



July 23, 2010

## **December 31, 2009 Actuarial Valuation** Oregon Public Employees Retirement System

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## Key Findings

### Overview of System-Wide December 31, 2009 Valuation Results

- Funded status improved during 2009, but is still well below 2007 levels

Tier 1/Tier 2/OPSRP Combined Funded Status as of December 31			
	2007	2008	2009
Excluding side accounts	98%	71%	<b>76%</b>
Including side accounts	112%	80%	<b>86%</b>

- Side accounts represent the market value of deposited but not-yet-utilized prepaid contributions for employers that voluntarily elected to establish side accounts
- Year-to-date 2010 (regular account) investment return through May 31 was -0.8%
  - If overall 2010 return turned out to be -0.8%, we would project December 31, 2010 funded status to decrease to 70% excluding side accounts and 78% including side accounts
  - Contribution rates will not be affected by 2010 investment returns until July 2013, based on results of the December 31, 2011 valuation
- Rates are set biennially based on results of “odd year” actuarial valuations
  - 2009 funded status excluding side accounts is used to set 2011-2013 employer rates
  - 2011-2013 employer contribution rates will increase sharply from their historic lows

## Key Findings

### Overview of System-Wide December 31, 2009 Valuation Results

- Current policy sets rates to pay off Tier 1/Tier 2 shortfalls over 20 years as a level percent of employer payroll if assumptions are met
- Policy includes a rate collar, which spreads large rate changes across more than one biennium

#### System-Wide Tier 1/Tier 2/OPSRP Plus Retiree Healthcare Contribution Rates

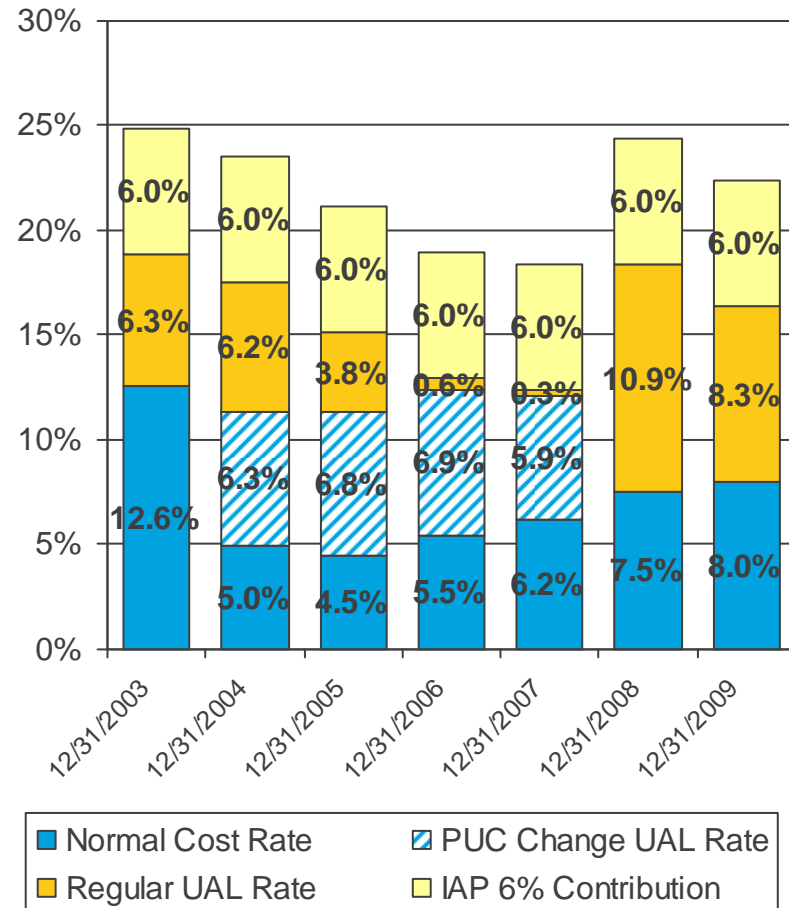
	2009-2011	<b>Collared 2011-2013</b>	Uncollared 2011-2013
Base rates (before effect of side account offsets)	12.4%	<b>16.3%</b>	20.3%
Net rates (reflect side account rate offsets)	5.2%	<b>10.8%</b>	14.8%

- Unlike base rates, net rates are affected by side account rate offset levels, which will be lower in 2011-2013 due to the 2008 market downturn
- Individual employers with large side accounts will have individual net rate increases greater than the system-wide net rate increase
- Rates shown above do not include contributions to the Individual Account Program (IAP) or debt service payments on pension obligation bonds

## Key Findings

### Average Base Contribution Rates Including Retiree Healthcare and IAP

- Since active Members projected to retire under the Money Match formula do not generate normal cost, normal cost rates are expected to increase over time as the system continues to migrate from Money Match to Full Formula and OPSRP
  - That migration temporarily accelerated due to the 2008 market downturn
- The regular unfunded actuarial liability (UAL) rate is significantly higher than the rate currently in effect, which was set at 12/31/2007, due to investment losses
  - Absent the rate collar, the regular UAL rate would be 12.3%
- The UAL established at the adoption of the projected unit credit (PUC) cost allocation method will be fully amortized by July 2011
- Rates shown here do not reflect the impact of side accounts or pre-SLGRP liabilities or surpluses



## Key Findings

### Average Base Contribution Rates Including Retiree Healthcare (Excluding IAP)

- While system-wide base rates increased by 3.9% of payroll, the increase varied from rate pool to rate pool
  - For example, since the State and Local Government Rate Pool (SLGRP) is more well funded (77% funded status excluding side accounts) than the School District rate pool (74%), SLGRP has a narrower rate collar

Average Base Employer Rates	SLGRP	School Districts	Independents <sup>1</sup>	OPSRP General	OPSRP P&F	System-Wide
2009-2011 Base Rates	11.4%	14.3%	10.7%	12.0%	14.7%	12.4%
<b>2011-2013 Base Rates</b>	<b>15.8%</b>	<b>19.5%</b>	<b>14.6%</b>	<b>14.5%</b>	<b>17.2%</b>	<b>16.3%</b>
Base Rate Increase	4.4%	5.2%	3.9%	2.5%	2.5%	3.9%

- Changes in base rates vary significantly by individual employer and to a lesser extent by rate pool
  - 2011-2013 Tier 1/Tier 2/OPSRP base contribution rates exceed 40% of payroll for some small employers with very poor unpooled demographic experience

<sup>1</sup> Independent employers, including Judiciary, are treated as a single pool for purposes of this exhibit.

## Key Findings

### Average Net Contribution Rates Including Retiree Healthcare (Excluding IAP)

- Net rate increases are greater than base rate increases due to the combination of two effects:
  - An increase in collared base rates, as detailed on the previous slide
  - A decrease in side account rate offset levels effective for 2011-2013 as an outcome of the 2008 market downturn

Average Net Employer Rates	SLGRP	School Districts	Independents	OPSRP General	OPSRP P&F	System-Wide
2009-2011 Net Rates <sup>1</sup>	4.4%	5.2%	9.6%	4.9%	7.5%	5.2%
<b>2011-2013 Net Rates<sup>2</sup></b>	<b>10.8%</b>	<b>11.7%</b>	<b>13.7%</b>	<b>9.0%</b>	<b>11.7%</b>	<b>10.8%</b>
Net Rate Increase	6.4%	6.5%	4.1%	4.1%	4.2%	5.6%

- Changes in net rates vary significantly by individual employer and to a lesser extent by rate pool, with larger changes for individual employers with side accounts

1 In this exhibit, 2009-2011 base rates are adjusted by two factors to calculate estimated system-wide net rates. Adjustments are for side accounts and pre-SLGRP liabilities/(surpluses). The 2009-2011 rates in this exhibit were accumulated on an employer by employer basis for SLGRP and School Districts, and adjustments were limited when an individual employer reaches a 0% contribution rate. Independent employers, including Judiciary, are treated as a single pool for purposes of this exhibit.

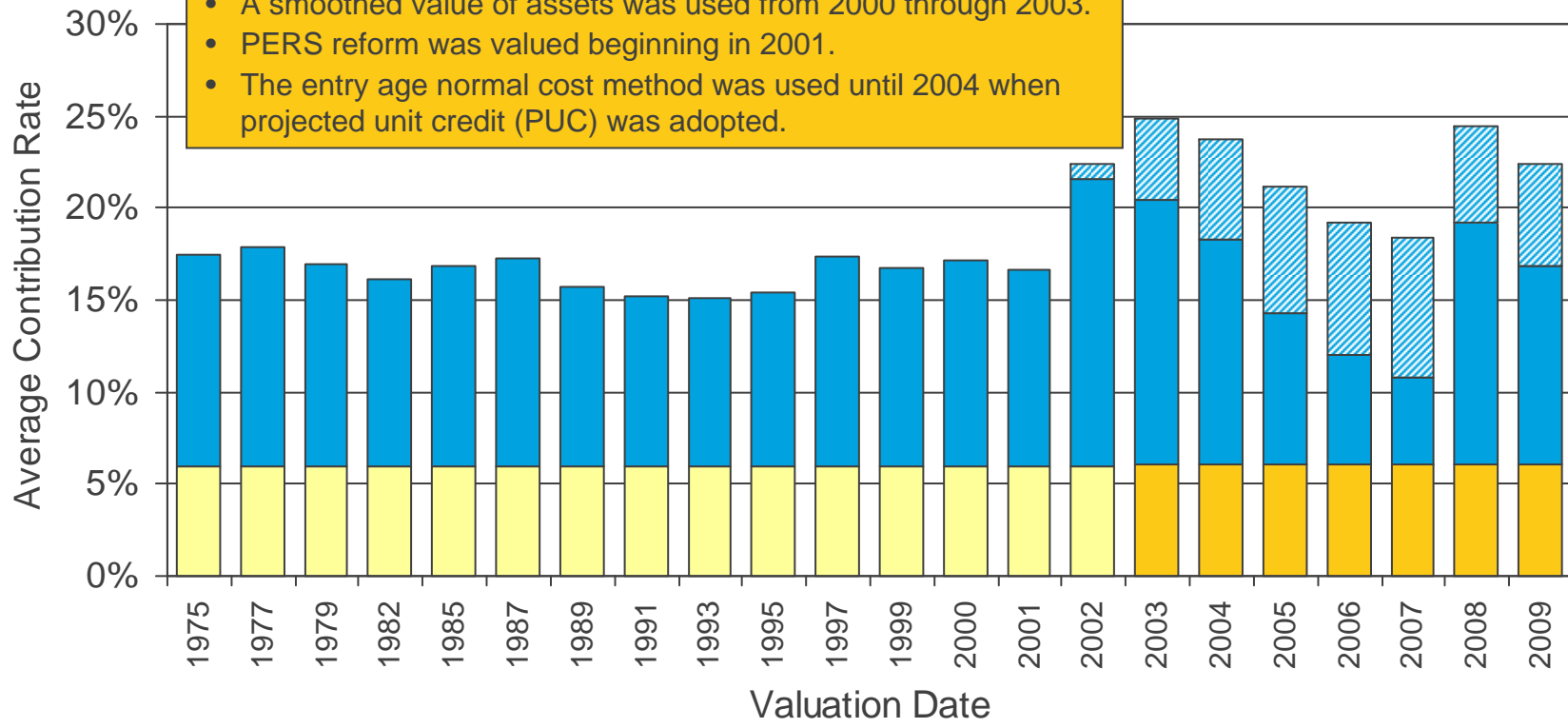
2 In this exhibit, 2011-2013 base rates are adjusted by two factors to calculate estimated system-wide net rates. Adjustments are for side accounts and pre-SLGRP liabilities/(surpluses) and are assumed not to be limited when an individual employer reaches a 0% contribution rate. Independent employers, including Judiciary, are treated as a single pool for purposes of this exhibit.

# Key Findings

## Historical Perspective on Valuation Rates (Including IAP)

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 in 2001.
- The entry age normal cost method was used until 2004 when projected unit credit (PUC) was adopted.



Member 6% Contribution
  IAP 6% Contribution  
 Adjusted Employer Contribution
  Average Adjustment\*

\* Adjustments to individual employer contribution rates are made for side accounts and pre-SLGRP liabilities or surpluses

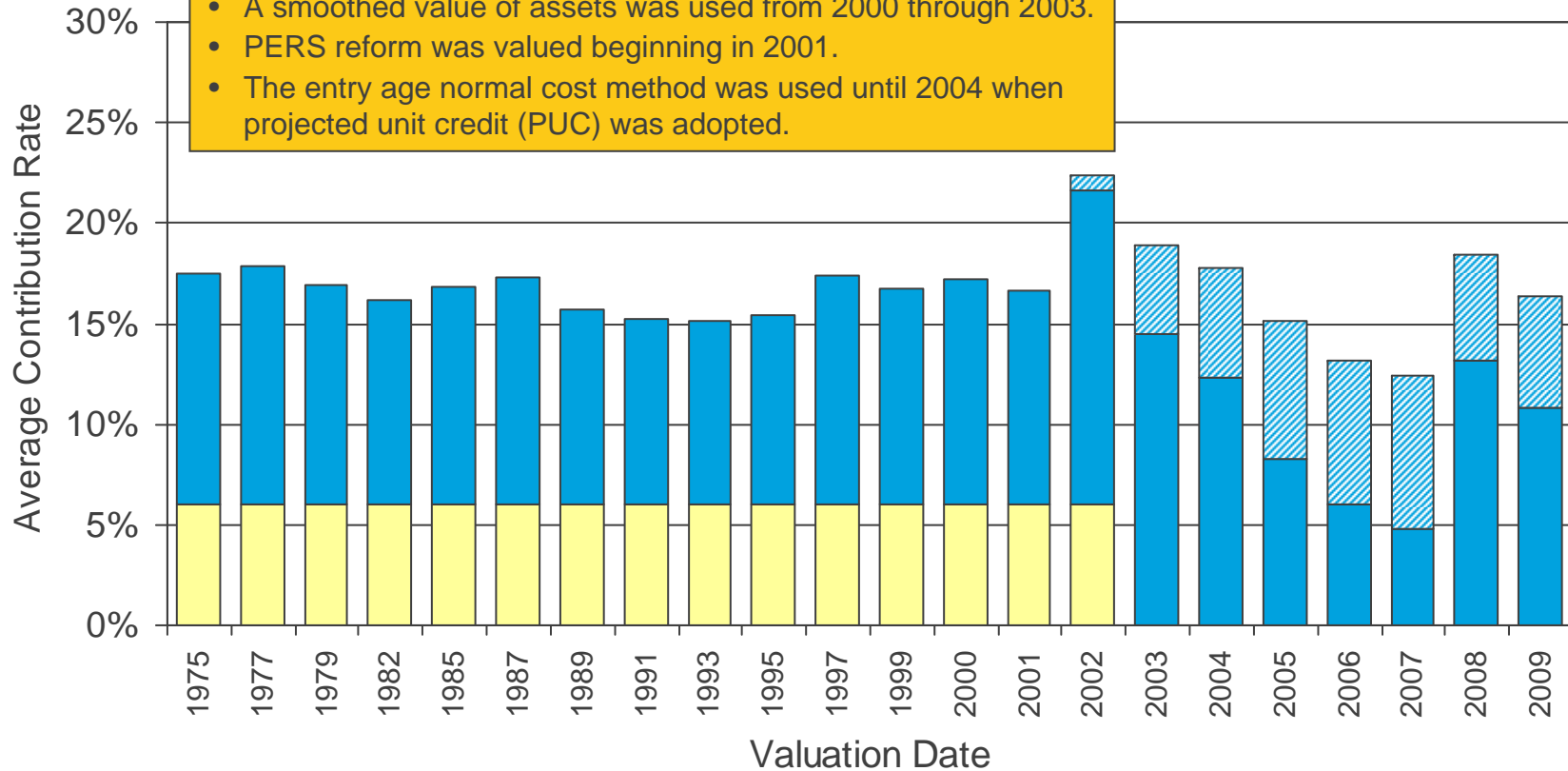


# Key Findings

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Member 6% Contribution
  Adjusted Employer Contribution
  Average Adjustment\*

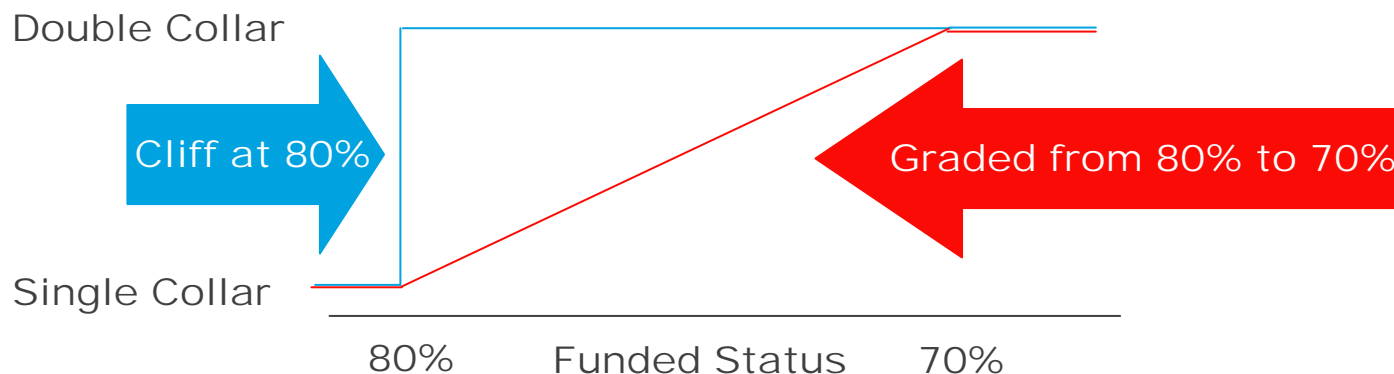
\* Adjustments to individual employer contribution rates are made for side accounts and pre-SLGRP liabilities or surpluses

## Key Findings

### Revised Implementation of the Double Rate Collar

- The rate collar limits changes in the base contribution rate from biennium to biennium
  - Under normal conditions, the collar width is the greater of:
    - 3% of payroll, or
    - 20% of the current base rate
  - If the funded status is low, the width of the collar doubles
- In January, the Board adopted a revised implementation of the double rate collar
  - The prior “cliff” approach doubled the size of the collar immediately when an employer’s funded status dropped below 80%
  - The revised implementation provides a graded schedule widening the collar from 80% to 70% funded status

— Previous Implementation — Revised Implementation



## Key Findings

### Revised Implementation of the Double Rate Collar

- The collar is applied separately for each rate pool or independent employer
- On an estimated system-wide basis, using the graded approach rather than the cliff approach lowered collared employer rates by 1.8% percent of payroll
- This chart shows the impact of the revised implementation on the Tier 1/Tier 2 rate pools
- Since Tier 1/Tier 2 unfunded accrued liability (UAL) is amortized across combined Tier 1/Tier 2/OPSRP payroll, collar limits on Tier 1/Tier 2 rate pools also affect rates charged on OPSRP payroll

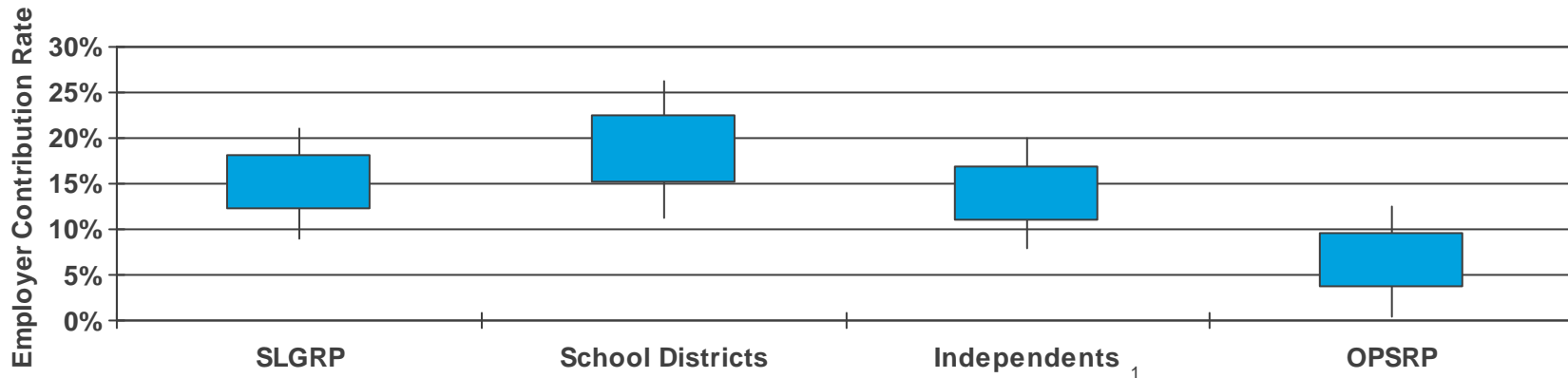
	SLGRP	School Districts	Independents <sup>1</sup>	System-Wide
Width of Single Collar	3.0%	3.0%	3.0%	3.0%
Funded Status Excluding Side Accounts	77%	74%	82%	76%
12/31/2009 Collar Width – Previous “Cliff” Implementation Approach	6.0%	6.0%	3.0%	6.0%
12/31/2009 Collar Width – Revised “Graded” Implementation Approach	3.9%	4.8%	3.0%	4.2%
<b>Change in Collar Width Due to Revised Implementation</b>	<b>(2.1)%</b>	<b>(1.2)%</b>	<b>0.0%</b>	<b>(1.8)%</b>

<sup>1</sup> Independent employers, including Judiciary, are treated as a single pool for purposes of this exhibit.

## Key Findings

### Collar Limits for Base Rates Effective 2013-2015 (Excluding Retiree Healthcare and IAP)

July 1, 2013 Collar Limits



- The rate collar limits the change in employer contribution rates from one period to the next. This valuation determines the actual rates for the period for 2011-2013 and the collar limits for rates that will be effective for 2013-2015.
- The blue boxes above show the collar limits for 2013-2015 assuming the funded status is between 80% and 120%. The lines above and below the boxes represent the potential range if the funded status is below 70% or above 130%. For funded status from 70-80% or 120-130%, the collar would be between these ranges.
- Ranges shown above are rates attributable to each rate pool (for example, the OPSRP range represents OPSRP Normal Cost plus the OPSRP UAL rate)
  - UAL rates are charged on all payroll (for example, Tier 1/Tier 2 UAL is charged on both Tier 1/Tier 2 payroll and OPSRP payroll)

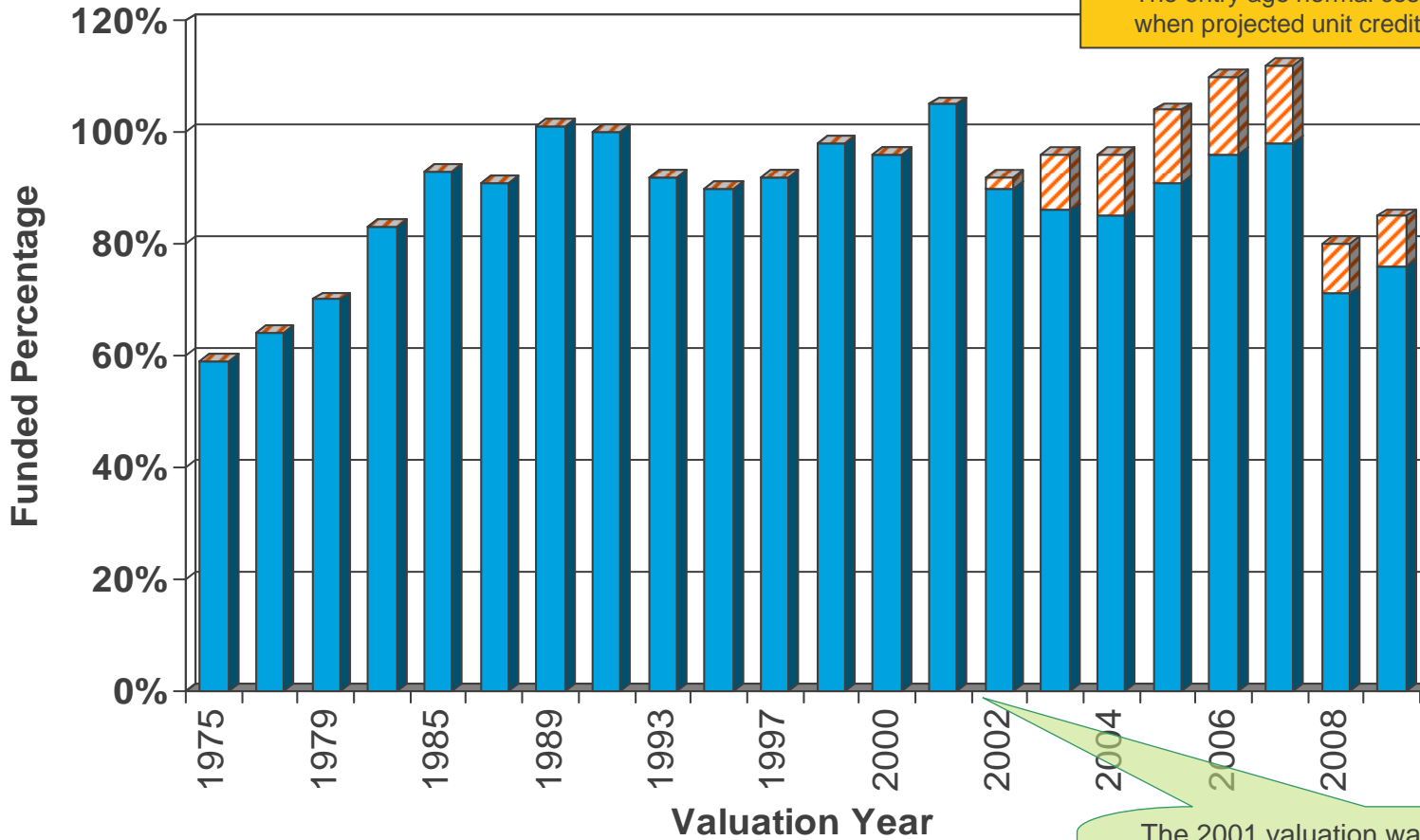
<sup>1</sup> Independent employers, including Judiciary, are treated as a single pool for purposes of this exhibit.

# Key Findings

## Tier 1/Tier 2/OPSRP Historical Funded Status

When comparing historical funded status, 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 in 2001.
- The entry age normal cost method was used until 2004 when projected unit credit (PUC) was adopted.

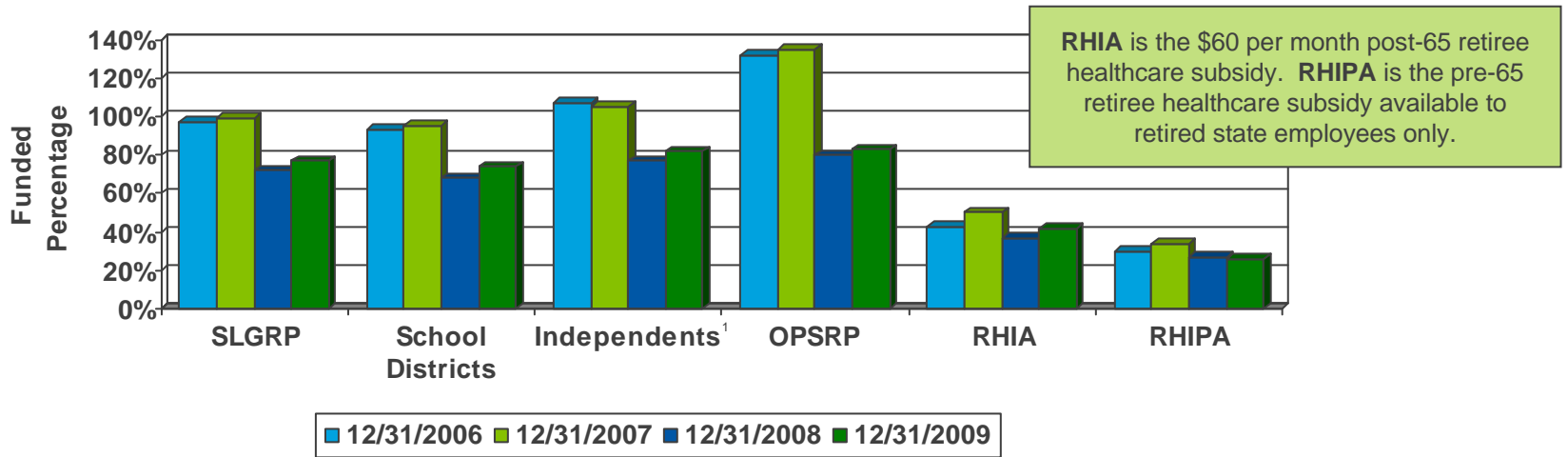


■ Actuarial Value    ▨ Side Accounts

The 2001 valuation was revised to include the impact of PERS reform legislation enacted in 2003. Prior to the revision, the funded percentage was 88%.

## Key Findings

### Funded Status Excluding Side Accounts By Rate Pool



- Funded status for rate pools improved from 2003 through 2007, but dropped sharply due to 2008 investment losses. Investment returns during 2009 improved funded status, but all pools are still well below their 2007 levels.
- Side accounts account for a significant portion of assets, which are not included in the graph above
- RHIPA assets represent only 38 months of benefit payments. Participation in the RHIPA program is fairly low. An increase in the participation rate, an increase in the retiree population and/or an additional market downturn has the potential to drop the “months of available benefit payments” level even further.

<sup>1</sup> Independent employers, including Judiciary, are treated as a single pool for purposes of this exhibit.

## Key Findings

### Projection to Year-End 2010 Excluding Side Accounts

Percentile	2010 Asset Return	Projection to 12/31/2010		
		Funded Status (Excluding Side Accounts)	UAL Excluding Side Accounts (billions)	Advisory Uncollared Base Rate
5 <sup>th</sup>	-6.5%	67%	\$19.5	25.2%
10 <sup>th</sup>	-4.2%	68%	\$18.6	24.5%
25 <sup>th</sup>	-0.4%	71%	\$17.3	23.5%
<b>50<sup>th</sup></b>	<b>3.8%</b>	<b>73%</b>	<b>\$15.8</b>	<b>22.4%</b>
75 <sup>th</sup>	7.8%	75%	\$14.4	21.3%
90 <sup>th</sup>	11.3%	78%	\$13.2	20.3%
95 <sup>th</sup>	13.4%	79%	\$12.5	19.7%
<b>Values at 12/31/2009:</b>		<b>76%</b>	<b>\$13.6</b>	<b>20.3%</b>

- This chart combines published investment experience through May 31 (-0.8% return) with forecast variability in returns for the last seven months of 2010
- Comparable amounts at year-end 2009 are shown at the bottom
- The system would need a return of approximately 8.8% to maintain the 12/31/2009 funded status of 76% (excluding side accounts)
- If experience after 2010 follows assumption, the collared base rate will move toward the uncollared base rate over a period of one biennium or more

# **12/31/2009 Tier 1/Tier 2 & OPSRP Valuation**

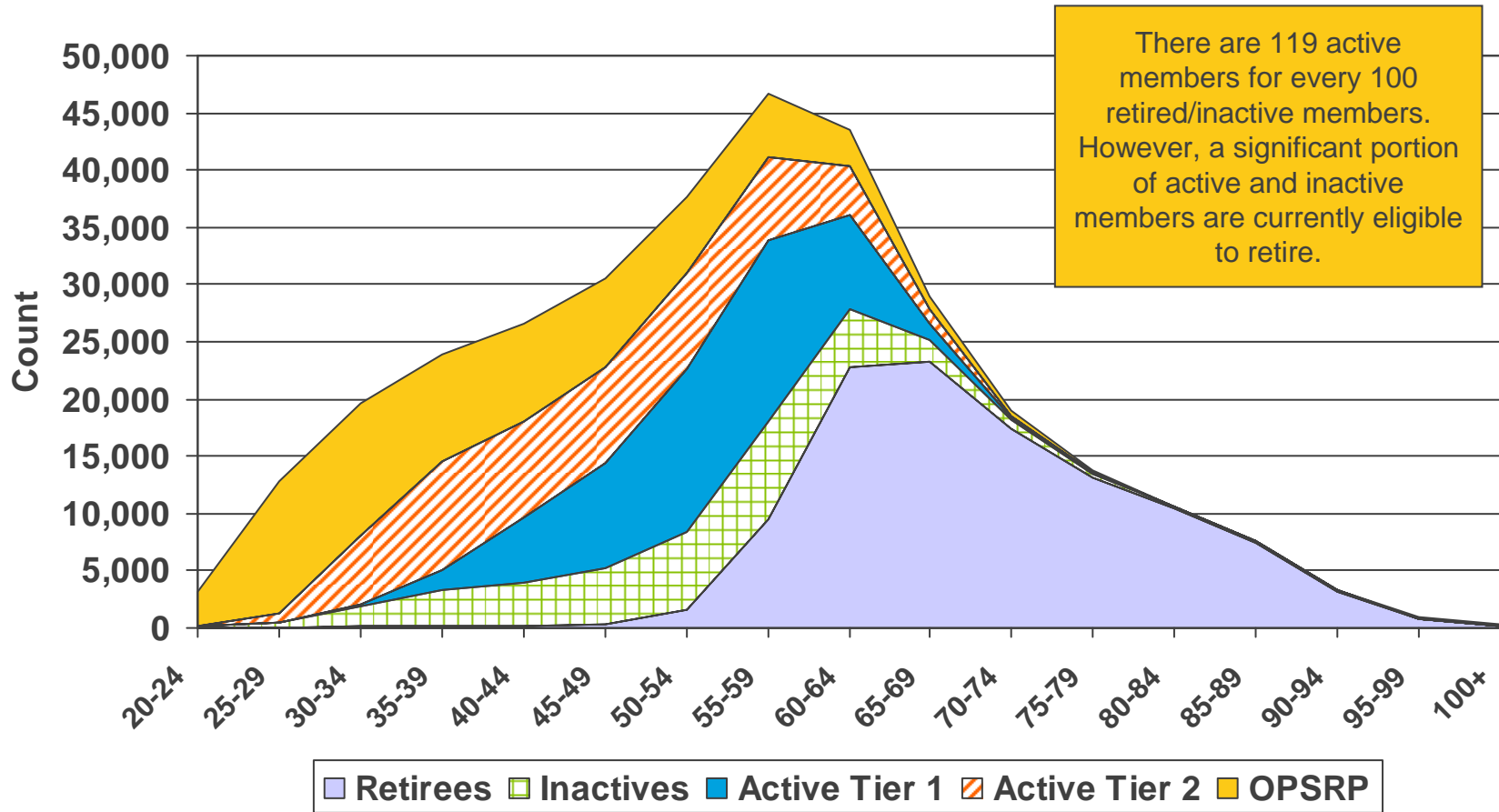
Oregon Public Employees Retirement System



# 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

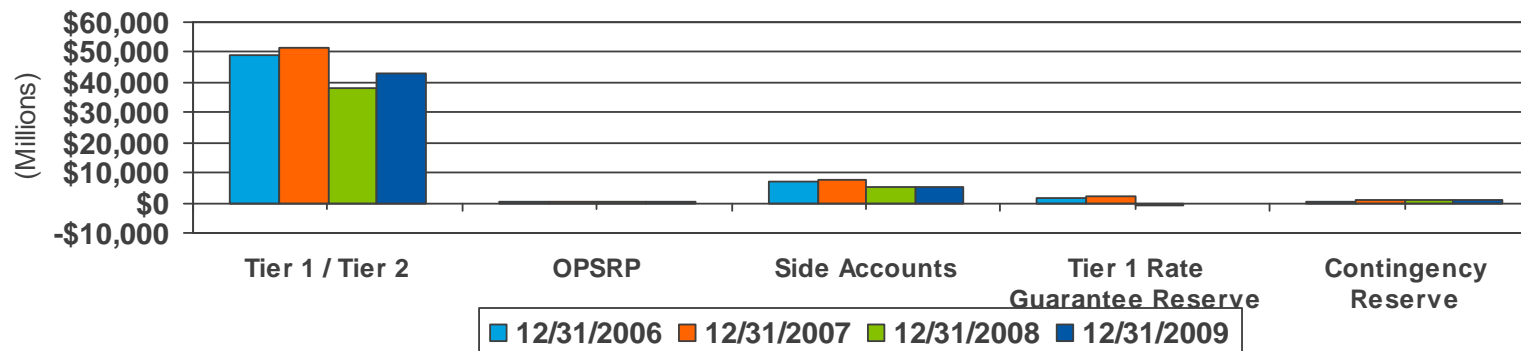
## Demographics

### Age Distribution



# 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation Assets

Assets (Excluding IAP and Retiree Healthcare)

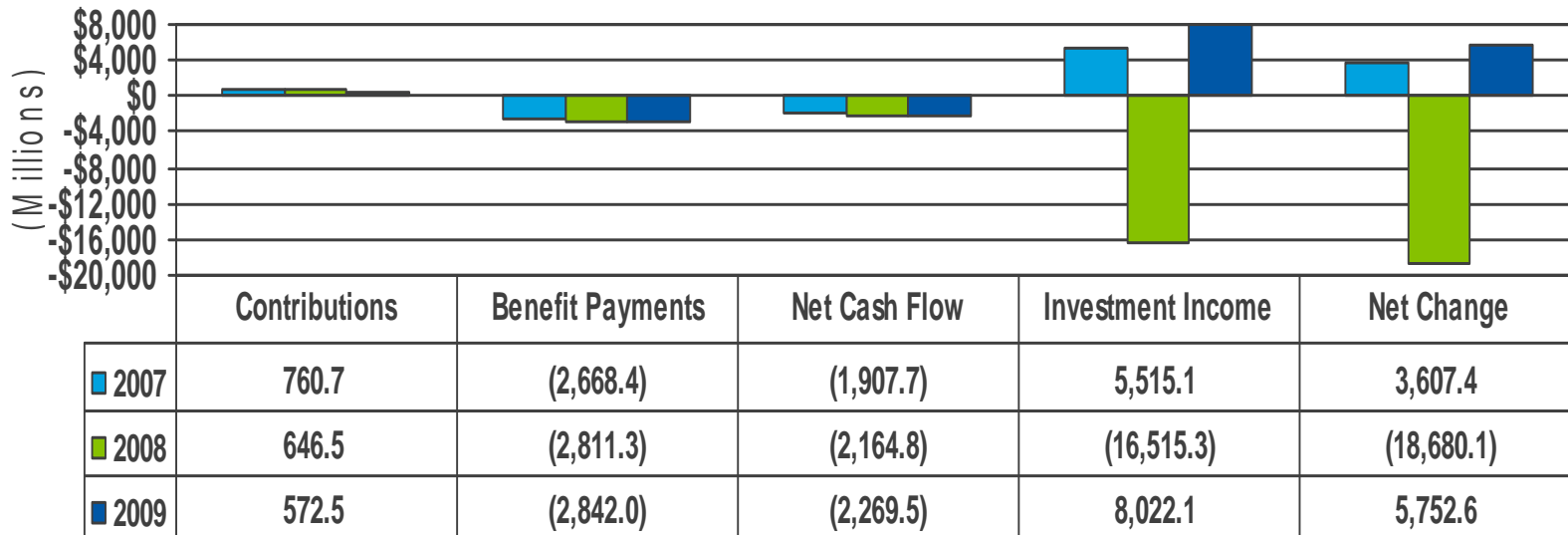


- Valuation assets used to set Tier 1/Tier 2 & OPSRP contribution rates exclude:
  - The Contingency and Tier 1 Rate Guarantee Reserves,
  - Side accounts,
  - Pre-SLGRP liabilities and surpluses, and
  - IAP and Retiree Healthcare (RHIA, RHIPA) assets
- Combined Tier 1/Tier 2, OPSRP and Side Account assets as reported by PERS increased from \$44.0 billion to \$49.2 billion during the year.
  - Tier 1/Tier 2 assets increased from \$38.6 billion to \$43.3 billion
  - Side Accounts increased from \$5.1 billion to \$5.5 billion.
  - OPSRP valuation assets increased from \$270 million to \$445 million in the last year
- The Rate Guarantee Reserve went from a negative \$1.0 billion position to a negative \$0.4 billion position. The Contingency Reserve was held constant at \$653 million.

# 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

## Assets

### Changes in Tier 1/Tier 2 & OPSRP Assets (Including Side Accounts & Reserves)



- Benefit payments are five times larger than 2009 net rate contributions, resulting in net negative cash flow before earnings
- Investment earnings and losses are the primary determinant of changes in Tier 1/Tier 2 & OPSRP assets. For 2009, investment gains were fourteen times greater than contributions.
- During 2008 and 2009 the cumulative net change was a \$12.9 billion decrease
  - Over the same period valuation assets for the purposes of setting base rates, which exclude side accounts and reserves, decreased by \$8.4 billion

# 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

## Normal Cost Rate

- The average normal cost rate increased 52 basis points since the last valuation
- Active members projected to retire under Money Match have a 0% normal cost. As a result, Tier 1 general service members have the lowest normal cost rate.
- Tier 1 / Tier 2 normal cost rates are expected to continue to increase as benefits continue to shift to Full Formula and as active members age. For Tier 2 Members, this trend was accelerated by the 2008 market downturn.

	Valuation		
	12/31/2007	12/31/2008	12/31/2009
T-1, General	3.57%	5.02%	5.81%
T-1, P&F	13.14%	14.61%	15.79%
<b>T-1, Average</b>	<b>4.67%</b>	<b>6.12%</b>	<b>6.98%</b>
T-2, General	7.28%	9.52%	9.95%
T-2, P&F	12.81%	14.03%	14.67%
<b>T-2, Average</b>	<b>8.03%</b>	<b>10.13%</b>	<b>10.60%</b>
OPSRP, General	5.81%	5.90%	6.13%
OPSRP, P&F	8.52%	8.61%	8.84%
<b>OPSRP, Average</b>	<b>6.05%</b>	<b>6.16%</b>	<b>6.40%</b>
<b>System Average</b>	<b>6.07%</b>	<b>7.44%</b>	<b>7.96%</b>

## 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

### Actuarial Accrued Liabilities

	Valuation		
	12/31/2007	12/31/2008	12/31/2009
T-1, General	\$15,246	\$14,666	\$14,589
T-1, P&F	\$1,810	\$1,808	\$1,863
<b>T-1, Active Total</b>	<b>\$17,056</b>	<b>\$16,474</b>	<b>\$16,452</b>
T-2, General	\$2,010	\$2,177	\$2,558
T-2, P&F	\$415	\$475	\$563
<b>T-2, Active Total</b>	<b>\$2,425</b>	<b>\$2,652</b>	<b>\$3,120</b>
OPSRP, General	\$177	\$290	\$454
OPSRP, P&F	\$25	\$43	\$70
<b>OPSRP, Active Total</b>	<b>\$202</b>	<b>\$333</b>	<b>\$524</b>
Inactive	\$4,421	\$4,659	\$4,666
Retiree	\$28,767	\$30,142	\$32,074
<b>Non-Active Total</b>	<b>\$33,188</b>	<b>\$34,801</b>	<b>\$36,741</b>
<b>System Total</b>	<b>\$52,871</b>	<b>\$54,260</b>	<b>\$56,837</b>

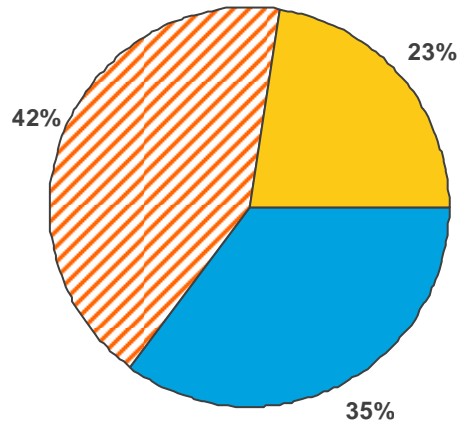
Amounts in millions

- System liabilities grew 4.7% since the prior valuation, with the above average increase caused by three factors in the active member liability
  - Fewer members commenced benefits than anticipated in 2009
    - Benefit payments not made are temporarily retained in liability
  - 37.57% crediting to variable accounts due to 2009 investment returns increased liabilities
  - 12/31/2008 systemwide normal cost rate was 1.37% of payroll higher than the 12/31/2007 normal cost rate (see prior slide)
    - Over time the system is migrating from Money Match to a normal cost level based on Full Formula and OPSRP
    - 2008 market returns accelerated that migration

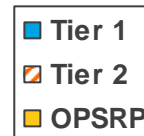
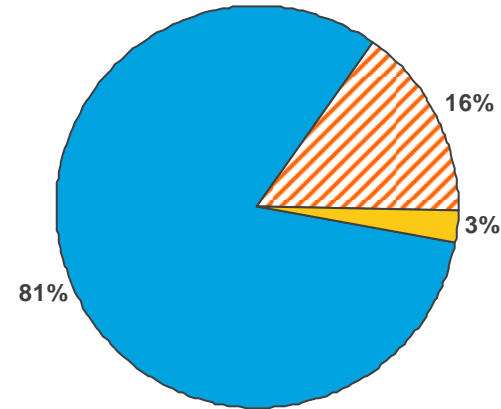
# 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

## Active Member Liabilities

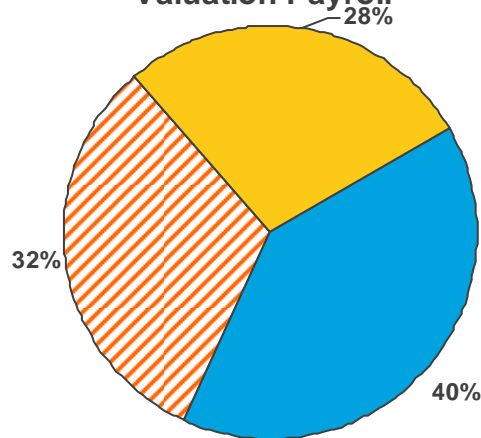
Normal Cost



Actuarial Accrued Liability



Valuation Payroll



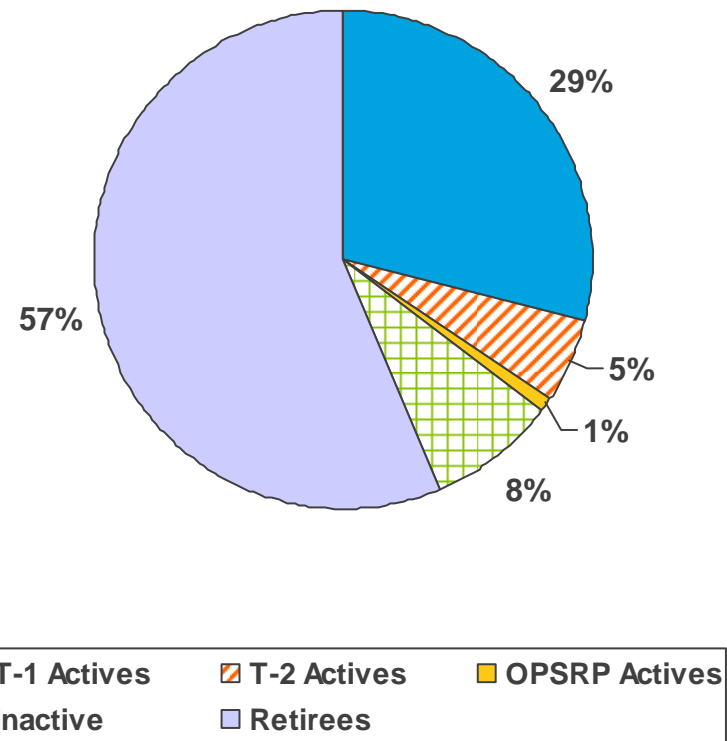
- While Tier 1 represents 81% of the accrued liability for active members, it is only 40% of the payroll and 35% of the normal cost
- Tier 2 represents 16% of the accrued liability, 32% of the payroll and 42% of the normal cost
- OPSRP represents 28% of the payroll and 23% of the normal cost, but only 3% of the active member liability

# 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

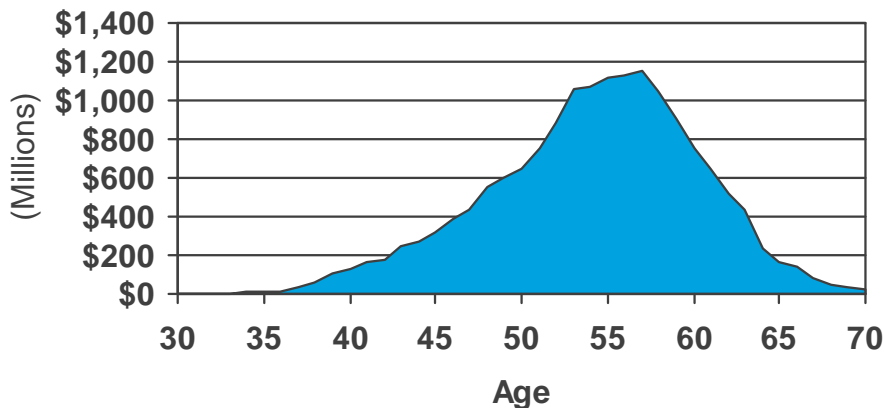
## Actuarial Accrued Liabilities

- While Tier 1 members represent the predominant portion of the active member liability, 65% of the system's total accrued liability is for members who are no longer working in covered employment
- Over 44% of the Tier 1 active member liability is for members over age 55, and approximately 75% of the Tier 1 active member liability is for members over age 50

Actuarial Accrued Liability by Member Category



Distribution of Tier 1 Active Liability



## 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

### Funded Status Measures

- **Unfunded Accrued Liability (UAL) Excluding Side Accounts**
  - The UAL excluding side accounts is used to calculate the employer contribution rates for the SLGRP and School District pools and for independent employers
  - The side accounts are treated as prepaid contributions for the individual employers who have made supplemental contributions
  
- **Unfunded Accrued Liability (UAL) Including Side Accounts**
  - The UAL including side accounts is used to report the funded status of the system as a whole
  - Side accounts are held within the PERS Trust and are available to pay PERS benefits
  
- **Employer Net Obligation**
  - The employer net obligation is the UAL including side accounts but adjusted for the outstanding principal on pension obligation bonds (POBs)
  - This measure is not used by PERS, but can be used in a broader financial context to understand the outstanding obligations related to PERS



# 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

## Unfunded Accrued Liability (UAL)

	12/31/2009 Valuation					12/31/2008
	SLGRP	School Districts	Independents	OPSRP	System-Wide <sup>1</sup>	System-Wide <sup>1</sup>
Accrued Liability	\$29,058	\$22,507	\$4,674	\$536	\$56,837	\$54,260
Assets	\$22,476	\$16,577	\$3,840	\$445	\$43,239	\$38,386
<b>UAL Excluding Side Accounts</b>	<b>\$6,582</b>	<b>\$5,929</b>	<b>\$834</b>	<b>\$90</b>	<b>\$13,598</b>	<b>\$15,873</b>
Side Accounts	\$2,593	\$2,811	\$87	N/A	\$5,490	\$5,135
<b>UAL Including Side Accounts</b>	<b>\$3,989</b>	<b>\$3,119</b>	<b>\$747</b>	<b>\$90</b>	<b>\$8,108</b>	<b>\$10,739</b>
POBs	\$3,264	\$2,632	\$213	N/A	\$6,109	\$6,187
<b>Employer Net Obligations</b>	<b>\$7,254</b>	<b>\$5,751</b>	<b>\$959</b>	<b>\$90</b>	<b>\$14,217</b>	<b>\$16,926</b>

***The ratio of Side Accounts to outstanding Pension Obligation Bonds (POBs) went from 0.83 to 0.90 from 12/31/2008 to 12/31/2009***

<sup>1</sup> System-wide results include Multnomah Fire District #10

Amounts In Millions

# 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

## Unfunded Accrued Liability (UAL)

	12/31/2009 Valuation					12/31/2008
	SLGRP	School Districts	Independents	OPSRP	System-Wide <sup>1</sup>	System-Wide <sup>1</sup>
Payroll (T1/T2 + OPSRP)	\$4,850	\$2,874	\$788	\$8,512	\$8,512	\$8,130
UAL Excluding Side Accounts	\$6,582	\$5,929	\$834	\$90	\$13,598	\$15,873
<b>UAL Excluding Side Accounts as % of Payroll</b>	<b>136%</b>	<b>206%</b>	<b>106%</b>	<b>1%</b>	<b>160%</b>	<b>195%</b>
UAL Including Side Accounts	\$3,989	\$3,119	\$747	\$90	\$8,108	\$10,739
<b>UAL Including Side Accounts as % of Payroll</b>	<b>82%</b>	<b>109%</b>	<b>95%</b>	<b>1%</b>	<b>95%</b>	<b>132%</b>
UAL Including Side Accounts Adjusted for POBs	\$7,254	\$5,751	\$959	\$90	\$14,217	\$16,926
<b>Employer Net Obligations as % of Payroll</b>	<b>150%</b>	<b>200%</b>	<b>122%</b>	<b>1%</b>	<b>167%</b>	<b>208%</b>

<sup>1</sup> System-wide results include Multnomah Fire District #10

Amounts In Millions

## 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

### Employers Joining the State & Local Government Rate Pool (SLGRP)

- Effective 1/1/2010, eight previously independent employers joined the SLGRP
- SLGRP contribution rates in this valuation reflect the addition of these employers
- The SLGRP UAL rate is not affected by new employers joining the pool as a transition liability or surplus is established such that the pooled UAL rate remains unchanged
- All of the new employers had a transition surplus
- The addition of these employers to the pool increased the overall net transition surplus approximately \$16 million

	Joining SLGRP	Current SLGRP
Primary Employers	8	353
Payroll (T1/T2 + OPSRP)	\$29	\$4,821
Tier 1/Tier 2 Assets	\$109	\$22,383
Tier 1/Tier 2 Accrued Liability	\$133	\$28,925
Tier 1/Tier 2 Normal Cost	\$2	\$306

*Dollar Amounts In Millions*

## 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

### 2011-2013 Contribution Rates (Excluding Retiree Healthcare and IAP)

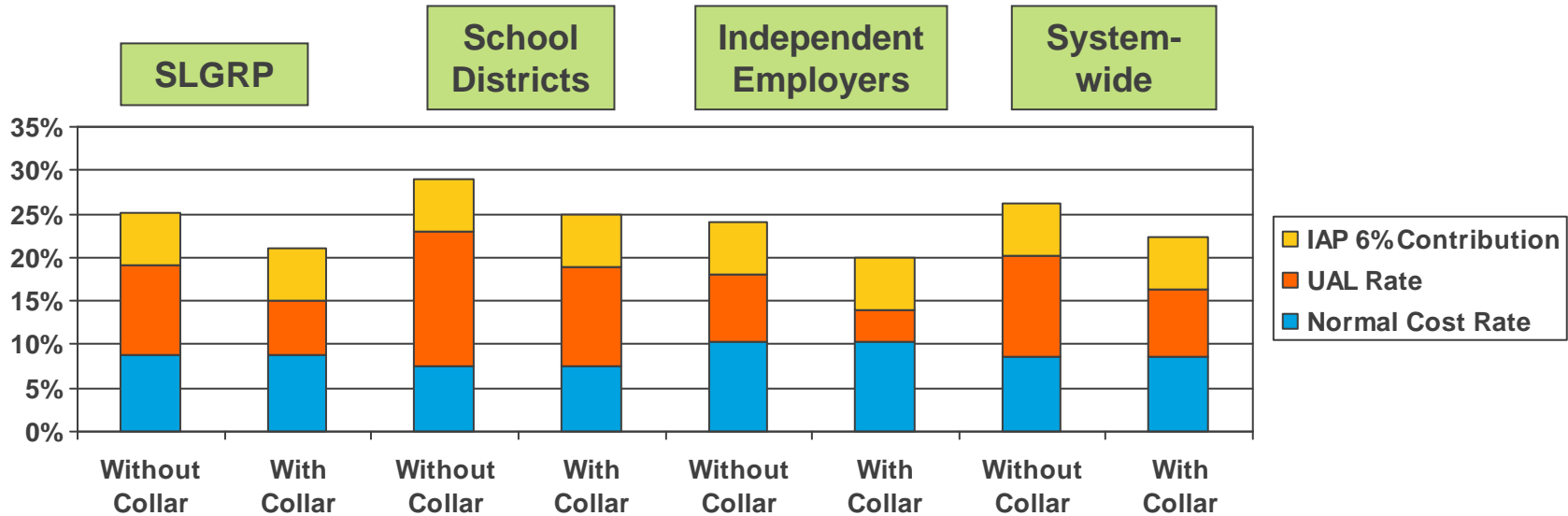
	SLGRP	School Districts	Independents <sup>1</sup>	OPSRP General	OPSRP P&F	System-Wide
<b>Tier 1/Tier 2/OPSRP</b>						
Normal Cost	8.89%	7.55%	10.35%	6.13%	8.84%	7.96%
T1/T2 UAL	6.16%	11.26%	3.56%	7.72%	7.72%	7.72%
OPSRP UAL	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%
<b>Base Rate, Excluding Retiree Healthcare &amp; IAP</b>	<b>15.13%</b>	<b>18.89%</b>	<b>13.99%</b>	<b>13.93%</b>	<b>16.64%</b>	<b>15.76%</b>
<b>Adjustments<sup>2</sup></b>						
Side Accounts	(4.24%)	(7.75%)	(0.87%)	(5.11%)	(5.11%)	(5.11%)
Pre-SLGRP Liabs	(0.71%)	N/A	N/A	(0.40%)	(0.40%)	(0.40%)
Average Adjustment	(4.95%)	(7.75%)	(0.87%)	(5.51%)	(5.51%)	(5.51%)
<b>Net Rate, Excluding Retiree Healthcare &amp; IAP<sup>2</sup></b>	<b>10.18%</b>	<b>11.14%</b>	<b>13.12%</b>	<b>8.42%</b>	<b>11.13%</b>	<b>10.25%</b>

<sup>1</sup> Independent employers, including Judiciary, are treated as a single pool for purposes of this exhibit.

<sup>2</sup> For this exhibit, adjustments are assumed not to be limited due to an individual employer reaching a 0.00% contribution rate.

# 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

## Impact of Collar on Base Rates for Tier 1/Tier 2 Payroll (Excluding Retiree Healthcare)

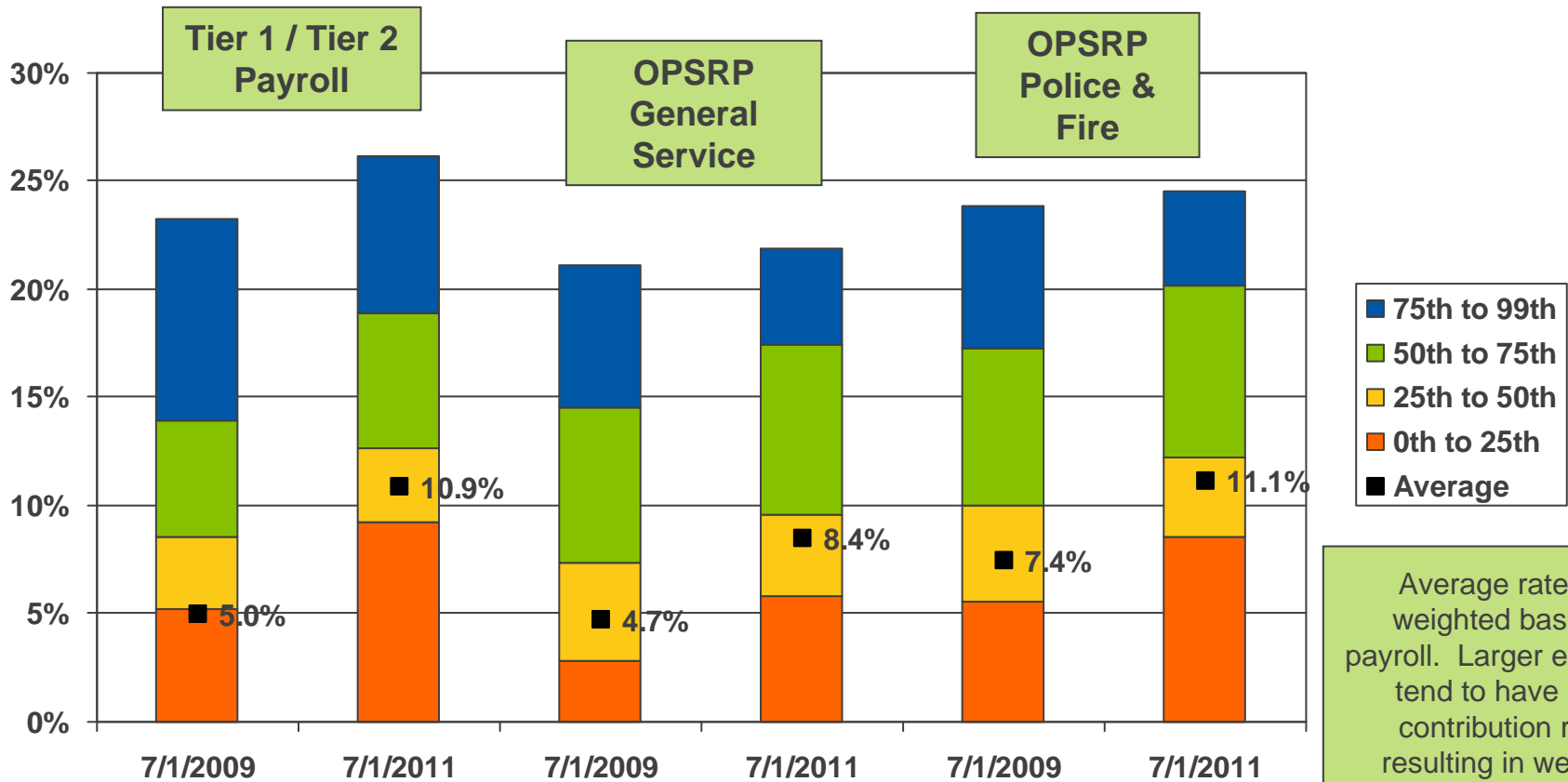


- Without the collar in place, the system-wide base rate on Tier 1/Tier 2 payroll excluding the IAP contribution would be 20.3% of payroll
- The rate collar limits the 2011-2013 base rate to 16.3% of payroll
- Independent employers are treated as a pool for purposes of this exhibit; rates for individual independent employers vary from the rate shown here

# 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

## Distribution of Net Contribution Rates (Excluding Retiree Healthcare and IAP)

System-Wide Contribution Rates

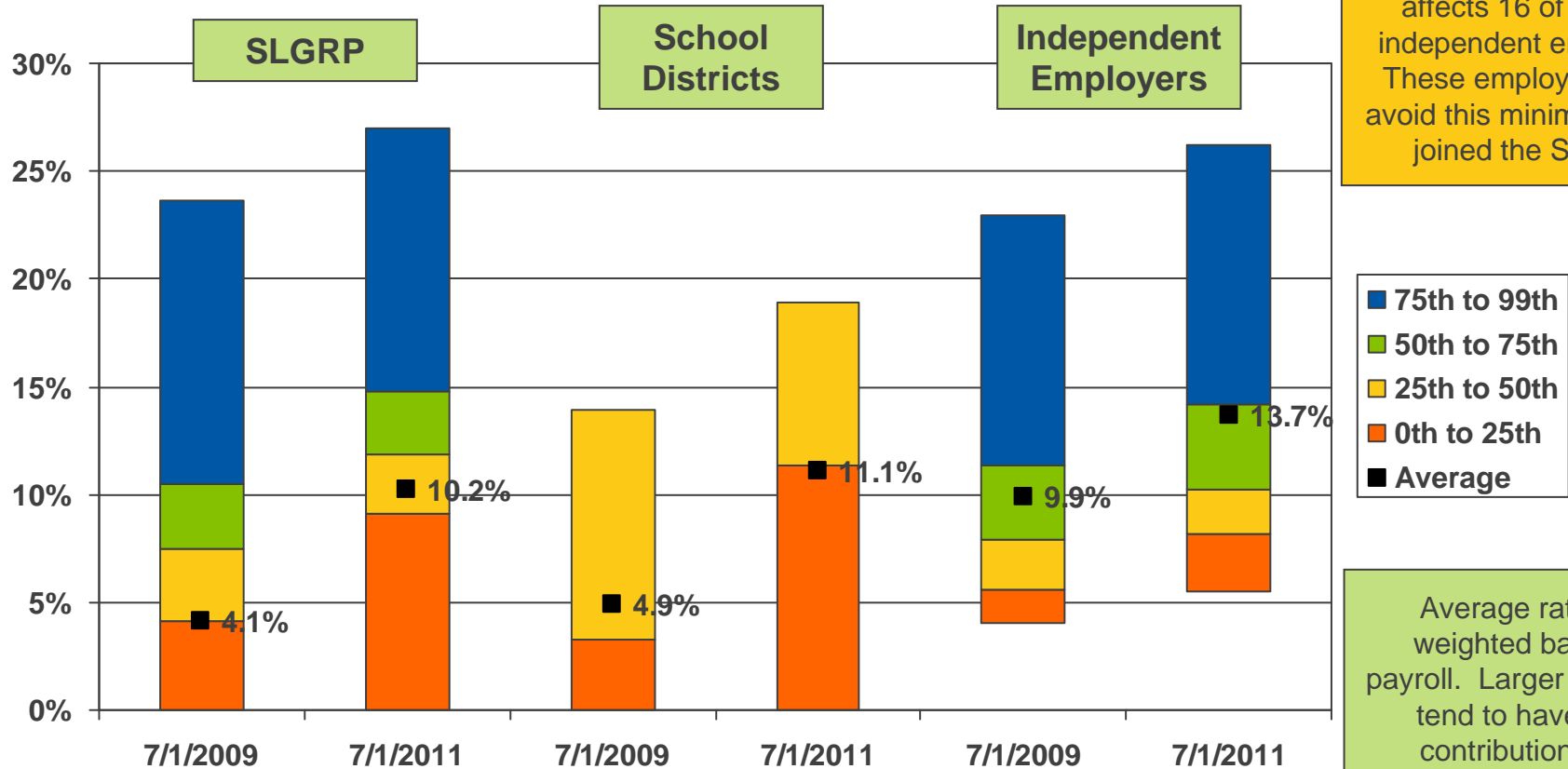


Average rates are weighted based on payroll. Larger employers tend to have lower contribution rates, resulting in weighted average rates below the median rate.

# 12/31/2009 Tier 1/Tier 2 & OPSRP Valuation

## Distribution of Net Contribution Rates (Excluding Retiree Healthcare and IAP)

Tier 1/Tier 2 Employer Contribution Rates



The Board's policy to require Independent Employers to contribute a minimum (excluding IAP) of 6% of payroll before side account adjustments affects 16 of the 130 independent employers. These employers could avoid this minimum if they joined the SLGRP.

■ 75th to 99th  
■ 50th to 75th  
■ 25th to 50th  
■ 0th to 25th  
■ Average

Average rates are weighted based on payroll. Larger employers tend to have lower contribution rates, resulting in weighted average rates below the median rate.

**12/31/2009 Retiree Healthcare Valuation**  
Oregon Public Employees Retirement System



# 12/31/2009 Retiree Healthcare Valuation

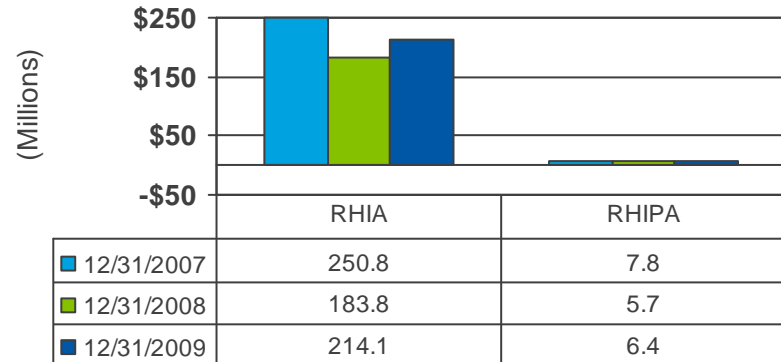
## Overview

- RHIA provides \$60 per month subsidy toward healthcare premium for Tier 1/Tier 2 retirees who are eligible for Medicare. OPSRP retirees are not eligible for the RHIA subsidy.
- RHIPA provides Tier 1/Tier 2 State employees who retire prior to age 65 with an alternative to PEBB coverage until they reach Medicare eligibility. OPSRP retirees are not eligible for the RHIPA subsidy.
- These benefits are funded through 401(h) accounts within the PERS trust, but the funds are, by law, kept separate from the pension funds. Consequently, side accounts cannot be used to make RHIA or RHIPA contributions.
- RHIA and RHIPA are not as well-funded as the pension plan.
  - To address that, in July 2009 the Board approved a shortening of the amortization period to more rapidly improve funded status of those programs.
  - Effective July 2011, the unfunded actuarial liability (UAL) will be amortized over a 10-year period.
- Contribution rates for RHIA and RHIPA will increase effective 2011-2013 due to investment losses and the change from a 20-year amortization period to a 10-year period.

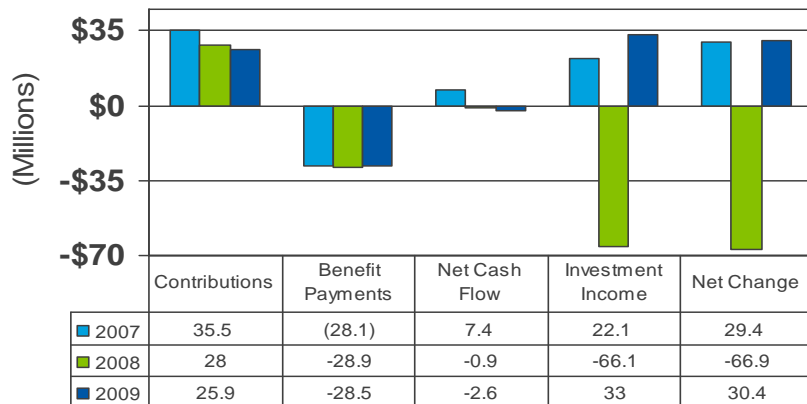
# 12/31/2009 Retiree Healthcare Valuation Assets

- During 2008 and 2009 the cumulative net change in retiree healthcare assets was a \$38 million (or 15%) decrease
- For both programs, contributions are about equal to benefit payments, so the net decrease in assets is driven by investment losses

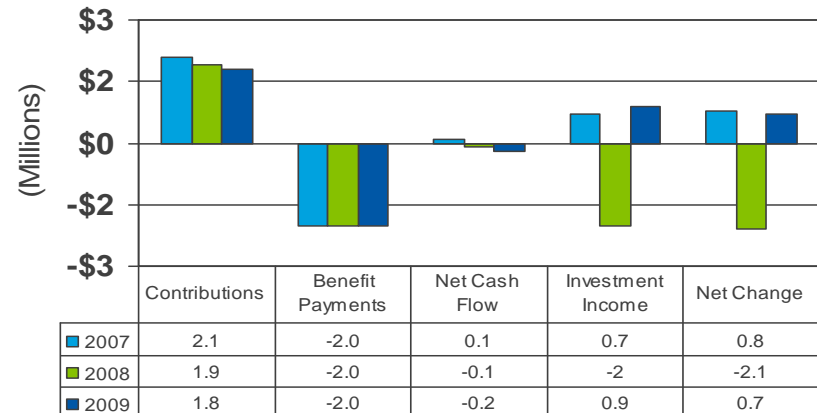
Retiree Healthcare Assets



Changes in RHIA Plan Assets



Changes in RHIPA Plan Assets



# 12/31/2009 Retiree Healthcare Valuation

## Normal Cost

	RHIA		RHIPA		Retiree Healthcare	
	12/31/2008	12/31/2009	12/31/2008	12/31/2009	12/31/2008	12/31/2009
Normal Cost	\$5.6	\$5.5	\$0.8	\$0.8	\$6.4	\$6.3
Normal Cost Payroll	\$6,226	\$6,123	\$1,709	\$1,705	\$6,226	\$6,123
<b>Normal Cost Rate</b>	<b>0.09%</b>	<b>0.09%</b>	<b>0.05%</b>	<b>0.05%</b>	<b>0.10%</b>	<b>0.10%</b>

*Amounts In Millions*

- Normal cost rates for RHIA and RHIPA have remained level
- These rates, however, are very sensitive to the participation assumption

# 12/31/2009 Retiree Healthcare Valuation

## Unfunded Accrued Liability

Funded status lags significantly behind the funded status of Tier 1/Tier 2 and OPSRP.

	RHIA		RHIPA		Retiree Healthcare	
	12/31/2008	12/31/2009	12/31/2008	12/31/2009	12/31/2008	12/31/2009
Accrued Liability	\$494	\$511	\$21	\$25	\$515	\$536
Assets	\$184	\$214	\$ 6	\$ 6	\$190	\$220
UAL	\$310	\$297	\$16	\$18	\$325	\$315
<b>Funded Percentage</b>	<b>37%</b>	<b>42%</b>	<b>27%</b>	<b>26%</b>	<b>37%</b>	<b>41%</b>
Combined Valuation Payroll	\$8,130	\$8,512	\$2,218	\$2,372	\$8,130	\$8,512
<b>UAL Rate</b>	<b>0.50%</b>	<b>0.50%</b>	<b>0.10%</b>	<b>0.11%</b>	<b>0.53%</b>	<b>0.53%</b>

*Amounts In Millions*

- For comparison, the 12/31/2007 system-wide UAL rate was 0.20% of payroll
  - Both investment losses and a shortened amortization period increased the rate

# 12/31/2009 Retiree Healthcare Valuation

## Contribution Rates for 2011-2013

- Contribution rates are higher than the rates in effect 2009-2011 by approximately 0.3% of payroll
  - The increase was driven by a change in the UAL rate
- Changes in actual participation rates can have a significant effect on the UAL

Payroll	Tier 1 / Tier 2	OPSRP General	OPSRP P&F
Normal Cost Rate	0.10%	N/A	N/A
UAL Rate	0.53%	0.53%	0.53%
<b>2011-2013 Rates</b>	<b>0.63%</b>	<b>0.53%</b>	<b>0.53%</b>
<b>2009-2011 Rates</b>	<b>0.32%</b>	<b>0.20%</b>	<b>0.20%</b>

## Next Steps

- Board adopts individual employer rates for 2011-2013 biennium at September 24, 2010 Board meeting
- Individual employer reports are sent via e-mail to employers shortly after the rates are adopted

# Actuarial Certification

Mercer has prepared this presentation exclusively for the Oregon PERS Board to present the system-wide results of a valuation of the Oregon Public Employees Retirement System as of December 31, 2009, and to provide information on system-wide employer contribution rates for the period beginning July 1, 2011. This presentation may not be used or relied upon by any other party or for any other purpose; Mercer is not responsible for the consequences of any unauthorized use.

A valuation report is a snapshot of a plan's estimated financial condition at a particular point in time; it does not predict a plan's future financial condition or its ability to pay benefits in the future.

Over time, a plan's total cost will depend on a number of factors, including the amount of benefits the plan pays, the number of people paid benefits, plan expenses and the amount earned on any assets invested to pay the benefits. These amounts and other variables are uncertain and unknowable at the valuation date, but are predicted to fall within a reasonable range of possibilities.

To prepare this report, various *actuarial assumptions*, as described in the Appendix, are used to select a single scenario from a range of possibilities. However, the future is uncertain, and the system's actual experience will differ from those assumptions; these differences may be significant or material. In addition, different assumptions or scenarios may also be within the reasonable range and results based on those assumptions would be different. Actuarial assumptions may also be changed from one valuation to the next because of changes in mandated requirements, plan experience, changes in expectations about the future and other factors. Due to the limited scope of our assignment, we did not perform, nor do we present, an analysis of the potential range of future possibilities and scenarios.

Because actual system experience will differ from the assumptions, decisions about benefit changes, investment policy, funding amounts, benefit security and/or benefit-related issues should be made only after careful consideration of alternative future financial conditions and scenarios and not solely on the basis of a valuation report or reports.

This report is based on data and system provisions as described in the Appendix. Oregon PERS is solely responsible for the validity, accuracy and comprehensiveness of this information. If the data or plan provisions supplied are not accurate and complete, the valuation results may differ significantly from the results that would be obtained with accurate and complete information; this may require a later revision of this report.

# Actuarial Certification

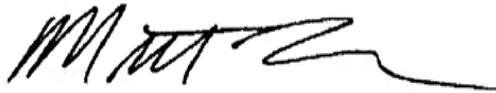
## Actuarial Calculations, Methods and Assumptions

To the best of our knowledge and belief, this report is complete and accurate and all costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures using an actuarial cost method approved by the Board. Assumptions used are based on the last experience study, as adopted by the Board on July 16, 2009. This valuation is based on assumptions, plan provisions, methods and other parameters as summarized in this report. If this information is inaccurate or incomplete or does not reflect current statutes, regulations or Board directives, the reader of this report should not rely on the valuation results and should notify Mercer promptly. In our opinion, this report fully and fairly discloses the actuarial position of the plan on an ongoing basis.

## Professional Qualifications

We are available to answer any questions on the material in this report or to provide explanations or further details as appropriate. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report. We are not aware of any direct or material indirect financial interest or relationship, including investments or other services that could create a conflict of interest, that would impair the objectivity of our work.

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.



July 23, 2010

Matthew R. Larrabee, FSA, EA, MAAA  
Enrolled Actuary No. 08-6154

Date



July 23, 2010

Scott D. Preppernau, FSA, EA, MAAA  
Enrolled Actuary No. 08-7360

Date

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***The information contained in this document is not intended by Mercer to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.***



# Appendix

# Appendix

## Actuarial Basis

### Data

We have based our calculation of the liabilities on the data, methods, assumptions and plan provisions described in the forthcoming December 31, 2009, Actuarial Valuation (“2009 Valuation Report”) for the Oregon Public Employees Retirement System.

Assets as of December 31, 2009, were based on values provided by Oregon PERS reflecting the Board's earnings crediting decisions for 2009. Assets and year-to-date returns as of May 31, 2010 as published by the Oregon Investment Council (OIC) were used as the basis for projecting December 31, 2010 assets, where applicable. Year-to-date 2010 returns as of that date on regular accounts are -0.83%.

### Methods / Policies

Liabilities are based on the Projected Unit Credit method and are rolled forward according to the following rules:

**UAL Amortization:** The UAL for Tier 1/Tier 2, OPSRP, and Retiree Healthcare as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for OPSRP, it is 16 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent odd-year valuations are amortized as a level percentage of combined valuation payroll over the amortization period (20 years for Tier/Tier 1, 16 years for OPSRP, 10 years for Retiree Healthcare) from the odd-year valuation in which they are first recognized.

**Contribution rate stabilization method:** Contribution rates are confined to a collar based on the prior base contribution rate. The new base contribution rate will generally not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the prior contribution rate. If the funded percentage excluding side accounts drops below 80% or increases above 120%, the size of the collar increases.

**Expenses:** OPSRP administration expenses are assumed to be equal to \$6.6M and are added to the OPSRP normal cost.

**Actuarial Value of Assets:** Equal to Market Value of Assets excluding Contingency and Tier 1 Rate Guarantee Reserves



## Appendix

### Actuarial Basis

#### Assumptions

Assumptions for valuation calculations are as described in the 2009 Valuation Report.

#### Provisions

Provisions valued are as detailed in the 2009 Valuation Report.

#### Arken and Robinson Litigation

We have made no adjustment to these valuation results to reflect any interpretation of Judge Kantor's rulings in the *Arken and Robinson* cases.

# MERCER



MARSH MERCER KROLL  
GUY CARPENTER OLIVER WYMAN