MERCER
Human Resource Consulting


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# Oregon PERS

## Recent Benefit Changes & Future Employer Rates

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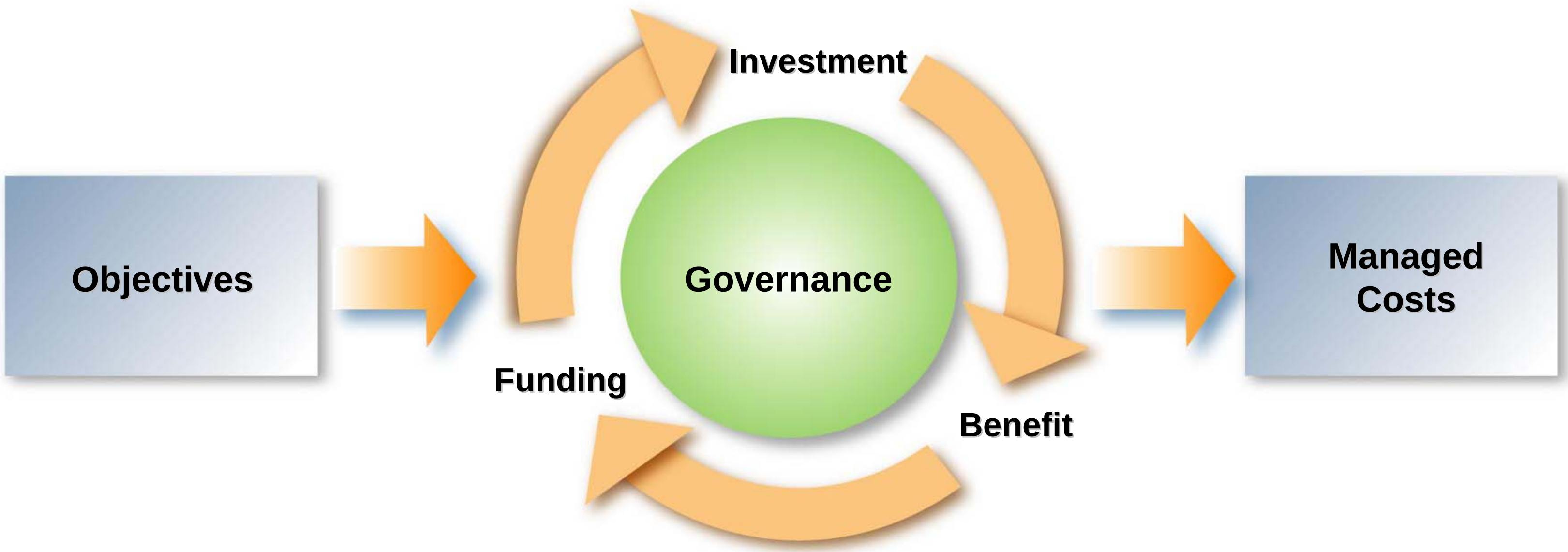
# Objectives
## Today's Meeting

- Review recent changes in member benefits
- Forecast employer rates for the next 5 – 10 years
- Explain the change in employer rates prior to 7/1/2005
- Explain the change in expected employer rates from 7/1/2005 to 7/1/2007
- Explain the expected future movement in employer rates
- Offer approaches for the Board to consider to improve transparency and manage the level and volatility of employer contribution rates

# Retirement Plan Financial Management Framework



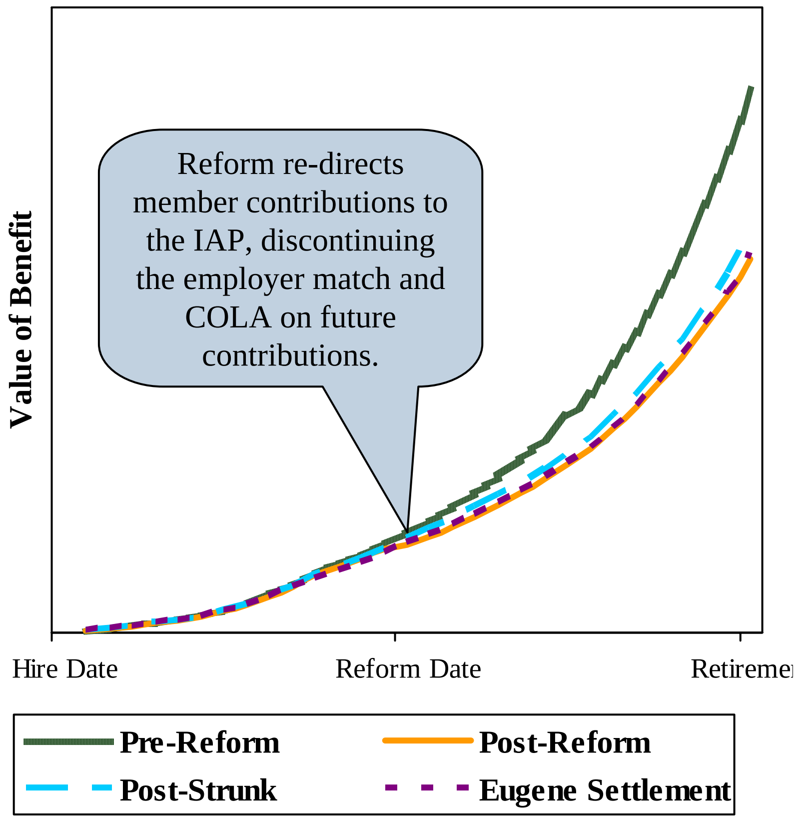
# Outline of 2003 PERS Reform

Increasing liabilities and rising employer rates were two primary motivators of PERS reform

- Oregon Public Service Retirement Plan (OPSRP), including the Individual Account Program (IAP), was established for employees hired after August 29, 2003
- Member contributions after 12/31/2003 were diverted from PERS Tier One/Two to IAP
- Tier One assumed rate was re-characterized as a guarantee over the member's career and not on an annual basis
- Actuarial equivalency factors for converting Money Match benefits to annuities and other actuarial conversions were updated
- Temporary COLA freeze for certain retirees was established in response to the Eugene case decision on 1999 earnings crediting

# Changes in Member Benefits
## Reform Curtailed Growth in Money Match Benefits

**Money Match & IAP Benefits**




- This graph illustrates the growth of Money Match and IAP benefits for a hypothetical member pre-reform, post-reform, post-Strunk, and assuming the Eugene settlement stands
- The PERS reforms were primarily targeted at curtailing the growth of Money Match benefits.
- Even after the Strunk ruling, the future growth of these benefits has been reduced by diverting future member contributions to the IAP.

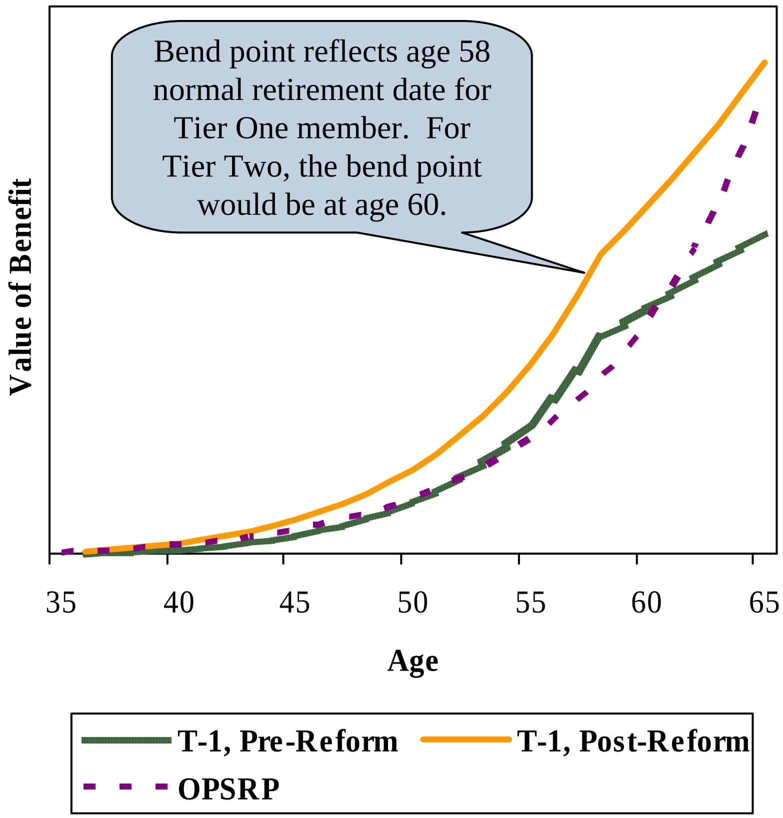
**Key Assumptions**
•8% future earnings
•No future changes in actuarial equivalency factors

- *The impact on actual individual members varies significantly, but the pattern of the impact on Money Match benefits is similar for all members*

# Changes in Member Benefits
## Full Formula Benefits Enhanced by IAP

A member's actual benefit is the IAP benefit plus the greater of the Money Match benefit or the Full Formula benefit.

**Full Formula & IAP Benefits**

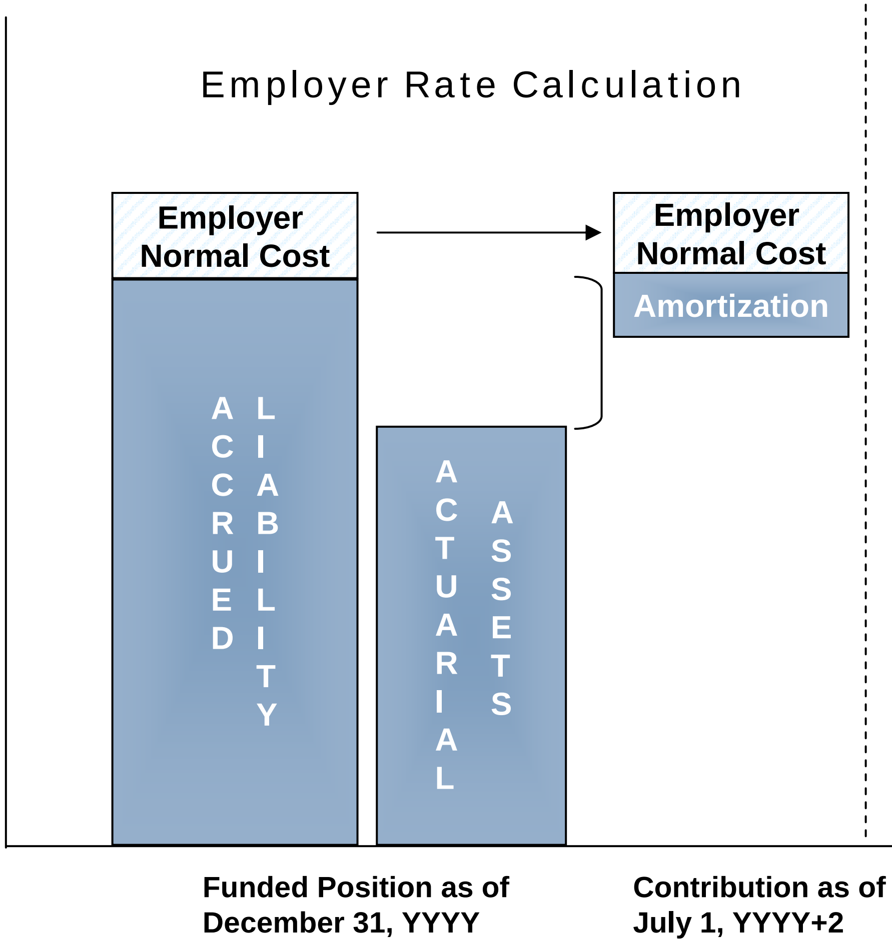



- This graph shows projected Full Formula and IAP benefits for a hypothetical Tier One general service member pre-reform and post-reform. In addition, the OPSRP benefit is compared to the Tier One Full Formula benefit, both including IAP benefits.
- The Strunk ruling and the Eugene settlement do not affect the value of Full Formula benefits.
- By re-directing the Tier One/Two member contributions to the IAP, the Legislature provided an additional benefit to any Tier One/Two member who retires under Full Formula

**Key Assumptions**
•8% future earnings in IAP
•Valuation salary scale is met

- *The impact on actual individual members varies significantly, but the pattern of the impact on Full Formula and OPSRP benefits is similar for all members*

# Calculation of Contribution Rates
## Basic Theory




### Adjustments

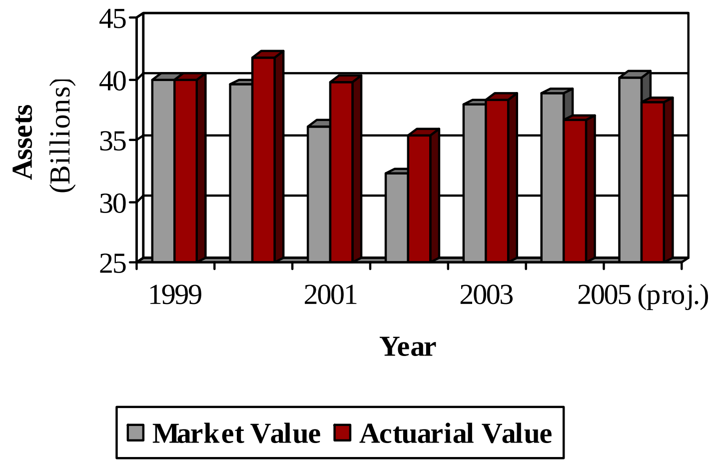
- Lump Sum payments
  - Made by employers up to unfunded liability by using general assets or issuing bonds
  - Offsets employer rates but employers may have additional borrowing costs external to PERS
- Transition liabilities or assets
  - Applicable to pooled employers
  - Increases or decreases pooled rate

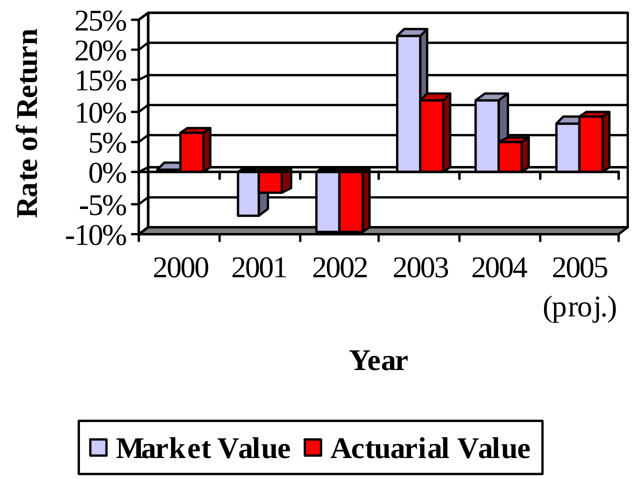
# Calculation of Contribution Rates
## Determination of Liabilities

- PERS uses the Entry Age Normal actuarial method to spread the cost of benefits as a level percentage of pay over the working life of each individual member.
- The calculation depends on whether money match or full formula is dominant for each individual at each point in the future.
- The liabilities are dependent on the numerous actuarial assumptions used including investment return, mortality, withdrawal, salary increase rate, etc.

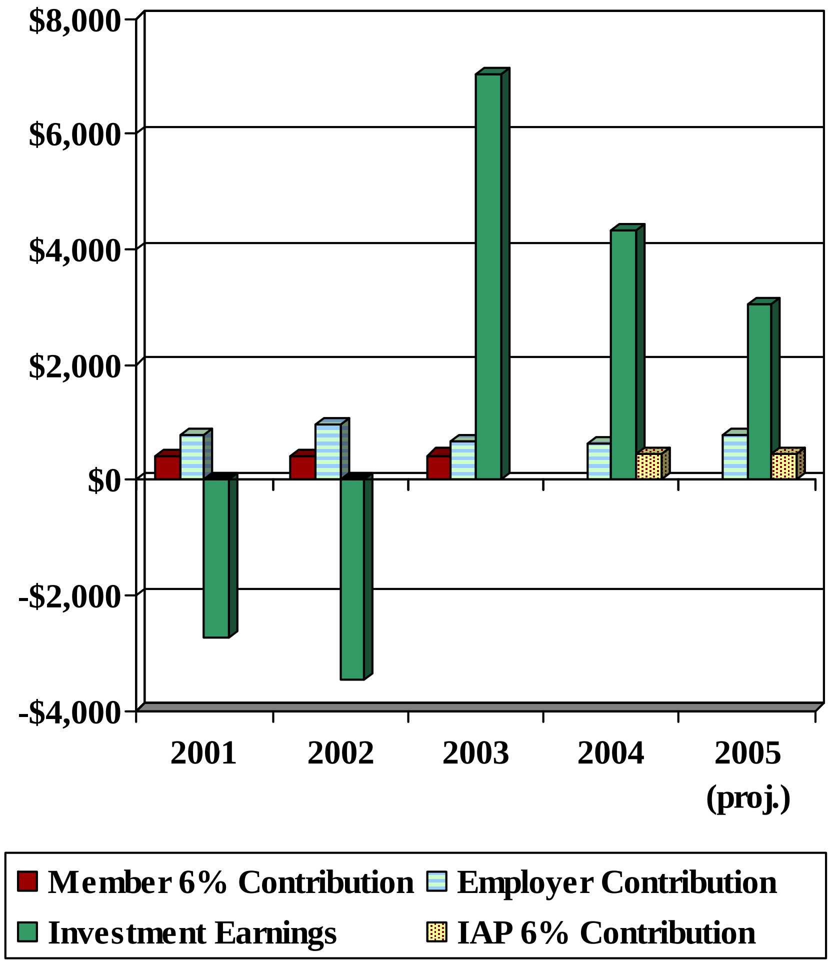
# Calculation of Contribution Rates
# The Actuarial Value of Assets is Smoothed

- With the 2000 valuation, PERS adopted an asset smoothing method to control the volatility of employer contribution rates.
- The smoothing method spread investment gains and losses over four years, but required the actuarial value of assets to be within 10% of the fair value of assets.
- The impact of investment returns on liabilities was not smoothed causing some additional volatility in employer rates that the Board addressed on an ad hoc basis by phasing in the 2005 rate increases.



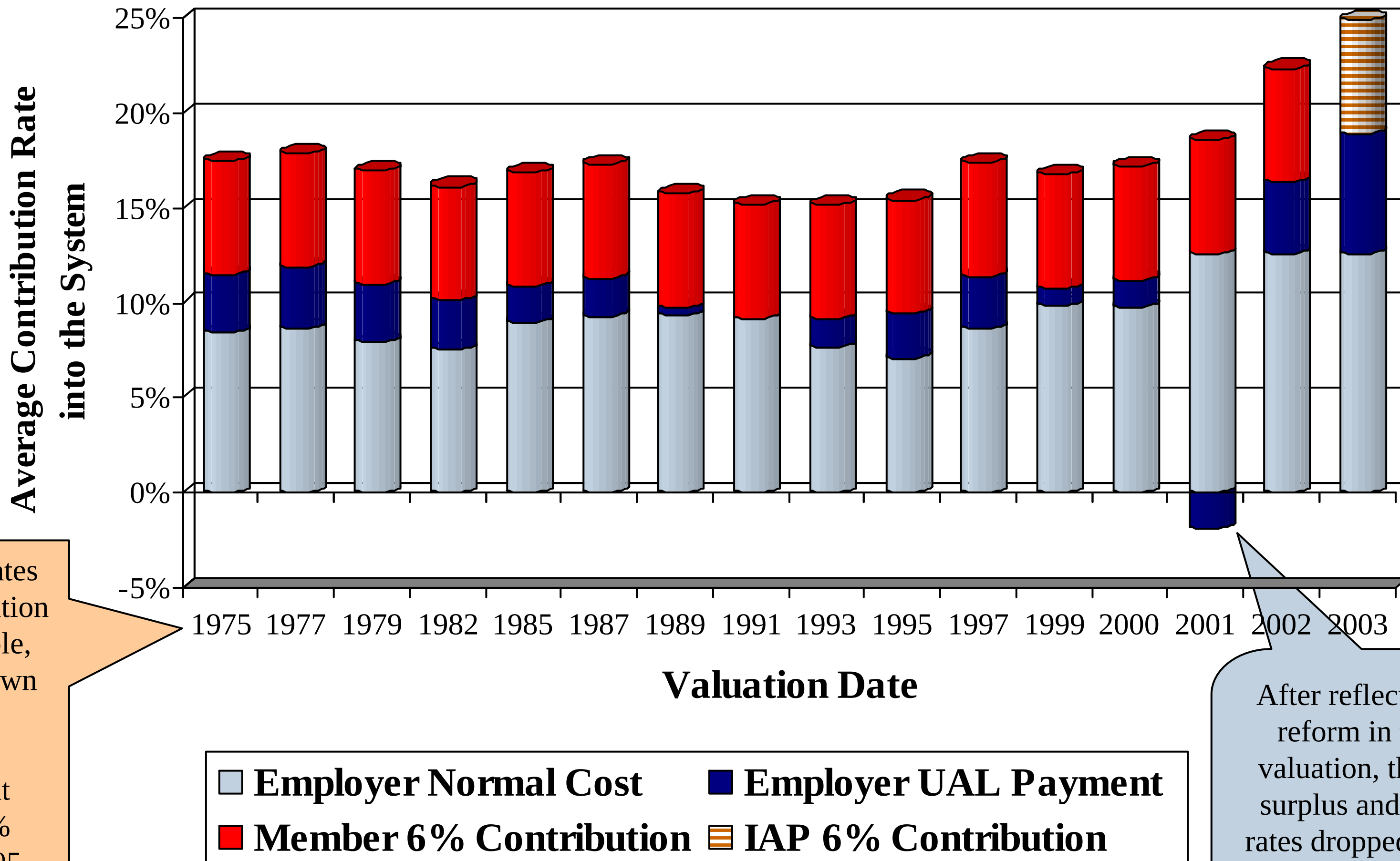
# Calculation of Contribution Rates
## Investment Earnings are Critical




| | |
|---|---|
| Expected PERS Contribution | 1.7% of Assets |
| Expected PERS Benefit Payments | 6.0% of Assets |
| Net Expected Cash Flow Before Earnings | -4.3% of Assets |
| Expected PERS Earnings | 8.0% of Assets |

- Contributions to the System are dwarfed by expected investment earnings.
- Volatile investment experience creates even more volatile contribution rates.

# Changes in Contribution Rates
## Historical Perspective




Note that these rates are as of the valuation date. For example, the 2003 rate shown is the 18.9% calculated at 12/31/2003 that becomes 19.7% effective 7/1/2005.

After reflecting PERS reform in the 2001 valuation, there was a surplus and employer rates dropped below the normal cost.

*Historical rates are as reported in the December 31, 2003 actuarial valuation report.*

# Changes in Contribution Rates
## Estimated Impact from PERS Reform

| **Initial Estimates During Legislative Session as of 12/31/2001** | |
|---|---|
| **PERS Reform** | |
| Decrease in UAL | $8 to 9 billion |
| Decrease in contribution rates | 5.84% |
| Future OPSRP Savings | ~ $7 billion |

- The initial estimates were based on the 12/31/2001 valuation.
- Unexpected investment earnings significantly reduced the expected impact of reform.
- The increase in normal cost has a present value of approximately $0.9 billion.

| **Changes in UAL as of 12/31/2003** | **Contribution Rate** | **UAL** *(billions)* |
|---|---|---|
| Initial decrease in UAL | (7.64%) | ($7.5) |
| Market experience | 2.44% | $2.4 |
| Strunk Ruling | 2.13% | $2.1 |
| **Total Change in UAL** | **(3.07%)** | **($3.0)** |

| **Changes in Normal Cost** | **Contribution Rate** |
|---|---|
| Decrease in total normal cost | (4.18%) |
| Redirection of member 6% contributions | 5.98% |
| **Total Change in Normal Cost** | **1.80%** |

# Changes in Contribution Rates
## Investment Experience Resulted in Increased Rates

| | | |
|---|---|---|
| **2001 Average PERS Rate** | | **16.48%** |
| **PERS Reform** | | **(5.84%)** |
| **Experience** | | |
| 2002 investment loss | 6.35% | |
| 2003 investment gain | (2.55%) | |
| Shortened T-1 Regular Interest Deferral | 2.44% | |
| Variable account earnings | 0.96% | |
| Reserve allocation | 1.21% | |
| Other | (0.16) | |
| **Total Experience** | **8.25%** | **8.25%** |
| **2003 Average PERS Rate** | | **18.89%** |
| 18-month delay | | 0.81% |
| **July 1, 2005 Average PERS Rate** | | **19.70%** |
| Does Not Include IAP 6% Contribution | | 6.00% |

*All figures based on calculations performed by prior actuary*

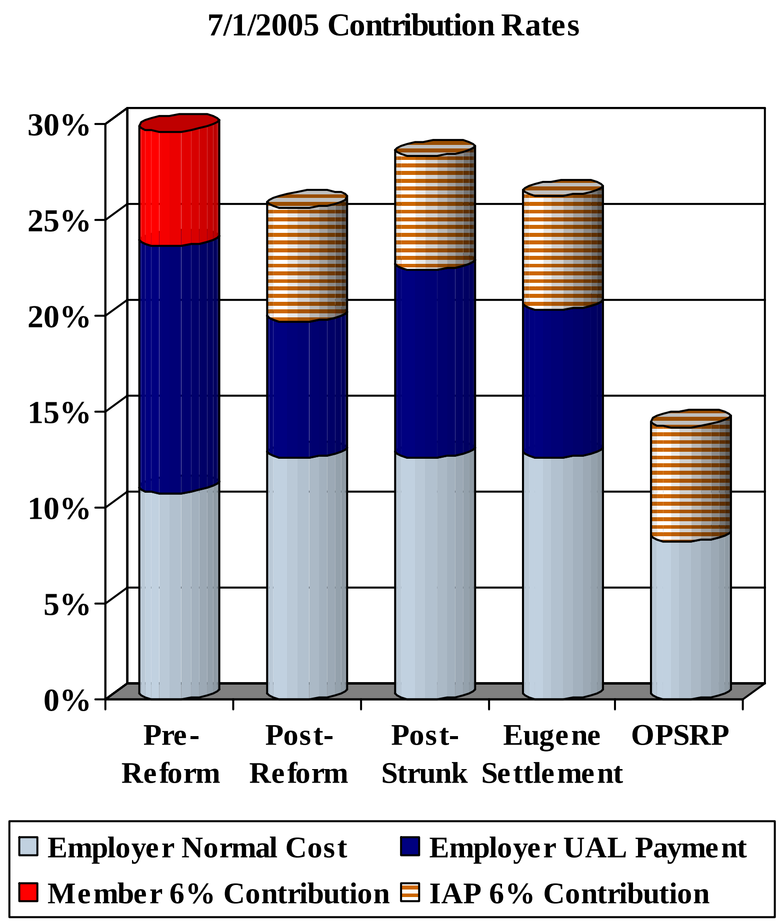
# Changes in Contribution Rates
## Over 60% of PERS Accrued Liability is for Retirees and Inactives

| | Post-Reform | Post-Strunk | Eugene Settlement |
|---|---|---|---|
| *Actives Tier One* | | | |
| General Services | $13.9 | $14.9 | $14.4 |
| Police & Fire | $1.6 | $1.7 | $1.7 |
| *Actives Tier Two* | | | |
| General Services | $1.0 | $1.0 | $1.0 |
| Police & Fire | $0.2 | $0.2 | $0.2 |
| *Judges* | $0.1 | $0.1 | $0.1 |
| *Retirees & Inactives* | $27.3 | $28.3 | $27.2 |
| **Total Accrued Liability** | **$44.1** | **$46.2** | **$44.6** |

*Calculations as of December 31, 2003 in billions*

# Changes in Contribution Rates
## PERS Rates Effective 7/1/2005

- Reform redirected Member contributions to the IAP, reduced the UAL payment, and increased the employer normal cost.
- The Strunk ruling and Eugene settlement have no impact on the normal cost rate. They only change the UAL payment.
- The OPSRP normal cost rate is lower than Tier One and Two under any of the cases.



# Changes in Contribution Rates
## Expected Contribution Rates Effective 7/1/2007

| | |
|---|---|
| **7/1/05 Contribution Rate** **(Excluding IAP 6% Contribution)** | **15.4%** |
| Planned Phase-In | 4.9% |
| 2004 Reserves | 0.4% |
| Asset Smoothing | 2.4% |
| Strunk Ruling | 2.7% |
| **7/1/07 Expected Contribution Rate** **(Excluding IAP 6% Contribution)** | **25.8%** |
| IAP 6% Contribution | 6.0% |
| Other Potential Adjustments | |
| Reserves | (2.1%) |
| Eugene Settlement | (1.6%) |

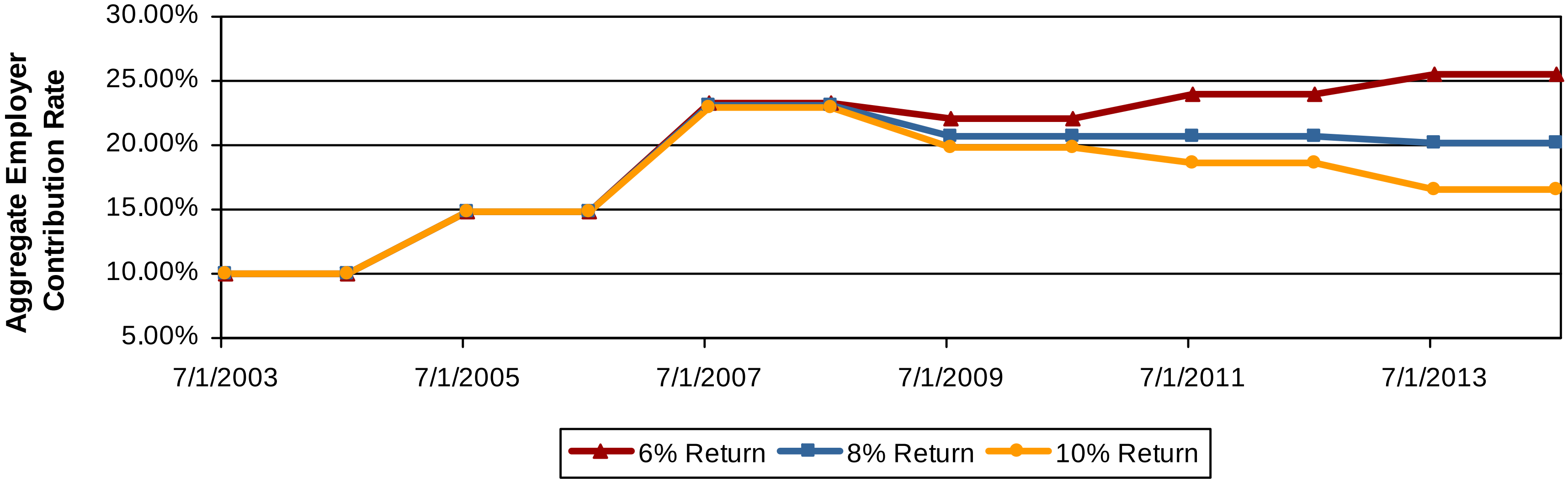
- With phase-in, current contribution rates average 15.4%, excluding the 6% contribution to the IAP.
- The rate would increase to 20.3% as of July 1, 2007 to complete the phase-in of current rates.
- Completing the recognition of 2001 and 2002 losses, but only recognizing a portion of subsequent gains results in a 2.4% increase in rates.
- The increase due to the Strunk ruling could be offset by using the reserves and/or implementing the Eugene settlement.
- These rates do not include the effect of employer side funds.

# Changes in Contribution Rates
## High Earnings Won't Significantly Reduce Rates Immediately

| | | 2005 Earnings | | |
|---|---|---|---|---|
| | | **0%** | **8%** | **16%** |
| Payroll Increase | **0%** | 27.2% | 26.3% | 25.6% |
| | **4%** | 26.6% | 25.8% | 25.1% |

- The rates shown above do not include the 6% IAP contribution or the effect of employer side funds.
- Using reserves reduces these rates by about 2.1%.
- The actual contribution rates effective July 1, 2007 will depend on a number of factors, including changes in methods and assumptions Mercer recommends.
- Two critical factors are investment earnings during 2005 and the total payroll increase of the employer. The investment earnings affect the assets available to pay benefits, and the change in payroll determines how the amortization of the unfunded is spread as a percentage of employee salaries.
- Asset smoothing and amortization methods spread the impact of changes in payroll and investment earnings over a long period.

# Changes in Contribution Rates
## Earnings Make a Significant Difference Long-Term
### (Using Non-Valuation Reserves)




- The rates shown above do not include the 6% IAP contribution or the effect of employer side funds.
- As part of the 2003 earnings crediting decision, the Board set aside approximately $1.2 billion in the contingency and capital preservation reserves. Staff has recommended the Board set aside an additional $600 million in these reserves out of 2004 earnings. This chart shows the expected contribution rates in the future, using $1.8 billion of non-valuation reserves as of December 31, 2004
- The funded status of the System is expected to decline from 86% (without side accounts) on December 31, 2003 to about 79% on December 31, 2005. The funded status of the System is expected to decline from 96% (with side accounts) on December 31, 2003 to about 91% on December 31, 2005
- Over the long run, investment earnings will make a significant difference in contribution rates.

# Conclusions

- Even after the Strunk ruling, PERS reform significantly curtailed the growth of Money Match benefits. However, it also made the Full Formula benefit more valuable.
- Market conditions combined with the Strunk ruling erased much of the savings initially anticipated from reform, although some savings remain and significant savings are still expected from OPSRP in the future.
- Employer rates are expected to rise rapidly in the next few years reflecting the phase-in of 12/31/2003 calculated rates and the smoothing of investment returns. Court rulings will also affect how much rates rise.
- High investment earnings will not provide relief in the short run, but will make a significant difference in the long run.
- The Board has some control over the growth and volatility of contribution rates, starting with a decision to use reserves to offset the impact of the Strunk ruling.

# Next Steps
## Overview of Measures to Control Contribution Volatility

- Short-Term Measures
  - Use of the Contingency and Capital Preservation Reserves
  - Formal policy on interest crediting
- Intermediate-Term Measures
  - Review use of Entry Age Normal funding method
  - Review alternative methods to smooth contribution rates
  - Review other actuarial methods and assumptions
- Long-Term Measures
  - Financial modeling of reserving policies
  - Asset-liability study to assess the risk-return benefits of different asset allocations



## Certification

We have prepared this report for the Oregon Public Employees' Retirement System to assist the Board in understanding the financial implications of recent legislation and court rulings on the System. The information in this report is based on the data, assumptions and methods used for the actuarial valuation report as of December 31, 2003 which was prepared by Milliman. Unless otherwise noted, the Oregon Public Service Retirement Plan is not considered in this report.

This report also contains projections of assets and liabilities. For 2004, we used actual asset returns and assumed the Board allocated $373 million to the contingency reserve and $275 million to the capital preservation reserve. For years beyond 2004 we assumed asset returns as described in the various projections. Actual experience could differ from these assumptions and may produce results that differ materially and significantly from this report.

The liabilities, costs and other information included in this report were determined in accordance with generally accepted actuarial principles and procedures. 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.

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**Enrolled Actuary No. 05-5650**

**William R. Hallmark, ASA, EA** **Date**
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# Appendix
## Key Projection Assumptions

| Assumption | Projection Scenario | | |
|---|---|---|---|
| Investment Return (Regular and Variable) | 6% | 8% | 10% |
| Expenses | Investment returns are assumed to be net of expenses. | | |
| Contingency Reserve | No allocation and no withdrawal | Earnings attributable to the contingency and capital preservation reserves are allocated to the contingency reserve. | Allocate 7.5% of available earnings in first 3 years, 5.0% of available earnings thereafter. |
| Capital Preservation Reserve | No allocation and no withdrawal. | No allocation and no withdrawal. | No allocation and no withdrawal. |
| Tier 1 Rate Guarantee Reserve | No allocation. Balance is withdrawn as needed to credit 8.0% to Tier 1 member accounts. | No withdrawal. Earnings on the current reserve are allocated to the reserve. | All earnings available in excess of 8.0% for Tier 1 member accounts are allocated to the reserve. |
| All Other Assumptions | Based on assumptions used for 12/31/2003 actuarial valuation | Based on assumptions used for 12/31/2003 actuarial valuation | Based on assumptions used for 12/31/2003 actuarial valuation |