MINUTES

JOINT COMMITTEE ON PENSIONS, INVESTMENTS, AND BENEFITS

February 26, 2010
Room 152-S—Statehouse

Members Present

Senator Steve Morris, Chairperson
Representative Rob Olson, Vice-chairperson
Representative Geraldine Flaharty, Ranking Minority Member
Senator Anthony Hensley
Senator Laura Kelly
Senator Ruth Teichman
Representative Margaret Long
Representative Richard Proehl
Representative Sharon Schwartz
Representative Jeff Whitham

Members Absent

Senator Jay Emler
Representative Richard Carlson
Representative Dale Swenson

Staff

Julian Efird, Kansas Legislative Research Department
Michael Steiner, Kansas Legislative Research Department
Gordon Self, Office of the Revisor of Statutes
Kristen Kellems, Office of the Revisor of Statutes
Florence Deeter, Committee Secretary

Conferee

Glenn Deck, Executive Director, Kansas Public Employees Retirement System

The Chairperson called the meeting to order at 1:37 p.m. and recognized Julian Efird, Kansas Legislative Research Department, who reviewed three documents as background information for the

Committee: a National Conference of State Legislatures study, "Sustaining State Retirement Benefits: Recent State Legislation Affecting Public Retirement Plans" (Attachment 1); a Pew Center report on "The Trillion-Dollar Gap: Underfunded State Retirement Systems and The Roads to Reform" (Attachment 2); and "Reviewing How the Recent Economic Downturn Has Affected the Kansas Public Employees Retirement System's Funding Situation," a February 2010 Legislative Post Audit report (Attachment 3).

Glenn Deck, Executive Director, Kansas Public Employees Retirement System (KPERS), reviewed KPERS' long-term funding status (Attachment 4). He also provided copies of a notebook, *KPERS Long-Term Funding Status*, to be available in legislative offices (Secretary of the Senate, Clerk of the House, Legislative Administrative Services) and online at the KPERS website: http://www.kpers.org/reports.htm, under *Special Funding Reports—Report to the Legislature's Joint Committee on Pensions, Investments, and Benefits.* He traced KPERS' history through its 48-year existence and commented on various notable events, such as the 1993 15 percent *ad hoc* cost-of-living adjustment, the $4,000 increase in the death benefit, an extension of the amortization period for the unfunded actuarial liability (UAL), changes in the actuarial funding method, and a statutory cap on employer contribution rate increases of 0.1 percent. He noted the 2001 process for developing a comprehensive long-term funding plan to address funding shortfalls and bring KPERS into actuarial balance, a process which accomplished its goals through December 31, 2007.

Mr. Deck stated that the economic downturn of 2008 and 2009 has placed KPERS in actuarial jeopardy again, and he identified the key factors which need to be addressed: the UAL (currently $8.3 billion); the actuarially required contribution (ARC) rates, which presently are believed to be unsustainable for the school group; and the funded ratio (80 percent and rising is required, whereas it is currently 72 percent for the state and 52 percent for the school group).

Mr. Deck listed several options to correct these shortfalls in funding:

- Increase the statutory employer contribution rate cap (currently .6 percent annually);
- Increase employee contribution rates;
- Adjust the statutory multiplier for future service;
- Issue bonds; and
- Create a new mandatory defined contribution plan for future employees.

Mr. Deck distributed information previously provided to the Committee on December 14, 2009 (Attachment 5). He noted that a complete record of information on the issue is available at the offices of the Clerk of the House, the Secretary of the Senate, and Legislative Administrative Services. He concluded by emphasizing the importance of taking action to put KPERS on the road to actuarial health; the more that action is delayed, the more expensive it will be to remedy.

A motion was made by Senator Teichman and seconded by Representative Whitham to:

- *Increase the current cap on the maximum year-to-year increases in employer contributions from .6 percent to 1.0 percent;*

- *Increase the employee contribution rate .5 percent per year for four years to a maximum of 6 percent for KPERS Tier I and 8 percent for KPERS Tier II; and*

- *Increase the current multiplier for retirant benefits calculations from 1.75 percent to 1.85 percent for KPERS Tier I and II.*

Members discussed the motion. A member expressed concern that increasing the employee contribution rate without a commensurate increase in benefits might not pass court muster. Mr. Deck referenced Attachment 5 to illustrate the effect of two options. He replied that changes to Tier I are generally more costly to KPERS than changes to Tier II. A member expressed concern about the financial hardship of an 8 percent contribution for employees.

The motion passed.

By consensus, members agreed to have the bill addressing KPERS' shortfall introduced in the Senate.

The meeting was adjourned at 2:16 p.m. No further meetings were scheduled.

Prepared by Gary Deeter
Edited by Michael Steiner and Julian Efird

Approved by Committee on:

March 15, 2010
(Date)

Attachment 1
TC PIB 2-26-10

NATIONAL CONFERENCE *of* STATE LEGISLATURES

The Forum for America's Ideas

Sustaining State Retirement Benefits: Recent State Legislation Affecting Public Retirement Plans, 2005-2009

Ronald Snell
January 2010

INTRODUCTION

Since 2007, investment losses and the weakness of state and local government revenues have produced extraordinary stress for public retirement funds in the United States. This stress magnified the funding issues retirement funds encountered because of the recession at the turn of the century.

Policy makers' responses are occurring in the context of an additional issue, that of providing for the commitments state and local governments have made for retiree health insurance and other post-employment benefits. These obligations have accumulated gradually for many years. Current accounting rules now require recognition of them. State government liabilities, aside from any local government amounts, have recently been estimated to be as much as $560 billion.

Legislatures and governors began to address pension system issues while the economy was still strong; the recession added urgency to their endeavors to strengthen the funding streams and reduce the long-term costs of their public retirement systems. This report summarizes the most significant features of state public retirement plan changes in 18 states from 2005 through 2009.

In general, states have made a broad range of relatively minor changes to plans, rather than undertaking fundamental change. Their goal has been to adjust rather than radically alter their retirement plans. Several of the states listed in this report have made a number of the following changes at once:

- Increases in employee contributions
- Extending the period over which salary is calculated for the purpose of determining retirement benefits
- Increases in the age or service requirement, or both, for eligibility for retirement benefits
- Anti-spiking provision
- Reductions in or greater controls over post-retirement cost-of-living adjustments

As an example, these are the changes that Kansas enacted in 2008 for newly-hired state employees and teachers in the Kansas Public Employee Retirement System:

- Employee contribution increased from 4% to 6% of salary
- Future cost increases, in the old plan the employer's responsibility, will be shared equally by employees and employers in the new plan.
- The base for calculating final average salary increased from the four highest years to five highest years.
- Age and service requirements were increased to allow retirement at 60 only with 30 years of service and to encourage retirement at 65.
- Included benefits employees had requested, including immediate membership for all members (in place of a six-month wait); vesting in five years (as opposed to 10 years) and a guaranteed post-retirement benefit increase of 2% a year for retirees over age 65.

Although the Kansas legislation included the widest range of policy changes reported here, the kinds of changes in that legislation and the general approach of changing a number of features of the plan in a relatively moderate degree are typical of the state legislation of the period.

Kansas acted in another way typical of most states in the period in choosing to preserve and reform a traditional defined benefit retirement plan (which provides a guaranteed life-time annuity) rather than fundamentally restructure the kind of benefit it provides. Two states in this period did carry out fundamental restructuring of their retirement provisions: Alaska and Georgia. They replaced traditional defined benefit (DB) plans with alternatives. Alaska created defined contribution (DC) plans for teachers and public employees. Georgia enacted a hybrid plan that combines a traditional defined benefit plan with a 401(k) in which all new employees are automatically enrolled.

In recent years, many legislatures have considered replacing a DB plan with a DC plan. Defined contribution plans provide each member with an individual account to which the member and the employer make contributions throughout the member's employment at some percentage of the employee's salary. The member's retirement benefit depends upon the accumulation of contributions and investment earnings in the account when the member retires. The general practice is for the employee to control the investment of his or her account.

At present, DC plans are the basic state retirement plan only for state employees in Michigan, public employees and teachers in Alaska, and state employees in Nebraska, which now uses the variant of a cash balance plan. The District of Columbia also has a DC plan as its primary pension coverage. West Virginia's retirement plan for teachers was a defined contribution plan from 1991 to 2005, when it was closed to new enrollment. Otherwise, and except for higher education, their use in state government takes two forms:

- An alternative to a defined benefit plan that employees may choose to join if they wish to. Examples are Colorado, Florida, Ohio, Montana and South Carolina. A few additional states sponsor DC plans for elected officials, as in Utah and Virginia. In these jurisdictions, a new employee is enrolled in the defined benefit plan unless he or she makes an explicit decision to join the DC plan.

- A component of a mandatory hybrid plan, in which the general practice is for employee contributions to support a defined contribution account and employer contributions to support a defined benefit program. Such plans, with various plan designs, exist in Georgia, Indiana, Oregon and Washington.

In 2005, Alaska became the first state to close statewide DB plans and enroll all new employees in DC plans since Michigan had done so for state employees in 1997.

In 2008, Georgia became the first state to enroll all new employees in a hybrid plan since Washington had created hybrid plans for its teachers and state employees in 1998-2000. Its DB component is funded by both employers and employees but with the employee contribution and potential benefit reduced from the previous state DB plan. All new members will also be enrolled in a 401(k) with a provision for self-directed levels of employee contributions and a limited employer match. Employees may withdraw from the 401(k) plan if they wish to do so.

About this report. In the following chart, major changes in state retirement plan provisions are organized first by topic—for example, employee contribution changes or changes in age and service requirements for retirement eligibility—and then by year and state. The data in this chart are taken from NCSL's annual reports on state pensions and retirement legislation. The complete reports are available on the NCSL website at http://www.ncsl.org/default.aspx?tabid=13399 or by searching on the NCSL website for "Pension and Retirement Plan Enactments."

Major Changes in State Public Retirement Plan Provisions, 2005 – 2009 The changes listed in this chart affect only new hires unless otherwise stated.		
Employee Contributions	Alaska Public Employees and Teachers' Defined Contribution Plans: 2006	Increased employee contribution from defined benefit plan level to 8 % of salary, and provided for a flat employer contribution of 5%.
	Colorado Public Employees: 2006	Additional 1% of salary to fund post-retirement benefit increases
	Iowa Public Employees: 2006	To increase 0.5% a year, 2008-2012, if needed to fully fund the system by 2016
	Kansas Public Employees: 2007	Contribution for new employees was increased from 4% to 6%.
	New Jersey Public Employee System, Teachers' Fund, and defined contribution plan: 2007	Increased to 5.5% (from 5%), and caps the base on which contributions are made at the maximum amount on which Social Security contributions are levied. Effective for current and future employees.
	Iowa Public Employees: 2008	Re-enacts the 2006 legislation on employee contributions and caps the annual increase at 0.5%
	Kentucky Public Employee Retirement Plan: 2008	Additional 1% of salary dedicated to the retiree health insurance plan.
	Nebraska School Employees: 2009	Increase of 1% for five years (current employees).
	New Hampshire Retirement System: 2009	Increased from 5% to 7% of salary for new employees.
	New Jersey Public Employee System, Teachers' Fund, and defined contribution plan: 2007	Increased to 5.5% (from 5%), and caps the base on which contributions are made at the maximum amount on which Social Security contributions are levied. Effective for current and future employees.

	Georgia Public Employees Retirement System: 2009	For new hybrid plan, employee contribution to the defined benefit portion is 1.25% of salary; for personal account may range from 0% to 5% of salary.
	New Mexico Public Employee plan and teachers' plan: 2009	Increase of 1.5% of salary for fiscal years 2010 and 2011, affecting current employees.
Calculation of final average salary, and percentage factor for calculating benefits	Alaska Public Employees and Teachers' Defined Contribution Plans: 2006	No defined retirement benefit; the benefit will depend upon the accumulations in a member's account.
	Louisiana Teachers: 2005	Base for final average salary increased from 36 months to 60 months.
	Rhode Island Public Employees: 2005	Rhode Island applies different multipliers to groups of years of service. As service grows longer, the multiplier increases. The scale was reduced for shorter mounts of service in 2005. The former highest multiplier was 3.0%; under new law, the highest multiplier is 2.5%. The cap of benefits as a percent of final average salary was reduced from 80% to 75%.
	Kansas Public Employees: 2007	Base for final average salary increased from four years to five years.
	New Jersey State and Local Plans: 2007	Limited to salary on which Social Security tax is levied.
	North Dakota Teachers: 2007	Base for final average salary increased from 36 months to 60 months.
	Kentucky Public Employees 2008	Benefit percentage previously was 1.97%; changed to range from 1.1% to 1.7 percent depending on years of service. For years in excess of 30, a factor of 2% applies.
	Georgia Public Employees: 2009	For the member account, the benefit base will be the accumulation in the account. For the defined benefit portion, the multiplier was reduced from 2% to 1%.

	Nevada Public Employees Retirement System: 2009	Formerly allowed a benefit factor of 2.67% for service after July 1, 2001. This was reduced to 2.5%.
	Rhode Island Public Employees System: 2009	Base for final average salary increased from three highest consecutive years to five highest consecutive years.
	New York State & Local Employees: 2009	Increased the minimum retirement age from 55 to 62; increased the minimum retirement age for the NY State Teachers system from 55 to 57 with 30 years of service.
Age and Service Requirements for Normal Retirement	Alaska Public Employees and Teachers' Defined Contribution Plans: 2006	No state restrictions, but receipt of benefits is subject to federal rules governing withdrawals from individual retirement accounts.
	Colorado Public Employees: 2006	Rule of 85 replaces the Rule of 80.
	Louisiana Teachers: 2005	Minimum age of 60, up from 55.
	Rhode Island Public Employees System: 2005	Previous law allowed general employees to retire at age 60 with 10 years or service or any age with 28 years. New law for new and non-vested employees allows normal retirement at age 65 with 10 years of service or age 59 with 29 years of service. For current employees, the minimum age of eligibility for retirement will vary with length of service.
	Kansas Public Employees: 2007	Increased from age 65, or age 62 with 10 years of service, or the Rule of 85, to age 65 with five years of service or age 60 with 30 years of service; the Rule of 85 will not apply.
	New Jersey State and Local: 2007 and 2008	Prohibited contractual employees from earning service credit. Raised normal retirement age for public employees and teachers' systems from 60 to 62 for those who become members after the effective date of the bill (previously 55/25 or age 60).

	North Dakota Teachers: 2007	Rule of 90 instead of the Rule of 85; 5 year service minimum for benefits.
	Kentucky Public Employees Retirement System: 2008	Previously allowed general employees to retire at age 65 with four years of service, or any age with 27 years of service. For subsequent hires, it will be age 57 with 30 years of service; rule of 87 (with minimum age of 57); 65 with five years of service.
	Nevada Public Employee Retirement System: 2009	Previously allowed general members to retire at age 60 with 10 years of service; revised to age 62 with 10 years of service. For new police and firefighter members, the eligible age for retirement after 10 years of service is raised from age 55 to age 60 and the former option to retire at any age after 25 years of service was eliminated.
	Texas Employee Retirement System: 2009	Minimum eligibility at age 65 with 10 years of service rather than 60/5; or the Rule of 80.
Anti-Spiking Provisions	Colorado Public Employees: 2006	Annual salary growth for calculation of benefit capped at 8%.
	Iowa Public Employees: 2006	Annual salary growth for calculation of benefit capped at about 7%
	Louisiana State Employee System: 2005	Annual salary growth for calculation of benefit capped at 15%, down from 25%
	Kansas Public Employees: 2007	Annual salary growth for calculation of benefit capped at 7.5%, down from 15%
	New Hampshire, all members: 2008	If compensation in the final year of service exceeds 125% of final average compensation, the retiree's last employer will be assessed the cost of the excess benefit.
	Nevada Public Employees' Retirement System: 2009	Annual salary growth for calculation of benefit capped at 10% for last five years of service.

	Georgia all systems: 2009.	For all members, the employer must pay the system the actuarial cost of benefits whose calculation includes a pay increase of more than 5% in the last 12 months before retirement; for future employees, such salary increases will not be included in the benefit calculation.
Post-Retirement Increases	Alaska Public Employees and Teachers' Defined Contribution Plans: 2006.	DB plan provided annual automatic adjustments; no provision for post-retirement increases in the defined contribution plans.
	Colorado Public Employees: 2006.	Capped at 3% per year (previously 3.5%) or less depending on the consumer price index (CPI).
	Missouri local government plans: 2006.	Allowable only in plans that are at least 80% funded; must be amortized over 20 years.
	Kansas Public Employees: 2007.	For all pre-retirement employees, provided an annual adjustment of 2% in place of ad hoc adjustments.
	Georgia, all systems: 2009.	Future post-retirement increases are prohibited for public employees hired after July 1, 2009.
	Iowa Public Employees: 2006.	No future benefit increases without increases in contribution rates.
	Kentucky Public Employee Retirement Plan: 2008.	Replaced a COLA at the rate of the consumer price index, capped at 5%, with an annual 1.5%, for all future retirees.
	Louisiana State Employees: 2009.	Future permanent benefit increases require age of 60 for eligibility (previously age 55) and link them to the system's actuarial funding level and investment return.

	Vermont Retirement System: 2008	Replaces the existing-law COLA, which is an annual adjustment equal to 50% of the CPI, whether positive or negative. For active members as of June 30, 2008 who retire after July 1, 2008, the COLA will be the CPI percentage or at least 1%, to a maximum of 5%, beginning on January 1, 2014. Members' contribution rates are increased from 3.25% to 5% until July 1, 2019, when the contribution rate will fall to 4.75%. The additional cost of the COLA will be amortized separately from the existing UAAL over 30 years.
Vesting	Alaska defined contribution plans: 2006	Employee contributions to the individual account are immediately vested and employer contributions are vested gradually with 100% vesting after five years of service.
	Mississippi Public Employees: 2007	Vesting period increased from four years to eight years.
	North Dakota Teachers: 2007	Vesting period increased from three years to five years.
	Kentucky Public Employee Retirement Plan: 2008	Vesting period for retiree health insurance benefits increased from 10 years to 15 years.
	Georgia hybrid plan: 2009	Vesting for the defined benefit portion of the plan remains at 10 years. Employee contributions to the individual account are immediately vested and employer contributions are vested gradually with 100% vesting after five years of service.
	New York State and Local Employees System, and the State Teachers System: 2009	Increased vesting requirement for new employees from five years to 10 years.

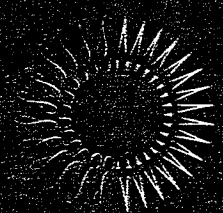
SOURCES

This report is based on NCSL's annual compilation of state legislation concerning pensions and retirement plans. The annual reports are available on the NCSL website at http://www.ncsl.org/default.aspx?tabid=13399

The trillion dollar gap

Underfunded state retirement systems and the roads to reform

Attachment 2
JCPIB 2-26-10



THE PEW CENTER ON THE STATES

FEBRUARY 2010

Executive Summary

Of all of the bills coming due to states, perhaps the most daunting is the cost of pensions, health care and other retirement benefits promised to their public sector employees. An analysis by the Pew Center on the States found that at the end of fiscal year 2008, there was a $1 trillion gap between the $2.35 trillion states and participating localities had set aside to pay for employees' retirement benefits and the $3.35 trillion price tag of those promises.[1]

To a significant degree, the $1 trillion gap reflects states' own policy choices and lack of discipline: failing to make annual payments for pension systems at the levels recommended by their own actuaries; expanding benefits and offering cost-of-living increases without fully considering their long-term price tag or determining how to pay for them; and providing retiree health care without adequately funding it.

Pew's figure actually is conservative, for two reasons. First, it counts total assets in state-run public sector retirement benefit systems as of the end of fiscal year 2008, which for most states ended on June 30, 2008—so the total does not represent the second half of that year, when states' pension fund investments were devastated by the market downturn before recovering some ground in calendar year 2009. Second, most states' retirement systems allow for the "smoothing" of gains and losses over time, meaning that the pain of investment declines is felt over the course of several years. The funding gap will likely increase when the more than 25 percent loss states took in calendar year 2008 is factored in.[2]

Many states had fallen behind on their payments to cover the cost of promised benefits even before they felt the full weight of the Great Recession. When Pew first delved into the realm of public sector retirement benefits in December 2007, our report, *Promises with a Price: Public Sector Retirement Benefits*, found that only about a third of the states had consistently contributed at least 90 percent of what their actuaries said was necessary during the previous decade.[3] Since that time, pension liabilities have grown by $323 billion, outpacing asset growth by more than $87 billion.[4] Pew's analysis, both then and now, found that many states shortchanged their pension plans in both good times and bad. Meanwhile, a majority of states have set aside little to no money to pay for the burgeoning costs of retiree health care and other non-pension benefits.

As pension funding levels declined over the past decade from states' failures to fully pay for their retirement obligations as well as investment losses from the bursting of the dot-com bubble, states found their annual required contributions going up. In 2000, when pension systems were well funded, states and participating local governments had to pay $27 billion to adequately fund promised benefits. By 2004, following the 2001 recession, their annual payment for state-run pensions should have increased to $42 billion. In fiscal year 2008, state and participating local governments were on the hook for more than $64 billion, a 135 percent increase from 2000. In 2009 and going forward, that number is certain to be substantially higher. Similarly, to have adequately funded retiree health care benefits in fiscal year 2008, state and local governments would have needed to contribute $43 billion, a number that will grow as more public employees retire and as health care costs increase.

In sum, states and participating localities should have paid about $108 billion in fiscal year 2008

to adequately fund their public sector retirement benefit systems. Instead, they paid only about $72 billion.

In states with severely underfunded public sector retirement benefit systems, policy makers often have ignored problems in the past. Today's decision-makers and taxpayers are left with the legacy of that approach: high annual costs that come with significant unfunded liabilities, lower bond ratings, less money available for services, higher taxes and the specter of worsening problems in the future.

Although investment income and employee contributions help cover some of the costs, money to pay for public sector retirement benefits also comes from the same revenues that fund education, public safety and other critical needs—and the current fiscal crisis is putting a tight squeeze on those resources. Between the start of the recession in December 2007 and November 2009, states faced a combined budget gap of $304 billion, according to the National Conference of State Legislatures (NCSL)—and revenues are expected to continue to drop during the next two years.[5] Given these circumstances—and the certainty that the challenges will worsen if they are not addressed—a growing number of states are considering reforms that can put their public sector retirement benefit systems on better fiscal footing.

To help policy makers and the public understand these challenges and their implications, Pew graded all 50 states on how well they are managing their public sector retirement benefit obligations.

Pew's analysis comes from an intensive review of data compiled and reported by the states—information that is publicly available but not easily accessible. Pew collected data on all state-administered retirement plans directly from states' own Comprehensive Annual Financial Reports (CAFRs), pension plan system annual reports and actuarial valuations. Once the information was assembled, researchers sent the data back to the states' pension directors to verify their accuracy.[6] In addition, interviews were conducted with representatives of pension plans in 50 states to provide perspective, case studies and an understanding of the trends and themes underlying the data. Pew researchers analyzed these data to assess the funding performance of 231 state-administered pension plans and 159 state-administered retiree health care and other benefit plans, including some plans covering teachers and local employees.

States have a lot of leeway in how they compute their obligations and present their data, so three main challenges arise in comparing their numbers. First, states vary in their smoothing practices—that is, how and when they recognize investment gains and losses. While most states acknowledge them over a number of years, several show their full impact immediately. Second, most states conduct actuarial valuations on June 30, but 15 perform them at other times, such as December 31. The severe investment losses in the second half of 2008 mean that states that do not smooth and that conduct their asset valuations in December will show pension funding levels that will appear worse off than states that did so on June 30. However, this also means that such states' numbers are likely to show a faster recovery than other states. (In addition, when investments were doing extremely well, their data reflected the full gains immediately, while other states smoothed those gains over time.) Finally, other factors also can impact states' asset and liability estimates, such as assumptions of investment returns, retirement ages and life spans. (See Appendix A for a full explanation of our methodology.) Pew attempted to note these differences whenever possible.

Key Findings

Public sector retirement benefits provide a reliable source of post-employment income for government workers, and they help public employers retain qualified personnel to deliver essential public services. Some states have been disciplined about paying for their policy choices and promises on an ongoing basis. But for those that have not, the financial pressure builds each year.

Among the key findings of Pew's analysis:

Pensions

- In fiscal year 2008, which for most states ended on June 30, 2008, states' pension plans had $2.8 trillion in long-term liabilities, with more than $2.3 trillion socked away to cover those costs (see Exhibit 1).
- In aggregate, states' systems were 84 percent funded—a relatively positive outcome, because most experts advise at least an 80 percent funding level.[7] Still, the unfunded portion—almost $452 billion—is substantial, and states' overall performance was down slightly from an 85 percent combined funding level, against a $2.3 trillion total liability, in fiscal year 2006. These pension bills come due over time, with the current liability representing benefits that will be paid out to both current and future retirees. Liabilities will continue to grow and, as more workers approach retirement, the consequences of delayed funding will become more pronounced.
- Some states are doing a far better job than others of managing this bill coming due. States such as Florida, Idaho, New York, North Carolina and Wisconsin all entered the current recession with fully funded pensions.
- In 2000, slightly more than half the states had fully funded pension systems. By 2006, that number had shrunk to six states. By 2008, only four—Florida, New York, Washington and Wisconsin—could make that claim.
- Many states are struggling. While only 19 states had funding levels below the 80 percent mark in fiscal year 2006, 21 states were funded below that level in 2008:[8]

Alabama	Massachusetts
Alaska	Mississippi
Colorado	Nevada
Connecticut	New Hampshire
Hawaii	New Jersey
Illinois	Oklahoma
Indiana	Rhode Island
Kansas	South Carolina
Kentucky	West Virginia
Louisiana	Wyoming
Maryland	

  In eight states—Connecticut, Illinois, Kansas, Kentucky, Massachusetts, Oklahoma, Rhode Island and West Virginia—more than one-third of the total liability was unfunded.

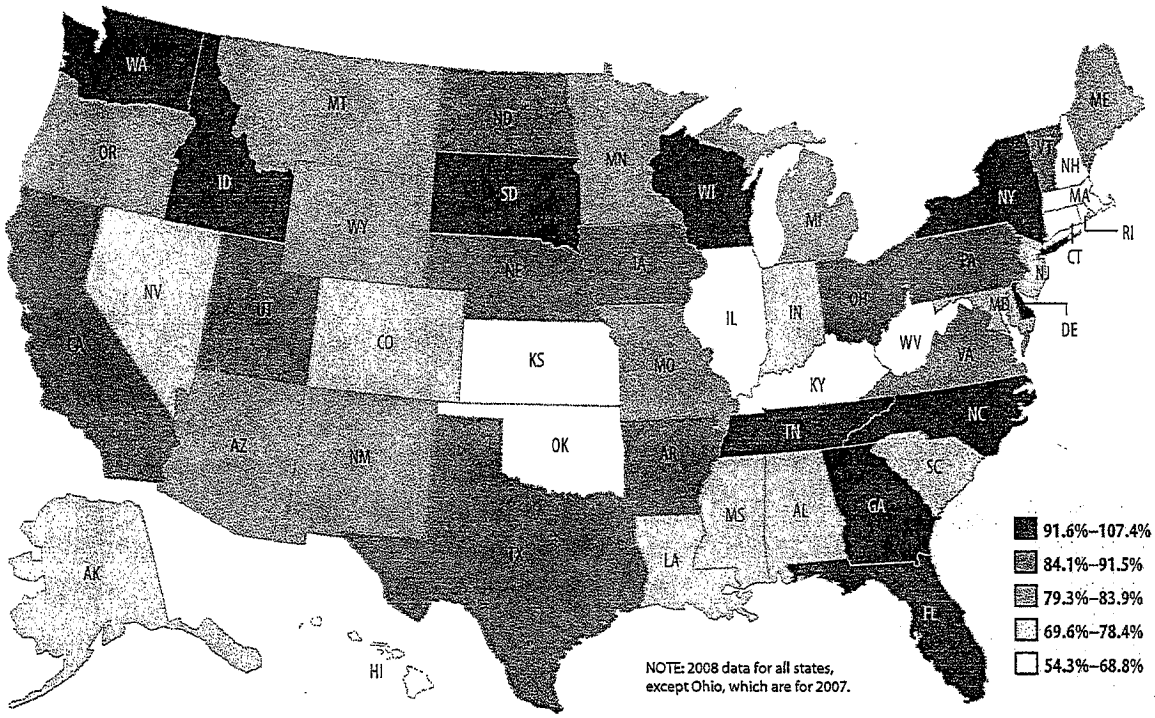
  Two states had less than 60 percent of the necessary assets on hand to meet their long-term pension obligations: Illinois and Kansas. Illinois was in the worst shape of any state, with a funding level of 54 percent and an unfunded liability of more than $54 billion.

- While states generally are more cautious about increasing benefits than they were in the early part of this decade, many have been lax in providing the annual funding that is necessary to pay for them. During the past five years, 21 states failed to make pension contributions that average out to at least 90 percent of their actuarially required contributions—the amount of money, determined by actuaries, that a state needs to pay in a current year for benefits to be fully funded in the long term.

2-4

Exhibit 1

STATE PENSION FUNDING LEVELS



Figures are in thousands.

State	Latest liability	Latest unfunded liability	Annual required contribution	Latest actual contribution
Alabama	$40,206,232	$9,228,918	$1,069,214	$1,069,214
Alaska	14,558,255	3,522,661	282,656	300,534
Arizona	39,831,327	7,871,120	1,023,337	1,035,557
Arkansas	21,551,547	2,752,546	555,147	556,755
California	453,956,264	59,492,498	12,376,481	10,469,213
Colorado	55,625,011	16,813,048	1,141,081	779,644
Connecticut	41,311,400	15,858,500	1,248,860	3,243,647
Delaware	7,334,478	129,359	149,614	144,358
Florida	129,196,897	-1,798,789	3,005,387	3,130,378
Georgia	75,897,678	6,384,903	1,275,881	1,275,881
Hawaii	16,549,069	5,168,108	488,770	510,727
Idaho	11,526,600	772,200	256,400	285,400
Illinois	119,084,440	54,383,939	3,729,181	2,156,267
Indiana	35,640,073	9,825,830	1,232,347	1,275,191
Iowa	24,552,217	2,694,794	453,980	389,564
Kansas	20,106,787	8,279,168	607,662	395,588
Kentucky	34,094,002	12,328,429	859,305	569,913
Louisiana	38,350,804	11,658,734	1,160,051	1,337,933
Maine	13,674,901	2,782,173	305,361	305,361
Maryland	50,561,824	10,926,099	1,208,497	1,077,796
Massachusetts	58,817,155	21,759,452	1,226,526	1,368,788
Michigan	70,354,300	11,514,600	1,249,909	1,392,709
Minnesota	57,841,634	10,771,507	1,036,509	767,295
Mississippi	29,311,471	7,971,277	662,900	643,356
Missouri	52,827,423	9,025,293	1,219,871	1,072,027
Montana	$9,632,853	$1,549,503	$201,871	$211,914
Nebraska	8,894,328	754,748	169,068	169,068
Nevada	30,563,852	7,281,752	1,262,758	1,174,837
New Hampshire	7,869,189	2,522,175	251,764	189,134
New Jersey	125,807,485	34,434,055	3,691,740	2,107,243
New Mexico	26,122,238	4,519,887	667,691	591,279
New York	141,255,000	-10,428,000	2,648,450	2,648,450
North Carolina	73,624,027	504,760	675,704	675,056
North Dakota	4,193,600	546,500	80,928	59,900
Ohio	148,061,498	19,502,065	2,632,521	2,369,045
Oklahoma	33,527,899	13,172,407	1,245,646	986,163
Oregon	54,260,000	10,739,000	707,400	707,400
Pennsylvania	105,282,637	13,724,480	2,436,486	986,670
Rhode Island	11,188,813	4,353,892	219,864	219,864
South Carolina	40,318,436	12,052,684	902,340	902,365
South Dakota	7,078,007	182,870	95,766	95,766
Tennessee	32,715,771	1,602,802	838,259	825,259
Texas	148,594,953	13,781,228	1,871,409	1,854,968
Utah	22,674,673	3,611,399	641,690	641,690
Vermont	3,792,854	461,551	83,579	78,743
Virginia	65,164,000	10,723,000	1,486,768	1,375,894
Washington	54,322,900	-179,100	1,545,600	967,900
West Virginia	13,642,584	4,968,709	481,703	510,258
Wisconsin	77,412,000	252,600	644,800	644,800
Wyoming	6,989,764	1,444,353	163,994	108,017

NOTE: All figures listed above for Ohio are for 2007. The 2008 contribution figures for Ohio are $2,263,766 (actuarially required) and $2,262,847 (actual).

SOURCE: Pew Center on the States, 2010.

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Health Care and Other Non-pension Benefits

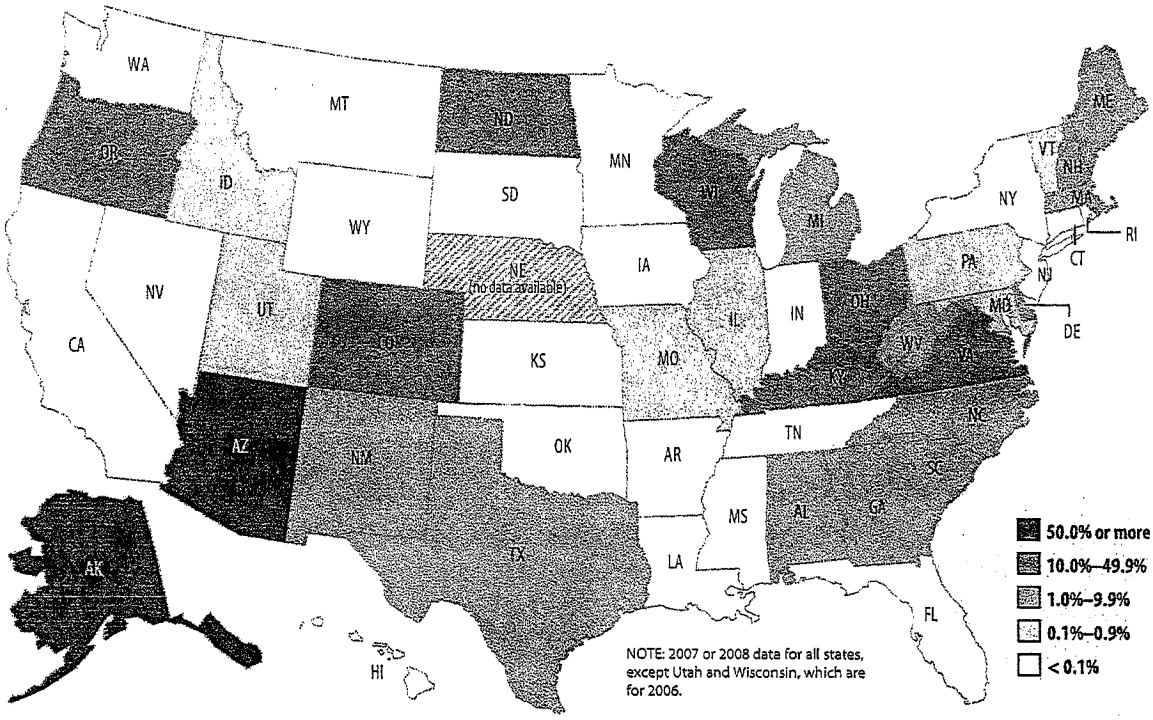
- Retiree health care and other non-pension benefits create another huge bill coming due: a $587 billion total liability to pay for current and future benefits, with only $32 billion—or just over 5 percent of the total cost—funded as of fiscal year 2008. Half of the states account for 95 percent of the liabilities.
- In general, states continue to fund retiree health care and other non-pension benefits on a pay-as-you-go basis—paying medical costs or premiums as they are incurred by current retirees. For states offering minimal benefits, this may cause little problem. But for those that have made significant promises, the future fiscal burden will be enormous.
- Only two states had more than 50 percent of the assets needed to meet their liabilities for retiree health care or other non-pension benefits: Alaska and Arizona (see Exhibit 2). Only four states contributed their entire actuarially required contribution for non-pension benefits in 2008: Alaska, Arizona, Maine and North Dakota.
- Both health care costs and the number of retirees are growing substantially each year, so the price tag escalates far more quickly than average expenditures. States paid $15 billion for non-pension benefits in 2008. If they had started to set aside funding to pay for these long-term benefits on an actuarially sound basis, the total payments would have been $43 billion.

Investment Losses and Future Implications

- The recession, which officially began in December 2007, dealt a severe blow to all state pension systems. In calendar year 2008, public sector pension plans experienced a median 25 percent decline in their investments.[9] These losses generally are not fully reflected in the fiscal year 2008 data, because most state pension systems use a fiscal year that ends on June 30.
- A look at the 2008 investment losses for a selection of states suggests that despite the improvement in the market in 2009, the financial picture for states' retirement systems in fiscal year 2009 and beyond will be considerably worse (see Exhibit 3).
- All but three states—Idaho, Oregon and West Virginia—use a smoothing process in which investment gains and losses are recognized over a number of years.[10] Smoothing is a way of managing state expenditures by preventing contribution rates from suddenly jumping or dropping. The number of smoothing years varies, with five years being the most common. Because only a portion of the 2008 losses will be recognized each year, there is a great likelihood that pension funding levels will be dropping for the next four to five years. This is what happened after state pension systems sustained the less extreme investment losses associated with the market downturn of 2001-2003.[11] Although investment returns were generally very good in 2004, 2005 and 2006, the funding levels for most pension systems continued on a downward path until 2007, when investment returns were strong and the bad years began to drop out of the calculations.
- Given the experience of the past decade, pension plan investment losses in 2008 raise the question of whether it remains reasonable for states to count on an 8 percent investment return over time—the most common assumption for all 231 state-administered pension plans examined for this report. Some experts in the field suggest that an assumed 8 percent yield is unrealistic for the near future.[12] In addition, it will take consistently higher levels of investment returns over a number of years for states to make up their losses from 2008 and 2009.

Exhibit 2

STATE RETIREE HEALTH CARE AND OTHER NON-PENSION BENEFITS



Figures are in thousands.

State	Latest liability	Latest unfunded liability	Annual required contribution	Latest actual contribution
Alabama	$15,950,194	$15,549,411	$1,313,998	$1,107,831
Alaska	9,146,629	4,032,052	558,041	600,903
Arizona	2,322,720	808,818	146,198	146,198
Arkansas	1,822,241	1,822,241	170,177	38,119
California	62,466,000	62,463,000	5,178,789	1,585,295
Colorado	1,385,954	1,127,179	81,523	25,877
Connecticut	26,018,800	26,018,800	1,718,862	484,467
Delaware	5,489,000	5,409,600	464,600	176,548
Florida	3,081,834	3,081,834	200,973	87,825
Georgia	19,100,171	18,322,123	1,583,008	422,157
Hawaii	10,791,300	10,791,300	822,454	299,466
Idaho	493,746	489,421	45,494	17,695
Illinois	40,022,030	39,946,678	1,192,336	159,751
Indiana	442,268	442,268	45,963	10,218
Iowa	404,300	404,300	42,991	16,613
Kansas	316,640	316,640	16,039	5,105
Kentucky	13,008,572	11,660,245	1,051,372	259,912
Louisiana	12,542,953	12,542,953	1,168,087	269,841
Maine	4,399,800	4,347,702	164,045	196,053
Maryland	14,842,304	14,723,420	1,086,240	390,319
Massachusetts	15,305,100	15,031,600	838,700	701,992
Michigan	40,668,800	39,878,500	3,946,416	1,207,746
Minnesota	1,011,400	1,011,400	109,982	46,677
Mississippi	570,248	570,248	43,627	0
Missouri	2,867,472	2,851,826	262,215	151,629
Montana	$631,918	$631,918	$58,883	$0
Nebraska does not calculate its liability for retiree health care and other benefits.				
Nevada	2,211,439	2,211,439	287,217	59,167
New Hampshire	3,229,375	3,054,188	268,848	112,038
New Jersey	68,900,000	68,900,000	5,022,100	1,249,500
New Mexico	3,116,916	2,946,290	286,538	92,121
New York	56,286,000	56,286,000	4,133,000	1,264,000
North Carolina	29,364,734	28,741,560	2,459,469	597,176
North Dakota	123,776	81,276	6,085	6,450
Ohio	43,759,606	27,025,738	2,717,364	855,937
Oklahoma	359,800	359,800	48,200	0
Oregon	868,393	609,793	67,126	45,385
Pennsylvania	10,048,600	9,956,800	823,500	745,600
Rhode Island	788,189	788,189	46,125	28,378
South Carolina	8,791,792	8,638,076	762,340	241,383
South Dakota	76,406	76,406	9,429	3,505
Tennessee	1,746,879	1,746,879	167,787	63,140
Texas	29,340,584	28,611,584	2,236,952	592,507
Utah	677,499	672,843	53,969	53,289
Vermont	1,618,245	1,614,581	107,506	17,776
Virginia	3,963,000	2,621,000	541,163	446,321
Washington	7,901,610	7,901,610	682,797	156,294
West Virginia	6,362,640	6,108,398	174,842	143,582
Wisconsin	2,237,204	1,700,396	205,116	90,134
Wyoming	174,161	174,161	19,292	7,324

SOURCE: Pew Center on the States, 2010.

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How States Have Responded

For many years, lawmakers in a number of states put off dealing with the challenges posed by their public sector retirement systems. But for many governors and state legislators, a convergence of factors has made the issues too critical to ignore. Policy makers that have underfunded their states' liabilities in the past now find they owe far more annually as a result—and if they postpone paying the bill any longer, the debt will increase even more significantly. This will leave their states, and tomorrow's taxpayers, in even worse shape, since every dollar needed to feed that growing liability cannot be used for education, health care or other state priorities. Steep investment losses in pension plan funds in the past two years signal that states cannot simply sit back and hope the stock market delivers returns large enough to cover the costs. Meanwhile, more and more baby boomers in state and local government are nearing retirement, and many will live longer than earlier generations—meaning that if states do not get a handle on the costs of post-employment benefits now, the problem likely will get far worse, with states facing debilitating costs.

Momentum for reform is building. Fifteen states passed legislation to reform some aspect of their state-run retirement systems in 2009, compared with 12 in 2008 and 11 in 2007. States similarly enacted a series of reforms following the 2001 recession, with 18 states making changes in 2003, compared with only five in 2002 and nine in 2001.[13] And many states are likely to explore options in their 2010 legislative sessions. At least a third of the states have study commissions, task forces or other research initiatives to examine the possibilities for reform.

Because there are legal restrictions on reducing pensions for current employees in most states, the majority of changes in the past two years were made to new employee benefits. Ten states increased the contributions that current and future employees make to their own benefit

Exhibit 3

INVESTMENT LOSSES IN 2008 FOR SELECT STATE PENSION PLANS

State	Plan name	2008 percentage investment loss
Pennsylvania	Pennsylvania State Employees' Retirement System	-28.7%
Ohio	Ohio Public Employees Retirement System	-26.8%
Pennsylvania	Pennsylvania Public School Employees' Retirement System	-26.5%
California	California Public Employees' Retirement System	-23.0%
Illinois	Teachers' Retirement System of the State of Illinois	-22.3%
Oregon	Oregon Public Employees Retirement System	-22.2%
Indiana	Indiana Employees' Retirement Fund	-21.0%
Virginia	Virginia Retirement System	-21.0%
Maryland	State Retirement and Pension System of Maryland	-20.0%
Missouri	Missouri Public School Retirement System	-19.3%
New Jersey	New Jersey Division of Pensions and Benefits	-19.0%
North Carolina	North Carolina Retirement Systems	-14.0%
Georgia	Georgia Teachers Retirement System	-13.1%

SOURCE: Pew Center on the States, 2010.

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systems, while ten states lowered benefits for new employees or set in place higher retirement ages or longer service requirements.[14] (See Exhibit 4.)

Reforms largely fell into five categories: 1) keeping up with funding requirements; 2) reducing benefits or increasing the retirement age; 3) sharing the risk with employees; 4) increasing employee contributions; and 5) improving governance and investment oversight.

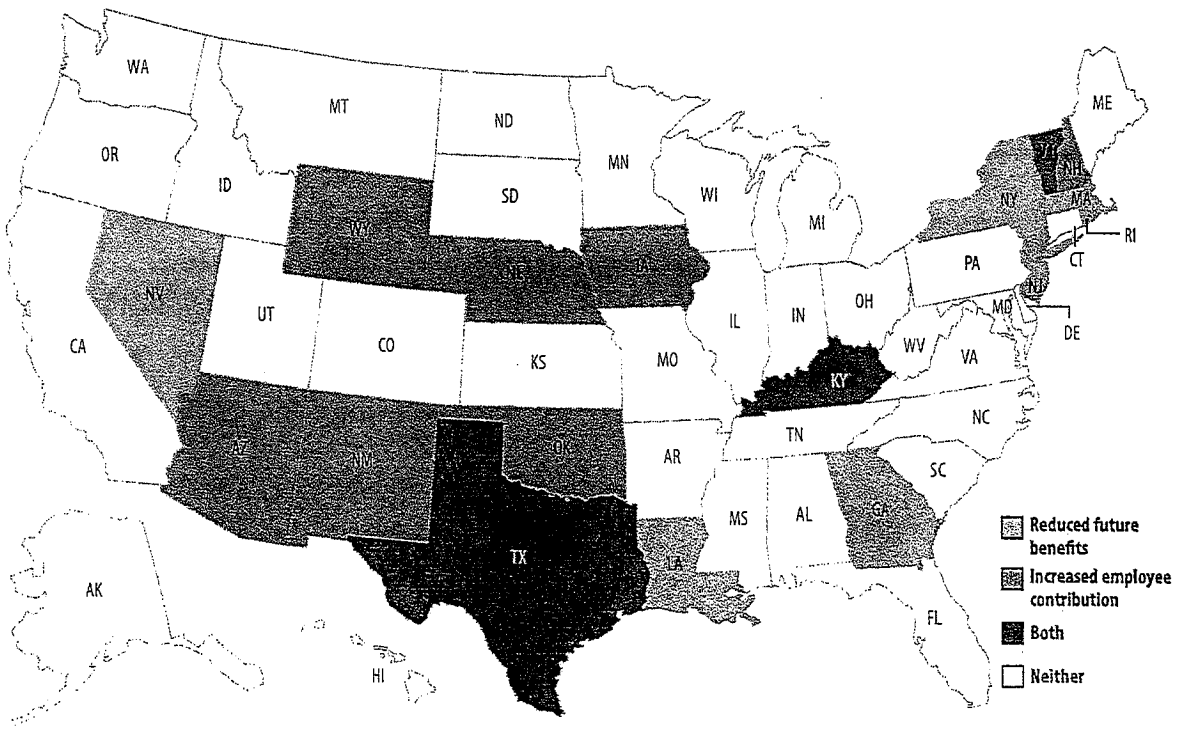
Keeping up with funding requirements

Generally, the states in the best shape are those that have kept up with their annual funding requirements in both good times and bad. In some states, such as Arizona, a constitutional or statutory requirement dictates that this payment is made. In early 2008, Connecticut issued a $2 billion bond to help fund the teachers' pension system, with a covenant that required the state to fully fund that plan based on actuarial assessments.

Making the payment required by actuaries is only part of the battle. States also need to make sure the assumptions used in calculating the payment amount are accurate—for example, estimating the lifespan of retirees or the investment returns they expect. As noted earlier, some states are now questioning whether, over the long term, investment return assumptions have been too optimistic. In 2008, Utah reduced its investment assumption from 8 percent to 7.75 percent,[15] and in 2009 the Pennsylvania State Employees Retirement System lowered its assumption from 8.5 percent to 8 percent.[16] Although the median investment return for pension plans over the past 20 years averaged over 8 percent, some experts in the field, including

Exhibit 4

STATE PENSION POLICY REFORMS, 2008–2009



SOURCE: Pew Center on the States, 2010.

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renowned financier and investor Warren Buffett, believe even those assumptions are too high.[17] By comparison, the Financial Accounting Standards Board requires that private sector defined benefit plans use investment return assumptions based on the rates on corporate bonds. As of December 2008 the top 100 private pensions had an average assumed return of 6.36 percent.[18]

Reducing benefits or increasing the retirement age

Several states reduced benefits for new employees either by altering the pension formula or raising retirement ages.

In 2008 and 2009, Kentucky, Nevada, New Jersey, New York, Rhode Island and Texas reduced benefits offered to new employees or raised the retirement age, according to NCSL.[19]

For example, in Nevada, employees hired after January 1, 2010, will have their annual pension benefits calculated using a new formula. In the past, the state multiplied the number of years of service by 2.67 to derive the percentage of salary to be replaced by pension benefits. That number has dropped to 2.5 percent. Nevada's employees also will have to work until age 62, instead of age 60, to retire with 10 years of service.

New York lawmakers in December raised the minimum retirement age from 55 to 62 for new hires, increased the minimum years of service required to draw a pension from five years to 10, and capped the amount of overtime used in calculating benefits. Teachers have a separate benefit structure that raises the minimum retirement age from 55 to 57, boosts the employee contribution rate from 3 percent to 3.5 percent of annual wages and increases the 2 percent multiplier threshold for pension calculations from 20 to 25 years.[20]

Rhode Island went a step further than other states by applying its change in retirement age to current workers, not just new ones. New workers will have a retirement age of 62, up from 60, while the minimum retirement age for current workers will depend on their length of service.

Overall, four states took legislative action to reduce retiree health care and other non-pension benefits for employees in 2008, and seven did so in 2009. Vermont, for example, changed the vesting period for receiving full health care benefits so that a new employee now has to work 10 years to receive 40 percent coverage on health premiums and 20 years to get the full 80 percent coverage. Employees hired before July 1, 2008, only have to work five years to qualify for 80 percent coverage.[21]

Some additional states reduced retiree health care benefits through administrative or executive branch actions. For instance, West Virginia's Public Employees Insurance Agency decided last summer that it would no longer pay its share of the premium for employees hired after July 1, 2010. It paid 71 percent of the costs for employees hired before that date. Several lawsuits have been filed in response.

In the past, some states such as Georgia, North Carolina and Tennessee required that any proposals that will affect pension benefits or costs receive a full actuarial analysis to determine its long-term price tag.[22] This goes for changes in retirement ages, cost-of-living adjustments, any change in the time needed to vest in a system, or any adjustment to the pension formula. In 2008, California passed a law that requires both state and local decision-making bodies to review potential future costs before increasing any non-pension benefits. It also requires actuaries to be present when pension benefit increases are discussed.

Forcing policy makers to responsibly identify the cost and potential funding sources for benefit increases can help states avoid offering unfunded benefit hikes. State and local governments still can

offer or increase benefits, but this additional step ensures that costs will be thoroughly considered in advance. Although such reforms will not reduce existing liabilities, they can keep state policy makers from making the funding situation worse.

Sharing the risk with employees

A few states have taken a step toward sharing more of the risk of investment loss with employees by introducing benefit systems that combine elements of defined benefit and defined contribution plans. These hybrid systems generally offer a lower guaranteed benefit, while a portion of the contribution—usually the employees' share—goes into an account that is similar to a private sector 401(k). For example, Nebraska's "cash balance" plan, enacted in 2003, is described by one state official as a "defined benefit plan, with a defined contribution flair."[23] As in a traditional defined contribution account, the employee's payout on retirement is based on what is in the account, not on a set benefit. But some protection is offered to employees through a guaranteed annual investment return of 5 percent.

In 2008, Georgia introduced its own hybrid system for new employees hired after January 1, 2009. The defined benefit portion provides about half the benefit of the plan for employees hired before that point, but there also is a defined contribution portion in which the state matches employee contributions in a 401(k)-style savings plan. New employees automatically are enrolled in the savings plan at a 1 percent contribution rate, but may opt out at any time.[24]

No states moved completely away from defined benefit plans in the past two years.[25] The last two that took any steps in this direction were Alaska, which moved new employees to a defined contribution plan in 2005, and Michigan, which moved new state employees to a defined contribution approach in 1997. In light of severe investment losses in 2008 and 2009 that resulted in decreased pension funding levels, policy makers are once again openly discussing defined contribution plans. Louisiana lawmakers, for instance, are looking at the recommendations of a pension panel that studied making this switch.[26] Other states where this has been mentioned by policy makers include Florida, Kansas and Utah.[27] Because unions and other employee representatives often have vigorously opposed defined contribution plans, it is unclear whether any state will find such a switch viable, or if such plans are primarily being proposed as a starting point for hybrid plans or other compromises.

Increasing employee contributions

Employees already contribute about 40 percent of non-investment contributions to their own retirement. But states are looking toward their workers to pay for a larger share. In many states, the employee contribution is fixed at a lower rate than the employer contributions. But some states have more flexibility. In Arizona, for example, the pension system is designed so that general (non-public safety) employees and employers each pay equal shares of the annual contribution. If the employer contribution goes up, so does the employee's. According to Arizona pension officials, this tends to increase the attention that employees give to the health of the pension system and increases pressure to keep it well funded.[28]

Some states, such as Iowa, Minnesota and Nebraska, have the ability to raise employee pension contributions if needed. Iowa and Minnesota have been raising employee contribution rates in the past several years, and in 2009, Nebraska increased its employee

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contribution rates for individuals in its defined benefit plans. Last year, New Mexico temporarily shifted 1.5 percent of the employer's contribution to employees.[29] New Hampshire and Texas increased payroll contributions required from new employees.[30]

Several states also began asking employees and retirees to start making contributions for their retiree health care benefits. In 2008, Kentucky required new employees to contribute 1 percent of their pay to help fund their post-retirement health care and other non-pension benefits. In 2009, New Hampshire established a $65 monthly charge for retired employees under 65 who are covered by retiree health insurance. And Connecticut will now require new employees, and current employees with fewer than five years of service,[31] to put in 3 percent of their salaries.[32]

Governance and investment oversight

In recent years, some states have sought to professionalize the complex task of pension investments by shifting oversight away from boards of trustees to specialized bodies that focus on investment. For example, Vermont moved investment oversight from its pension boards to an entity called the Vermont Pension Investment Committee, which includes a representative elected by each of three boards and the state treasurer as an ex-officio member.[33] The change was designed to bring a higher level of expertise to the body responsible for investing the pension assets, to combine the assets of the three retirement systems to realize administrative savings, and to be able to act more quickly when making changes to the actual investment allocations.

Pension systems also have continued to improve governance practices to ensure that the board of trustees is well trained, that the division of responsibilities between board and staff makes sense, and that the composition of the board is balanced between members of the system and individuals who are independent of it. Several pension reform commissions are considering reforms similar to those enacted by Oregon in 2003, heightening qualifications for trustees and shifting membership so that boards are not dominated by pension recipients.

In 2009, some reforms grew out of specific problems that states had with investment practices or because of ethical questions that were raised. Illinois, for instance, put in place a number of protections to ensure that pension trustees, employees and consultants are barred from benefiting from investment transactions. More competitive processes for procuring consulting and investment services were introduced, and the state's pension systems were required to review the performance of consultants and managers and to establish ways of comparing costs.[34]

Grading the States

Based on all of this information, Pew graded all 50 states on how well they are managing their public sector retirement benefit. (See individual fact sheets for each of the 50 states at www.pewcenteronthestates.org/trilliondollargap.)

Pensions

Pew assessed states' pension systems on three criteria and awarded each state up to four points: two points for having a funding ratio of at least 80 percent; one point for having an unfunded liability below covered payroll; and one point for paying on average at least 90 percent of the actuarial required contribution during the past five years.

States earning four points were solid performers. Those earning two or three points were deemed

in need of improvement. And those earning zero or one point were labeled as meriting serious concerns.

Overall, 16 states were solid performers, 15 states were in need of improvement and 19 states were cause for serious concerns (see Exhibit 5). All 16 states that were assessed as solid performers had funding levels over the 80 percent threshold, had manageable unfunded liabilities, and had contributed on average at least 90 percent of the actuarially required contribution during the past five years. Eight states—Alaska, Colorado, Illinois, Kansas, Kentucky, Maryland, New Jersey and Oklahoma—received no points, having failed to make any meaningful progress toward adequately funding their pension obligations.

Exhibit 5
HOW ARE STATES DOING?

PENSIONS

Grade	Number of states	
SOLID PERFORMER	16	AZ, AR, DE, FL, GA, ID, ME, MT, NE, NY, NC, OH, SD, TN, UT, WI
NEEDS IMPROVEMENT	15	AL, CA, IA, MI, MN, MO, NM, ND, OR, PA, TX, VT, VA, WA, WY
SERIOUS CONCERNS	19	AK, CO, CT, HI, IL, IN, KS, KY, LA, MD, MA, MS, NV, NH, NJ, OK, RI, SC, WV

RETIREE HEALTH CARE AND NON-PENSION BENEFITS

Grade	Number of states	
SOLID PERFORMER	9	AK, AZ, CO, KY, ND, OH, OR, VA, WI
NEEDS IMPROVEMENT	40	AL, AR, CA, CT, DE, FL, GA, HI, ID, IL, IN, IA, KS, LA, ME, MD, MA, MI, MN, MS, MO, MT, NV, NH, NJ, NM, NY, NC, OK, PA, RI, SC, SD, TN, TX, UT, VT, WA, WV, WY

NOTE: Nebraska does not provide any estimates of its retiree health care and other non-pension benefits obligation.

SOURCE: Pew Center on the States, 2010.

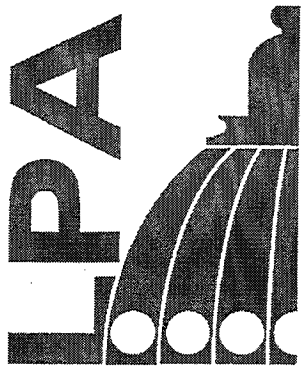
Health Care and Other Non-pension Benefits

Pew's criteria for grading states' retiree health care and other non-pension benefit obligations were much simpler and more lenient than those used for the pension assessment. This is because states generally have set aside little funding to cover the costs of these obligations and because they only recently began to report on their non-pension assets and liabilities. In fact, states have an average funding rate of 7.1 percent—and 20 states have funded none of their liability.

Because most states have only recently begun to account for and address these liabilities, Pew's grades measure the progress they are making toward pre-funding future benefit obligations. As a result, a "serious concerns" grade was not included. Pew rated as solid performers states that were above average at setting aside funds to cover the bill coming due. States below average were identified as needing improvement.

Nine states earned the designation of being solid performers: Alaska, Arizona, Colorado, Kentucky, North Dakota, Ohio, Oregon, Virginia and Wisconsin. Only two of those—Alaska and Arizona—have set aside at least 50 percent of the assets needed. Forty states were in need of improvement, having put away less than 7.1 percent of the funds needed—and, as noted above, half of these have not set aside any funds at all. (Nebraska subsidizes retiree health benefits however the state has not calculated the amount of this obligation and therefore was not graded. See Exhibit 5.)

2-13



PERFORMANCE AUDIT REPORT

Reviewing How the Recent Economic Downturn Has Affected the Kansas Public Employees Retirement System's Funding Situation

A Report to the Legislative Post Audit Committee
By the joint venture of Allen Gibbs & Houlik and
Berberich Trahan & Co., audit firms under contract with the
Legislative Division of Post Audit
State of Kansas
February 2010

10PA01

Attachment 3
JCPIB 2-26-10

Legislative Post Audit Performance Audit Report Highlights

Highlights

Kansas Public Employees Retirement System: Reviewing How the Recent Economic Downturn Has Affected the Kansas Public Employees Retirement System's Funding Situation

Report Highlights

February 2010 10PA01

Audit Concern

State law calls for a performance audit of the Retirement System once every three years. The Executive Director requested that this audit address the impact of the downturn on KPERS.

This audit was conducted by the joint venture of Allen Gibbs & Houlik and Berberich Trahan & Co., under contract with the Legislative Division of Post Audit.

Other Relevant Facts

KPERS was established in 1962 as an umbrella organization administering three Statewide pension groups under one plan for 268,546 members and 1,492 participating employers. The groups are KPERS, which includes State, school and local employees; the Kansas Police and Firemen's Retirement System; and the Kansas Retirement System for Judges.

The KPERS group represents 95% of total system membership, so the analysis focuses on this group before and after the worst part of the recession.

For 10 years, the top priority has been developing a comprehensive plan to address KPERS' long-term funding shortfall. The situation

AUDIT QUESTION: *How has the recent economic downturn affected the Kansas Public Employees Retirement System's funding situation?*

AUDIT ANSWER and KEY FINDINGS:

- Three key indicators are used to assess the performance of a retirement system:
  - » In the year's time between the end of December 2007 and 2008, the KPERS group's unfunded actuarial liability grew by $2.4 billion, from $5.3 billion to $7.6 billion (45%). Although the State and local subgroups' unfunded liability grew at a faster rate, the school subgroup's unfunded liability was about five times larger than each of the two other subgroups.
  - » On an actuarial basis, KPERS' assets compared to its liabilities dropped from 68.6% to 56.9%. Investment losses were the main cause. The actual investment experience over the next four years may be able to offset some of the deferred loss if the experience is favorable.
  - » As calculated by the actuary, the level of contributions required to fully fund the KPERS group through 2033 would increase by 2% to 4% for each subgroup. However, State law limits increases in employer contribution rates to no more than 0.6% over the previous year's rate.
- The auditors compared KPERS' State and school subgroups combined to similar plans in five other states, some of which are in separate retirement plans. As a result, Kansas' single plan (for the State and school subgroups only) was compared with 10 other plans in those five states. The auditors' comparisons showed that KPERS ranked near the middle on employer contribution rates, near the bottom on the actuarial funding ratio, and in the bottom half on the amount of unfunded actuarial liability. However, if the five states' plans are combined and compared with Kansas, Kansas' unfunded actuarial liability is less than three of those five states. The report also summarizes what some other states have done in response to the recession

The Auditors Recommended:

The auditors made no recommendations, but they observed that the Legislature and KPERS will have to take many factors into account in deciding what action to take.

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INTRODUCTION

Kansas Public Employees Retirement System: Reviewing How the Recent Economic Downturn has Affected the System's Funding Situation

The Kansas Public Employees Retirement System (Retirement System or System) was established in 1962 to provide retirement and related benefits to public servants in Kansas. The Retirement System is an umbrella organization administering the following three statewide pension groups under one plan: the Kansas Public Employees Retirement System (KPERS), the Kansas Police and Firemen's Retirement System (KP&F), and the Kansas Retirement System for Judges (Judges). As of June 30, 2009, the Retirement System had 268,546 members and 1,492 participating employers.

For the last ten years, the Retirement System's top priority has been developing a comprehensive plan to address the long-term funding shortfall. Legislation changes, Board actions, and strong investment performance from 2003 to 2007 improved this situation, although the progress was largely dependent on the System reaching the 8% investment return assumption. Unfortunately, the economic collapse occurring in 2008 has significantly overshadowed these steps towards improvement.

A key evaluation tool used to assess the System's performance is the funded ratio. In general, dividing assets by liabilities is how the funded ratio is calculated. When using the actuarial value of assets and liabilities, the average funded ratio for 2003 to 2007 was 70.8%. When using the market value, the average funded ratio for the same period was 73%. The 2008 economic upheaval is evident when looking at these ratios for the System as of December 31, 2008. The actuarial funded ratio fell to 59%, an 11.8 percentage point drop, and the market value ratio dropped to 49%, a decrease of 24 percentage points.

The December 31, 2008 actuarial report notes the effect of the economic downturn on the Retirement System's long-term financial health:

> "The unprecedented negative investment experience in 2008 was a significant setback in the System's long-term funding. Despite the 2008 investment loss, the State and Local groups remain in actuarial balance (the statutory contribution rate is projected to converge with the actuarial required contribution (ARC) rate before the end of the amortization period (2033) if all actuarial assumptions are met in future years). For the School group, the statutory and actuarial contribution rates are not projected to converge before 2033 if all assumptions are met in future years...as the deferred investment losses are recognized in the next four years, the actuarial and statutory contribution rate is expected to increase significantly. As this occurs, the shortfall between the actuarial and statutory contribution rates will grow and will produce increases in the UAL. As a result, the actuarial contribution rate is expected to increase until the ARC Date (defined as the date at which the actuarial and statutory contribution rates are equal) is reached."

It is important to note that this is a long-term issue not an immediate crisis. In addition, the Retirement System is not alone when it comes to finding solutions to strengthening their funding situation in the years to come as the economic collapse affected public retirement systems in every state. The degree to which these systems were affected and the type of changes that will need to be made will depend on many factors as no two systems are the same.

AUDIT OBJECTIVE, SCOPE AND METHODOLOGY

Objective:
Legislators have expressed concern about the extent to which the recent economic downturn has adversely affected the value of the System's investment portfolio and the System's ability to pay future benefits.

Scope:
The Legislative Division of Post Audit has engaged Berberich Trahan & Co., P.A. to address the following question:

1. **How has the recent economic downturn affected the Kansas Public Employees Retirement System's funding situation?**

Methodology:
To answer this question, we examined the funding ratios, unfunded actuarial liabilities, and contribution rates of the individual groups within the KPERS branch of the System (specifically the State, School, and Local groups) before and after the worst part of the recession to determine the effect the recent economic downturn has had on KPERS. We interviewed Retirement System personnel to identify public employee systems with similar benefit structures in other states. We reviewed relevant literature and information sources (such as comprehensive annual financial reports, actuarial valuations and a public funds survey conducted by the National Association of State Retirement Administrators) regarding the selected systems' funded ratios, unfunded actuarial liabilities and contribution rates and compared to KPERS (State and School only) for the relevant time period. In addition, we compared other state school plans with the KPERS School group as the recession affected this group the most. Lastly, we reviewed retirement plan websites for information discussing the steps taken or steps these systems are planning to take to shore up their financial positions as a result of financial losses they have experienced over the past two years.

We conducted this performance audit in accordance with *generally accepted government auditing standards*. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

THE ECONOMY AND ITS EFFECT ON THE KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM

Report Focus

The KPERS group represents 95% of total system membership with 255,582 members as of June 30, 2009. This group is a combination of State, School and Local employees. KP&F and Judges represent the remaining 5% of system membership. Because the KPERS group is the largest, this analysis focuses on this group within the Retirement System.

KPERS – The Economic Effect

KPERS – Actuarial Results

Unfunded Actuarial Liability

All public retirement systems have actuarial valuations performed. A valuation provides information on a system's financial condition at a specific point-in-time. One of the key indicators used to assess plan performance is the unfunded actuarial liability (UAL). As of December 31, 2007 and 2008, the KPERS group had the following calculated UAL's (expressed in millions):

	State	School	Local	Total KPERS
12/31/2007	$ 450.6	$ 3,861.6	$ 940.5	$ 5,252.7
12/31/2008	1,001.7	5,238.5	1,384.7	7,624.9
Percent Change	122.3%	35.7%	47.2%	45.2%

In total, the KPERS UAL increased 45.2% or almost $ 2.4 billion in one year. Although the State and Local groups had the first and second largest percent increase, respectively, the School's UAL at December 31, 2008 is almost five times greater than each of those group's UAL's. The State and Local groups were able to remain in actuarial balance despite the large increase in their UAL's; however, the School group did not remain in actuarial balance. This means the School group's actuarial and statutory contribution rates are not expected to equal before 2033, which was the anticipated end-date for the actuarial liability amortization period.

There are several factors that affect the UAL from year-to-year. For example, changes to benefit provisions or actuarial assumptions will affect the UAL. Another factor is the actual investment return compared to the expected return. The following table illustrates the different factors and their effect on the UAL between December 31, 2007 and 2008 (expressed in millions):

	State	School	Local	Total KPERS
UAL in 12/31/2007 Valuation Report	$ 450.6	$ 3,861.6	$ 940.5	$ 5,252.7
Effect of contribution cap/timing	7.5	190.7	50.8	249.0
Expected increase due to method	4.7	51.6	12.1	68.4
Actual vs. expected experience:				
Investment return	549.8	1,072.4	372.7	1,994.9
Demographic experience	(7.2)	76.9	13.9	83.6
All other experience	(3.7)	(14.6)	(5.4)	(23.7)
Change in assumptions	-	-	-	-
Change in benefit provisions	-	-	-	-
UAL in 12/31/2008 Valuation Report[1]	$ 1,001.7	$ 5,238.5	$ 1,384.7	$ 7,624.9

[1] May not add due to rounding.

Approximately 84% of the change between years can be attributed to the investment return factor due to the recent economic recession. As noted above, over half of the investment return experience was attributed to the School group by itself.

Actuarial Funding Ratio

The second key indicator used to assess plan performance is the actuarial funding ratio. This is the ratio of the actuarial value of assets to the actuarial liability. The following table illustrates the funding ratio for the last two actuarial valuations and the change between the ratios:

	State	School	Local
12/31/2007	86.8%	62.6%	70.1%
12/31/2008	71.8%	52.1%	59.0%
Change	-15.0%	-10.5%	-11.1%

As the table on the previous page indicates, the decrease in the funding ratios for each of the groups between the December 31, 2007 and 2008 valuations is roughly the same with an average decrease of about 12.2%. This decrease is largely attributed to the investment loss experienced between the two valuation dates. While an average 12.2% decrease in a group's funding ratio is a large decrease, it is important to understand that the decrease would have been much greater had the calculation been performed using the pure market value of assets. The System adopted an asset smoothing method with the December 31, 2003 actuarial valuation, which reduces the effect of swings in market value. The method calculates the difference between the actual return and the expected return on the market value of assets each year and recognizes it over a five-year period.

The following tables demonstrate how the funding ratio would have been affected if the market value of assets had been used rather than the actuarial value of assets:

Actuarial valuation of assets at:

	State	School	Local
12/31/2007	$ 2,971,538,701	$ 6,454,380,538	$ 2,206,473,161
12/31/2008	2,552,895,270	5,699,278,482	1,991,428,225
Percent Change	-14.1%	-11.7%	-9.7%

Market value of assets at:

	State	School	Local
12/31/2007	$ 3,094,367,129	$ 6,863,242,512	$ 2,339,695,800
12/31/2008	2,127,412,725	4,749,398,735	1,659,523,521
Percent Change	-31.2%	-30.8%	-29.1%

Market value funding ratio at:

	State	School	Local
12/31/2007	90.4%	66.5%	74.3%
12/31/2008	59.8%	43.4%	49.2%
Change	-30.6%	-23.1%	-25.1%

The first section on the previous page shows the actuarial valuation of assets used to calculate the funding ratio. The percent change between actuarial valuations of assets is an average decrease of 11.8%. The second section shows the market value of assets with an average decrease between values of 30.4%. The smoothing method allows more than $ 1.7 billion of net investment loss to be deferred and recognized over the next four years. Without the deferral, the funding ratios would have been much lower, as indicated in the third section on the previous page.

Because of the way the smoothing method works, the actual investment experience over the next four years may be able to offset some of the deferred loss if the experience is favorable. The following table shows the investment income or loss in six-month intervals except the last period, which is only three months of activity:

	State	School	Local	Total KPERS
12/31/2007	$ 34,607,195	$ 138,027,700	$ 52,139,439	$ 224,774,334
6/30/2008	(188,240,339)	(447,371,921)	(153,314,483)	(788,926,743)
12/31/2008	(676,129,541)	(1,474,887,846)	(508,682,924)	(2,659,700,311)
6/30/2009	97,218,245	220,857,988	87,710,686	405,786,919
9/30/2009	277,485,301	603,552,233	220,300,012	1,101,337,546

It is clear from the schedule above that the Fall of 2008 was the worst period of the recession as KPERS recorded an investment loss of approximately $ 2.7 billion in just six months. The next nine months show a favorable experience with over $ 1.5 billion in investment income. Although KPERS has been able to record a sizeable amount of income during this period to help offset the negative impact of the Fall of 2008, only 20% of the income will be recognized the first year in accordance with the smoothing method for the actuarial valuation. While the investment return on the market value of assets for the December 31, 2008 valuation was approximately -28.5%, the assets were actually 37% lower than expected due to the actuarial assumption for investment return being 8%. With such a substantial difference between the expected return and the actual return, KPERS will need to have several years of favorable experience in excess of 8% to get back to where they would have been at December 31, 2008 had the recession not occurred. Actuarial valuations are expected to produce significantly higher actuarial contribution rates for at least the next few years. This trend may continue longer if the future rates of return are not favorable enough.

Effect on Contribution Rates

Although the smoothing method has allowed for much of the loss to be deferred, the portion of the loss actually recognized was so large that significant increases in the actuarial required contribution rates (ARC) could not be averted for the December 31, 2008 valuation.

The ARC consists of two components, normal cost and the amortization of the unfunded actuarial liability and debt service. The first component has remained relatively stable. It is the second component that has changed drastically due to the recent economic recession as the UAL has increased nearly $ 2.4 billion for the 2008 valuation. The following table illustrates the change in the ARC over the last six valuations (rates do not include contributions to the Death and Disability Plan):

	State *					
	12/31/2003	**12/31/2004**	**12/31/2005**	**12/31/2006**	**12/31/2007**	**12/31/2008**
Normal Cost	3.37%	3.72%	3.76%	3.90%	4.13%	4.17%
Amortization of UAL and Debt Service	1.84%	3.27%	3.59%	3.44%	3.26%	6.96%
Actuarial Contribution Rate	5.21%	6.99%	7.35%	7.34%	7.39%	11.13%

	School *					
	12/31/2003	**12/31/2004**	**12/31/2005**	**12/31/2006**	**12/31/2007**	**12/31/2008**
Normal Cost	3.95%	4.24%	4.23%	4.29%	4.61%	4.64%
Amortization of UAL and Debt Service	5.80%	7.23%	7.72%	7.78%	7.87%	10.32%
Actuarial Contribution Rate	9.75%	11.47%	11.95%	12.07%	12.48%	14.96%

	Local ^					
	12/31/2003	**12/31/2004**	**12/31/2005**	**12/31/2006**	**12/31/2007**	**12/31/2008**
Normal Cost	3.36%	3.68%	3.69%	3.86%	4.14%	4.15%
Amortization of UAL and Debt Service	2.88%	4.01%	4.23%	4.26%	4.38%	6.27%
Actuarial Contribution Rate	6.24%	7.69%	7.92%	8.12%	8.52%	10.42%

* - Rates are effective 2 1/2 years later. For example, the 12/31/2008 valuation establishes the rate for fiscal year 2012.
^ - Rates are effective 2 years later. For example, the 12/31/2008 valuation establishes the rate for calendar year 2011.

The normal cost for each of the groups has remained fairly consistent over the past six years. However, over the same time period, the amortization component has almost doubled for the School group and has more than tripled for the State group. There was a sizeable increase in this component from the 2003 to the 2004 valuation due to actuarial assumption changes made by the Board in September 2004. The rates stayed fairly consistent for the next three years, and then increased significantly again. The increase from the 2007 to the 2008 valuation was attributed to the recession. In total, the State ARC increased 3.74%, the School ARC increased 2.48%, and the Local ARC increased 1.90% during this one-year time period.

It is important to note that these rates represent the employer rate only. Since all State, School, and Local employees contribute 4.00%, the overall ARC is really 15.13%, 18.96%, and 14.42% for each group, respectively. Because the employee rate is capped at 4.00%, fluctuations in the rate fall to the employer to address. This is further complicated by the fact that the employer rates cannot increase more than 0.6% over the previous year's rate due to statutory limitations. The following table demonstrates the difference between the statutory rates and the ARC for the past six valuations (rates do not include contributions to the Death and Disability Plan):

	State *			School *			Local ^		
	Actuarial	**Statutory**	**Difference**	**Actuarial**	**Statutory**	**Difference**	**Actuarial**	**Statutory**	**Difference**
12/31/2003	5.21%	5.21%	0.00%	9.75%	5.77%	3.98%	6.24%	3.81%	2.43%
12/31/2004	6.99%	6.37%	0.62%	11.47%	6.37%	5.10%	7.69%	4.31%	3.38%
12/31/2005	7.35%	6.97%	0.38%	11.95%	6.97%	4.98%	7.92%	4.91%	3.01%
12/31/2006	7.34%	7.34%	0.00%	12.07%	7.57%	4.50%	8.12%	5.53%	2.59%
12/31/2007	7.39%	8.17%	-0.78%	12.48%	8.17%	4.31%	8.52%	6.14%	2.38%
12/31/2008	11.13%	8.77%	2.36%	14.96%	8.77%	6.19%	10.42%	6.74%	3.68%

* - Rates are effective 2 1/2 years later. For example, the 12/31/2008 valuation establishes the rate for fiscal year 2012.
^ - Rates are effective 2 years later. For example, the 12/31/2008 valuation establishes the rate for calendar year 2011.

The State statutory and actuarial employer rates have been almost equal until the 2008 valuation, which is due to the recession increasing the UAL and ultimately the ARC. The School group's statutory rates have been consistently lower than the ARC. The difference between the rates for this group for the 2008 valuation is 2 and 3 times greater than the Local and State groups, respectively. This is due to the fact that the UAL for the School group is much higher than it is for the other two groups. The School's UAL has been significantly higher for several years and the recession has only made it worse.

KPERS (State and School Only) – Comparison to Other State Plans

Since all state public employee retirement systems have valuations performed, they become a valuable tool for comparison purposes. Although valuations are performed in much the same way for each plan, it is important to note that each plan valuation is based on specific assumptions that may or may not be the same for each plan. Therefore, it is important to take these differences into consideration when making comparisons. Retirement plans selected for comparison are all statewide, defined benefit plans with similar employee groups and a comparable number of members.

Exhibit 1 displays some of the actuarial assumptions for each of the plans, and Exhibit 2 shows the retirement age and years-of-service provisions, participation in social security and each plan's retirement factor. These exhibits provide additional information to help assess the comparisons made in Exhibits 3 and 4, which are discussed below. All four exhibits should be considered together when drawing conclusions about KPERS performance in comparison to the other plans presented.

Exhibit 3 displays contribution rates for each of the twelve plans at valuation dates immediately before and after the worst part of the recession (Fall 2008). The systems are in order of smallest to largest actuarial employer rates for the June 30, 2008 valuation. KPERS has the seventh largest actuarial rate as of June 30, 2008 and moves to eighth place as of June 30, 2009. The Missouri State Employees' Retirement System is the only plan that does not require employees to make contributions to the plan. Despite the employer taking all responsibility for contributions, the actual employer rate equals the actuarial employer rate for both valuations even though the actuarial rate is the eighth largest as of June 30, 2008 and seventh largest as of June 30, 2009. The South Dakota Retirement System is the only other plan with matching employer rates. None of the other plans are meeting their actuarial rates. All plans saw an increase in their actuarial employer rate from 2008 to 2009 except for the Public School Retirement System of Missouri, which experienced a slight decrease. The Colorado PERA (State Division) has the largest difference between the actual and actuarial employer rates at June 30, 2009 with a difference of ten percent. KPERS has the fourth largest difference between the rates with a difference of 5.3%.

The actual employer contribution rates shown for both Colorado PERA divisions for each year include a contribution of 1.02% to the Health Care Trust Fund. This makes the rate available for funding only 9.13%, creating an even larger difference between the actual employer and actuarial contribution rates. Colorado recently enacted two bills to combat the shortfall. The first bill established an Amortization Equalization Disbursement (AED) requiring each PERA employer to pay an additional 1.0% starting January 1, 2007 and 1.4% starting January 1, 2008. The AED is scheduled to increase 0.4% each year until 2012 when it will cap at 3%. The second bill established a Supplemental Amortization Equalization Disbursement (SAED) requiring each PERA employer to pay an additional 0.5% starting January 1, 2008. The SAED will increase 0.5% each year until 2013 when it will cap at 3%.

Exhibit 4 shows the actuarial funding ratio and unfunded actuarial liability for each retirement system. The systems are in order of smallest to largest UAL as of June 30, 2008 and 2009. KPERS is ranked eighth. If the systems were ranked highest to lowest by funding ratio, KPERS would fall to second to last. KPERS had the largest decrease in its funding ratio with a decrease of 11.7% from 2008 to 2009; however, the Iowa Public Employees' Retirement System had the largest increase in its UAL with an increase of approximately $ 2.1 billion.

All of the plans except KPERS and the Colorado PERA State and School Divisions had their actuarial valuations performed as of June 30, 2008 and 2009. These dates are also their fiscal year-end dates. The Colorado PERA State and School Divisions had their actuarial valuations performed as of December 31, 2007 and 2008 like KPERS; however, these dates are also their fiscal year-end dates as well. The KPERS plan is the only one with a time-lag between the valuation and fiscal year-end dates. This should be considered when comparing the other systems to KPERS as any investment recovery occurring in the first half of calendar 2009 would be included in the calculation of the funding ratio and the UAL for all other systems, except the Colorado plans, making it possible for a plan to be ranked higher than KPERS because of the valuation timing.

School Group – Comparison to Other State Plans

Out of the three KPERS groups (State, School, and Local), the School group has the lowest funding ratio, so we decided to compare the School group to other school plans. Five of the eleven retirement plan selections are school plans. The following table compares the KPERS School group's actuarial funding ratio and UAL to these five school retirement systems' ratios and UAL's immediately before and after the worst part of the recession:

	Valuation Date of 6/30/2008 *		Valuation Date of 6/30/2009 *	
	Actuarial Funding Ratio	Unfunded Actuarial Liability ($ in thousands)	Actuarial Funding Ratio	Unfunded Actuarial Liability ($ in thousands)
North Dakota Teachers' Fund for Retirement	81.9%	$ 421,100	77.7%	$ 545,600
Public Education Employees Retirement System of Missouri	82.5%	$ 574,840	80.7%	$ 665,862
Kansas PERS (School group only)	62.6%	$ 3,861,624	52.1%	$ 5,238,522
Public School Retirement System of Missouri	83.4%	$ 5,739,211	79.9%	$ 7,234,046
Colorado PERA (School Division)	75.5%	$ 7,170,659	70.1%	$ 9,266,873
Teachers Retirement System of Oklahoma	50.5%	$ 9,090,100	49.8%	$ 9,512,000

* Colorado PERA (School Division) and Kansas PERS (School group only) valuation dates are as of December 31, 2007 and 2008, respectively.

The plans are listed in the order of smallest to largest UAL for each valuation date. The KPERS School group ranks third among the six retirement systems. If the systems were ranked in order of largest to smallest funding ratio, the KPERS School group would rank fifth. Only the Teachers Retirement System of Oklahoma ranks below the KPERS School group for the funding ratio.

The KPERS School group had the largest decrease in its funding ratio with a decrease of 10.5%. The Colorado PERA School Division had the next highest decrease with 5.4%. As noted above, both of these plans had valuations performed as of December, 31, 2007 and 2008, respectively, rather than at June 30, 2008 and 2009. This allows for any economic recovery experienced during the first half of calendar year 2009 to be included in the other four system's actuarial calculations.

Exhibit 5 displays the actual and actuarial employer rates for each plan's valuation immediately before and after the worst part of the recession. The table also illustrates the two components making up the actuarial employer rate, normal cost and the amortization of the UAL. The systems are ranked in order of smallest to largest actuarial rates.

The KPERS School group ranks fourth out of the six plans and also had the greatest increase in the actuarial rate between valuations. The Colorado PERA School Division had the next largest increase, which seems reasonable since its valuations were performed in December rather than in June. North Dakota has the lowest normal cost rates while the Public School Retirement System of Missouri has the highest rates.

Actions Taken or Actions Proposed to be Taken

A common theme emerged from the retirement systems' June 30, 2008 Comprehensive Annual Financial Reports: subsequent to year-end, volatility in financial markets and the banking system had substantially affected investment returns. At the beginning of 2009, retirement systems began posting statements on their websites to reassure the public that management would be assessing these recent events, adjusting investment strategies accordingly and coordinating studies to determine any necessary future changes to retirement plan assumptions, contribution rates, and benefits.

Limited actions have been taken as the worst part of the recession occurred during the Fall of 2008, which did not allow retirement systems adequate time to obtain complete information on the recession's effect on the plans in order for 2009 legislative sessions to enact new laws. According to information obtained from the selected plans' websites, many are still evaluating information and composing recommendations for 2010 or 2011 legislative sessions. The following plans offered details on their websites on proposed changes stemming from the recession's effect.

Colorado PERA – State and School Division

On October 16, 2009 (subsequently revised on January 7, 2010 per senate president proposal), the Board of Trustees approved a plan to be presented during the 2010 legislative session to return the plan to long-term sustainability. The package is known as "2/2/2 Plus". The three main elements are:

- A 2% increase in the Amortization Equalization Disbursement (AED)
- A 2% increase in the Supplemental Amortization Equalization Disbursement (SAED)
- A 2% cap on the Cost of Living Adjustment (COLA) for all retirees, members, and inactive members

The "Plus" refers to necessary additional provisions that supplement the three main elements listed above. These provisions are:

- Increase Amortization Equalization Disbursement (AED) by 0.4% per year to total rate of 5% by 2017 (currently caps at 3% in 2012)
- Increase Supplemental Amortization Equalization Disbursement (SAED) by 0.5% per year to total rate of 5% by 2017 (currently caps at 3% in 2013)
- Reduce Cost of Living Adjustment (COLA) to an amount equal to CPI-W with a cap of 2%. Beginning in 2012 the COLA shall be the cap unless PERA experiences a negative investment return triggering a 3-year period of determining the COLA by reference to the CPI-W subject to the cap.
- Establish a 3-year highest average salary (HAS) with a base year and an 8% salary increase cap (currently have a 3-year HAS with a base year and a 15% salary increase cap; original Board proposal wanted a 5-year HAS with a base year and an 8% salary increase cap)
- Establish a 5-year earned service credit vesting requirement for the 50% refund match for future contributions
- Add employee contribution of 8% of salary for all retirees working after retirement
- Prevent recalculation of original retirement benefits for retirees who have suspended their benefits and returned to work

- Change the COLA payment month from March to July
- Implement a 12-month delay on the COLA after retirement before the COLA will be paid. Members who retire with a reduced service retirement must reach age 60 or meet the applicable age and service requirement for full service retirement in order to be eligible for a COLA (original Board proposal wanted a one calendar-year delay on the COLA).
- For everyone hired before January 1, 2007, prevent accumulation of COLA unless benefit is presently being paid (this provision repeals the current statute that allows any member who began PERA membership on or before December 31, 2006, and who terminated PERA membership with at least 25 years of service credit, to have his/her retirement benefits increased by the COLA that would have been granted to the account if a retirement benefit had been paid since the date of termination of membership)
- Revise the existing reduction factors for early reduced retirements to reflect an actuarial reduction
- For existing members with less than 5 years of service credit as of January 1, 2011, age and service retirement shall be a modified Rule of 85 with a minimum age of 55. For new hires on and after January 1, 2011, age and service requirements for full service retirement shall be a modified Rule of 88 with a minimum age of 58. For new hires on and after January 1, 2017, age and service requirements for full service retirement shall be a modified Rule of 90 with a minimum age of 60.
- AED and SAED corridor – will be adjusted based on PERA's year-end funded status for each division's trust fund, with decreases allowed for the division when the division's year-end funded status reaches 103% and increases mandated when the division's funded status subsequently falls below 90% (original Board proposal had a corridor of 90% and 110%)
- COLA corridor – allow the COLA cap to be adjusted based on PERA's overall year-end funded status, with increases allowed when PERA is over 103% and decreases mandated when PERA's funded status subsequently falls below 90% (original Board proposal had a corridor of 90% and 110%)
- Add 30 days to the 110-day limit for working after retirement in a calendar year without penalty for up to 10 service retirees per employer in the School and DPS Divisions and Higher Education employers in the State Division provided full contributions are paid (this provision was not in the original Board proposal, but the Board adopted this change from the senate president)

<u>Iowa Public Employees' Retirement System</u>

The Benefits Advisory Committee (the Committee) met on November 2, 2009 to discuss an actuarial study of two proposals, so they could make a recommendation to the Public Retirement System's Committee. The Committee approved the following proposal:

- Reduce benefits for early retirement by 6% from age 65 (current reduction is 3% from Rule of 88, Rule of 62/20, or age 65)
- Increase vesting from 4 to 7 years
- Use high 5 earning years rather than high 3 in final average salary (transition: snapshot of high 3 on effective date of change; compare to high 5 when retire; use higher of two)
- Keep current multiplier with 65% maximum
- Keep Rule of 88 and Rule of 62/20
- 13.45% contribution rate on 7/1/11

- Yearly contribution rate change limit +/- 1.0% (current law 11.95% on 7/1/11 with +/- 0.5% limit)
- Rate drop allowed when 30-year closed amortization period can be used

Missouri State Employees' Retirement System

At the Board of Trustees meeting held on September 17, 2009, the Board approved a temporary change in the valuation asset market corridor. They wanted to reflect the unusual market condition experienced over the last two years. Starting with the June 30, 2009 valuation, the corridor was increased from +/- 20% to +/-30%. The corridor will decrease to +/- 25% for the June 30, 2010 valuation and back to +/- 20% for the June 30, 2011 valuation.

North Dakota Teachers' Fund for Retirement

The Board members discussed several options at their October 22, 2009 meeting to address the funding shortfall. Exhibits presented projected funding levels and margins using various contribution rate increases. They also discussed the availability of state trust funds, general fund surplus, and dedicated property tax among other revenue sources. They did not feel they should consider retiree or current active/inactive benefit changes. Instead, they wanted to focus on a variety of funding sources, member and employer contribution rate increases and benefit reductions for new hires. They also discussed decreasing the 2.0% multiplier, raising the age of retirement eligibility, adjusting retiree re-employment provisions and tightening requirements for disability retirement. Based on these guidelines, staff were to conduct additional analysis for further discussion at future board meetings.

South Dakota Retirement System

According to the October 2009 Outlook, a publication of the South Dakota Retirement System, staff and consultants have made the following two-step proposal to the Board:

- The first step will save the system nearly $ 70 million in the current funded status –
  - Make adjustments to some of the assumptions used to measure assets and liabilities
  - Eliminate unanticipated costs from the optional spouse benefit and the return-to-work provision
- The second step adjusts plan features that exceed those typical of other public retirement plans –
  - Eliminate pro-rata COLA in a partial first year of retirement
    - Currently, members who retire halfway through the year receive half of the COLA for the year
  - Limit refunds
    - Members who refund out before they attain 3 years of service (vesting requirement) would receive 50% rather than 75% of their employer contributions.
    - Members who refund out after 3 years of service would receive 80% rather than 100% of their employer contributions.
    - In either case, members would continue to receive 100% of their own contributions

Exhibit 3 displays contribution rates for each of the twelve plans at valuation dates immediately before and after the worst part of the recession (Fall 2008). The systems are in order of smallest to largest actuarial employer rates for the June 30, 2008 valuation. KPERS has the seventh largest actuarial rate as of June 30, 2008 and moves to eighth place as of June 30, 2009. The Missouri State Employees' Retirement System is the only plan that does not require employees to make contributions to the plan. Despite the employer taking all responsibility for contributions, the actual employer rate equals the actuarial employer rate for both valuations even though the actuarial rate is the eighth largest as of June 30, 2008 and seventh largest as of June 30, 2009. The South Dakota Retirement System is the only other plan with matching employer rates. None of the other plans are meeting their actuarial rates. All plans saw an increase in their actuarial employer rate from 2008 to 2009 except for the Public School Retirement System of Missouri, which experienced a slight decrease. The Colorado PERA (State Division) has the largest difference between the actual and actuarial employer rates at June 30, 2009 with a difference of ten percent. KPERS has the fourth largest difference between the rates with a difference of 5.3%.

The actual employer contribution rates shown for both Colorado PERA divisions for each year include a contribution of 1.02% to the Health Care Trust Fund. This makes the rate available for funding only 9.13%, creating an even larger difference between the actual employer and actuarial contribution rates. Colorado recently enacted two bills to combat the shortfall. The first bill established an Amortization Equalization Disbursement (AED) requiring each PERA employer to pay an additional 1.0% starting January 1, 2007 and 1.4% starting January 1, 2008. The AED is scheduled to increase 0.4% each year until 2012 when it will cap at 3%. The second bill established a Supplemental Amortization Equalization Disbursement (SAED) requiring each PERA employer to pay an additional 0.5% starting January 1, 2008. The SAED will increase 0.5% each year until 2013 when it will cap at 3%.

Exhibit 4 shows the actuarial funding ratio and unfunded actuarial liability for each retirement system. The systems are in order of smallest to largest UAL as of June 30, 2008 and 2009. KPERS is ranked eighth. If the systems were ranked highest to lowest by funding ratio, KPERS would fall to second to last. KPERS had the largest decrease in its funding ratio with a decrease of 11.7% from 2008 to 2009; however, the Iowa Public Employees' Retirement System had the largest increase in its UAL with an increase of approximately $ 2.1 billion.

All of the plans except KPERS and the Colorado PERA State and School Divisions had their actuarial valuations performed as of June 30, 2008 and 2009. These dates are also their fiscal year-end dates. The Colorado PERA State and School Divisions had their actuarial valuations performed as of December 31, 2007 and 2008 like KPERS; however, these dates are also their fiscal year-end dates as well. The KPERS plan is the only one with a time-lag between the valuation and fiscal year-end dates. This should be considered when comparing the other systems to KPERS as any investment recovery occurring in the first half of calendar 2009 would be included in the calculation of the funding ratio and the UAL for all other systems, except the Colorado plans, making it possible for a plan to be ranked higher than KPERS because of the valuation timing.

- Indexing the COLA
  - Currently, retired members receive a COLA of 3.1% regardless of the rate of inflation or financial strength of the system. The COLA would be indexed when the system's annual assets do not equal its liabilities and when inflation is less than 3.1%. The COLA would never fall below 2.1%.

Summary

The economic recession has affected KPERS significantly, especially the School group, as nearly 84% of the $ 2.4 billion increase in KPERS unfunded actuarial liability is attributed to the investment return factor. Because KPERS' UAL has increased despite the smoothing method employed, the actuarial contribution rates have increased significantly for all groups. Looking at KPERS funding ratio on a pure market value basis as of December 31, 2008 paints an even worse picture. While the State and Local groups were able to remain in actuarial balance for the long-term, the recession caused the School group to fall out of actuarial balance. While KPERS did not rank last when comparing plan performance against similar plans, KPERS did fall towards the bottom of the rankings.

Even though KPERS had favorable investment experience of $ 1.5 billion during the first nine months of calendar year 2009, it will take several years of favorable experience in excess of the investment return assumption rate for KPERS to return to pre-recession status.

Many plans appear to be assessing their long-term sustainability and are proposing other plan changes, such as placing caps on COLA adjustments, increasing contribution rates, and adjusting actuarial assumptions rather than relying alone on positive future investment returns to strengthen plan performance. Many factors should be considered by the Legislature and KPERS in determining what actions to take as a result of the economic recession.

Actuarial Assumptions

	Actuarial Cost Method	Amortization Method	Remaining Amortization Period
North Dakota PERS - Main System (6/30/09)	Entry Age Normal	Level Percent Open	20-year open period
South Dakota Retirement System (6/30/08)	Entry Age; frozen UAAL	Level Percent Open	20 years remaining
North Dakota Teachers' Fund for Retirement (6/30/09)	Entry Age Normal	Level Percent	30-year open period
Public Education Employees Retirement System of Missouri (6/30/09)	Entry Age Normal	Level Percent Open	30 years
Missouri State Employees' Retirement System (6/30/09)	Entry Age	Level Percent	30-year open period
Oklahoma Public Employees Retirement System (6/30/09)	Entry Age Normal	Level Percent	20-year closed period
Iowa Public Employees' Retirement System (6/30/08)	Entry Age Normal	Level Percent Open	30 years (open method)
Kansas PERS (6/30/09)	Entry Age Normal	Level Percent Closed	24 years remaining
Colorado PERA-State Division (12/31/08)	Entry Age	Level Percent Open	30 years
Public School Retirement System of Missouri (6/30/09)	Entry Age Normal	Level Percent Open	30 years
Colorado PERA-School Division (12/31/08)	Entry Age	Level Percent Open	30 years
Teachers Retirement System of Oklahoma (6/30/09)	Entry Age	Level Percent	30-year open period

Exhibit 1

Asset Valuation Method	Inflation Rate	Investment Rate of Return	Projected Salary Increase	Cost of Living Adjustment
Assets valued utilizing method recognizing book value plus or minus realized/unrealized investment gains/losses amortized over a 5-year period	3.50%	8.00%	4.7-7.0%	None
Assets credited with assumed rate of investment return, debited/credited with liability gain/loss for year, and constrained to range of 80-120% of market	4.00%	7.75%	4.15-8.13%	3.10%
5-year smoothed market	3.00%	8.00%	4.5-14.0%	None
5-year smoothed market. Marked to market June 30, 2003	3.25%	8.00%	5.0-10.0%	3.25%
5-year smoothed market +/- 30% market corridor	3.20%	8.50%	4.3-7.5%	4% on a compound basis; 4% for the first 12 years, 1% for the 13th year, and 2.56% per year thereafter
5-year moving average of expected actuarial values and market values	3.00%	7.50%	5.1-9.0%	2.00%
Expected value at valuation date plus 25% of difference between market value and expected value. Actuarial value must fall within corridor of 80-120% of market value.	3.25%	7.50%	4.0-12.0%	Non-guaranteed post-retirement payment from a reserve account established from excess investment earnings.
Difference between actual return and expected return on market value recognized evenly over 5-year period. Value must be within corridor of 80-120% of market value.	3.25%	8.00%	4.0-12.0%	None
4-year smoothed market	3.75%	8.50%	4.50-10.17%	3.5% compounded for those hired before 7/1/05; 3% for those hired 7/1/05-1/1/07; none thereafter
5-year smoothed market. Marked to market June 30, 2003	3.25%	8.00%	5.00-10.25%	3.25%
4-year smoothed market	3.75%	8.50%	4.50-10.70%	3.5% compounded for those hired before 7/1/05; 3% for those hired 7/1/05-1/1/07; none thereafter
Market value, adjusted for 5-year phase in of actual investment return in excess of expected investment return	3.00%	8.00%	4.25-6.00%	2.00%

Retirement Benefits

Exhibit 2

	Retirement Age / Years-of-Service		Social Security	Retirement
	Normal	Early	Participation	Factor
North Dakota PERS-Main System (6/30/09)	65/3, Rule of 85	55/3	Yes	2.00%
South Dakota Retirement System (6/30/08)	65/3, Rule of 85; 55/3	55/3	Yes	1.7% service before 7/1/08 and 1.55% service thereafter; or Alternate Benefit
North Dakota Teachers' Fund for Retirement (6/30/09)	65/3, Rule of 85; 65/5 and rule of 90 for those hired after 6/30/08	55/3; 55/5 for those hired after 6/30/08	Yes	2.00%
Public Education Employees Retirement System of Missouri (6/30/09)	60/5, any/30, Rule of 80	55/5	Yes	1.61%
Missouri State Employees' Retirement System (6/30/09)	62/5, Rule of 80 for MSEP 2000; MSEP: 65/4 if active, 65/5, 60/15, Rule of 80	57/5-MSEP 2000; 55/10-MSEP	Yes	1.7%-MSEP 2000; 1.6%-MSEP
Oklahoma Public Employees Retirement System (6/30/09)	62/8, Rule of 90; members who joined before 7/1/92 qualify for Rule of 80	55/10	Yes	2.00%
Iowa Public Employees' Retirement System (6/30/09)	65/any, 62/20, Rule of 88	55/any	Yes	2.00%
Kansas PERS (6/30/09)	Tier 1: 65/any, 62/10, Rule of 85. Tier 2: 65/5, 60/30 (effective 7/1/09).	55/10	Yes	1.75%
Colorado PERA-State Division (12/31/08)	65/5, 50/30, Rule of 80; new hires 1/1/07 are 65/5, 55/30, Rule of 85	60/5, 55/20, 50/25	No	2.50%
Public School Retirement System of Missouri (6/30/09)	60/5, any/30, Rule of 80	55/5, any/25	No	2.5%; 2.55% for 31 or more years of service
Colorado PERA-School Division (12/31/08)	50/30, Rule of 80 at age 55, 65/5	50/25, 55/20	No	2.50%
Teachers Retirement System of Oklahoma (6/30/09)	62/5, Rule of 90; members who joined before 7/1/92 qualify for Rule of 80	55/5; any/30	Yes	2.00%

Contribution Rates

Exhibit 3

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	Valuation Date of 6/30/2008 *			Valuation Date of 6/30/2009 *		
	Employee Rate	Actual Employer Rate	Actuarial Employer Rate	Employee Rate	Actual Employer Rate	Actuarial Employer Rate
[1] South Dakota Retirement System	6.00%	6.00%	6.00%	^	^	^
[2] North Dakota PERS (Main System)	4.00%	4.12%	6.26%	4.00%	4.12%	7.74%
[3] Public Education Employees Retirement System of Missouri	6.25%	6.25%	6.73%	6.50%	6.50%	6.79%
[4] Iowa Public Employees' Retirement System	4.30%	6.65%	8.04%	4.50%	6.95%	9.62%
[5] North Dakota Teachers' Fund for Retirement	7.75%	8.25%	9.24%	7.75%	8.25%	10.78%
[6] Teachers Retirement System of Oklahoma	7.00%	8.50/9.00% & 7.55/8.05%	11.19%	7.00%	9.00/9.50% & 8.05/8.55%	11.62%
[7] Kansas PERS	4.00%	8.17%.	11.30%	4.00%	8.77%	14.09%
[8] Missouri State Employees' Retirement System	none	12.75%	12.75%	none	13.81%	13.81%
[9] Public School Retirement System of Missouri	13.00%	13.00%	15.24%	13.50%	13.50%	14.95%
[10] Colorado PERA (School Division)	8.00%	10.15%	16.56%	8.00%	10.15%	18.75%
[11] Colorado PERA (State Division)	8.00%	10.15%	17.91%	8.00%	10.15%	20.16%
[12] Oklahoma Public Employees Retirement System	4.04%	14.50%	18.94%	3.84%	15.50%	22.20%

* Colorado PERA State and School Divisions and Kansas PERS valuation dates are as of December 31, 2007 and 2008, respectively.

^ This information was not available as of the time this report was issued.

[1] Rates displayed are for Class A members (defined as general), which excludes Public Safety and Judicial (Class B members). Class A includes schools, state, board of regents, local and other public entities.

[2] Rates displayed are for the main system, which consists of employees of the State of North Dakota, its agencies and various political subdivisions.

[3] Rates displayed are for non-certified employees of public schools and community and junior colleges.

[4] Rates displayed are for Regular Membership, which consists of state, school, and local employees.

[5] Rates displayed are for the public school system.

[6] Rates displayed are for the public school system. The first set of employer rates are for EESIP employers and the second are for regional universities. The first rate in each set is the rate from July-December; the second is January-June.

[7] Rates displayed are for state and school employees only, applicable for fiscal years 2011 and 2012, respectively.

[8] Rates displayed are for employees of the State, both MSEP (closed plan) and MSEP 2000 (new plan).

[9] Rates displayed are for certified employees of public schools and 4-year regional universities.

[10] Rates displayed are for school employees only.

[11] Rates displayed are for state employees only (state troopers employer rate is 12.85%).

[12] Rates displayed are for State and Local employees.

Actuarial Data

Exhibit 4

	Valuation date of June 30, 2008 *		Valuation date of June 30, 2009 *	
	Actuarial Funding Ratio	Unfunded Actuarial Liability ($ in thousands)	Actuarial Funding Ratio	Unfunded Actuarial Liability ($ in thousands)
(1) North Dakota PERS (Main System)	92.6%	$ 127,800	85.1%	$ 284,100
(2) South Dakota Retirement System	97.2%	$ 192,520	^	^
(3) North Dakota Teachers' Fund for Retirement	81.9%	$ 421,100	77.7%	$ 545,600
(4) Public Education Employees Retirement System of Missouri	82.5%	$ 574,840	80.7%	$ 665,862
(5) Missouri State Employees' Retirement System	85.9%	$ 1,289,800	83.0%	$ 1,618,700
(6) Oklahoma Public Employees Retirement System	73.0%	$ 2,402,358	66.8%	$ 3,083,212
(7) Iowa Public Employees' Retirement System	88.4%	$ 2,712,000	80.5%	$ 4,822,000
(8) Kansas PERS	68.6%	$ 4,312,000	56.9%	$ 6,240,000
(9) Colorado PERA (State Division)	73.3%	$ 5,169,615	67.9%	$ 6,584,297
(10) Public School Retirement System of Missouri	83.4%	$ 5,739,211	79.9%	$ 7,234,046
(11) Colorado PERA (School Division)	75.5%	$ 7,170,659	70.1%	$ 9,266,873
(12) Teachers Retirement System of Oklahoma	50.5%	$ 9,090,100	49.8%	$ 9,512,000

* Colorado PERA State and School Divisions and Kansas PERS valuation dates are as of December 31, 2007 and 2008, respectively.

^ This information was not available as of the time this report was issued.

(1) Represents employees of the State, its agencies and various political subdivisions.

(2) Represents Class A and B members (State, Board of Regents, city/county gov, and other public entities and public safety and judicial).

(3) Represents all employees of the public school system in North Dakota.

(4) Represents non-certified employees of public schools and community and junior colleges.

(5) Represents employees of the State, both MSEP (closed plan) and MSEP 2000 (new plan).

(6) Represents State and Local employees.

(7) Represents Regular Membership, which consists of State, School and Local employees.

(8) Represents State and School employees.

(9) Represents Colorado State employees.

(10) Represents certified employees of public schools and 4-year regional universities.

(11) Represents Colorado School employees.

(12) Represents all employees of the public school system in Oklahoma.

School Contribution Rates

Exhibit 5

	Normal Cost (a)	Amortization of UAL (b)	Actuarial Employer Rate (a) + (b)	Actual Employer Rate
[1] **Public Education Employees Retirement System of Missouri**				
6/30/08 Valuation (effective SFY09)	4.98%	1.75%	6.73%	6.25%
6/30/09 Valuation (effective SFY10)	4.38%	2.41%	6.79%	6.50%
[2] **North Dakota Teachers' Fund for Retirement**				
6/30/08 Valuation (effective SFY09)	2.51%	6.73%	9.24%	8.25%
6/30/09 Valuation (effective SFY10)	2.51%	8.27%	10.78%	8.25%
[3] **Teachers Retirement System of Oklahoma**				
6/30/08 Valuation (effective SFY09)	4.25%	6.94%	11.19%	8.50/9.00% & 7.55/8.05%
6/30/09 Valuation (effective SFY10)	4.25%	7.37%	11.62%	9.00/9.50% & 8.05/8.55%
[4] **Kansas PERS (School group only)**				
12/31/07 Valuation (rates effective SFY11)	4.61%	7.87%	12.48%	8.17%
12/31/08 Valuation (rates effective SFY12)	4.64%	10.32%	14.96%	8.77%
[5] **Public School Retirement System of Missouri**				
6/30/08 Valuation (effective SFY09)	8.71%	6.53%	15.24%	13.00%
6/30/09 Valuation (effective SFY10)	8.34%	6.61%	14.95%	13.50%
[6] **Colorado PERA (School Division)**				
12/31/07 Valuation (rates effective SFY09)	6.02%	10.54%	16.56%	10.15%
12/31/08 Valuation (rates effective SFY10)	5.80%	12.95%	18.75%	10.15%

[1] Rates displayed are for non-certified employees of public schools and community and junior colleges.

[2] Rates displayed are for the public school system.

[3] Rates displayed are for the public school system. The first set of employer rates for EESIP employers and the second are for regional universities. The first rate in each set is the rate from July-December; the second is January-June.

[4] Rates displayed are for School employees only.

[5] Rates displayed are for certified employees of public schools and 4-year regional universities.

[6] Rates displayed are for School employees only.

KANSAS

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM

January 29, 2010

Brad Koehn
Berberich Trahan & Co., P.A.
3630 SW Burlingame Road
Topeka, KS 66611-2050

Dear Mr. Koehn:

Thank you for the opportunity to respond to the draft copy of the performance audit report, Kansas Public Employees Retirement System: Reviewing How The Recent Economic Downturn Has Affected the System's Funding Situation. We appreciate the professional approach by your firm during this audit. We believe the audit report confirms the information on the System's funding status that we have provided in reports and presentations this past year to the Legislature and provides excellent comparative information on other states' retirement systems and the actions they are taking to address similar funding problems.

The global financial crisis of 2008 resulted in unprecedented investment market declines affecting all institutional and individual investors. These investment market declines had a substantial negative impact on the System's funding status, reversing forward progress on long-term funding made in previous years. As a result, the System's current funding structure is not projected to generate enough assets to provide all the benefits already earned by members and to pay off the unfunded actuarial liability in the amortization period ending in FY 2033.

In recent months, the financial markets have stabilized and the System's investment returns are rebounding. However, even with a strong, sustained market recovery, the unfunded actuarial liability will continue to increase, the funded ratio will further decline, and the actuarially required employer contribution rates will increase. Investment returns alone are unlikely to fix the funding shortfall. While this is not an immediate crisis, the long-term funding shortfall is serious, and prompt legislative actions to address it are necessary.

During the 2009 interim, we have made a series of presentations to the Joint Committee on Pensions, Investments and Benefits presenting the System's funding shortfall projections and an extensive range of options to address this issue. These options included: increases in the statutory employer contribution rate cap, increases in employee contribution rates, changes in the statutory multiplier for future service, various combinations of employer and employee rate increases and multiplier changes, creating a new mandatory defined contribution plan for future employees, and bond issues in lieu of the statutory employer contribution cap increase. Many of these options are similar to the approaches being taken by the other states outlined in the audit report.

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The Joint Committee plans to continue to meet early in the 2010 Session and finalize recommendations to the full Legislature on a long-term funding plan.

We look forward to discussing the audit report with the Legislative Post Audit Committee.

Sincerely,

Glenn Deck
Executive Director

REPORT TO THE JOINT COMMITTEE ON PENSIONS, INVESTMENTS AND BENEFITS

KPERS LONG-TERM FUNDING STATUS

KPERS

February 26, 2010

Attachment 4
JCPIB 2-26-10

EXECUTIVE SUMMARY

The Joint Committee on Pensions, Investments and Benefits studied the Kansas Public Employees Retirement System's long-term funding challenges during the 2009 Interim. The Joint Committee reviewed the December 31, 2008, Actuarial Valuation, a presentation by the System's consulting actuary, Milliman, Inc., and three presentations by KPERS' Executive Director describing KPERS' long-term funding challenges, along with a range of potential funding options to address them. Following its review, the Committee requested this report on KPERS' long-term funding status and funding alternatives, as well as historical information on KPERS' plan design, funding history, and steps previously taken by the Legislature to address KPERS' long-term funding concerns.

A Historical Perspective on Long-Term Funding

The Kansas Legislature created and established the terms of the Retirement System's defined benefit plan in the Kansas statutes. Since KPERS' inception in 1962, the Legislature has passed laws expanding and enhancing benefits for KPERS members. As a result, most of the basic plan design elements have been the subject of one or more enhancements at some point in KPERS' history.

The Legislature has adopted a range of approaches to valuing and funding these enhancements, including increases in employer contribution rates and changes in actuarial methodology; however, these enhancements have not always been adequately funded. The employee contribution rate has remained at 4%, even when such benefit enhancements were applied to previous service. A second tier of KPERS benefits with an employee contribution rate of 6% was added for individuals who became members on and after July 1, 2009.

In 1993, the Legislature enacted a law providing a collection of benefit enhancements that is of particular significance in understanding the development of the current KPERS' long-term funding shortfall. The benefit enhancements package included the following: changes to retirement eligibility allowing earlier retirement with full benefits, a higher benefit formula factor for both previous and future service, a one-time 15% ad hoc COLA for most retirees, and an increase in the retiree death benefit to $4,000.

The funding plan for the 1993 enhancements included an extension of the amortization period for KPERS' unfunded actuarial liability (UAL), changes in the actuarial funding method and the basis for computing amortization payments, plus a statutory cap on employer contribution rate increases of 0.1%. This funding plan lowered initial annual employer contributions, but significantly increased the UAL and built in higher costs over the course of the amortization period.

The funding plan for the benefit enhancement package, along with subsequent experience losses and other factors that adversely affected liabilities, contributed to the development of a long-term funding shortfall that became apparent during the market declines in 2001 and 2002. Actuarial

projections from that period indicated that the KPERS retirement plan was not in actuarial balance.

Previous Legislative Actions to Address Long-Term Funding Problem

Following the 2001 actuarial valuation results, KPERS worked with the Legislature and the Governor to develop a comprehensive, long-term funding plan to address the shortfall and bring KPERS into actuarial balance. Key steps in the plan included phasing in increases in the statutory employer contribution caps from .2% per year to .6% per year, issuing $500 million in pension obligation bonds in 2004, making actuarial changes to generally accepted methods, and establishing a new plan design for KPERS members first employed on or after July 1, 2009.

These actions, along with strong investment returns in the FY 2004-2007 period, brought KPERS into actuarial balance and significantly improved the projected funding status through the December 31, 2007, Actuarial Valuation.

Assessment of Current Long-Term Funding Status

The extraordinary financial crisis of 2008 and early 2009 and its unprecedented investment market declines profoundly affected investors globally. The investment return for the S&P 500 was -26.2% during FY 2009, which is reflected in the System's return of -19.6% for the same period.

The investment losses had a substantial negative impact on the funding status of the Retirement System as a whole and reversed previous forward progress on long-term funding. As a result, KPERS' current funding structure is not projected to generate enough contributions to pay off the UAL in the amortization period ending in FY 2033. The funding problem facing KPERS does not constitute a crisis threatening its short-term viability. Instead, it is KPERS' ability to pay benefits over the long-term that is in jeopardy.

The nature and depth of the System's long-term funding challenges are illustrated by projections of three key measures of the System's long-term viability: (1) the unfunded actuarial liability (UAL), (2) the actuarially required contribution (ARC) rates, and (3) the funded ratios.

UAL. Looking at the System as a whole, the December 31, 2008, Actuarial Valuation reported a $2.7 billion or 49% increase in the System's UAL to $8.3 billion. On a current market value basis, the System's UAL is $10.3 billion, due to the $2.0 billion in investment losses from 2008 that will be averaged in over the next four years. Actual investment returns will determine how much of these deferred losses are offset in subsequent valuations. However, at current statutory rates, the UAL cannot be paid off within the current amortization period.

ARC Rates. As the remainder of the 2008 loss is averaged in over the next four years, the ARC rate will continue to grow substantially, except to the extent it is moderated by future investment gains. The School Group is out of actuarial balance, which means that the statutory rate does not match the ARC rate before the end of the amortization period in FY 2033, and the State Group's ARC rate of 14.41% at its ARC date (FY 2022) will be nearly double the statutory state/school rate paid by state agencies in FY 2010 (7.57%).

Funded Ratio. The funded ratio represents the proportion of the actuarial liability currently funded by the actuarial value of a plan's assets. This key measure illustrates the depth and severity of KPERS' long-term funding problem, and the potential consequences of its protracted vulnerability to future market downturns. For public plans, a funded ratio of 80% and rising is considered to indicate adequate funding. Funded ratios of 60% or below are considered to reflect severe underfunding requiring prompt remedial action.

The State's funded ratio has dropped to 72%. It is projected to fall to near 60% for six years and projected to reach 80% in FY 2027. The School Group's funded ratio immediately fell to 52%. It is projected to reach 41% in FY 2015 and remain at 41 to 43% for nine years. The funded ratio is not projected to reach 60% until FY 2031 and is projected to reach 80% in FY 2035. The Local Group's 2008 funded ratio dropped to 59%. It is projected to continue falling to 53% and is not projected to reach 80% until CY 2025.

Options to Address the Funding Shortfall

The Joint Committee has received projections related to a number of basic funding solution options and multiple variations that involve combinations of the following:

- increasing the statutory employer contribution rate cap
- increasing employee contribution rates
- adjusting the statutory multiplier for future service
- issuing bonds
- creating a new mandatory defined contribution plan for future employees

Analysis of these options illustrated trade-offs and limitations that will need to be weighed in determining actions to be taken to address KPERS' funding shortfall.

KPERS' ability to withstand future economic downturns has been compromised. With any of the funding options, substantial progress in the short to mid-term may be limited, and KPERS' funding status will remain tenuous for an extended period of time. All basic measures of KPERS' funding status clearly reflect this deterioration and indicate that the Plan is at risk over the long-term.

Efforts to address the long-term funding shortfall will need to be part of an ongoing process for a number of years. Legislative action is needed to begin that process, with additional employer contributions as a basic element of any funding option. Further steps, such as employee contribution increases and plan design changes also need to be considered in order to begin establishing a more sound foundation for KPERS' long-term financial health.

REPORT TO THE JOINT COMMITTEE ON PENSIONS, INVESTMENTS AND BENEFITS

KPERS LONG-TERM FUNDING STATUS

Introduction

The Joint Committee on Pensions, Investments and Benefits spent the 2009 Interim Session studying the Kansas Public Employees Retirement System's long-term funding challenges. At its September 2, 2009, meeting, the Joint Committee reviewed the December 31, 2008, Actuarial Valuation, which is the foundation for evaluating the System's status, and the Committee received a presentation by the System's consulting actuary, Milliman, Inc. (*See* Appendices 1 and 2.) KPERS' Executive Director made three presentations to the Joint Committee during the 2009 Interim, describing KPERS' long-term funding challenges and a variety of potential funding options to address them. (*See* Appendices 3 through 5.)

At the Joint Committee's December 14, 2009, meeting, the Committee requested this overview of KPERS' long-term funding status and funding alternatives, as well as historical information on KPERS' plan design, funding history, and steps previously taken by the Legislature to address KPERS' long-term funding concerns. Highlights of KPERS' historical record are included in this overview, and a full history of the KPERS plan is provided separately. (*See* Appendix 6.)

A Historical Perspective on Long-Term Funding

KPERS is a defined benefit plan, which means that, upon retirement, members receive a specified retirement benefit determined according to a predetermined formula and related criteria. The plan's provisions are established in statutes passed by the Legislature. Since KPERS' inception in 1962, the Legislature has passed laws providing various benefit enhancements to KPERS members. As a result, most of the basic plan design elements have been the subject of one or more enhancements at some point in KPERS' history. Those elements include:

- Retirement eligibility criteria for both full and early retirement
- Changes to each of the elements in the benefit formula –
  Final Average Salary x Statutory Multiplier x Years of Service = Annual Benefit
- The vesting period
- Death benefits
- Post-retirement benefit increases
- Crediting of prior service
- Service purchase options.

The Legislature has adopted a range of approaches to valuing and funding these enhancements, including increases in employer contribution rates and changes in actuarial methods. However, these approaches did not always fully fund the enhancements. Moreover, prior to introduction of

a 6% contribution rate for members of the new KPERS Tier 2, employee contributions remained at the original rate of 4%, even when benefit enhancements were applied to past service.

A package of benefit enhancements enacted in 1993 is of particular significance in understanding the development of the current KPERS' long-term funding shortfall. Working from recommendations of the Kansas Public Employees Retirement Study Commission, the Legislature passed a benefit enhancement package that was effective July 1, 1993. The benefit enhancements package consisted of these plan design changes:

- **Retirement eligibility requirements.** Members became eligible for full retirement benefits based on a new "85-point rule" (when age plus years of service equal 85) and at age 62 with 10 years of service.
- **Benefits formula multiplier.** The multiplier was increased from 1.4% to 1.75% for both previous and future service.
- **Final average salary (FAS) calculations.** The number of years used in FAS calculations was lowered to three years (without additions for payouts of sick and vacation leave) for new members. For existing members, it is based on the higher of three years without leave add-ons or four years with add-ons included.
- **Death benefit.** The death benefit for retirees increased from $2,500 to $4,000.
- **One-time ad hoc COLA.** An ad-hoc cost-of-living adjustment was granted in the amount of 15% for retirees with 15 or more years of service and 5% for those with less. (Included minimum and maximum limits.)

The key components of the funding plan associated with the package included an extension of the amortization period for KPERS' unfunded actuarial liability (UAL), changes in the actuarial funding method and the basis for computing amortization payments, plus a statutory cap on employer contribution rate increases of 0.1%. In general, the funding plan lowered initial annual employer contributions and shifted the cost of the benefit enhancements many years into the future. The effect of the funding plan changes made in 1993 was to significantly increase the UAL and to build in higher costs over the course of the amortization period.

Thus the funding plan for the benefit enhancement package, along with subsequent experience losses and other factors that adversely affected liabilities, contributed to the development of a long-term funding shortfall. However, during most of the 1990s, double-digit positive investment returns produced substantial gains in the actuarial value of KPERS' assets, which largely offset and masked the effects of experience losses, actuarial changes, and other factors that increased KPERS' actuarial liabilities during this period. Therefore, the long-term funding shortfall did not become fully apparent for several years, but emerged with investment losses during the market declines in 2001 and 2002. Actuarial projections from that period indicated that the KPERS retirement plan was not in actuarial balance, which means the statutory rate would not converge with the actuarially required contribution (ARC) rate before the end of the amortization period for the UAL.

Previous Legislative Actions to Address Long-Term Funding Problem

Following the 2001 actuarial valuation results, KPERS worked with the Legislature and the Governor to develop a comprehensive, long-term funding plan to address the shortfall and bring KPERS into actuarial balance. Key steps in the plan included:

Increased Statutory Employer Contribution Caps. The 2003 Legislature passed HB 2014 which increased the statutory cap on the State/School employer contribution rate from 0.2% to 0.4% in FY 2006, 0.5% in FY 2007, and 0.6% in FY 2008 and thereafter. In 2004, the Legislature passed SB 520, which similarly increased the statutory caps for KPERS local employers from 0.15% to 0.4% in CY 2006, 0.5% in CY 2007 and 0.6% in CY 2008 and thereafter. The estimated annual cost increase to the State in FY 2011 under the .6% cap on employer contribution rates is approximately $35 to $40 million and approximately $15 million for local employers.

Issued Pension Obligation Bonds. In 2003, HB 2014 authorized the issuance of $500 million in pension obligation bonds. In March 2004, the Kansas Development Finance Authority (KDFA) issued $500 million of bonds, and the KPERS Fund received net proceeds of $440.2 million as an employer contribution for the State and School Groups. Of the remaining bond proceeds, $55 million was used for capitalized interest to lower the debt service in the first three years of the amortization period. Debt service on the bonds is paid by the State General Fund. The current annual debt service payment is $36.1 million through FY 2034.

Authorized Actuarial Changes. SB 520, which was enacted in 2004, gave the KPERS Board of Trustees the authority to establish the actuarial cost method and amortization method and period. These had previously been established by the Legislature as part of the 1993 benefit enhancement legislation. With this authority, the KPERS Board changed the actuarial cost method to the "entry age normal" method beginning with the December 31, 2003, Valuation. Entry age normal is the most common cost method used by public retirement systems.

Adopted a New Plan Design. Following in-depth examinations of funding and demographic projections, cost estimates and plan design options during the 2006 Interim, the Joint Committee on Pensions, Investments and Benefits introduced legislation during the 2007 Session to implement an alternative retirement plan for future employees. In the 2007 Session, the Legislature passed SB 362, which established a new plan design for KPERS members first employed on or after July 1, 2009. Key provisions of the new plan design included: lowering vesting to five years; raising normal retirement age; increasing the benefit reductions for early retirement; increasing the final average salary period to 5 years; providing an automatic 2% COLA beginning at age 65; and increasing the employee contribution rate to 6%. (*See* Appendix 7 for a comparison of Tier 1 and Tier 2 benefits.) At the time these changes were adopted, they were projected to reduce the State's costs for State and School members by $2.6 billion and local employer costs by $1 billion through the end of the amortization period in 2033.

These actions, along with strong investment returns in the FY 2004-2007 period, brought KPERS into actuarial balance and significantly improved the projected funding status through the December 31, 2007, Actuarial Valuation.

Assessment of Current Long-Term Funding Status

The extraordinary financial crisis of 2008 and early 2009 and its unprecedented investment market declines profoundly affected investors globally. The investment return for the S&P 500 was -26.2% during FY 2009, which is reflected in the System's return of -19.6% for the same period.

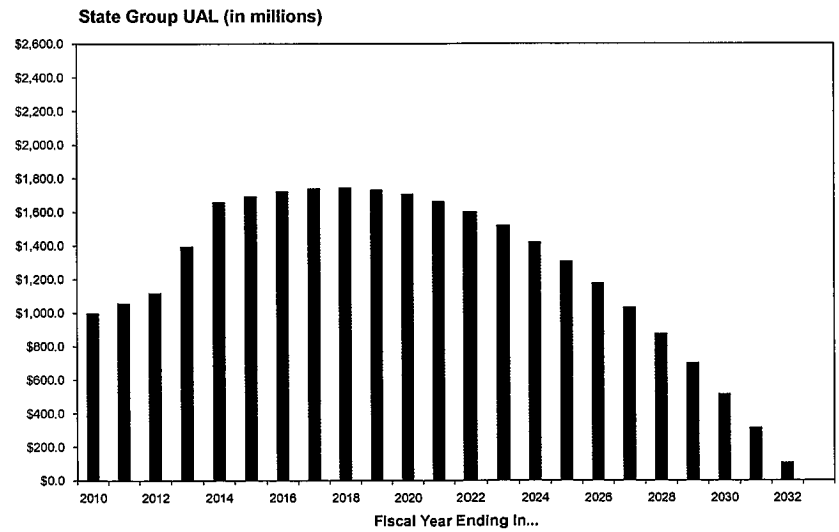
The extraordinary investment losses had a substantial negative impact on the funding status of the System as a whole and reversed previous forward progress on long-term funding. As a result, KPERS' current funding structure is not projected to generate enough contributions to pay off the UAL in the amortization period ending in FY 2033. The System has more than $10 billion in assets. In FY 2009, $728 million in contributions from employees and employers were paid into the KPERS Trust Fund, and benefit payments in FY 2009 totaled just over $1.0 billion. Therefore, KPERS has sufficient assets and contributions to continue paying benefits for decades. Moreover, not all benefits are due at once. Most members are still working and contributing and will not retire for years. Those in retirement are paid over a lifetime. As a result, the funding problem facing KPERS does not constitute a crisis threatening its short-term viability. Instead, it is KPERS' ability to pay benefits over the long-term that is in jeopardy.

The three presentations previously provided to the Joint Committee illustrated the nature and depth of the System's long-term funding challenges using projections of three key measures of the System's long-term viability: (1) the growth of the unfunded actuarial liability (UAL), (2) future actuarially required contribution (ARC) rates, and (3) future funded ratios. Highlights of those measures using a "baseline" projection follow, as well as an assessment of their implications for KPERS' health. The baseline's assumptions include an average annual return of 8% and no change in the current contribution or benefit structure.

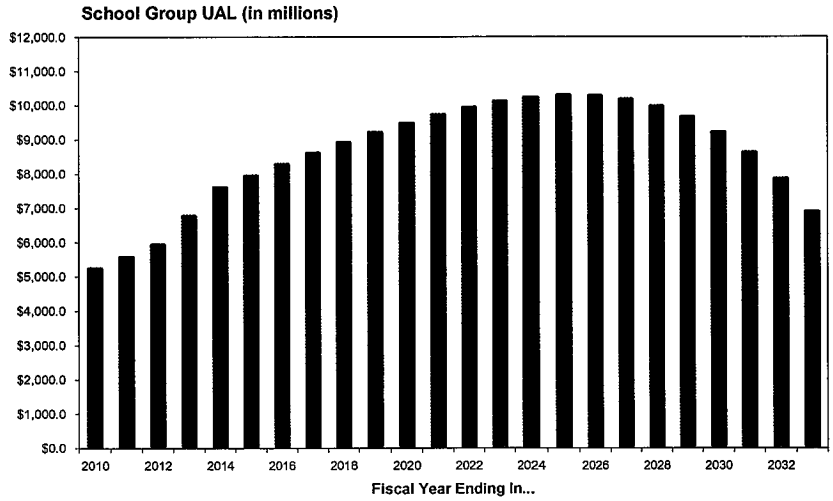
UAL. The unfunded actuarial liability represents the difference between the System's actuarial accrued liabilities for retirement benefits and the actuarial value of the System's assets. Looking at the System as a whole, the December 31, 2008, Actuarial Valuation reported a $2.7 billion or 49% increase in the System's UAL to $8.3 billion. On a current market value basis, the System's UAL is $10.3 billion, due to the $2.0 billion in investment losses from 2008 that will be averaged in over the next four years. Actual investment returns will determine how much of these deferred losses are offset in subsequent valuations.

The same effects are evident in the three KPERS groups.

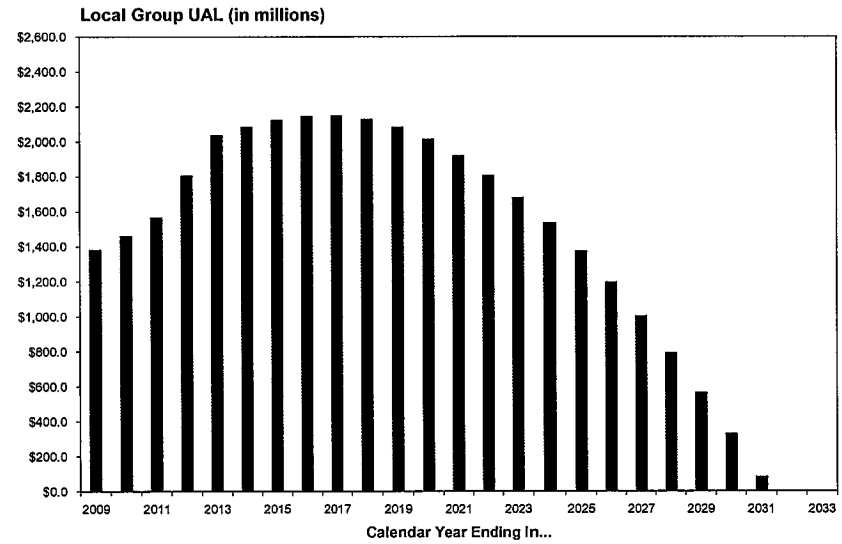
- As of the December 31, 2008, Actuarial Valuation, the State Group's UAL more than doubled from the prior year's valuation – rising from $.45 billion to $1.0 billion. Under the baseline projection, the State Group's UAL continues rising another 74% before peaking at $1.743 billion in FY 2018.



- The School Group's UAL grew from $3.86 billion at the end of 2007 to $5.24 billion at the close of 2008. The UAL is projected to almost double by FY 2025 to $10.282 billion.



- The Local Group's UAL was $1.38 billion, which was an increase of 47% over the 2007 valuation. It is projected to grow another 55% to $2.15 billion by CY 2017.



The measure of a healthy defined benefit plan is not whether there is a UAL. Nor is a UAL a debt that must be paid in full over the short term. Instead, the UAL should be evaluated based on the trend of the UAL amount and whether it can be amortized over a period consistent with accepted actuarial standards, at reasonably sustainable contribution rates. By its nature, the level percent of pay amortization method adopted in 1993 results in increases in the UAL during a significant portion of the amortization period before the UAL levels off and then declines steadily in the final years of the period. Therefore, some upward trend in the UAL at this point in the amortization period is expected. However, prolonged UAL increases of the magnitude now projected for KPERS are of concern, particularly given their impact on sustainable ARC rates and on KPERS' funded ratios.

ARC Rates. The ARC rate for each KPERS group is recalculated annually and consists of two elements. The first is the rate required to pay the normal costs, *i.e.*, the actuarial present value of benefits allocated to the current year. The normal cost component changes over time as actuarial assumptions, benefits, and plan design are modified. The second is the rate required to amortize the UAL over the remainder of the amortization period. Due to the large rise in the UAL, the December 31, 2008, Actuarial Valuation substantially increased the UAL amortization element of the ARC for each KPERS group.

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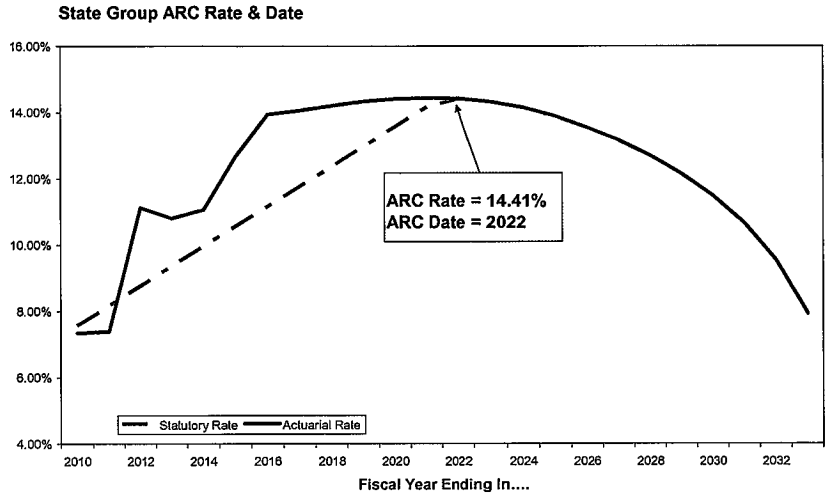
	State Group		School Group*		Local Group	
Valuation	*12/31/07*	*12/31/08*	*12/31/07*	*12/31/08*	*12/31/07*	*12/31/08*
Normal Cost Component	4.13%	4.17%	4.50%	4.53%	4.14%	4.15%
Amortization of UAL and Debt Service**	3.26%	6.96%	6.80%	9.56%	4.38%	6.27%
Total ARC	7.39%	11.13%	11.30%	14.09%	8.52%	10.42%
UAL Element as a Percent of ARC	**44.1%**	**62.5%**	**60.2%**	**67.8%**	**51.4%**	**60.2%**

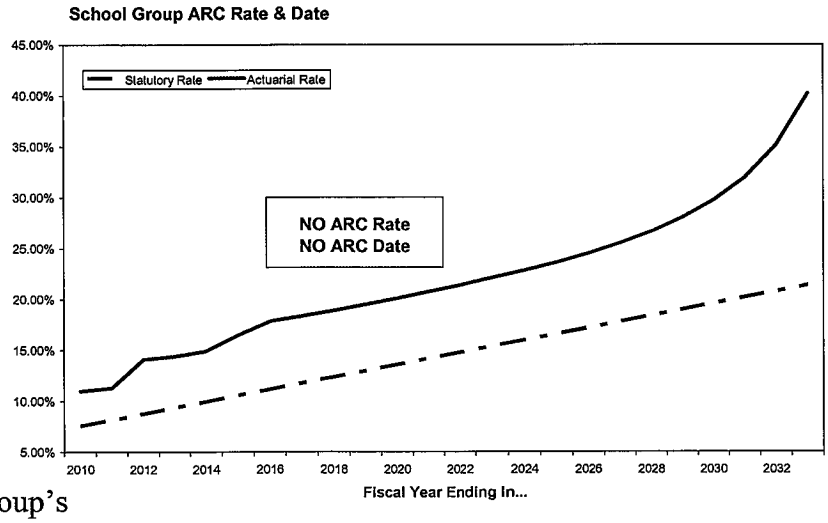
*Reflects State/School Group Rates.
**Payments on bonds issued in 2004.

As the remainder of the 2008 loss is averaged in over the next four years, the UAL component and the total ARC rate will continue to grow, except to the extent they are moderated by future investment gains. However, as a result of the statutory cap on annual employer rate increases, the statutory rate paid by employers lags the ARC rate. Until the point at which statutory rates catch up (the ARC date), that lag will contribute to the growth of both the UAL and ARC rate. ARC rates and ARC date projections for each group under the baseline scenario follow:

- The State Group's projected ARC rate of 14.41% at its ARC date (FY 2022) will be nearly double the statutory state/school rate paid by state agencies in FY 2010 (7.57%).



- The School Group is out of actuarial balance, which means that the statutory rate does not match the ARC rate before the end of the amortization period in FY 2033. Projected ARC rates rise to potentially unsustainable levels, with State/School ARC rates reaching 40.18% by FY 2033. Although the 21.37% statutory rate for FY 2033 is almost three times as high as the FY 2010 statutory rate, it is still only about half of the projected ARC rate for that year. Even with substantial increases in funding, the School Group's UAL is not fully amortized by FY 2033.



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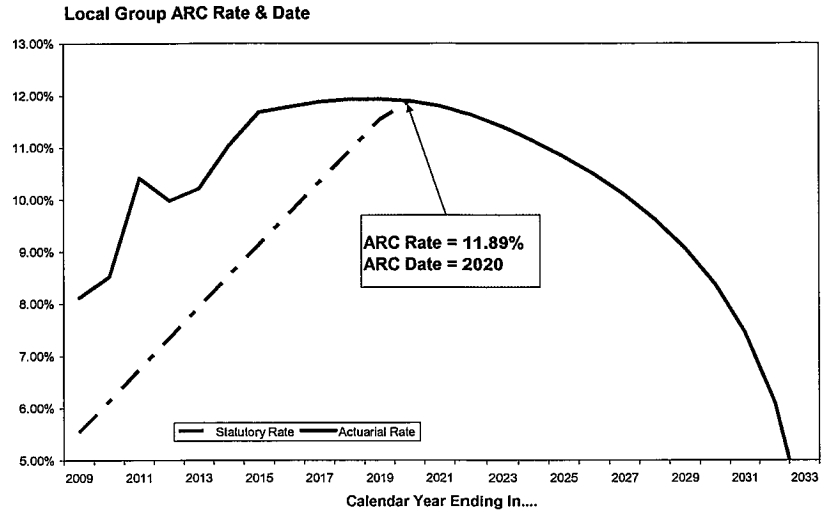
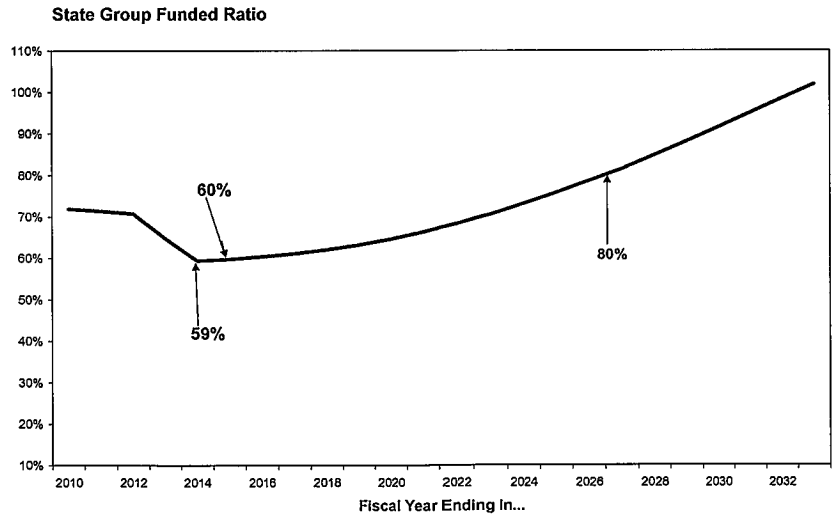
- The projected Local Group ARC rate of 11.89% in CY 2020 (its ARC date) is nearly double the statutory rate paid by local employers in CY 2010 (6.14%).



Funded Ratio. The funded ratio represents the proportion of actuarial liability currently funded by the actuarial value of a plan's assets. This key measure illustrates the depth and severity of KPERS' long-term funding problem, and the potential consequences of its protracted vulnerability to future market downturns. Funded ratio benchmarks applicable to private sector defined benefit plans under federal law also illustrate the far-reaching actions necessary to address such large funding deficits.

For public plans, a funded ratio of 80% and rising is considered to indicate adequate funding. Due to previous steps taken to improve KPERS' long-term funding, the State Group met that criterion for several years prior to the 2008 financial crisis, reaching a funded ratio of 86.8% as of the December 31, 2007, Actuarial Valuation. The School Group's more severe underfunding was reflected in much lower funded ratios of 61% to 63% in the last four valuations. The Local Group was similar, with funded ratios rising slightly from 67% to 70% from 2004 through 2007. However, the immediate and dramatic impact of investment losses on a vulnerable plan is illustrated by the funded ratio for each KPERS group as of the December 31, 2008, Actuarial Valuation and by projections of their future funded ratios using the baseline scenario:

- The State's funded ratio dropped in the December 31, 2008, Actuarial Valuation to 72% and is projected to reach a low of 59% in FY 2014. It is projected to remain near 60% for an additional five years, only reaching 80% in FY 2027.



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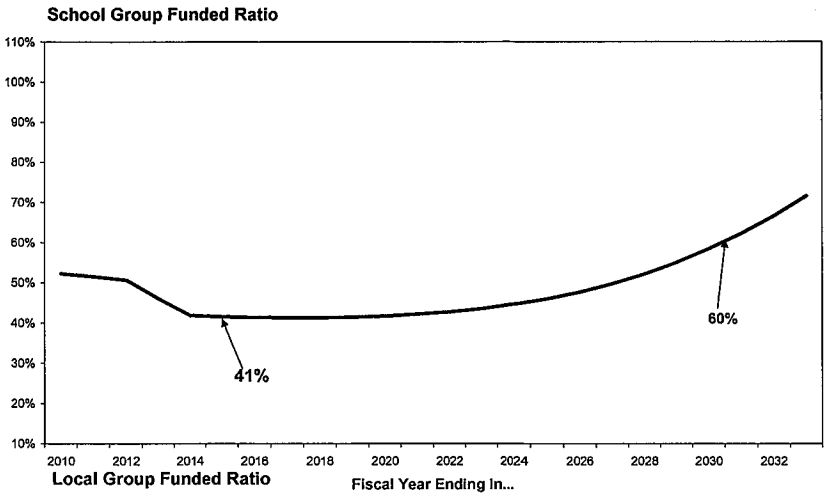
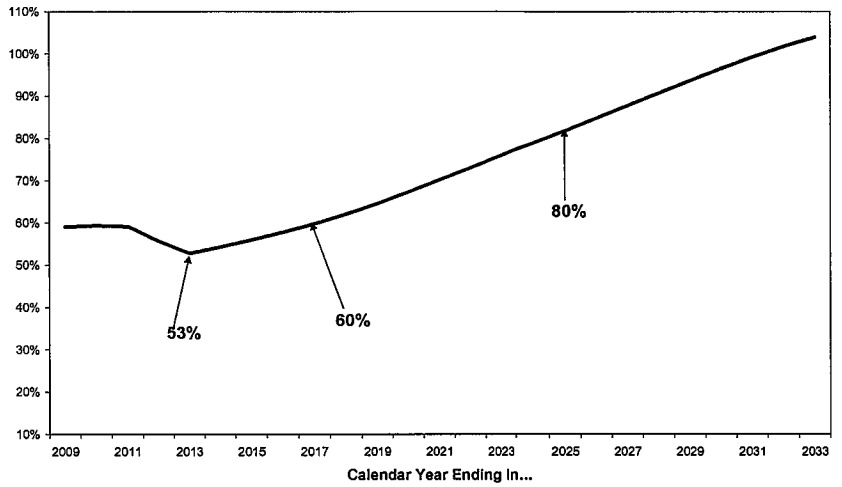
- The School Group's funded ratio immediately fell to 52%. It is projected to reach 41% in FY 2015 and remain at 41 to 43% for 9 years. The funded ratio is not projected to reach 60% until FY 2031 and only reaches 80% in FY 2035.



- The Local Group's 2008 funded ratio dropped to 59%. It is projected to continue falling to 53% by CY 2013, regaining 60% by CY 2017. The funded ratio is not projected to reach 80% until CY 2025.



With two or more decades of funded ratios at levels that are three-quarters to one half of the 80% benchmark for a healthy plan, it is almost inevitable that KPERS will experience one or more periods of investment losses before reaching the 80% funded ratio. If another downturn occurs before significant recovery in the funded ratio occurs, KPERS' viability over the short term, as well as the long term, could be in jeopardy – particularly with respect to the decade during which the School Group is projected to be funded below 45%.

At very low funding levels such as these, preservation of sufficient cash flow to fund current benefits may become paramount, particularly for a maturing plan such as KPERS with an increasing proportion of its members receiving benefits. As a plan is forced to hold more of its assets in cash or very short-term investments, the potential range of the plan's investment strategy may be constrained and, as a result, the plan's ability to achieve its assumed investment return may be increasingly impaired.

As a public plan, KPERS is not subject to ERISA or some of the other federal laws covering private sector defined benefit plans. However, the depth of KPERS' underfunding is illustrated by the extent of the responses required of private sector plans at funded ratio benchmarks well above KPERS' projected funded ratios. While the actuarial methodology used in the calculation of the funded ratio is different in public versus private plans, the funding requirements in private plans make it clear that the Federal Government considers the funded ratio as a key measurement of a pension system's financial health and viability.

4-12

- Plans that are less than **80% funded** generally are considered to be "at risk plans," and are prohibited from making plan amendments that would increase benefits, unless they qualify for one of a limited number of exceptions.

- Plans that are less than **60% funded** must freeze all future benefit accruals until they satisfy the 60% funding level or provide additional security. These plans are also subject to restrictions on benefit payments.

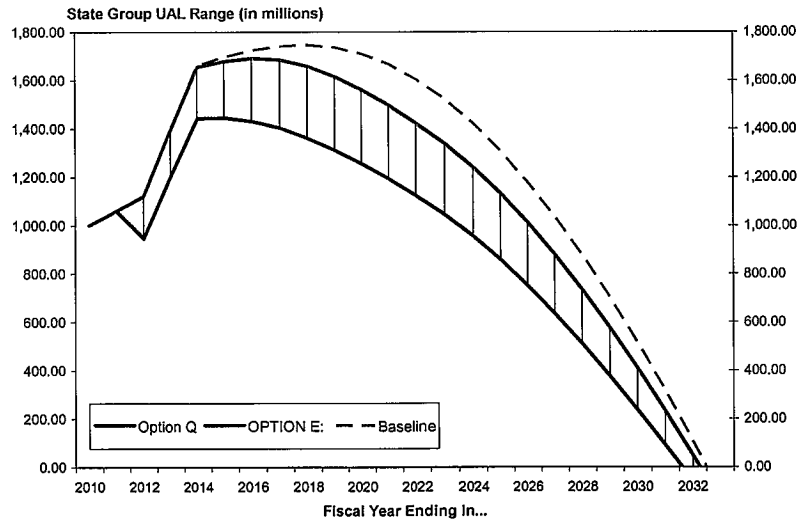
By all of these measures, the KPERS plan and, in particular, the School Group are "at risk" and potentially face further deterioration, which at some point could threaten benefit payments. These benchmarks also reinforce the need for substantive measures to lessen that potential.

Options to Address the Funding Shortfall

The Joint Committee has received projections related to a number of basic funding solution options and multiple variations that involve combinations of raising the statutory cap on employer rate increases, increases in employee contribution rates, changes to the benefit formula multiplier, issuing bonds, and creating a new, mandatory defined contribution plan for future members.* (*See* Appendix 8 for a listing of the options, and Appendices 4 and 5 for more detailed information about each one.) The range of options presented to the Joint Committee illustrates the various trade-offs and limitations that will need to be weighed, as seen in the following summary of their projected impact on the three measures of KPERS' health – UAL, ARC rates and dates, and funded ratios.

Unfunded Actuarial Liability. As the remaining investment losses from 2008 are smoothed in over the next four years, the UAL is expected to rise more steeply under all options. It is projected to continue to rise for up to eight more years. However, all options provided to the Committee reduce the projected maximum UAL.

- The projected reduction in the State Group's maximum UAL ranges from 3% (Option E†) to 17% (Option Q‡).



* Projections were presented to the Joint Committee for the State and School Groups. Projections for the Local Group have not yet been developed, but are expected to fall within similar ranges as the other two groups. All projections assumed an 8% investment return.

† Option E: Phase in a 1% cap on employer contribution rate increases. No employee rate increases.

‡ Option Q: $1.055 billion bond issue with a 2% increase in member contributions phased in over four years.

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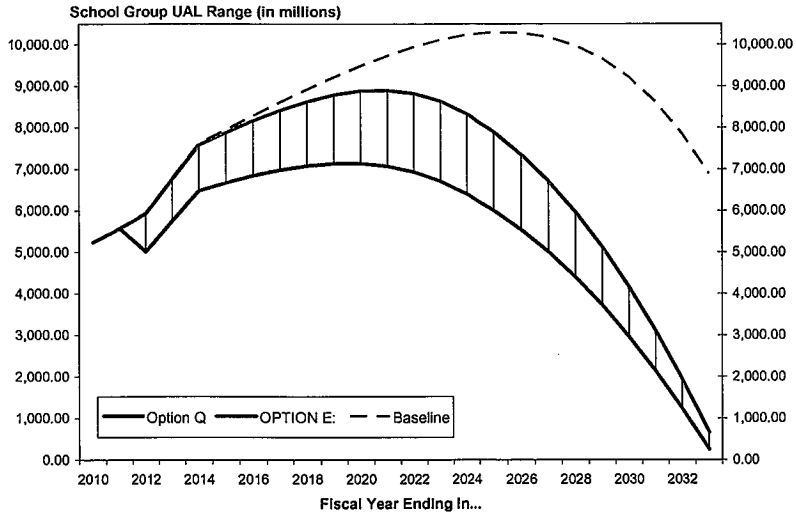
- The projected reduction in the School Group's maximum UAL ranges from 14% (Option E) to 31% (Option Q).

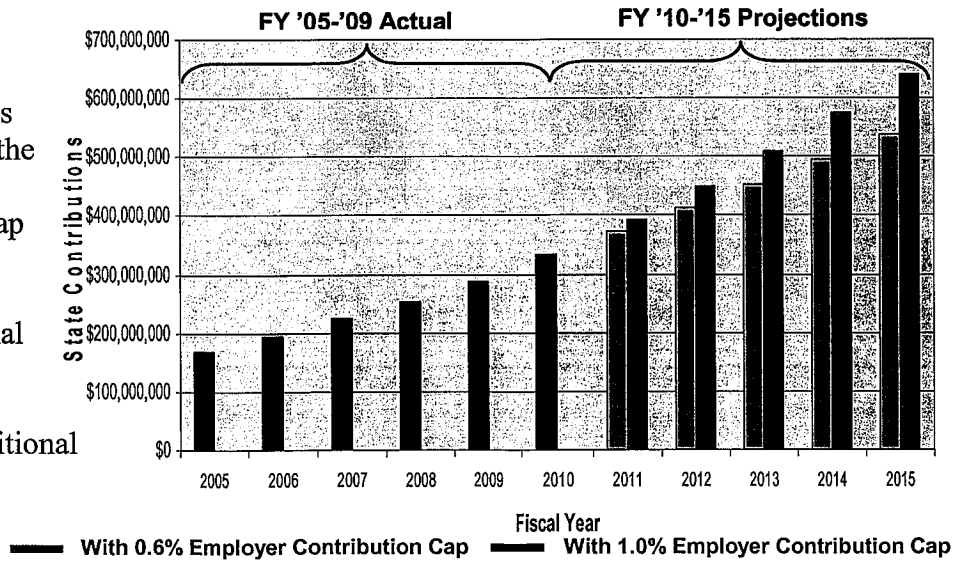


ARC Rates and Dates. Projected ARC rates will rise over a period of years under all options presented to the Committee – for 6 to 8 years for the State Group and 7 to 21 years for the School Group.

- The State Group's maximum ARC rate ranges from 11.26% to 14.00%.
- While all options bring the School Group into actuarial balance, many are at very high ARC rates after 10 to 15 years of annual increases.
- The School Group's maximum ARC rate varies from 15.24% to 20.68%.
- For both Groups, Option Q results in the lowest maximum ARC rate and Option E the highest.

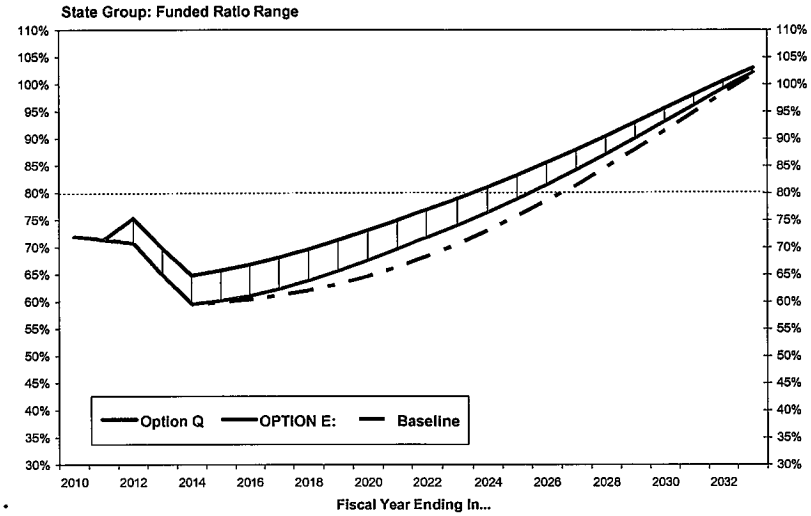
Substantial increases in state funding for KPERS retirement benefits will occur even with the current .6% per year statutory cap on employer rate increases. Because the employer contribution rate is a percent of payroll, contributions automatically increase as the payroll base grows. State funding in FY 2011 is projected to rise by $39.35 million over FY 2010 to $373.57 million. From FY 2011 to FY 2015, State funding is expected to increase by 44% to $538.96 million.

Therefore, raising the cap on employer contribution increases would substantially accelerate the pace of growth in State contributions. Under a 1.0% cap on employer contribution rate increases, State funding in FY 2011 would rise by an additional $18.29 million to $391.86 million. By FY 2015, State funding would increase an additional $101.99 to $640.95 million.



4-14

Funded Ratios. Increases in employer contributions, while necessary, will not substantially affect the funded ratio for a number of years until compounding of investment earnings has the opportunity to grow the new assets relative to liabilities. Under all options presented to the Committee, projected funded ratios continue falling through FY 2014. The State Group's lowest funded ratios are clustered around 60% beginning in FY 2014, while the School Group's low point primarily falls between 41% to 45%.

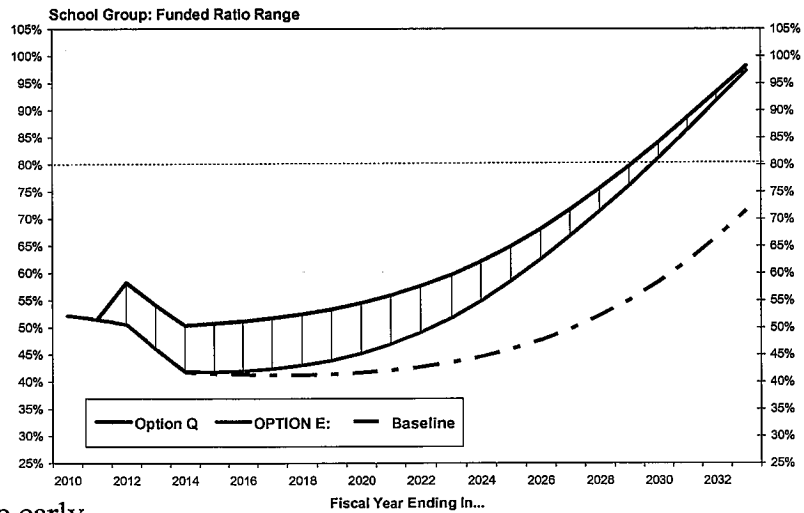


Under the options presented to the Committee, both the State Group and School Group are projected to remain below 80% funded for much of the remainder of the amortization period ending in FY 2033.

- The State Group's funded ratio is projected to hover around 60% at its low point in FY 2014.

- The State Group is projected to reach 80% funded around FY 2025.

- The School Group is projected to reach 80% funded around FY 2028 to FY 2030.



- Under all options provided to the Committee, the School Group's funded ratio is projected to stay below 60% for 10 to 15 years, and it remains below 50% for 7 to 9 years under many of the options. As a result, the School Group will be particularly vulnerable to further market downturns that result in investment performance below 8%.

- A major injection of money in the early years (such as through the pension obligation bonds in Option Q) or large, sustained investment returns in the near term would improve funded ratios somewhat faster than increases in employer and/or employee contributions alone.

The timing, size and combination of additional funding sources – higher caps on employer rate increases, employee rate increases, or pension obligation bonds – affect all of the measures of the System's long-term funding status. Taken as a group, these projections illustrate the difficulties associated with developing viable options that produce substantial progress in the short to mid-

4-15

term. KPERS' funding status will remain tenuous for an extended period of time with any of the options, due to their modest short-term impact and the critical problems that are likely to result from any future downturn in the next 10 to 15 years. Nonetheless, providing additional funding quickly and in larger amounts does appear to result in the greatest reductions in the projected ARC rates and UAL; a smaller decline in projected funded ratios through FY 2014; and lower total employer contributions through the end of the amortization period.

KPERS' has faced challenges with respect to long-term funding for a number of years. Due to a number of actions taken by the Legislature beginning in the 2003 Session, measures of KPERS' funding status began to improve through 2007. However, the investment losses of 2008 had a substantial adverse impact on KPERS' long-term funding outlook and reversed its forward progress. KPERS' ability to withstand future economic downturns has been compromised. All basic measures of KPERS' funding status clearly reflect this deterioration and indicate that the Retirement System is at risk over the long-term. New steps to reduce the funding shortfall – including options for additional funding or plan design changes – are essential, but are likely to require a number of years to effect positive changes in measures of KPERS' health. As a result, KPERS will remain vulnerable to future market downturns for an extended period of time.

Therefore, efforts to address the long-term funding shortfall will need to be part of an ongoing process for a number of years. Legislative action is needed to begin that process, with additional employer contributions as a basic element of any funding option. Further steps, such as employee contribution increases and plan design changes also need to be considered in order to begin establishing a more sound foundation for KPERS' long-term financial health.

Attachment 5
JCPIB 2-26-10

Kansas Public Employees Retirement System

KPERS Long-Term Funding

Joint Committee on Pensions, Investments and Benefits ▪ *December 14, 2009*

Introduction

5.2

- Throughout the fall, KPERS has been conducting an analysis of options for addressing long-term funding challenges faced by the KPERS State, School, and Local Groups.
- At the November meeting of the Joint Committee on Pensions, Investments and Benefits, KPERS provided analyses of a range of long-term funding options. The options included various combinations of –
  - Raising the cap on employer rate increases.
  - Increasing the employee contribution rate.
  - Changing the multiplier used in the benefit formula.
- KPERS also presented background information related to defined contribution (DC) plans, along with several design and funding options for a DC plan.
- In response to requests from the Joint Committee, KPERS has developed several variations on options presented in November.
- In addition, KPERS was requested to analyze the impact of using pension obligation bonds (bonds) in lieu of raising the employer contribution cap. Analyses of two options that use bonds to manage the State's costs over the next few fiscal years are included.

Baseline and Basic Funding Solution Options

5-3

- To provide a frame of reference for the new options, projections for the KPERS "Baseline" and three of the options presented at the November meeting follow.
- The assumptions used for the Baseline and for each of the options are listed below. All projections assume a level, 8% annual investment return.
- **Baseline:**
  - Employer Contribution Rate: Cap remains at 0.6%.
  - Employee Contribution Rate: No change.
- **Option A:**
  - Employer Contribution Rate: Increase cap to 1.0%, effective 7/1/10 (FY 2011).
  - Employee Contribution Rate: No change.
- **Option C:**
  - Employer Contribution Rate: Increase cap to 1.0%, effective 7/1/10 (FY 2011).
  - Employee Contribution Rate: Increase rate by .5% for both Tiers 1 and 2 in each of four years, beginning 7/1/10 (FY 2011).

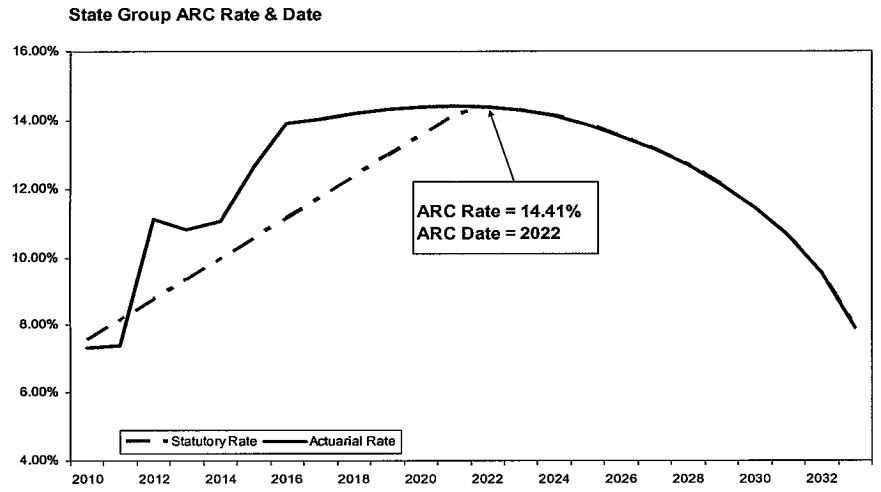
Basic Funding Solution Options (Continued)

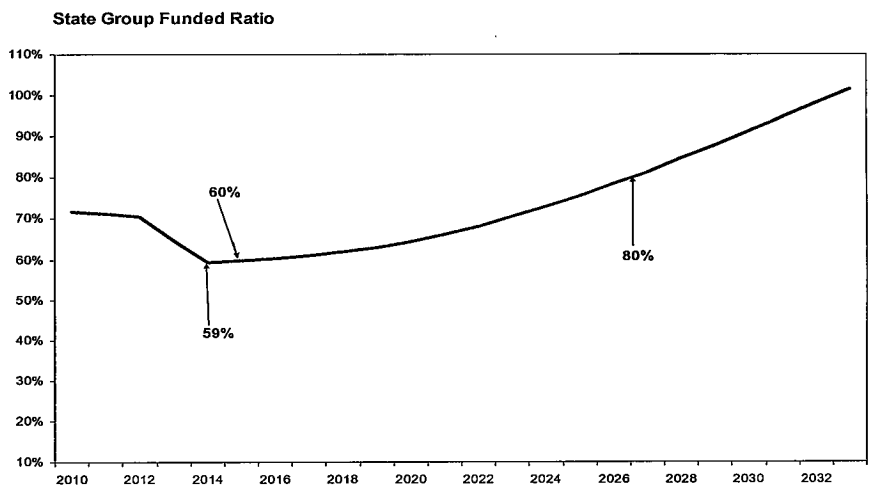
5-4

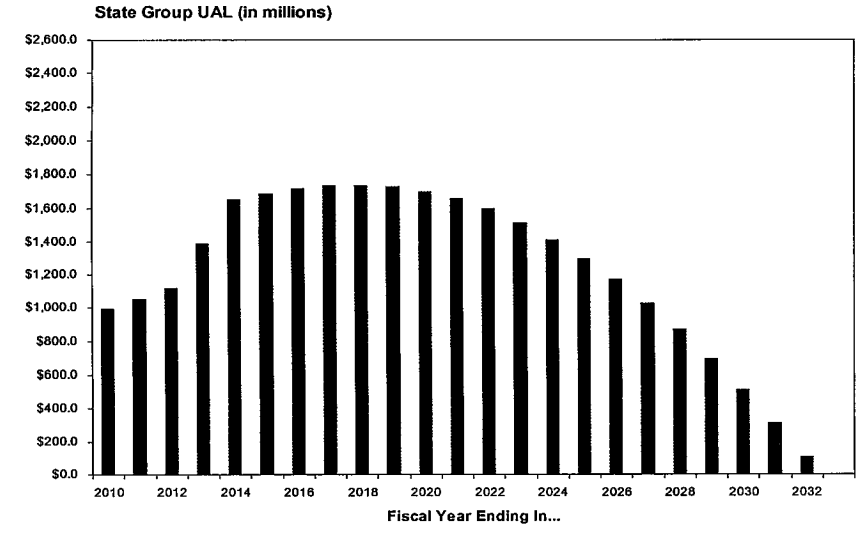
- **Option H:**
  - Employer Contribution Rate: Increase cap to 1.0%, effective 7/1/10 (FY 2011).
  - Employee Contribution Rate: Increase rate 1.0% for Tier I only, effective 7/1/10 (FY 2011).
  - Benefit Multiplier: Increase multiplier to 1.85% for future service (Tier 1 only).

State Group: Baseline Projections

- **No change in the .6% employer rate increase cap.**



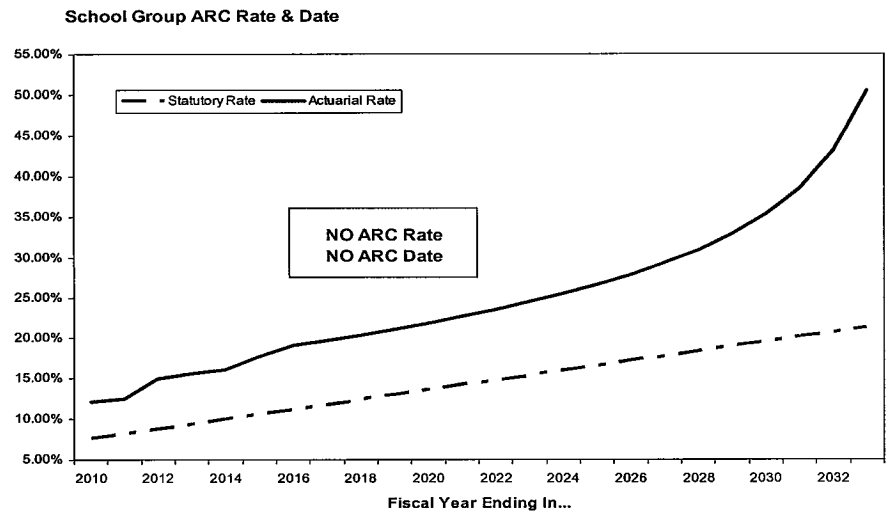


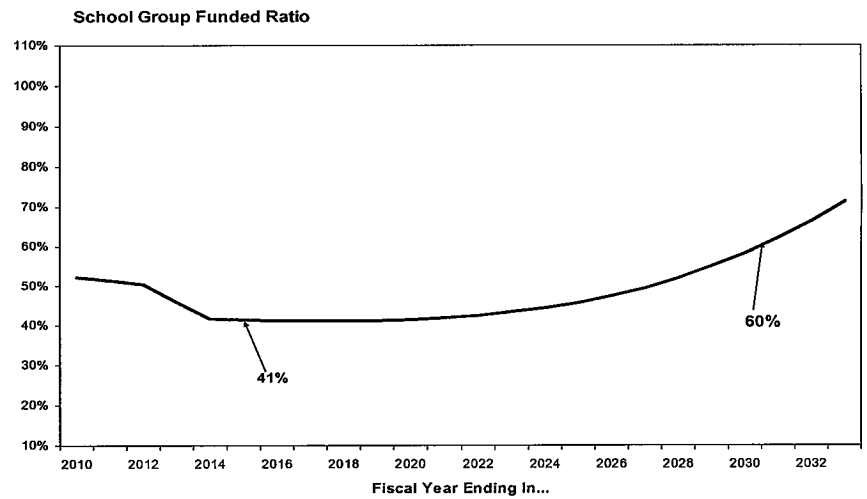


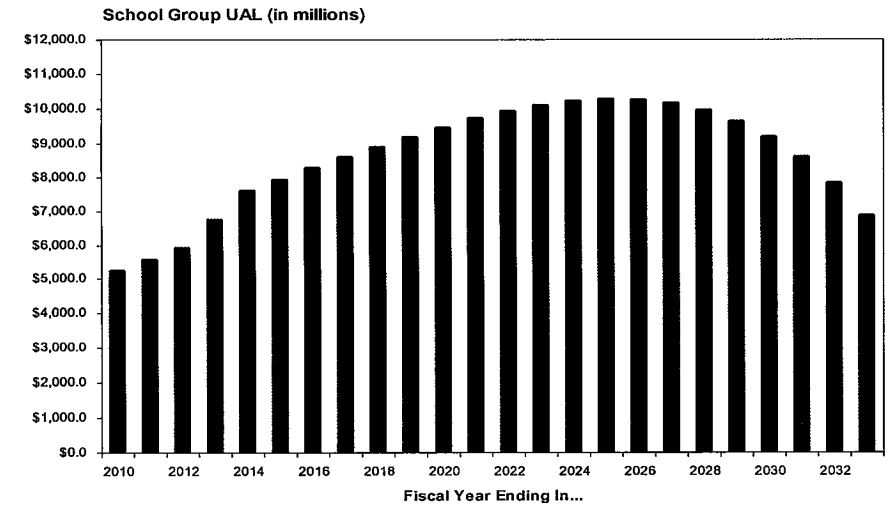
- The projected ARC rate is nearly double the state/school rate paid by state agencies in FY 2010 (7.57%).
- The funded ratio reaches a low of 59% in FY 2014.
- It remains near 60% for an additional 5 years and only reaches 80% in FY 2027.
- The projected UAL rises by nearly 75% to $1.74 billion in FY 2018.

School Group: Baseline Projections

- **No change in the .6% employer rate increase cap.**



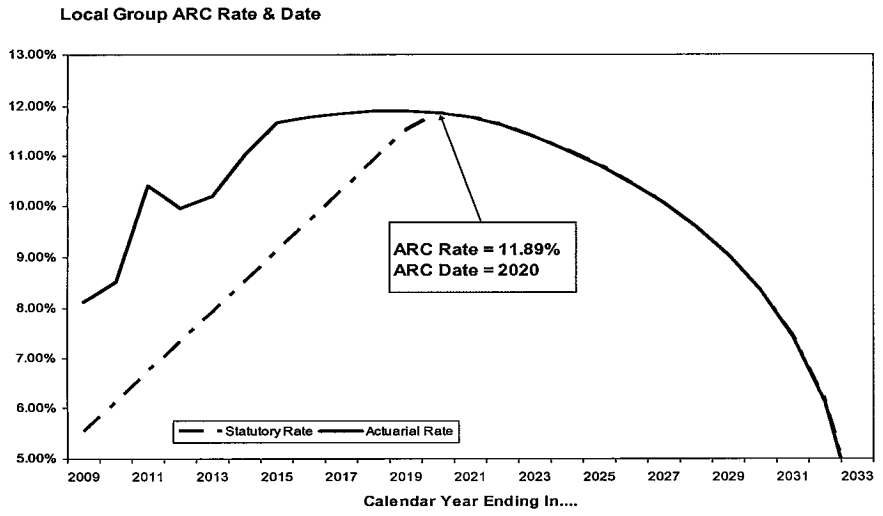


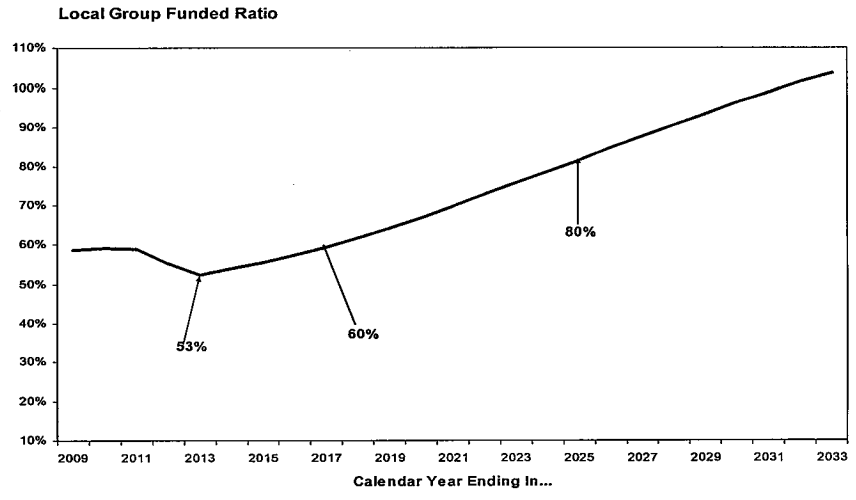


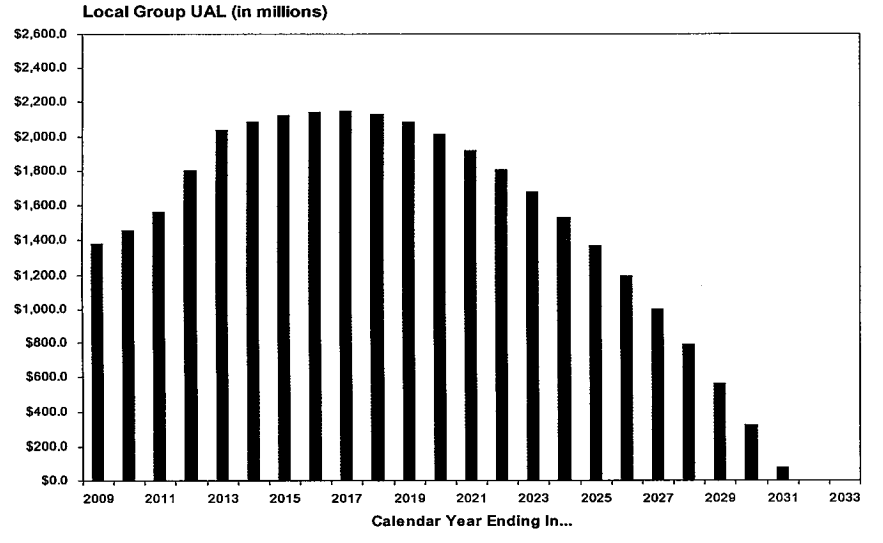
- The School Group is not in actuarial balance by FY 2033.
- The funded ratio reaches a low of 41% in FY 2015 and remains at 41 to 43% for 9 years.
- The funded ratio does not reach 60% until FY 2031 and only reaches 80% in FY 2035.
- The projected UAL nearly doubles to $10.3 billion in FY 2025.

Local Group: Baseline Projections

- **No change in the .6% employer rate increase cap.**



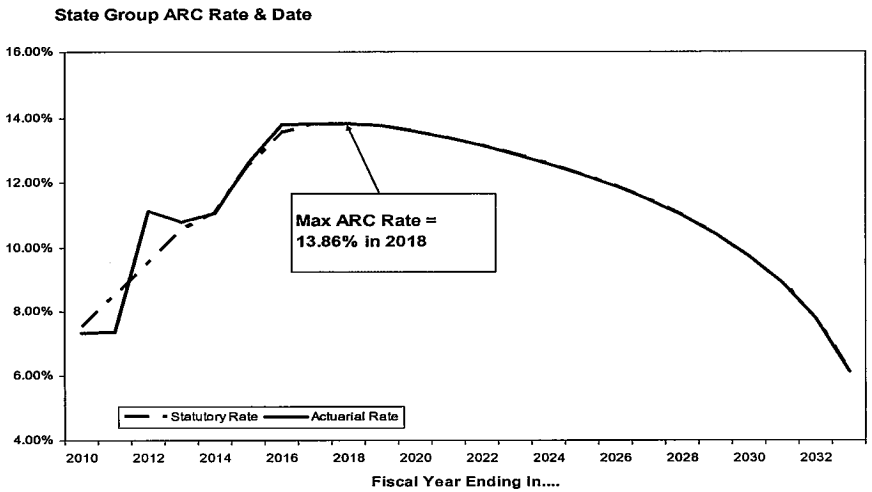


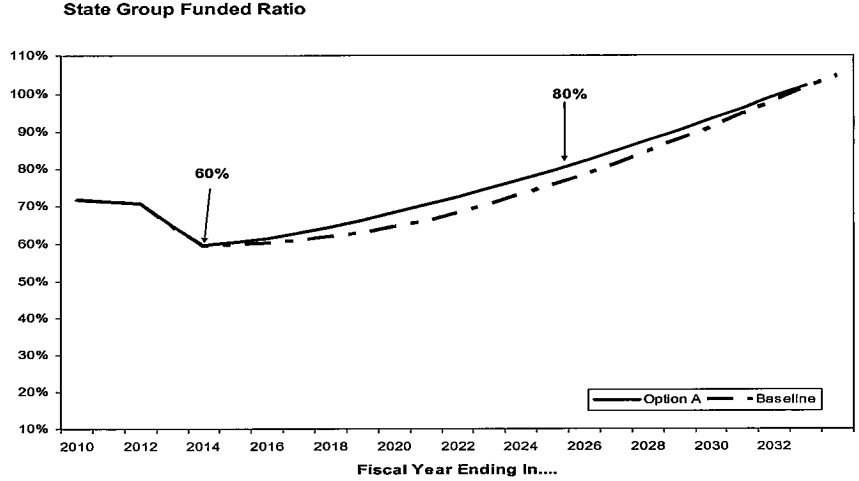


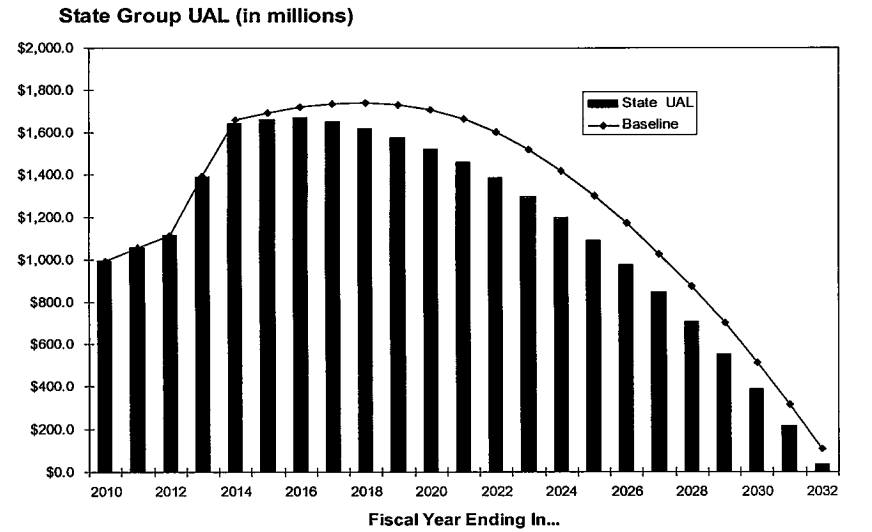
- The Local Group ARC rate is projected to double to 11.89% by CY 2020.
- Its projected funded ratio will fall to 53% by CY 2013, regaining 60% by CY 2017. The funded ratio is projected to reach 80% by CY 2025.
- The UAL is projected to increase by 55.4% to $2.15 billion by CY 2017.

State Group: Option A

- **Raise cap on employer rate increases to 1% in FY '11.**





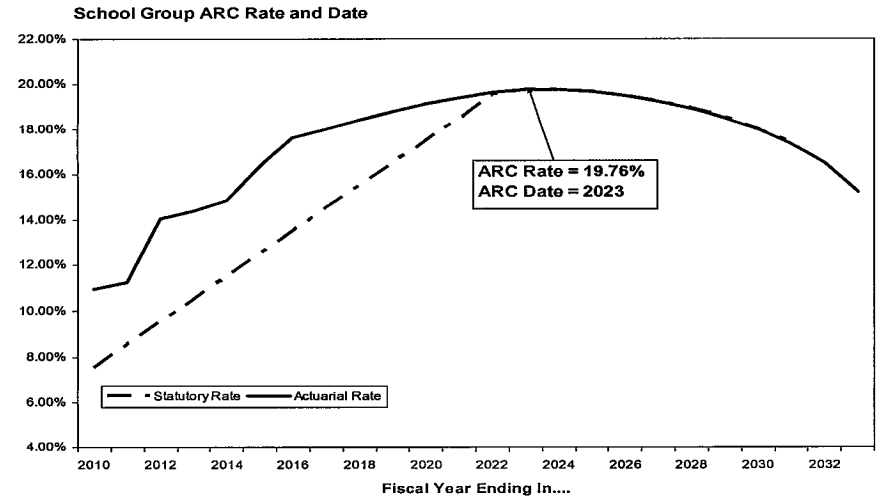


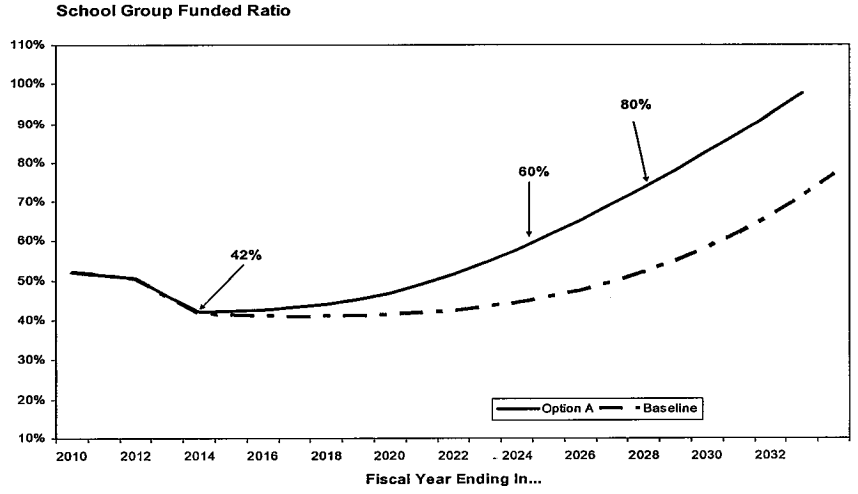
- The projected ARC rate rises to a maximum of nearly 14% by FY 2018.
- The funded ratio projections are similar to the Baseline, reaching a low of 60% in FY 2014.
- The funded ratio recovers very gradually to 80% in FY 2026 – one year earlier than the Baseline.
- The projected UAL rises to $1.67 billion in FY 2016 – two years earlier and $74.9 million less than the Baseline.

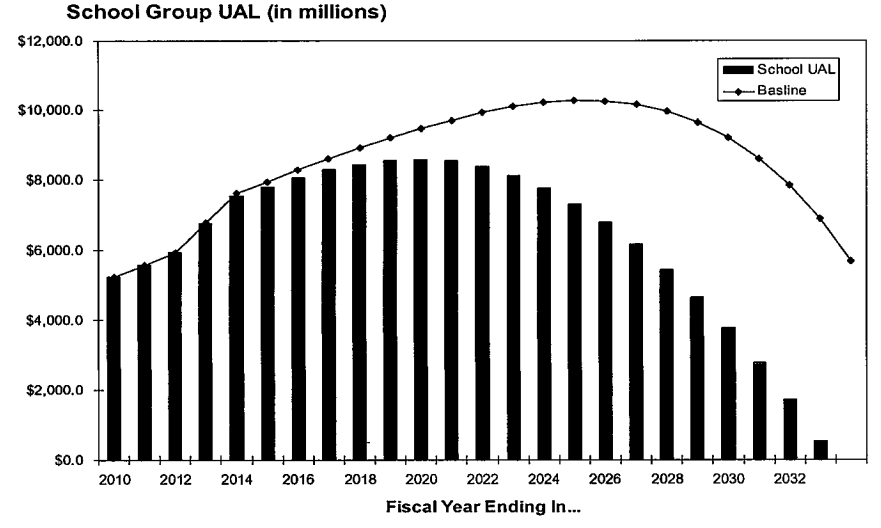
School Group: Option A

5-9

- **Raise cap on employer rate increases to 1% in FY '11.**





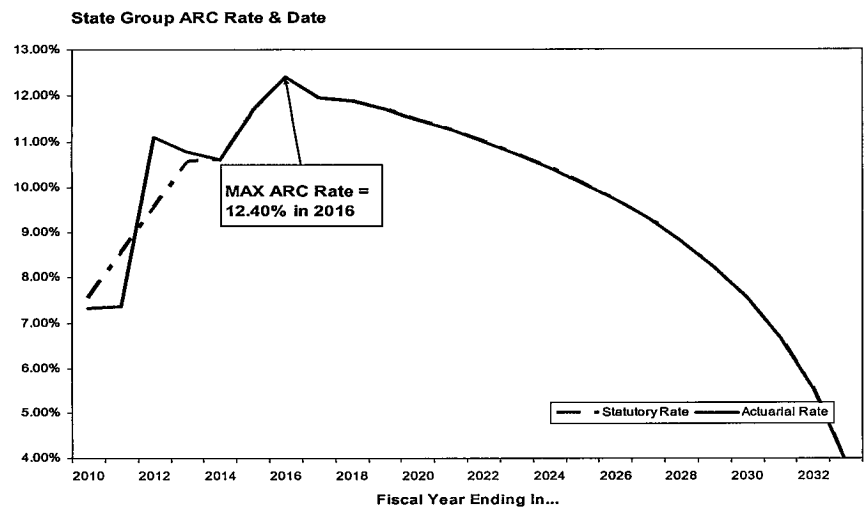


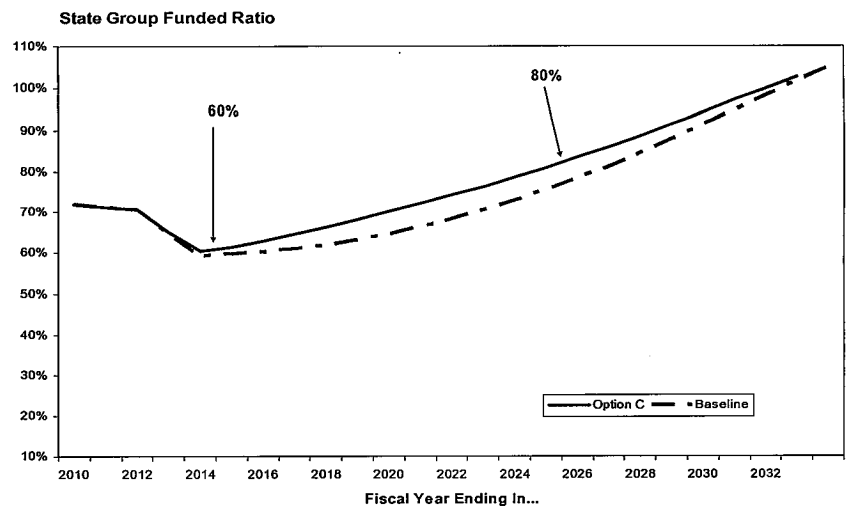
- A 1% cap on employer rate pulls the School Group back into actuarial balance by FY 2023, but at a rate of 19.76%.
- The funded ratio is depressed for an extended period of time, falling to 42% in FY 2014 and remaining below 50% for another 7 years.
- The funded ratio continues increasing slowly to 60% in 2025 and to 80% by FY 2030.
- The projected UAL peaks at $8.6 billion in FY 2020 – five years earlier and $1.7 billion less than the Baseline.

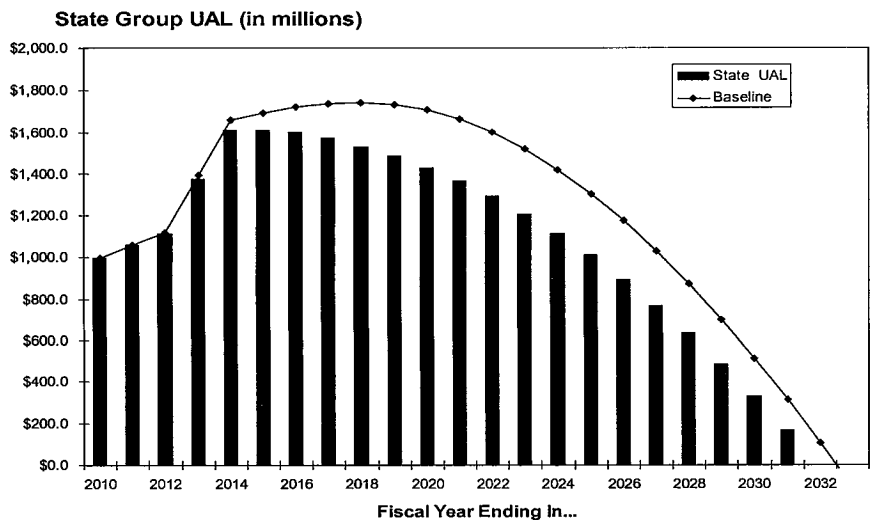
State Group: Option C

5-10

▪Raise cap on employer rate increases to 1% in FY '11. Increase member contributions by .5% in each of four years, beginning FY 2011.







▪With the phased addition of 2% in additional member contributions, the projected ARC rate peaks at 12.40% in FY 2016. (The maximum ARC rate is 13.86% in FY 2018 for the 1% cap alone.)

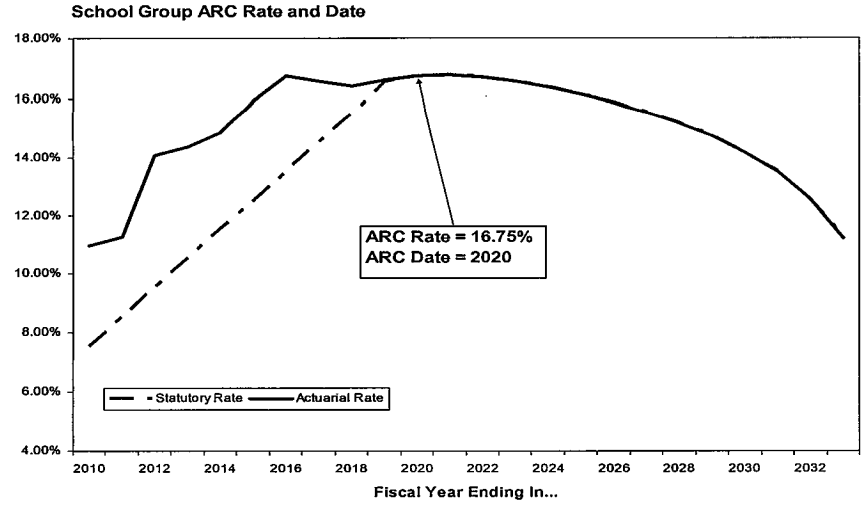
▪Funded ratio projections are in the same range as those for the 1% cap option.

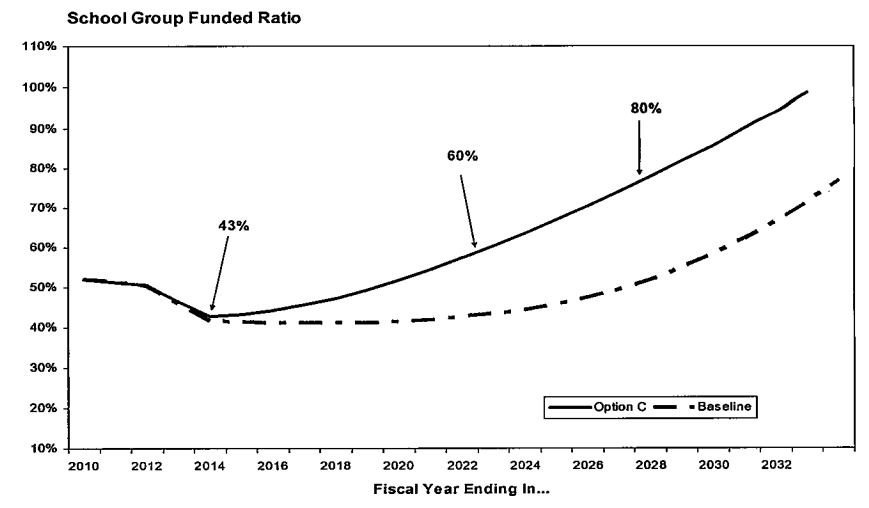
▪The UAL projections are slightly lower than the 1% cap option, peaking three years earlier at $1.61 billion and $131 million less than the Baseline.

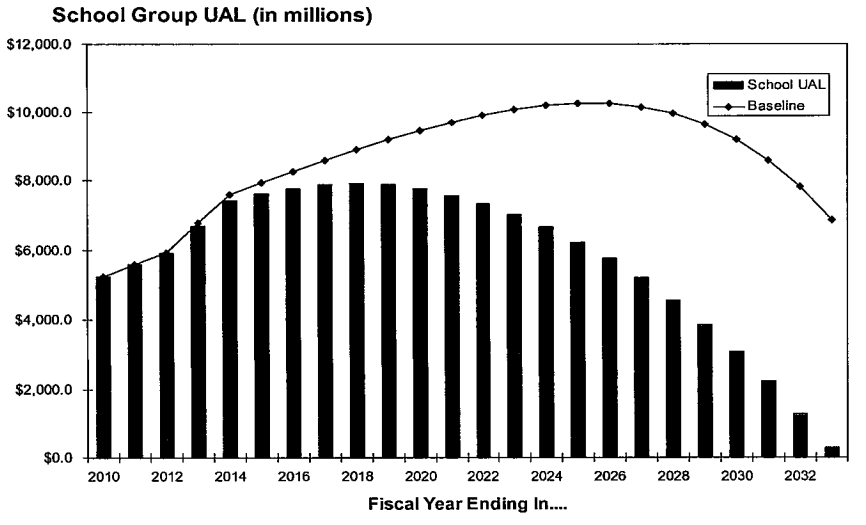
School Group: Option C

5-11

▪Raise cap on employer rate increases to 1% in FY '11. Increase member contributions by .5% in each of four years, beginning FY 2011.



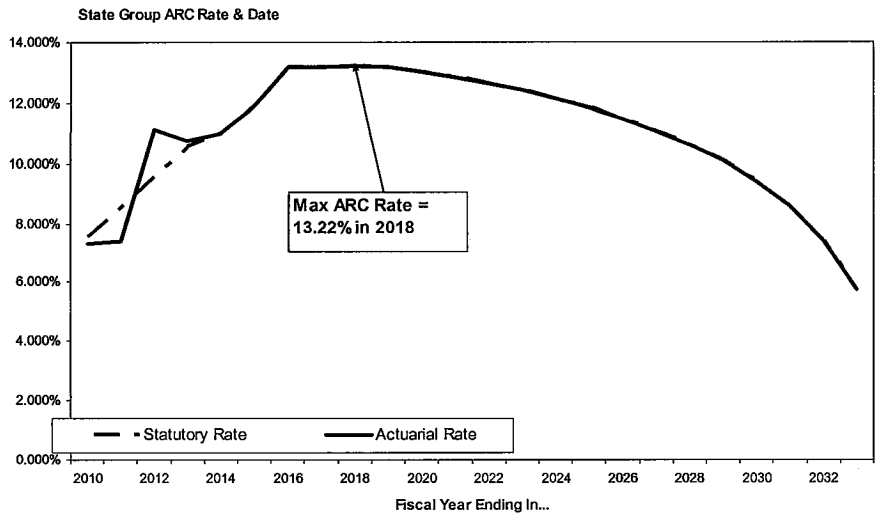


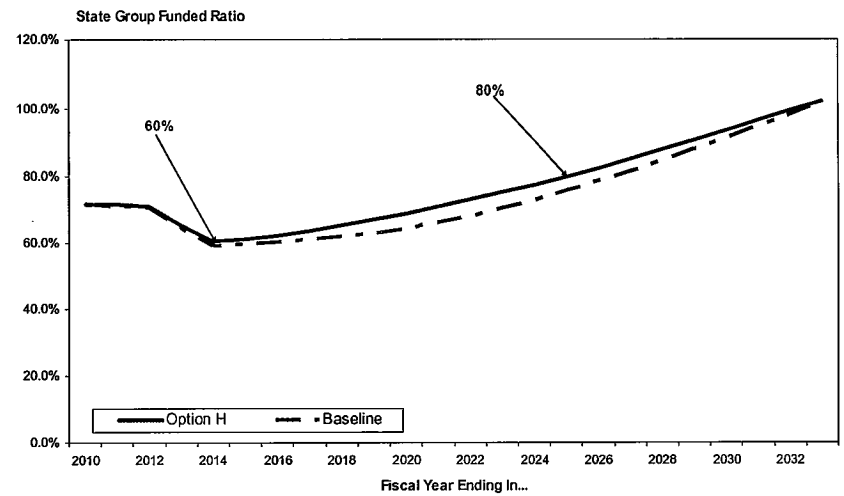


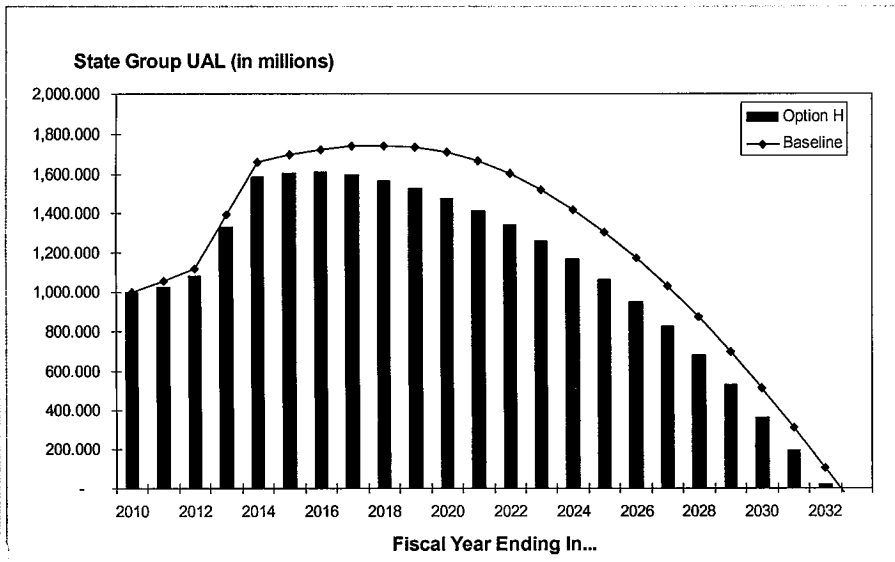
- The ARC rate and date drops from 19.76% in FY 2023 with the 1% cap to 16.75% in FY 2020 if a phased-in 2% member contribution increase is added.
- The low point of the funded ratio projections is similar to the 1% cap option. A 60% funded ratio is reached in FY 2023 – two years earlier than the 1% option. An 80% funded ratio is projected in FY 2029.
- With the additional member contributions, the projected UAL peaks seven years earlier – in FY 2018 at $7.9 billion or $2.4 billion less than the Baseline.

State Group: Option H

▪Raise cap on employer rate increases to 1.0% in FY '11. Raise Tier I employee rate by 1.0% in FY '11. Increase Tier I multiplier to 1.85% for future service.





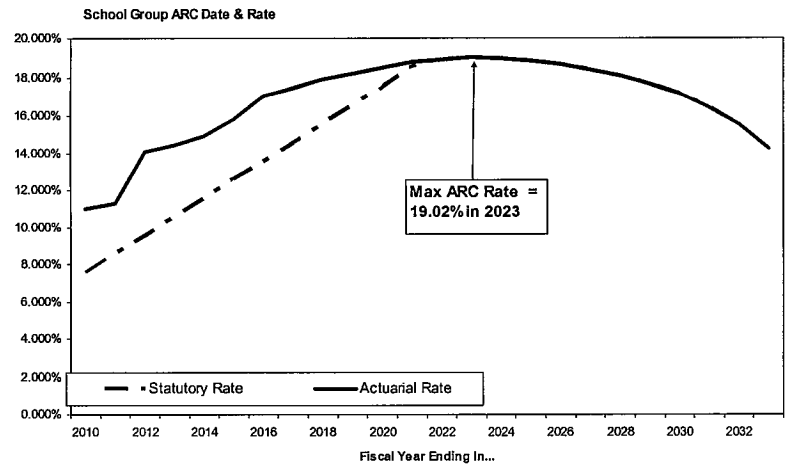


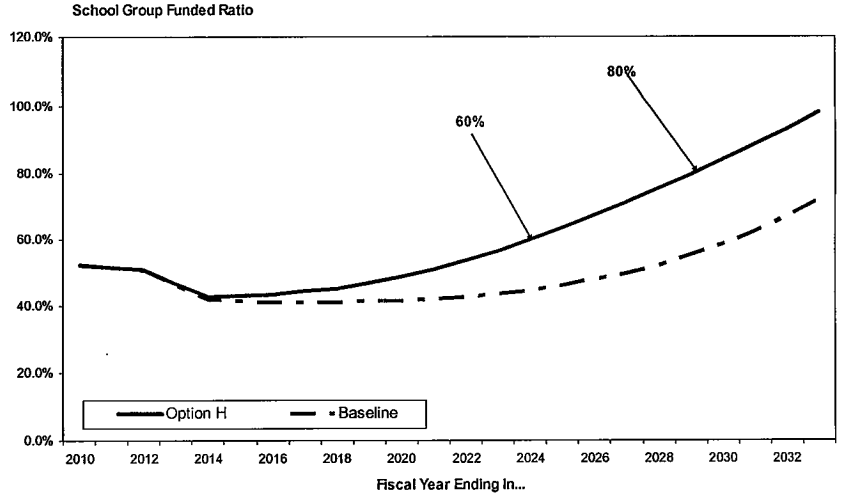
- The projected ARC rate rises to a maximum of 13.22% in FY 2018 – .64% lower than Option A.
- The funded ratio projections are similar to the Baseline, reaching a low of 61% in FY 2014.
- The funded ratio recovers gradually to 80% in FY 2025 – two years earlier than the Baseline.
- The projected UAL peaks at $1.61 billion in FY 2016 – two years earlier and $134.5 million less than the Baseline.

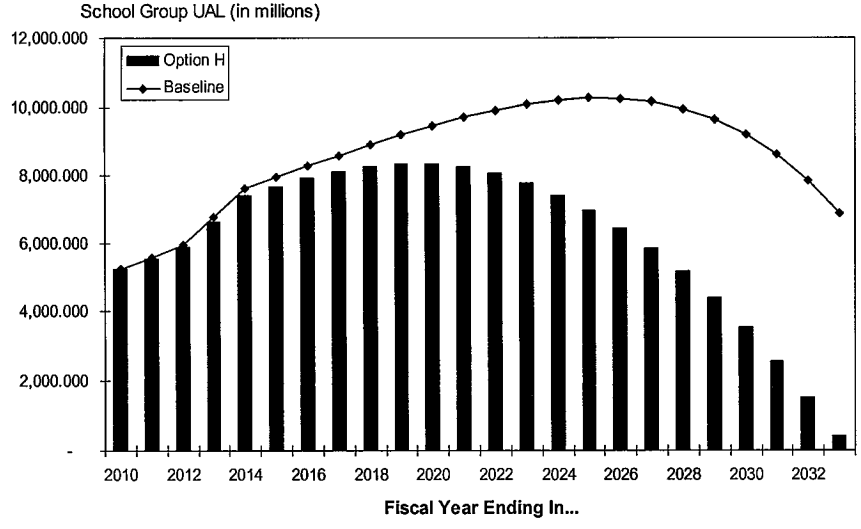
School Group: Option H

▪Raise cap on employer rate increases to 1.0% in FY '11. Raise Tier I employee rate by 1.0% in FY '11. Increase Tier I multiplier to 1.85% for future service.

5-13







- The projected ARC rate rises to a maximum of 19.02% in FY 2023 – .74% lower than Option A.
- The funded ratio reaches a low of 43% in FY 2014 and remains below 50% for another 6 years.
- The funded ratio recovers to 60% in FY 2024 and 80% in 2030.
- The projected UAL peaks at $8.3 billion in FY 2020 – five years earlier and $1.96 billion less than the Baseline.

Effect on State Contributions

Option A* Estimated Effect on the State and School Group (in millions)

	0.6% Cap	Option A	Additional ER Contributions
FY 2011 Increase in Employer Contributions	$39.35	$57.64	$18.29
FY 2011 Total Employer Contributions	$373.57	$391.86	$18.29
FY 2015 Increase in Employer Contributions	$44.80	$67.48	$22.68
FY 2015 Total Employer Contributions	$538.96	$640.95	$101.99
Total Employer Contributions: FY 2010-2033	$23,977.65	$25,492.03	$1,514.38

Option C Estimated Effect on the State and School Group (in millions)**

	0.6% Cap	Option C	Additional ER Contributions
FY 2011 Increase in Employer Contributions	$39.35	$57.64	$18.29
FY 2011 Total Employer Contributions	$373.57	$391.86	$18.29
FY 2015 Increase in Employer Contributions	$44.80	$67.48	$22.68
FY 2015 Total Employer Contributions	$538.96	$640.95	$101.99
Total Employer Contributions: FY 2010-2033	$23,977.65	$21,936.48	($2,041.17)

*Raise cap on employer rate increases to 1.0% in FY 2011.
**Raise cap on employer rate increases to 1% in FY '11. Increase employee rate by .5% for both Tier 1 and 2 in each of four years, beginning FY 2011.

Effect on State Contributions

5-15

Option H* Estimated Effect on the State and School Group (in millions)

	0.6% Cap	Option H	Additional ER Contributions
FY 2011 Increase in Employer Contributions	$39.35	$57.64	$18.29
FY 2011 Total Employer Contributions	$373.57	$391.86	$18.29
FY 2015 Increase in Employer Contributions	$44.80	$67.48	$22.68
FY 2015 Total Employer Contributions	$538.96	$640.95	$101.99
Total Employer Contributions: FY 2010-2033	$23,977.65	$24,689.52	$711.87

*Raise cap on employer rate increases to 1.0% in FY '11. Raise Tier I employee rate by 1.0% in FY '11. Increase Tier I multiplier to 1.85% for future service.

Funding Solution Option Variations

- The Joint Committee requested that KPERS prepare projections for six variations that are based on Options C and H.
- The factors differentiating the variations are the amount and timing of employer and member contribution increases, as well as which Tiers are included in member increases.

Variation 1 (Opt. J: Both Tiers & Opt. K: Tier 1)	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**
Raise employer rate increase cap to:	.8%	1.0%	--	--
Raise employee rate by:	0.5%	0.5%	0.5%	0.5%
Increase multiplier for future service to 1.85%.				

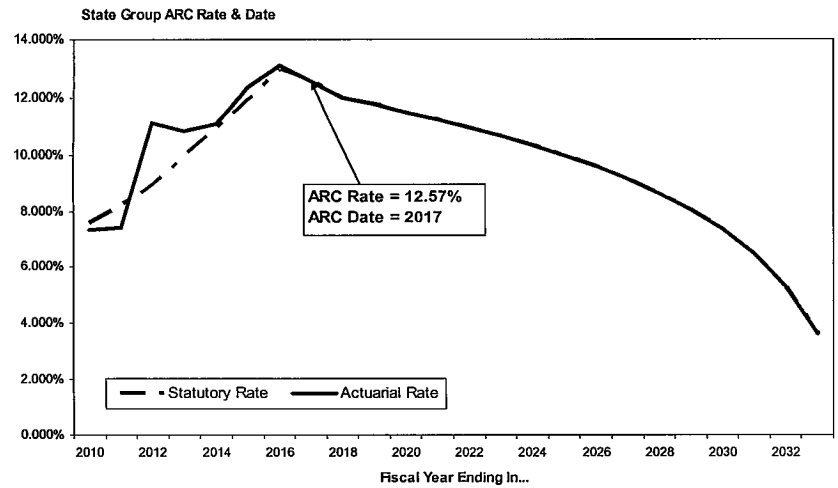
Variation 2 (Opt. L: Both Tiers & Opt. M: Tier 1)	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**
Raise employer rate increase cap to:	1.0%	--	--	--
Raise employee rate by:	1.0%	1.0%		
Increase multiplier for future service to 1.85%.				

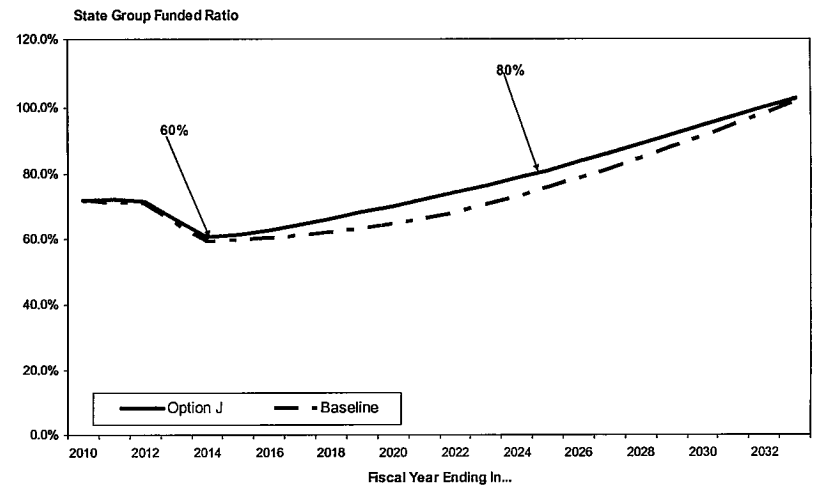
Variation 3 (Opt. N: Both Tiers & Opt. O: Tier 1)	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**
Raise employer rate increase cap to:	.8%	1.0%	--	--
Raise employee rate by:	1.0%	1.0%	--	--
Increase multiplier for future service to 1.85%.				

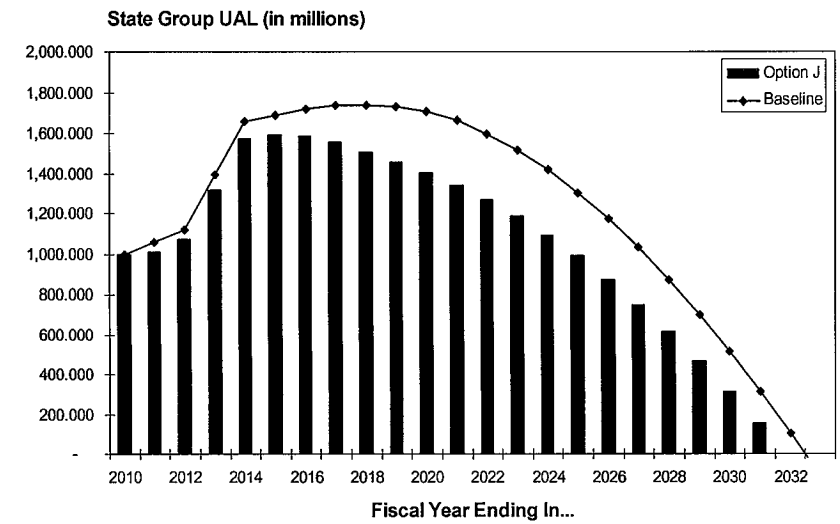
State Group: Option J

5-17

▪Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tiers I & 2 employee rate by 0.5% in each of four years, beginning in FY '12 . Increase Tiers I & 2 multiplier to 1.85% for future service.



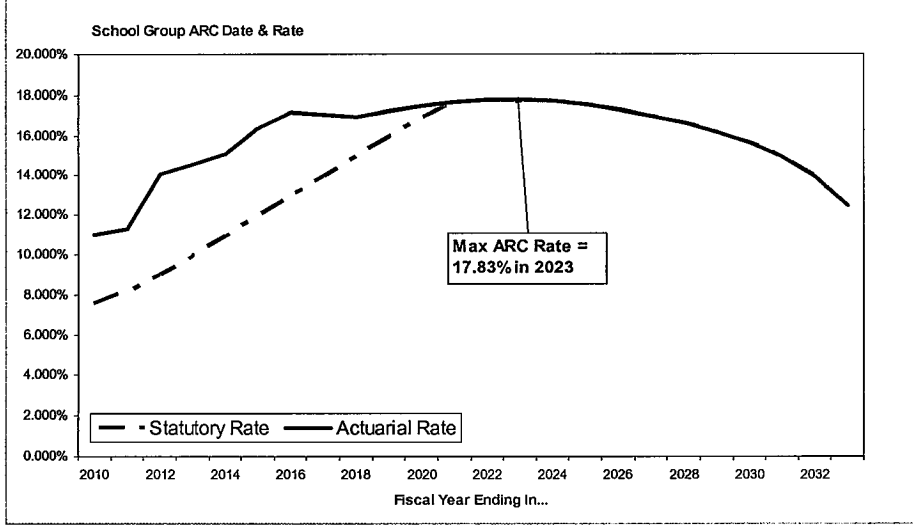


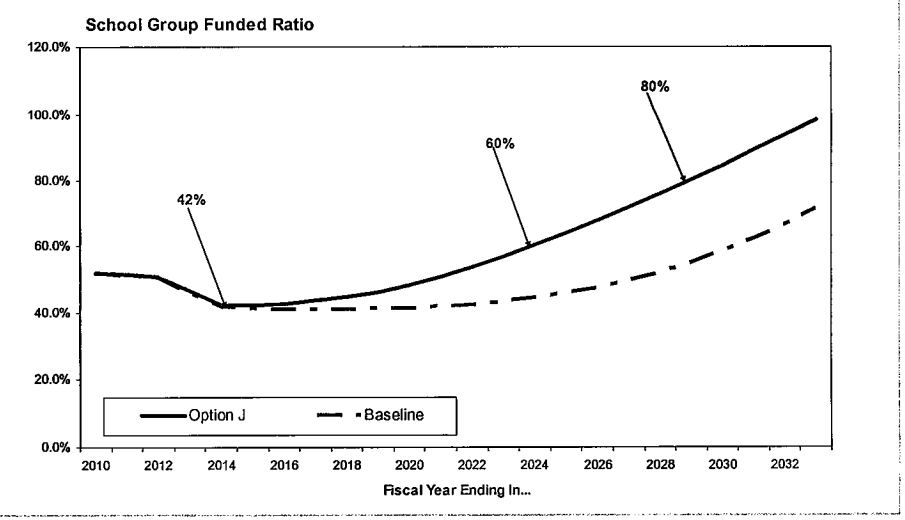


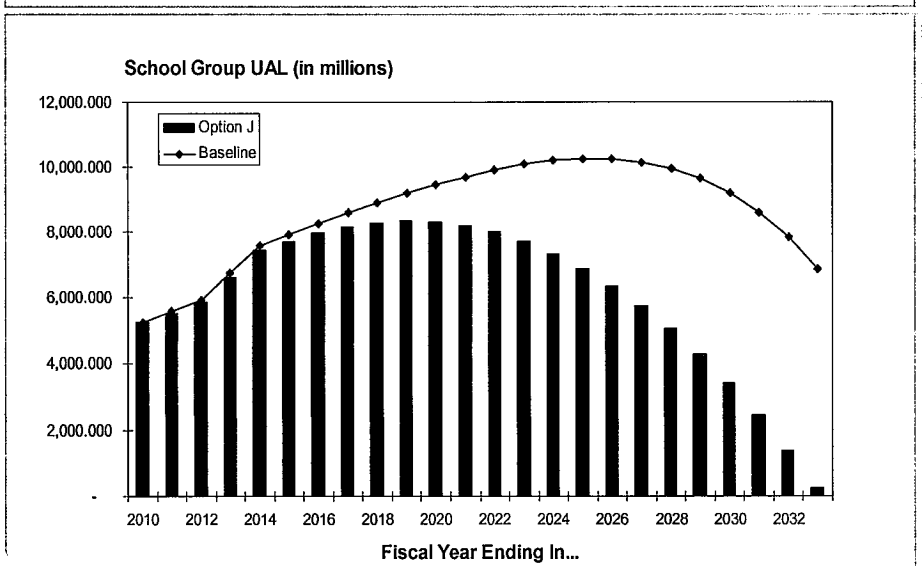
- The projected ARC rate rises to 12.57% in FY 2017 – very similar to Option C without the multiplier increase.
- The funded ratio projections reach a low of 60.7% in FY 2014.
- The funded ratio recovers to 80% in FY 2025 –two years earlier than the Baseline.
- The projected UAL peaks at $1.59 billion in FY 2015 – three years earlier and $151 million less than the Baseline.

School Group: Option J

▪Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tiers I & 2 employee rate by 0.5% in each of four years, beginning in FY '12 . Increase Tiers I & 2 multiplier to 1.85% for future service.





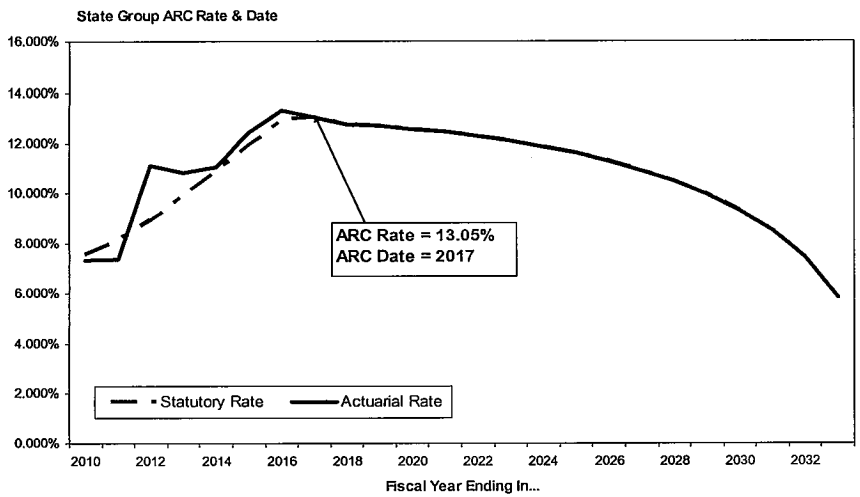


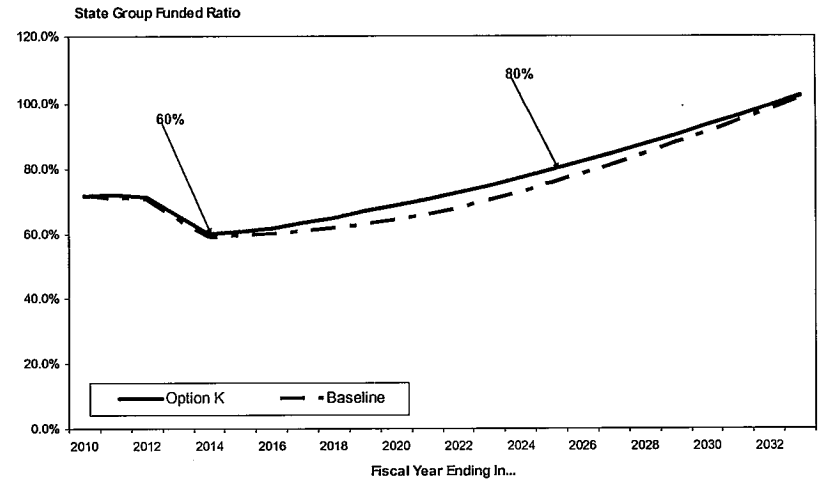
- The projected ARC rate rises to a maximum of 17.83% in FY 2023 – two years later and 1% higher than Option C.
- The funded ratio falls to a low of 42.4% in FY 2014 and remains below 50% for a total of eight years.
- The funded ratio reaches 60% in FY 2024 and 80% by FY 2029 – similar to Option C.
- The projected UAL peaks at $8.34 billion in FY 2019 – six years earlier and $1.94 billion less than the Baseline.

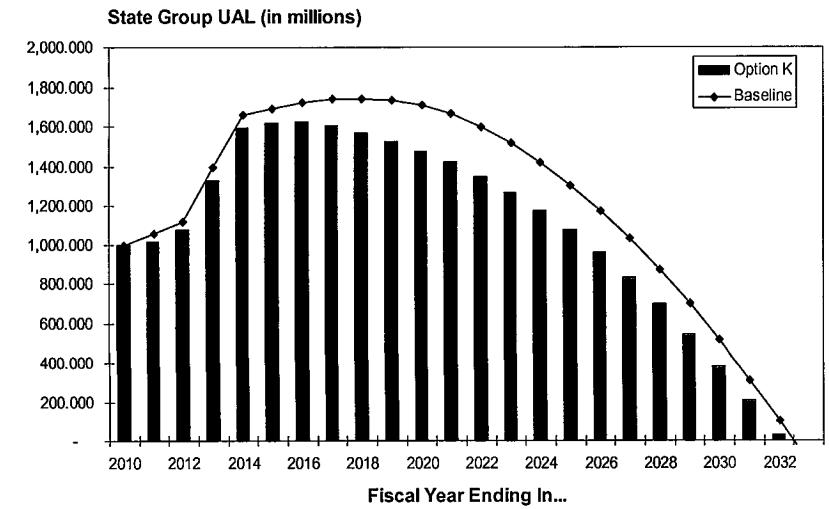
8-5

State Group: Option K

▪Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I employee rate by 0.5% in each of four years, beginning in FY '12. Increase Tier I multiplier to 1.85% for future service.



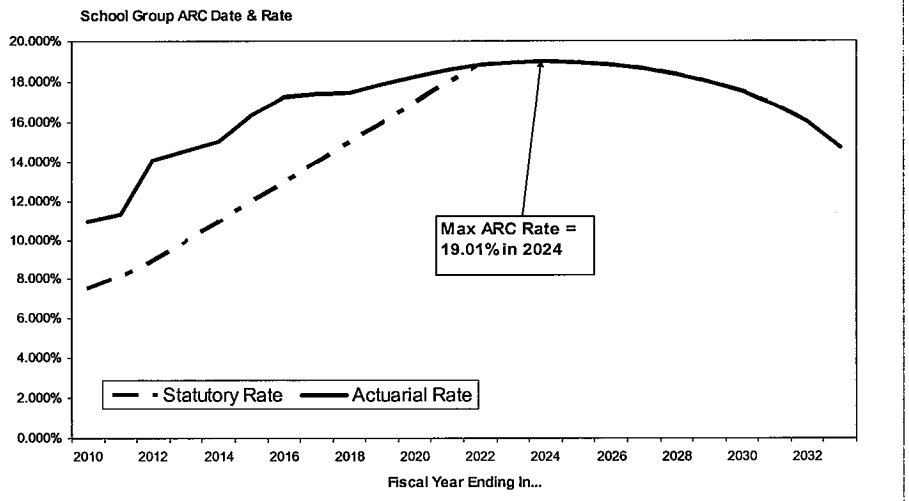


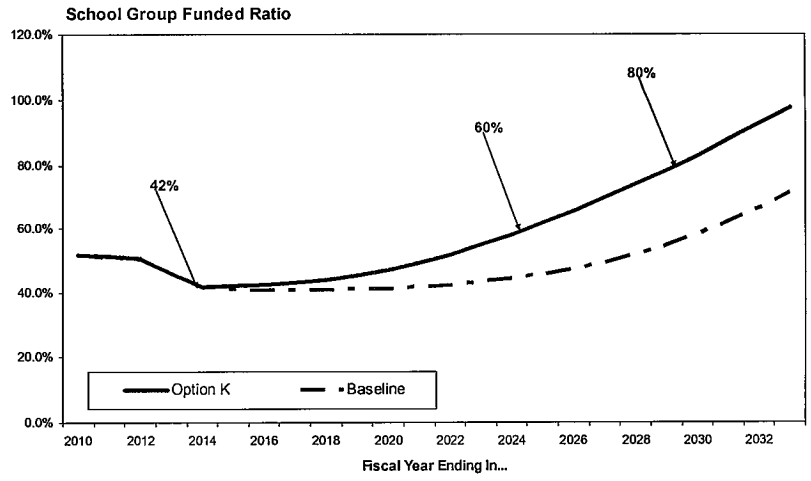


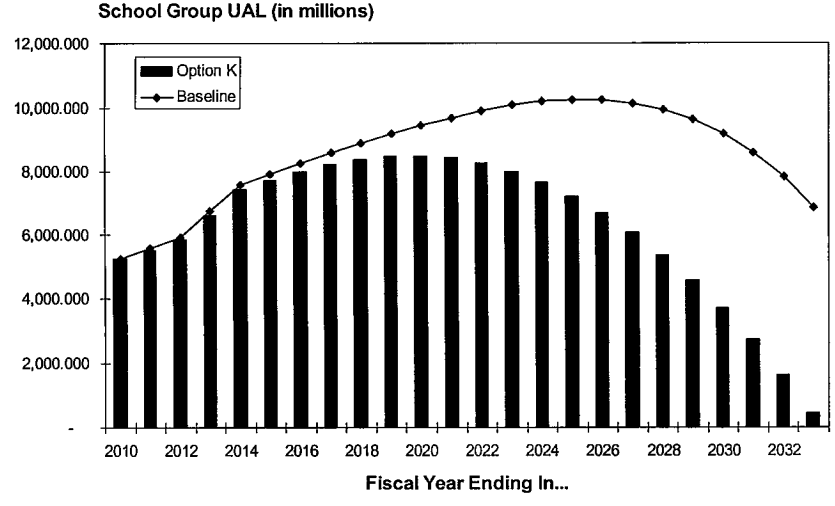
- The projected ARC rate rises to 13.05% in FY 2017 – approximately .5% more than Option J.
- The funded ratio projections reach a low of 60.4% in FY 2014.
- The funded ratio recovers to 80% in FY 2026.
- The projected UAL peaks at $1.62 billion in FY 2016 – $30 million more than Option J.

School Group: Option K

▪Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I employee rate by 0.5% in each of four years, beginning in FY '12. Increase Tier I multiplier to 1.85% for future service.



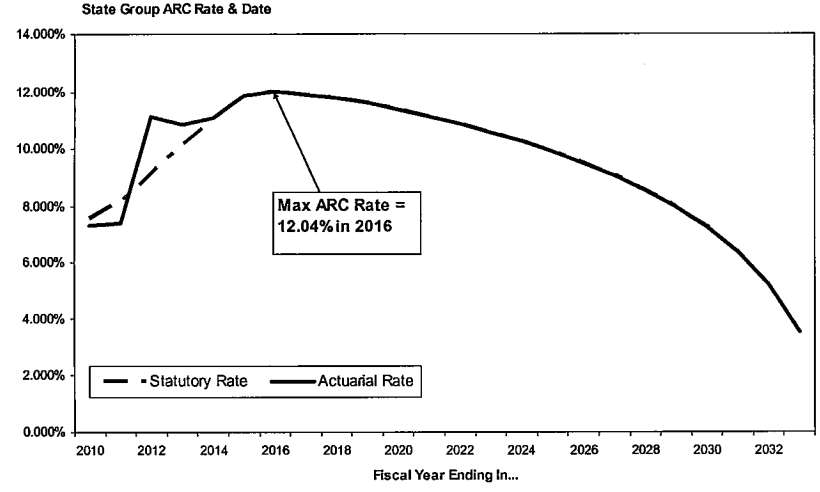


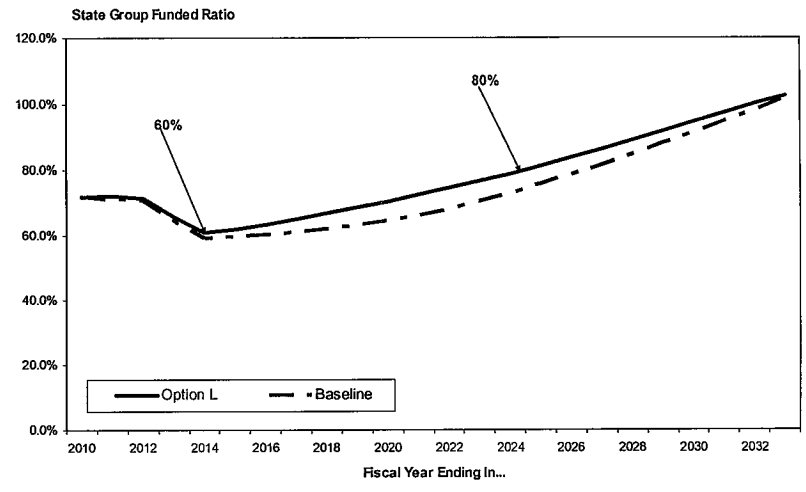


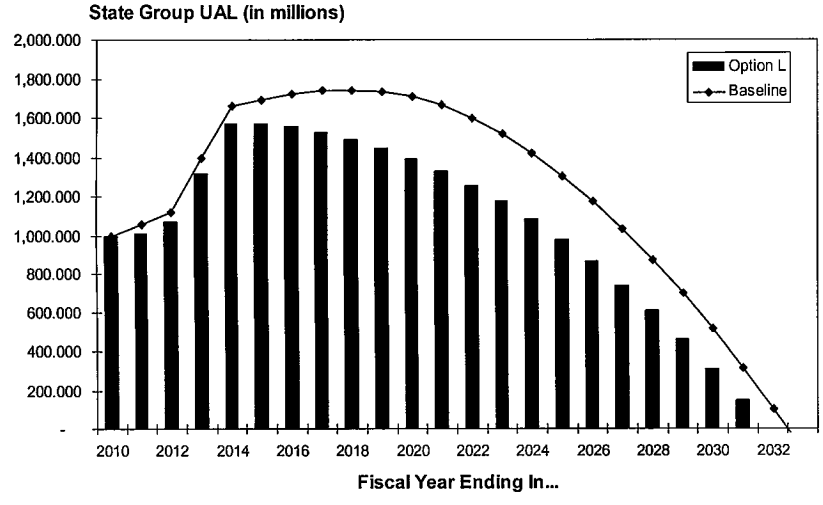
- The projected ARC rate rises to a maximum of 19.01% in FY 2024 – 1.18% more than Option J.
- The funded ratio falls to a low of 42.3% in FY 2014 and remains below 50% for a total of nine years.
- The funded ratio reaches 60% in FY 2025 and 80% by FY 2030.
- The projected UAL peaks at $8.50 billion in FY 2020 – $165 million more than Option J.

State Group: Option L

▪Raise cap on employer rate increases to 1.0% in FY '12. Raise Tiers I & 2 employee rate by 1.0% in FY '12 and in FY '13. Increase Tiers I & 2 multiplier to 1.85% for future service.





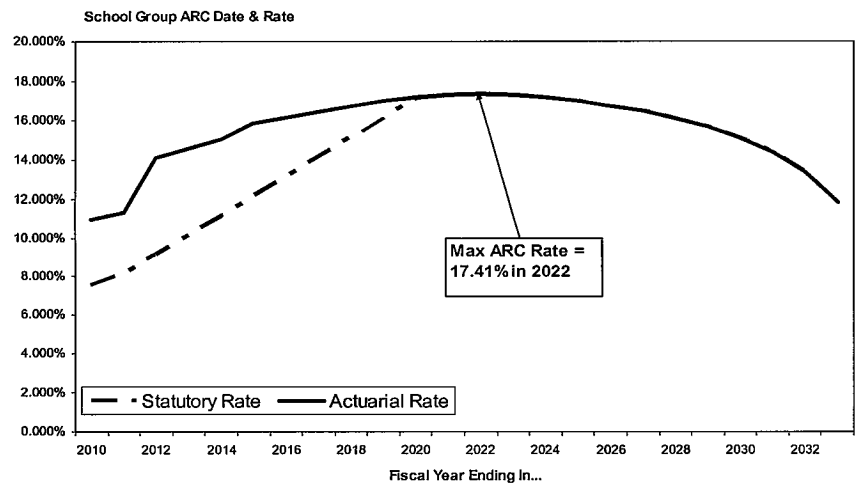


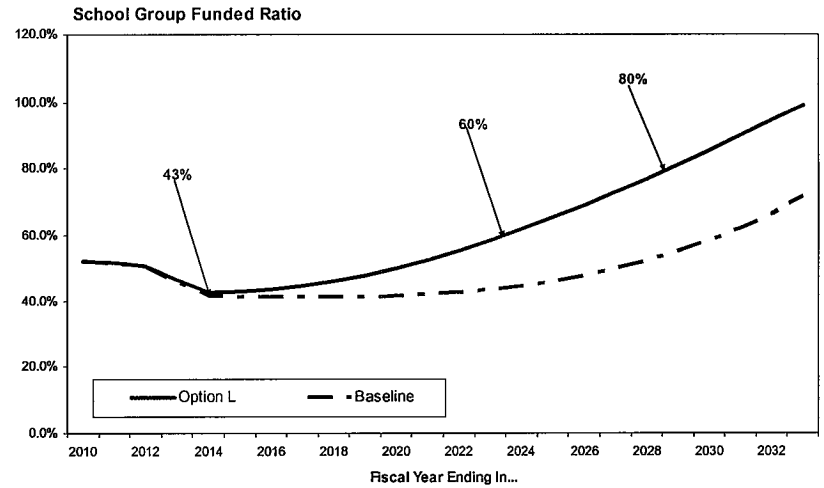
- The projected ARC rate rises to a maximum of 12.04% in FY 2016 – one year earlier and .5% less than Option J.
- The funded ratio projections reach a low of 60.9% in FY 2014.
- The funded ratio recovers to 80% in FY 2025.
- The projected UAL peaks at $1.57 billion in FY 2015 – $24 million less than Option J.

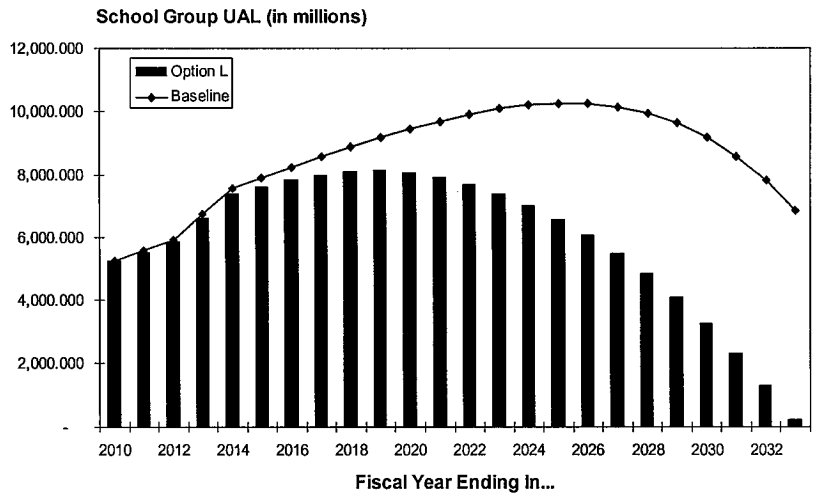
School Group: Option L

▪Raise cap on employer rate increases to 1.0% in FY '12. Raise Tiers I & 2 employee rate by 1.0% in FY '12 and in FY '13. Increase Tiers I & 2 multiplier to 1.85% for future service.

5-22





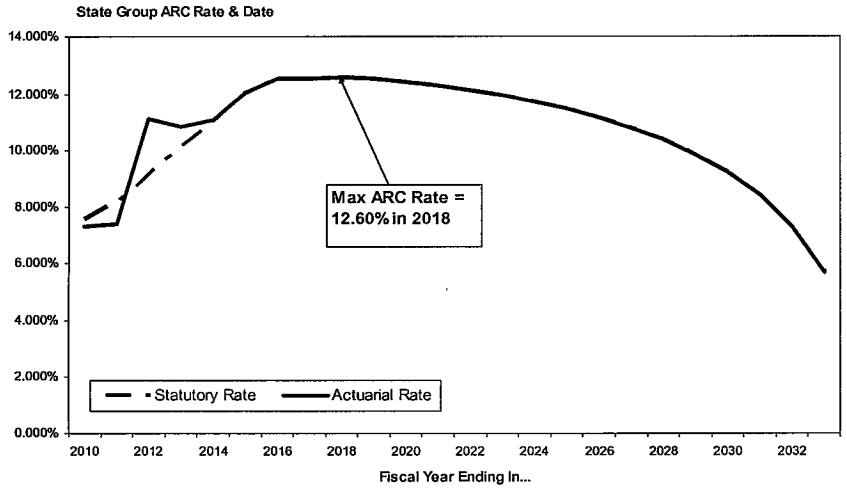


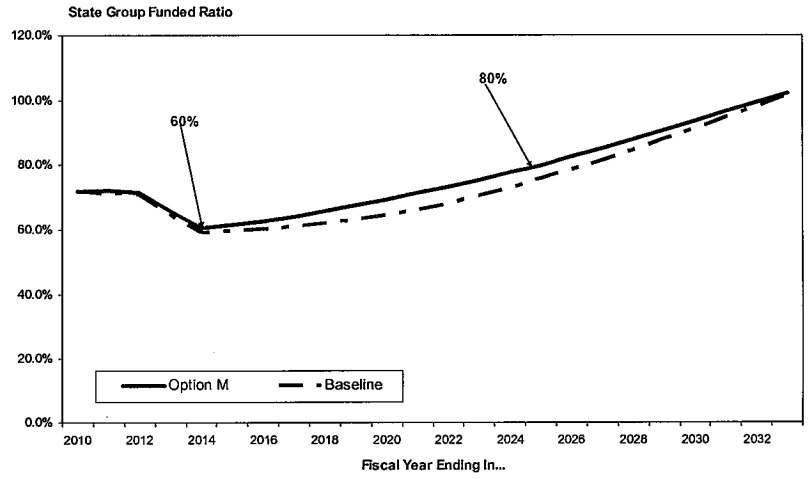
- The projected ARC rate rises to a maximum of 17.41% in FY 2022 – one year earlier and .42% less than Option J.
- The funded ratio falls to a low of 42.6% in FY 2014 and remains below 50% for a total of seven years.
- The funded ratio reaches 60% in FY 2024 and 80% by FY 2029.
- The projected UAL peaks at $8.13 billion in FY 2019 – $207 million less than Option J.

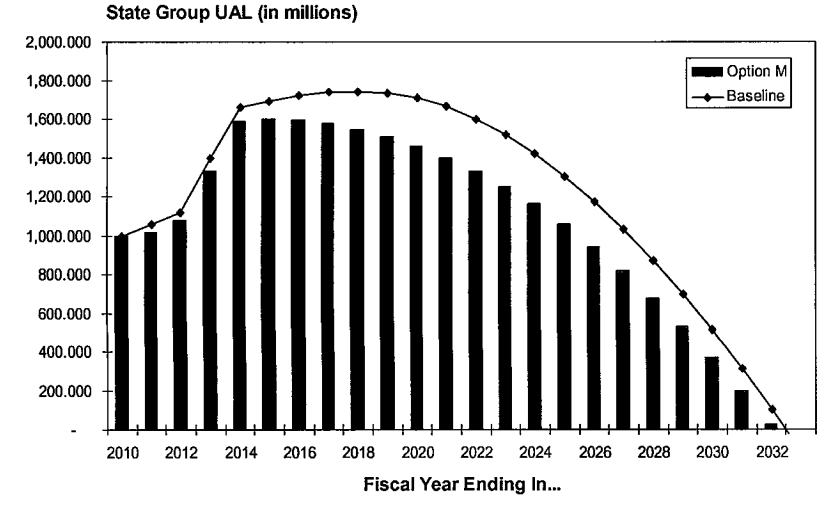
State Group: Option M

▪Raise cap on employer rate increases to 1.0% in FY '12. Raise Tier I employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I multiplier to 1.85% for future service.

F-23





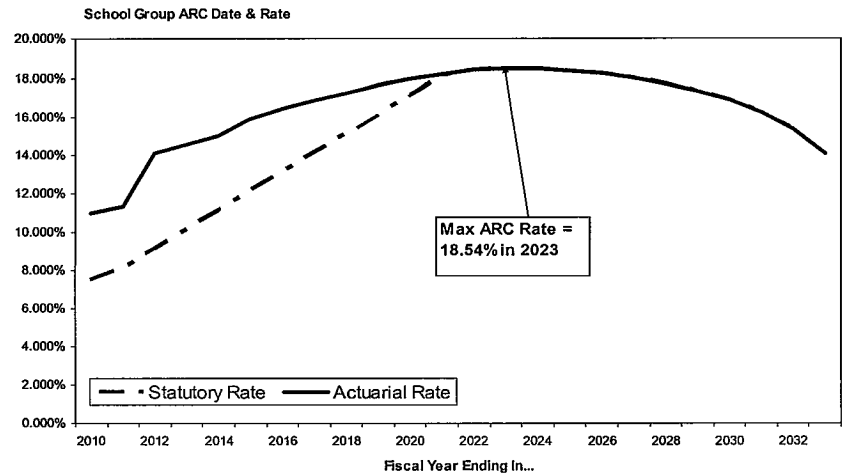


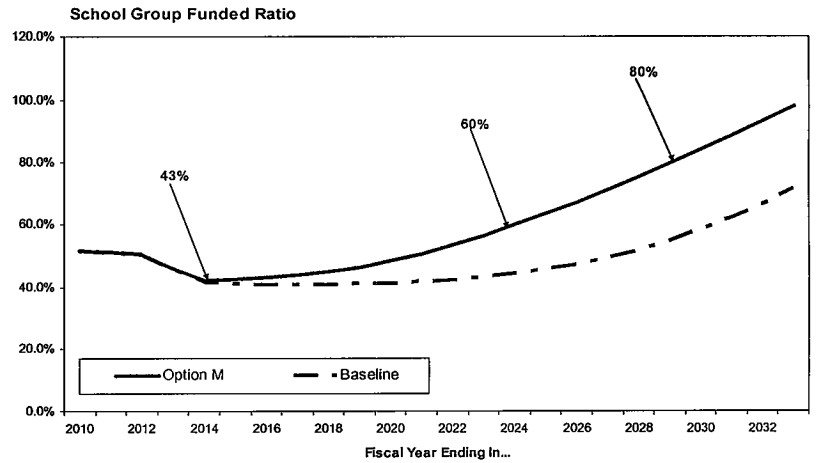
- The projected ARC rate rises to a maximum of 12.60% in FY 2018 – two years later and .56% more than Option L.
- The funded ratio projections reach a low of 60.6% in FY 2014.
- The funded ratio recovers to 80% in FY 2025.
- The projected UAL peaks at $1.60 billion in FY 2015 – $29 million more than Option L.

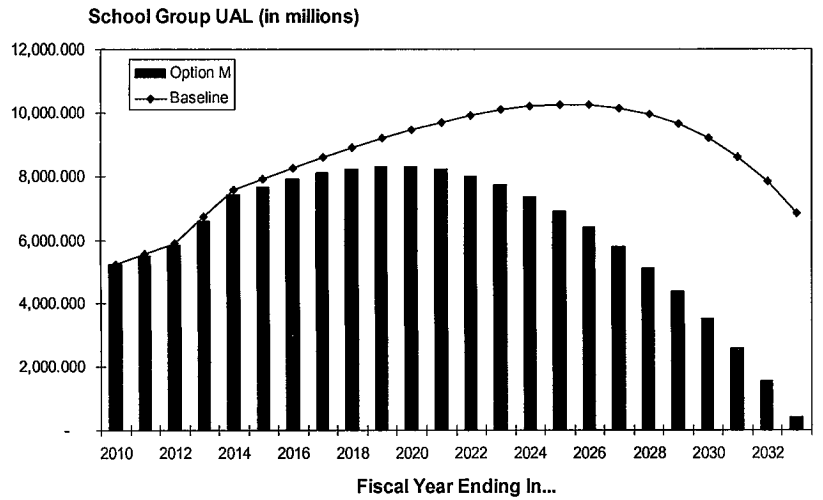
School Group: Option M

▪Raise cap on employer rate increases to 1.0% in FY '12. Raise Tier I employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I multiplier to 1.85% for future service.

S-24



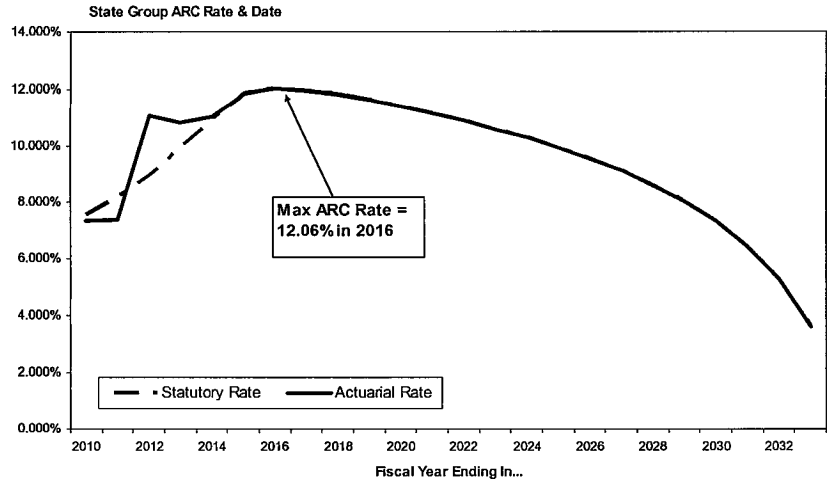


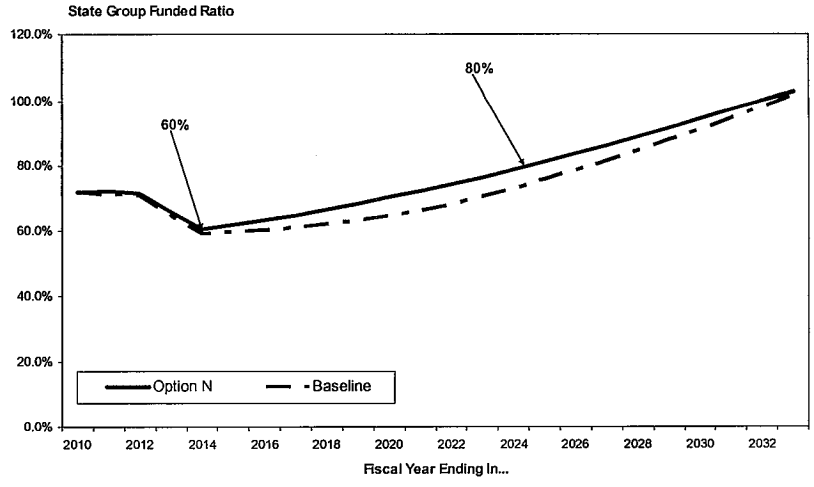


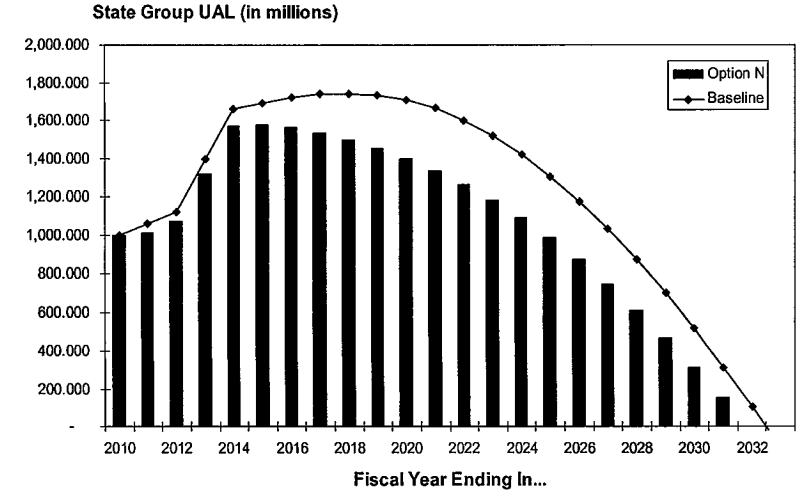
- The projected ARC rate rises to a maximum of 18.54% in FY 2023 – one year later and 1.13% more than Option L.
- The funded ratio falls to a low of 42.5% in FY 2014 and remains below 50% for a total of eight years.
- The funded ratio reaches 60% in FY 2024 and 80% by FY 2030.
- The projected UAL peaks at $8.31 billion in FY 2019 – $177 million more than Option L.

State Group: Option N

▪Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I & 2 employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I & 2 multiplier to 1.85% for future service.





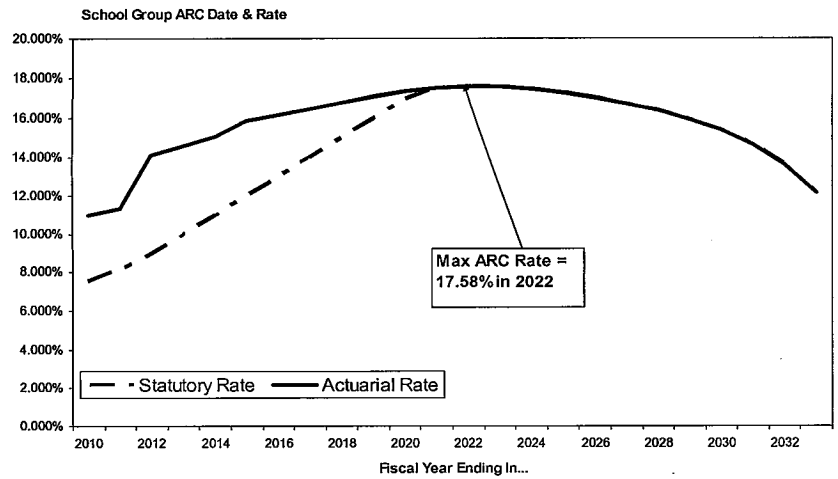


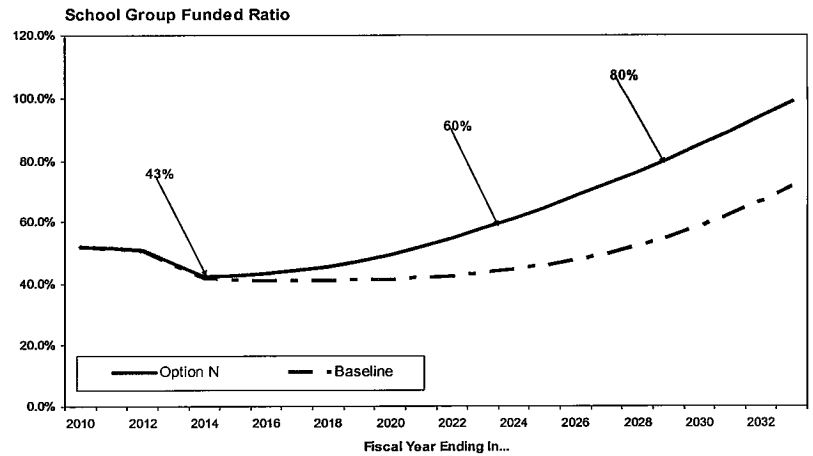
- The projected ARC rate rises to a maximum of 12.06% in FY 2016 – one year earlier and .5% less than Option J.
- The funded ratio projections reach a low of 60.8% in FY 2014.
- The funded ratio recovers to 80% in FY 2025.
- The projected UAL peaks at $1.57 billion in FY 2015 – $19 million less than Option J.

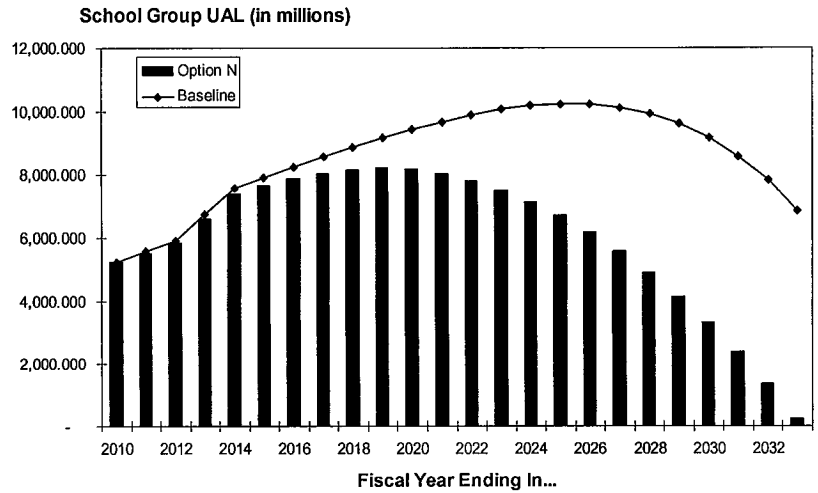
School Group: Option N

5-26

▪Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I & 2 employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I & 2 multiplier to 1.85% for future service.





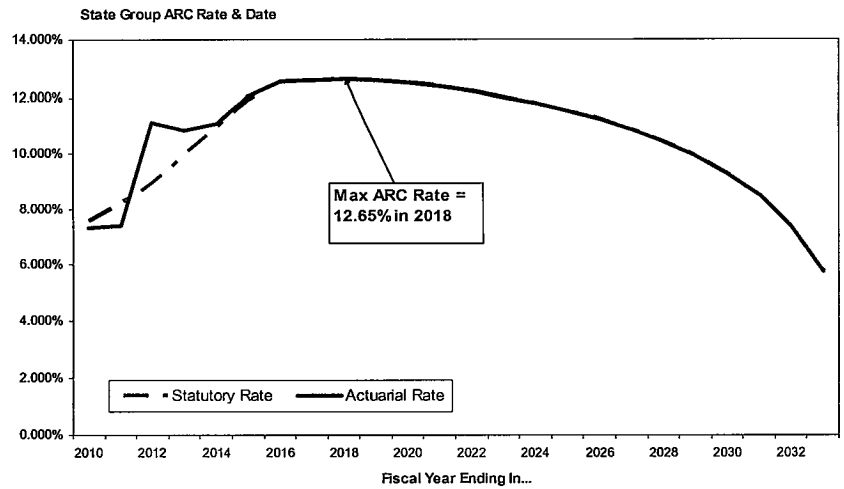


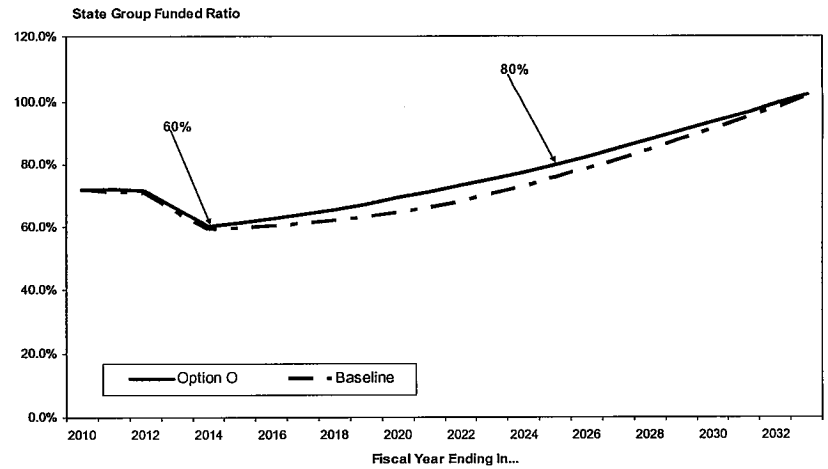
- The projected ARC rate rises to a maximum of 17.58% in FY 2022 – one year earlier and .25% less than Option J.
- The funded ratio falls to a low of 42.5% in FY 2014 and remains below 50% for a total of eight years.
- The funded ratio reaches 60% in FY 2024 and 80% by FY 2029.
- The projected UAL peaks at $8.2 billion in FY 2019 – $130 million less than Option J.

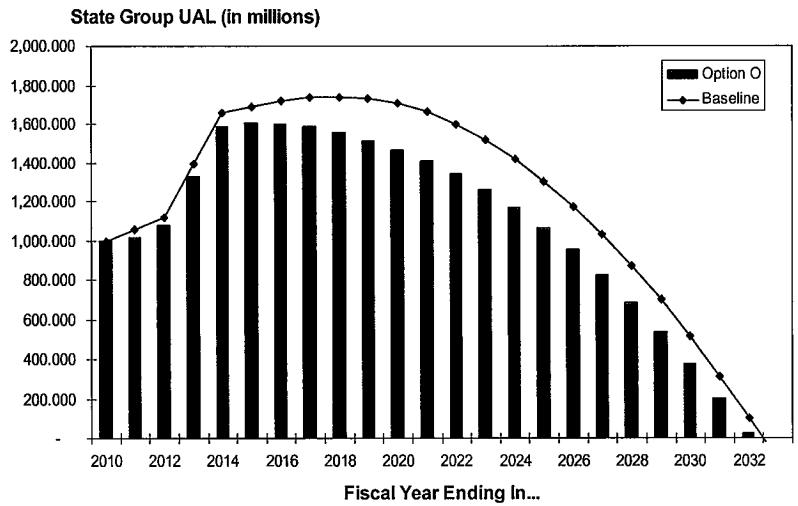
State Group: Option O

5-27

▪Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I multiplier to 1.85% for future service.



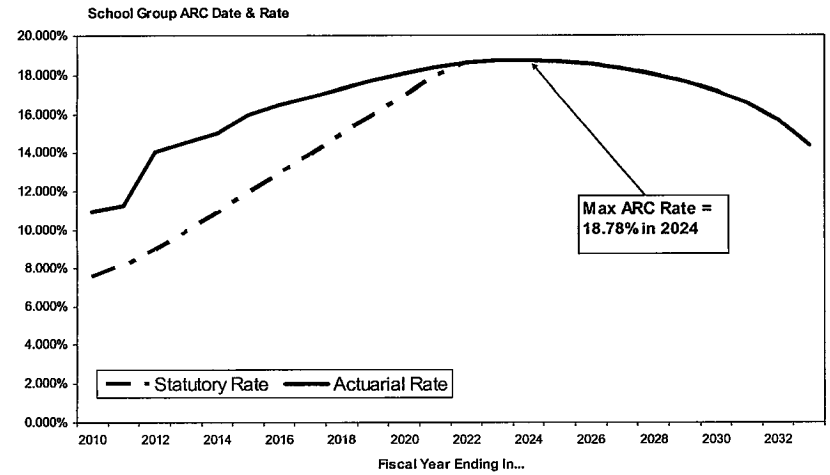


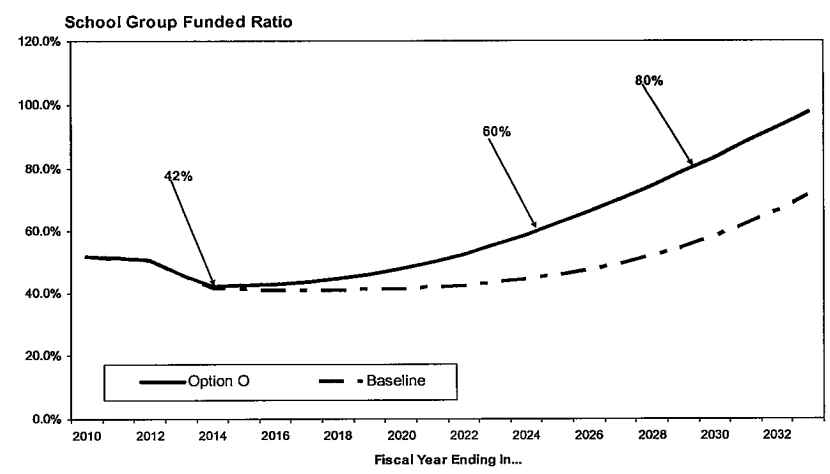


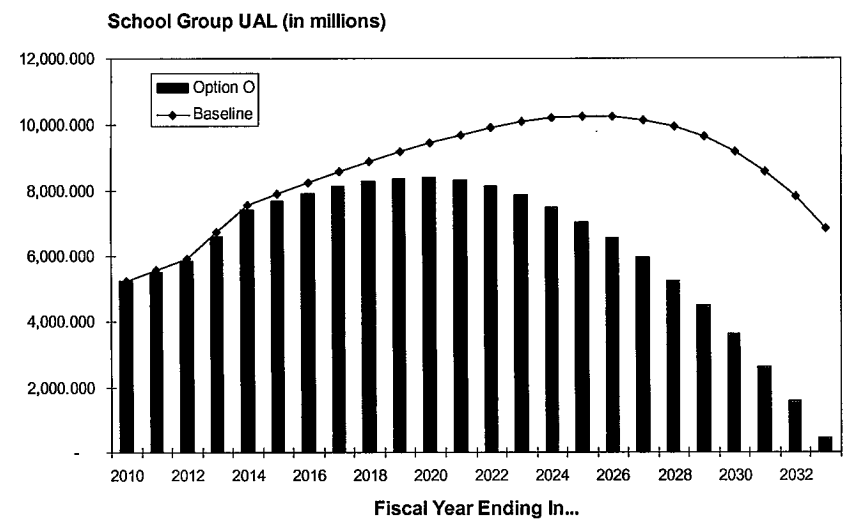
- The projected ARC rate rises to a maximum of 12.65% in FY 2018 – two years later and .59% more than Option N.
- The funded ratio projections are similar to Options K and M – reaching a low of 60.5% in FY 2014.
- The funded ratio recovers to 80% in FY 2025.
- The projected UAL peaks at $1.60 billion in FY 2015 – $29.5 million more than Option N.

School Group: Option O

▪Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I multiplier to 1.85% for future service.







- The projected ARC rate rises to a maximum of 18.78% in FY 2024 – two years later and 1.2% higher than Option N.
- The funded ratio falls to a low of 42.4% in FY 2014 and remains below 50% for a total of eight years.
- The funded ratio reaches 60% in FY 2025 and 80% by FY 2030.
- The projected UAL peaks at $8.40 billion in FY 2020 – $188 million more than Option N.

5-29

Effect on State Contributions

Option J* Estimated Effect on the State and School Group (in millions)

	0.6% Cap	Option J	Additional ER Contributions
FY 2012 Increase in Employer Contributions	$38.13	$47.52	$9.39
FY 2012 Total Employer Contributions	$411.70	$421.09	$9.39
FY 2015 Increase in Employer Contributions	$44.80	$66.62	$21.82
FY 2015 Total Employer Contributions	$538.96	$610.35	$71.39
Total Employer Contributions: FY 2010-2033	$23,977.65	$23,006.01	($971.64)

Option K Estimated Effect on the State and School Group (in millions)**

	0.6% Cap	Option K	Additional ER Contributions
FY 2012 Increase in Employer Contributions	$38.13	$47.52	$9.39
FY 2012 Total Employer Contributions	$411.70	$421.09	$9.39
FY 2015 Increase in Employer Contributions	$44.80	$66.62	$21.82
FY 2015 Total Employer Contributions	$538.96	$610.35	$71.39
Total Employer Contributions: FY 2010-2033	$23,977.65	$24,557.87	$580.22

*Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tiers I & 2 employee rate by 0.5% in each of four years, beginning in FY '12. Increase Tiers I & 2 multiplier to 1.85% for future service.

** Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I employee rate by 0.5% in each of four years, beginning in FY '12. Increase Tier I multiplier to 1.85% for future service.

Effect on State Contributions

5-30

Option L* Estimated Effect on the State and School Group (in millions)

	0.6% Cap	Option L	Additional ER Contributions
FY 2012 Increase in Employer Contributions	$38.13	$56.91	$18.78
FY 2012 Total Employer Contributions	$411.70	$430.48	$18.78
FY 2015 Increase in Employer Contributions	$44.80	$66.91	$22.11
FY 2015 Total Employer Contributions	$538.96	$620.55	$81.59
Total Employer Contributions: FY 2010-2033	$23,977.65	$22,570.82	($1,406.83)

Option M Estimated Effect on the State and School Group (in millions)**

	0.6% Cap	Option M	Additional ER Contributions
FY 2012 Increase in Employer Contributions	$38.13	$56.91	$18.78
FY 2012 Total Employer Contributions	$411.70	$430.48	$18.78
FY 2015 Increase in Employer Contributions	$44.80	$66.91	$22.11
FY 2015 Total Employer Contributions	$538.96	$620.55	$81.59
Total Employer Contributions: FY 2010-2033	$23,977.65	$24,155.06	$177.41

*Raise cap on employer rate increases to 1.0% in FY '12. Raise Tiers I & 2 employee rate by 1.0% in FY '12 and in FY '13. Increase Tiers I & 2 multiplier to 1.85% for future service.

**Raise cap on employer rate increases to 1.0% in FY '12. Raise Tier I employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I multiplier to 1.85% for future service.

Effect on State Contributions

5-31

Option N* Estimated Effect on the State and School Group (in millions)

	0.6% Cap	Option N	Additional ER Contributions
FY 2012 Increase in Employer Contributions	$38.13	$47.52	$9.39
FY 2012 Total Employer Contributions	$411.70	$421.09	$9.39
FY 2015 Increase in Employer Contributions	$44.80	$66.62	$21.82
FY 2015 Total Employer Contributions	$538.96	$610.35	$71.39
Total Employer Contributions: FY 2010-2033	$23,977.65	$22,714.30	($1,263.35)

Option O Estimated Effect on the State and School Group (in millions)**

	0.6% Cap	Option O	Additional ER Contributions
FY 2012 Increase in Employer Contributions	$38.13	$47.52	$9.39
FY 2012 Total Employer Contributions	$411.70	$421.09	$9.39
FY 2015 Increase in Employer Contributions	$44.80	$66.62	$21.82
FY 2015 Total Employer Contributions	$538.96	$610.35	$71.39
Total Employer Contributions: FY 2010-2033	$23,977.65	$24,317.79	$340.14

*Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I & 2 employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I & 2 multiplier to 1.85% for future service.

**Raise cap on employer rate increases to 0.8% in FY '12 and 1.0% in FY '13. Raise Tier I employee rate by 1.0% in FY '12 and in FY '13. Increase Tier I multiplier to 1.85% for future service.

2004 Pension Obligation Bonds

S-32

At the November meeting, the Joint Committee members requested information about the pension obligation bonds issued in February 2004. Key points regarding this bond issue include:

- The Kansas Development Finance Authority (KDFA) issued $500 million of bonds on March 10, 2004, with an effective interest rate of 5.39 percent.
- The KPERS Fund received net proceeds of $440.2 million.
- $55 million of the bond proceeds were used for capitalized interest to lower the debt service in the first three years.
- Debt service on the bonds is paid by the State General Fund. The current annual payment is $36.1 million through FY 2034.
- KDFA anticipates receiving a request from the Secretary of Administration to currently refund the May 1, 2010, $10.415M Series 2004C principal payment in order to obtain current fiscal year budgetary relief. The refunding transaction was authorized by the State Finance Council at its meeting on September 3, 2009.

2004 Pension Obligation Bonds (Continued)

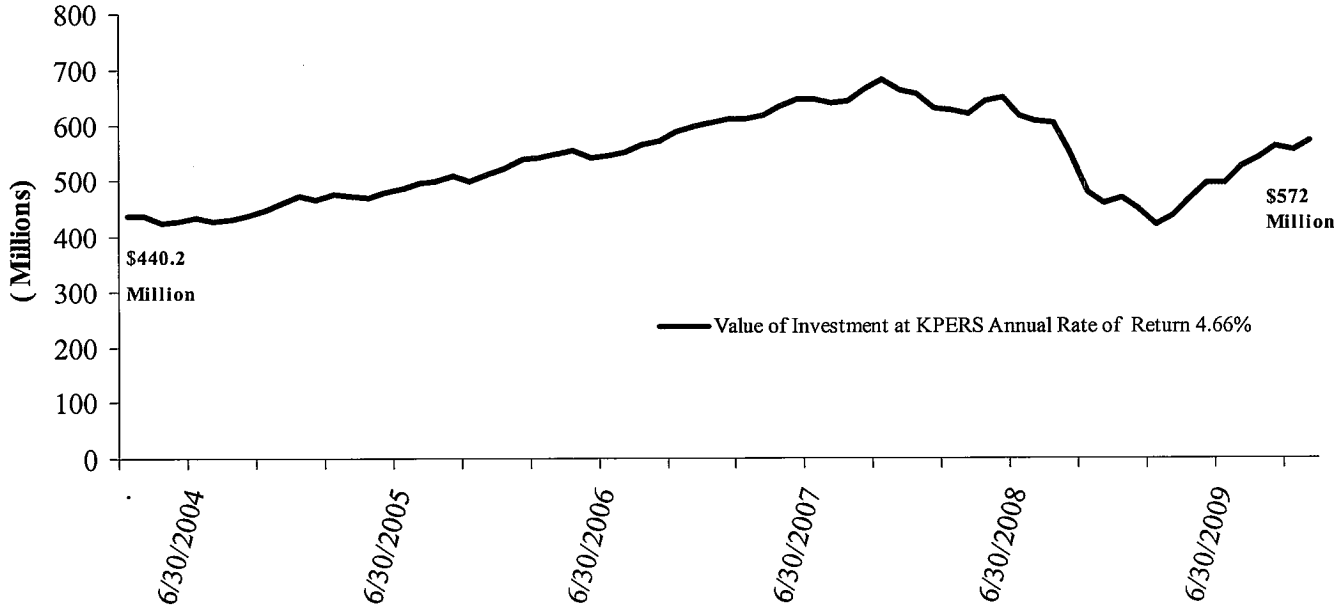
5-33

- The annualized return on the investment of the $440.2 million through November 30, 2009, is 4.66 percent, which has generated an additional $132 million in investment earnings to the KPERS Fund.
- See Appendix A for the Sources & Uses Table and Debt Service Schedule for these bonds.

Growth of 2004 Bond Proceeds

5-34

Investment Value of Proceeds of
$500 Pension Obligation Bonds



Pension Obligation Bond Options

5-35

At its November meeting, the Committee also requested that KPERS work with KDFA to model two pension obligation bond options. A key reason for considering these options was the substantial projected State budget shortfall in FY 2011 that makes it very difficult to increase employer contribution rates for the next few years.

- **Bond Option P:** The approach in this option is for the State to make an "up-front" employer contribution through a bond issue that matches the present value of a 1% employee contribution increase. In addition, it assumes that member contributions are raised by 1.0% in FY 2012 for Tiers 1 and 2.

- **Bond Option Q:** The approach in this option is for the State to make an "up-front" employer contribution through a bond issue that matches the present value of raising the employer contribution cap from 0.6% to 1.0% (Option A). In addition, it assumes an employee contribution rate increase of .5% for Tiers 1 and 2 in each of four years, beginning FY 2012.

Bond Option P

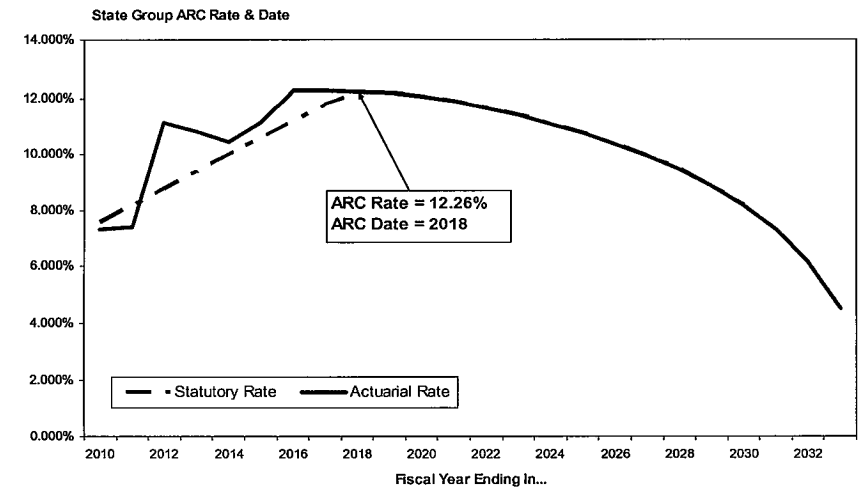
9-36

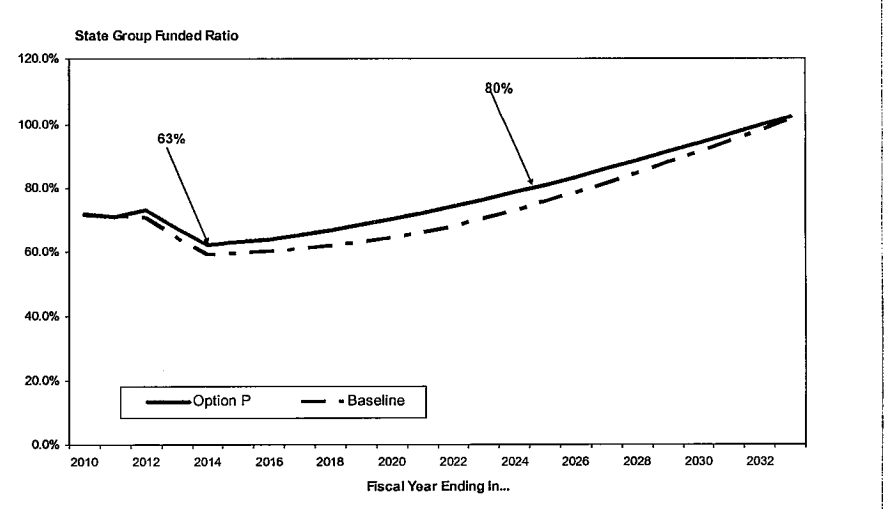
- The approach in this option is for the State to make an up-front employer contribution that matches the present value of a 1% employee contribution increase.
- Assuming a 1.0% increase in the employee contribution rate for both Tiers 1 and 2, effective 7/1/11 (FY 2012), the net present value of the additional employee contributions through FY 2033 is $590 million.
- In addition to the 1.0% increase in member contributions for Tiers 1 and 2, Option P "matches" these employee contributions with a bond issue of $590 million (par amount of $660.3 million).
- Option P is based on the following assumptions.
  - Issuance in 2010.
  - A 23-year amortization period.
  - Phased-in debt service.

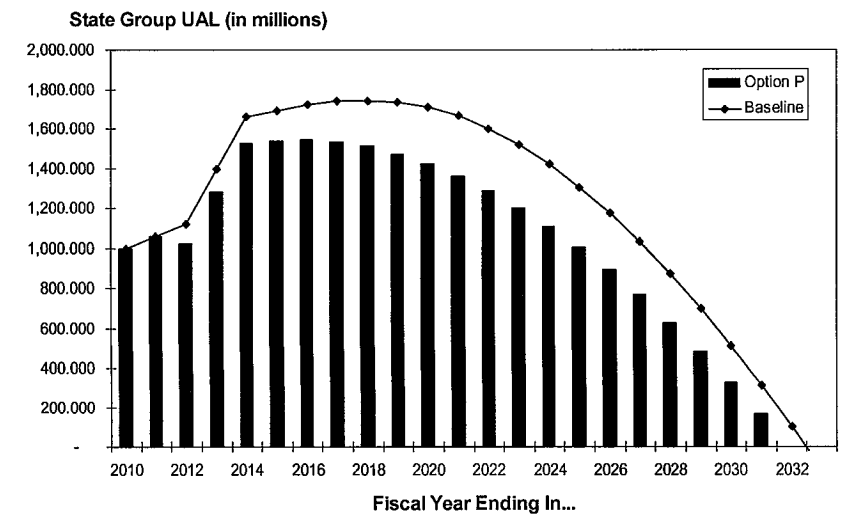
State Group: Bond Option P

▪Issue bonds with proceeds of $590 million in 2010 with payments phased in beginning FY '13. Raise Tier I & 2 employee rate by 1.0% in FY '12.

5-37





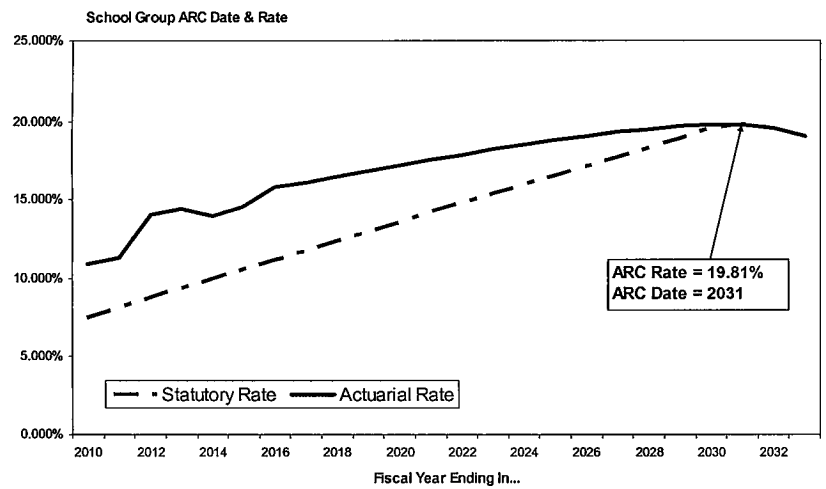


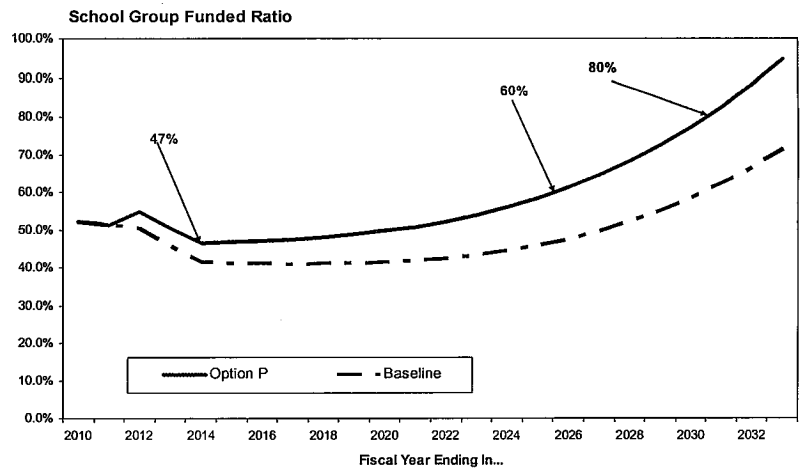
- The projected ARC rate rises to a maximum of 12.26% in FY 2018 – four years earlier and 2.15% less than the Baseline.
- The funded ratio falls to a low of 62.6% in FY 2014 – 3.2% higher than the Baseline.
- The funded ratio reaches 80% by FY 2025.
- The projected UAL peaks at $1.54 billion in FY 2016 – two years earlier and $200 million less than the Baseline.

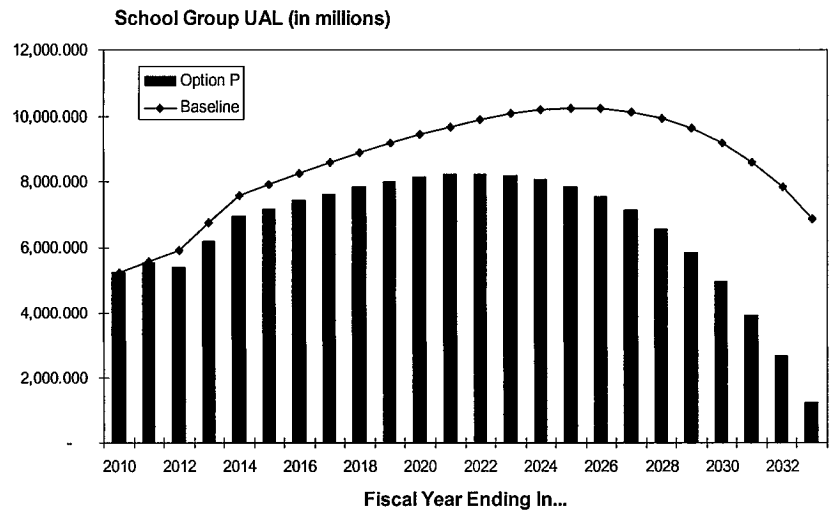
School Group: Bond Option P

▪Issue bonds with proceeds of $590 million in 2010 with payments phased in beginning FY '13. Raise Tier I & 2 employee rate by 1.0% in FY '12.

5-38







- The projected ARC rate rises to a maximum of 19.81% in FY 2031. The Baseline does not achieve ARC.
- The funded ratio falls to a low of 46.7% in FY 2014, 5.6% higher than the Baseline.
- The funded ratio reaches 60% in FY 2026 and 80% by FY 2031.
- The projected UAL peaks at $8.23 billion in FY 2022 – $2 billion less than the Baseline.

Option P: State Contributions and Debt Service

5-39

Fiscal Year	Baseline*		Option P: $590 Million Bond Issue*			Total Increase in Annual State Outlays*
	State/School Current Contributions (0.6% Cap)	Annual Increase in Contributions	Option P: State/School Contributions (0.6% Cap)	SGF Debt Service Payments	Total State Payment	
2011	$ 373.57	$ 39.35	$ 373.57	$ -	$ 373.57	$ 39.35
2012	$ 411.70	$ 38.13	$ 411.70	$ -	$ 411.70	$ 38.13
2013	$ 451.81	$ 40.11	$ 451.81	$ 36.69	$ 488.50	$ 76.80
2014	$ 494.17	$ 42.36	$ 494.17	$ 36.69	$ 530.86	$ 79.05
2015	$ 538.96	$ 44.79	$ 538.96	$ 58.36	$ 597.32	$ 103.15
2020	$ 805.78	$ 59.76	$ 805.78	$ 58.36	$ 864.14	$ 118.12
2025	$ 1,164.48	$ 80.45	$ 1,164.48	$ 58.36	$ 1,222.84	$ 138.81
2033	$ 2,004.25	$ 126.70	$ 1,857.81	$ 58.36	$ 1,916.17	$ 185.06
Total	**$ 23,977.65**		**$ 23,775.54**	**$1,182.24**	**$ 24,957.78**	

* In millions

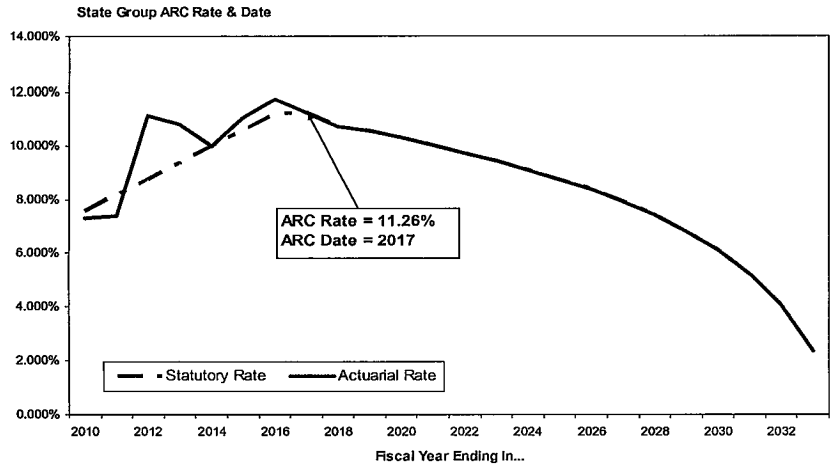
Bond Option Q

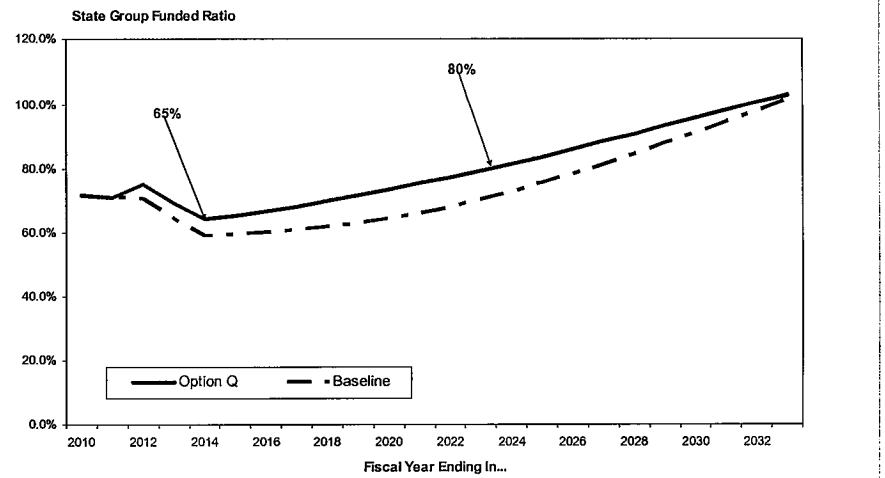
5-40

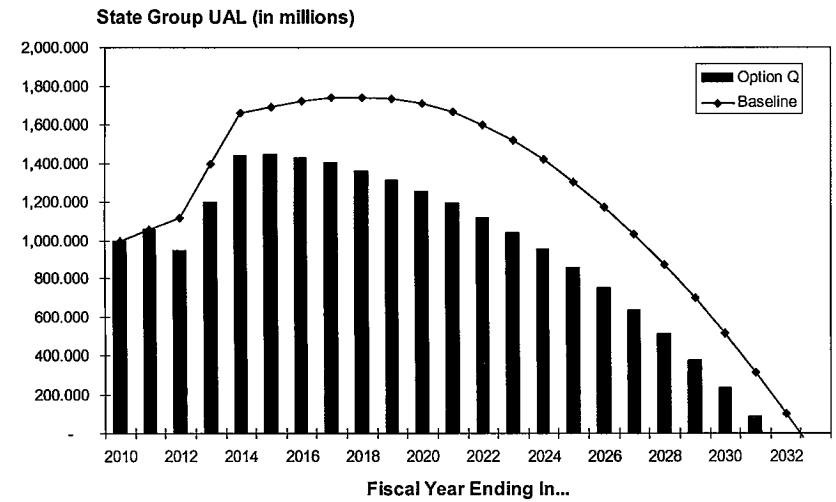
- Option A raises the cap on employer contribution rate increases to 1% per year beginning in FY 2011.
- When compared to the Baseline employer contributions with a .6% cap, Option A results in additional employer contributions of $1.5 billion through the end of the actuarial amortization period (FY 2033).
- The net present value of that payment stream is equivalent to $1.055 billion.
- Option Q replaces the additional employer contribution increases generated by a 1% cap with a bond issue of $1.055 billion (par amount of $1.2 billion). In addition, it includes an increase in member contributions of .5% for both Tiers 1 and 2 in each of four years, beginning FY 2012.
- Option Q is based on the following assumptions:
  - Issuance in 2010.
  - A 23-year amortization period.
  - Phased-in debt service.

State Group: Bond Option Q

- **Issue bonds with proceeds of $1.055 billion in 2010 with payments phased in, beginning FY '13. Raise Tier I & 2 employee rate by .05% in each of four years, beginning in FY '12.**





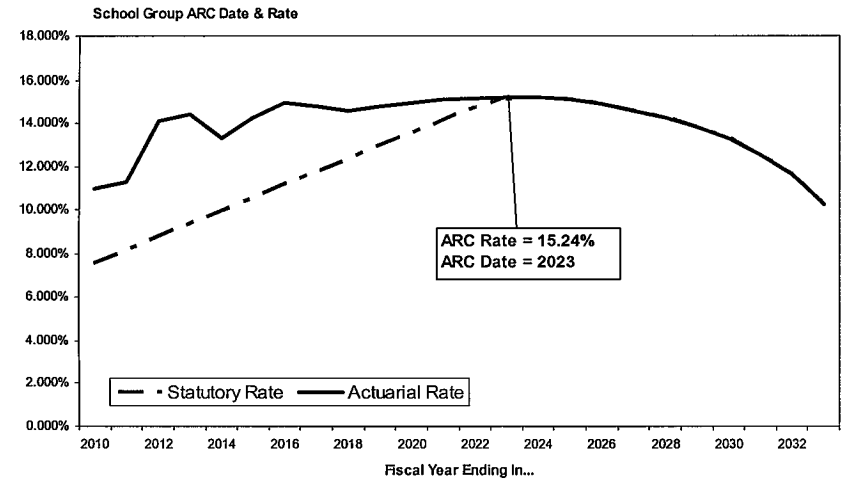


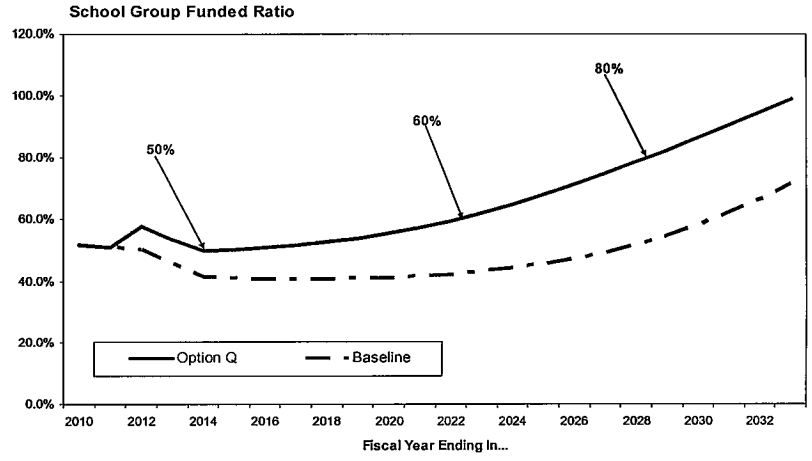
- The projected ARC rate rises to a maximum of 11.26% in FY 2017 – 1.0% lower and one year earlier than Option P.
- The funded ratio dips to 64.7% in FY 2014 and reaches 80% by FY 2024.
- The projected UAL peaks at $1.44 billion in FY 2015 – $100 million less and one year earlier than Option P.

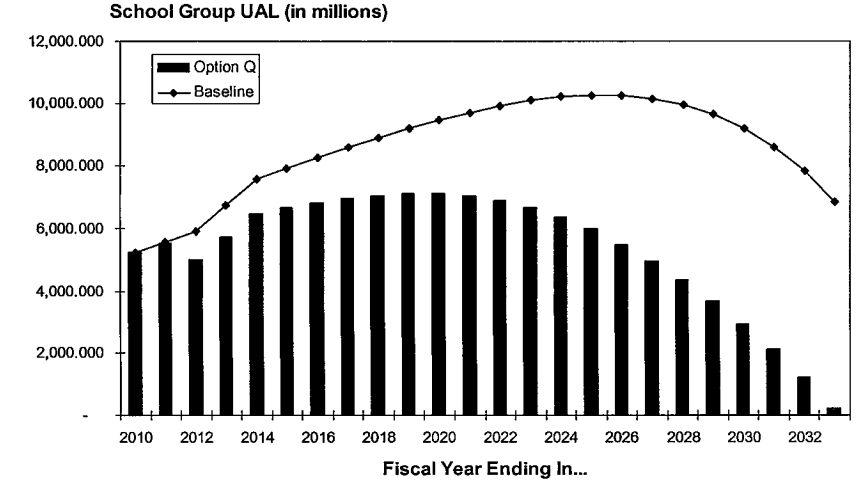
School Group: Bond Option Q

5-42

- **Issue bonds with proceeds of $1.055 billion in 2010 with payments phased in, beginning FY '13. Raise Tier I & 2 employee rate by .05% in each of four years, beginning in FY '12.**







- The projected ARC rate rises to a maximum of 15.24% in FY 2023 – 4.6% lower and 8 years earlier than Option P.
- The funded ratio falls to a low of 50.2% in FY 2014. This is the only option that remains above 50% through FY 2033.
- The funded ratio reaches 60% in FY 2023 and 80% by FY 2029.
- The projected UAL peaks at $7.13 billion in FY 2019 -- $1.1 billion less and three years earlier than Option P.

5-43

Option Q: State Contributions and Debt Service

Fiscal Year	Baseline*		Option Q: $1.055 Billion Bond Issue*			Total Increase in Annual State Outlays*
	State/School Current Contributions (0.6% Cap)	Annual Increase in Contributions	Option Q: State/School Contributions (0.6% Cap)	SGF Debt Service Payments	Total State Payment	
2011	$ 373.57	$ 39.35	$ 373.57	$ -	$ 373.57	$ 39.35
2012	$ 411.70	$ 38.13	$ 411.70	$ -	$ 411.70	$ 38.13
2013	$ 451.81	$ 40.11	$ 451.81	$ 65.55	$ 517.36	$ 105.66
2014	$ 494.17	$ 42.36	$ 494.17	$ 65.55	$ 559.72	$ 107.91
2015	$ 538.96	$ 44.79	$ 538.96	$ 104.26	$ 643.22	$ 149.05
2020	$ 805.78	$ 59.76	$ 805.78	$ 104.26	$ 910.04	$ 164.02
2025	$ 1,164.48	$ 80.45	$ 1,061.41	$ 104.26	$ 1,165.67	$ 184.71
2033	$ 2,004.25	$ 126.70	$ 965.89	$ 104.26	$ 1,070.15	$ 230.96
Total	**$ 23,977.65**		**$ 19,625.62**	**$2,112.03**	**$ 21,737.65**	

* In millions

Observations Regarding Options

A review of all options illustrates various trade-offs and limitations, some of which are summarized below:

ARC Rates and Dates

- The State Group is currently at its ARC of 7.34%, but the ARC will rise to 14.41% in FY 2022 under the Baseline. The School Group is out of actuarial balance under the Baseline.
- ARC rates will rise over a period of years under all options presented to the Committee – for 6 to 8 years for the State Group and 7 to 21 years for the School Group.
  - The State Group's maximum ARC rate ranges from 11.25% to 14.00%.
  - While all options bring the School Group into actuarial balance, many are at very high ARC rates after 10 to 15 years of annual increases.
    - The School Group's maximum ARC rate varies from 15.24% to 20.68%.
- For both Groups, Option Q results in the lowest ARC rate and Option E the highest.
  - Option Q: $1.055 billion bond issue with a 2% increase in member contributions phased in over four years.
  - Option E: Phase in a 1% cap on employer contribution rate increases. No employee rate increases.

Observations Regarding Options (Continued)

5-45

Funded Ratios

- Increases in employer contributions, while necessary, will not substantially affect the funded ratio for a number of years until compounding of investment earnings has the opportunity to grow the new assets relative to liabilities.
- Under all options presented to the Committee, funded ratios continue falling through FY 2014.
  - The State Group's lowest funded ratios are clustered around 60%, while the School Group's low point primarily falls between 41% to 45%.
- A funded ratio of 80% and rising is generally considered to be a "healthy" level for public pension plans.
- Under the options presented to the Committee, both the State Group and School Group will remain below 80% funded for much of the remainder of the amortization period ending in FY 2033. Under most options –
  - The State Group reaches 80% funded around FY 2025.
  - The School Group reaches 80% funded around FY 2028 to FY 2030.

Observations Regarding Options (Continued)

- A funded ratio of 60% or below is generally considered to reflect severe underfunding that requires prompt remedial action.
  - The State Group's funded ratio hovers around 60% at its low point in FY 2014.
  - Under all options provided to the Committee, the School Group's funded ratio remains below 60% for 10 to 15 years, and it remains below 50% for 7 to 9 years under many of the options. As a result, the School Group will remain particularly vulnerable to further market downturns that result in investment performance below 8%.
- A major injection of money in the early years (such as through pension obligation bonds) or large, sustained investment returns in the near term may improve funded ratios somewhat faster than increases in employer and/or employee contributions alone.

Unfunded Actuarial Liability

- Under the Baseline, the State Group's UAL peaks at $1.743 billion in FY 2018, and the School Group's UAL peaks at $10.282 billion in FY 2025.
- As the investment losses from 2009 are smoothed in over the next four years, the UAL is expected to rise more steeply under all options. It will continue rising another one to six years.

Observations Regarding Options (Continued)

5-47

- All options provided to the Committee reduce the maximum UAL.
  - The reduction in the State Group's UAL ranges from 3% (Option E) to 17% (Option Q).
  - The reduction in the School Group's UAL ranges from 14% (Option E) to 31% (Option Q).

Effect of Additional Funding

- The timing, size and combination of additional funding sources – higher caps on employer rate increases, employee rate increases, or pension obligation bonds – affect all of the measures of the System's long-term funding status.
  - Providing additional funding quickly and in larger amounts results in –
    - The greatest reductions in the ARC rates and UAL.
    - A smaller decline in funded ratios through FY 2014.
    - Lower total employer contributions through the end of the amortization period.
  - Options G and Q provide examples of these effects.
    - Option G: 2% employer cap and 2% Tier 1 employee rate increase, both in FY 2011.
    - Option Q: $1.055 billion bond issue with a 2% increase in member contributions phased in over four years.

Observations Regarding Options (Continued)

- Options involving delayed and smaller amounts of funding increases result in –
  - The highest UAL's and ARC rates, which rise to levels that may become unsustainable.
  - Greater declines in funded ratios through FY 2014.
  - Higher total employer contributions through the end of the amortization period.
- Options A and E provide examples of these effects.
  - Option A: 1% cap on employer contribution rate increases, effective FY 2011. No employee rate increases.
  - Option E: Phase in a 1% cap on employer contribution rate increases. No employee rate increases.

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Appendix A

FINAL

$500,000,000 Kansas Development Finance Authority

Revenue Bonds, 2004C (Taxable)

(Kansas Public Employees Retirement System)

2004C KPERS FINAL

Sources & Uses

Dated 03/10/2004 | Delivered 03/10/2004

Sources Of Funds	
Par Amount of Bonds	$500,000,000.00
Total Sources	**$500,000,000.00**

Uses Of Funds	
Deposit to Project Construction Fund	440,165,000.00
Deposit to Capitalized Interest (CIF) Fund	55,030,831.95
Bond Insurance Premium (22.5 bp)	2,231,062.87
Total Underwriter's Discount (0.323%)	1,615,000.00
Costs of Issuance	958,105.18
Total Uses	**$500,000,000.00**

$500,000,000 Kansas Development Finance Authority

Revenue Bonds, 2004C (Taxable)

(Kansas Public Employees Retirement System)

2004C KPERS FINAL

Net Debt Service Schedule

Date	Principal	Coupon	Interest	Total P+I	Capitalized Int	Net New D/S
06/30/2004	-	-	-	-	-	-
06/30/2005	-	-	29,770,445.81	29,770,445.81	(29,770,445.81)	-
06/30/2006	-	-	26,076,302.90	26,076,302.90	(16,076,302.90)	10,000,000.00
06/30/2007	-	-	26,076,302.90	26,076,302.90	(11,076,302.90)	15,000,000.00
06/30/2008	-	-	26,076,302.90	26,076,302.90	-	26,076,302.90
06/30/2009	10,070,000.00	3.426%	26,076,302.90	36,146,302.90	-	36,146,302.90
06/30/2010	10,415,000.00	3.796%	25,731,304.70	36,146,304.70	-	36,146,304.70
06/30/2011	10,805,000.00	4.152%	25,335,951.30	36,140,951.30	-	36,140,951.30
06/30/2012	11,255,000.00	4.372%	24,887,327.70	36,142,327.70	-	36,142,327.70
06/30/2013	11,745,000.00	4.522%	24,395,259.10	36,140,259.10	-	36,140,259.10
06/30/2014	12,275,000.00	4.592%	23,864,150.20	36,139,150.20	-	36,139,150.20
06/30/2015	12,835,000.00	4.722%	23,300,482.20	36,135,482.20	-	36,135,482.20
06/30/2016	13,440,000.00	4.812%	22,694,413.50	36,134,413.50	-	36,134,413.50
06/30/2017	14,085,000.00	4.912%	22,047,680.70	36,132,680.70	-	36,132,680.70
06/30/2018	14,775,000.00	5.012%	21,355,825.50	36,130,825.50	-	36,130,825.50
06/30/2019	15,515,000.00	5.371%	20,615,302.50	36,130,302.50	-	36,130,302.50
06/30/2020	16,345,000.00	5.371%	19,781,991.86	36,126,991.86	-	36,126,991.86
06/30/2021	17,215,000.00	5.371%	18,904,101.90	36,119,101.90	-	36,119,101.90
06/30/2022	18,135,000.00	5.371%	17,979,484.26	36,114,484.26	-	36,114,484.26
06/30/2023	19,105,000.00	5.371%	17,005,453.40	36,110,453.40	-	36,110,453.40
06/30/2024	20,130,000.00	5.371%	15,979,323.86	36,109,323.86	-	36,109,323.86
06/30/2025	21,205,000.00	5.371%	14,898,141.56	36,103,141.56	-	36,103,141.56
06/30/2026	22,335,000.00	5.371%	13,759,221.00	36,094,221.00	-	36,094,221.00
06/30/2027	23,530,000.00	5.501%	12,559,608.16	36,089,608.16	-	36,089,608.16
06/30/2028	24,815,000.00	5.501%	11,265,222.86	36,080,222.86	-	36,080,222.86
06/30/2029	26,165,000.00	5.501%	9,900,149.70	36,065,149.70	-	36,065,149.70
06/30/2030	27,590,000.00	5.501%	8,460,813.06	36,050,813.06	-	36,050,813.06
06/30/2031	29,090,000.00	5.501%	6,943,087.16	36,033,087.16	-	36,033,087.16
06/30/2032	30,675,000.00	5.501%	5,342,846.26	36,017,846.26	-	36,017,846.26
06/30/2033	32,345,000.00	5.501%	3,655,414.50	36,000,414.50	-	36,000,414.50
06/30/2034	34,105,000.00	5.501%	1,876,116.06	35,981,116.06	-	35,981,116.06
Total	**$500,000,000.00**	**-**	**$546,614,330.41**	**$1,046,614,330.41**	**(56,923,051.61)**	**$989,691,278.80**

Yield Statistics

Bond Year Dollars	$10,199,523.33
Average Life	20.399 Years
Average Coupon	5.3592145%
Net Interest Cost (NIC)	5.3969227%
True Interest Cost (TIC)	5.3848214%
Bond Yield for Arbitrage Purposes	5.3575064%
All Inclusive Cost (AIC)	5.4010885%