

PERS Overview

General Government Subcommittee of Ways and Means

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PERS Executive Director

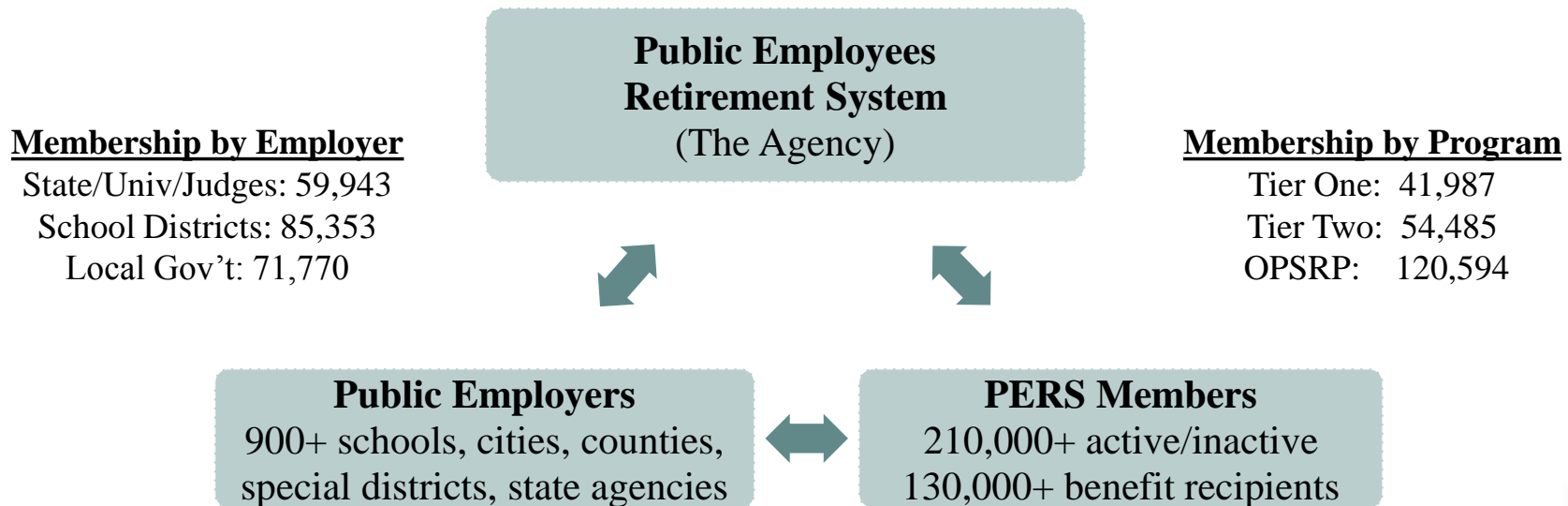
March 6, 2017



PERS Overview and Partnerships

The Oregon Legislative Assembly is the “Plan Sponsor” for the Oregon Public Employees Retirement System. The legislature determines the benefit structure for participating public employees. Those benefits have been modified over time, generally with benefit enhancements through 1995, but then reducing benefits since, including the creation of the Tier Two program for employees starting in 1996 and then the Oregon Public Service Retirement Program (OPSRP) for employees that started after August 28, 2003.

The legislature established PERS, the agency, to administer the retirement system in partnership with more than 900 public employers, including school districts, special districts, cities, counties, community colleges, universities, and state agencies. PERS collects records and maintains relationships with almost 350,000 current and former public employees or their beneficiaries.



System Overview – Benefit Components

Tier One: Members hired before January 1, 1996

Tier Two: Members hired between January 1, 1996 and August 28, 2003

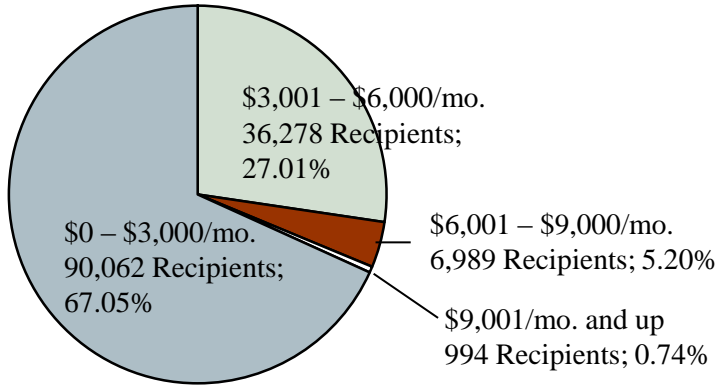
OPSRP: Members hired after August 28, 2003

IAP Account: All members with service after January 1, 2004

	Tier One Pension	Tier Two Pension	OPSRP Pension	IAP Account
Normal retirement age	58 (or 30 yrs); P&F* = age 55 or 50 w/ 25 yrs	60 (or 30 yrs); P&F = age 55 or 50 w/ 25 yrs	65 (58 w/ 30 yrs); P&F = age 60 or 53 w/ 25 yrs	Members receive IAP account at the time of retirement – may select distribution option
Early retirement	55 (50 for P&F)	55 (50 for P&F)	55, if vested	
Benefit calculation methods	Money Match Full Formula Formula +Annuity	Money Match Full Formula	Full Formula	Six account distribution options
Full Formula benefit factor	1.67% general 2.0% P&F	1.67% general 2.0% P&F	1.50% general 1.80% P&F	N/A
Lump-sum vacation payout Included in covered salary for contributions (6%)?	Yes	Yes	No	N/A
Included in Final Average Salary?	Yes	No	No	
Unused sick leave included in Final Average Salary?	Yes	Yes	No	N/A

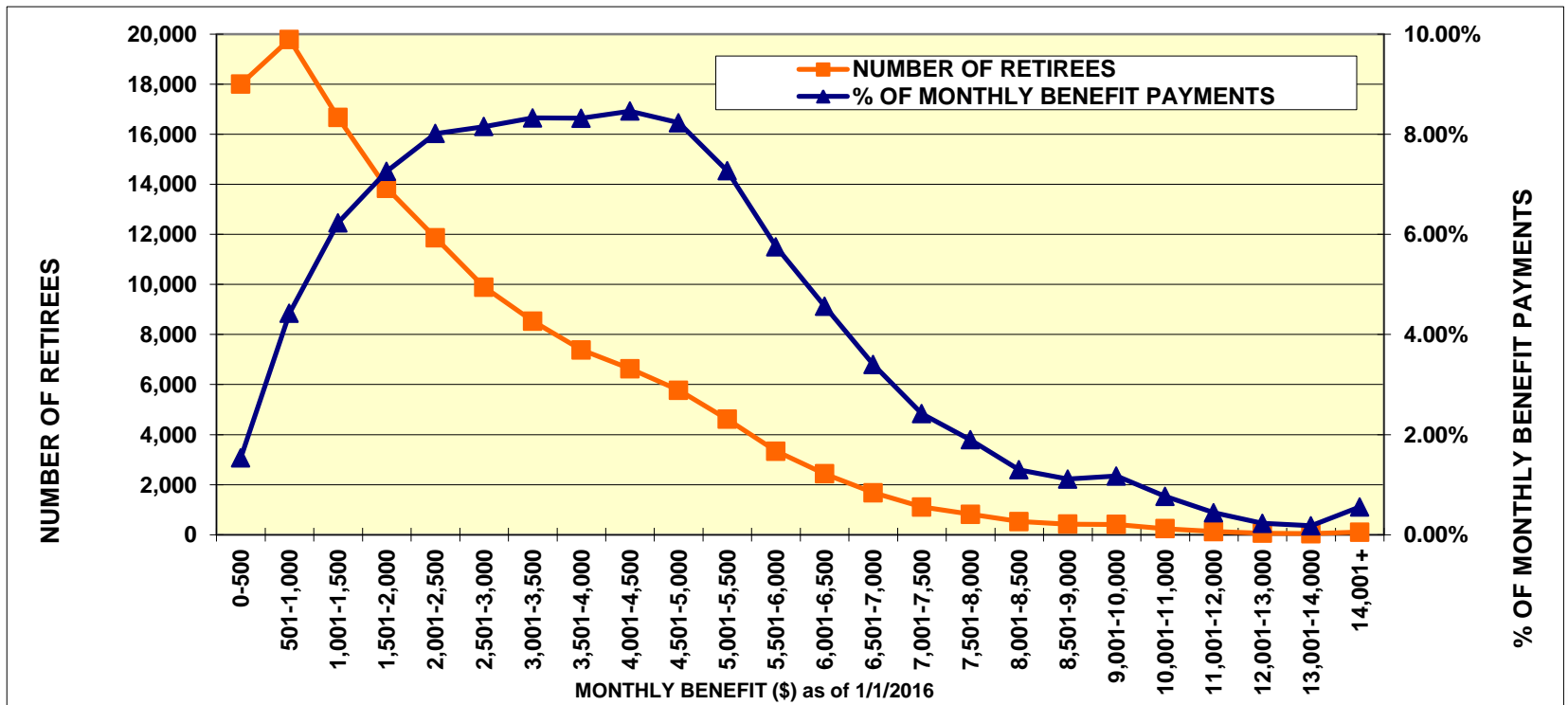
*“P&F” refers to members who meet statutory definitions of “Police” or “Firefighter” as determined by their employer.

Who Gets Paid How Much?

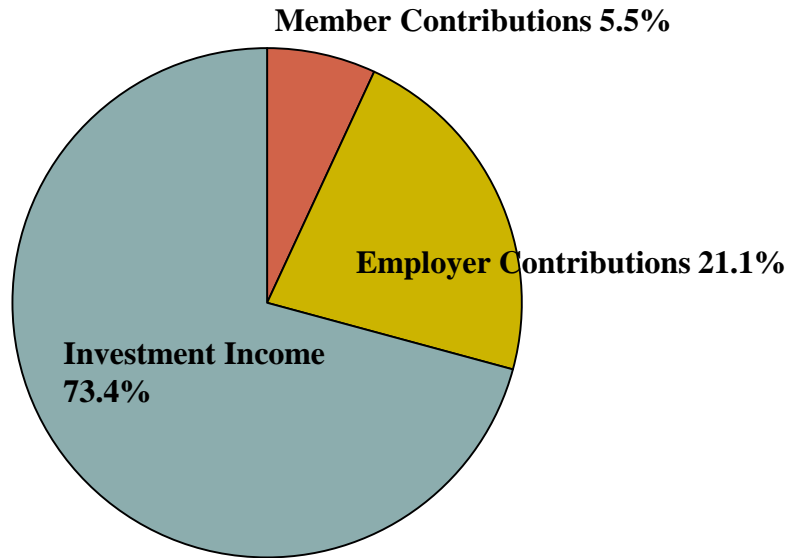


134,323 Benefit Recipients (as of January 1, 2016)

Average Annual Benefit: \$29,720
 Median Annual Benefit: \$23,493



How Has PERS Been Funded?



Revenue by source (1970-2015)

	Calendar Year (as of December 31)						
	2009	2010	2011	2012	2013	2014	2015
Funded Status							
Including side accounts	86%	87%	82%	91%	96%	84%	79%
Excluding side accounts	76%	78%	73%	82%	86%	76%	71%
Unfunded Actuarial Liability (UAL) (\$ B)							
Including side accounts	\$8.1	\$7.7	\$11.0	\$5.6	\$2.6	\$12.1	\$16.2
Excluding side accounts	\$13.6	\$13.3	\$16.3	\$11.1	\$8.5	\$18.0	\$21.8

Who is Eligible to Retire?* (as of September 30, 2016)

Employer Group	Tier One		Tier Two		OPSRP		Eligible to Retire by Employer Group	Total Members in Employer Group	% of Members Eligible to Retire
	Actives	Inactives	Actives	Inactives	Actives	Inactives			
State Agencies & Universities	5,494	3,093	3,983	1,536	5,446	958	20,510	59,741	34.33%
School Districts	6,137	3,360	5,349	2,674	7,202	2,057	26,779	85,353	31.37%
Local Govt.	4,873	2,587	3,631	1,980	4,555	1,153	18,779	60,469	31.06%
Community Colleges	778	619	805	600	1,382	702	4,886	11,301	43.24%
Judges	41	3	42	2	---	---	88	202	43.56%
Eligible to retire	17,323	9,662	13,810	6,792	18,585	4,870	---	---	---
TOTAL	26,985		20,602		23,455		71,042	217,066	32.73%

* Reflects the number of members eligible to retire (including those eligible for reduced benefits) based on: age 55 or 30 years of service for general service members; age 50 or 25 years of service for police & firefighters; and age 60 for judge members.

The PERS Funding Equation

At the end of each calendar year, the PERS actuaries calculate the system's funded status using the following basic equation:

$$B = C + E$$

BENEFITS = CONTRIBUTIONS + EARNINGS

present value of
earned benefits

employer funds to pay
pension benefits

future returns on
invested funds

Set by:

Oregon Legislature

Set by:

PERS Board

Managed by:

Oregon Investment Council

Every two years, the PERS Board adjusts contributions so that, over time, those contributions will be sufficient to fund the benefits earned, if earnings follow assumptions.

History of Key PERS Benefit Enhancements, Caps, and Reductions

Part 1 – Changes from Plan Inception Through Mid-1990s

	Year	Action	Affected Members
Benefit Enhancement	1945	PERS created as a Money Match retirement plan	Tier One
	1947	6-month wait period before becoming a member	Tier One
	1953	PERS terminated; reopened next day for Social Security coverage	Tier One
	1967	Added Formula + Annuity as defined benefit funded by employers	Tier One
	1969	Allowed members to elect to participate in the Variable Account	Tier One
Benefit Cap or Reduction	1972	Initiated annual COLA with a 1.5% cap; granted ad hoc COLA for existing retirees (and repeatedly through the early 1980's)	All retirees
	1973	Increased Formula + Annuity pension factors	Tier One
	1973	Annual COLA cap raised to 2%, but capped at actual inflation or 2% (whichever is less)	Tier One
	1973	Accrued sick leave in retirement calc for participating employers	Tier One
	1975	Initiated assumed rate guarantee for member regular accounts	Tier One
	1975 & After	Credited member regular accounts with more than the assumed rate; did so in every subsequent year possible (1976, 1979, 1980, 1982-1983, 1985-1986, 1988, 1989, 1991, 1993, 1995-1999) until 2003	Tier One
	1979	Employers allowed to "pick up" member 6% contribution	Tier One
	1981	Added Full Formula benefit calculation method; eliminated Formula + Annuity for new hires	Tier One
	1981	Member contributions go from salary based sliding scale to 6% for all	Tier One
	1987	Members allowed to purchase 6-month waiting period	Tier One
	1989	Added "30 years of service" retirement regardless of age	Tier One
	1991	Imposed state income tax on PERS benefits	Tier One
	1991	Added tax remedy benefit increase; adjusted in 1995 per court case	Tier One

History of Key PERS Benefit Enhancements, Caps, and Reductions

Part 2 – Changes over the last 20 Years

Benefit Enhancement

Benefit Cap or Reduction

Year	Action	Affected Members
1996	Created Tier Two, applied to all new hires from January 1, 1996: <ul style="list-style-type: none"> • eliminated guaranteed return on regular accounts • raised normal retirement age • eliminated using sick leave for final average salary 	Tier Two
1997	Out-of-state teaching service and some military purchases allowed	All
2003	Created OPSRP, applied to all new hires after August 28, 2003: <ul style="list-style-type: none"> • decreased benefit factors and limited calculations to Full Formula • increased normal retirement age and vesting requirements • pro-rated the first-year COLA and eliminated “banking” • eliminated vacation payouts and sick leave from final average salary 	OPSRP
2003	Created IAP and redirected all member contributions made on or after January 1, 2004, reducing Money Match benefits and subjecting all member contributions to actual market earnings and losses	All
2003	Required regularly updated mortality assumptions and actuarial factors	All
2013	Reduced COLA to 1.5% in 2013; in 2014 and beyond, 1.25% on the first \$60,000 of an annual benefit; 0.15% on amounts above \$60,000	All
2013	Eliminated any tax remedy for retirees who do not pay Oregon income taxes because they are not Oregon residents	All
2014	Decreased assumed earnings rate from 8.0% to 7.75%	Tier One
2015	Oregon Supreme Court overturns COLA restrictions, restoring up to 2% COLA for all service time accrued before October 1, 2013	All
2016	Decreased assumed earnings rate from 7.75% to 7.5%	All

PERS Board – Duties and Authority

- Five members, appointed by the Governor and confirmed by the Senate (Governor designates who will serve as Board Chair):
 - One member is an employee of the state in a management position or holds an elective office in a governing body of a public employer;
 - One member is retired from a bargaining unit or is currently employed and in a bargaining unit; and
 - Three members with experience in business management, pension management, or investing
- Authority by Statute
 - Trustees of the Public Employees Retirement Fund, directed to administer the system to create and maintain long-term stability and viability
 - Publish an actuarial report at least once every two years evaluating the system's current and prospective assets and liabilities and its financial condition, including the mortality, disability, and other experience of the members and employers
 - Adopt actuarial equivalency factor tables at least once every two years, using the best actuarial information on mortality available at the time of adoption
 - Adopt rules and take all actions necessary to maintain PERS as a federal tax qualified retirement plan

Employer Contribution Rate Setting Cycle

Actuarial valuations are conducted annually, but alternate between “advisory” and “rate setting”: e.g., the December 31, 2014, valuation results were used to project employer rates, but the December 31, 2015, valuation was used to set actual rates for the 2017-2019 biennium.

Once employer rates are adopted by the PERS Board (in the fall of the even-numbered year), they become effective the following July 1 of the odd-numbered year (18 months after the valuation date).

Valuation Date	Employer Contribution Rates
December 31, 2013	→ July 2015 - June 2017
December 31, 2015	→ July 2017 - June 2019
December 31, 2017	→ July 2019 - June 2021

Solving the Equation . . .

When setting employer contribution rates, the PERS Board considers the following objectives and principles:

- Transparent process and inputs
- Predictable and stable employer contribution rates
- Protect funded status to secure future benefit payments
- Equitable across generations of taxpayers funding the system
- Actuarially sound – fully fund the system if assumptions are met
- GASB compliant

Some of the objectives can conflict, particularly in periods with significant volatility in investment return or projected benefit levels. Overall system funding policies should seek an appropriate balance between conflicting objectives.

System Wide Pension Rates (% of Payroll)

Excludes Retiree Health Care and IAP Contributions

	2015 - 17 Rates			2017 - 19 Rates		
	Tier One/Two	OPSRP	Weighted Average ¹	Tier One/Two	OPSRP	Weighted Average ¹
Normal Cost	13.18%	7.79%	10.94%	15.07%	8.56%	11.79%
Tier 1/Tier 2 UAL	6.63%	6.63%	6.63%	16.02%	16.02%	16.02%
OPSRP UAL	0.61%	0.61%	0.61%	1.27%	1.27%	1.27%
Uncollared Rate²	20.42%	15.03%	18.18%	32.36%	25.85%	29.08%
Increase				11.94%	10.82%	10.90%
Collar Limitation	(0.72%)	(0.72%)	(0.72%)	(8.23%)	(8.23%)	(8.23%)
Collared Base Rate*	19.70%	14.31%	17.46%	24.13%	17.62%	20.85%
Side Account (Offset)	(6.38%)	(6.38%)	(6.38%)	(6.14%)	(6.14%)	(6.14%)
SLGRP Charge/(Offset)	(0.47%)	(0.47%)	(0.47%)	(0.48%)	(0.48%)	(0.48%)
Collared Net Rate	12.85%	7.46%	10.61%	17.51%	11.00%	14.23%
Increase				4.66%	3.54%	3.62%

1 Weighting based on the membership distribution (Tier 1/Tier 2, OPSRP) as of the valuation date.

2 Does not include side accounts

Milliman presentation; July 29, 2016 Board meeting

Sources of 2014-2015 UAL Increase (\$ billions)

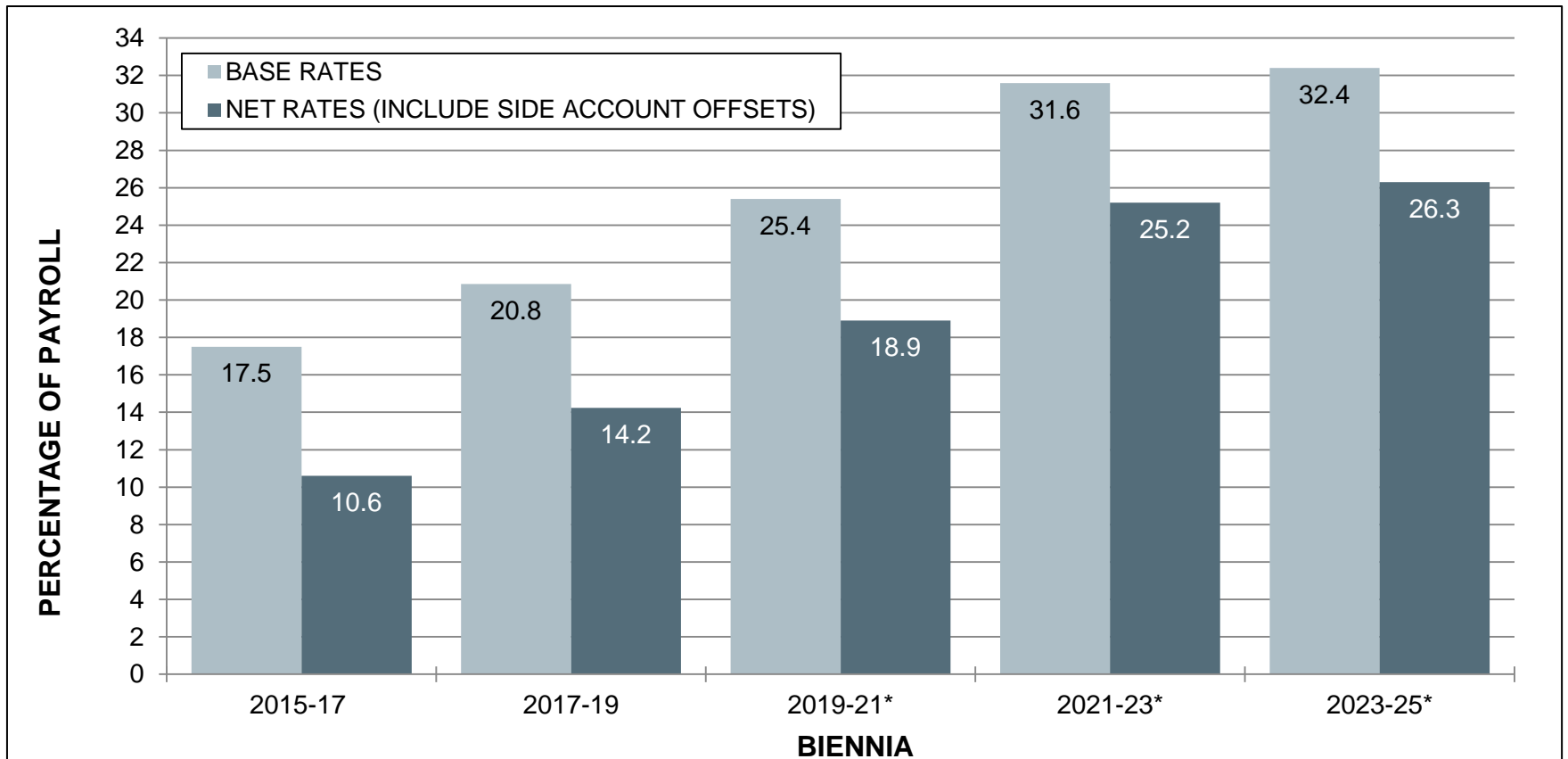
2014	UAL Increase
Expected UAL increase during 2014	\$0.2
2014 actual investment returns below assumption	\$0.2
<i>Moro</i> adjustment to projected benefits	\$5.1
Decrease in assumed rate of return to 7.50%	\$1.7
Update to mortality assumptions	\$1.8
All other assumption changes and actual experience	<u>\$0.5</u>
Total	\$9.5 billion

2015	UAL Increase
Expected UAL increase during 2015	\$0.9
2015 actual investment returns below assumption	\$2.6
Actual demographic experience different than assumed	<u>\$0.5</u>
Total	\$3.8 billion

Funded Status and Unfunded Actuarial Liability (UAL) (\$ billions)

System-total Pension Funded Status (\$ billions)			
<i>Reflects:</i>	12/31/2013	12/31/2014	12/31/2015
<i>Moro decision?</i>	<i>No</i>	<i>Yes</i>	<i>Yes</i>
<i>2014 Experience Study assumptions?</i>	<i>No</i>	<i>Yes</i>	<i>Yes</i>
Actuarial liability	\$62.6	\$73.5	\$76.2
Assets (excluding side accounts)	<u>\$54.1</u>	<u>\$55.5</u>	<u>\$54.4</u>
UAL (excluding side accounts)	\$8.5	\$18.0	\$21.8
Funded status (excluding side accounts)	86%	76%	71%
Side account assets	<u>\$5.9</u>	<u>\$5.9</u>	<u>\$5.6</u>
UAL (including side accounts)	\$2.6	\$12.1	\$16.2
Funded status (including side accounts)	96%	84%	79%

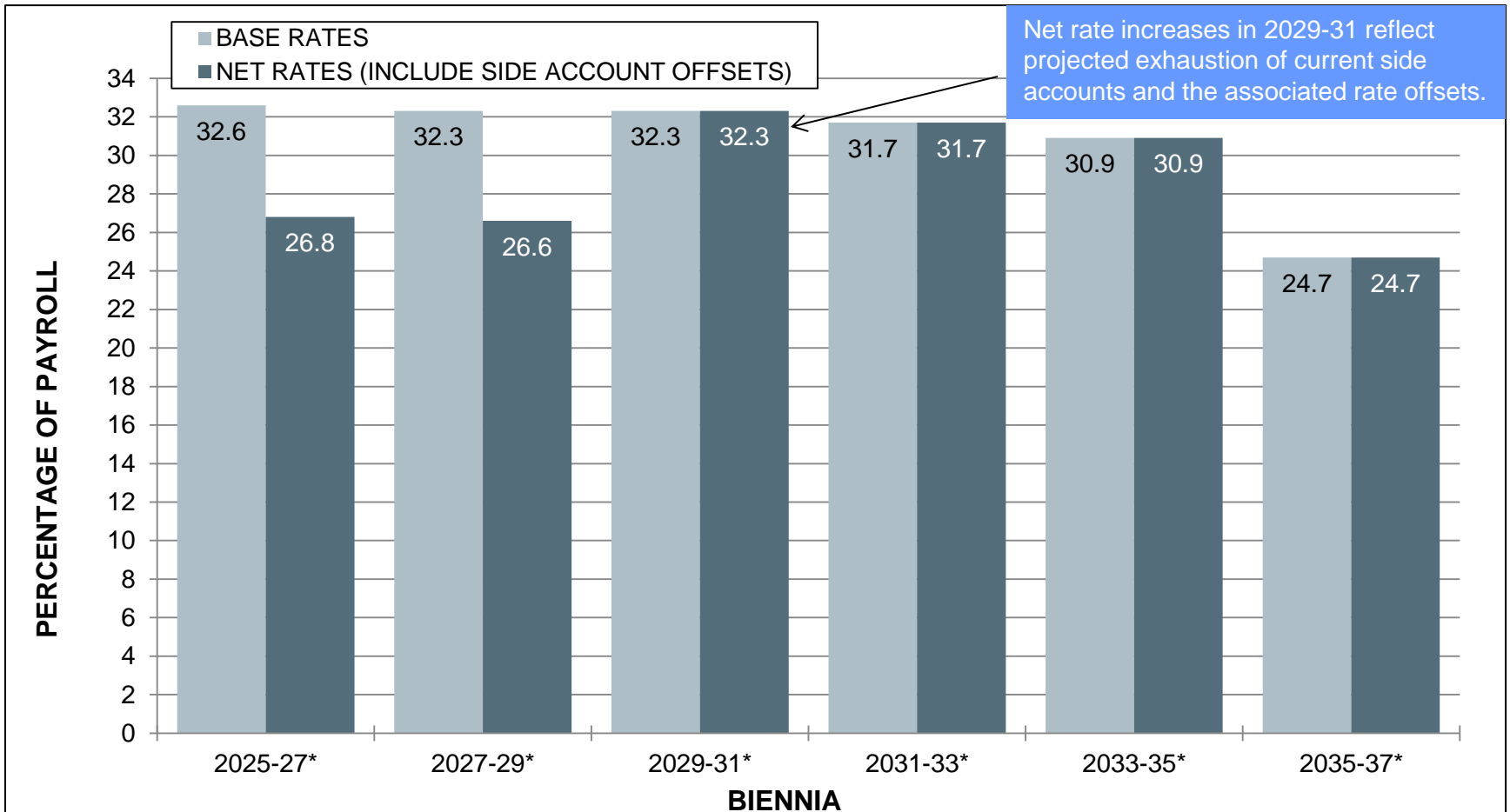
Actual and Projected System Wide Employer Rates (2015-2025)



- RATES ARE COLLARED; THIS LIMITS THE MAXIMUM ALLOWABLE BIENNIUM-TO-BIENNIUM CHANGE IN RATES. THE WIDTH OF THE RATE COLLAR IS DETERMINED BY AN EMPLOYER'S CURRENT CONTRIBUTION RATE AND FUNDED STATUS
- EXCLUDES 6% MEMBER IAP CONTRIBUTIONS AND PENSION OBLIGATION BOND DEBT SERVICE PAYMENTS
- INCLUDES TIER ONE, TIER TWO, AND OPSRP
- DOES NOT INCLUDE RHIA/RHIPA

* PROJECTED BASED ON NOVEMBER 2016 MILLIMAN FINANCIAL MODELING PRESENTATION

Projected System Wide Employer Rates (2025-2037)



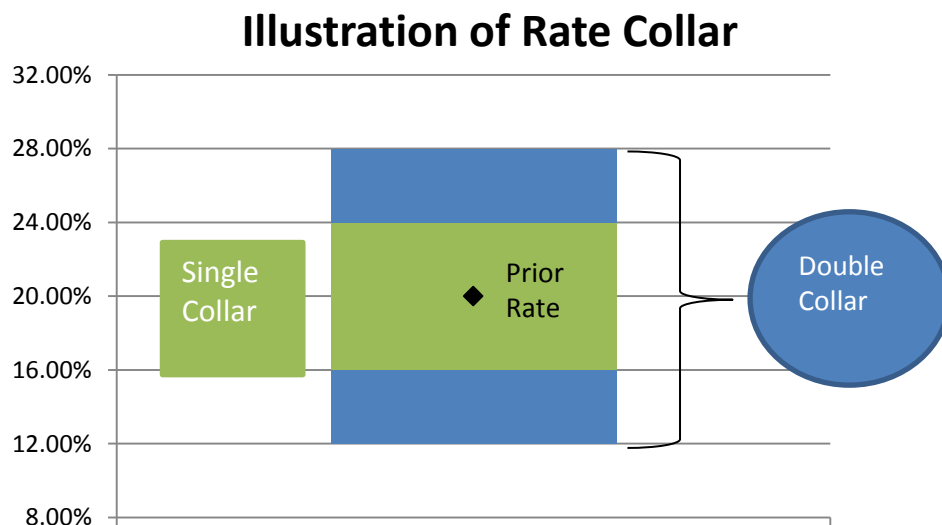
Net rate increases in 2029-31 reflect projected exhaustion of current side accounts and the associated rate offsets.

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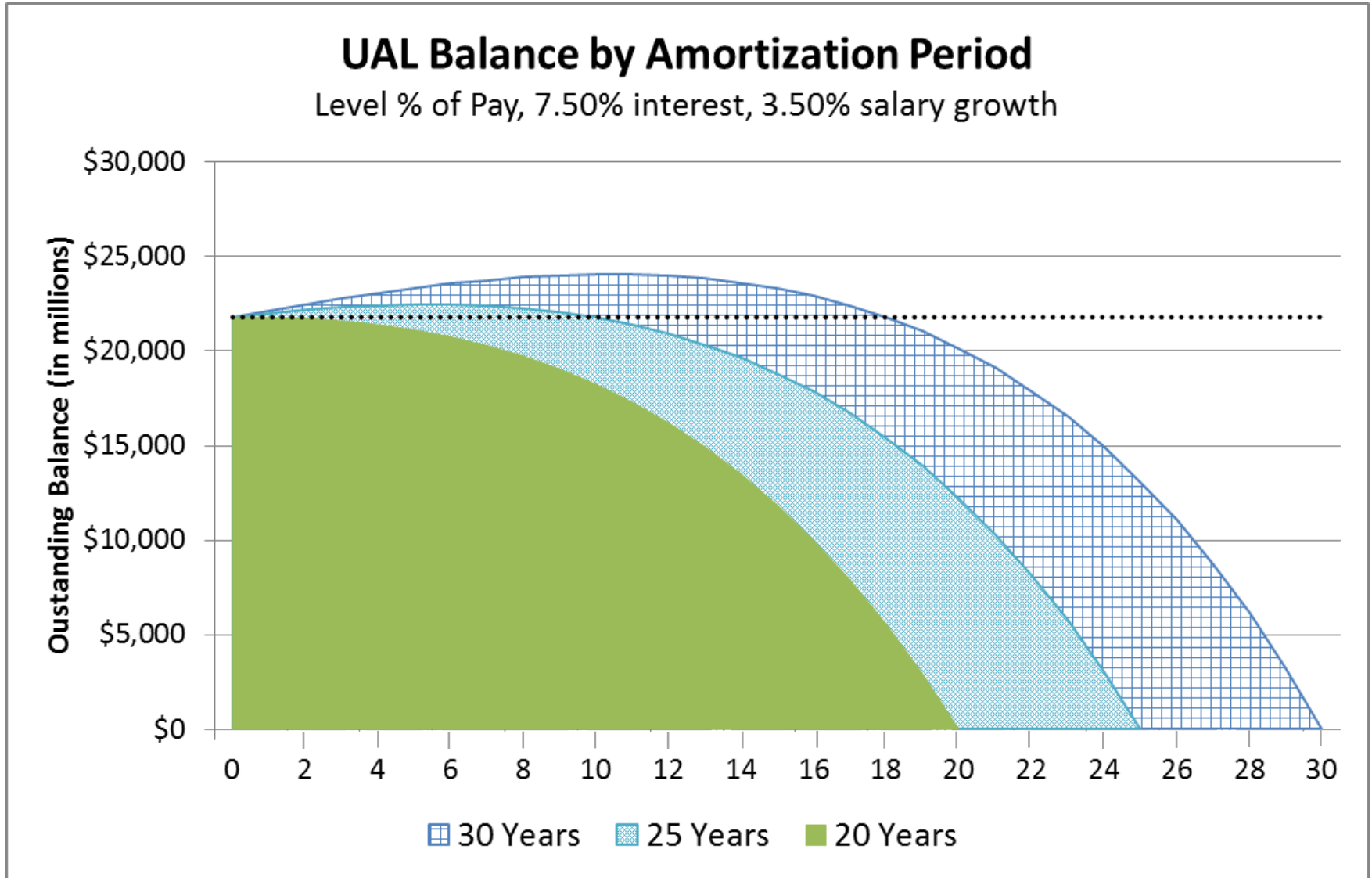
Rate Collar – PERS Board Policy

- The maximum change typically permitted by the collar is 20% of the rate currently in effect (3% of payroll minimum collar width)
- If funded status is 60% or lower, the width of the collar doubles to 40% of rate currently in effect (6% of payroll minimum collar width)
- If the funded status is between 60% and 70%, the collar size is prorated between the initial collar and double collar level



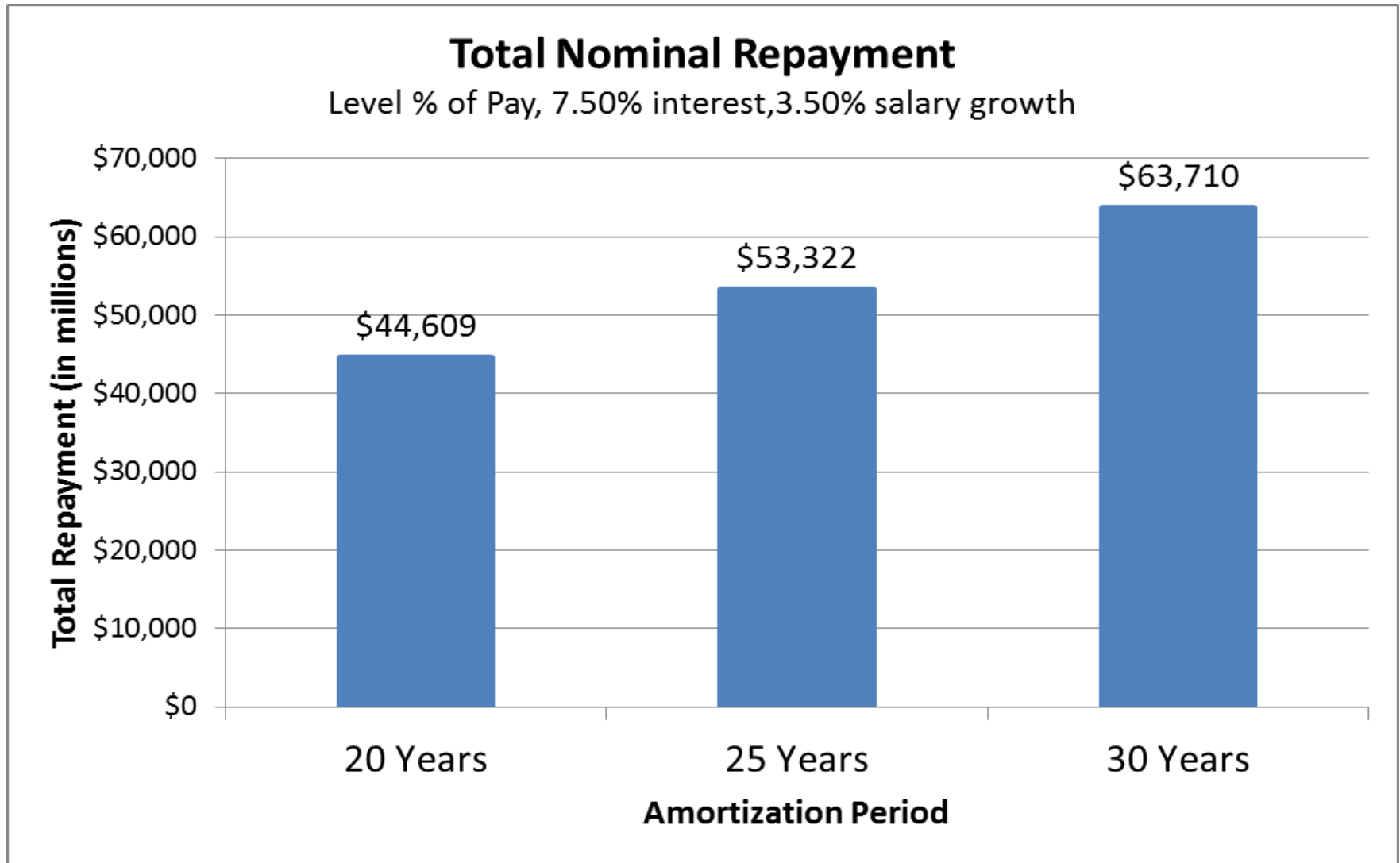
- Rate collars are calculated at a rate pool level and limit the biennium to biennium increase in the UAL rate for a given rate pool

UAL Amortization Patterns



Milliman presentation; September 30, 2016 – joint meeting of OIC/PERS Board

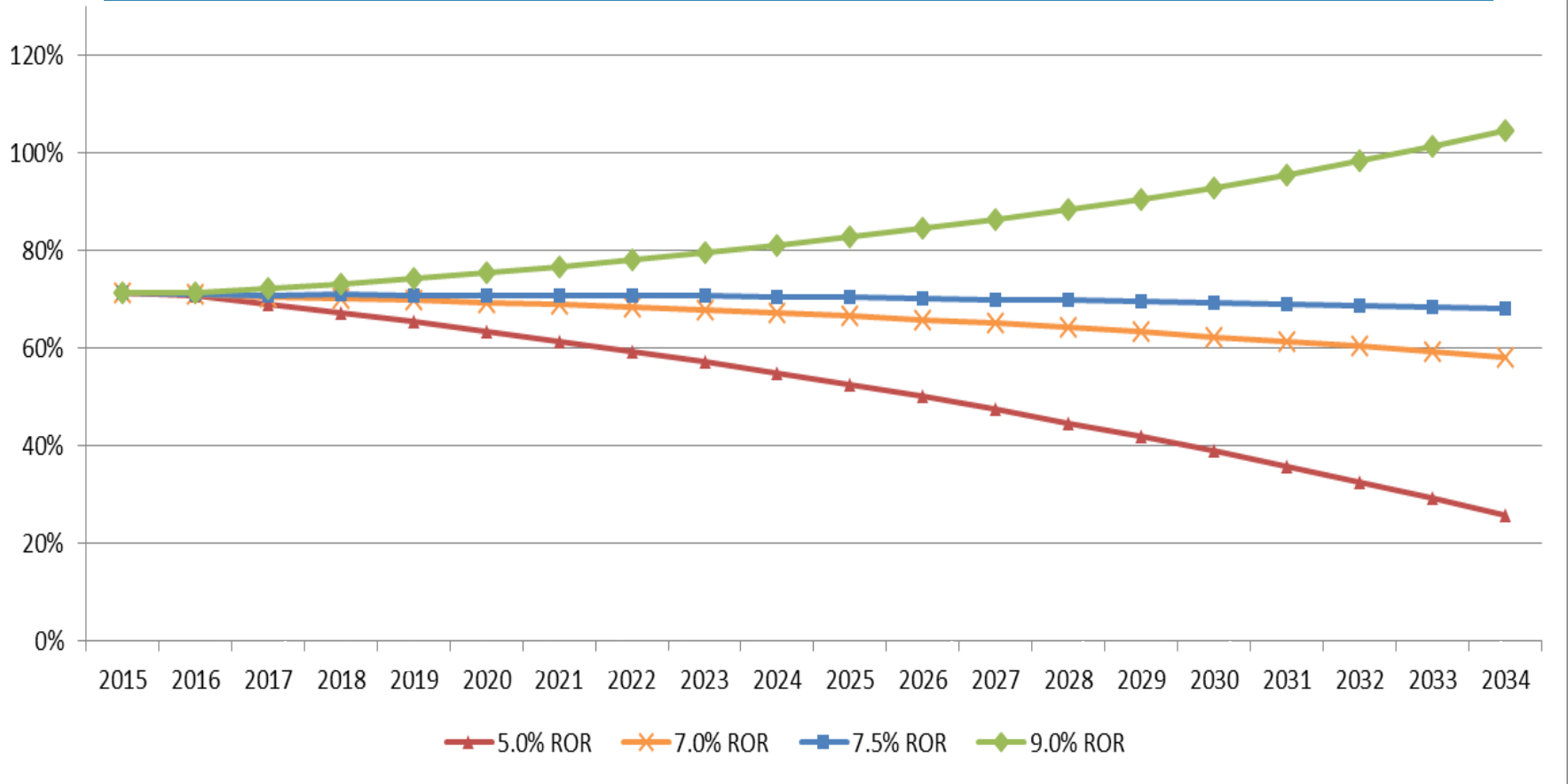
Total UAL Amortization Payments



Milliman presentation; September 30, 2016 – joint meeting of OIC/PERS Board

Funded Status if 2017-19 Employer Rates Held Steady

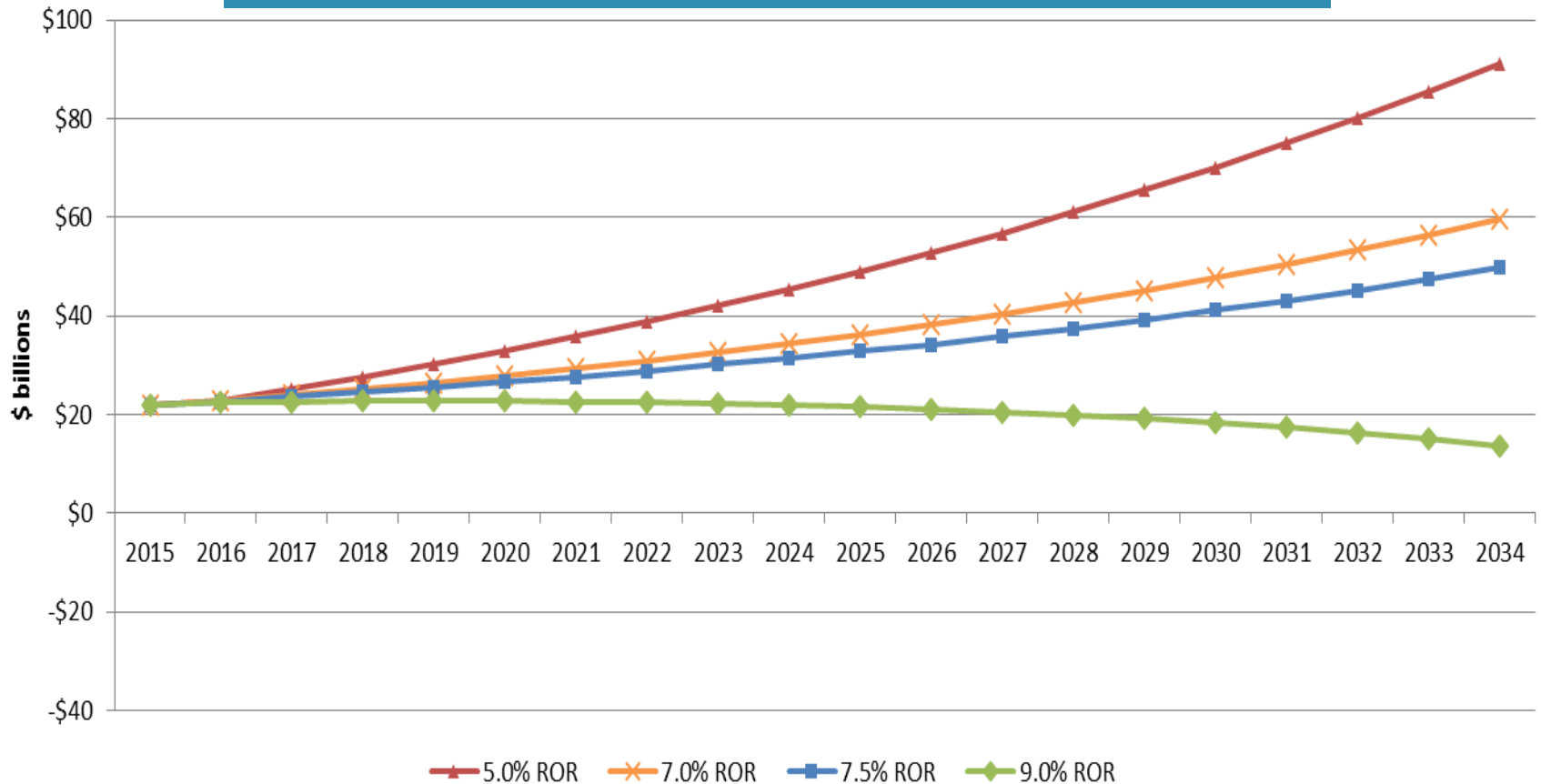
If contributions increase for 2017-19 but then are held steady, with 7.5% actual return funded status declines slightly to 68% over the projection period.



Shows projected funded status (excluding side accounts) under steady return projections if collared base contribution rates remain at 2017-2019 levels subsequent to the current biennium

UAL if 2017-19 Employer Rates Held Steady

With contribution rates at 2017-19 levels, UAL exceeds \$30 billion at the end of the projection period in the 7.5% actual return scenario.

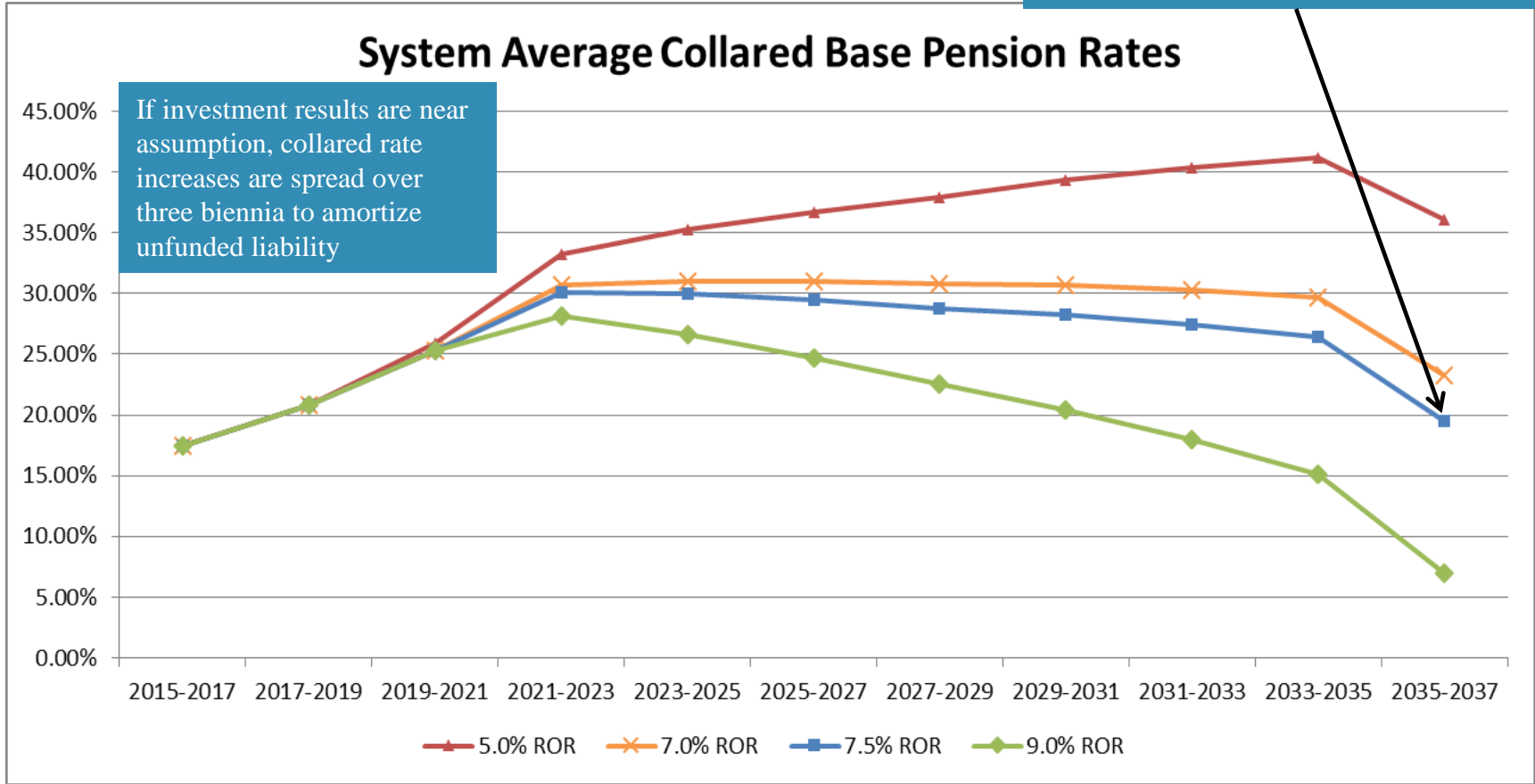


Shows projected UAL under steady return projections if collared base contribution rates remain at 2017-2019 levels subsequent to the current biennium

Collared Base Pension Rates (November 2016 Financial Modeling)

The steady return model illustrates impact of consistently achieving the assumed 7.5% return and three alternative returns

- At assumed return:
- Rate eventually declines as new hire OPSRP members replace retiring Tier 1/Tier 2 members
 - Rate drops significantly at 7/1/2035 after amortization of a large portion of current UAL



Milliman presentation; November 18, 2016 Board meeting

How Variable are the Projections?

Milliman conducted a “stress test” of future rate projections in their financial modeling presentation to the PERS Board at its November 2016 meeting. The model evaluated the likelihood of certain events, looking at 10,000 investment return scenarios. Probabilities for some of those events to occur at some point during the next 20 years is shown below:

Likelihood of Event Occurring at Some Point in Next 20 Years	Percent
Funded status (excluding side accounts) > 100%	59%
Funded status (excluding side accounts) <60%	64%
Funded status (excluding side accounts) <40%	13%
Base rate (excluding retiree health care) >30% of pay	80%

Variable Model Stress Test

- This chart shows the probability of a collared employer contribution rate increase exceeding a selected threshold in at least one of the next three biennial rate changes (July 1 of 2019, 2021, and 2023):

Likelihood of a Biennial Rate Increase Exceeding Threshold at Some Point in Next Three Biennia		
<u>Threshold Increase</u>	<u>Base Rate</u>	<u>Net Rate</u>
3% of pay	94%	93%
4% of pay	91%	86%
5% of pay	74%	77%

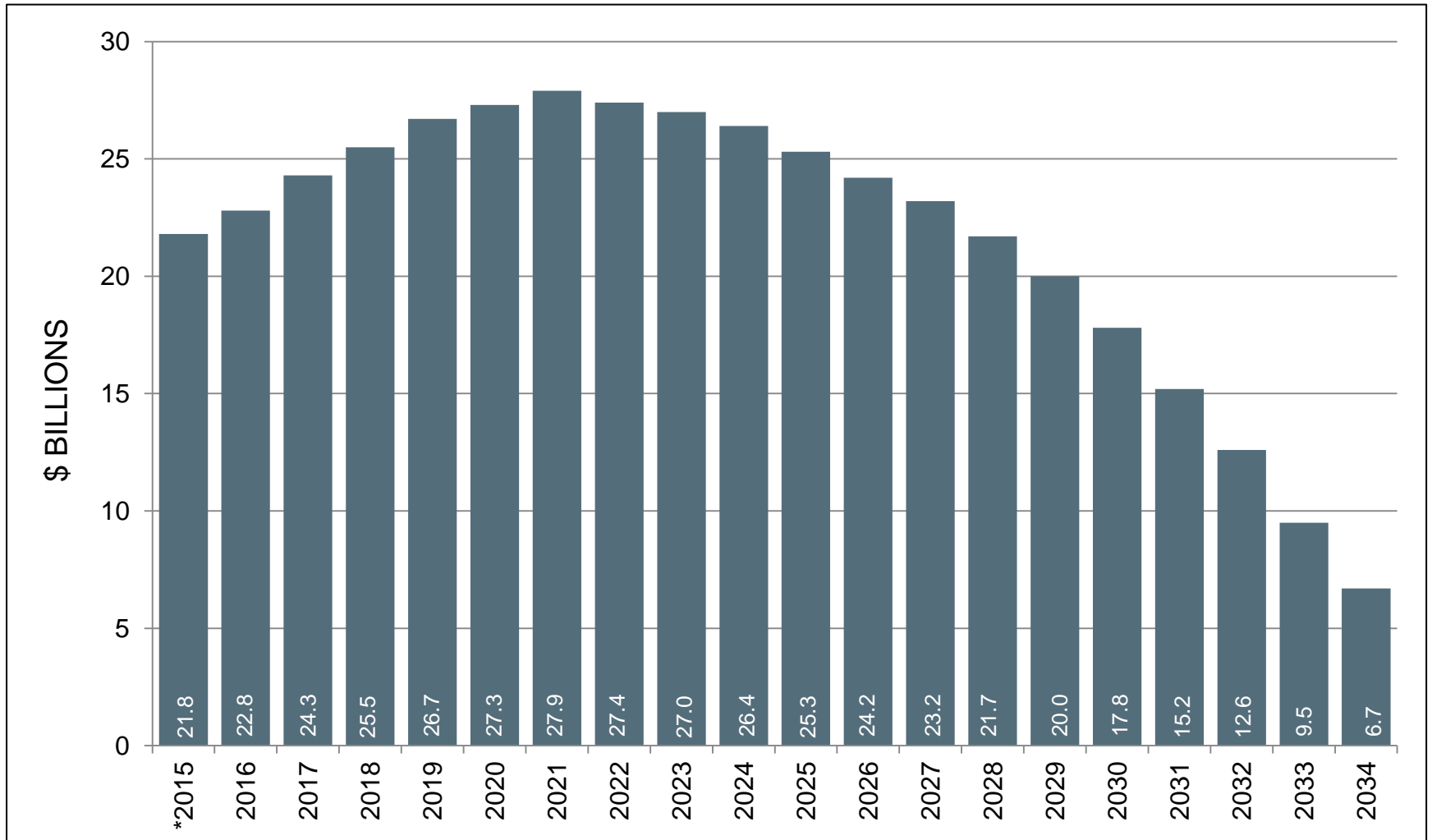
2017-19 Contribution Increase Estimates

(\$ millions)	Projected 2015-17 Payroll*	(A) Projected 2015-17 Contribution	Projected 2017-19 Payroll*	(B) Projected 2017-19 Contribution	(B) - (A) Projected Contribution Increase
State Agencies	\$5,620	\$575	\$6,020	\$835	\$260
School Districts	\$6,120	\$575	\$6,560	\$910	\$335
All Others	<u>\$7,350</u>	<u>\$875</u>	<u>\$7,880</u>	<u>\$1,165</u>	<u>\$290</u>
Total	\$19,090	\$2,025	\$20,460	\$2,910	\$885

* Assumes payroll grows at 3.50% annually based on 12/31/2015 active member census, reflecting proportional payroll composition (Tier One/Tier Two vs. OPSRP) as of 12/31/2015

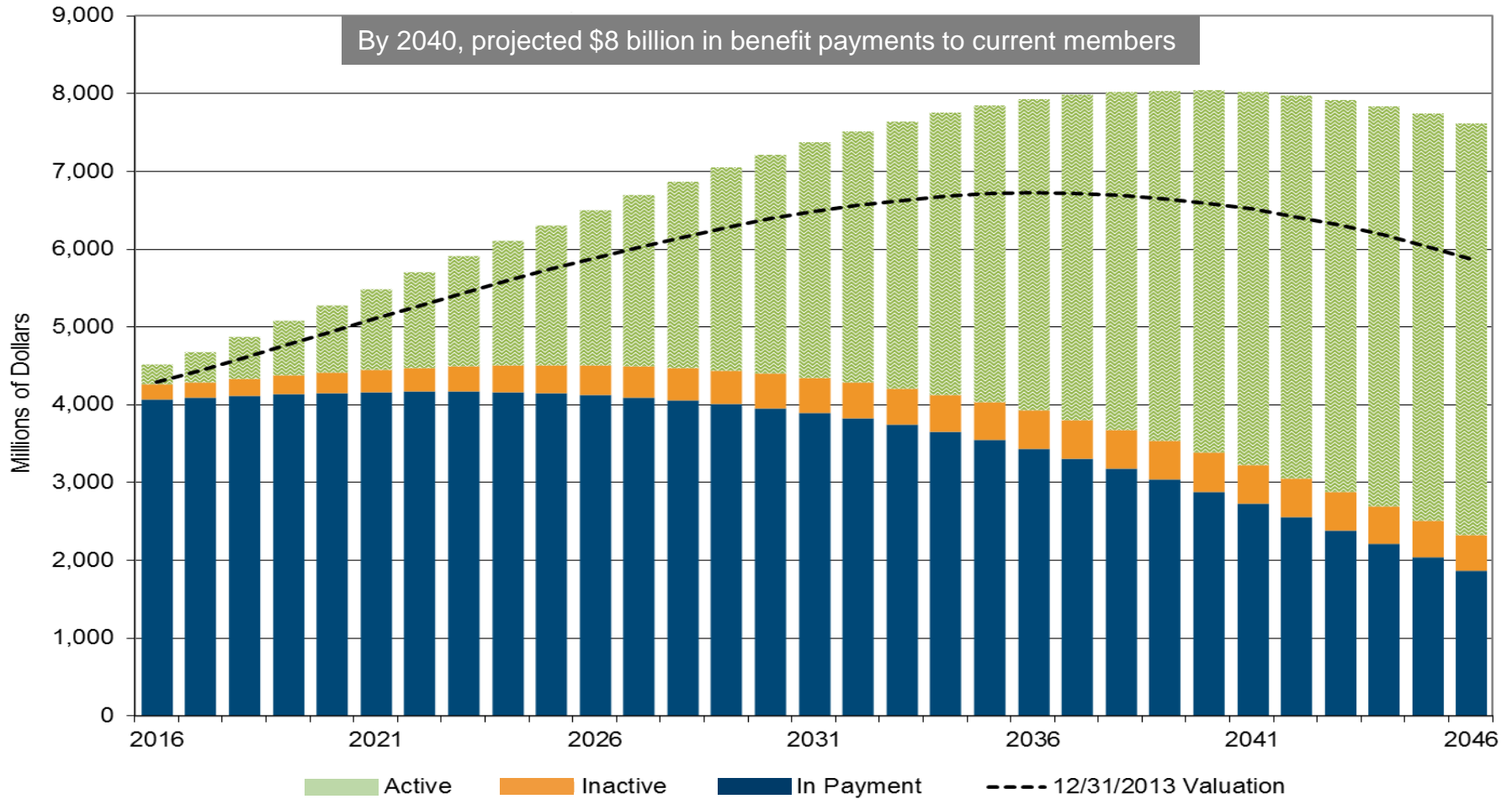
- Collared net rates are used to project 2017-2019 contributions
- The advisory valuation had a projected contribution increase of \$800 million; the change from that estimate was caused primarily by 2015 investment underperformance and the leveraged effects that side accounts had on net rates

Current and Projected UAL (Excluding Side Accounts)



* 2015 IS ACTUAL; OTHER YEARS ARE PROJECTED BASED ON NOVEMBER 2016 MILLIMAN PRESENTATION

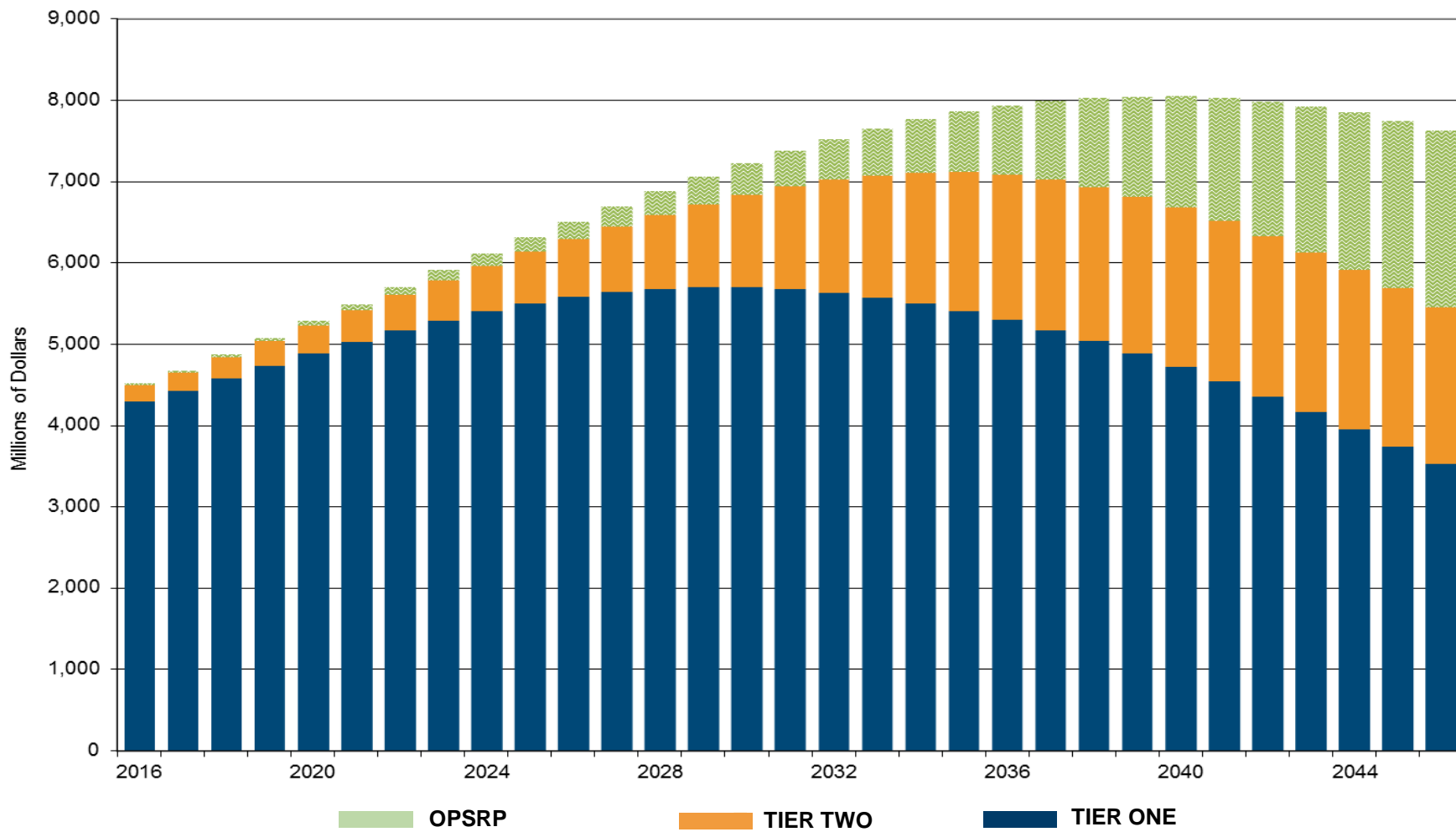
Projected Benefit Payments by Status (as of 12-31-15)



Dotted line depicts the projected payments from the 12/31/2013 rate-setting valuation, which did not reflect the *Moro* decision

Milliman presentation; July 29, 2016 Board meeting

Projected Benefit Payments by Program (as of 12-31-15)



Milliman presentation; July 29, 2016 Board meeting

For More Information

Website

<http://www.oregon.gov/pers>

Resources

- **“PERS by the Numbers”** – Approachable summary of information about PERS benefits, demographics, and system funding
- **Board agendas and materials** – Including actuarial presentations from Milliman, policy memos on board actions, and other information

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