# Kansas Public Employees Retirement System

House Appropriations Committee

January 29, 2013

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# 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

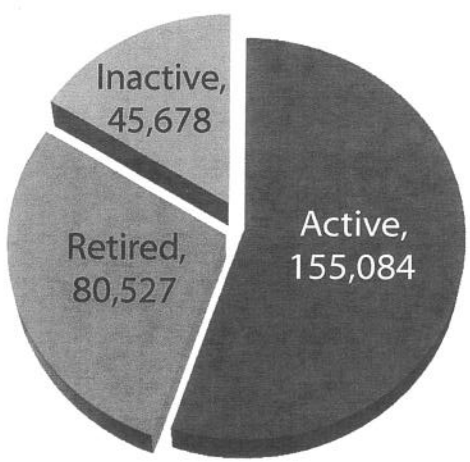
**Terry Matlack**, Shawnee
Managing Director, Tortoise Capital Advisors, LLC
Board member since May 2011
Appointed by the Governor

**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

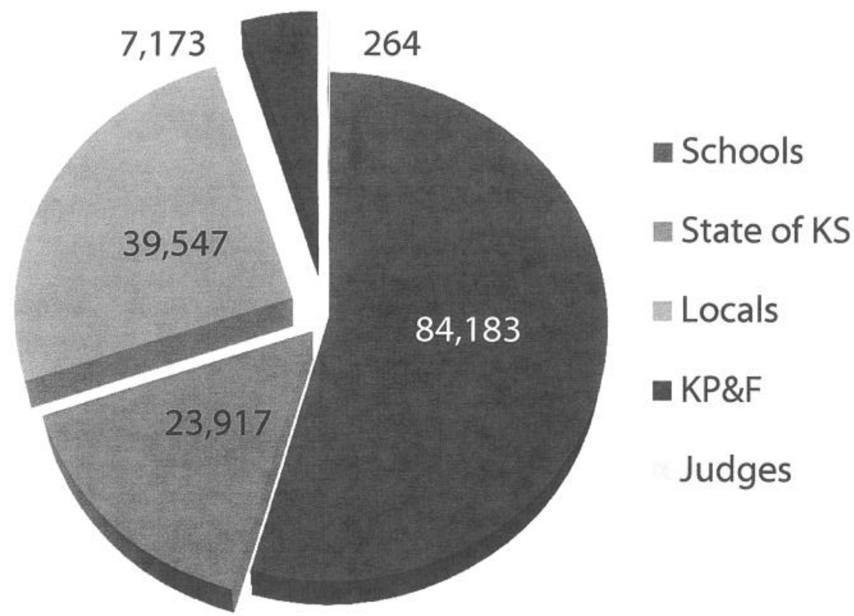
# Who Are Our Members

- 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

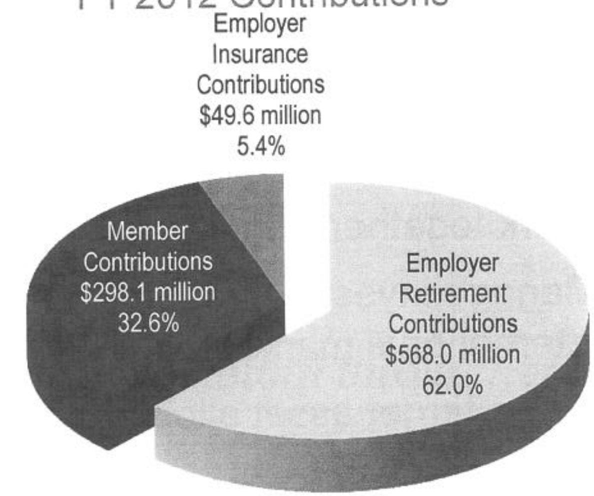
- KPERS is not like Social Security
  - Social Security utilizes contributions from current employees to pay the benefits of current retirees
  - KPERS benefits are "pre-funded"; current contributions are invested to pay benefits down the road

# How Benefits Are Funded

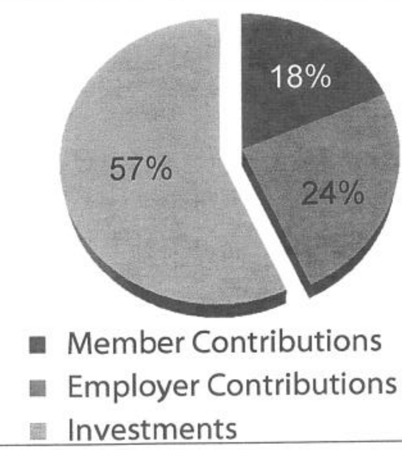
**Contributions** + Investments – Expenses = Benefits

- 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**

FY 2012 Contributions




Revenues Over the Last 20 Fiscal Years



# 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

# 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

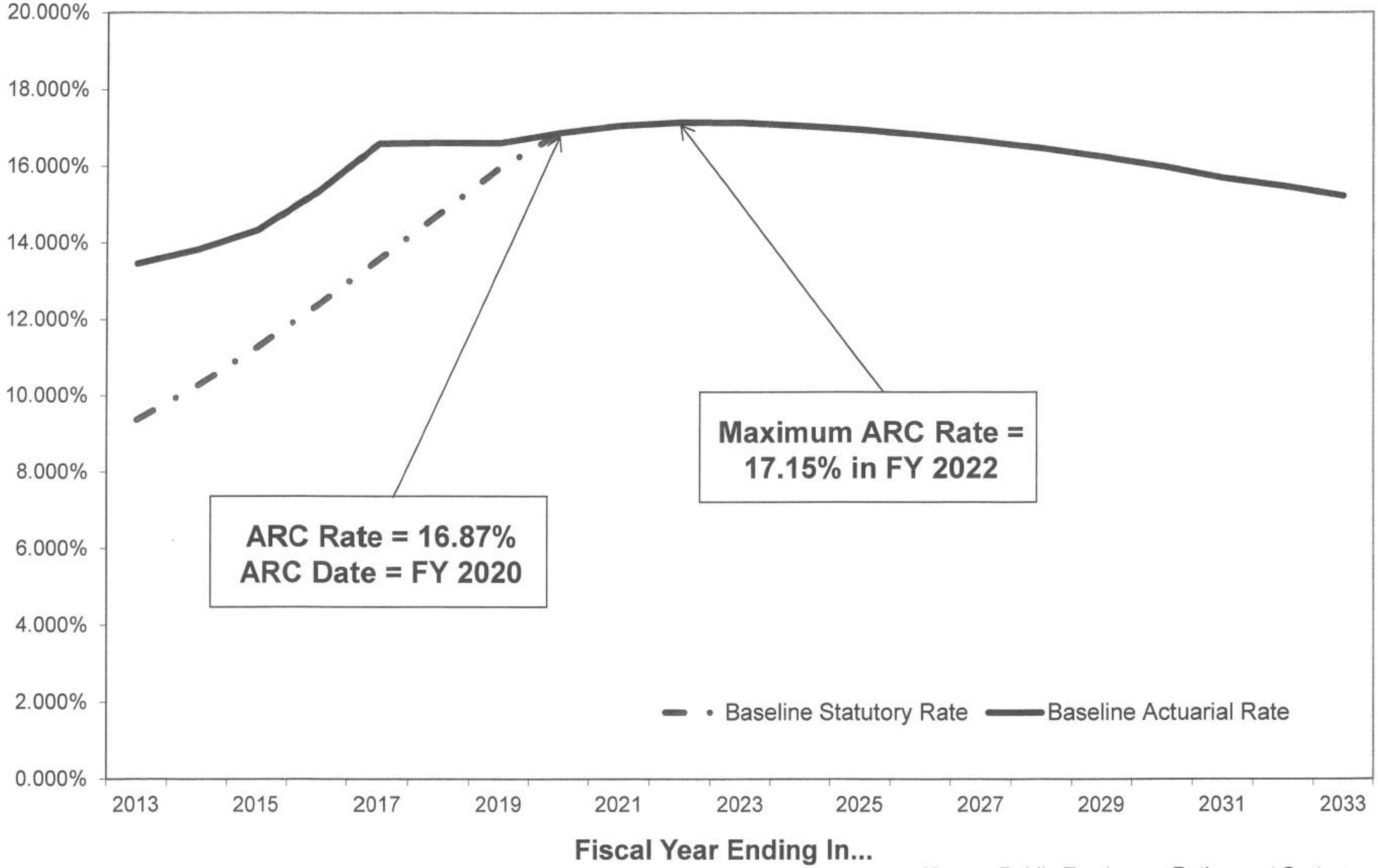
| Group | Contribution Rates* | | Actuarial Funded Status | |
|---|---|---|---|---|
| | Actuarial Rate | Statutory Rate | Unfunded Actuarial Liability (in Millions) | Funded Ratio |
| State | 10.80% | 11.27% | $1,122.8 | 71.3% |
| School | 15.41% | 11.27% | $5,797.6 | 52.1% |
| Local | 9.77% | 8.84% | $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.)

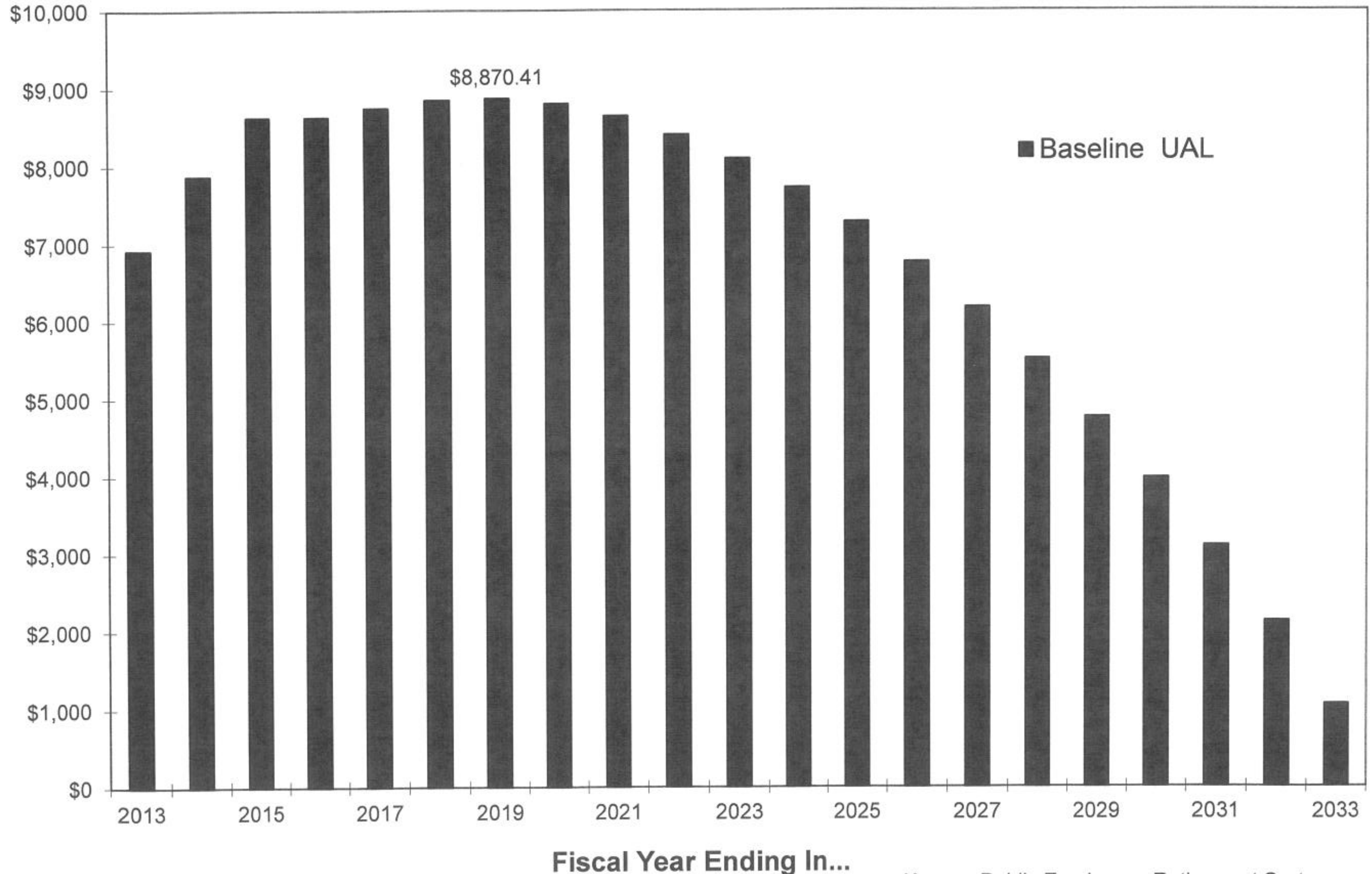
# Projections of Long-Term Funded Status

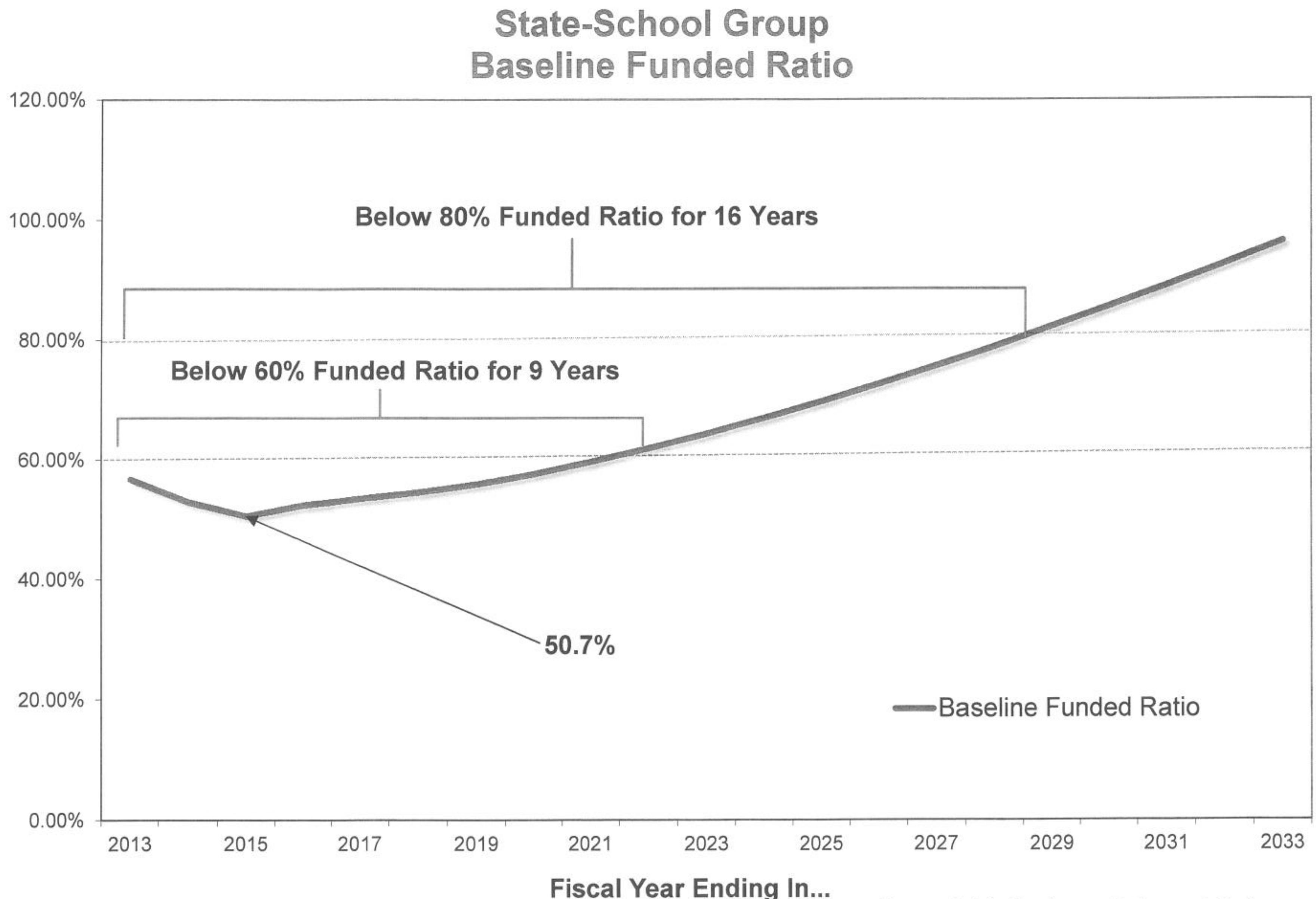
- KPERS' actuary models future trends in the System's long-term funding status, using the "snapshot" data in the valuation.
- Graphs for the KPERS State-School Group and Local Group follow, showing projections of their –
  - ARC rates and statutory rates
  - Unfunded actuarial liability
  - Funded ratios

## State-School Group
## Baseline ARC Date & Rate



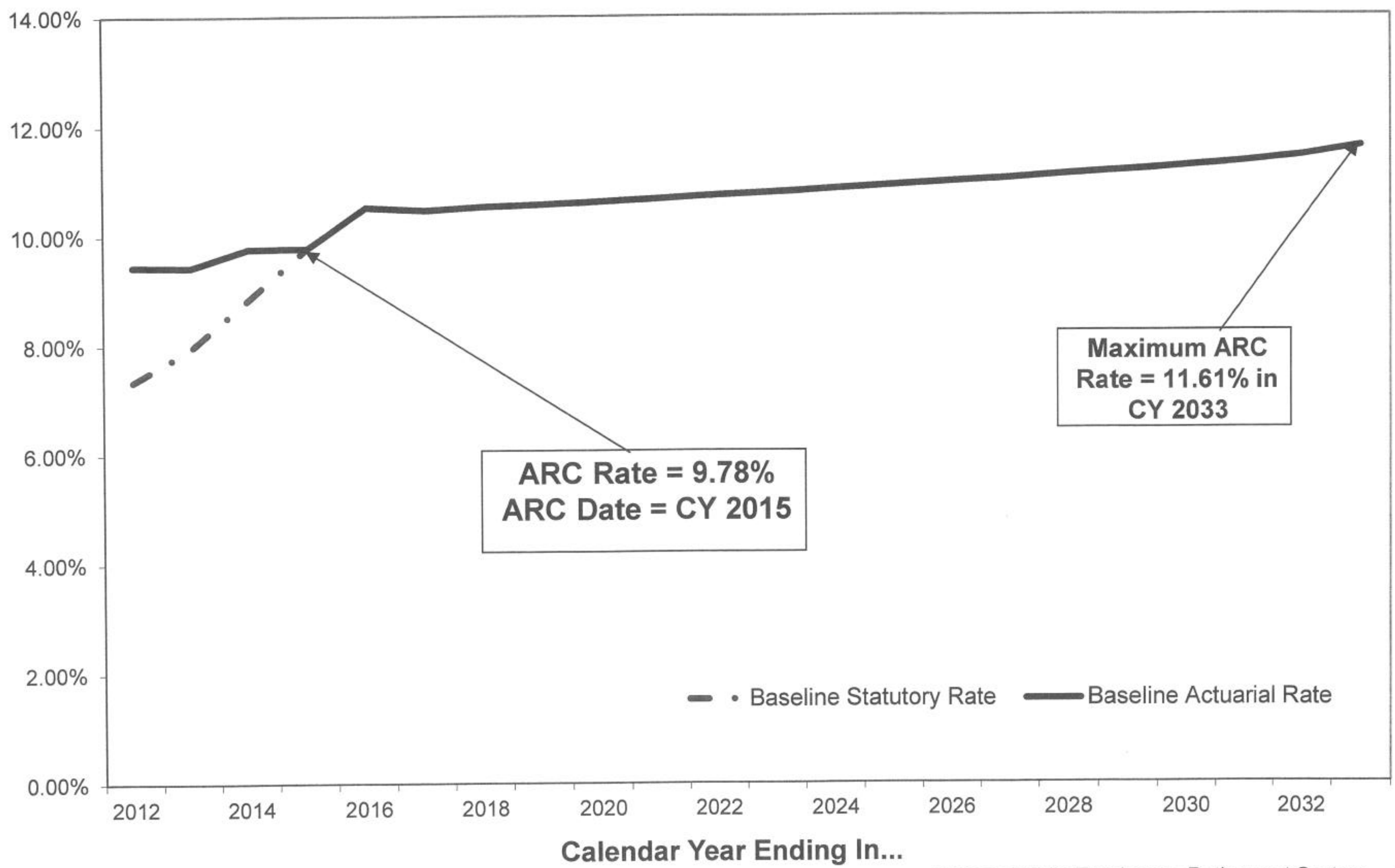
## State-School Group
## Baseline UAL (in millions)



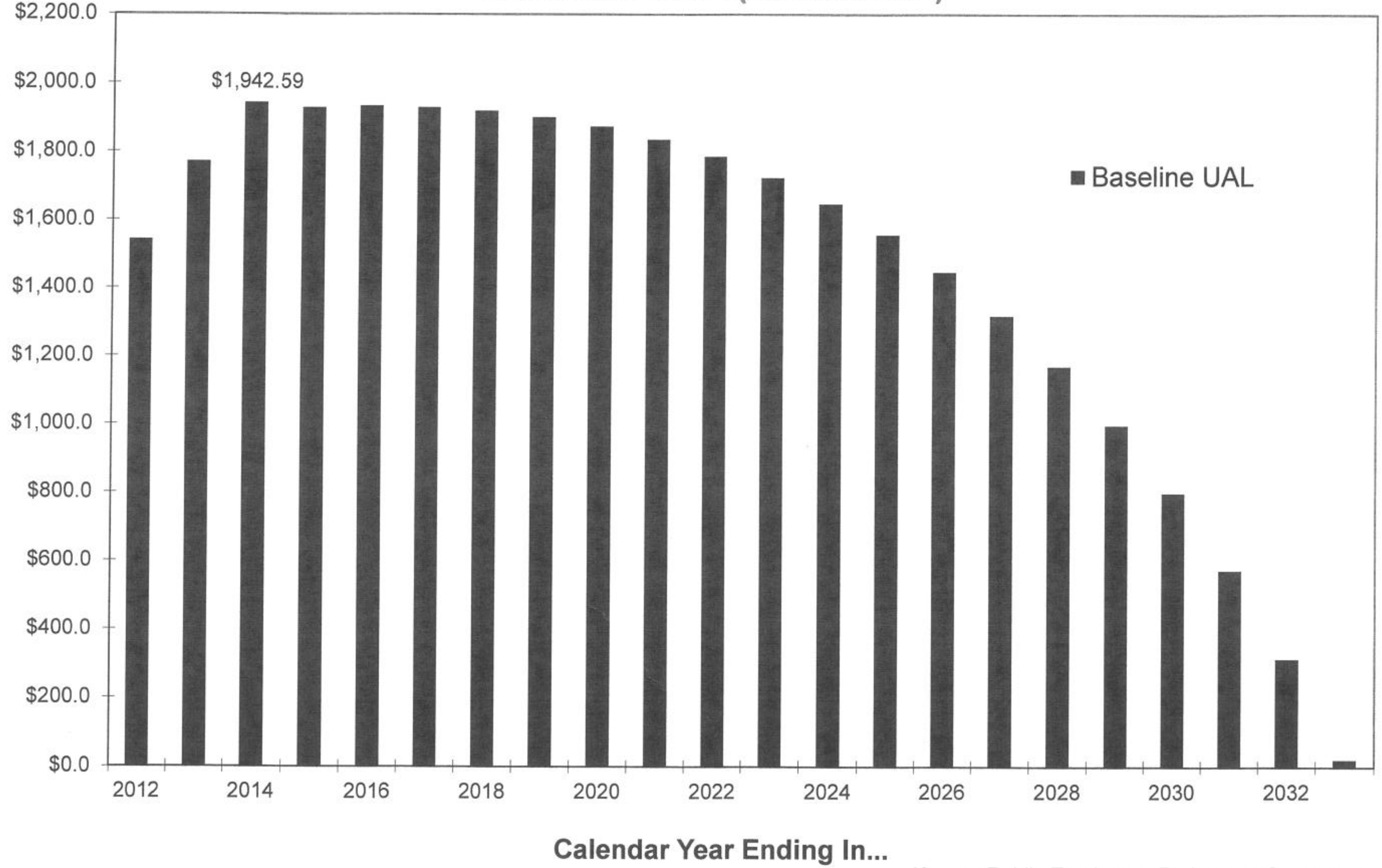


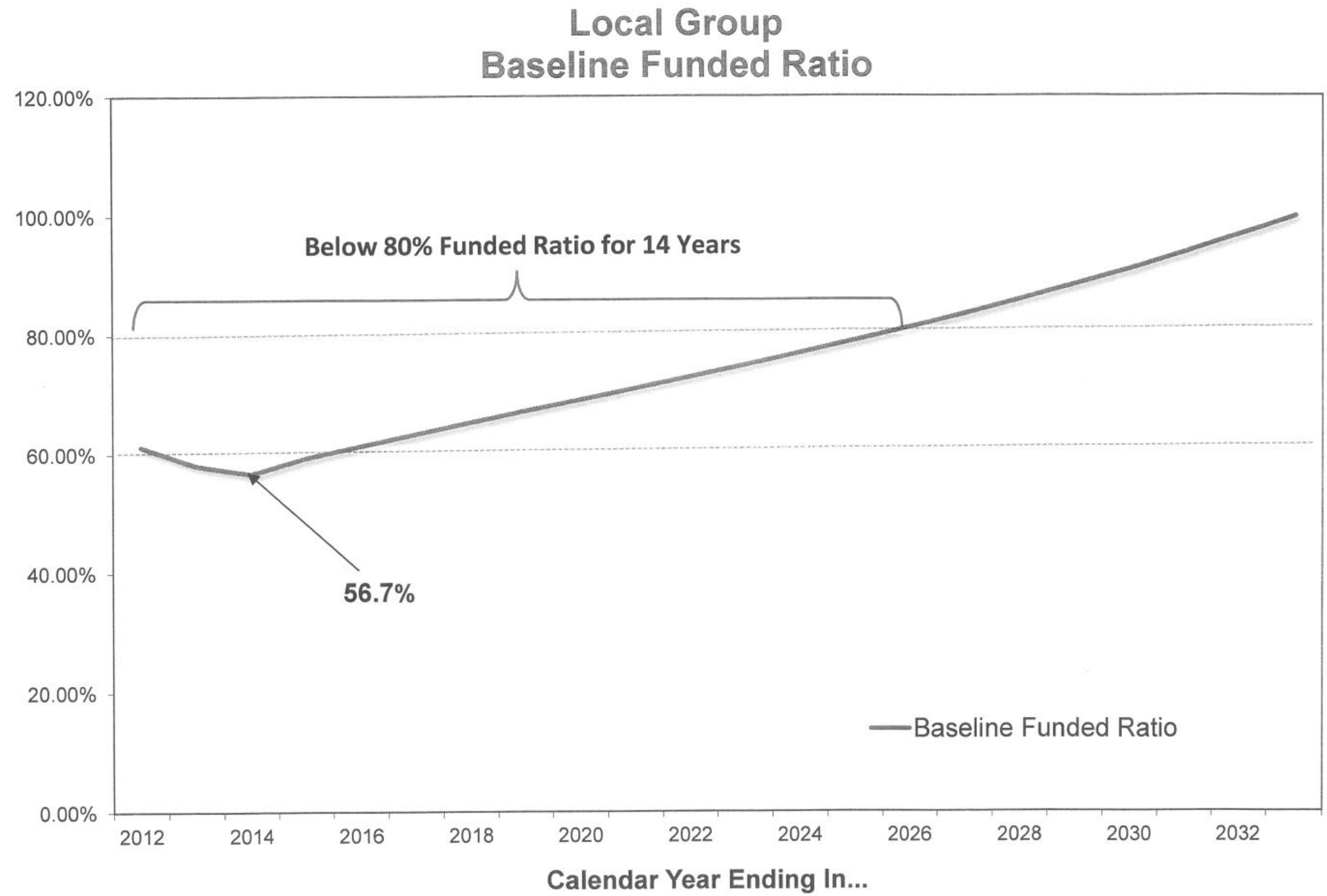
State-School Group
Baseline Funded Ratio
120.00%
100.00%
80.00%
60.00%
40.00%
20.00%
0.00%
Below 80% Funded Ratio for 16 Years
Below 60% Funded Ratio for 9 Years
50.7%
Baseline Funded Ratio
2013
2015
2017
2019
2021
2023
2025
2027
2029
2031
2033
Fiscal Year Ending In...

# Local Group
## Baseline ARC Date & Rate



## Local Group
## Baseline UAL (in millions)




Local Group
Baseline Funded Ratio
120.00%
100.00%
80.00%
60.00%
40.00%
20.00%
0.00%
Below 80% Funded Ratio for 14 Years
56.7%
Baseline Funded Ratio
2012
2014
2016
2018
2020
2022
2024
2026
2028
2030
2032
Calendar Year Ending In...

# 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

# 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

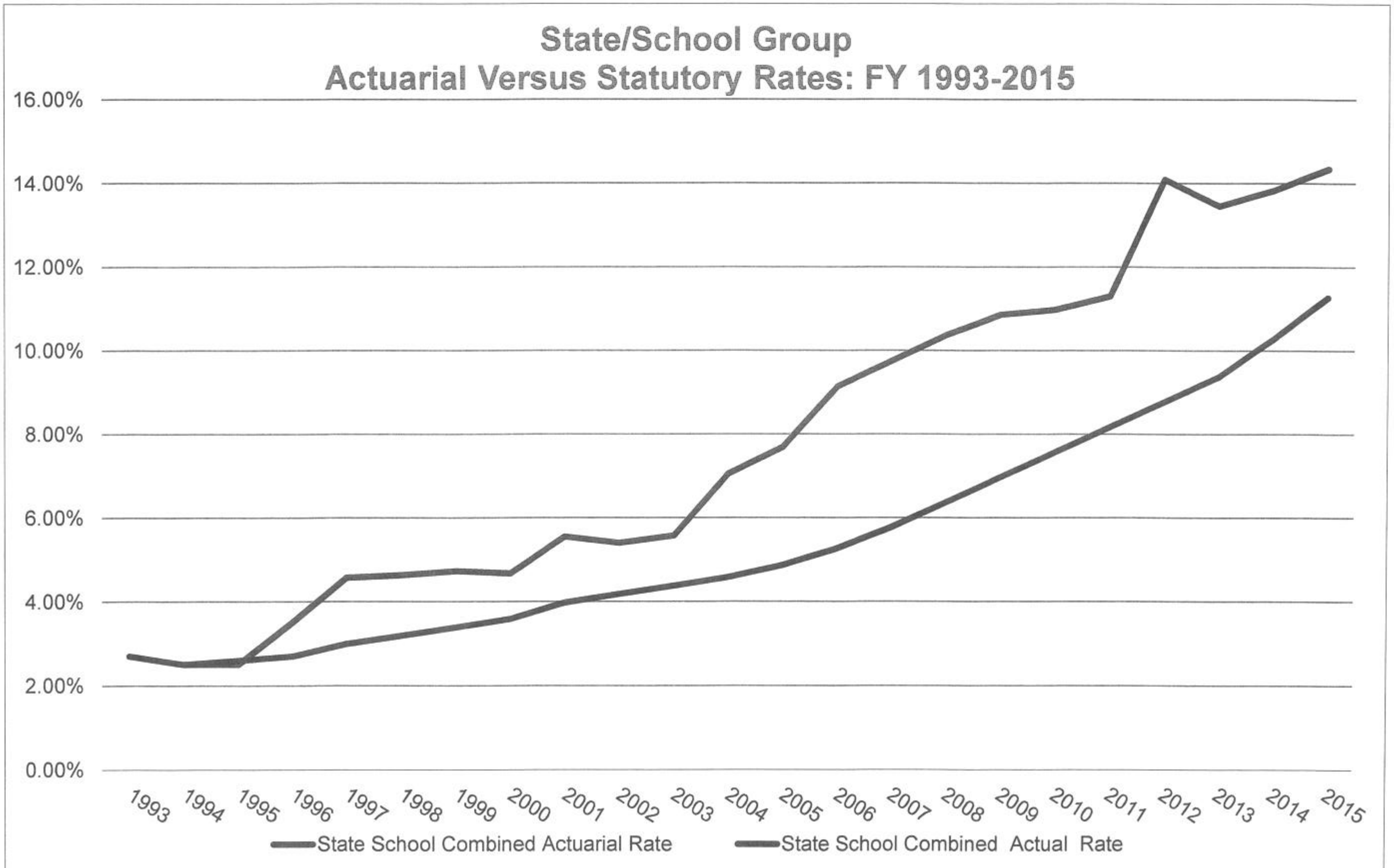
- These changes, along with later experience losses and other factors adversely affecting liabilities contributed to long-term funding issues that emerged in 2001-2002.
- By 2001 and 2002, actuarial projections indicated
  - The statutory rate would not reach the actuarial rate before the end of the 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.

# Employer Contribution Cap

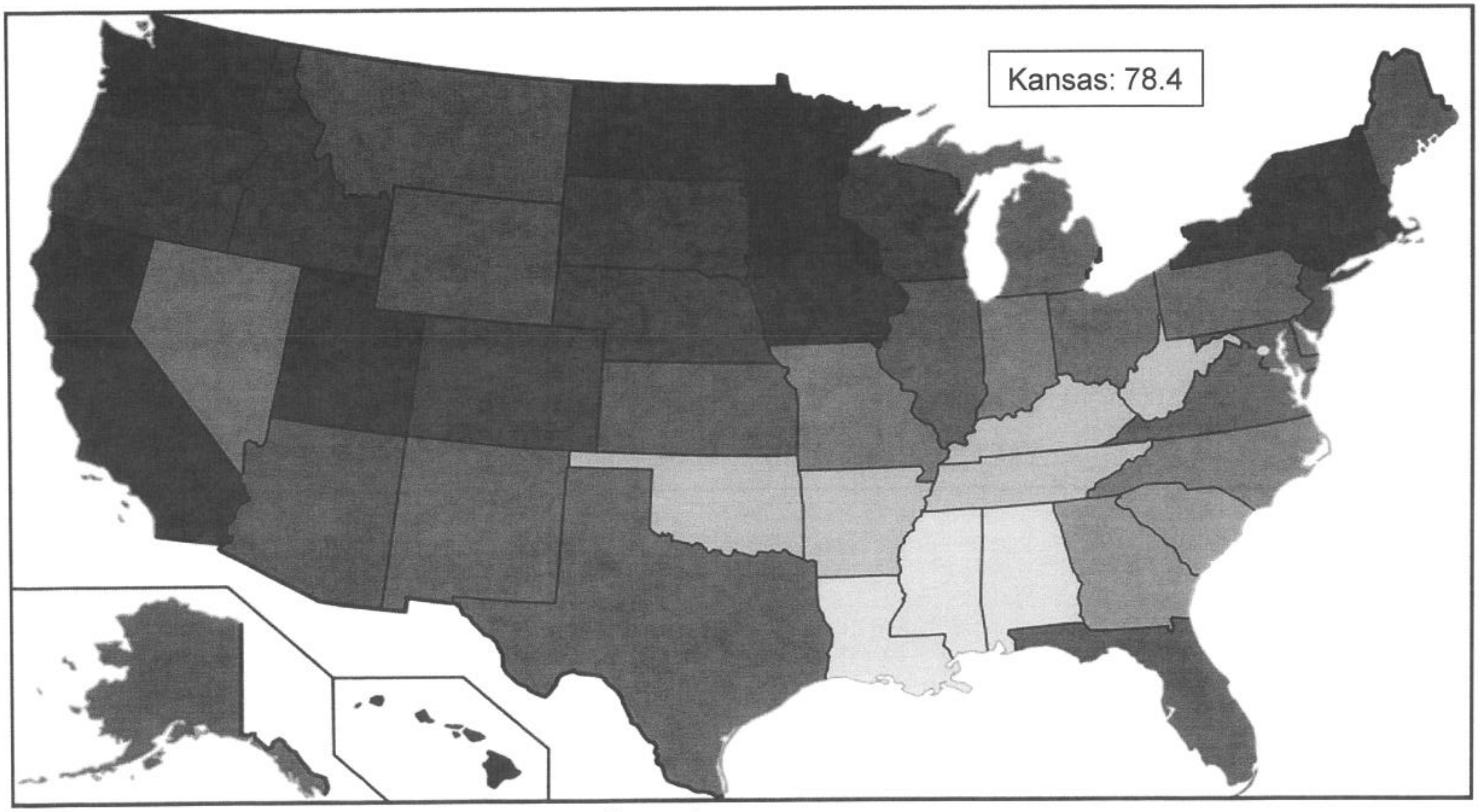


# Changes in Assumptions/Demographics

Changes to actuarial assumptions affect the Unfunded Actuarial Liability

- Retirement Rates
  - Length of career
  - Early retirement
  - Eliminating the Rule of 85
- Payment selections
  - Total number of partial lump sum payments
- Mortality
  - Life expectancy is increasing

# Life Expectancy at Birth – By Geography




**Legend:**

- <74.75
- 74.75-75.5
- 75.5-76.25
- 76.25-77
- 77-77.75
- 77.75-78.5
- 78.5-79.25
- 79.25-80
- >80

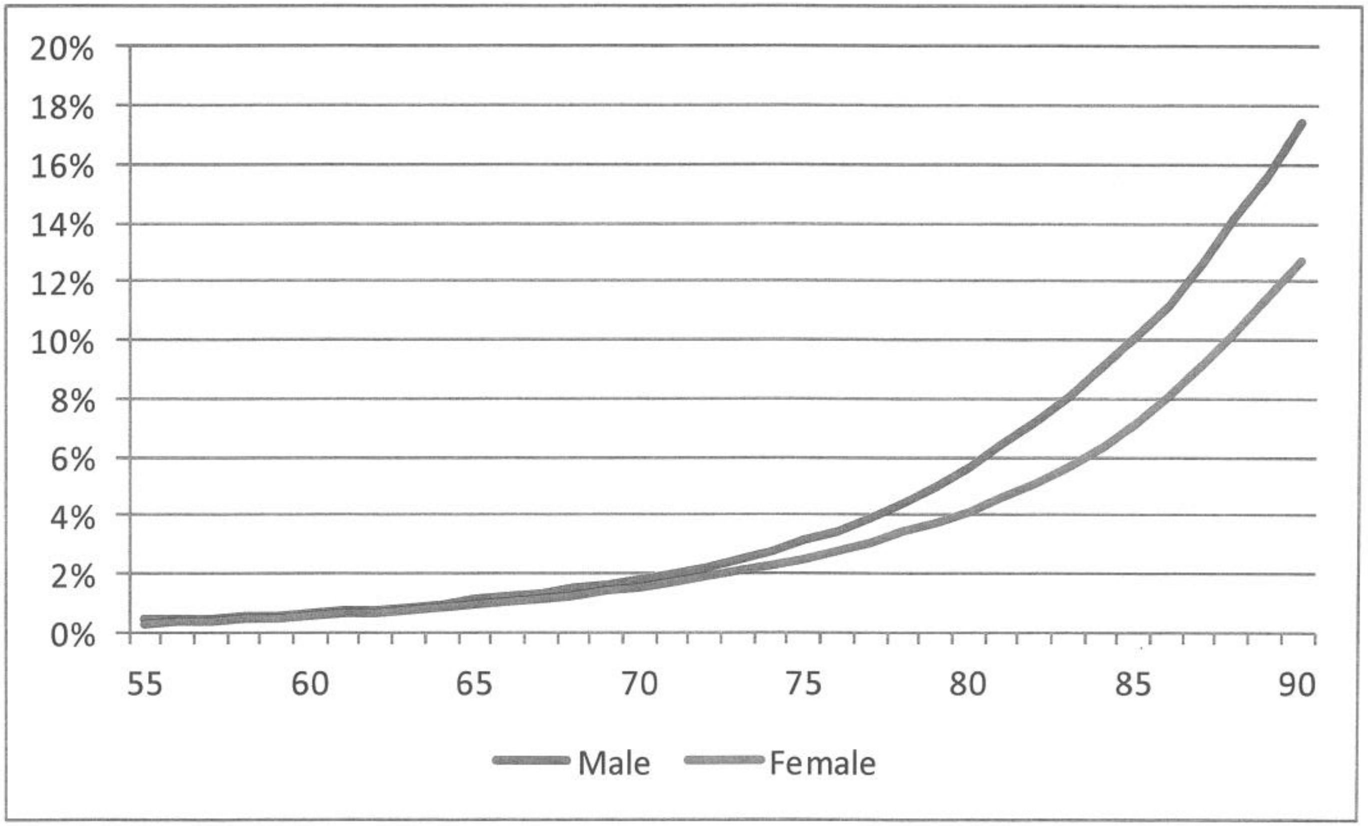
Source: American Human Development Report

# Life Expectancy at Birth – By Gender


Source: Human Mortality Database

# Life Expectancy at Birth – By Gender

## Probability of Death




Source: RP-2000 Generational Mortality Table projected to 2013

# Life Expectancy at Age 60 – By Gender

| | 1960 | 1970 | 1980 | 1990 | 2000 | 2010 |
|---|---|---|---|---|---|---|
| Males | 75.8 | 76.1 | 77.4 | 78.6 | 79.7 | 81.7 |
| | | | | | | |
| Females | 79.7 | 80.7 | 82.2 | 82.9 | 83.1 | 84.6 |

- Data reflects U.S. population.
- Mortality at older ages has also improved in the last 50 years.

# Life Expectancy at Age 60 – By Gender

| | 1960 | 1970 | 1980 | 1990 | 2000 | 2010 |
|---|---|---|---|---|---|---|
| Males | 75.8 | 76.1 | 77.4 | 78.6 | 79.7 | 81.7 |
| Females | 79.7 | 80.7 | 82.2 | 82.9 | 83.1 | 84.6 |

- Data reflects U.S. population.
- Mortality at older ages has also improved in the last 50 years.

# Will We Keep Living Longer?

- If mortality rates keep improving, members will spend longer periods of time in retirement

- Differences of opinion exist

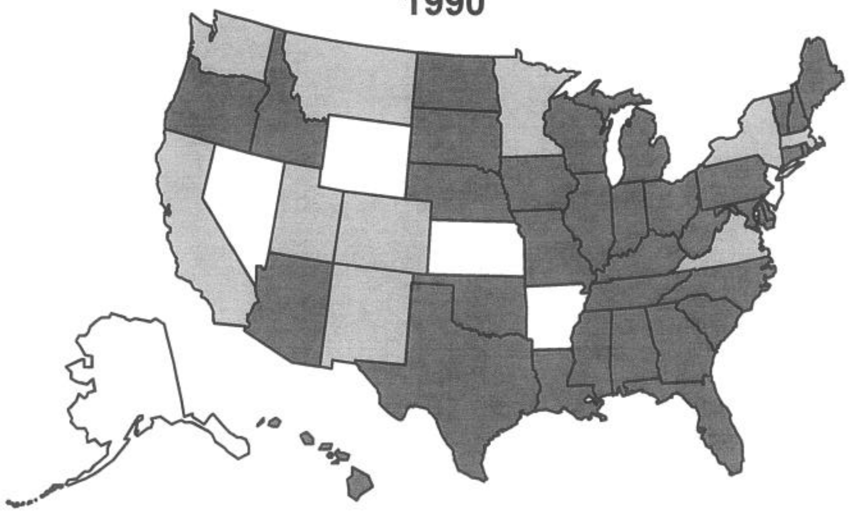
  - Some believe improvements will continue at current rate of even accelerate
    - Assumes medical advancements will occur to help slow or even reverse the aging process

  - Others believe rate of improvement cannot continue
    - Obesity and related health issues
    - Biomechanical limits on human lifespan

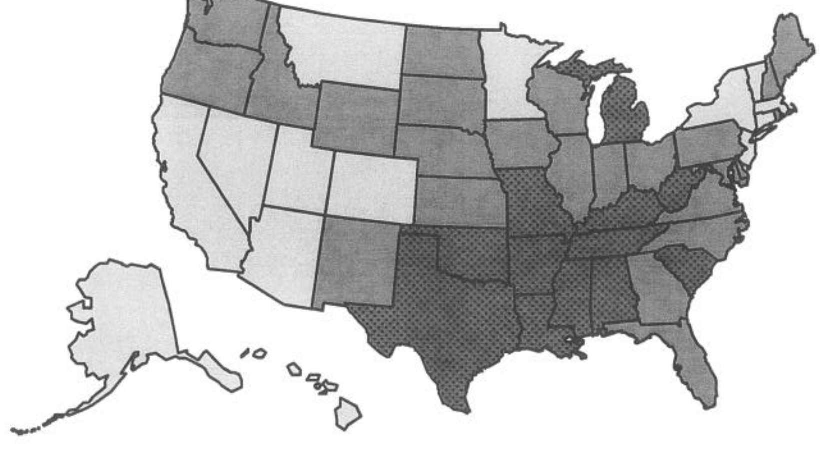
# Will We Keep Living Longer?

**Obesity Trends* Among U.S. Adults**
**(*BMI ≥30, or about 30 lbs. overweight for 5'4" person)**

**1990**



**2010**




Source: CDC

# 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)<br>• 65 with 1 year service<br>• 62 with 10 years service | • 65 with 5 years service<br>• 60 with 30 years service |
| Final average salary | 3 years<br>No final payouts (e.g., vacation or sick leave) if hired 7/1/93 or later | 5 years<br>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
- Over the following four years, the Legislature and the KPERS Study Commission evaluated multiple options for addressing KPERS' funded status.
  - Ultimately resulted in passage of 2012 Sub 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 shared with employee in KPERS plan
- 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 (employee and employer)
  - Interest credit
  - Annuitization of account balance at retirement
    - Must offer an annuity option
    - Annuity factors (interest rate and mortality)
- KPERS' plan design features reduce employer risks and costs
  - Interest crediting rate is lower than KPERS' investment return assumption, which can provide margin and/or reduce employer contributions
  - Annuity factors (e.g., set interest rate below assumed investment return)
  - 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%<br>• May be changed prospectively by the Legislature |
| Interest credits | • 5.25% guaranteed. Paid quarterly on prior quarter's ending balance<br>• Possible additional interest credits (0-4%) at Board discretion based on statutory criteria, including KPERS' funding, investment returns, market conditions<br>• 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<br>— 6% interest rate assumption<br>— Mortality table selected by Board<br>• Annuity factors may be changed prospectively by the Legislature<br>• Various forms of payment, including survivor options and self-funded COLA<br>• 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<br>• Vested members can leave contributions in and receive benefit at retirement age<br>• Inactive members earn interest credits on notional account<br>• Non-vested: two years following termination<br>• 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