Analysis of PERS Cost Allocation, Benefit Modification, and System Financing Concepts

December 1, 2010

Appendix updated 3-26-12

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Important Notes Regarding This Report

The purpose of this report is informational only. PERS does not endorse or advocate for any specific concept. The report also does not reflect any legal analysis, or specific stakeholder group or interested party viewpoints.

This report analyzes concepts that have been in the public discussion of ways to mitigate or reduce PERS costs. These concepts (or ones similar) have surfaced in different forums over the years, including the Legislature, ballot initiatives, special study committees, and various PERS and other public retirement system analyses.

The intent of this report is to provide basic high-level information on how these concepts would affect PERS members and employers, and the potential impact on system funding and administration.

The estimated fiscal impacts were developed based on the actuarial methods and assumptions used in the 2009 PERS system-wide valuation. Actual experience may vary from estimates.

The cost savings estimates reflect a projected $18 billion PERS-covered payroll for the 2011-13 biennium. Estimated employer rate impacts are system-wide averages.

Contents

Category: Cost Allocation

Concept: Eliminate Employer "Pick-up"

Description: Remove the statutory option for employers to "pick-up" the member's 6% Individual Account Program (IAP) contribution.

Employer Rate and Liability Impact: The IAP is a member-funded individual account benefit that is separate from the defined pension benefit. Enacting this concept would reduce uncollared employer rates by approximately 0.67%, saving approximately $124 million per biennium, due to a reduction in the final average salary (FAS) for those Tier One/Tier Two members whose IAP contributions are employer paid or "picked up" and who retire under the Full Formula or Formula + Annuity benefit calculation methods. For 2009 retirements, 28% were Full Formula, 7% were Formula + Annuity, and 65% were Money Match.

Employer Impact: Would reduce costs for those employers that currently "pick-up" member IAP contributions. Employers pay IAP contributions for approximately 70% of active members. If these employers suspend these "picked-up" IAP contributions, those employers would save approximately $750 million in the 2011-13 biennium. Employers who do the "pick-up" will have to change their salary reporting to member-paid status on either a "pre-tax" or "post-tax" basis. The percentage of members whose employers "pick-up" and pay the IAP contribution is estimated as follows:

State and OUS: 100%
Community Colleges: 80%
School Districts: 55%
Local Governments: 85%
System-wide: 70%

Member Impact: Reduces take-home pay for the approximately 70% of members whose contributions are now "picked up" as the contribution will instead come out on either a pre-tax or post-tax basis. Would reduce FAS for Tier One/Tier Two members, whose contributions are "picked up" by up to 6%, reducing Full Formula and Formula + Annuity benefits for affected members.

PERS Administrative Impact: No impact on PERS; employers report whether contributions are "picked-up" at the individual member level and would have to amend their reports to correctly categorize the contribution.

Category: Cost Allocation

Concept: Allow Partial Employer "Pick-up"

Description: Amend statutes to allow employers to set the percentage of member Individual Account Program (IAP) contributions to be "picked-up" in increments of 1%, up to a maximum of 6%.

Employer Rate and Liability Impact: The IAP is a member-funded individual account benefit that is separate from the defined pension benefit. If the employer "pick-up" is limited to 3% of payroll, this would reduce uncollared employer rates by approximately 0.34%, saving approximately $63 million per biennium, due to a reduction in the final average salary (FAS) for those Tier One/Tier Two members whose contributions are employer paid or "picked up" and who retire under the Full Formula or Formula + Annuity benefit calculation method. A reduction in the employer "pick-up" to zero would reduce uncollared employer rates by 0.67%**,** and save $124 million per biennium.

Employer Impact: Would reduce costs for those employers that currently "pick-up" member IAP contributions, depending on the percentage selected. Employers fund IAP contributions for approximately 70% of active members. Based on current employer "pick-up," each across-the-board percentage point reduction would reduce employer cost by about $125 million per biennium systemwide. Employers will have to modify salary reporting to reflect the split contributions. The percentage of members whose employers "pick-up" and pay the IAP contribution is estimated as follows:

State and OUS: 100%
Community Colleges: 80%
School Districts: 55%
Local Governments: 85%
System-wide: 70%

Member Impact: Would be mixed depending on how many and at what rate employers set reduced "pick up" percentage. Affected members will see a take-home pay reduction if employers reduce the contribution "pick-up" percentage. Would reduce FAS for Tier One/Tier Two members whose contributions are "picked up" by up to 1% to 6%, reducing Full Formula and Formula + Annuity benefits for affected members.

PERS Administrative Impact: Would require significant system modifications to allow validations on an individual employer level of the split member/employer IAP contribution percentage. Ongoing administration would be required to input periodic changes and track the history of the varying percentages elected by the employer to be "picked up" when contributions are verified for a member's career.

Category: Benefit Modifications

Concept: Reduce or Eliminate 6% Member IAP Contributions

Description: Amend statutes to eliminate the member Individual Account Program (IAP) contribution or reduce the required contribution (currently 6% of covered salary).

Employer Rate and Liability Impact: The IAP is a member-funded individual account benefit that is separate from the defined pension benefit. Enacting this concept to eliminate the member IAP contribution would reduce uncollared employer rates by approximately 0.67%, saving approximately $124 million per biennium, due to a reduction in the final average salary (FAS) for those Tier One/Tier Two members whose IAP contributions are employer paid or "picked up" and who retire under the Full Formula or Formula + Annuity benefit calculation method.

Employer Impact: Would reduce total PERS costs for those employers that currently "pick-up" IAP contributions. Employers fund IAP contributions for approximately 70% of active members. Total elimination of the IAP contribution would translate into biennial savings for those employers of approximately $750 million. The percentage of members whose employers "pick-up" and pay the IAP contribution is estimated as follows:

State and OUS: 100%
Community Colleges: 80%
School Districts: 55%
Local Governments: 85%
System-wide: 70%

Member Impact: Would reduce future IAP benefits as contributions and compounded future earnings would not accrue. Would increase take-home pay for members who pay their own IAP contributions. Would not affect take-home pay for members whose IAP contributions are "picked up" by their employer. Would reduce FAS for Tier One/Tier Two members whose IAP contributions are "picked up" by up to 6%, reducing Full Formula and Formula + Annuity benefits for affected members.

PERS Administrative Impact: Would require increased coordination with the Oregon Investment Council as a total elimination of the IAP contribution would result in a decrease in cash flow to the PERS Fund of approximately $1 billion per biennium. Would require substantial system modifications to remove calculation, billing, tracking, allocation, and collection of member IAP contributions from current PERS and employer IT systems and reporting processes.

Category: Benefit Modification

Concept: Eliminate Tax Remedy Payments for Non-Oregon Residents

Description: Amend statutes to eliminate supplemental tax remedy benefits for PERS retirees that do not pay state income taxes in Oregon.

Employer Rate and Liability Impact: Uncollared employer contribution rates would decrease by about 0.4% of payroll, or save approximately $72 million per biennium. System liabilities would decrease by $450 million.

Employer Impact: No identifiable administrative impact.

Member Impact: Would reduce annual benefits of current out-of-state retirees by approximately 6%, on average. This would affect approximately 13% to 15% of current retirees, or about 14,000 to 16,000 retirees.

PERS Administrative Impact: Would require system modifications to coordinate withholding supplemental tax remedy benefits from those recipients who should no longer receive them. Oregon’s Department of Revenue would also need to coordinate eligibility determinations and complications would arise as recipients change residency status.

Category: Benefit Modification

Concept: 10% Across-The-Board Benefit Reduction

Description: Amend statutes to reduce all PERS retirement benefit payments to existing and future retired members by 10%.

Employer Rate and Liability Impact: Uncollared employer contribution rates would decrease by about 5.6% of payroll, or save approximately $1 billion per biennium. Would reduce system liabilities by $5.4 billion.

Employer Impact: No identifiable administrative impact.

Member Impact: Would reduce all current and future retirement benefits by 10%, impacting long-term and more recent retirees, as well as all future retirees. In 2009, PERS pension benefit payments totaled about $2.9 billion, so a 10% reduction would equal $290 million per year in reduced benefits.

PERS Administrative Impact: Would require system modifications to reduce benefit payments.

Category: Benefit Modification

Concept: Maximum Benefit Cap

Description: Amend statutes to limit annual retirement benefits to no more than 65% of the member's Final Average Salary (FAS) for all members not yet retired.

Employer Rate and Liability Impact: Would reduce "full career" system liabilities by $2.4 billion. If the full career liability change was entirely attributed to past service, uncollared employer contribution rates would decrease by about 2.1% of payroll or save approximately $378 million per biennium. (See note below)

Employer Impact: No identifiable administrative impact.

Member Impact: Would reduce annual benefits for future retirees that would otherwise exceed the limitation. Excluding lump sum retirements, approximately 33% or 1,593 of members who retired in 2009 received annual benefits in excess of 65% of FAS.

PERS Administrative Impact: Would require system modifications to impose the limitation and re-allocate the member account and employer reserve transfers to fund the benefit.

Options: Excluding lump sum retirements, maximum annual benefit caps at the following payout levels would have the impacts as shown: (See note below)

80% FAS cap:	Full career liability reduction: ~ $1.3 billion Uncollared employer rate reduction: ~ 1.1% Biennial reduction in employer contributions: ~$200 million Percent and number of 2009 retirees affected: 20% (981 retirees)
90% FAS cap	Full career liability reduction: ~ $0.9 billion Uncollared employer rate reduction: ~ .78% Biennial reduction in employer contributions: ~$140 million Percent and number of 2009 retirees affected: 14% (652 retirees)
100% FAS cap	Full career liability reduction: ~ $0.6 billion Uncollared employer rate reduction: ~ 0.52% Biennial reduction in employer contributions: ~$94 million Percent and number of 2009 retirees affected: 9% (422 retirees)

Note: Full career liabilities are also known as the Present Value of Benefits and reflects not just liabilities attributable to past service (the Actuarial Accrued Liability), but also liabilities attributable to projected future service for current active members.

Actual allocation between past and future service and employer rate impact would depend on the specific implementation language of such a concept and the application of the actuarial cost allocation method.

Category: Benefit Modification

Concept: Reduced Money Match Annuity Rate

Description: Amend statutes to set the interest rate used when deriving the annuity to calculate future Money Match retirement benefits at 6% instead of using the system's assumed earnings rate (currently 8%).

Employer Rate and Liability Impact: No near-term change in net employer rates. Accrued liabilities would be reduced by $1.7 billion and the unfunded actuarial liability rate component would decline by 1.5% of payroll. However, this would be entirely offset in the near-term by a 1.5% of payroll increase in the normal cost employer rate component due to shifting future retirees to the Full Formula or Formula + Annuity methods, both of which have a normal cost for each additional year of service. Following the 2003 PERS reform, members who retire under Money Match no longer have a normal cost for additional years of service.

Employer Impact: No identifiable administrative impact.

Member Impact: Would significantly reduce subsequent retirement benefits based on the Money Match calculation method and cause more members to retire with a benefit calculated using the Full Formula or Formula + Annuity methods. Reducing the benefit annuitization interest rate by two percentage points would result in a 16% reduction in a 60-year old member's Money Match calculated benefit and a 55-year old member's benefit would be reduced 25%. Note that all members are provided the highest of three benefit calculation methods, so reducing Money Match benefits could move affected members to Full Formula or Formula + Annuity "floors" that may limit the retirement benefit reduction, and may also affect projected savings.

PERS Administrative Impact: Would require the creation of new actuarial factor tables to be used for Money Match calculations and to derive the actuarial equivalent for optional benefit forms.

Category: Benefit Modification

Concept: Final Average Salary Factors

Description: Amend statutes to eliminate lump sum vacation pay and unused sick leave as factors included in determining a member's final average salary (FAS) used in formula-based benefit calculations for all members not yet retired.

Employer Rate and Liability Impact: Uncollared employer contribution rates would decrease by about 1.35% of payroll or save approximately $240 million per biennium. Would reduce system liabilities by about $400 million.

Employer Impact: Change the salary reporting process to eliminate these factors.

Member Impact: Tier One FAS would be reduced by eliminating both factors (estimated average reduction of about 8%). Tier Two FAS would be reduced by eliminating the unused sick leave factor (lump sum vacation is already excluded), for an estimated average reduction of about 6%. Only impacts Full Formula and Formula + Annuity benefit calculations, not Money Match benefits. No effect on OPSRP; both factors are already excluded from FAS calculation for OPSRP benefits.

PERS Administrative Impact: Would require significant system changes to revise or remove reporting, validation, verification, and calculation processes that use these factors.

Category: Benefit Modification

Concept: 10-Year Service Requirement for Cost-of-Living Adjustment

Description: Amend statutes to impose a separate 10 years of creditable service period for future retirees to be eligible for a COLA.

Employer Rate and Liability Impact: Uncollared employer contribution rates would decrease by about 0.5% of payroll or save approximately $90 million per biennium. Would reduce system liabilities by approximately $450 million.

Employer Impact: No identifiable administrative impact.

Member Impact: Members retiring with less than 10 years of service time would see diminished purchasing power over time due to the impact of inflation, beyond that experienced by other retirees. Approximately 7% of PERS members retiring in 2009 had less than 10 years of creditable service.

PERS Administrative Impact: Would require significant system changes to not apply COLAs for non-eligible retirees.

Category: Benefit Modification

Concept: Eliminate Cost-Of-Living Adjustment (COLA) for One Biennium

Description: Amend statutes to eliminate COLA increases from July 1, 2011 to July 1, 2013.

Employer Rate and Liability Impact: Uncollared employer contribution rates would decrease by about 0.9% of payroll. This would save approximately $162 million the first biennium and reduce system liabilities by $1 billion. An additional 1% of payroll rate reduction would occur for each successive biennium in which the COLA is eliminated (e.g. a six-year COLA elimination would reduce employer rates by 3% of payroll).

Employer Impact: No identifiable administrative impact.

Member Impact: Current and future retiree benefits would diminish in purchasing power over time due to the impact of inflation.

PERS Administrative Impact: Would require some system changes to eliminate COLA and exclude both additional accumulation and application of any banked COLA during the period that the COLA is eliminated.

Category: Benefit Modification

Concept: Limit Cost-Of-Living Adjustment (COLA) Applicability

Description: Amend statutes to limit future COLAs to the first $24,000 of a retiree's annual benefits for all current and future retirees.

Employer Rate and Liability Impact: Uncollared employer contribution rates would decrease by about 3.2% of payroll or save approximately $576 million per biennium. Would reduce system liabilities by approximately $3 billion.

Employer Impact: No identifiable administrative impact.

Member Impact: The average PERS retiree benefit is about $24,000 per year. Approximately 58% of all current retired members receive a benefit of $24,000 per year or less and would not be impacted until their annual benefit after COLAs grew to greater than $24,000. Benefits above the specified level would diminish further in purchasing power over time due to the impact of inflation on the portion of the annual benefit that exceeds $24,000.

PERS Administrative Impact: Would require system modifications to limit application of COLA to the specified benefit level.

Category: Benefit Modification

Concept: Fourth Tier of Benefits

Description: Adopt a new statutory defined benefit tier of benefits that provides 2/3 of the OPSRP benefit level for new hires by applying a 1% rather than 1.5% retirement factor to multiply times years of service and final average salary in the annual benefit calculation.

Employer Rate and Liability Impact: Negligible initially; will reduce rates on new hires by about 1.9% to 2% of payroll after the new tier's effective date.

Employer Impact: Would substantially increase administrative complexity as another retirement tier would be mixed into the benefit package and eligibility determinations would need to be made.

Member Impact: Would substantially reduce the retirement benefits for new hires, (e.g., a 1/3 reduction in the current factor would lower the new tier of benefits from the current 45% of final average salary for a 30-year OPSRP general service employee to 30% of final average salary for a 30-year "Tier 4" employee).

PERS Administrative Impact: Would require significant system changes depending on the design of the new benefit plan. Increases system complexity due to the need to manage a fourth tier of benefits.

Category: Benefit Modification

Concept: Defined Contribution (DC) Plan

Description: Adopt a statutory DC plan for new hires that requires employers to contribute 6% of the member's salary to an account, to combine with member contributions and receive market earnings and losses.

Employer Rate and Liability Impact: Negligible for several decades. All Tier One, Tier Two, and OPSRP unfunded liabilities and normal costs would still have to be funded by employers. Future combined payroll rates may decline as new plan members become a greater percentage of the workforce. DC plan employer contributions would need to be less than the OPSRP normal cost rate. The OPSRP normal cost rate for the 2011-13 biennium will average 6.4% of payroll.

Employer Impact: Transfers all investment and longevity risk from the employer to the employee; establishes a determinable, consistent benefit plan cost structure.

Member Impact: The impact on the value of retirement benefits for new hires will depend on investment performance and expenses, amount of employee contributions, and individual life-span. Members could "out-live" benefits. Prior projections for the DC-like IAP component of the current PERS hybrid plan were that a 6% contribution with an estimated 8% annual return provides a benefit equal to 15% to 20% of final average salary for a 30-year member.

PERS Administrative Impact: Would require a new fund investment and benefit administration system, or contracting with a third party administrator, or outsourcing both plan investment and administration functions. Increases administrative complexity and costs by introducing a different benefit structure.

Category: System Financing

Concept: Increase UAL Amortization Period

Description: PERS Board adopts new actuarial methodology to increase the amortization period of the current Tier One/Tier Two unfunded actuarial liability (UAL) from a closed 20 years to a closed 30 years. Future UALs or surpluses would be amortized over a new 30-year period. Current side account amortization periods would remain the same.

Employer Rate and Liability Impact: Increasing the amortization period from 20 to 30 years would initially lower <u>uncollared</u> employer rates by approximately 4% of payroll systemwide, “saving” approximately $720 million per biennium by shifting costs to future years. This would allow negative amortization of the UAL for approximately the first five years, causing the UAL to increase and the system funded status to decline. This increased UAL would need to be financed through future contributions. In addition, the UAL contribution rate would have to be assessed for an additional 10 years should earnings grow only at the assumed rate.

Employer Impact: Currently contemplated changes in Governmental Accounting Standards Board (GASB) financial reporting requirements might require UALs to be amortized over the average remaining service time of active members, which could be as short as 15 years or less. Lengthening the PERS system amortization period could result in additional reporting requirements due to a mismatch between the 30-year amortization period and the shorter GASB required amortization period. Lengthening the amortization period will also result in greater generational inequity as the payoff of UALs attributed to current members and retirees will be deferred, in part, to future member payrolls and future taxpayers.

Member Impact: No direct impact on member benefits.

PERS Administrative Impact: Could result in additional actuarial reporting requirements if GASB adopts amortization periods currently being considered.

Category: System Financing

Concept: Reduce Assumed Earnings Rate

Description: PERS Board, based on advice from OIC investment consultant and PERS actuary, reduces the assumed earnings rate assumption from the current 8% per year to 7.5% per year.

Employer Rate and Liability Impact: Lowering the assumed earnings rate assumption by 0.5% would increase uncollared employer Tier One/Tier Two rates by approximately 1% to 2% of payroll, increasing employer contributions by approximately $180 to $360 million per biennium. This change would result in a net increase in the UAL as accrued liabilities would increase due to the lowering of future earnings expectations. This increase would be offset, in part, by the lowering of expected costs related to future Money Match and Formula + Annuity calculated benefits.

Employer Impact: No identifiable administrative impact.

Member Impact: A reduction in the assumed earnings rate assumption would result in a reduction in the actuarial equivalency factors used to calculate Money Match and Formula + Annuity benefits. Money Match benefits would be reduced by approximately 4% to 8% depending on the current age of the affected member. Formula + Annuity benefits would be affected by approximately half as much as Money Match benefits. However, these reductions may be limited as the Full Formula calculated benefit would provide a floor, preventing some member's retirement benefits from declining by the full amount.

PERS Administrative Impact: Would require the creation of new actuarial factor tables to be used for Money Match calculations and to derive the actuarial equivalent for optional benefit forms.

Category: System Financing

Concept: Limit Net Employer Rate Increases to 3% of Payroll Per Biennium

Description: PERS Board adopts new rate collaring methodology to limit net rate increases to 3% of payroll from one biennium to the next. Rate increase would first apply to base, pooled rates. Employers with side accounts would be given the choice to either allow side account offsets to readjust or remain frozen for the next biennium.

Employer Rate and Liability Impact: Limiting the increase in net employer rates to 3% of payroll in the 2011-13 biennium would reduce the projected rate increases by 2% to 3% of payroll system-wide, “saving” approximately $360 million to $540 million per biennium by shifting costs to future years. System funded status would decline by about 1% of assets per biennium over the next four to five biennia, as employer contributions would not keep pace. Net rates will ultimately rise to a higher level in the future due to the effects of deferred collection of contributions. Also, if earnings do not meet projections, funded status deterioration and future rate impact would be more pronounced. Employer side accounts could also be exhausted before the debt on the associated pension obligation bonds is paid off.

Employer Impact: Could result in an accelerated depletion of side accounts, resulting in significantly higher long-term rates for affected employers. Could create substantial accounting, actuarial, and bond finance reporting concerns.

Member Impact: No direct impact on member benefits.

PERS Administrative Impact: Increases overall complexity of setting employer rates, but is manageable within current system design. Would create substantial financial and actuarial reporting concerns and workload.

Appendix (updated 3-20-12)

Demographic Information

Benefit Information

Employer Rate Information

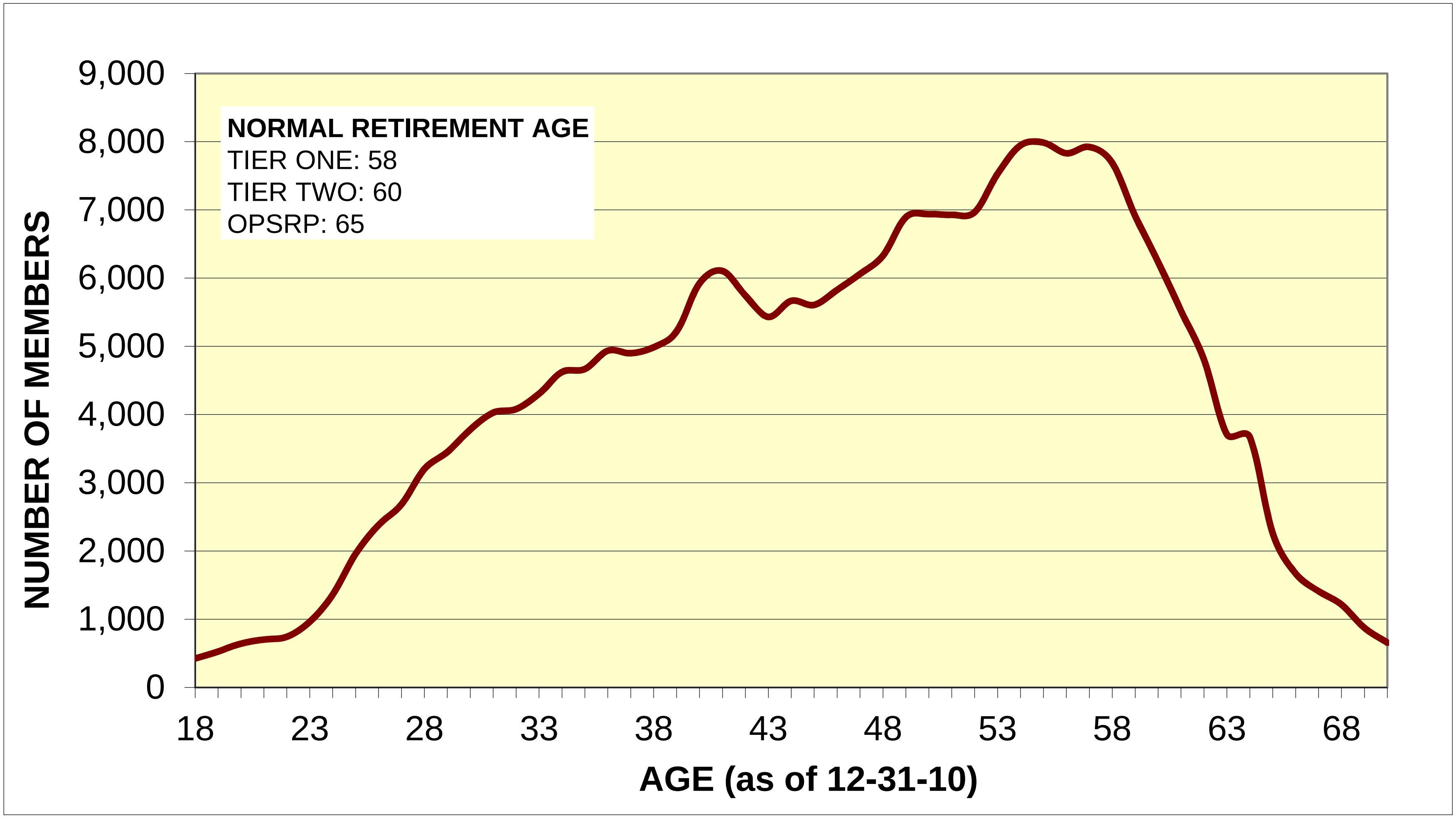
PERS Membership by Category
(as of December 31, 2010)

		State Govt.	Local Govt.	School Districts	Total
Tier One	Active	14,207	17,255	21,234	52,786
	Inactive	5,698	7,314	8,254	21,266
Tier Two	Active	13,362	17,806	21,221	52,389
	Inactive	3,489	5,963	6,178	15,630
OPSRP	Active	20,288	30,506	37,600	88,394
	Inactive	671	839	947	2,457
Sub-total	Active	47,857	65,567	80,145	**193,569**
	Inactive	9,858	15,379	14,116	**39,353**
Retirees*		27,403	29,467	56,594	**113,464**
TOTAL					**346,386**

* Includes beneficiaries but not members who received total lump-sum retirement or account withdrawal payouts.

PERS Oregon Public Employees Retirement System

Active and Inactive Member Age Distribution



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Members Eligible to Retire* (as of January 2012)

	ACTIVE MEMBERS	ACTIVES ELIGIBLE TO RETIRE	% ACTIVES ELIGIBLE TO RETIRE	INACTIVE MEMBERS	INACTIVES ELIGIBLE TO RETIRE	% INACTIVES ELIGIBLE TO RETIRE
STATE & UNIVERSITIES	43,505	15,084	35%	9,690	4,852	50%
SCHOOL DISTRICTS	73,423	22,538	31%	11,313	5,389	48%
LOCAL GOVERNMENT	54,143	16,513	31%	10,396	4,701	45%
COMMUNITY COLLEGES	10,627	4,213	39%	1,847	1,035	56%
JUDGES	181	71	40%	19	18	95%
TOTAL	**181,879**	**58,419**	**32%**	**33,265**	**15,995**	**48%**

* 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.

Retirees with Hours Reported Working in a PERS-Covered Position in 2011

Hours	Employer Group			Total
	State and University	Local Government	School Districts	
< 200	335	1,115	2,860	4,310
201 - 400	243	551	1,196	1,990
401 - 600	203	409	908	1,520
601 - 800	168	285	609	1,062
801 - 1039	283	433	613	1,329
> 1039	119	228	177	525
Total	**1,351**	**3,021**	**6,363**	**10,735**

PERS Oregon Public Employees Retirement System

Benefit Comparisons

Tier One covers members hired before January 1, 1996; Tier Two covers members hired between January 1, 1996 and August 28, 2003; and OPSRP covers members hired on or after August 29, 2003.

The IAP contains all member contributions (6% of covered salary) made on and after January 1, 2004.

	Tier One	**Tier Two**	**OPSRP Pension**	**IAP**
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	55
Early retirement	55 (50 for P&F)	55 (50 for P&F)	55, if vested (50 for P&F)	55
Regular account earnings	Guaranteed assumed rate annually (currently 8%)	No guarantee; market returns	N/A; no member account	No guarantee; market returns
Variable account earnings	Market returns on 100% global equity portfolio	Market returns on 100% global equity portfolio	N/A; no member account	N/A
Retirement calculation methods	Money Match, Full Formula, or Formula + Annuity (if eligible)	Money Match or Full Formula	Formula	Six account distribution options
Full Formula benefit factor	1.67% general; 2.00% P&F	1.67% general; 2.00% P&F	1.50% general; 1.80% P&F	N/A
Formula + Annuity benefit factor	1.00% general; 1.35% P&F	N/A	N/A	N/A

Oregon Public Employees Retirement System

Benefit Comparisons (continued)

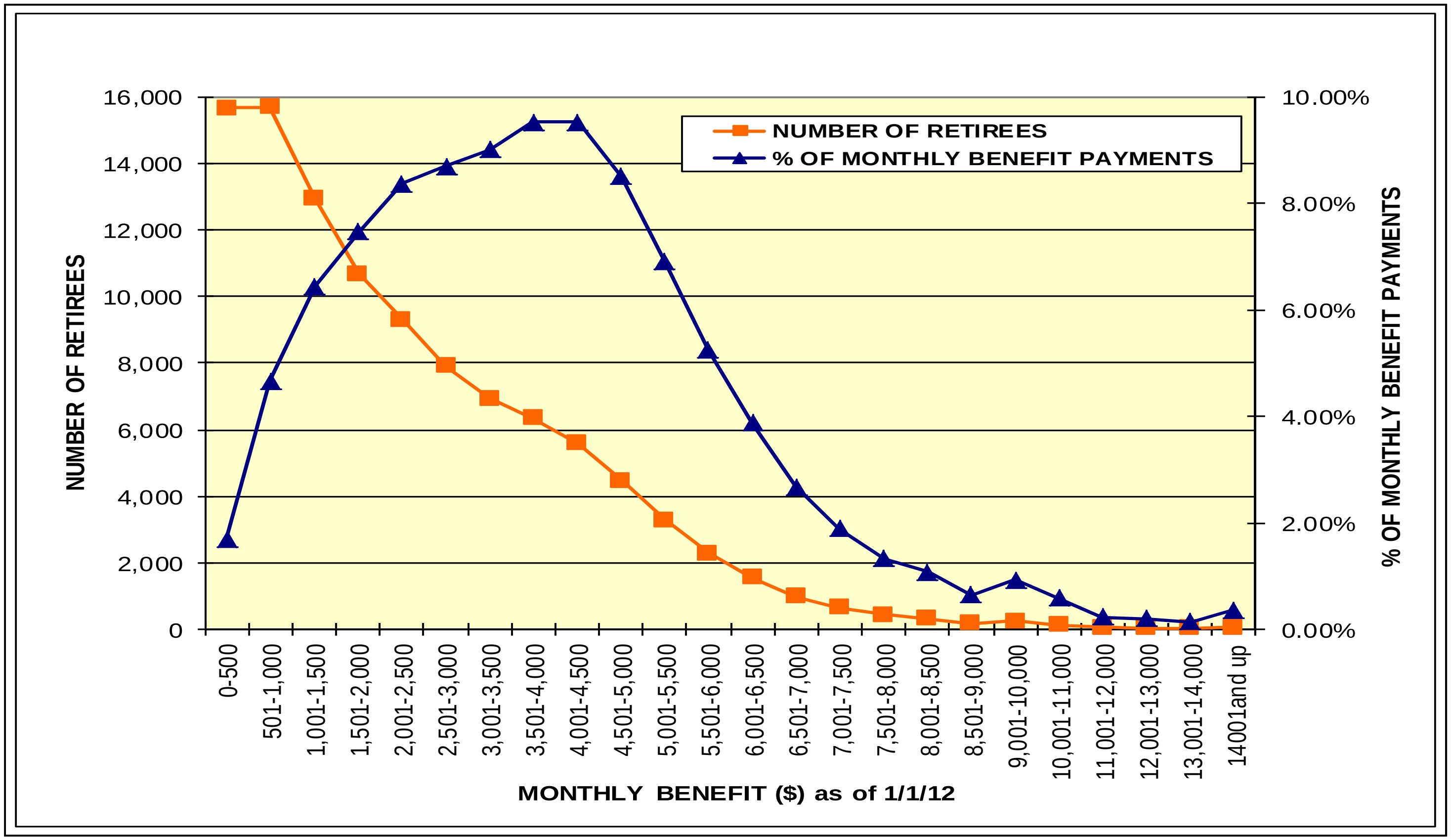
	Tier One	Tier Two	OPSRP Pension	IAP
Oregon state income tax remedy	If eligible, higher of 9.89% on service time before Oct. 1, 1991 or 4.0% or less based on total service time	No tax remedy provided	No tax remedy provided	No tax remedy provided
Lump-sum vacation payout				
Included in covered salary (6%)	Yes	Yes	No	Yes for Tier One and Tier Two; no for OPSRP
Included in FS	Yes	No	No	N/A
Unused sick leave included in FS	Yes	Yes	No	N/A
Vesting	Contributions in each of 5 yrs or active member at age 50	Contributions in each of 5 yrs or active member at age 50	5 yrs qualifying service or normal retirement age	Immediate
2% maximum annual cost-of-living adjustments after retirement	Can retire through July 1 and receive maximum COLA for the year	Can retire through July 1 and receive maximum COLA for the year	COLA prorated in year of retirement based on retirement date	N/A

P&F = police and firefighters; FS = final salary; COLA = cost-of-living adjustment; N/A = not applicable

Note: PERS uses three methods to calculate Tier One and Tier Two retirement benefits: Full Formula, Formula + Annuity (for members who made contributions before August 21, 1981), and Money Match. PERS uses the method (for which a member is eligible) that produces the highest benefit amount. OPSRP Pension benefits are based only on a formula method.

PERS Oregon Public Employees Retirement System

Monthly Benefits: All Retirees



Monthly Benefit ($)	# of Retirees	% of Benefits Paid	Monthly Benefit ($)	# of Retirees	% of Benefits Paid
0 - 500	15,667	1.69%	3,001 - 3,500	6,930	9.01%
501 - 1,000	15,697	4.67%	3,501 - 4,000	6,353	9.53%
1,001 - 1,500	12,940	6.45%	4,001 - 4,500	5,598	9.53%
1,501 - 2,000	10,688	7.47%	4,501 - 5,000	4,480	8.50%
2,001 - 2,500	9,321	8.38%	5,001 - 5,500	3,293	6.91%
2,501 - 3,000	7,911	8.70%	5,501 - 6,000	2,285	5.25%
Subtotal	**72,224**		**Subtotal**	**28,939**	
% of total	**68.23%**	**37.35%**	**% of total**	**27.34%**	**48.71%**

Monthly Benefit ($)	# of Retirees	% of Benefits Paid	Monthly Benefit ($)	# of Retirees	% of Benefits Paid
6,001 - 6,500	1,554	3.87%	9,001 - 10,000	246	0.93%
6,501 - 7,000	993	2.68%	10,001 - 11,000	140	0.59%
7,001 - 7,500	654	1.89%	11,001 - 12,000	50	0.23%
7,501 - 8,000	427	1.32%	12,001 - 13,000	39	0.20%
8,001 - 8,500	327	1.08%	13,001 - 14,000	26	0.14%
8,501 - 9,000	186	0.65%	14,001 and up	53	0.36%
Subtotal	**4,141**		**Subtotal**	**554**	
% of total	**3.91%**	**11.50%**	**% of total**	**0.52%**	**2.44%**

TOTAL RETIREES: 105,858 (does not include alternate payees and survivors)
TOTAL DOLLARS: $249.6 million

PERS Oregon Public Employees Retirement System

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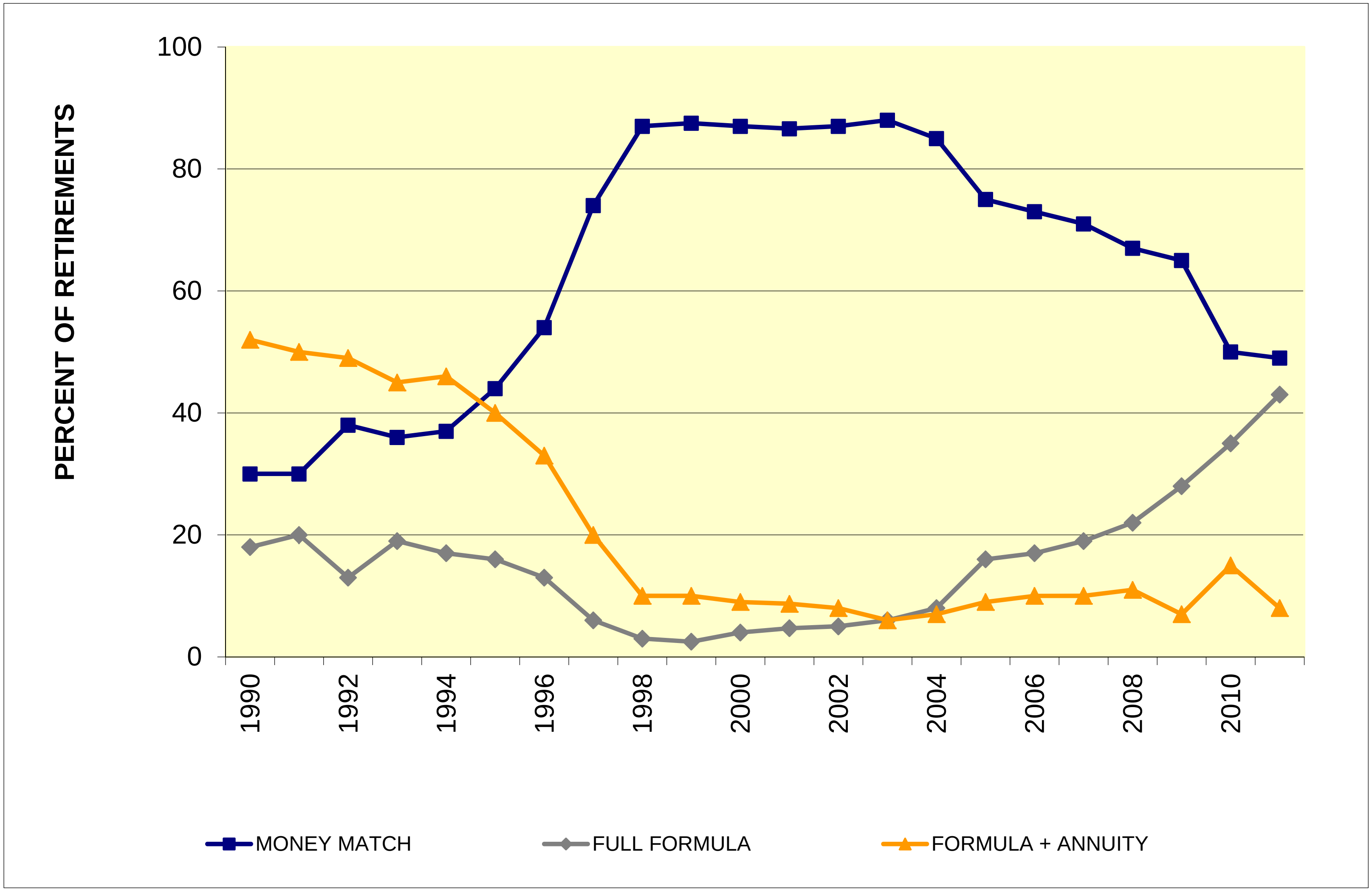
Tier One/Tier Two Retirement Benefit Calculation Method Trends



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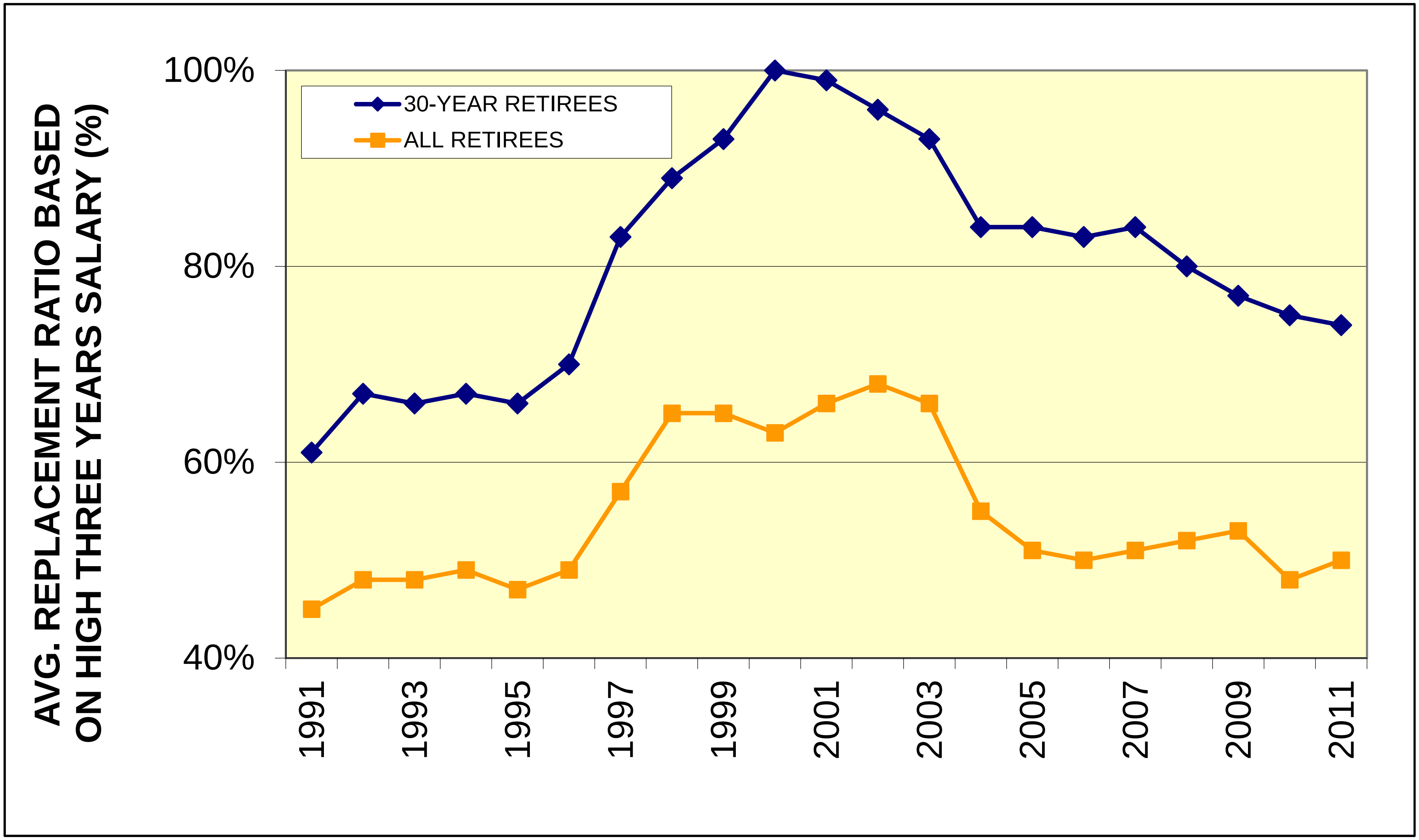
Replacement Ratio Trends



Oregon Public Employees Retirement System

History of PERS Benefit Caps and Reductions

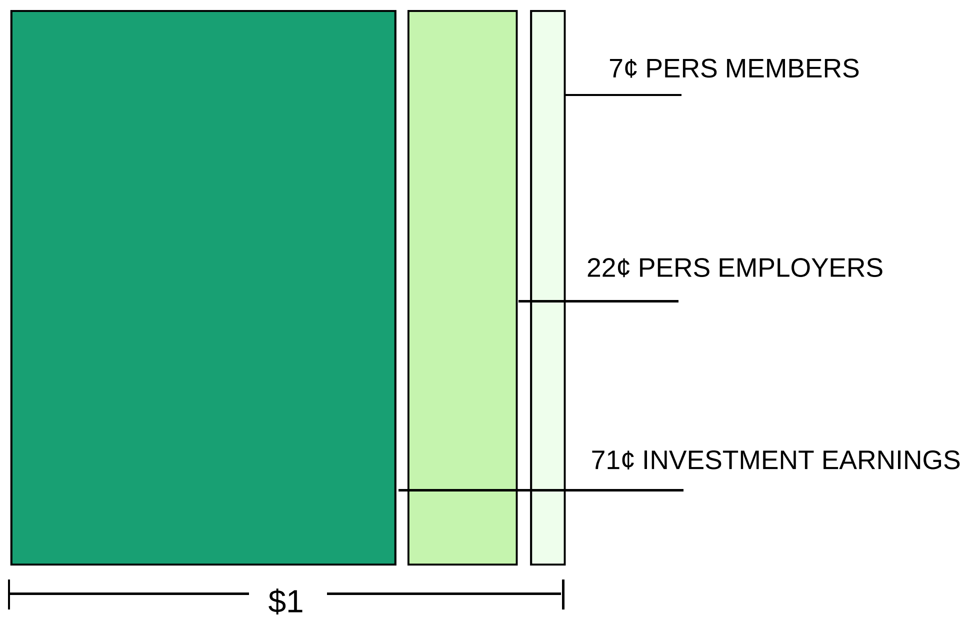
Category	Year	Action	Affected Members
Retirement Age/Vesting	1996	Increased retirement age for new members from 58 to 60 (General Service)	Tier Two
	2003	Increased retirement age from 60 to 65 (General Service) 55 to 60 (Police & Fire)	OPSRP
	2003	Increased vesting from 5 years or age 50 to 5 years or age 65 (General Service) or age 60 (Police & Fire)	OPSRP
Benefit Calc/Formula	1981	Eliminated Formula Plus Annuity benefit calculation method	Tier One
	1991	Imposed state income tax on PERS benefits	All
	2003	Decreased Full Formula benefit pension factor (General Service: 1.67 to 1.50; Police & Fire 2.00 to 1.80)	OPSRP
	2003	Eliminated Money Match benefit calculation method	OPSRP
	2003	Redirected member contributions to freeze Money Match (MM) benefit levels	Prospective MM retirees
	2003	Required regularly updated mortality assumptions and actuarial factors	All
	2005	Adjusted member accounts and benefit payments to recapture 1999 earnings over-crediting	Tier One
Final Average Salary	1996	Excluded lump sum vacation payouts from final average salary	Tier Two
	1996	Federal limit on member contributions and benefits	Tier Two/OPSRP
	2003	Eliminated lump sum vacation payouts from subject salary	OPSRP
	2003	Eliminated accumulated sick leave from final average salary	OPSRP
Investment Risk Allocation	1976	Gain Loss Reserve established to "self-fund" assumed earnings rate crediting	Tier One
	1996	Eliminated guaranteed return on regular accounts for new members	Tier Two
	2000	Eliminated 'Last Known Rate' member account crediting guarantee	Tier One
	2003	Required members to self-fund guaranteed return on member accounts	Tier One
	2003	Subjected all future member contributions made on or after 01/01/04 to actual earnings and losses with no guarantee	All
Retiree Health Benefits	1989	Capped Medicare premium subsidy at $60 per month	Tier One/Two
	2003	Eliminated post-retirement health insurance premium subsidies	OPSRP
Cost-of-Living Adjustment (COLA)	1973	Capped COLA at actual inflation rate or 2%, whichever is less	All retirees
	2003	Pro-rated first year COLA	OPSRP
	2003	Eliminated COLA 'bank' carryover	OPSRP

PERS Oregon Public Employees Retirement System

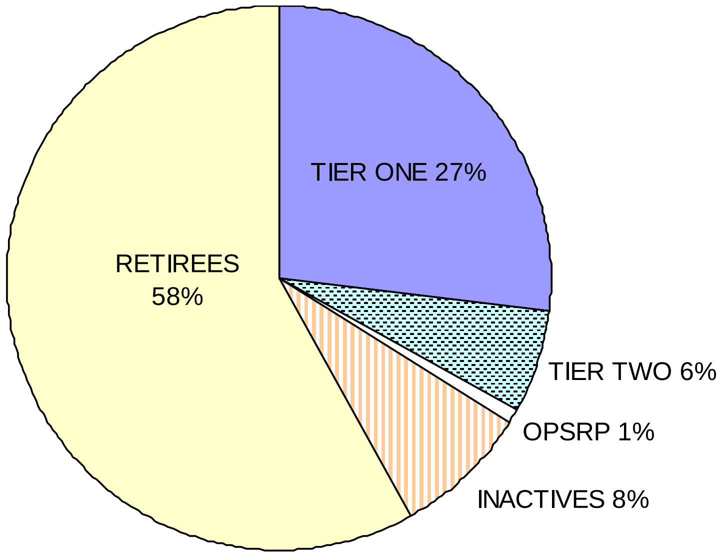
Benefit Funding and Accrued Liabilities

FUNDING SOURCES (1970-2010)

Money for benefit payments come from three sources



ACCRUED LIABILITIES



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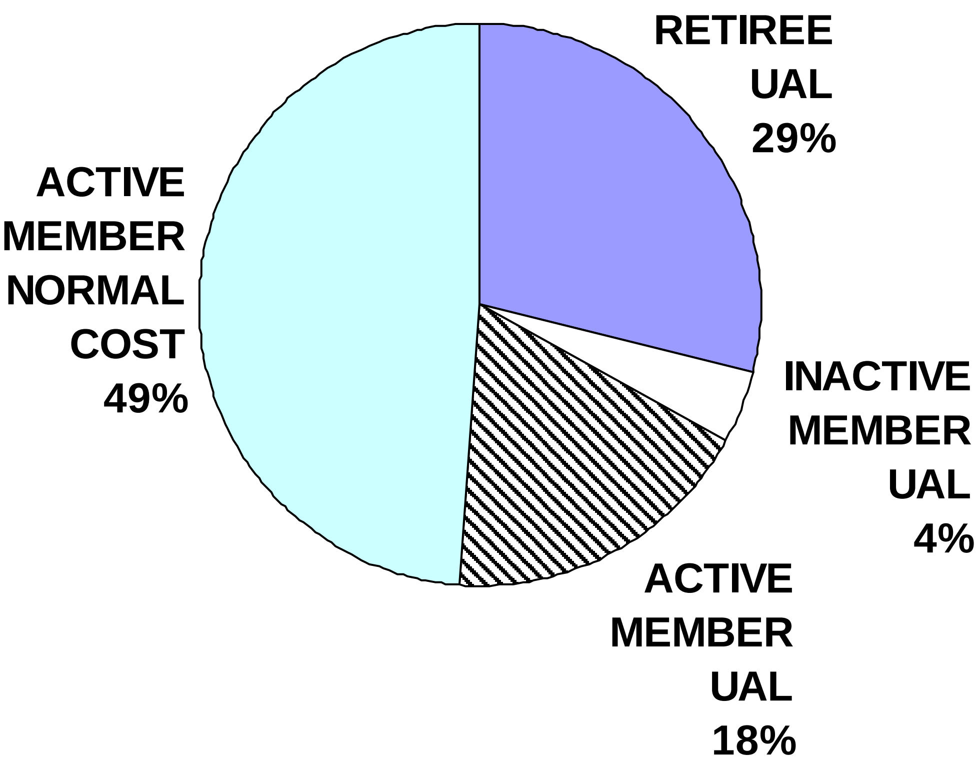
PERS Oregon Public Employees Retirement System

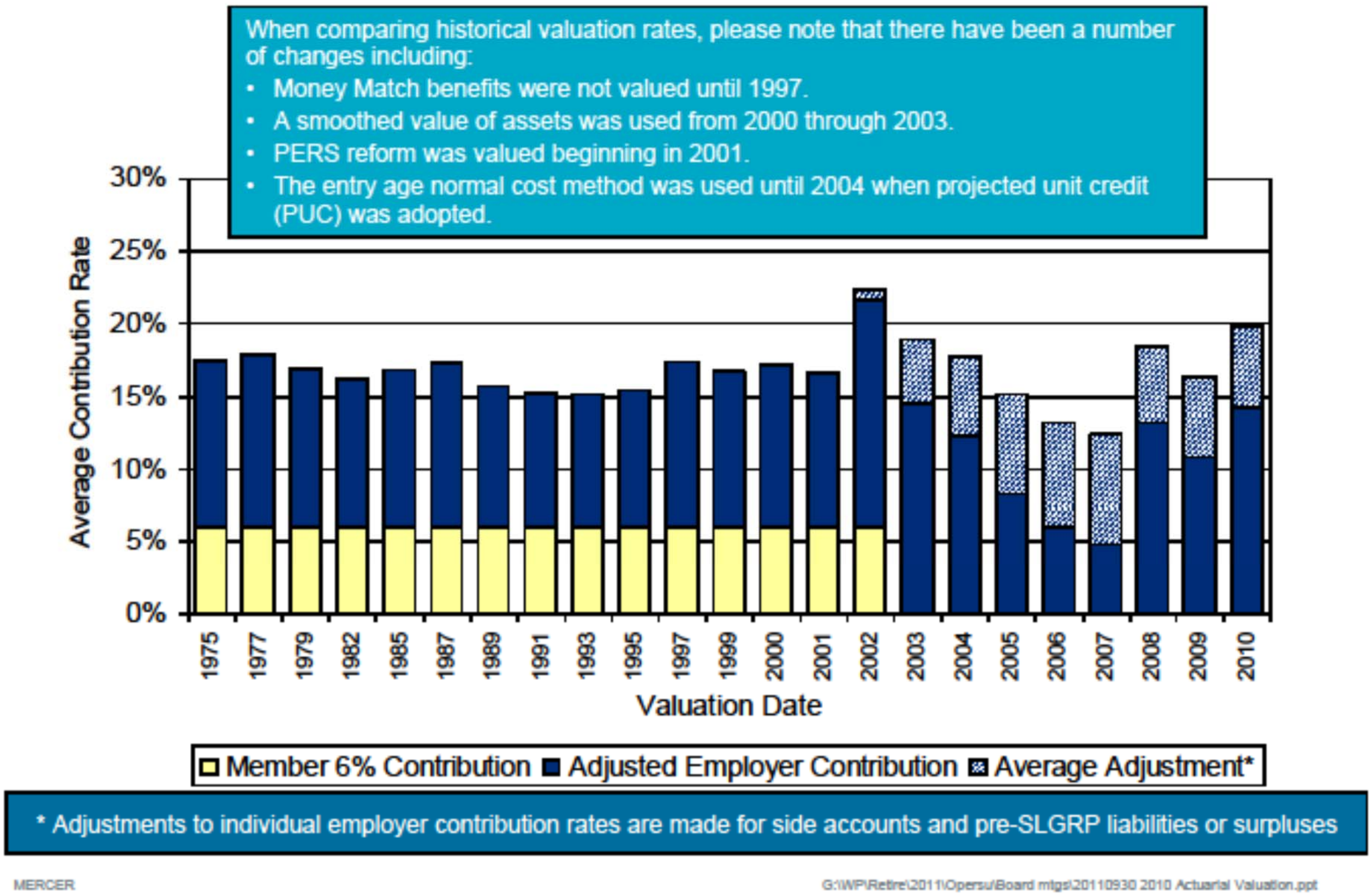
PERS 2011-13 Base Employer Rate Allocation



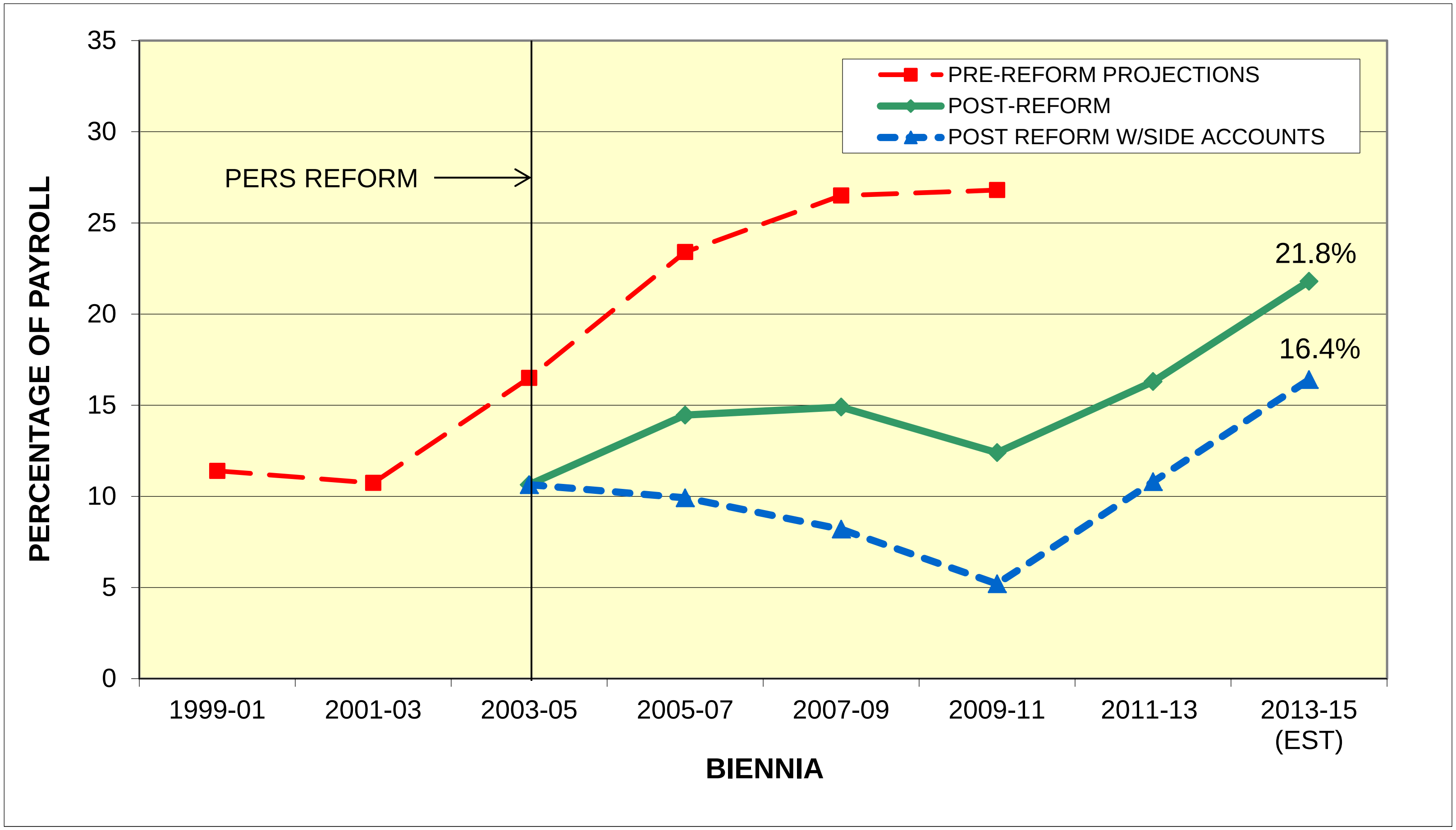
- Normal cost: Cost of benefits earned in the current period
- Unfunded actuarial liability (UAL): Amortized cost of accrued liabilities not covered by actuarial value of assets

PERS Oregon Public Employees Retirement System

Historical Perspective on Valuation Rates
(Excluding IAP)



PERS Employer Rates:
Pre-Reform Projected vs. Post-Reform Actual



- EXCLUDES 6% MEMBER CONTRIBUTIONS
- INCLUDES TIER ONE/TIER TWO & OPSRP
- RATES FOR 2005-07 & BEFORE ARE AS OF VALUATION DATE
- PROJECTED 2013-15 RATES ARE DISPLAYED BASED ON CURRENT RATE-SETTING POLICIES & ASSUMPTIONS
- PRE-REFORM PROJECTIONS PREPARED APRIL 7, 2003 REFLECTING METHODS AND ASSUMPTION IN EFFECT AT THE TIME, INCLUDING AN ANNUAL 8% INVESTMENT RETURN

PERS Oregon Public Employees Retirement System

Average Net Employer Rates and Contributions

	2009-2011	2011-2013	2011-2013 Net Increases
State Govt.			
Net Employer Rate	3.3%	10.1%	+ 6.8%
Contributions ($M)	$153	$510	+ $357
Projected Payroll ($M)	$4,710	$5,070	
School Districts			
Net Employer Rate	5.4%	11.4%	+ 6.0%
Contributions ($M)	$308	$703	+ $395
Projected Payroll ($M)	$5,750	$6,190	
Independents/All Others			
Net Employer Rate	6.4%	10.9%	+ 4.5%
Contributions ($M)	$422	$770	+ $348
Projected Payroll ($M)	$6,570	$7,070	
All Employers			
Net Employer Rate	5.2%	10.8%	+ 5.6%
Contributions ($M)	$884	$1,984	+ $1,100
Projected Payroll ($M)	$17,030	$18,330	

"Net Employer Rate" includes side account offsets but not IAP contributions or the costs of debt service on Pension Obligation bonds. Contributions are total new dollars coming into the system, by biennium. Rates for 2011-2013 were effective July 1, 2011. Payroll amounts were projected based on the December 31, 2009 valuation payroll and assuming a 3.75% annual payroll growth.

State of Oregon Total PERS Cost History

(Percent of Covered Salary)

Biennium	Base* Rate	Side Account Offset	Pension Obligation Bond Cost**	Member Contributions	Total PERS Cost
2001 - 2003	9.49%	-	-	6.00%	**15.49%**
2003 - 2005	11.31%	-6.60%	6.45%	6.00%	**17.16%**
2005 - 2007	16.12%	-8.06%	6.20%	6.00%	**20.26%**
2007 - 2009	16.18%	-9.47%	5.87%	6.00%	**18.58%**
2009 - 2011	13.00%	-9.83%	5.95%	6.00%	**15.12%**
2011 - 2013	16.05%	-6.45%	5.62%	6.00%	**21.22%**

* Source: Mercer blended PERS/OPSRP rate reports

**DAS pension obligation bond cost charges per PERS Budget section.

When comparing historical valuation rates, please note that there have been a number of changes including:

- Money Match benefits were not valued until 1997
- A smoothed value of assets was used from 2000 through 2003
- PERS Reform was valued beginning 2001
- The entry age normal cost method was used until 2004 when projected unit credit (PUC) was adopted
- Beginning January 1, 2004, member contributions were placed in the IAP

PERS Oregon Public Employees Retirement System

System Wide Employer Contribution Rates

Employer Contributions	2011-2013 Actual	2013-2015 (Estimated)		
		Prior Estimate (based on 2010 investment returns)	**Updated Estimate** (based on 2011 investment returns)*	**Rate Increase** (from prior estimate to updated estimate)
Base rate (before side account offsets)	16.3%	19.9%	21.8%	1.9%
Net rate (after side account offsets)	10.8%	14.2%	16.4%	2.2%

***** Based on 2011 investment performance (2.21%) and preliminary 2011 earnings crediting. The prior estimate assumed an 8% investment return for 2011. Employer contribution rates for 2013-2015 will be determined by the December 31, 2011 system valuation (using investment returns from 2010 and 2011). Rates will be adopted by the PERS Board at its September 28, 2012 meeting.

Rates include Tier One/Tier Two, OPSRP, and RHIA/RHIPA but do not include the cost of any employer pick-up of IAP contributions or costs associated with pension obligation bond repayment.

PERS Oregon Public Employees Retirement System

2007-2011 Funded Status and UAL

	Calendar Year				
	2007	**2008**	**2009**	**2010**	**2011 (est)**
Funded Status Including side accounts (%) Excluding side accounts (%)	112% 97%	80% 70%	86% 76%	87% 78%	81% 74%
Unfunded Actuarial Liability (UAL) Including side accounts ($ billion) Excluding side accounts ($ billion)	$ -6.1* $1.5	$11.0 $16.1	$8.1 $13.6	$7.7 $13.3	$11 $16

* This is a surplus.

SL1