Kansas Public Employees Retirement System

House Pensions and Benefits Committee
January 16, 2013

KPERS OVERVIEW

ACTUARIAL VALUATION

LONG-TERM FUNDING HISTORY

2012 HB 2333

KPERS Overview

KPERS is a fiduciary providing retirement, disability and survivor benefits to our members and their beneficiaries with a 97-member staff.

Administers three statewide, defined benefit plans for public employees.

- Kansas Public Employees Retirement System
- Kansas Police and Firemen's Retirement System
- Kansas Retirement System for Judges

Partners with more than 1,500 state and local government employers.

- State of Kansas
- 286 school districts
- 105 counties
- 418 cities and townships
- Other employers include libraries, hospitals, community colleges and conservation districts

KPERS Overview

Directed by Board of Trustees with 9 members:

Gary Price, Chairperson, Olathe
Retired school administrator
Board member since July 2009
Elected member - school

Doug Mays, Vice-Chairperson, Topeka
Doug Mays & Associates, LLC, Kansas Government Affairs
Board member since July 2011
Appointed by the Speaker of the House

Lois Cox, Manhattan
Dir of Investments, Kansas State University Foundation
Board member since August 2012
Appointed by the Governor

Ron Estes, Wichita
Kansas State Treasurer
Board member since Jan 2011
Statutory member

Ron Hagen, Hutchinson
Dir of Criminal Justice Program at Central Christian College
Board member since July 2009
Elected member - non-school (retired KBI)

Chris Long, Mission Hills
President, Palmer Square Capital
Board member since Sept 2011
Appointed by the Governor

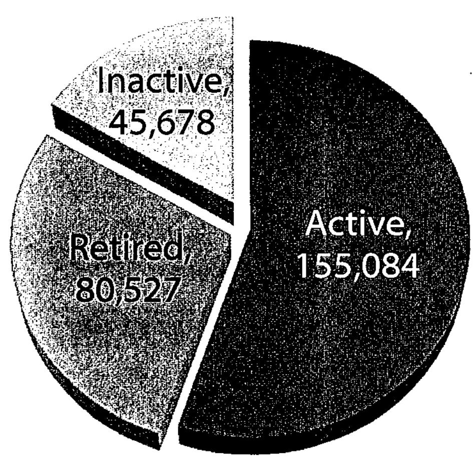
Terry Matlack, Shawnee
Managing Director, Tortoise Capital Advisors, LLC
Board member since May 2011
Appointed by the Governor

Lon Pishny, Garden City
Pishny Financial Services
Board member since July 2005 and July 1999 – Sept 2003
Appointed by the President of the Senate

Vacant - awaiting appointment
Appointed by the Governor

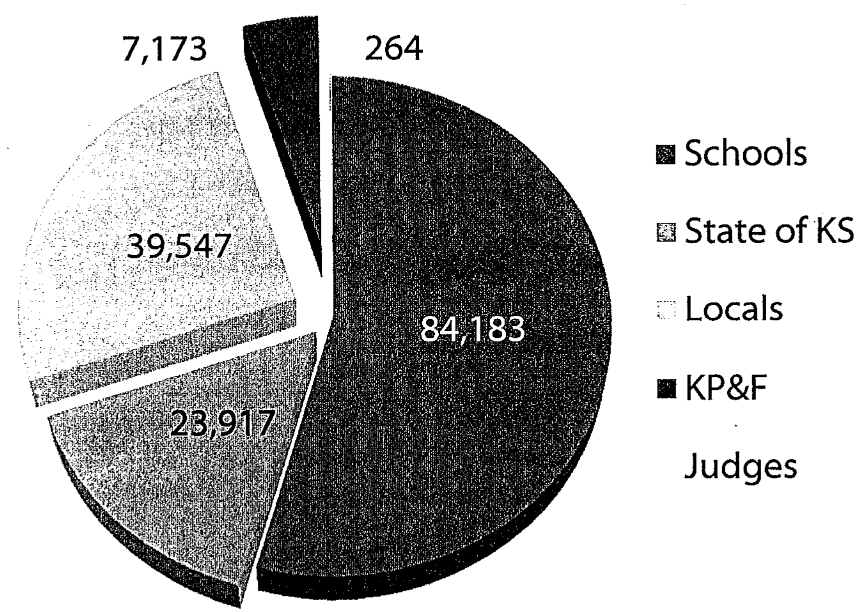
Who Are Our Members

- More than 281,000 members
- State of Kansas is largest single employer
- More than half of active members employed by school districts
- Nearly 90% of KPERS retirees are in Kansas



Total Membership

Active Membership



Who Are Our Members

	KPERS	KP&F	Judges
Active members	147,647	7,173	264
Inactive members	44,266	1,405	7
Retirees	75,997	4,315	215
Total Membership	267,910	12,893	486
Average current age (active members)	45.58	39.56	58.08
Average years of service (active members)	11.25	11.66	12.57
Average age of retirees and beneficiaries	72.25	65.32	74.50
Average annual retirement benefit	$12,690	$27,696	$37,367

How KPERS Works

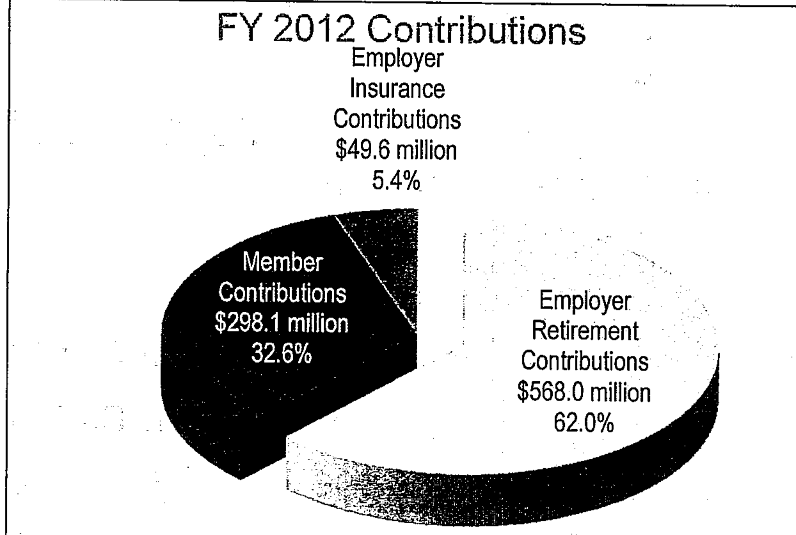
- Legislature defines benefits and funding
  - membership eligibility
  - vesting
  - employee and employer contributions
  - benefit formula
  - service credit
  - retirement eligibility
- Actuary estimates how much benefits will cost
- Employers and members make contributions
- KPERS invests the money over time
- KPERS pays benefits with contributions + investment earnings

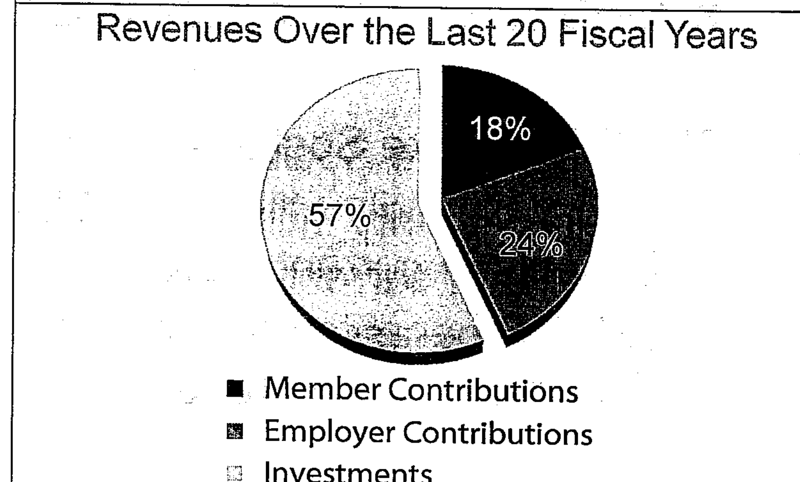
- KPERS is not like Social Security
  - Social Security utilizes contributions from current employees to pay the benefits of current retirees
  - KPERS benefits are “pre-funded”; current contributions are invested to pay benefits down the road

How Benefits Are Funded

Contributions + Investments – Expenses = Benefits

- Employee Contributions
  - Tier 1 = 4% of pay
  - Tier 2 = 6% of pay
- Employer Contributions
  - % of pay set by annual actuarial valuation
  - Statutory cap on annual rate increase
  - State pays for state and school employees
- Total Contributions for FY 2012: **$915.7 million**



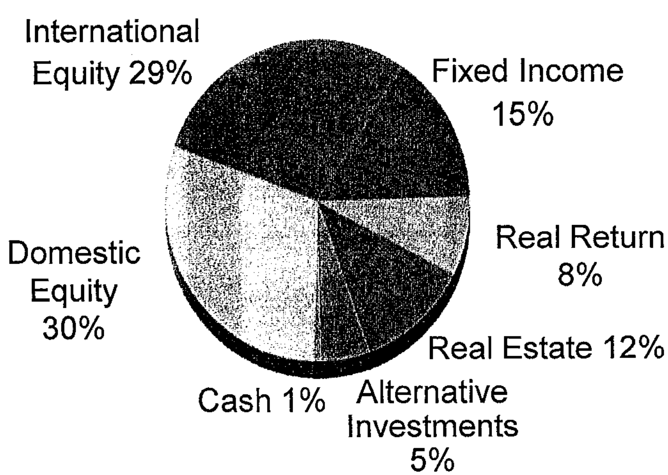


How Benefits Are Funded

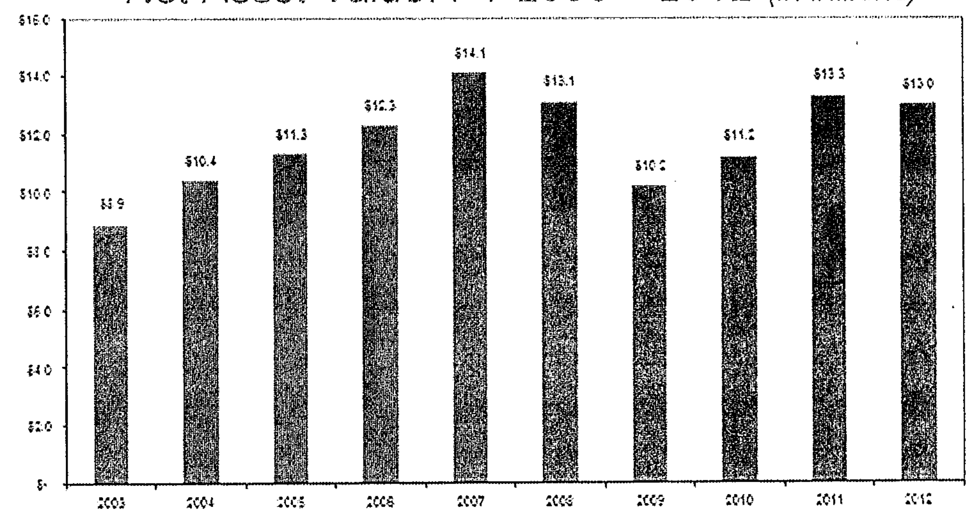
Contributions + **Investments** – Expenses = Benefits

- Over the years, investment returns make up approximately 60.0 percent of revenues
- Staff of 8 internal investment professionals, over 100 years of combined experience
- 3 investment consultants and 33 investment managers
- Work together with disciplined, diversified and long-term investment approach
- Manage investment of more than $13 billion of trust fund assets in the U.S. and international markets
- Use a target asset allocation

Target Asset Allocation



Net Asset Value: FY 2000 – 2012 (in billions)

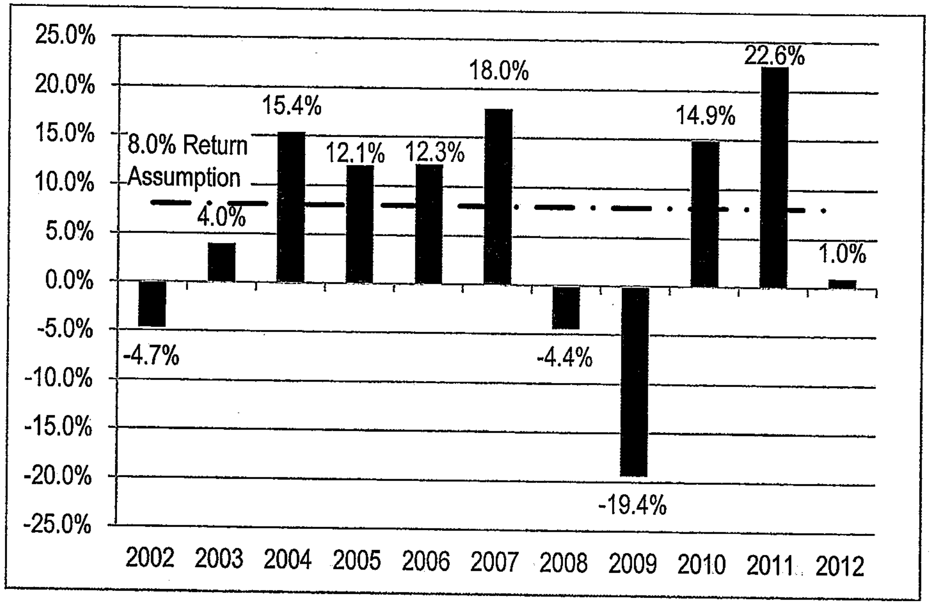


How Benefits Are Funded

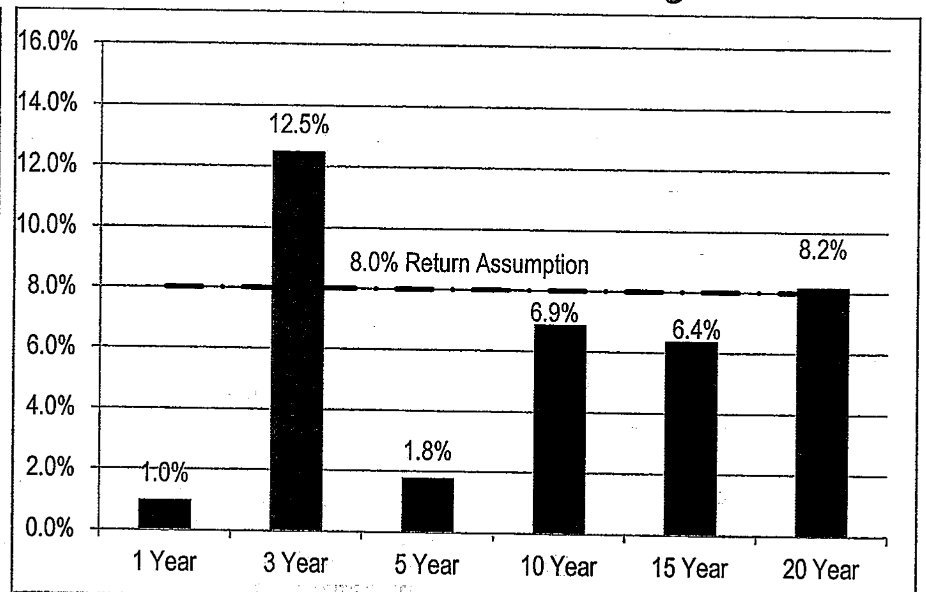
Contributions + **Investments** – Expenses = Benefits

- FY 2011 return, 22.6%
- FY 2012 return, 1.0 %
- FY 2013 return to-date, 6.0% (as of 11/30/12)
- 8.0% long-term return assumption
- Earned 8.0% over the last 25 years

Total Returns by Fiscal Year



Average Annual Return through 6/30/12



How Benefits Are Funded

Contributions + Investments – **Expenses** = Benefits

- Total investment fees for FY 2012: $29.4 million
    - 22 basis points on $13.1 billion in assets
- Total benefit administration expenses for FY 2012: $10 million

How Benefits Are Funded

Contributions + Investments – Expenses = **Benefits**

- Final average salary x multiplier (1.75%) x years of service
- Lifetime retirement benefit and $4,000 death benefit
- After about three years in retirement, most retirees begin receiving more in total benefits than they paid in contributions (if no lump-sum option)
- KPERS paid about **$1.36 billion** in total benefits in FY 2012 (retirement, death benefits, disability benefits, withdrawals)

Average member	
Final average salary	$40,000
Service	20 years
Benefit	$14,000 a year

Long-term member	
Final average salary	$40,000
Service	30 years
Benefit	$21,000 a year

All in a Day's Work

Fiscal year 2012 by the numbers

- 972,000 retirement benefit payments totaling over $1.2 billion
- $9.4 million in active member death benefits
- $24 million in benefits to 3,000 disabled employees
- 6,464 new retirees
- 23,000 member enrollments and transfers
- 41,500 beneficiary designations processed
- 10,000 members withdrew their contributions ($50 million)
- 92,000 incoming calls (average wait time 11 seconds)
- 13,000 e-mail requests

KPERS OVERVIEW

ACTUARIAL VALUATION

LONG-TERM FUNDING HISTORY

2012 HB 2333

What is an Actuarial Valuation?

- It is a “snapshot” measurement at a point in time (the valuation date), for the purpose of –
  - Calculating a best estimate of ultimate costs
    - Project future benefits using actuarial assumptions, such as mortality rates, investment returns, salary increase rates, and retirement rates
    - Calculate present value of future benefits (what they are worth in today’s dollars)
    - Apply an actuarial cost method to allocate those costs to periods of service
  - Measuring actuarial assets and liabilities
    - Actuarial assets do not equal the market value of assets
    - An asset valuation method is used to “smooth” the effect of market valuations and produce more stability in rates.
    - The difference between the assumed rate of return (8%) and actual returns is spread over five years – “smoothed” or recognized evenly over that period.

What is an Actuarial Valuation?

- Calculating employer contribution rates
  - The 12/31/2011 valuation provides rates that first apply in FY 2015 (July 1, 2014) for State and school employers, and in CY 2014 for local employers
- Preparing disclosures for financial reporting
- Providing a baseline for legislative changes

Long-Term Funding Measurements

- **Actuarially required contribution rate (ARC)** – the contribution rate determined by the valuation to prefund benefits if all the actuarial assumptions are met.
  - KPERS contributions are subject to statutory caps on the annual increase in rates.
  - As a result, the State-School Group and Local Group statutory rates are less than the ARC rate.
  - Employers pay the ARC rate for the KP&F and Judges plans.
- **Unfunded actuarial liability (UAL)** – the difference between the actuarial accrued liability and the actuarial valuation of assets
  - In short, the UAL indicates the extent to which the plan's actuarial liability is not prefunded through accumulated assets.
  - The existence of a UAL is not in itself bad, any more than a mortgage on a house is bad.
  - UAL does not represent a debt that is payable today.
  - What is important is ability to amortize the UAL and trends in its growth.
- **Funded ratio** – actuarial assets divided by the actuarial liability
  - There is no universally accepted standard for what constitutes a "healthy" funded ratio for a public pension system.
  - There is consensus that a funded ratio below 60% is a cause for concern and remedial action.

Key 2011 Valuation Results

- The 12/31/11 actuarial valuation report incorporated a portion of the HB 2333 changes and some relatively minor changes in actuarial assumptions.
  - No Tier 3 members in this valuation since the cash balance plan doesn't take effect until 2015.
  - Therefore, the cash balance plan has no cost impact on this valuation.
  - Changes for Tier 1 and 2 members and the higher employer contribution increase caps had an impact on this valuation.
- The **UAL** for the System as a whole increased $964 million –
  - Asset loss of $852 million and liability gain of $192 million
    - Due to smoothing, the asset loss still largely consists of 2008 losses.
    - $902 million in deferred losses has yet to be recognized, except to the extent offset by favorable returns above 8%.
    - As a result, the actuarial value of assets remains above the market value.
      - The System's unfunded liability on a market value basis is $10.1 billion.
- The System's **funded ratio** declined from 62.2% to 59.2%.

Key 12/31/11 Valuation Measurements

Group	Contribution Rates*		Actuarial Funded Status	
	Actuarial Rate	Statutory Rate	Unfunded Actuarial Liability (in Millions)	Funded Ratio
State	10.80%	11.27%	$1,122.8	71.3%
School	15.41%	11.27%	$5,797.6	52.1%
Local	9.77%	8.84%	$1,542.4	61.2%
KP&F	19.92%	19.92%	$738.6	69.8%
Judges	22.59%	22.59%	$26.8	82.5%
System Totals			$9,228.1	59.2%

*Effective for fiscal year beginning in 2014. (FY 2015 for State and School Groups, State KP&F employers, and Judges. CY 2014 for Local Group and Local KP&F employers.)

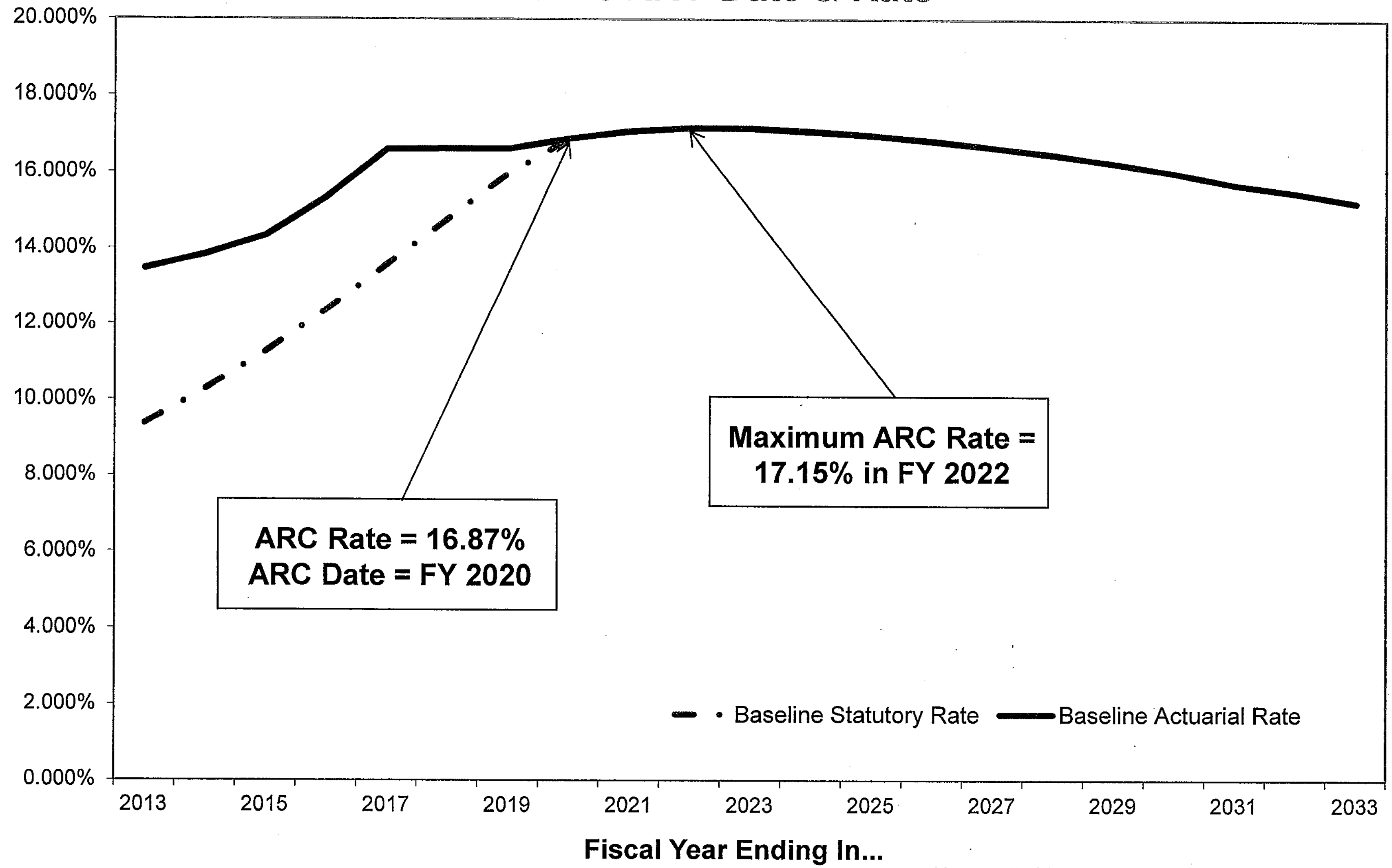
Projections of Long-Term Funded Status

- KPERS' actuary models future trends in the System's long-term funding status, using the "snapshot" data in the valuation.

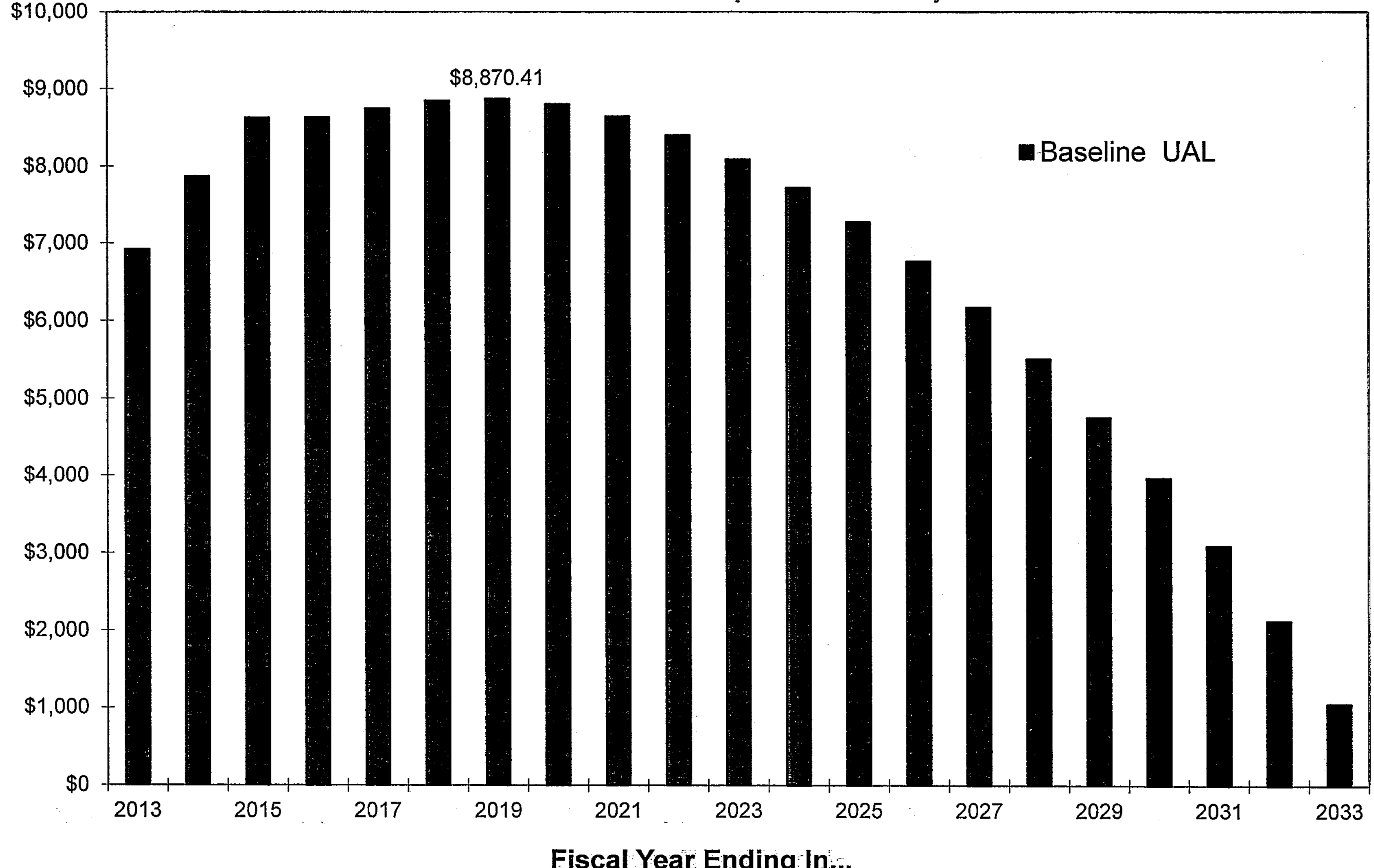
- Graphs for the KPERS State-School Group and Local Group follow, showing projections of their –

  - ARC rates and statutory rates
  - Unfunded actuarial liability
  - Funded ratios

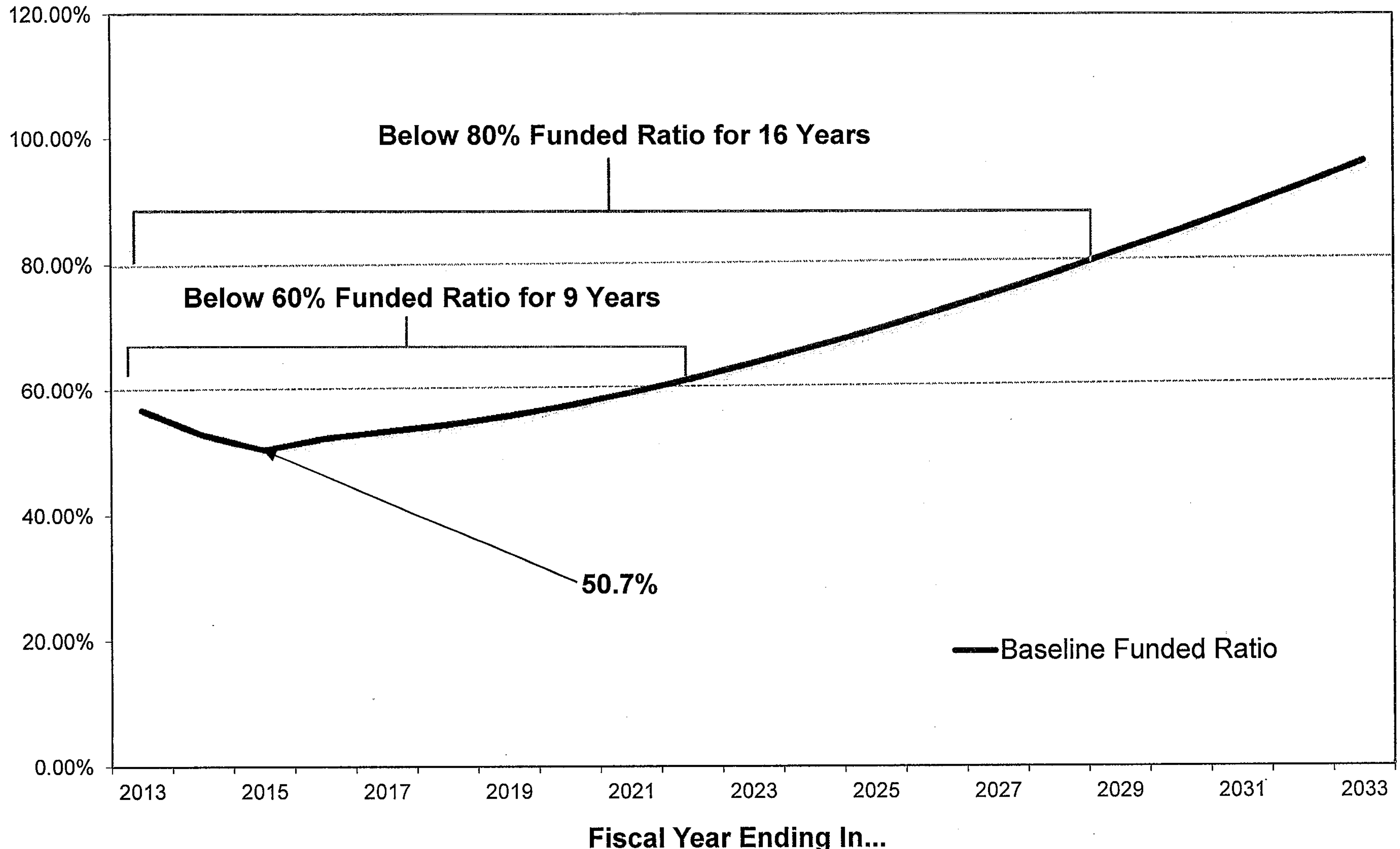
State-School Group
Baseline ARC Date & Rate



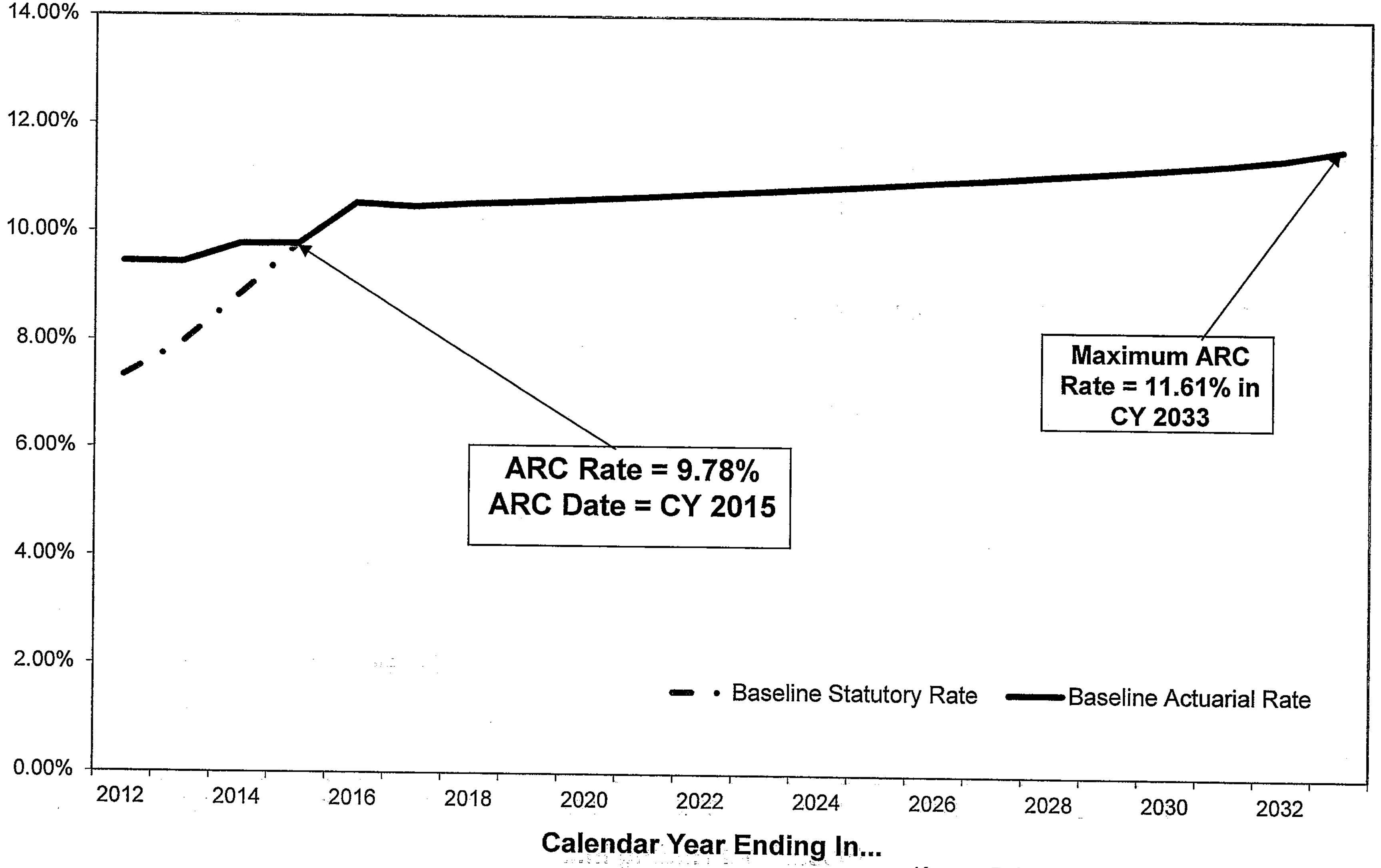
State-School Group
Baseline UAL (in millions)



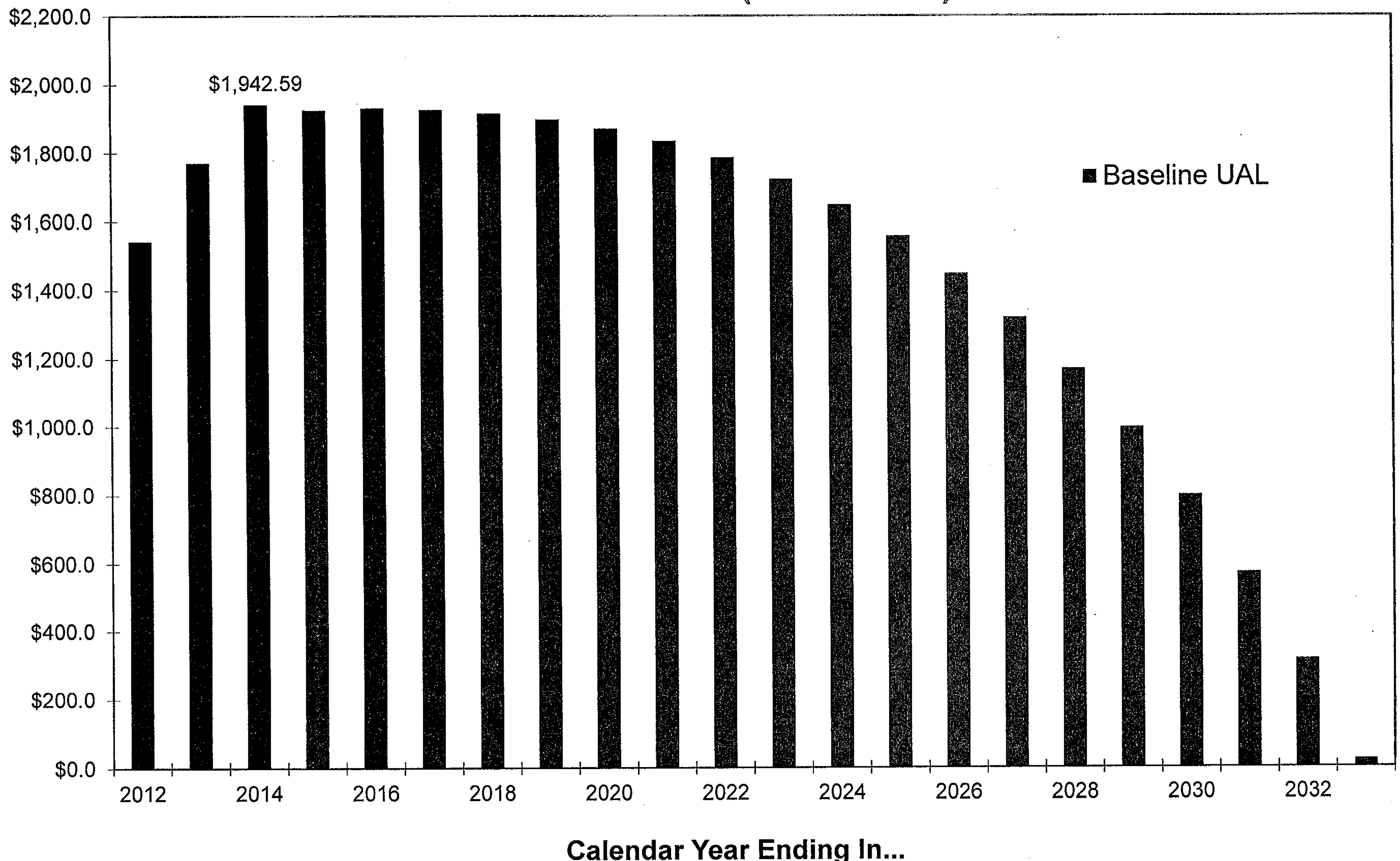
State-School Group
Baseline Funded Ratio



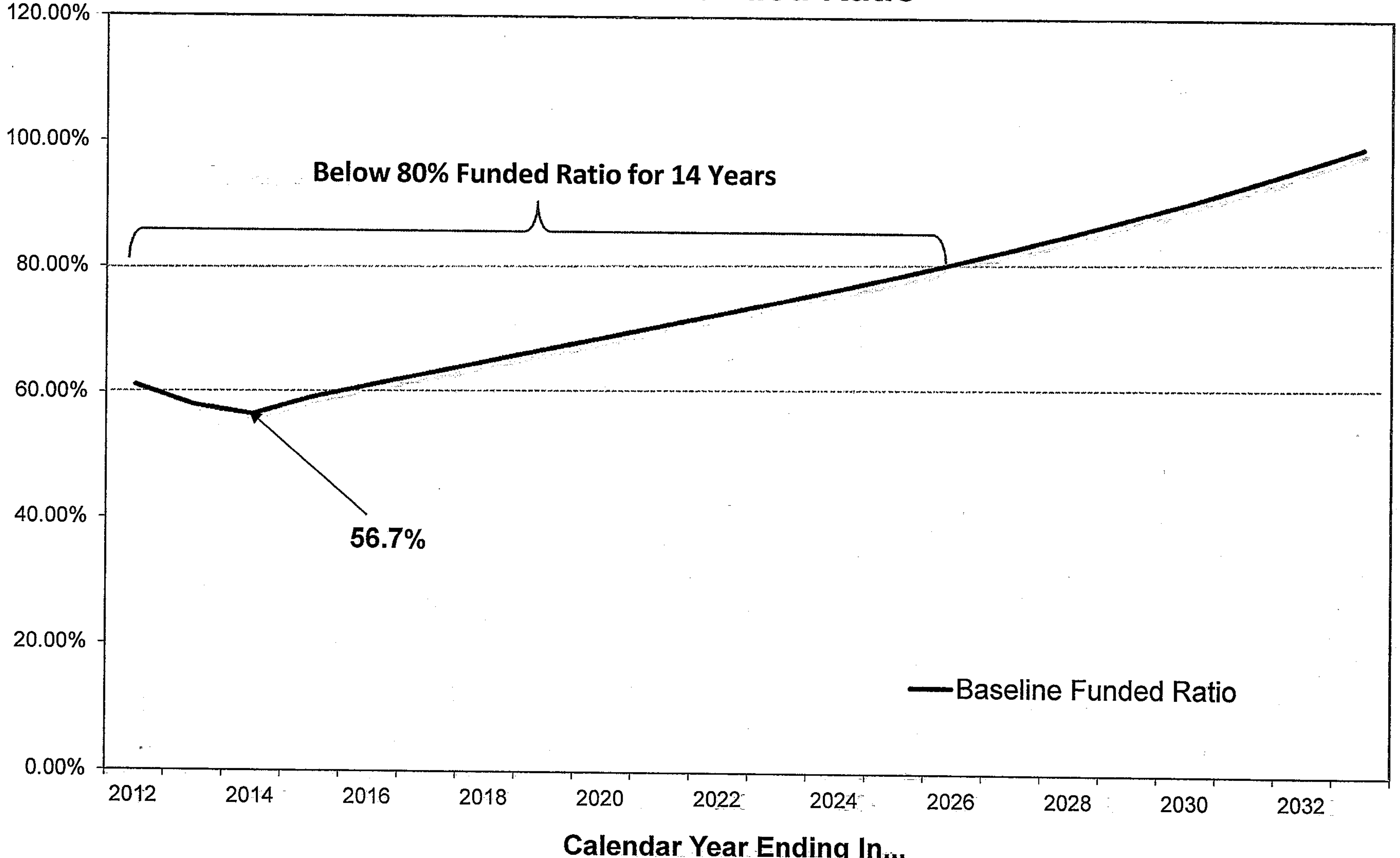
Local Group
Baseline ARC Date & Rate



Local Group
Baseline UAL (in millions)



Local Group
Baseline Funded Ratio



Employer Contributions

- A fundamental principle of sound funding for a defined benefit plan is to consistently pay the full ARC rate.
- Due to the 0.6% statutory cap on employer rate increase, there is a significant gap between KPERS' statutory and ARC rates.
  - In the current fiscal year, the statutory employer rate for the State/School Group is 70% of its ARC rate (9.37% statutory rate vs. 13.46% actuarial rate).
  - The Local Group's statutory rate is 84% of the ARC rate in CY 2013 (7.94% statutory rate vs. 9.43% actuarial rate).
- Last session's KPERS bill (2012 HB 2333) raises the cap on employer contribution increases, beginning FY 2014.
- As a result, employer contribution growth will accelerate.
  - State/School Group contributions are projected to increase by $54 million from FY 2013 to FY 2014.
  - Between FY 2016 and FY 2017, the increase would be almost $80 million.
- Accelerating employer contributions in the near term can help reduce contributions paid over the longer term.

State-School Group Employer Contributions

Employer Contributions*	Statutory Cap	Baseline (in Millions)
FY 2013 Total Contributions	0.6%	$411.51
FY 2014 Increase over Prior FY	0.9%	$54.34
FY 2014 Total Contributions		$465.84
FY 2015 Increase over Prior FY	1.0%	$60.32
FY 2015 Total Contributions		$526.16
FY 2016 Increase over Prior FY	1.1%	$69.37
FY 2016 Total Contributions		$595.53
FY 2017 Increase over Prior FY	1.2%	$79.05
FY 2017 Total Contributions		$674.58

*All Funds

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LONG-TERM FUNDING HISTORY

2012 HB 2333

KPERS' Long-Term Funding

- Over KPERS' 51-year history, the Legislature provided various benefit enhancements
- Made significant plan design changes in 1993
  - Common plan design features in most state defined benefit plans
    - Provided unreduced retirement under "Rule of 85"
    - Increased benefit formula multiplier to 1.75% for all service (from 1.4%)
  - Costs of the plan enhancements borne by employers
- Added statutory cap on employer contribution increases
  - Intended to make enhancements more affordable over short term
  - Statutory rate was expected to converge with actuarial rate within a short period
  - However, employer contributions remained below the actuarially required rate from that point forward
- Also adopted actuarial methods that lowered employer contributions in initial years, shifting cost of enhancements into the future.

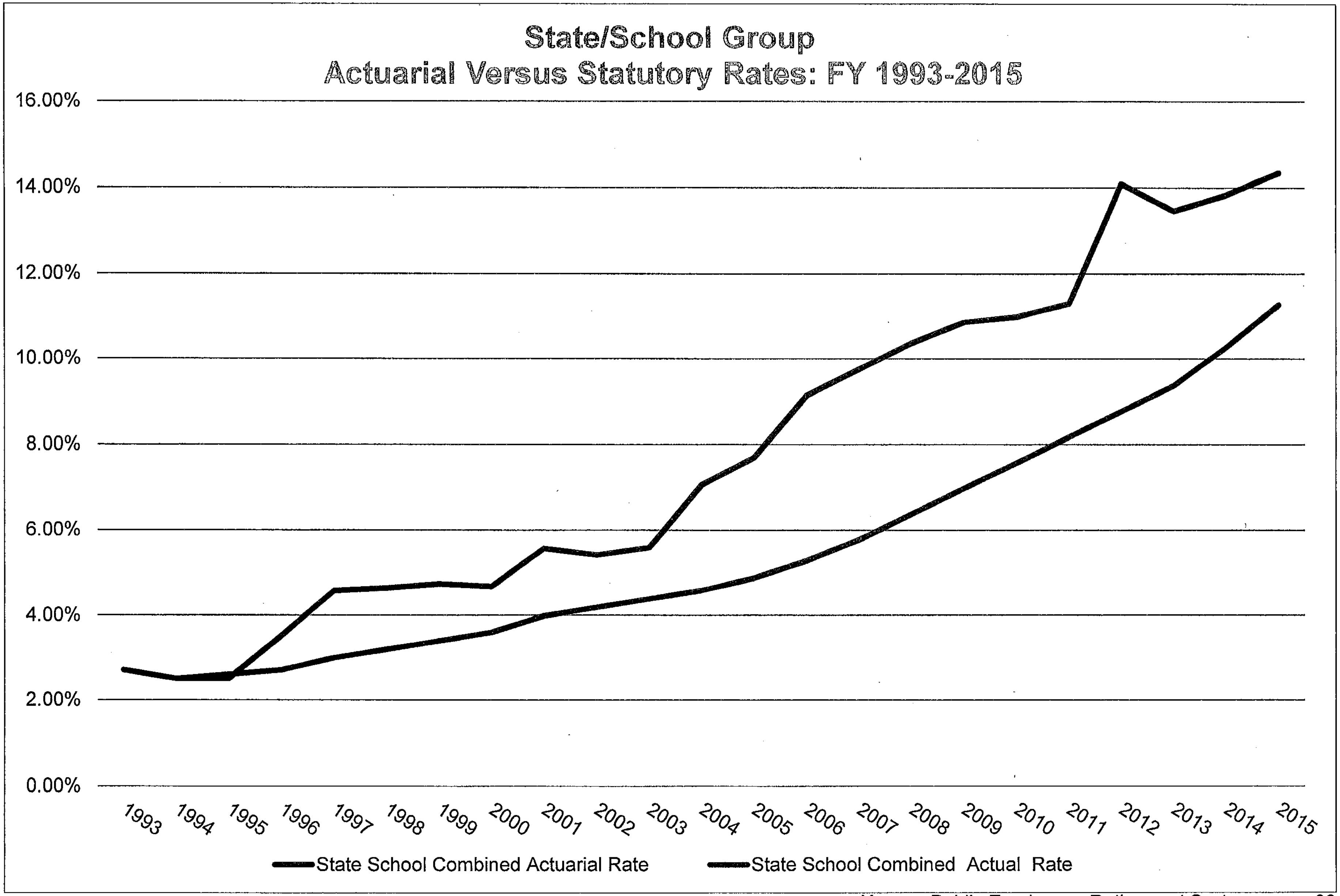
Long-Term Funding

- These changes, along with later experience losses and other factors adversely affecting liabilities contributed to long-term funding issues that emerged in 2001-2002.
- By 2001 and 2002, actuarial projections indicated
  - The statutory rate would not reach the actuarial rate before the end of the amortization period in 2033.
  - The UAL had reached $2.6 billion.
- KPERS began working with the Legislature to develop a plan to address the shortfall and bring the Plan into actuarial balance.

Factors Affecting the System's UAL

Historical Changes to System's UAL (1993-2011)		
Effect of Employer Contribution Cap/Lag	$3,095	37.5%
Actuarial Methodology (Includes changes to fund benefit liabilities more rapidly)	$2,405	29.1%
Changes in Assumptions/Demographic Experience	$1,500	18.2%
Actual vs. Assumed Investment Returns	$1,477	17.9%
Benefit Changes (after 1993)	$264	3.2%
Bond Issue	($481)	-5.9%
Total	$8,260	100.00%

- Changes to actuarial methodology –
  - Provided greater stability in the System's ongoing cost
  - Funded benefit liabilities more rapidly, which is more a conservative approach.
- Changes in demographic assumptions (such as mortality and retirement rates) were made to better reflect actual experience over time
- Differences between actuarial assumptions and actual experience also may affect the UAL.


State/School Group
Actuarial Versus Statutory Rates: FY 1993-2015
16.00%
14.00%
12.00%
10.00%
8.00%
6.00%
4.00%
2.00%
0.00%
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
State School Combined Actuarial Rate
State School Combined Actual Rate

Long-Term Funding Response

The Legislature took action to address long-term funding issues

- Gradually raised statutory cap of 0.2% on employer rate increases (2003)
  - Reached 0.6% in FY 2008
- Issued $500 million in pension obligation bonds (2004)
- Created new plan design for future employees (2007)

	Tier 1	Tier 2 (Effective 7/1/2009)
Employee contributions	4%	6%
Full retirement age	• 85 "points" (age + service) • 65 with 1 year service • 62 with 10 years service	• 65 with 5 years service • 60 with 30 years service
Final average salary	3 years No final payouts (e.g., vacation or sick leave) if hired 7/1/93 or later	5 years No final payouts

- These actions, plus strong investment returns from 2004-2007, improved projected funded status significantly
- Plan remained vulnerable to market downturns

Impact of 2008 Crisis

- Unprecedented investment market declines in 2008
- Substantial negative impact on KPERS' long-term funded status
- In the 12/31/08 actuarial valuation report for the entire System
  - 12% decline in funded ratio to 59%
  - $2.7 billion increase in UAL to $8.3 billion
  - Actuarial value of assets significantly greater than the market value
    - About $2 billion in deferred losses (averaged in over next four years)
    - On a current market value basis, a funded ratio of 49% and a UAL of $10.3 billion
- Statutory and actuarial contribution rates for school employers no longer projected to converge

Legislative Response: 2008-2011

- Multiple legislative committees requested options for a KPERS funding solution over the following three years
- During 2011 Session, both chambers passed bills with additional employer contributions and changes for active members
  - House also voted to establish a defined contribution (DC) plan for future employees
- Compromise in conference committee resulted passage of HB 2194
  - Delayed employer and current employee changes until an interim KPERS Study Commission could make recommendations
- Study Commission met throughout summer/fall 2011

Legislative Response: 2011-2012

- Study Commission recommended a hybrid cash balance/ defined contribution plan
  - Employer contributions funded a cash balance plan with pay credits based on years of service
  - Employee contributions funded a defined contribution plan
  - Required employer contributions to rise to actuarially required rate immediately
  - Included increases in current member contributions or reductions in future benefits
- When the Study Commission bills did not receive favorable action, the Legislature renewed review of multiple options
  - Increased focus on a cash balance element as new plan design foundation for future members
    - Cash balance plan only (House Committee bill)
    - Member election of cash balance or defined contribution plan (House floor)
    - Variation on Study Commission hybrid plan (Senate floor)
- Compromise
  - Raise cap on employer contribution increases (1.2% annually by FY '17)
  - Higher contributions or lower benefits for active members
  - Cash balance plan for new members (effective 1/1/2015)

KPERS OVERVIEW

ACTUARIAL VALUATION

LONG-TERM FUNDING HISTORY

2012 HB 2333

HB 2333: Employer Contributions

- Raises statutory cap on employer contribution increases:

		State/School Group	
Fiscal Year	Cap	Statutory rate	Actuarial rate
2013	0.60%	9.37%	13.46%
2014	0.90%	10.27%	13.83%
2015	1.00%	11.27%	14.34%
2016	1.10%	12.37%	15.34%
2017 and later	1.20%	13.57%	16.59%
FY 2020: Statutory/actuarial rates converge		16.87%	16.87%

Projected actuarial rates

- Provides contributions from the Expanded Lottery Act Revenue Fund
  - Beginning in FY 2014, dedicates 50% of ELARF revenue after distributing $10.5 million to higher education programs
  - Continues until KPERS reaches 80.0 percent funding ratio

HB 2333: Tier 1 Members

- Election – Pending IRS approval

Member Contributions	Benefit Formula	
5% effective January 1, 2014 and 6% effective January 1, 2015	Increase multiplier to 1.85% for future service only, effective January 1, 2014	DEFAULT
or		
Remain at 4%	Multiplier is reduced to 1.40% for future service only, effective January 1, 2014	

HB 2333: Tier 2 Members

- For all retirements on or after 7/1/12, cost of living increase is eliminated
- For all retirements on or after 1/1/14, multiplier increases to 1.85% for all service

Current Tier 2	Revised Tier 2
6% contributions	6% contributions
1.75% multiplier	1.85% multiplier for all service, starting with January 1, 2014, retirements
Includes cost of living increase	Eliminate COLA, first effective for July 1, 2012, retirements

What Is a Cash Balance Plan?

Defined benefit plan with defined contribution characteristics

- DC features
  - Value of benefit is expressed during working years as account value
    - However, accounts are “notional” or hypothetical accounts
    - Assets don’t precisely match account values as in a DC plan
  - Reflects compensation earned over entire career
  - Investment, inflation and longevity risks may be shared with employee
- DB features
  - Benefit is paid as lifetime income in retirement
    - Lump sum may be optional form of payment
  - Guaranteed interest crediting rate provides definitely determinable benefit
  - Assets are pooled and professionally managed
  - Actuarial valuation determines contributions required to fund the plan
  - Required actuarial contributions vary depending on the actual experience compared to actuarial assumptions

What Is a Cash Balance Plan?

- Cash balance plan design features affecting benefit
  - Total pay credits attributed to employee's cash balance account
  - Interest credit
    - May be fixed or tied to a benchmark
    - May include discretionary dividends
  - Annuitization versus lump sum
    - Availability of employer credits for distribution to members terminating before retirement
    - Must offer an annuity option
    - Annuity factors (interest rate and mortality)
- Plan design features can reduce employer risks and costs
  - Interest crediting rate
    - If lower than investment return assumption, can provide margin and/or reduce employer contributions
  - Annuity factors (e.g., set interest rate below assumed investment return)
  - Distribution options
    - Restrict distribution of employer account balance prior to retirement
    - Minimize lump sum distributions
  - Flexibility to change pay credits, interest credits and annuity factors prospectively

The Kansas Cash Balance Plan

Plan Provision	KPERS Cash Balance Plan
Employee contributions	6%
Employer "pay credit"	• Based on years of service: 1-4 yrs = 3%, 5-11 years = 4%, 12-23 years = 5%, 24 years+ = 6% • May be changed prospectively by the Legislature
Interest credits	• 5.25% guaranteed. Paid quarterly on prior quarter's ending balance • Possible additional interest credits (0-4%) at Board discretion based on statutory criteria, including KPERS' funding, investment returns, market conditions • May be changed prospectively by the Legislature
Vesting	5 years
Normal retirement age	Age 65 with 5 years of service. Age 60 with 30 years of service
Early retirement age	Age 55 with 10 years of service
Retirement benefit	• Account balance converted to monthly benefit at retirement using annuity factors — 6% interest rate assumption — Mortality table selected by Board • Annuity factors may be changed prospectively by the Legislature • Various forms of payment, including survivor options and self-funded COLA • Partial lump-sum option up to 30% (not available at early retirement)
Termination before retirement	• Can withdraw employee contribution balance, but forfeit employer account balance • Vested members can leave contributions in and receive benefit at retirement age • Inactive members earn interest credits on notional account • Non-vested: two years following termination • Vested: Until retirement or forfeiture of membership

What HB 2333 Accomplishes

- Employers and current employees take shared steps toward a funding solution
  - Higher statutory cap on increases in employer contributions, beginning FY 2014
  - Current employees pay additional contributions or accept reduced benefits (future service)
- Future employees in cash balance plan share risk to a greater degree than in a traditional DB plan
- Greater flexibility to change new cash balance plan design to manage future affordability and sustainability issues
- Existing DB plan stays OPEN – no adverse impact on cash flow, asset allocation or investment return assumption
- Guaranteed lifetime benefit as the basic foundation for retirement income
- Reduce total employer contributions over long-term

What HB 2333 Does NOT Affect

- No decrease in benefits already earned by current employees
- The unfunded actuarial liability – it is a "debt" that has already been incurred
  - As structured, does not shorten the UAL's amortization period