MERCER

Consulting. Outsourcing. Investments.

MARSH MERCER KROLL
GUY CARPENTER OLIVER WYMAN

March 2008

Negative Earnings System Impact

Oregon Public Employees Retirement System

Bill Hallmark, ASA
Matt Larrabee, FSA

Key Findings
Overview

- **We projected the impact on the System if investment experience in 2008 & 2009 is similar to that of 2001 & 2002**
  - Represents a cumulative two-year investment return of -14.2% on System assets
- **Including side accounts, such experience would decrease the System's funded status to 87% as of December 31, 2009**
  - This same measure is projected to be 113% as of December 31, 2007
- **Excluding side accounts, the funded status would decrease to 77% as of December 31, 2009**
  - This same measure is projected to be 98% as of December 31, 2007
  - A funded status below 80% would double the size of the "collar" on employer contribution rates for the determination of rates for the 2011-2013 biennium
- **The Tier 1 Rate Guarantee Reserve would move from a projected $1.9 billion account balance at December 31, 2007 to a $0.6 billion shortfall at December 31, 2009**

Key Findings
Overview

- **Projected Tier 1/ Tier 2 employer pension contribution rates would increase significantly, but the increase would be limited by the rate collar on a pool/employer basis**

Valuation	Excluding Side Accounts	Including Side Accounts
12/31/2007	11.6%	4.3%
12/31/2009	17.6% *(with rate collar)* 20.3% *(without rate collar)*	12.3% *(with rate collar)* 15.0% *(without rate collar)*

Note:
Side account rates are not limited by the rate collar

- **Rate increases would be driven by an increase in the unfunded actuarial liability (UAL) for the combined (Tier 1/Tier 2 & OPSRP) pension program**

Valuation	Excluding Side Accounts	Including Side Accounts
12/31/2007	+$1.0 Billion	-$6.7 Billion
12/31/2009	+$12.7 Billion	+$7.1 Billion

Note:
A negative UAL is a surplus

Key Findings
Overview

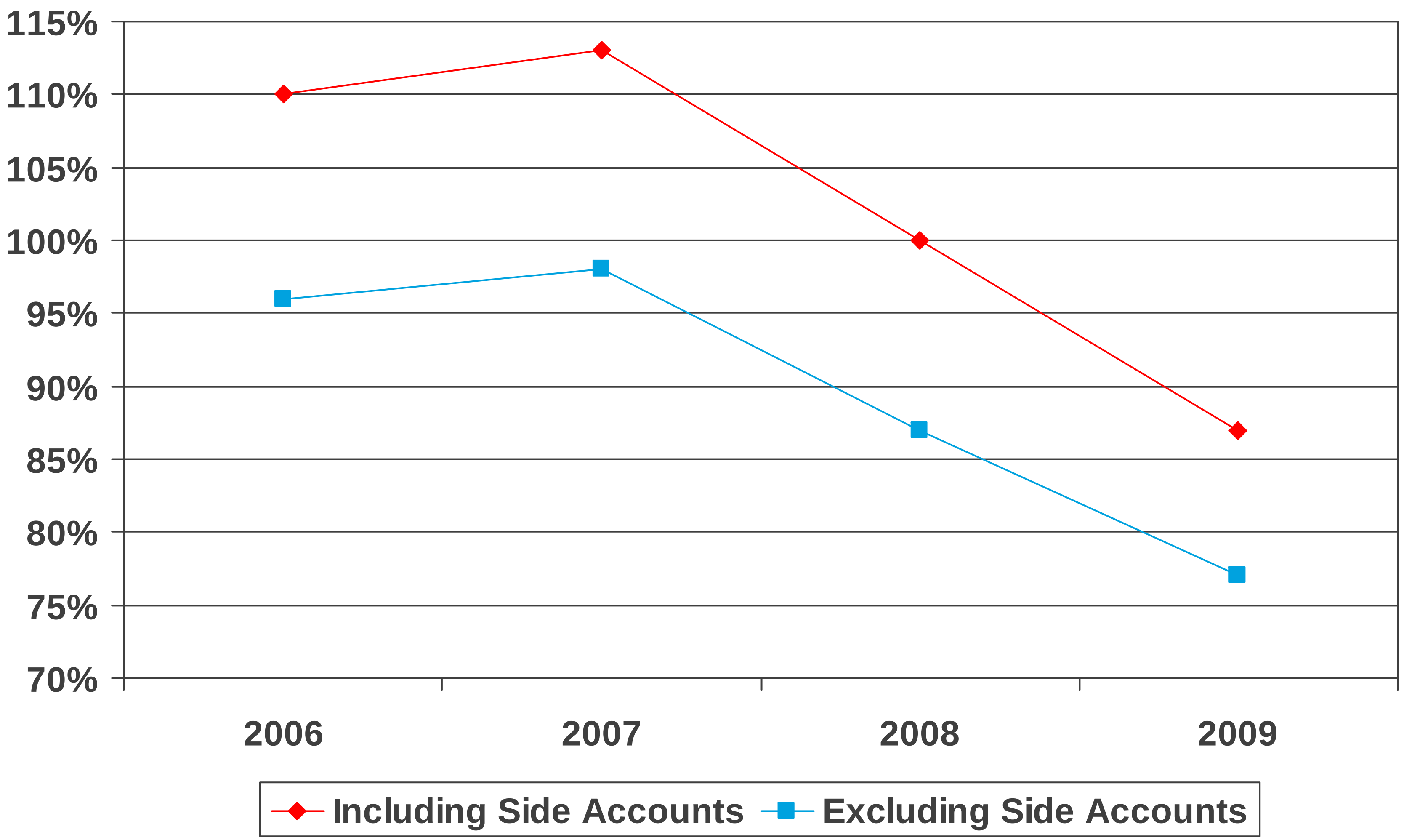
- **Projected blended OPSRP employer pension contribution rates would also increase**

Valuation	Excluding Side Accounts	Including Side Accounts
12/31/2007	11.6%	4.3%
12/31/2009	15.9% *(with rate collar)* 18.6% *(without rate collar)*	10.6% *(with rate collar)* 13.3% *(without rate collar)*

- **This rate increase would also be driven by the amortization of the projected $12.7 billion unfunded actuarial liability (UAL) excluding side accounts as of December 31, 2009, as UAL is amortized across both Tier 1/Tier 2 and OPSRP payroll**

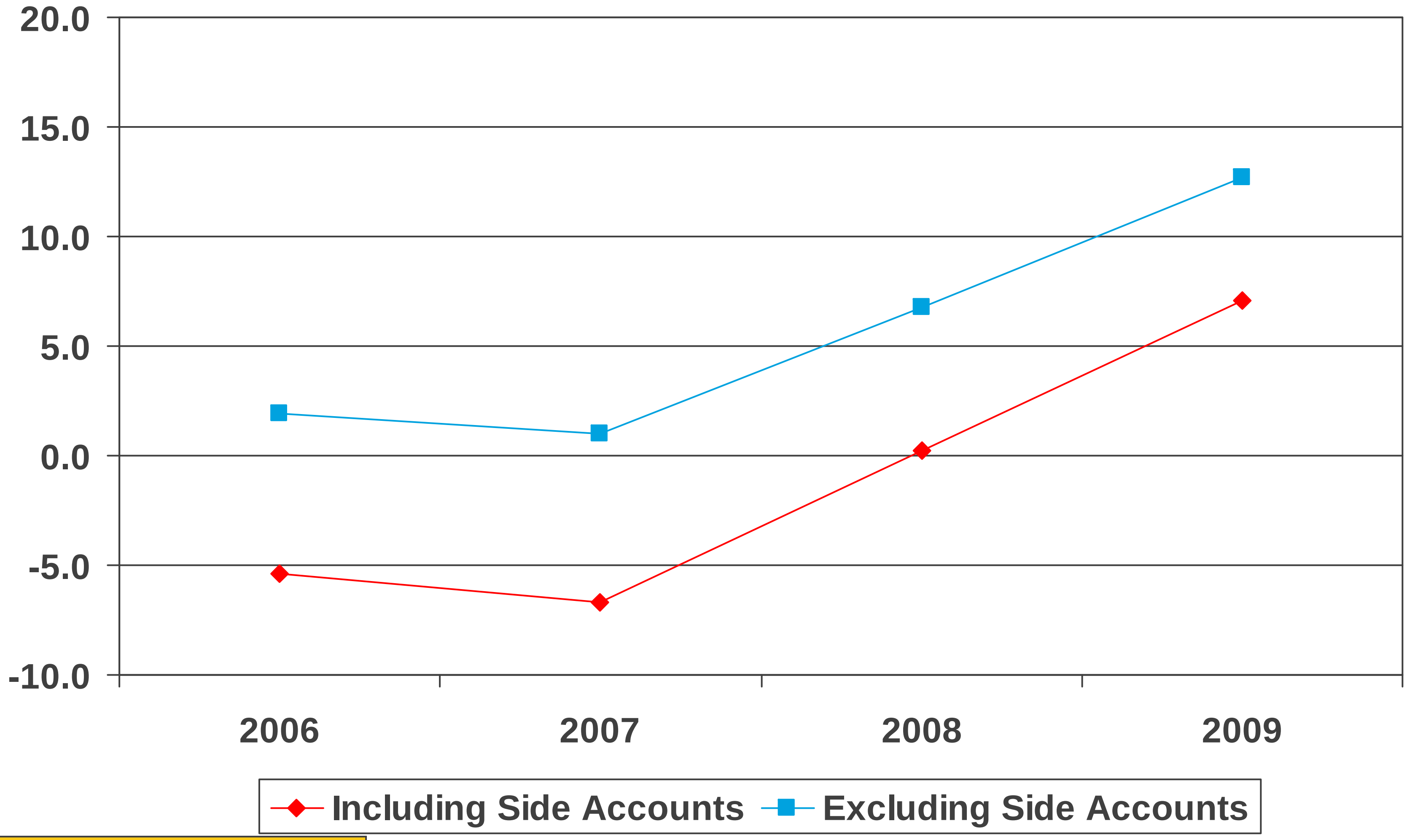
Projected Combined Pension Funded Status (Tier 1/Tier 2 & OPSRP)

Investment Experience: Actual 2007; Negative Earnings in 2008-2009



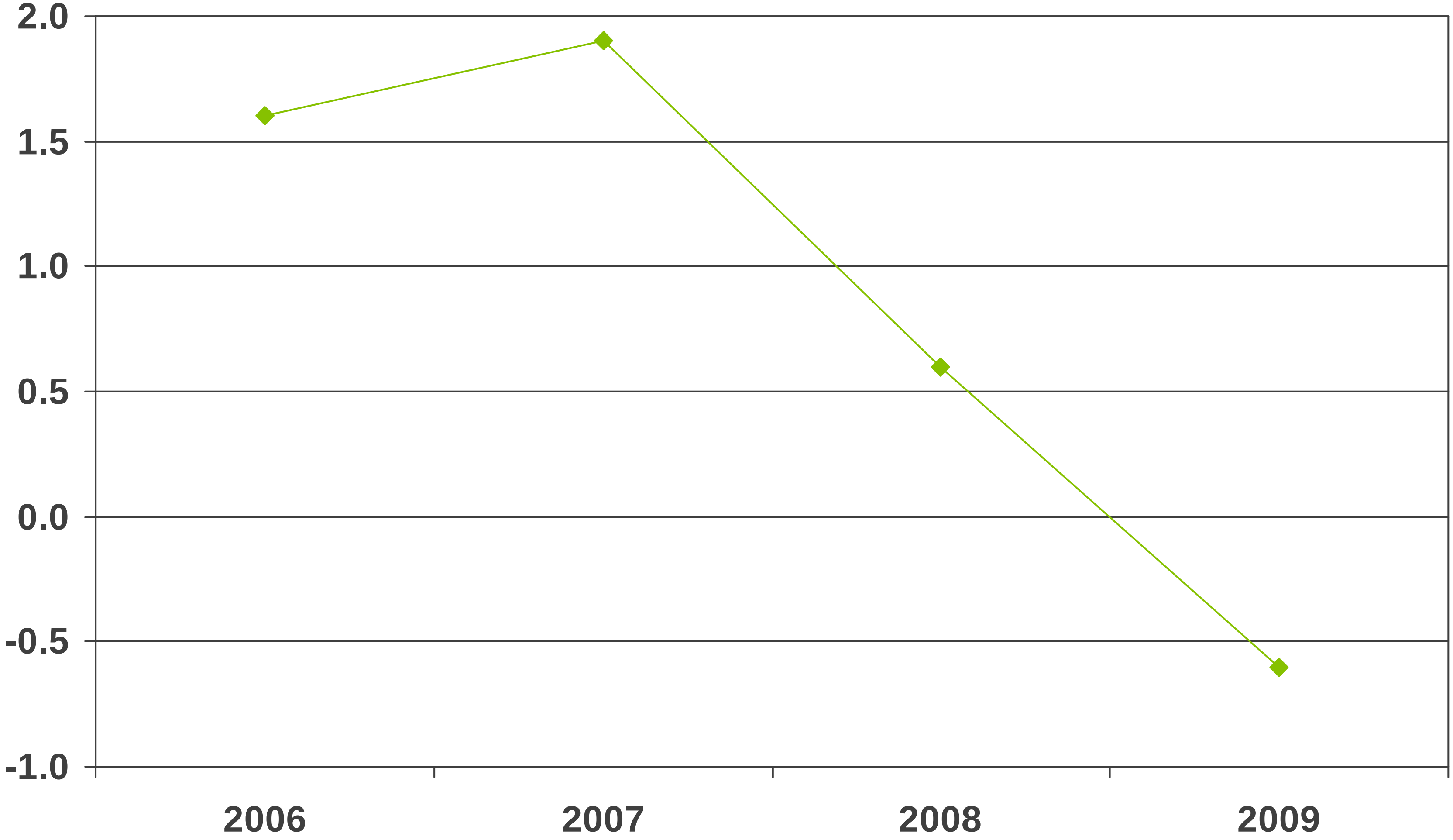
Projected Combined Pension Unfunded Accrued Liability (UAL)

Investment Experience: Actual 2007; Negative Earnings in 2008-2009



Amounts in $Billions

Projected Tier 1 Rate Guarantee Reserve Balance
Investment Experience: Actual 2007; Negative Earnings in 2008-2009



Amounts in $Billions

Data, Assumptions, Methods and Provisions

- **Census data provided by OPERS and valuation results as of December 31, 2006 were used for our modeling**
  - Data was projected forward assuming demographic experience follows actuarial assumptions and that active program membership remains at 12/31/2006 levels
  - Actual 12/31/2007 and 12/31/2009 valuation results will be dependent on actual demographic experience and hiring patterns and could differ materially from projected amounts shown in this presentation
- **Plan provisions and actuarial methods were modeled as stated in our December 31, 2006 valuation report**
  - No provisions were made for current or future litigation
  - No future demographic gains or losses were assumed. Actual results will deviate from those projected here based on demographic experience.
- **Actual investment returns for 2007 and actual asset allocation and proposed reserve balances as of 12/31/2007 as provided by PERS were used in our modeling**
  - We assumed no new side accounts are established post-2007
- **Historical asset class investment returns for 2001 and 2002 as provided by PERS were used to model 2008 and 2009 investment returns under the "negative earnings" scenario**

MERCER

MARSH MERCER KROLL
GUY CARPENTER OLIVER WYMAN