



Kentucky Retirement Systems

# KRS OVERVIEW

## PPWG

**David Eager, Executive Director**

**Erin Surratt, Executive Director, Office of Benefits**

January 2019

# JANUARY 29, 2019

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- **KRS Profile**
  - **Governance structure**
  - **Agencies**
  - **Memberships**
  - **Benefits**
- **Understanding the funding process**
- **The history of funding and the plans' funding statuses**
  - **Attribution of the shortfalls**
- **Setting the economic assumptions for FY 2019 and FY 2020**
- **The retiree unfunded liability problem**
- **The need for fixed dollar funding**
- **Identify other issues KRS faces**

# JANUARY 31, 2019

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- **Investment overview**
- **GRS presentation – Trends in Investment Return Assumptions**
- **Discussion with KRS and GRS**
  - **Issues KRS faces**
  - **Potential initiatives to improve KRS**
  - **Other PPWG issues**

# The KRS GOVERNANCE STRUCTURE

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## Board of Trustees:

- 10 appointed by the Governor
  - 7 directly appointed
  - 3 from lists submitted by the League of Cities, KACo, and the School Board Association
- 6 Elected by the KRS membership
  - 3 CERS
  - 2 KERS
  - 1 SPRS
- 1 Ex-Officio: Secretary of the Personnel Cabinet
- Must have six (6) investment professionals (SB2 2017)

# The KRS GOVERNANCE STRUCTURE

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## **Board of Trustees:**

- Board elects a Chair and Vice Chair
- Five (5) Committees:
  - Investment
  - Audit
  - Retiree Healthcare
  - Disabilities Appeals
  - Administrative Appeals
- Board hires the Executive Director
- Board has corporate powers (e.g. contract for services, lawsuits)
- Board establishes KRS Bylaws

# EMPLOYER CLASSIFICATIONS



## KERS

### KERS Employers

County Attorneys	61
Health Departments	60
Master Commissioner	34
Non-PI State Agencies	36
Other Retirement Systems	1
PI State Agencies	137
Regional Mental Health Units	12
Universities	7
<b>Total</b>	<b>348</b>



## CERS

### CERS Employers

Airport Boards	5	Jailers	2
Ambulance Services	19	Libraries	85
Area Development Districts	14	Other Retirement Systems	2
Boards of Education	173	PI State Agencies	4
Cities	221	Parks and Recreation	7
Community Action Agencies	21	Planning Commissions	16
Conservation Districts	49	Police Departments	2
County Attorneys	77	Riverport Authorities	5
County Clerks	16	Sanitation Districts	9
Development Authorities	6	Sheriff Departments	12
Fire Departments	38	Special Districts & Boards	49
Fiscal Courts	118	Tourist Commissions	23
Health Departments	1	Urban Government Agencies	2
Housing Authorities	42	Utility Boards	120
<b>Total</b>		<b>1,138</b>	



## SPRS

### SPRS Employers

State Police	<b>1</b>
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# TOP 10 EMPLOYERS



## KERS



## CERS



## SPRS

### KERS Employers

Rank	Employer	# of employees
1	Department for Community Based Services	4,572
2	Department of Corrections	3,798
3	Department of Highways	3,710
4	Judicial Department Administrative Office of the Courts	1,393
5	Department of Juvenile Justice	1,195
6	Bluegrass.org	940
7	Kentucky State Police	904
8	Unified Prosecutorial System	862
9	Department of Veterans Affairs	847
10	Department of Revenue	809
	All Others	20,577
	<b>Total</b>	<b>39,607</b>

### CERS Employers






Rank	Employer	# of employees
1	Jefferson County Board of Education	6,447
2	Louisville Jefferson County Metro Government	5,098
3	Fayette County Board of Education	1,918
4	Lexington Fayette Urban County Government	1,728
5	Judicial Department Administrative Office of the Courts	1,658
6	Boone County Board of Education	1,155
7	Bullitt County Board of Education	1,137
8	Hardin County Board of Education	1,105
9	Pike County Board of Education	974
10	Warren County Board of Education	958
	All Others	72,407
	<b>Total</b>	<b>94,585</b>

### SPRS Employers

1	State Police	<b>891</b>
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## KRS PLANS AND MEMBERSHIPS

	MEMBERS
 <div>KERS Non-Hazardous</div>	122,788
 <div>KERS Hazardous</div>	11,689
 <div>CERS Non-Hazardous</div>	222,672
 <div>CERS Hazardous</div>	19,513
 <div>SPRS</div>	2,626
<b>TOTAL</b>	<b>379,288</b>








## 2018 KRS MEMBER BREAKDOWN

				TOTAL
		Initiated 2008	Initiated 2014	
ACTIVE	63,547	26,589	43,283	133,419
INACTIVE	88,274	27,297	19,392	134,963
RETIRED	110,553	352	1	110,906
TOTAL	262,374	54,238	62,676	379,288

# KRS Benefit Tiers – Eligibility

					
Defined Benefit Plan		Defined Benefit Plan		Cash-Balance Plan	
Participation prior to 09/01/2008		Participation 09/01/2008 until 12/31/2013		Participation 01/01/2014 and after	
Non-Hazardous	Hazardous	Non-Hazardous	Hazardous	Non-Hazardous	Hazardous
<b>27 years</b> of service credit	<b>20 years</b> of service credit	<b>Rule of 87</b> Must be age 57 & Age + years of service credit = 87	<b>25 years</b> of service credit	<b>Rule of 87</b> Must be age 57 & Age + years of service credit = 87	<b>25 years</b> of service credit
<b>Age 65</b> or older	<b>Age 55</b> or older	<b>Age 65</b> with 5 years of service	<b>Age 60</b> with 5 Years of service	<b>Age 65</b> with 5 years of service	<b>Age 60</b> with 5 Years of service
Reduced Benefit		Reduced Benefit		Reduced Benefit	
<b>25 to 27</b> years of service credit	<b>Age 50</b> with at least 15 years of service credit	<b>Age 60</b> with 10 years of service credit	<b>Age 50</b> with at least 15 years of service credit	N/A	N/A
<b>Age 55</b> with 5 Years of service				<b>Note: Tier 3 is vested at 5 years of service.</b>	

# KRS BENEFIT TIERS – CONTRIBUTIONS TO MEMBER ACCOUNTS



Initiated 9/1/2008

Initiated 1/1/2014

## Employee Contribution to their account

*Non-Hazardous*

**5%**

**+ 5% Pension**  
**+ 1% Health Insurance**

**+ 5% Pension**  
**+ 1% Health Insurance**

**Hazardous**

**8%**

**+ 8% Pension**  
**+ 1% Health Insurance**

**+ 8% Pension**  
**+ 1% Health Insurance**

## Employer Contribution to the Member's account\*

*Non-Hazardous*

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**\***

**4%**

**Hazardous**

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**\***

**7.5%**

*\* Only applies to Tier 3*

# KRS Benefit Tiers – Benefits



	<i>Final Compensation X Benefit Factor X Years of Service</i>	<i>Final Compensation X Benefit Factor X Years of Service</i>	<i>Accumulated Account Balance ÷ Actuarial Factor = Monthly Life Annuity</i>
<b>KERS NON- HAZ</b>	<b>1.97%</b> (2.0% with 13 months service from 1/1998- 1/1999)	<b>1.10%</b> - Up to 10 Years <b>1.30%</b> - 10 - 20 Years <b>1.50%</b> - 20 - 26 Years <b>1.70%</b> - 26 – 30 Years <b>2.0%</b> - 30+ Years (only applies to service in excess of 30 years)	Accumulated Account Balance = <ul style="list-style-type: none"> <li>• Member Contribution</li> <li>• Employer Pay Credit</li> <li>• Base Interest (4%)</li> <li>• Upside Sharing*</li> </ul>
<b>CERS NON- HAZ</b>	<b>2.2%</b> Participation prior 8/1/04 <b>2.0%</b> Participation after 8/1/04		
<b>KERS HAZ</b>	<b>2.49%</b>	<b>1.30%</b> - Up to 10 Years <b>1.50%</b> - 10 - 20 Years <b>2.25%</b> - 20-25 Years <b>2.50%</b> - 25+ Years	
<b>CERS HAZ</b>	<b>2.50%</b>		
<b>SPRS</b>	<b>2.50%</b>		

*\*Upside Sharing is  
calculated as the  
trailing 5 year earnings  
of the funds + 75% of  
the excess over 4%*

# SICK LEAVE



Tier 1

- KERS/SPRS: Unlimited amount. Amount can be used toward determining retirement benefits. Total cost billed to last participating employer.
- CERS: (*Optional for CERS employers*) Employer chooses level and amount used toward determining retirement benefits. Sick leave billed to individual CERS employer.



Tier 2

- Limited to 12 months between KERS, CERS and SPRS for purposes of determining monthly benefits.
- Does not count toward retirement eligibility or health insurance.
- Last participating employer in KERS/SPRS pays total cost. Individual CERS employer billed for cost.



Tier 3

- Not eligible for sick leave credit.
- Not eligible for sick leave credit in CERS if Participation Date in CERS is on or after 1/1/2014 even if an earlier Participating Date is established in KERS or SPRS.

# SERVICE PURCHASE



Tier 1

- Removed ability for employees who participate after July 2002 to purchase Non-Qualified service (“Air-time”).
- Members pay 100% of the actuarial cost\*
- Service purchased on or after 8/1/2004, cannot be used towards health insurance benefits.\*
- New hires on or after 8/1/2004 cannot use most service purchases to count towards retirement eligibility.\*

*\*Exceptions: Recontribution of Refund, Sick Leave, Omitted, Free Military and Hazardous Conversion.*



Tier 2

- Service purchases do not count towards retirement eligibility.\*

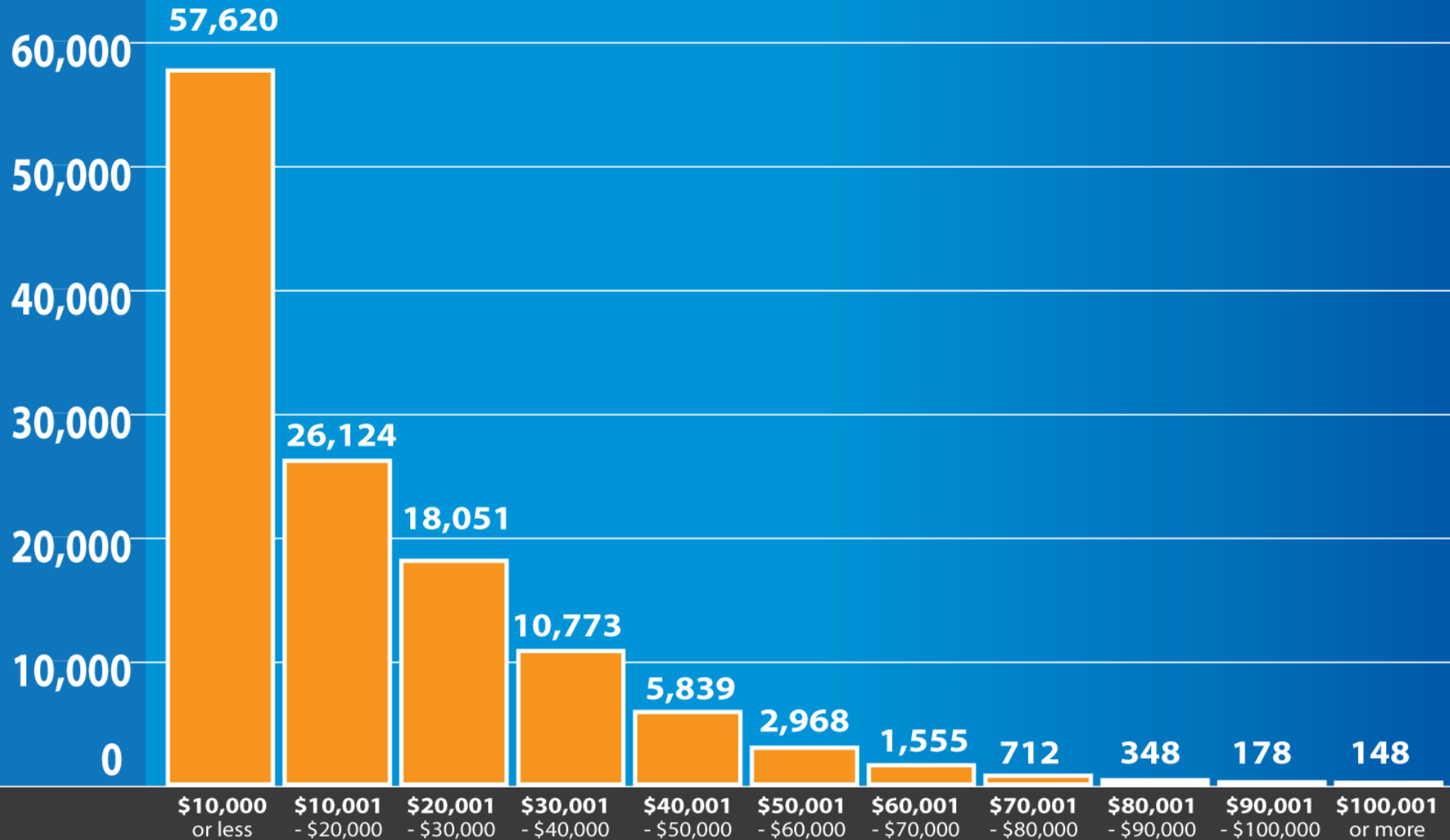
*\*Exceptions: Recontribution of Refund, Omitted, and Free Military.*



Tier 3

- Recontribution of Refunds, Omitted service and Military Omitted are the only purchase types allowed.
- A recontribution of refund will not reset the participation date if requested on or after 1/1/2014.

# RETIREES ANNUAL BENEFIT RECEIVED



# MEDICAL INSURANCE BENEFITS

## MEDICAL INSURANCE BENEFITS

For Members participating  
BEFORE July 1, 2003

Total Years of <u>Service</u>	% paid for <u>Retiree</u>
Less than 4 years	0%
4 – 9+ years	25%
10 – 14+ years	50%
15 – 19+ years	75%
20 or more years	100%
Percent paid for spouse and eligible dependents is based on hazardous service at retirement.	

## Participation between 7/1/03-8/31/08

Members must have 10 years of earned service credit

## Participation after 9/1/08

Members must have 15 years of earned service credit

- **NON-HAZARDOUS MEMBERS** will earn \$10 per month towards insurance for each year of earned service
- **HAZARDOUS MEMBERS** will earn \$15 per month towards insurance for each year of earned service
- The contributions will be increased each year by the Cost of Living Adjustment (COLA)
- The monthly contributions for 2019 are **\$13.38 Non-Hazardous; \$20.07 Hazardous**



# Actuarial Valuation Results

June 30, 2018 CAFR (Pension)

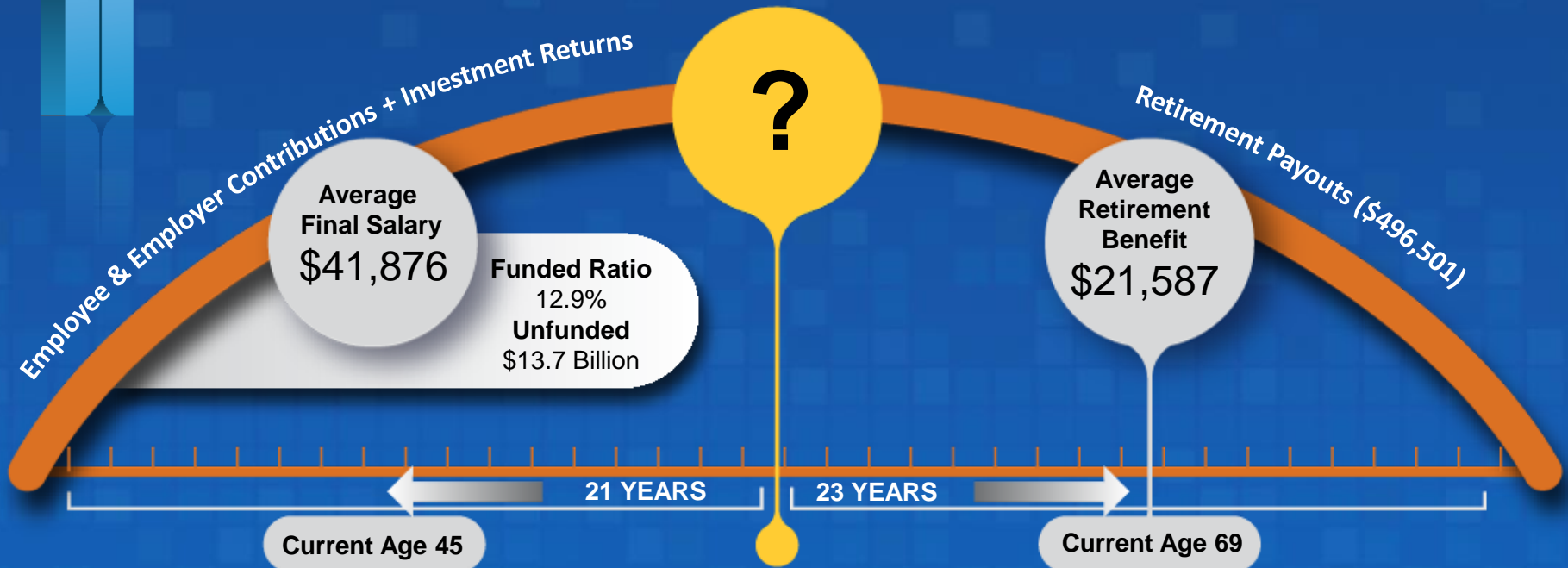


## KNOWN at valuation date

1. Age
2. Salary
3. Gender
4. Service to date
5. Occupation

## ASSUMED at valuation date

1. Future salary increases
2. Retirement date
3. Death rates before and after retirement
4. Disability rates; other termination rates
5. Investment return (discount rate) = 5.25%



Date of Hire  
(Age 36)

Total Active  
34,845 ↓

Retirement  
(Age 57)

Total Retired  
42,175 ↑

Average Age at Death  
(Age 80)



# Actuarial Valuation Results

June 30, 2018 CAFR (Pension)



## KNOWN at valuation date

1. Age
2. Salary
3. Gender
4. Service to date
5. Occupation

## ASSUMED at valuation date

1. Future salary increases
2. Retirement date
3. Death rates before and after retirement
4. Disability rates; other termination rates
5. Investment return (discount rate) = 6.25%



Date of Hire  
(Age 44) ↑

Total Active  
84,435 ↑

Retirement  
(Age 61) ↑

Total Retired  
56,629 ↑

Average Age at Death  
(Age 80) ↑



# Actuarial Valuation Results

June 30, 2018 CAFR (Pension)

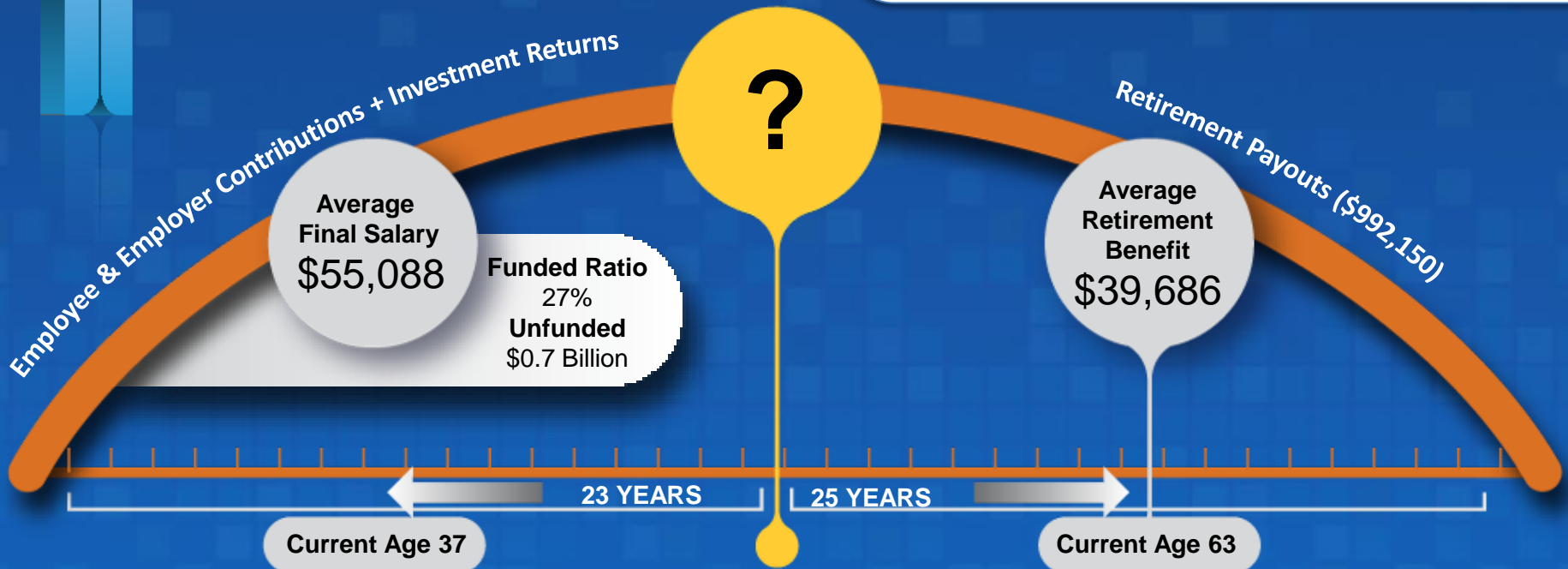


## KNOWN at valuation date

1. Age
2. Salary
3. Gender
4. Service to date
5. Occupation

## ASSUMED at valuation date

1. Future salary increases
2. Retirement date
3. Death rates before and after retirement
4. Disability rates; other termination rates
5. Investment return (discount rate) = 5.25%



Date of Hire  
(Age 25) ↑

Total Active  
891 ↓

Retirement  
(Age 48)

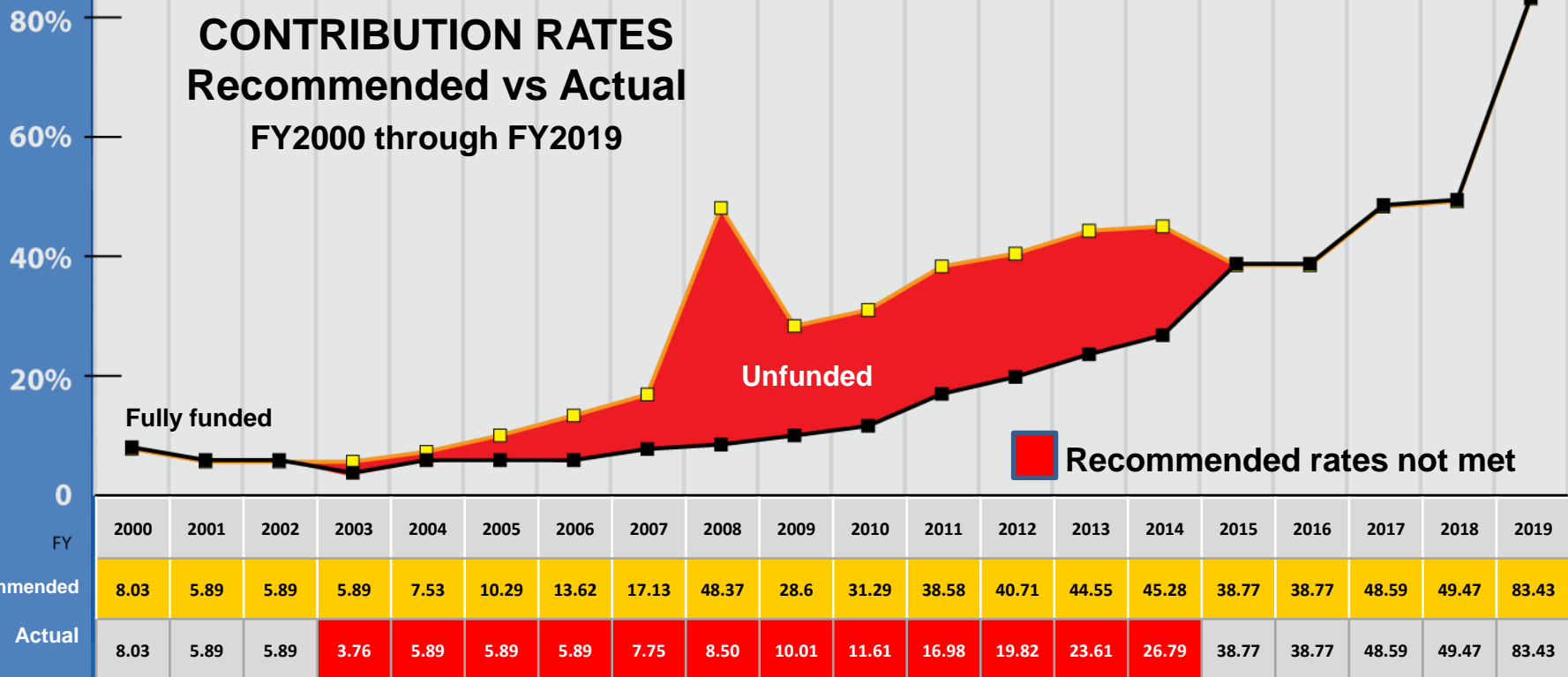
Total Retired  
1,445 ↑

Average Age at Death  
(Age 73)



# The KERS Non-Hazardous Funding Problem

**CONTRIBUTION RATES**  
Recommended vs Actual  
FY2000 through FY2019



## KEY IMPACT OF CONTRIBUTION SHORTFALL FY1993-2018 (\$ in Millions)

	# of Years Unfunded	Total amount of underfunding	Loss of investment opportunity	Total Shortfall	Current Unfunded Liability		Adjusted Unfunded Liability			
Pension	14 Years	\$1,743	+	\$1,233	=	\$2,976	\$13,656	12.9%	\$10,680	31.9%

# FUNDING SHORTFALL ATTRIBUTION

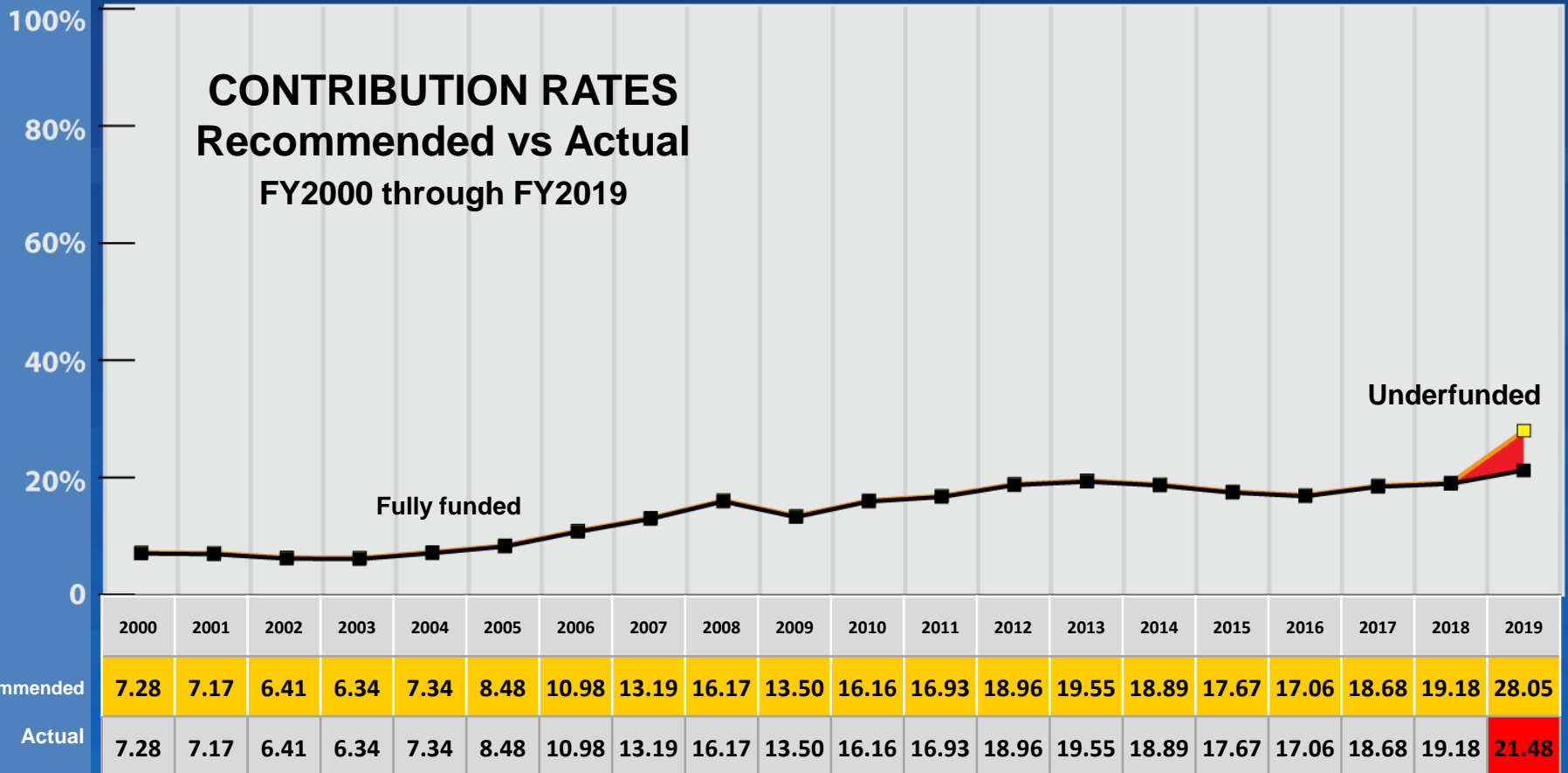
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Current Funded Status	12.9%	19.0%
Funded Status Adjusted for Underfunding	31.9%	68.1%
Full Funding	100.0%	
Funding Shortfall Attribution	$\frac{19.0\%}{87.1\%}$	= 21.8%



# The CERS Non-Hazardous Funding Problem

**CONTRIBUTION RATES**  
**Recommended vs Actual**  
FY2000 through FY2019



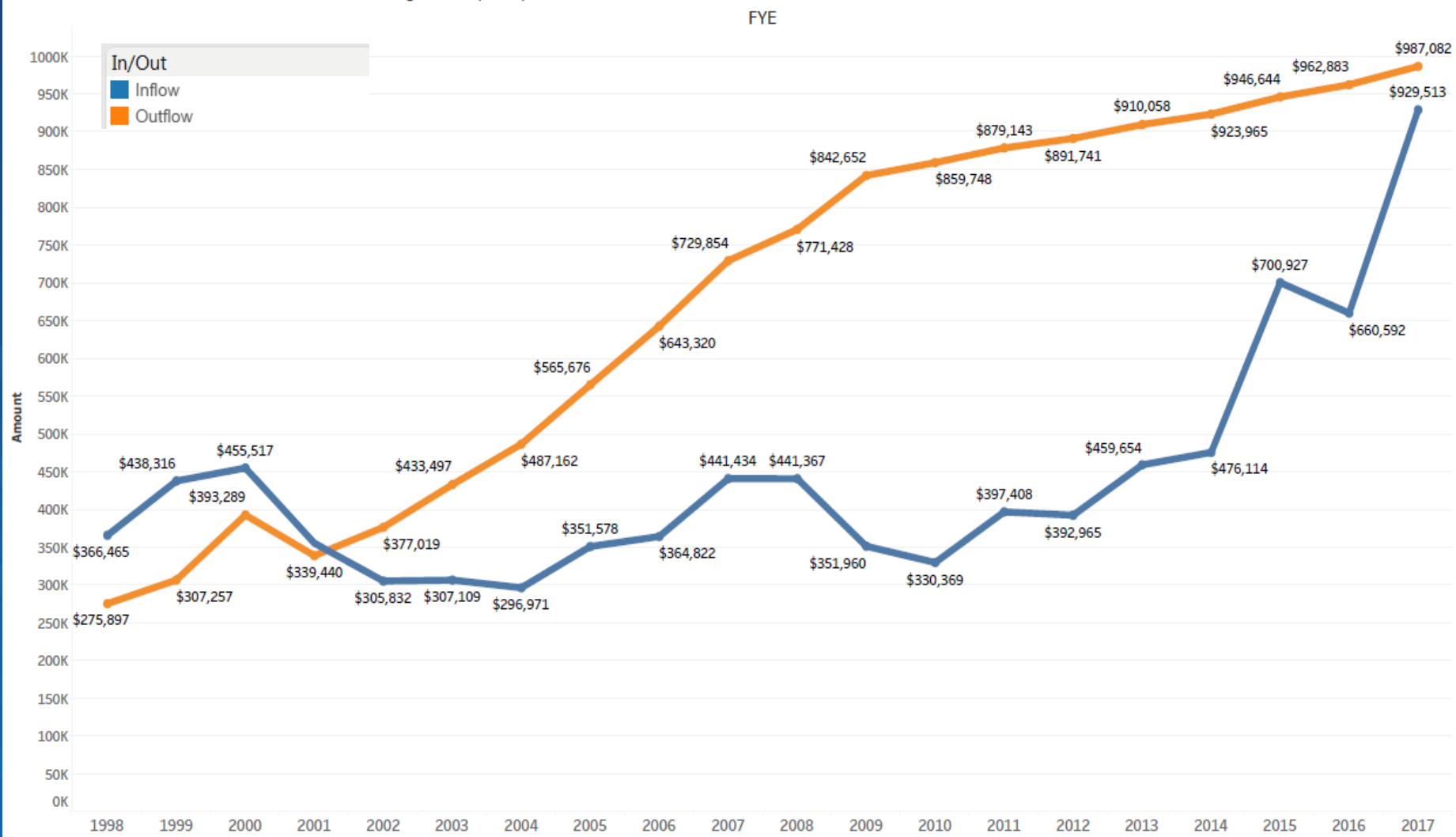


# KERS Non-Hazardous

## Pension Cash Flow with Investment Income and Expense (\$000's)

### Excluding Investment Gains/Losses

KERS Non-Hazardous Cash Flows FYE 1998 through 2017 (\$000s)



Note: Inflows include Member, Employer and General Fund Contributions.

# VALUE OF AN ADDITIONAL DOLLAR OF CONTRIBUTION OVER 25 YEARS

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**YEAR 1**

**YEAR 25**



$\$1.00 @ 5.25\% = \$3.59$

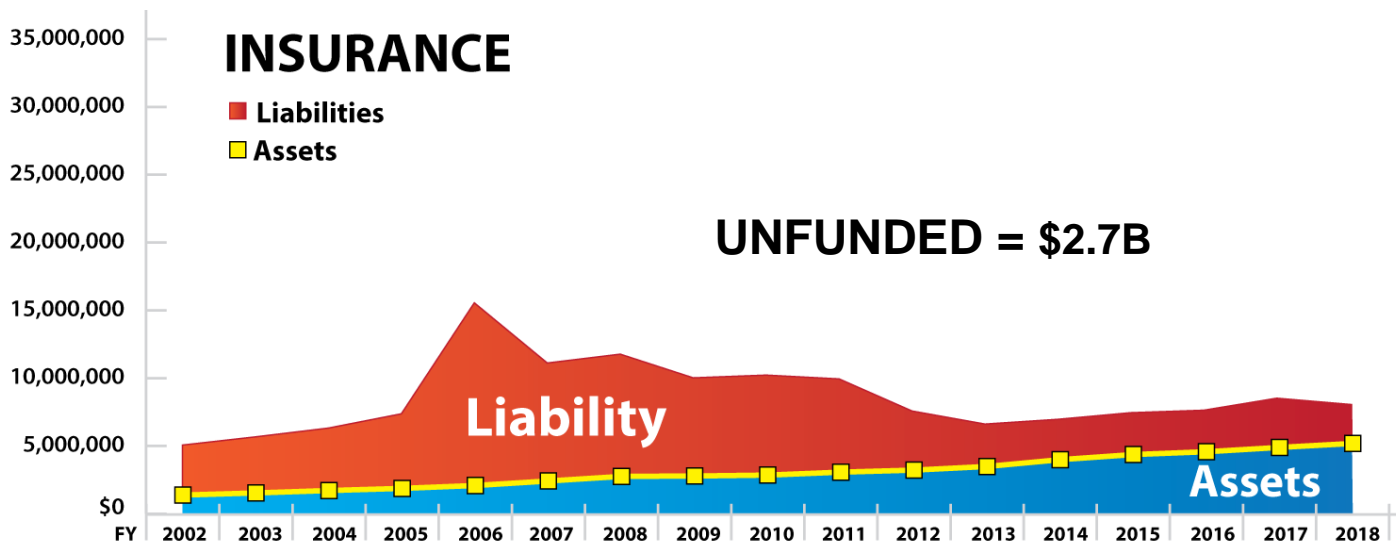
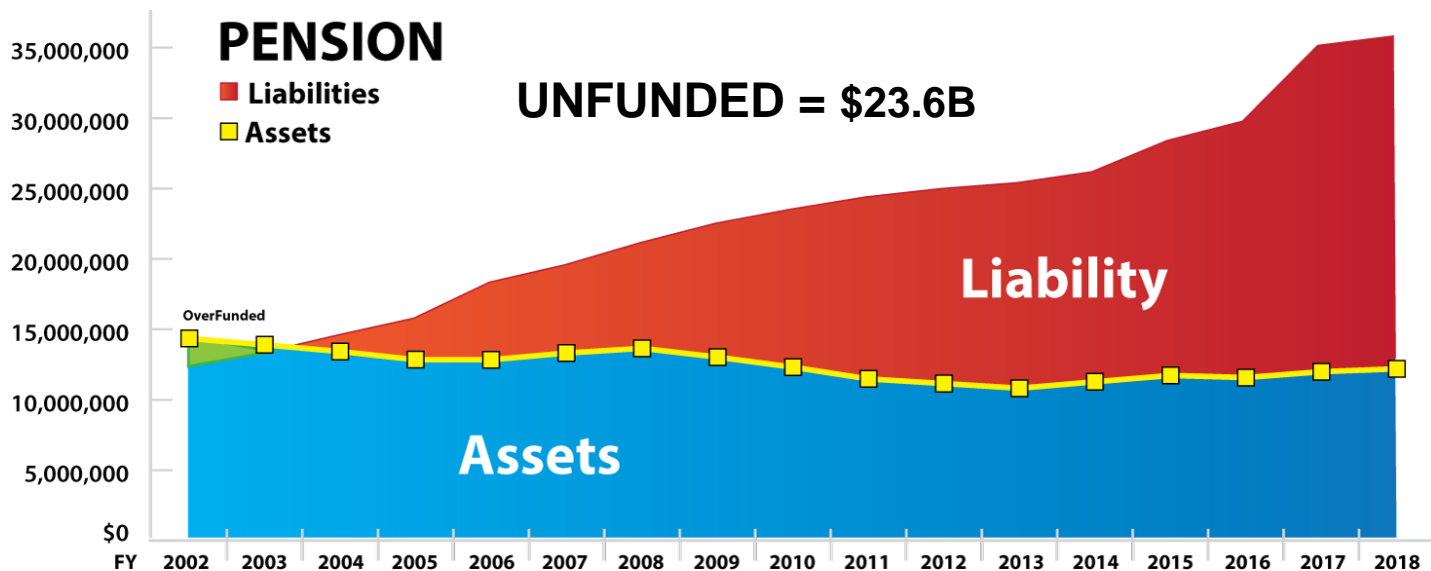


$\$1.00 @ 6.25\% = \$4.55$



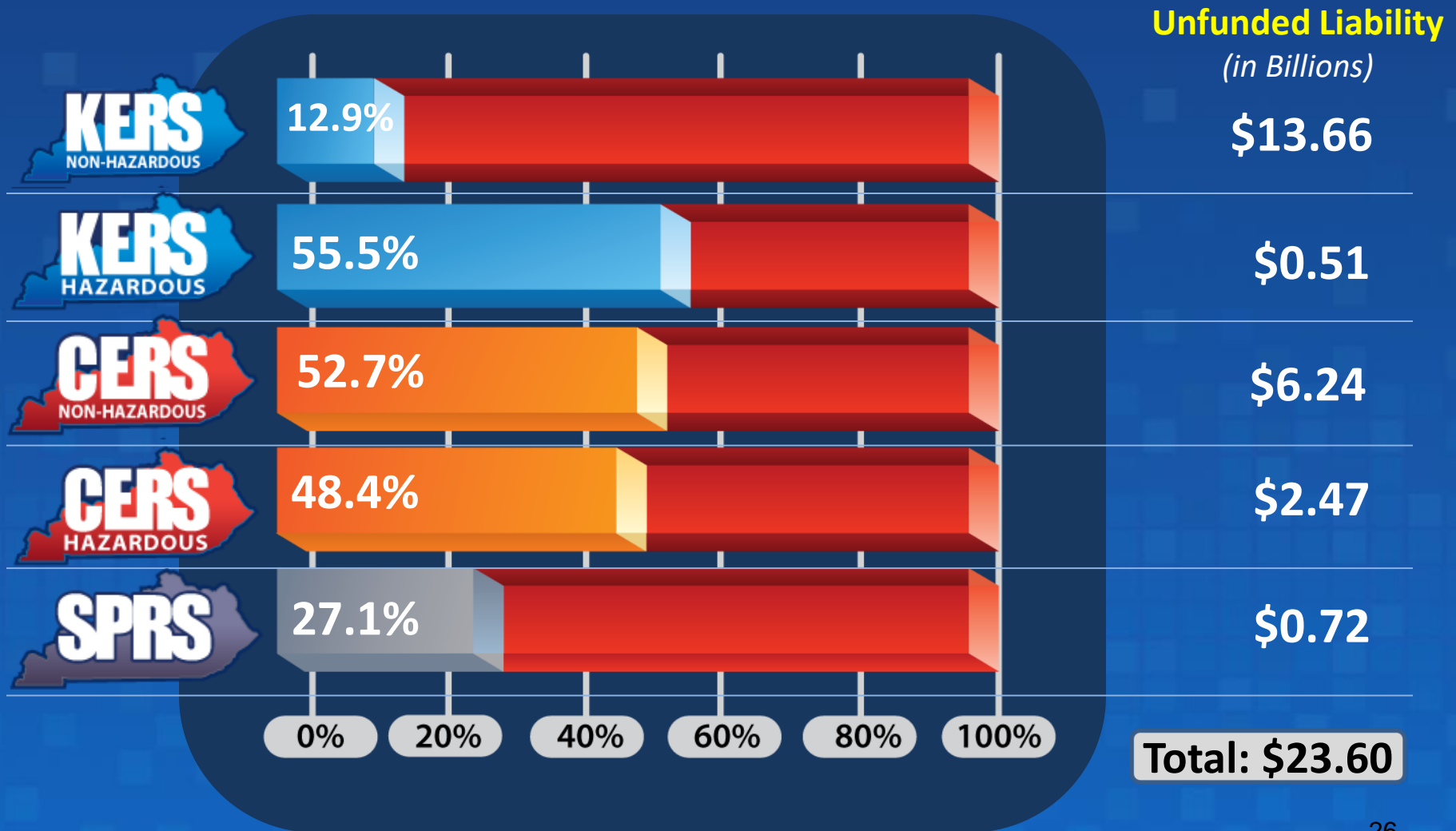
# KRS TOTAL PLANS

See appendix for contribution rate history by plan.



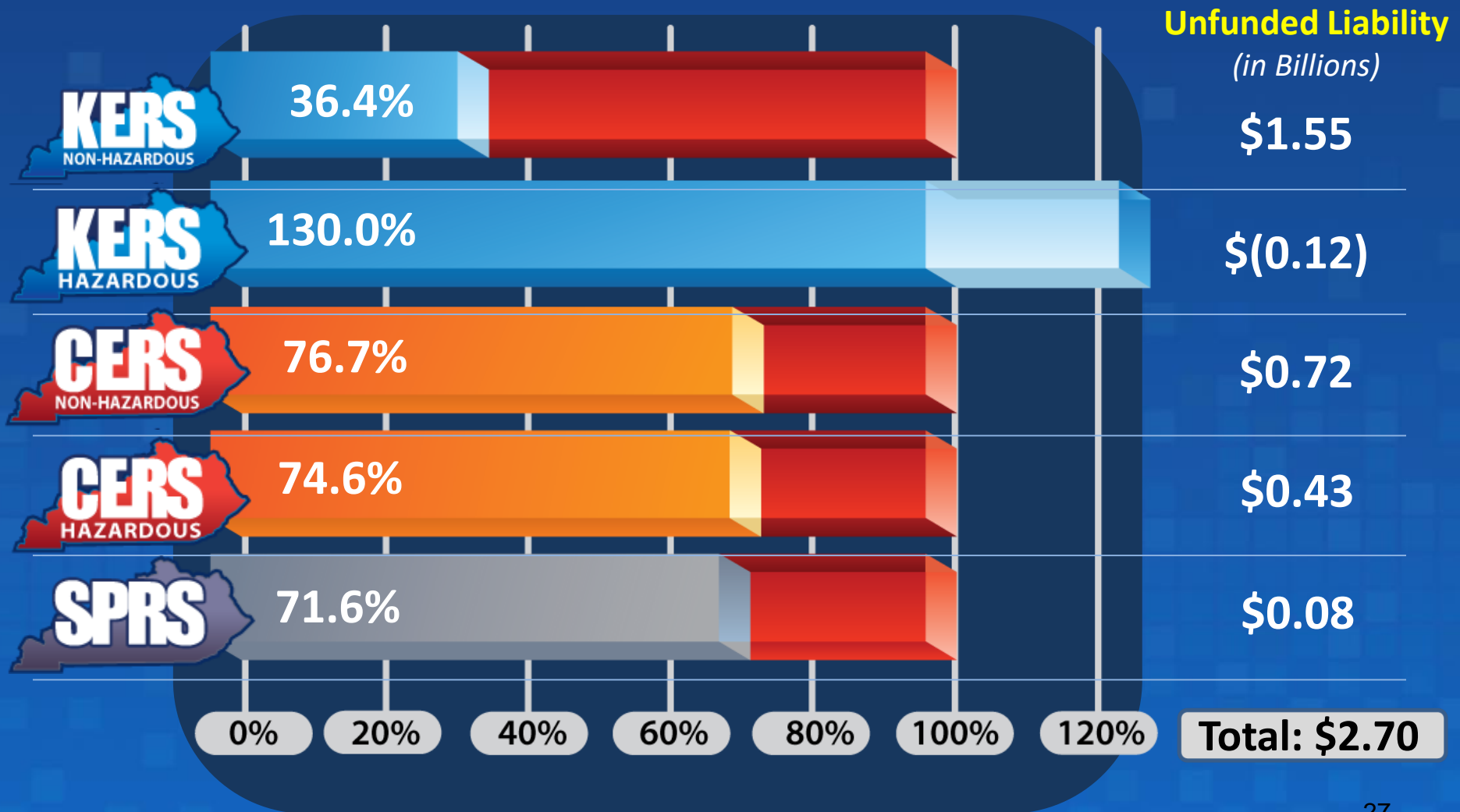
# FISCAL YEAR 2018 FUNDING STATUS

## PENSION

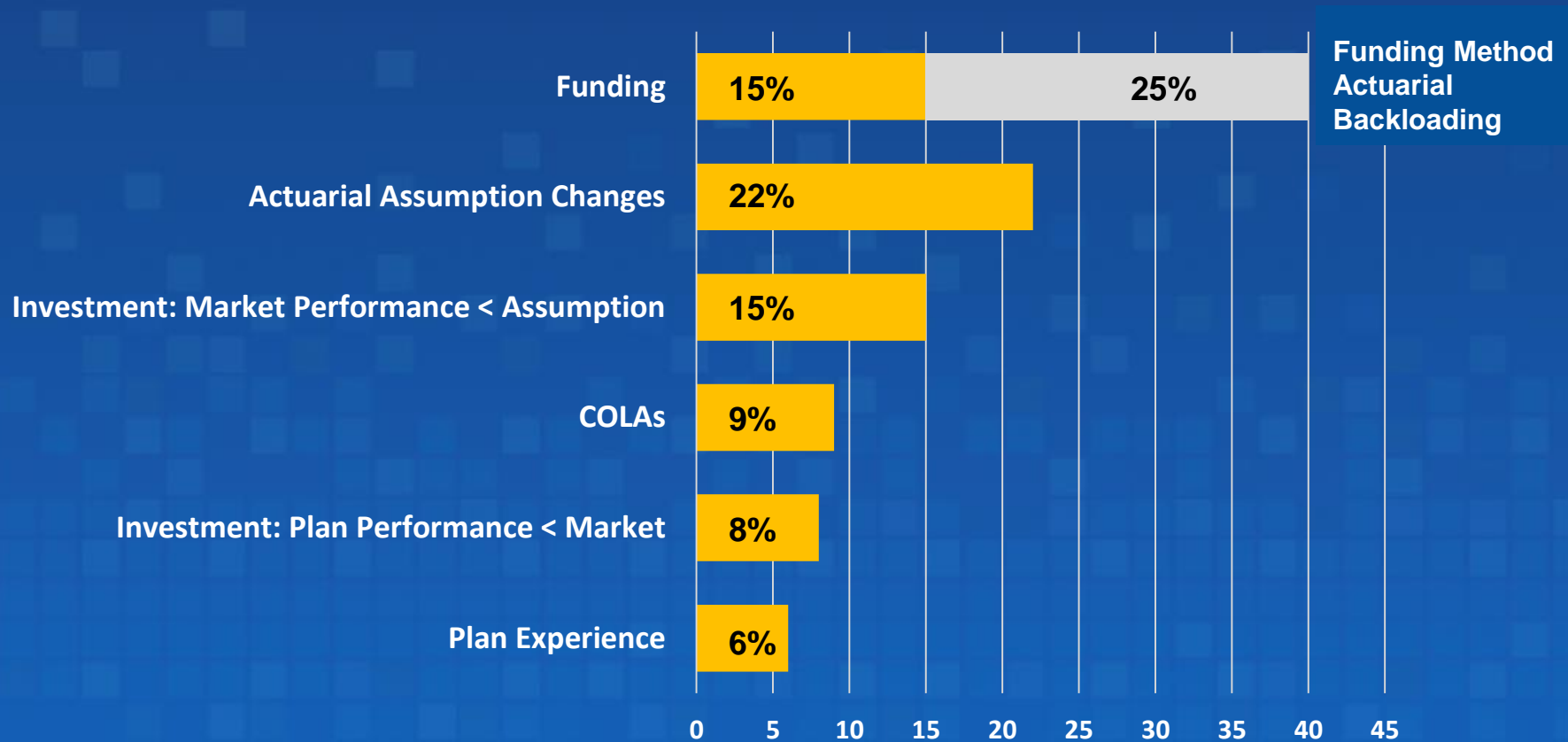


# FISCAL YEAR 2018 FUNDING STATUS

## INSURANCE



# SUMMARY COMPONENTS OF \$25.3 BILLION INCREASE IN UNFUNDED PENSION LIABILITIES: **ALL SYSTEMS**



Source: PFM Consulting Group

# FACTORS INCREASING THE UNFUNDED LIABILITY

FACTORS INCREASING THE UNFUNDED LIABILITY 6/30/2005 to 6/30/2016 (\$ in Millions)										
Causes	TRS	KERS-NH	KERS-H	CERS-NH	CERS-H	SPRS	KJRP	KLRP	TOTAL	
Actuarial Backloading	\$3,278	\$1,153	\$89	\$1,269	\$353	\$111	\$31	\$2	\$6,286	25%
Actuarial Assumption Changes	1,958	2,319	82	984	249	50	25	5	5,672	22%
Plan Experience	232	539	39	372	107	107	43	2	1,441	6%
Investment: Market Performance Below Assumption	1,926	639	80	931	297	45	5	2	3,925	15%
Investment: Market Performance Below Market	1,014	610	(5)	207	82	8	14	0	1,930	8%
Funding Less Than the ARC	1,588	2,561	(10)	(220)	(133)	42	(11)	3	3,820	15%
COLAs	0	1,291	68	672	267	72	27	3	2,400	9%
	\$9,996	\$9,112	\$343	\$4,215	\$1,222	\$435	\$133	\$17	\$25,473	100%

Source: PFM Consulting Group

# A DIFFERENT LOOK AT REASONS FOR FUNDING STATUS EROSION

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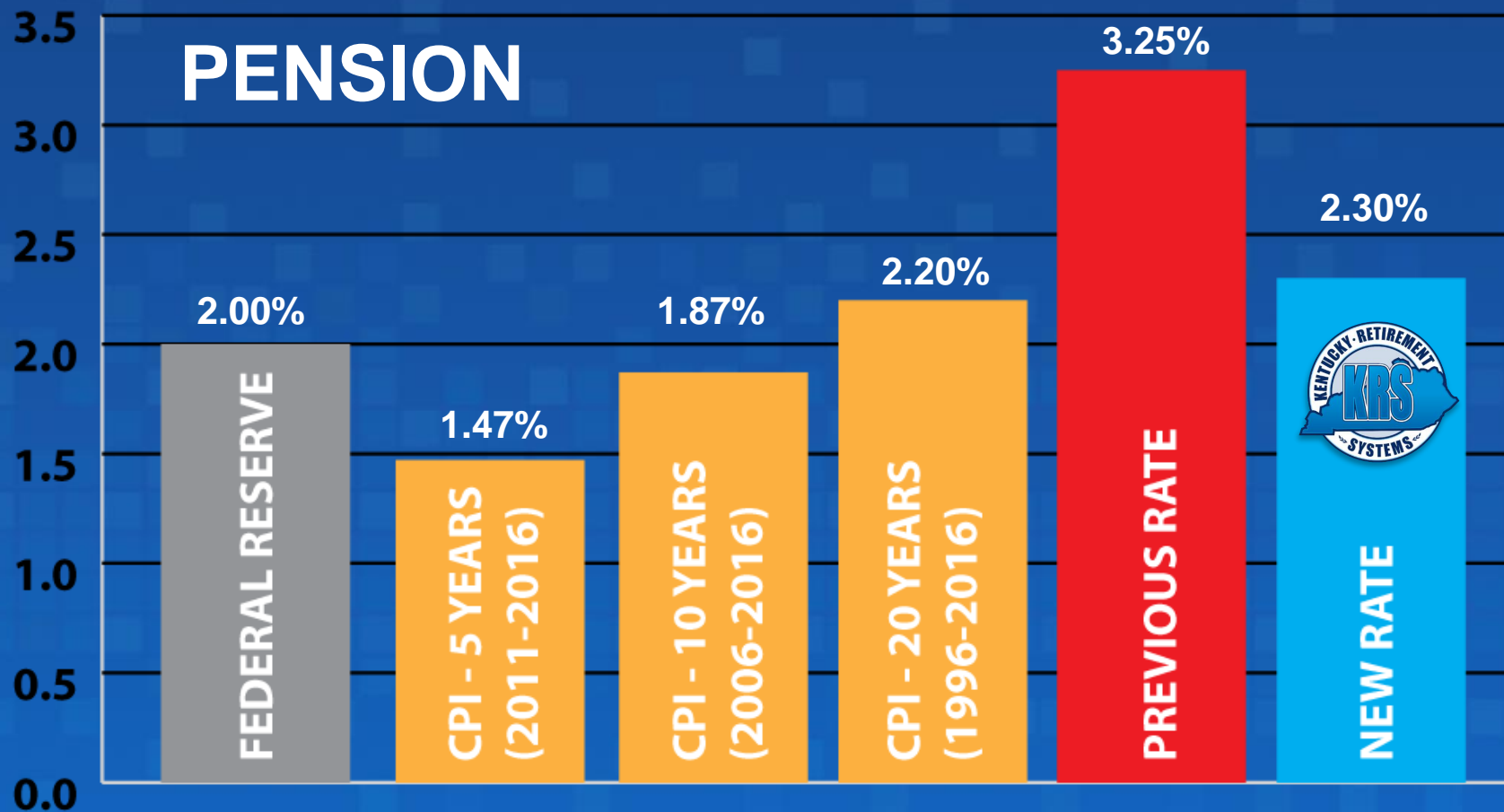
- **Pension Contribution Underfunding**
  - KRS ask (ARC) was too low because of liberal assumptions
  - Budget underfunded the ARC
- Missed contributions also meant missed earnings on the shortfalls
- KRS did not engage with Legislature enough
- Many Legislators lacked understanding of Defined Benefit Funding...and the long-term consequences of underfunding
- Didn't move to Tier 2 and Tier 3 soon enough
- Benefit payments in excess of contribution caused negative cashflow
- Special retirement incentives (1999-2010), below cost service purchases, and unfunded COLAs
- Great Recession market decline

# ASSUMPTION CHANGES

ASSUMPTION CHANGES			
		Previous Assumptions	FY 2019 Current Assumptions
<b>KERS Non-Hazardous and SPRS</b>	<b>Inflation</b>	<b>3.25%</b>	<b>2.30%</b>
	<b>Interest</b>	<b>6.75%</b>	<b>5.25%</b>
	<b>Payroll Growth</b>	<b>4.00%</b>	<b>0.00%</b>
<b>CERS Non-Hazardous, CERS Hazardous and KERS Hazardous</b>	<b>Inflation</b>	<b>3.25%</b>	<b>2.30%</b>
	<b>Interest</b>	<b>7.50%</b>	<b>6.25%</b>
	<b>Payroll Growth</b>	<b>4.00%</b>	<b>2.00%</b>

# ECONOMIC ASSUMPTIONS

## ESTIMATED INFLATION (CPI)

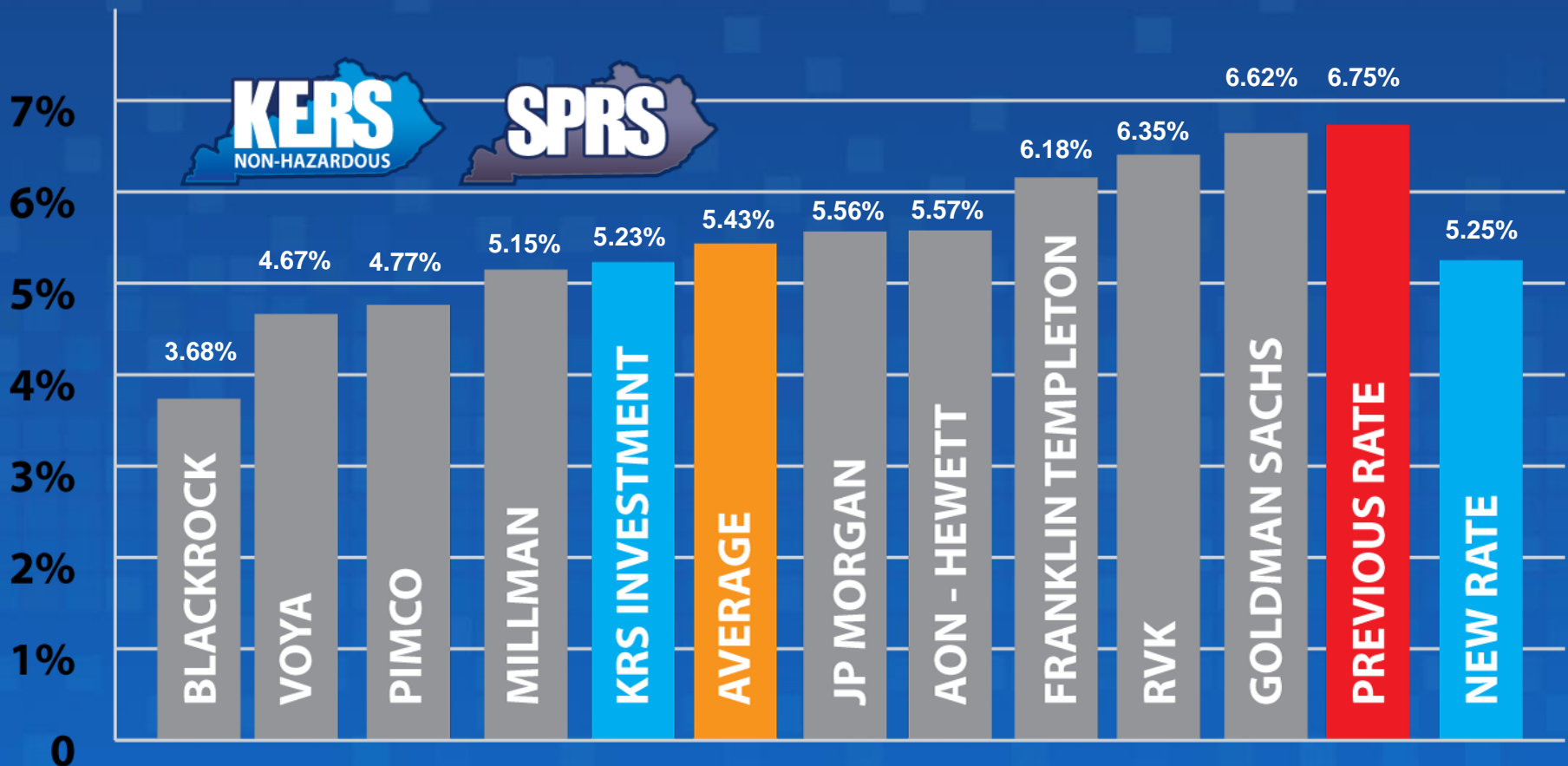




# ECONOMIC ASSUMPTIONS

## ESTIMATED INTEREST RATE

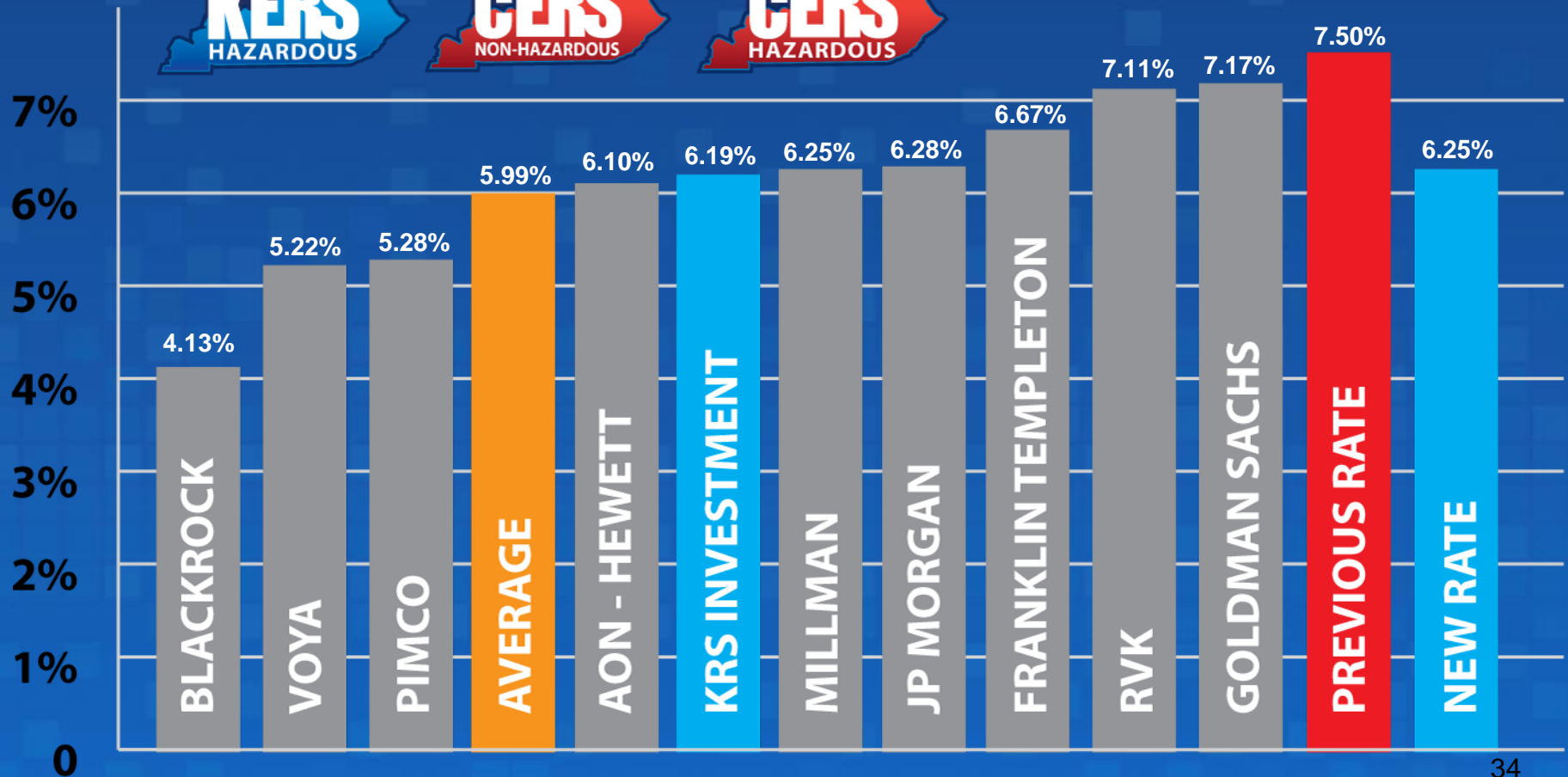
### PENSION



# ECONOMIC ASSUMPTIONS

## ESTIMATED INTEREST RATE

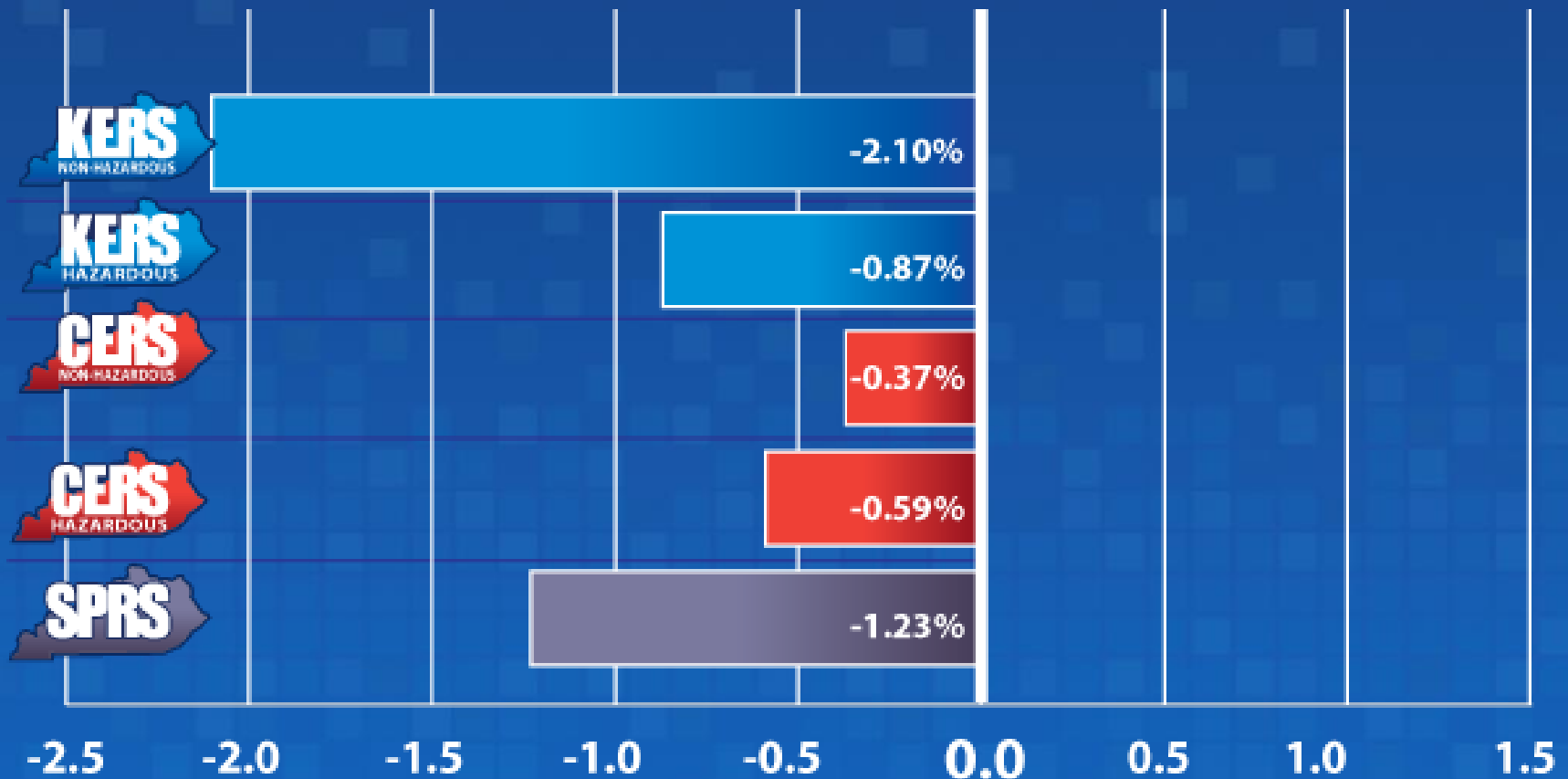
### PENSION



# ECONOMIC ASSUMPTIONS

## ANNUAL MEMBER GROWTH RATE

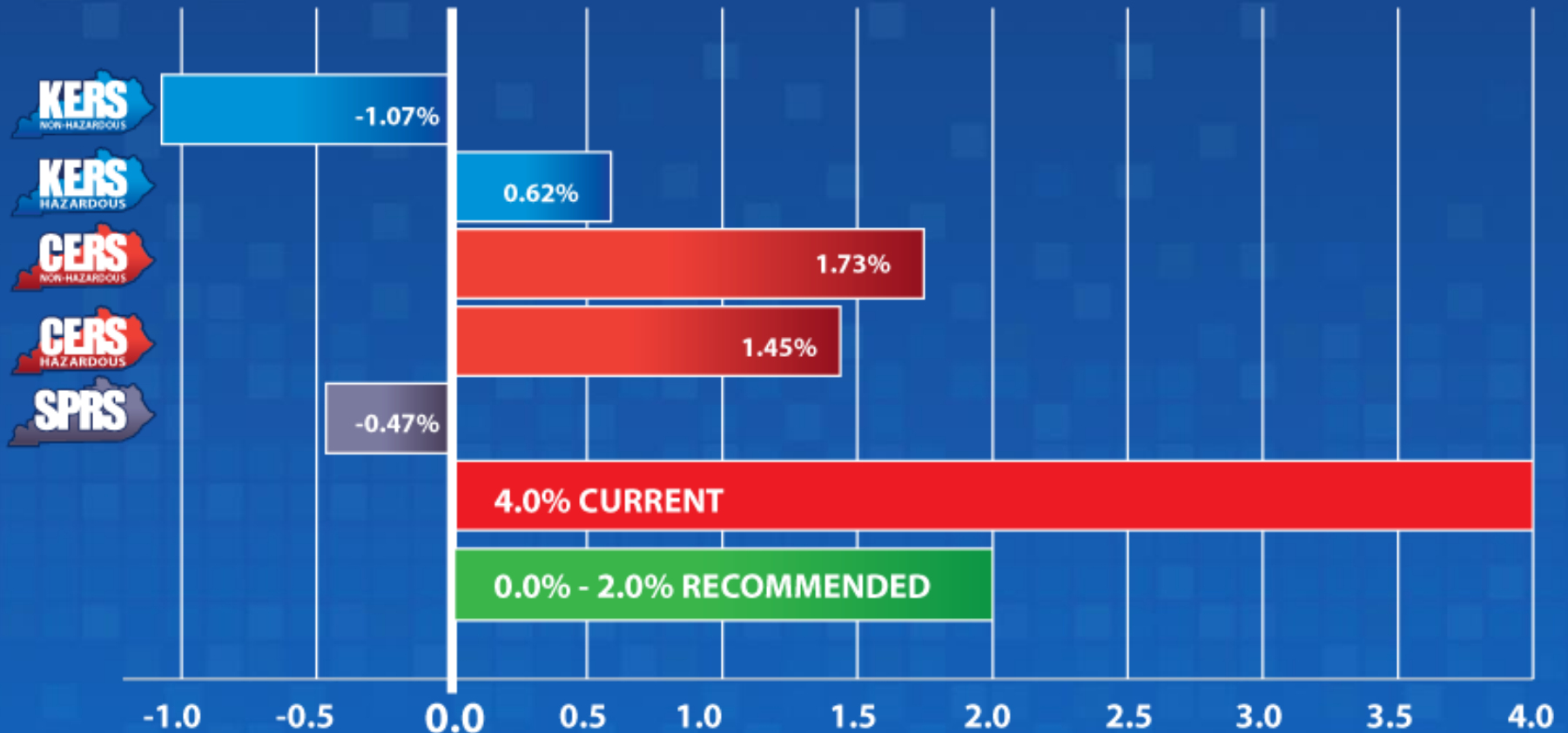
FY 2006-2016













# ECONOMIC ASSUMPTIONS

## ANNUAL PAYROLL GROWTH RATE

FY 2006-2016



# IMPACT OF THE ECONOMIC ASSUMPTIONS






CONTRIBUTION RATES		FY 2018	FY 2019
 KERS Non-Hazardous		50.39%	83.43%*
 KERS Hazardous		21.82%	36.85%
 CERS Non-Hazardous		19.18%	28.05%**
 CERS Hazardous		31.55%	47.86%**
 SPRS		89.67%	146.25%
FUNDING STATUS		6/30/17	6/30/18
 KERS Non-Hazardous		16.0%	13.6%
 KERS Hazardous		59.7%	54.1%
 CERS Non-Hazardous		59.0%	52.8%
 CERS Hazardous		57.7%	48.1%
 SPRS		28.1%	27.0%

\* HB 265 (2018 RS) allows Regional Mental Health/Mental Retardation Boards, Local and District Health Departments, Contracted Entities (domestic violence shelters, rape crisis centers, and child advocacy centers), state supported universities and community colleges, and any agencies eligible to voluntarily cease participating in KERS pursuant to KRS 61.522 to pay a reduced rate of 49.47% for FY 2019

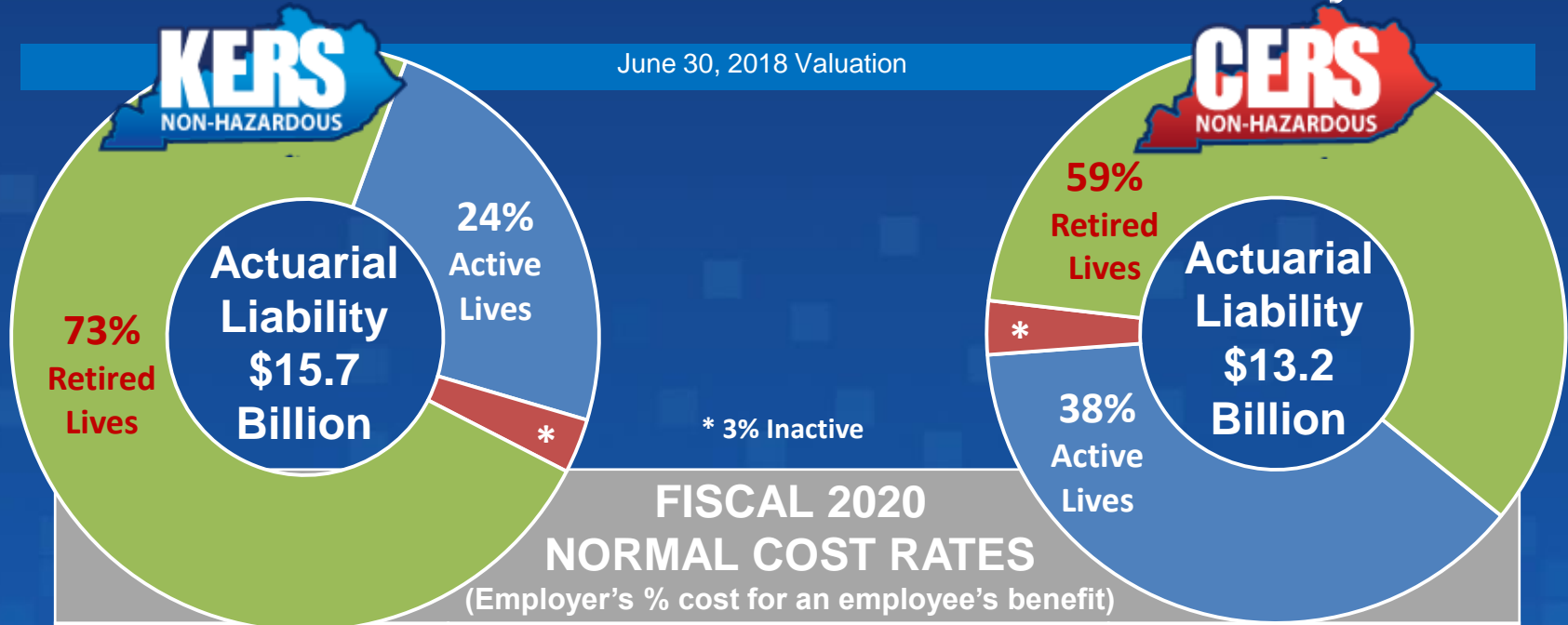
\*\* HB 362 (2018 RS) provided for a phase-in of no more than 12% increase per year over the prior fiscal year from FY 2018 through FY 2018.

# KRS PROJECTED BENEFIT PAYMENTS

(\$ in Millions)

	 KERS NH	 KERS H	 CERS NH	 CERS H	 SPRS
FY 2019	\$982	\$69	\$759	\$259	\$61
Peak \$ Amount	\$1,081	-	\$1,211	-	\$67
Peak Fiscal Year	FY2030	-	FY2037	-	FY2026
FY 2042	\$957	\$115	1,198	\$402	\$50

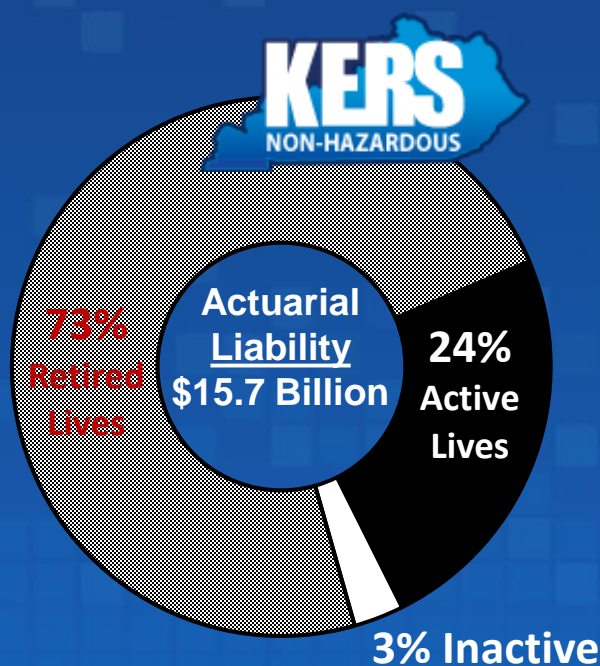
# Underfunding of the KRS Pension Systems is Primarily Attributable to the Retired Lives Liability



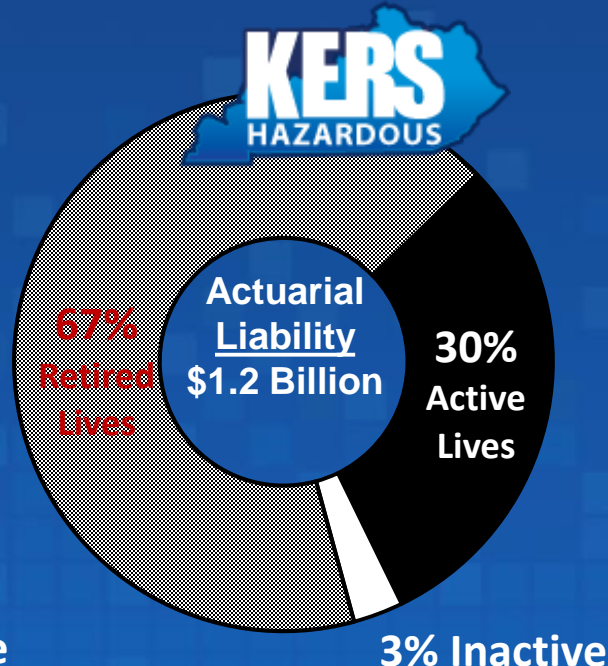
10.46%	<b>Total Pension &amp; Insurance</b>	8.69%
<b>UNFUNDED LIABILITY COSTS</b> (Employer's cost for the unfunded liability)		
66.56%	Pension	16.72%
8.17%	Insurance	1.87%
<b>74.73%</b>	<b>Total Unfunded Liability Costs</b>	<b>18.59%</b>
<b>85.19%</b>	<b>TOTAL COST</b>	<b>27.28%</b>
\$13.7B	Unfunded Liability \$	\$6.2B
0.83	Actives to Retired Ratio	1.49

# Underfunding of the KRS Pension Systems is Primarily Attributable to the Retired Lives Liability

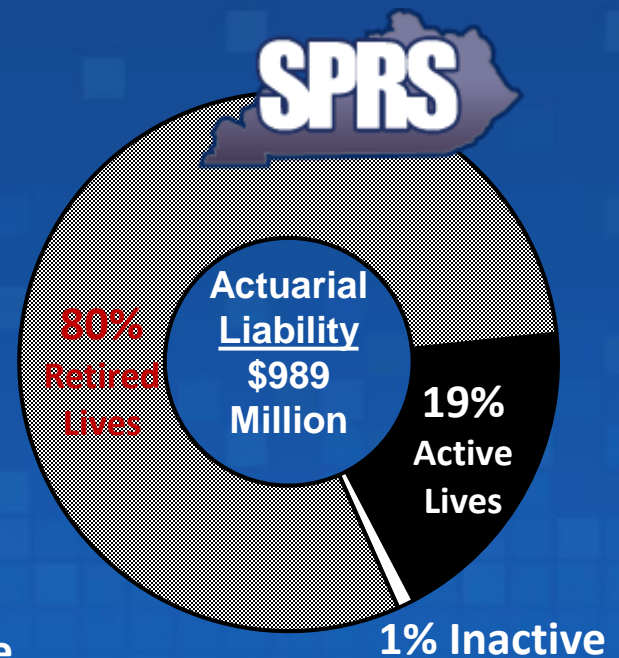
June 30, 2018 Valuation



Unfunded Liability = \$13.7B  
Actives to Retired Ratio = 0.83



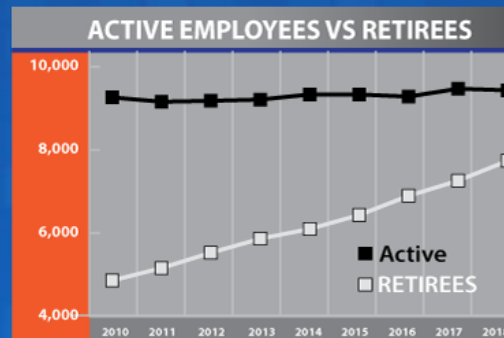
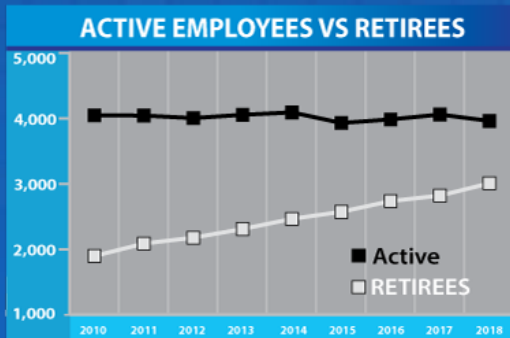
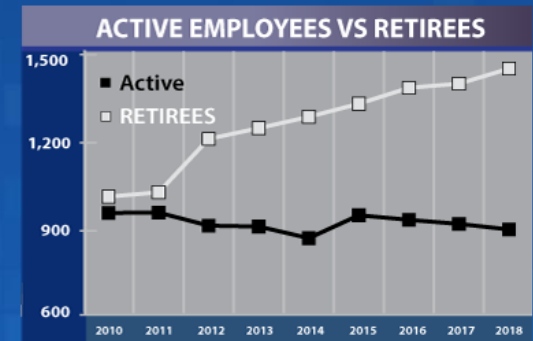
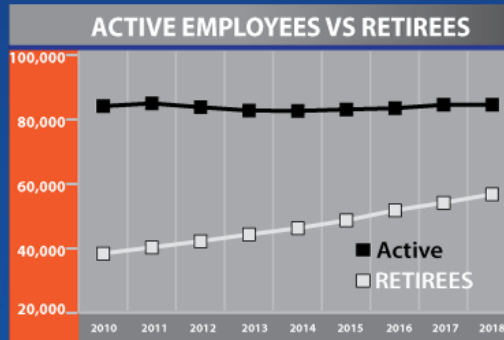
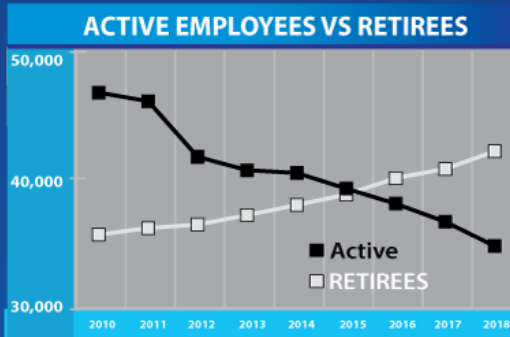
Unfunded Liability = \$513 M  
Actives to Retired Ratio = 1.32



Unfunded Liability = \$721 M  
Actives to Retired Ratio = 0.62



# ACTIVE EMPLOYEES VS RETIREES



# THE KRS PENSION CONUNDRUMS

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**As pension contribution rates go up, employers:**

- **May outsource**
- **Might not replace retirees and other terminations**
- **May withhold wage increases**







**All could potentially result in:**

- **A declining payroll**
- **Requiring a higher contribution rate to cover the normal cost and pay the unfunded liability**
- **More employee cut backs**

**...and so on.**

# THE SOLUTION: FIXED DOLLAR FUNDING

- Employers can't reduce their obligation by cutting payroll
- New hires will only cost the current normal cost
- Encourages a stable-to-growing workforce

					
	KERS NH	KERS H	CERS NH	CERS H	SPRS
<b>Pension and Insurance Normal Cost for Tier 3</b>	<b>3.05%</b>	<b>6.13%</b>	<b>2.78%</b>	<b>2.75%</b>	<b>7.77%</b>

# KRS ISSUES FOR 2019 AND BEYOND

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- **Implementing fixed dollar funding**
- **Receiving the ARC**
- **Using realistic economic assumptions and avoiding new unfunded liability**
- **Addressing a long-term solution to the Quasi conundrum**
- **Avoiding a CERS separation**
- **Continuing to improve our investment management**
- **Operating most effectively and efficiently**