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Update On Risk Assessment



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Risk Assessment A Strategic Priority Of SCPP

- 2009 SCPP adopted a strategic priority
 - Managing the future health of the retirement systems
- Actuarial risk assessment is the foundation
- SCPP and OSA both have roles
 - OSA - Measure and analyze
 - SCPP - Develop strategies



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SCPP Began Work Last Year

- Received educational briefings on the general process
 - Need for OSA to build an actuarial risk model
- Reviewed project plans

- Advisory group provided input on risks and desired outcomes

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Today's Briefing

- Why a separate OSA report?
- Update on OSA's progress
- Remaining steps for OSA
- Next steps for SCPP

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Why A Separate OSA Report?

- Risk assessment includes actuarial analysis
 - Document for multiple audiences
 - Communicate according to standards of practice
- Requires
 - Independent analysis (fact finding)
 - Separate OSA report
- OSA report distinct from policy development and risk management effort

Key Goals Of OSA's Report

- Improve understanding
 - Quantify the likelihood, magnitude, and financial impacts of risks
 - Identify root causes of risks
 - Show how risks interact
 - Inform future policy and budget discussions
- Provide framework for policy makers
 - Evaluate policy changes
 - Balance risks and rewards
 - Includes new tools



OSA's Report Focuses On Financial Risks

- Financial risks have a significant impact on health outcomes
 - Affordability
 - Sustainability
 - Adequacy
- Actuaries specialize in assessing financial risks
- Insufficient time to address all risks this interim

Other Risks Not Overlooked

- SCPP advisory group identified several non-financial risks
 - Examples
 - Benefit adequacy
 - Plan design
 - Complexity
- Documented in SCPP materials
- Can be evaluated in future risk management efforts



Recap

- Covered OSA report
 - Focus on financial risks
 - Fact finding
 - Distinct from SCPP policy development
- Up Next: What has OSA been doing since last check-in?



Questions?



OSA's Major Efforts Revolve Around Risk Model

- Gathered and analyzed historical data
- Set assumptions
- Built the risk model
 - Quantify financial risks
- Validated the risk model



OSA Gathered Data To Develop Assumptions For Model

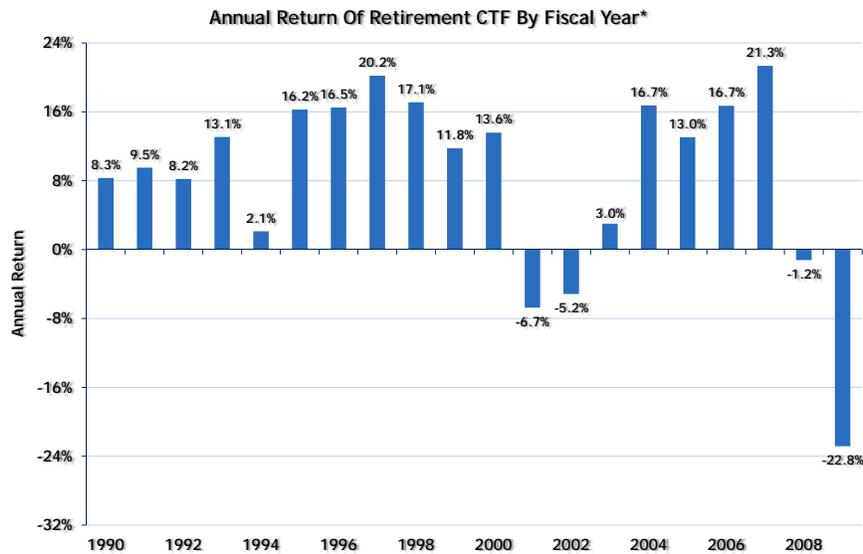
- Key drivers of financial health for retirement systems are investment, funding, and benefits policies
- Gathered a 20-year history of relevant data
 - Investments
 - Contributions
 - Benefit improvements
 - State revenue
 - Other economic variables
- Looked for correlations and other explanations
- Why 20 years?
 - Systematic actuarial funding policy adopted in 1989
 - Sufficient data for developing actuarial assumptions

What Did We Find?

- Investments are on track
- Benefit improvements are adding liabilities
 - Many years with small regular increases (“creep”)
 - Several large irregular increases (“spikes”)
- Consistent funding shortfalls over last decade
 - Contributions missed in good times and bad
 - Gains captured early, subsequent losses deferred
 - Underfunding correlated with investment and revenue volatility
- Investments and revenue growth move together
- More details available in PFC presentation
 - On OSA web site: osa.leg.wa.gov



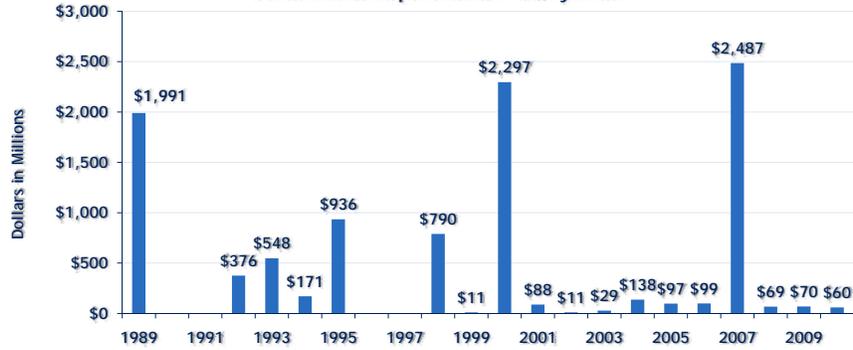
Average Annual Return Of 7.99 Percent Over Last 20 Years



* As reported by WSIB. Time weighted rate of return. Dollar weighted returns vary by plan.

The Spike And Creep Of Benefit Improvements

Present Value of Liability Increases From Benefit Improvements - All Systems*

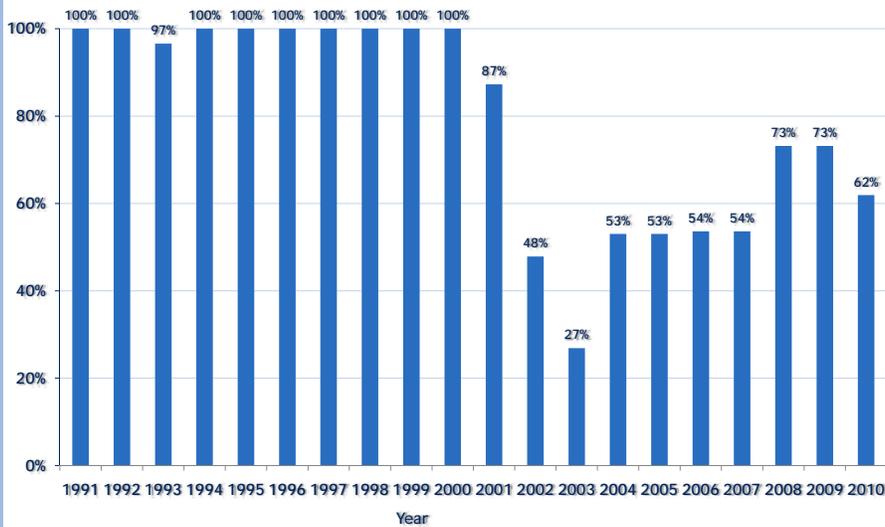


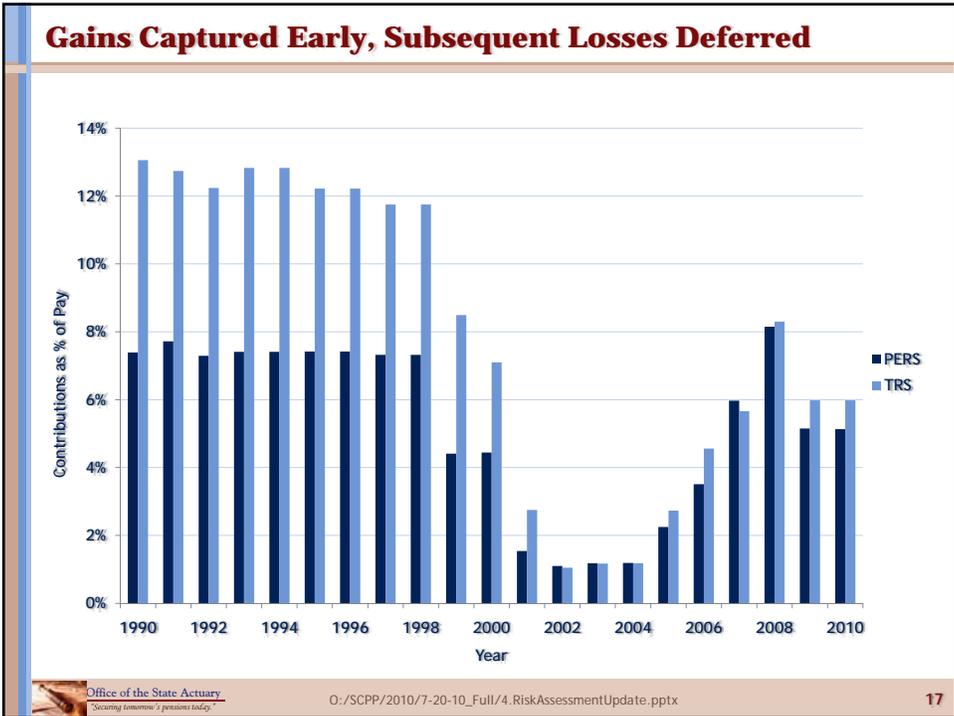
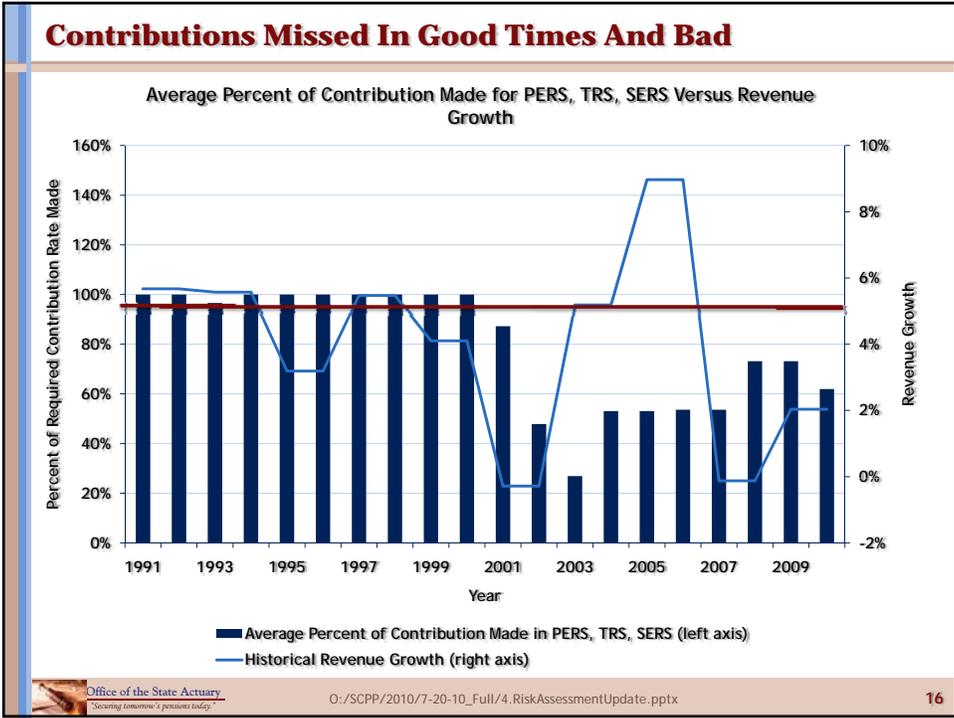
1989 - Plan 1 Age 65 COLA after 40% loss of purchasing power from age 65.
 1995 - Plan 1 Uniform COLA.
 1998 - Plan 1 Gain-Sharing.
 2000 - Plan 2/3 subsidized early retirement reduction factors with 30 years of service.
 2007 - Gain-sharing replacement benefits.

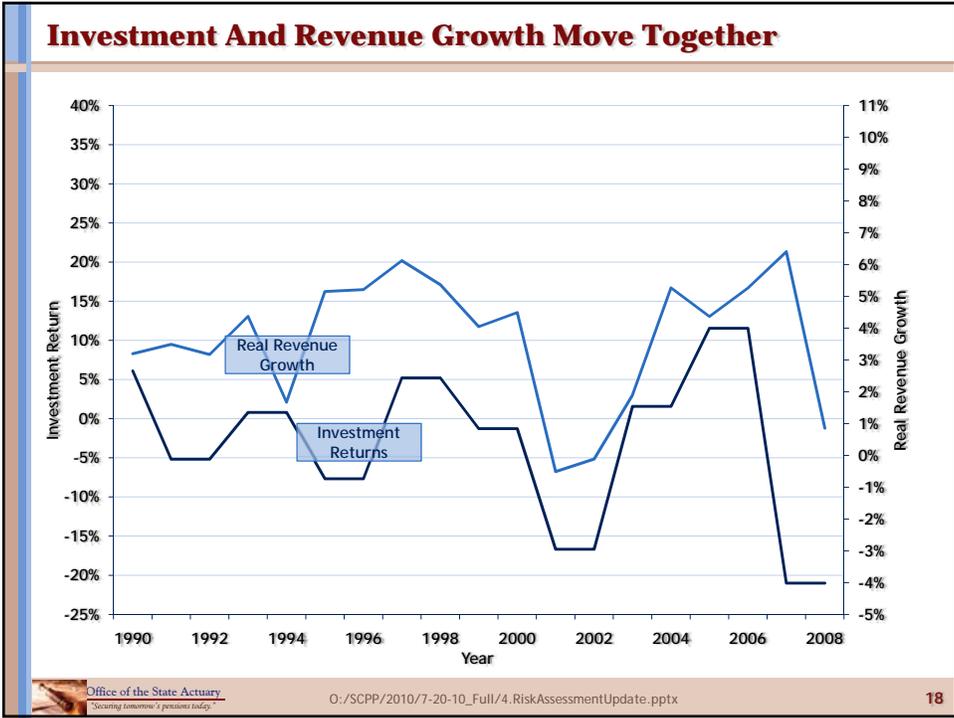
* In 2010 dollars (based on 8% annual interest).
 Note: Does not include impacts of Plan 3 gain-sharing prior to 2008 gain-sharing event. Does not include savings from repealing future gain-sharing since cost never recognized previously.

Eighty Percent Of Required Contributions Made

Average Percent of Required Contribution Made For PERS, TRS, SERS







Implications For Risk Model

- Move beyond a single "best estimate" expectation
- Consider how funding and benefit policies react to investment and revenue volatility
- Implies a need for dynamic model with new actuarial assumptions
 - Contributions made
 - Future benefit improvements

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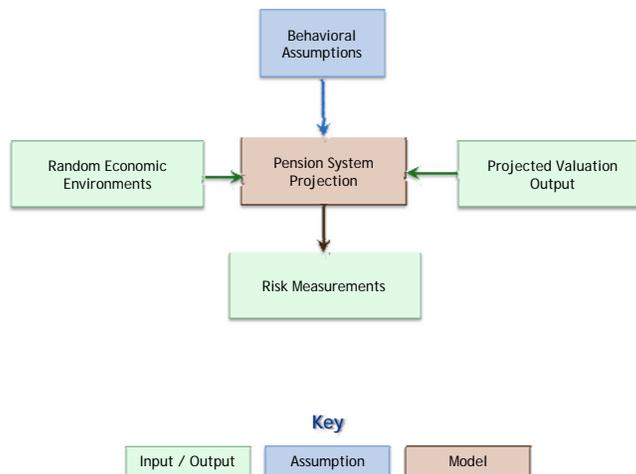
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OSA Built New Risk Model

- Quantifies financial impact of risks
 - Magnitude and likelihood
- Goes beyond traditional actuarial analysis
 - Simulates thousands of possible outcomes - not just the expected
 - Includes new assumptions about behavior
 - Contributions made
 - Future benefit improvements
 - Dynamic component
 - Allows multiple economic variables to interact
 - Calculates how funding policies react
- Can be customized to address different needs

Model Overview



Model Enhances Risk Analysis

- Shows full range of possible future outcomes
- Quantifies uncertainty
- Factors in human behavior

future?

How Can You Use The Model?

- Look into the future
 - See how funding policy and practice react to investment returns and available revenue
 - Measure plan health and affordability
- Answer questions
 - What happens if current policy and practice continue?
 - What happens if policy or practice changes?
- Weigh risks and rewards of systematic actuarial funding
 - Develop new strategies
 - Test policy changes
- Focus risk management efforts
- Educate and inform

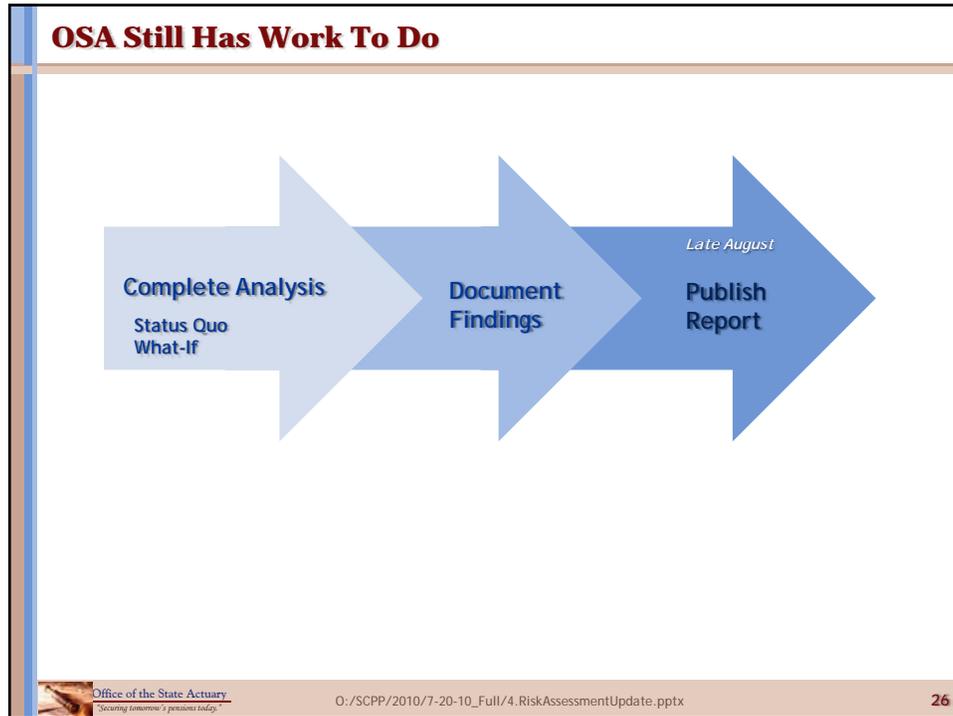
Recap

- What's happened to date
 - Research and fact finding
 - Assumption setting
 - Built risk model
 - Early findings
- Up next
 - What's OSA doing now?
 - What's in store?



What Is OSA Currently Doing?

- Analyzing and summarizing results from model
- Writing the report
- Working with outside auditors
 - Reviewing the model for the Pension Funding Council



What Will Be In The OSA Report?

- More details on fact finding and the risk model
- Analysis of future system outlook if current policies and practices continue
- Analysis of possible outlooks under different what-if scenarios
- State actuary's findings and recommendations
- Actuarial documentation and disclosures

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OSA Report Only The Beginning

- Kick-off for longer-term strategic efforts to manage system health
- Long-term strategy could include a phased approach
 - Phase 1: Identify and measure financial risks
 - Done in OSA report
 - Phase 2: Manage financial risks
 - Job of policy makers
 - Phase 3: Evaluate non-financial risks/outcomes
 - Examples: Benefit adequacy, plan design, complexity
 - Financial impacts can be assessed in the model
- Risk management is an ongoing process
 - Requires continued monitoring and adjustment

Next Steps For SCPP

- Executive Committee will discuss how to develop risk management strategies
 - On the agenda for this afternoon's meeting
- Receive the OSA report in August
 - Staff can provide a full briefing at September meeting
- Possibly develop a legislative strategy for the 2011 Session

