savings) saved the full 9% of pay required to gain the 5% employer match.

A realistic analysis of KERS Hazardous produces similar findings.

KERS Hazardous Plan ($58,000 final pay)								
Employee	**Age**	**Service**	**From Social Security at 62**	**From KERS DB Plan**	**From KERS Cash Balance - PFM**	**From KERS Cash Balance - PTA**	**PFM Reported Replacement Income Percentage**	**PTA Recalculated Replacement Income Percentage**
A – Tier 1	55	25	$12,912	$34,898	$0	$0	82%	82%
B – Tier 2	60	30	15,168	42,046	0	0	99%	99%
C – Tier 2	62	32	16,224	44,849	0	0	105%	105%
D – Tier 3	60	30	15,168	0	26,785	18,207	72%	59%
E – Tier 3	62	32	16,224	0	30,366	20,507	80%	62%

The target replacement income for these individuals was also 78%. PFM concluded that all these example employees other than employee D would attain this objective. We find that while the current Tier 1 and Tier 2 employees would attain the 78% objective, Tier 3 employees with the Cash Balance plan fall far short of necessary income replacement after 30 or more years of service by age 60 or 62. This results in an unusually low replacement income for hazardous duty employees when compared to similar plans outside of Kentucky. This could be a major impediment to recruitment and retention.

The analysis for non-hazardous CERS employees is in the table below:

CERS Non Hazardous Plan ($55,000 final pay)								
Employee	**Age**	**Service**	**From Social Security**	**From CERS DB Plan**	**From DC per PFM**	**From DC per PTA**	**PFM Reported Replacement Income Percentage**	**PTA Recalculated Replacement Income Percentage**
A – Tier 1	65	35	$20,592	$17,043	$16,283	$8,639	98%	84%
B – Tier 2	65	35	20,592	3,977	24,751	12,858	90%	68%
C – Tier 3	65	35	20,592	3,741	28,227	16,892*	96%	68%
D – New Hire	67	37	23,568	0	37,537	19,636	111%	79%

* Note - PTA calculation combines both Cash Balance (included under DB by PFM) and DC for Tier 3

Once again, we find that the PFM calculations are optimistic in terms of DC (and cash balance) replacement income provided. The target replacement income for salaries in the $50,000 to $60,000 range is 81% of final salary. While PFM concluded that all example employees would attain this, PTA finds that only the 50-year old 15-year Tier 1 employee would meet that objective.

The analysis for hazardous CERS employees is in the table below:

CERS Hazardous Plan ($72,000 final pay)							
Employee	**Age**	**Service**	**From CERS DB Plan**	**From CERS Cash Balance - PFM**	**From CERS Cash Balance - PTA**	**PFM Reported Replacement Income Percentage**	**PTA Recalculated Replacement Income Percentage**
A – Tier 1	55	25	$43,702	$0	$0	61%	61%
B - Tier 2	60	30	52,442	0	0	73%	73%
C - Tier 2	62	32	55,939	0	0	78%	78%
D – Tier 3	60	30	0	35,848	22,889	50%	39%
E – Tier 3	62	32	0	40,877	28,155	57%	32%

The target replacement income for salaries in the $70,000 range is 77% of preretirement earnings. PFM concluded that it is essential that these employees save additionally in order to meet their retirement objectives. Because these hazardous duty employees do not participate in Social Security, they presumably have 6.2% more to save than do participating employees. We find that the shortfall is even more substantial than PFM estimates due to the continuing inadequacy of the Tier 3 Cash Balance Plan.

Finally, an analysis of KTRS follows:

KTRS Non-University Plan ($85,000 final pay)								
Employee	**Age**	**Service**	**From Social Security at 62**	**From KTRS DB Plan**	**From DC Plan - PFM**	**From DC Plan - PTA**	**PFM Reported Replacement Income Percentage**	**PTA Recalculated Replacement Income Percentage**
Tier 1	55	30	$0	$61,407	$0	$0	72%	72%*
Tier 2	60	30	0	61,483	0	0	72%	72%*
New Hire	65	30	23,592	0	37,699	23,484	72%	55%
New Hire	67	30	27,048	0	40,202	24,979	79%	61%
New Hire	67	32	27,660	0	43,274	26,939	83%	64%

* Note - PTA did not independently verify PFM’s DB or Social Security calculations, or adjust for inflation

The target replacement income for salaries in the $80,000 to $90,000 range is 78% of preretirement earnings. PFM also concluded that it is essential that these current employees save additionally in order to meet their retirement objectives. Again, we find that the shortfall is even more substantial than PFM estimates under the new tier. Rather than improving the situation as illustrated by PFM, the new tier makes the situation worse and less likely that new teachers can attain necessary retirement income. Furthermore, since new teachers will be contributing 9% to their DC plan plus 6.2% to Social Security, it will be more difficult for these employees to make additional retirement savings so that their retirement objectives can be met.

In summary, optimistic assumptions in terms of individually directed account investment returns, longevity, and inflation considerations result in conclusions of most future employees attaining adequate retirement income. We find that future workers will receive retirement income below their targets, even if contributing the maximum employee contribution of 9% of pay plus 6.2% Social Security. Only the non-hazardous employees will receive retirement income more than 70% of final pay, still short of their 78% to 81% targets.

II. Lack of Disability Coverage

The PFM reports did not mention disability benefits. The current defined benefit plans do provide benefits in the case of disability. Defined Contribution plans and Cash Balance plans are not designed to provide pre-retirement death or disability benefits. This is a serious problem, particularly for public safety employees whose job duties result in higher risk of disabilities. The current cash balance program provides a modest level of disability benefits, 20% of pay for non-hazardous employees and 25% for hazardous employees. Combined with Social Security, this may be an adequate income replacement. But the new defined contribution program has no disability coverage whatsoever, which will result in inadequate retirement income for some of the most vulnerable former employees.

Disability coverage is not insignificant as illustrated by the following table of current benefit recipients.

Group	Disabled Participants	All Benefit Recipients	Disability Share
KERS Non Hazardous	1,970	44,004	4%
KERS Hazardous	149	3,966	4%
CERS Non Hazardous	3,941	56,339	7%
CERS Hazardous	519	8,563	6%
SPRS	53	1,515	3%
KTRS	2,751	51,563	5%
Total	9,393	165,950	6%

This means that if this lack of disability protection had been in effect in the past, more than 9,000 Kentuckians with disabilities would have inadequate retirement benefits.

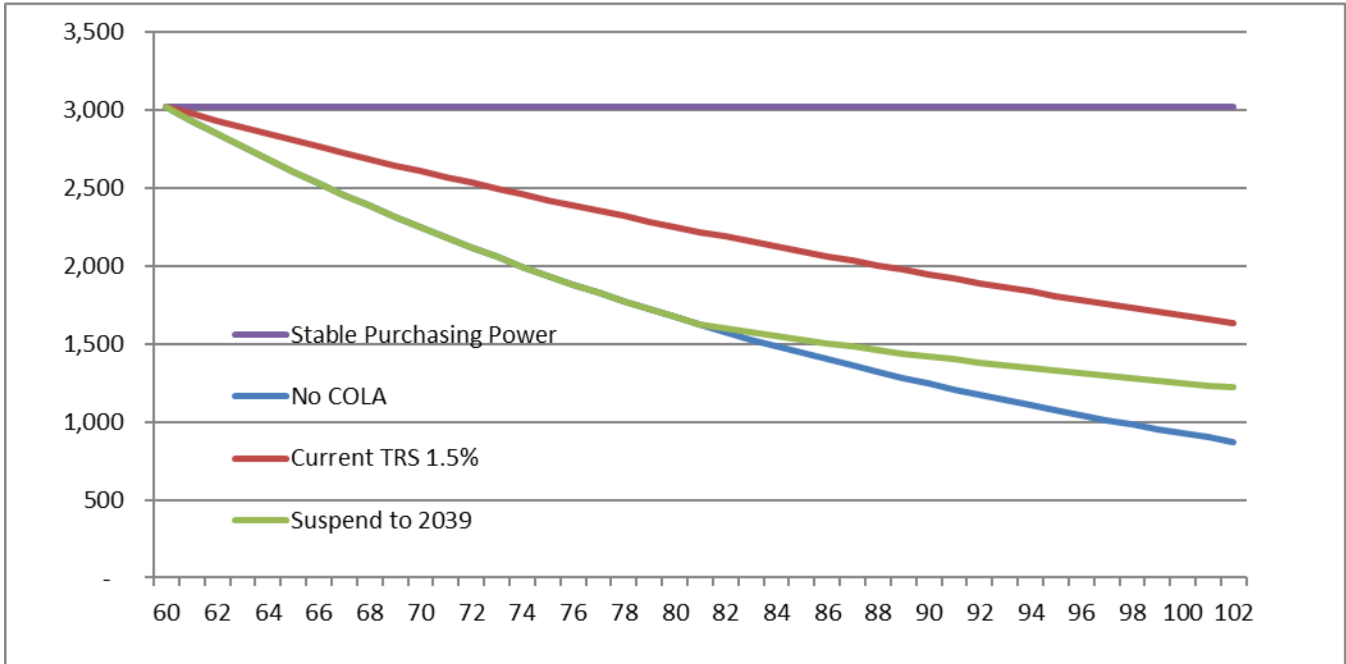
The normal cost for disability under the current plans range from 0.3% of pay to 0.6% of pay. Disability benefit coverage purchased in the insurance markets tend to be significantly higher. Costs for this or similar disability coverage does not appear to have been considered in the proposals.

III. Inflation Protection

Pensions which are adequate at retirement can become inadequate years later once the effects of inflation are considered. KTRS currently increases benefits for retirees by 1.5% per year. This helps somewhat against the impact of inflation, which is projected to be 3.0% per year in the KTRS actuarial valuations. The PFM proposal is to suspend KTRS cost of living adjustments (COLAs) until the plan is 90% funded. PFM projects that KTRS would be 84% funded in 2034, so PTA projects that KRTS would be 90% funded only in 2039. If this is the case, then a benefit which

is $3,000 today would be worth only about $1,600 in 2039. The table below shows the impact of inflation under various COLA scenarios, based on an average KTRS benefit of $3,000 per month and assuming age 60 in 2018.

Under current KTRS provisions, benefits lose 1.5% per year in real terms
This would double under proposal



The chart above shows that even under the current provisions, a retired teacher with a benefit of $3,000 in 2018 loses value to about $2,200 by 2039 assuming 3% per year inflation. But under the proposal, this would fall further to $1,600. Once the indexing begins, it would only be subject to the first $1,500 in 2018 dollars.

Another way to consider this is that the current KTRS COLA only protects against about half of the assumed inflation. For most current KTRS retirees, the proposal would nearly eliminate the COLA. Although the KTRS actuaries anticipate 3% inflation it may also be worthy to consider lower inflation, such as 2%. The following table illustrates the impact of inflation on purchasing power and various combinations of COLA and inflation:

	Based on 2% Inflation	Based on 3% Inflation
Baseline monthly benefit at retirement	$3,000	$3,000
Decreased value by 2039 – No COLA	$1,941	$1,566
Decreased value by 2039 – KTRS 1.5% COLA	$2,693	$2,172

IV. Change in Retirement Age

An additional proposal is to increase the normal retirement age for DB plan benefits to age 65. This results in a substantial reduction in benefits for those who are eligible, or close to eligibility, for normal retirement, but several years away from age 65.

The PFM report indicated that the 27-year provision is a "major outlier" of KTRS compared to other retirement systems. While this provision may be an outlier, so is age 65. As indicated in the 2015 TRS Work Group analysis, of the nineteen states considered, only Rhode Island, Illinois, and Maine had retirement ages of 65. And they generally imposed these only on future workers.

It is rare for retirement systems to "move the goalposts" this abruptly by increasing retirement ages for those who may already be near current eligibility requirements and planning retirement. Depending on how this is rolled out and phased-in this could be a significant disruption to the labor force.

Changes in retirement ages may also likely be an inviolable contract issue. Under ERISA and many other states' courts (which do not apply to KTRS) the retirement eligibility is often ruled to be part of the accrued benefit and subject to more stringent legal protection.

The same issues for KTRS also apply to the non-hazardous KRS legacy defined benefit plans. For example, a hazardous employee now aged 54 and planning on retiring in a year would now need to wait until age 60 to receive an unreduced benefit. A typical actuarial reduction from age 65 to age 60 could be about 35%. For a 27-year teacher near age 55, the reduction would be more stringent because it applies from age 65 to age 55. A 50% reduction would not be unusual. PFM did not specify how the actuarial reductions would apply or whether there would be a phase-in.

V. More Moderate Changes are Available

The proposed changes are drastic, particularly with respect to future employees most of whom will not have access to an employer provided defined benefit plan. The study attempted to justify the substantial changes in part because of the additional costs as a result of changes in actuarial assumptions and methods. These will be discussed in Section XIV below.

If changes are indeed necessary, areas for consideration for KTRS, for example, might include some of those explored in the 2015 TRS Work Group analysis:

- Remove feature where highest average salary is based on three years instead of five years for those 55 with 27 years of service (saves 0.65% of pay)
- Remove 3.0% formula multiplier for service beyond 30 years of service. Continue with 2.5% (saves up to 0.25% of pay)
- Shift sick leave credit from salary credit to service credit (saves up to 0.66% of pay)
- Increase normal retirement eligibility for future teachers (saves up to 2% of pay for future teachers)

While we have not thoroughly explored changes for the KRS plans, major changes were effective in 2014. As can be seen from PFM's analysis, the benefit levels for Tier 3 and future hazardous duty employees are inadequate. We concur that no reductions for this group are appropriate. The proposed changes for non-hazardous employees seem premature, as major pension reform was implemented only three years ago, which has not had time to address funding issues.

VI. Voluntary Buyouts

The voluntary buyout proposed could produce savings to the systems since the buyout would be based on accrued benefits and not final average pay at retirement. However, the offer would be very difficult for the member to accurately assess and make a wise financial decision.

The only way in which the system would reduce its unfunded actuarial liability and corresponding cost through voluntary buyouts is if individuals receive less in assets than the actuarial value of the benefit foregone. This essentially means that employees who elect the voluntary buyout would not be able to replicate the benefit they are giving up with the value of the lump sum, even if they were able to earn the actuarially assumed rate of return. If any employees were to benefit from the buyout because they die shortly after buyout, then the system is losing the future actuarial gain that they would otherwise realize, costing them rather than saving.

VII. Legal Risk of Inviolable Contract

Many of the proposals appear to be inconsistent with Kentucky's inviolable contract. While PTA does not provide legal advice, it seems clear that implementing such changes is merely inviting expensive lawsuits which the Commonwealth has a significant chance of losing.

The report occasionally cites ERISA standards, which apply to private sector pensions. While this may be an interesting benchmark, it is not likely to have any bearing on succeeding in a lawsuit over the inviolable contract. Furthermore, certain benefit provisions which are proposed to be changed, such as retirement age and COLA, would generally be protected in an ERISA plan.

Financial Considerations

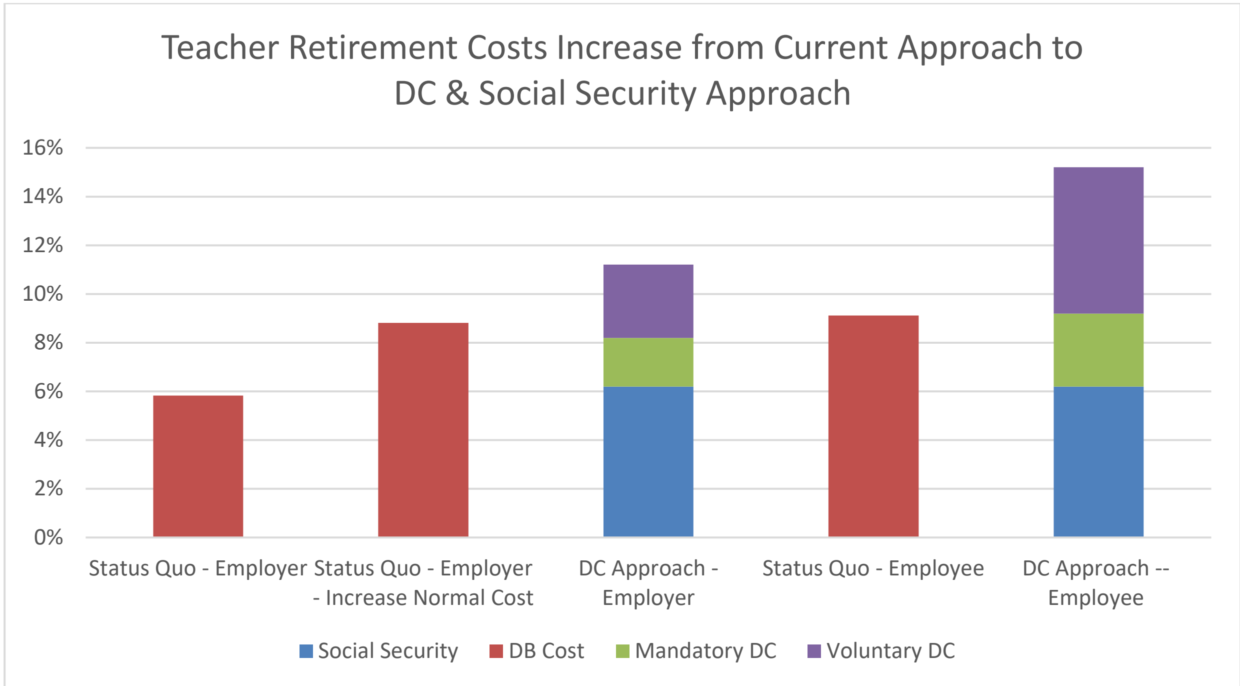
VIII. Higher Costs for Proposed Social Security and Defined Contribution Approach

The proposed plan for future employees quite simply is more expensive than the projected costs for the plan for current latest-tier employees. There is no savings to Kentucky or its public workers from the proposed changes.

Teachers

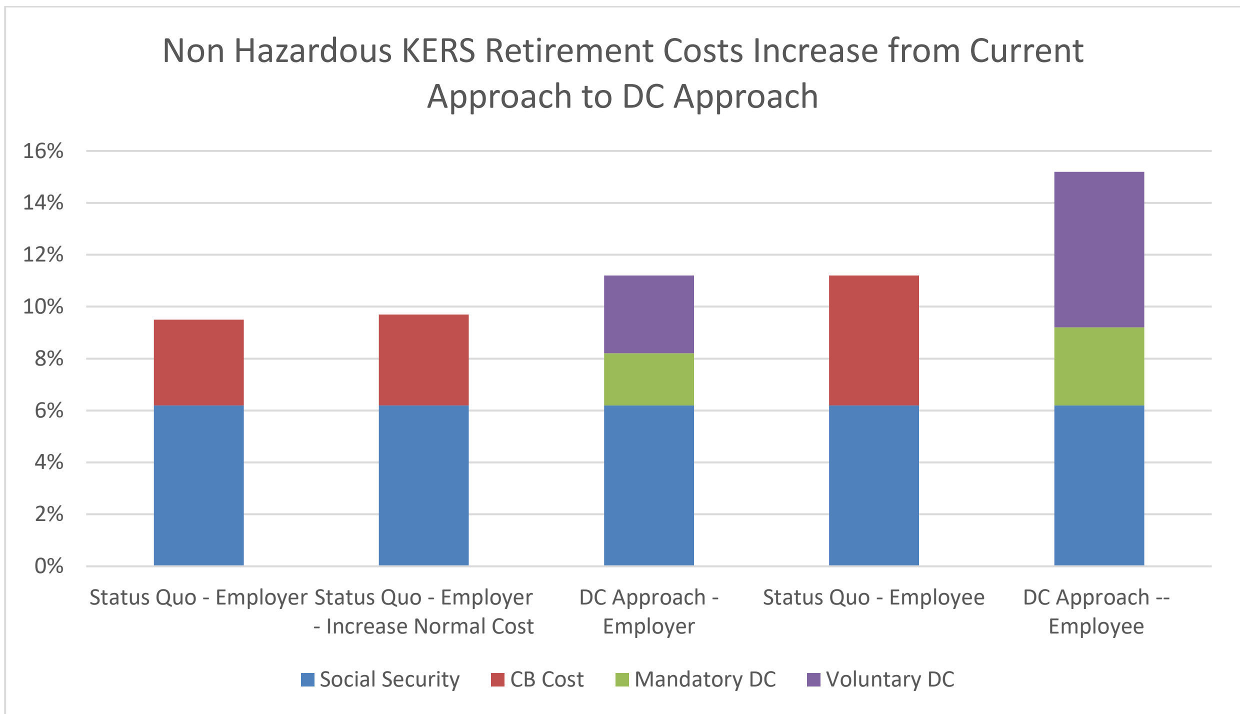
Under the current plan provisions, the Employer Normal Cost for future tiers is 5.83% of payroll based on current actuarial assumptions and 9.11% employee contributions. The proposed plan would require employer costs of 6.20% for Social Security plus between 2% and 5% for the DC plan. This totals between 8.20% and 11.20%. Teachers would contribute 6.20% for Social Security plus between 3% and 9% for DC for a total between 9.20% and 15.20%. It has been argued that the total Normal Cost of 14.94% (5.83% + 9.11%) could be understated due to optimistic actuarial assumptions. Even if this is understated by 20%, that would mean a total normal cost of about 18% and employer costs of about 9%, which would almost certainly be lower than the cost of the proposed DC plan (6.2% + 2% + up to 3%).

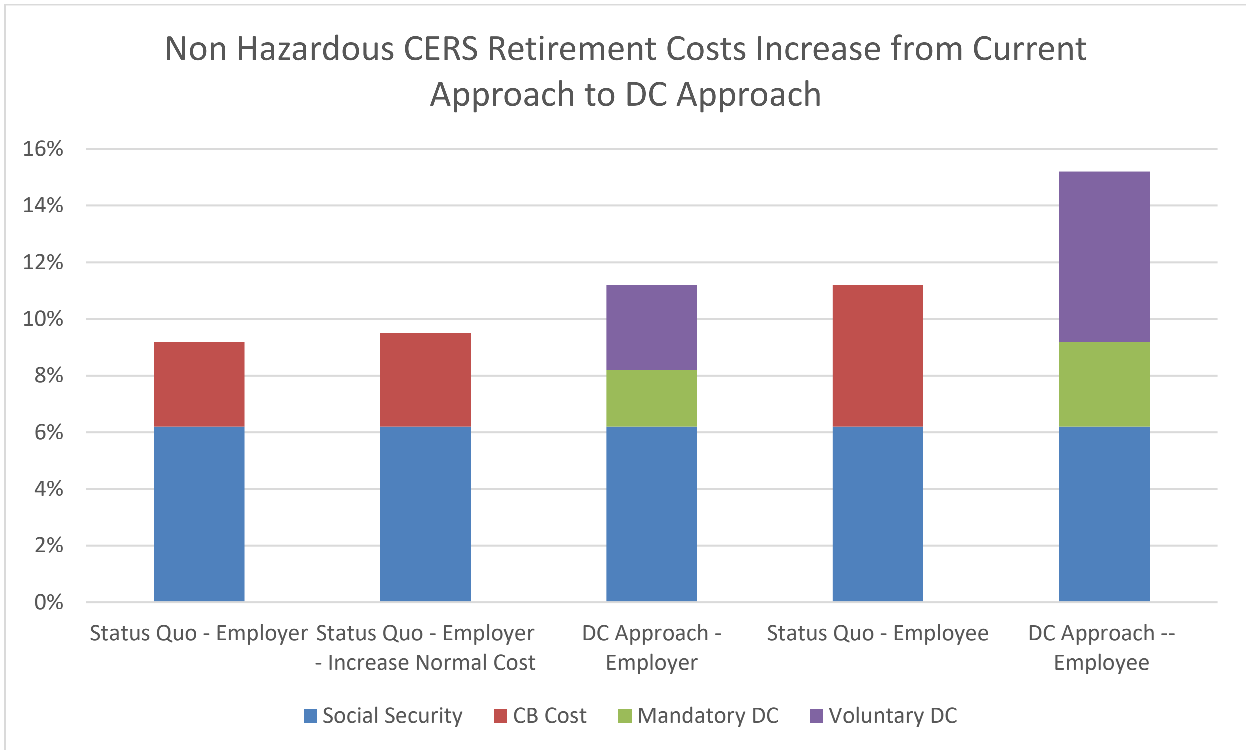
These figures are shown in the chart below:



KRS Non-Hazardous employees

The situation for KRS non-hazardous employees is illustrated in the charts below:





PTA estimates that the employer cash balance normal cost will be below 4% (3.0% to 3.5%) because of the reduced crediting rate and forfeitures upon non-vested turnover. There is little economic value to the employers for moving from the current 4% Cash Balance Plan arrangement to a 2% DC arrangement, unless employees do not contribute near the maximum required to get the full employer match. Employees will be paying far more for lower benefits even if they chose to contribute near the minimum required, in which case benefits will be far less than currently and far less than what is needed for adequate retirement income.

Because of the variable contribution crediting rate, there is little risk that employer costs will be volatile under the CB program such as there is under DB.

We do not compare the hazardous plans, as the CB plan is retained for hazardous duty employees.

IX. Inherent Viability of Defined Benefit Plans

The reports and subsequent public discussions seem to suggest that Defined Benefit Plans are simply not sustainable by nature, particularly considering actuarial techniques such as amortization of unfunded liability as a level percentage of pay. This is far from the truth. The table below looks at the ten best funded DB plans according to The Tax Foundation. https://taxfoundation.org/state-pensions-funding-2017/

State	Rank	Funded Ratio	Amortization Method	Period (Years)	Assumed Payroll Growth
South Dakota	1	107%	Level Percent of Pay-Closed	20	Not Disclosed
Oregon	2	104%	Level Percent of Pay - Closed	20	3.5%
Wisconsin	3	103%	Level Percent of Pay - Closed	30	3.2%
North Carolina	4 (tie)	99%	Level Dollar – Layered	12	Not Applicable
Tennessee	4 (tie)	99%	Level Dollar – Layered	20	Not Applicable
New York	6	98%	Level % -- Aggregate Method	NA	2.7% Inflation
Idaho	7	95%	Level Percent of Pay - Closed	25	3.75%
Nebraska	8	93%	Level Dollar – Layered	25	Not Applicable
Delaware	9	92%	Level Percent of Pay – Open	20	2.5%
Florida	10	91%	Level Percent of Pay – Closed	30	3.25%

This demonstrates that a well-funded defined benefit pension is achievable, even with features such as an amortization period of 20 to 30 years and payroll-based amortization. While I would encourage more rigorous actuarial funding basis, it is disingenuous to simply conclude that defined benefit programs are inherently not sustainable.

X. Inefficiency of Defined Contribution Plans

I testified with the National Institute on Retirement Security to a governor/legislative working group on pension reform in 2008. The presentation focused on the economic efficiencies of defined benefit plans and that DB plans can provide benefits at about half the cost of DC. This analysis was updated in 2014 and is available at:
http://www.nirsonline.org/index.php?option=content&task=view&id=871

DB is more efficient than DC because DB plans:

1. Pool the longevity risks of large numbers of individuals to provide Americans with stable income that won't run out in retirement. Said another way, pensions only have to save for the average life expectancy of a group of individuals. Absent a group retirement plan, individuals must save enough on their own should they be among the half of retirees who will live longer than the average life expectancy. **This DB pension longevity risk pooling feature generates a 10% cost savings.**

2. Are "ageless" and therefore can perpetually maintain an optimally balanced investment portfolio. In contrast, a typical individual investor must down shift investments over time to a lower risk portfolio of cash and bonds, sacrificing higher investment returns generated from stocks. **This DB pension balanced portfolio feature generates an 11% cost savings.**

3. Achieve higher investment returns as compared to individual investors because they have lower fees and are managed by investment professionals. **This lower fees and higher returns DB pension feature generates a 27% cost savings.**

Because DB plans are more efficient, it is reasonable to ask why the private sector has closed or terminated many DB plans over the past 20 years. Research finds that the issues are threefold:

1. 1990's Financial Accounting Standards tying corporate earnings to short term pension swings, while very popular in the high-return 1990's, have been problematic in terms of managing wall street expectations, executive compensation and quarter-to-quarter financial results.
2. ERISA rigid funding requirements make cash flow volatility more significant under DB plans than DC plans
3. The nature of the employment compact has changed, with employee retention becoming less significant. DC plans, which appear more portable, can facilitate corporate layoffs and job mobility.

These three factors are either not applicable in the public sector (FAS and ERISA) or much less significant.

XI. Significantly Higher Investment Fees Likely if DB is Abandoned

Although employees' benefits would be reduced, a move toward DC plans would create one large class of winners – the investment management industry. Many studies demonstrate that management and investment fees for DC plans are higher than those for DB plans. This seems logical when one considers the individual participant education requirements and recordkeeping requirements of DC plans.

If DC plans had been in effect for the past decades, PTA estimates that additional fees would be nearly $100 million per year. This is money which would otherwise be more efficiently spent by pension funds, providing additional benefits to retirees.

XII. Lack of Employer Funding of Current Plans

The PFM report points out in Report 2 that the amount of the increase in unfunded liability due to employer underfunding less than the ARC is only 15% of the total increase. While we find the calculation of this accurate, we believe that this is an incomplete analysis. The employer contributions have proven to be significantly less than the actuarially required contribution (ARC). PFM argues that the actuaries would have been calculating a higher ARC if actuarial assumptions and methods had been more appropriate. But the 15% figure assumes that the employers would have contributed a higher amount if only the actuaries had asked. Presumably the employers made limited contributions because there was a limited capacity for additional contributions. There is no basis to assume that the governmental employers would have stepped up and made the larger contributions had the actuary simply asked.

It is disingenuous to suggest that the significant underfunding is not in large part due to the employers refusing to make actuarially required contributions.

XIII. Need for Qualified Actuarial Opinion

We recommend that a thorough actuarial analysis in accordance with Actuarial Standards of Practice (ASOPs) be conducted to determine if the:

1. Benefit levels are expected to be adequate
2. Actuarial assumption and method changes proposed by PFM are advisable
3. Proposals will generate purported cost savings

While PFM did seek the advice of actuaries in preparation of their analysis, this analysis did not rise to the level of a qualified actuarial opinion as specified under Actuarial Standards of Practice. Such an actuarial opinion is essential before such drastic changes are implemented.

This report is an Actuarial Opinion in accordance with the ASOPs, although not as comprehensive as we are recommending. Calculations have been performed by or under the supervision of William B. Fornia, FSA, and a member of the American Academy of Actuaries, who is qualified to render this actuarial opinion.

XIV. More Conservative Actuarial Assumptions and Methods

PFM has concluded that it is necessary to strengthen the actuarial assumptions and methods, which increase the cost in the short run and paint a more pessimistic view of the status of the already poorly funded plans. While strengthening actuarial assumptions and methods may be worthwhile, tying them to benefit cuts is not appropriate. Proper benefit levels and proper funding policy are two separate issues. Lack of employer funding discipline is not a justification for breaking the inviolable contract or not offering Kentucky public employees a mechanism for adequate retirement.

The KERS assumed rate of return of 5.25%, in particular, is an outlier compared to public funds around the country. According to the February 2017 NASRA Issue Brief, none of the 128 large public plans used a rate lower than 6.5%.

While a level percent of pay amortization is more fiscally responsible, it is perfectly reasonable to solve the unfunded liability problem more gradually. For example, the all-in proposed revised actuarial contribution from the general fund for all plans is $1.23 billion in Fiscal Year 2019, decreasing to $1.18 billion in FY 2029. This represents a 4% decrease over ten years, while inflation alone suggests the general fund budget would increase by 22%. This suggest that Kentucky taxpayers would be paying about 27% more today (in today's dollars) than in ten years. While this is very fiscally conservative, it may not be the best use of today's taxpayer dollars, and might be being used as a pretext for a need to cut pension benefits.

XV. Increased Cost to School Districts

The proposal calls for school districts to begin to pay Social Security. Costs were estimated to be roughly $11 million the first year, escalating to $136 million in FY2029 and $201 million in FY2034. Shortly afterward, it will represent a full 6.2% of total teacher pay. While this may not be significant in the short run, in the long run it will represent one of the largest items in the school district budgets.

XVI. Closing Plans Could Change Asset Allocation, Increasing Long Term Costs

The concept of closing plans increasing costs is complex. Some have argued that a closed plan requires a more immediate funding of the unfunded liability. Others have argued against this point, including the Laura and John Arnold Foundation in "GASB won't let me" – A False Objective to Pension Reform (2012) and the Reason Foundation in The "Transition Costs" Myth – Why Defined-Benefit to Defined-Contribution Pension Reform Is Commonly Misunderstood (2014). The National Institute on Retirement Security released a report of case studies in 2015 on three states (Michigan, Alaska and West Virginia) which had higher costs following their switch to DC.

While the GASB argument is obsolete, transition costs can be overstated, and the experience in the other states may have other contributing factors, there is no question that plans with a longer time horizon can invest in assets with higher expected returns than can plans with a shorter time horizon. This can be particularly problematic for poorly funded plans such as KERS. Experience with corporate pension plans, many of which froze in the last two decades and converted to DC bear this out also.

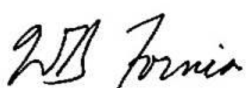
In PTA's involvement with the 2015 TRS Funding Work Group, we calculated that a 1% reduced return (due to changing asset allocation) would increase actuarial costs by 4.9% of pay (about $170 million). This is consistent with experience in the private sector following closing of their plans and converting to DC. While the Commonwealth may choose to maintain the existing asset allocation and take on the risk of more volatile actuarial costs, most plan sponsors have not taken that approach.

Conclusions

Our primary conclusion is that the proposals will provide less than adequate retirement benefits at an increased cost compared to the status quo. We believe that the proposed reform of the currently inadequately funded pension program does not address this significant funding problem in a balanced and cost efficient manner.

We are available to discuss our findings further with your entities or other decision-makers as appropriate. We are also available to provide significant additional detail on our calculations.

Sincerely,



William Fornia, FSA