



Office of the State Actuary
"Securing tomorrow's pensions today."



State of the State's Pensions

Matt Smith, FCA, EA, MAAA
State Actuary

Aaron Gutierrez, MPA, JD
Policy Analyst

January 17, 2012

State Of The State's Pensions

- A national leader in pensions
- Certain risks and challenges ahead
- Opportunities to plan for the future and remain a national leader



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Today's Presentation

- Brief "Pensions 101" to start
- State of the State's Pensions
- Additional pension references

What Are Pensions?

- Lifetime retirement payments
- Promises made today to pay benefits in the future



Pension Promise Is A Contract

- Since 1956, pension promise has been deemed a contractual right (*Bakenhus* case)
- Money must be available when pension payment becomes due
- How do you secure a promise for something that happens in the future?

Washington Uses A Financing Plan To Satisfy Contract

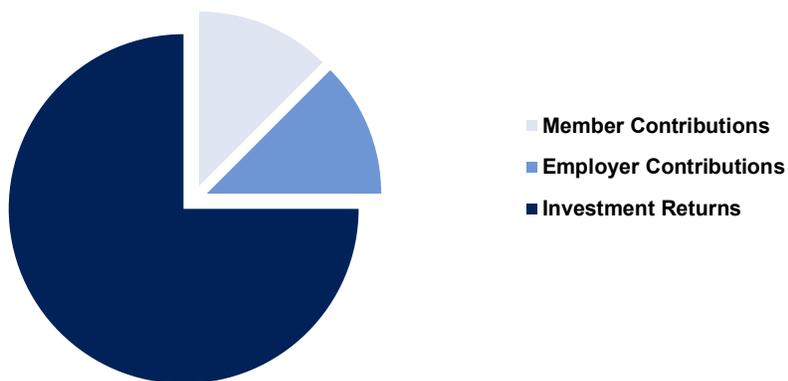
- Regular contributions over time
 - "Systematic actuarial funding"
- Uses the power of investing to help pay pension costs



Where Does The Money Come From?

- Members and employers make contributions
- Department of Retirement Systems (DRS) collects contributions as a percentage of each paycheck
- Contributions pooled and held in a trust fund
 - Managed by Washington State Investment Board (WSIB)
 - WSIB mandate: maximize returns at a prudent level of risk

Pension Trust Fund



What Is Systematic Actuarial Funding?

- Might be easier to understand if compared with two other approaches
 - Pay-as-you-go
 - Up-front contribution
- One key consideration is fairness across the generations
 - “Intergenerational equity”
 - Funding a pension plan so costs of members’ benefits are paid by the taxpayers who received services from those members



Pay-As-You-Go

- Contributions made as benefits are paid
- Most expensive financing plan in long term
 - Little time to invest
 - Less potential earnings
 - Less potential investment risk
- Least expensive in short term
 - No contributions made until employee retires
- Does not support intergenerational equity
 - Contributions made after a member retires
 - Future generations pay for past generations



Up-Front Payment

- Single lump sum contribution today for all future benefits
- Least expensive financing plan in long term
 - Maximum time to invest
 - Greater potential earnings
 - Greater potential investment risk
- Most expensive in short term
 - All contributions made up-front, single lump sum
- Does not support intergenerational equity
 - All contributions made today
 - Today's generation pays for future generations

Systematic Actuarial Funding

- Washington uses this approach
- Regular contributions over time
- Investment returns earned systematically over time
 - "Middle ground" between pay-as-you-go and up-front payment plans
- Investment risk is spread over time
- Supports intergenerational equity
 - Contributions made over members' careers
 - Today's generation pays for today's generation



How Does It Work?

- Estimate future pension benefits
 - What will future benefits be?
 - When will they be paid and for how long?
- Estimate returns on future invested contributions?
 - What will future investment returns look like?
- Select an actuarial cost method
 - What are the regular contributions required over time?



Actuarial Cost Method

- Allocates a pension plan's cost over a member's working career
- Determines annual and on-going cost while member works
 - "Normal cost"
 - The regular contributions over time under systematic actuarial funding
- If everything happens as planned, normal cost will accumulate with investment earnings and completely fund a member's pension at the time of his/her retirement



Measuring Plan Health

- Has everything happened as planned?
- Are we on track with our systematic actuarial funding plan?
- Two key measurements
 - Funded status
 - Unfunded Actuarial Accrued Liability (the “UAAL”)

Funded Status

- Comparison of plan assets to today's value of earned pensions
 - Point-in-time measurement
- A funded status of at least 100 percent means a plan has at least \$1 in assets for each \$1 of earned pension liability
 - On track with systematic actuarial funding plan



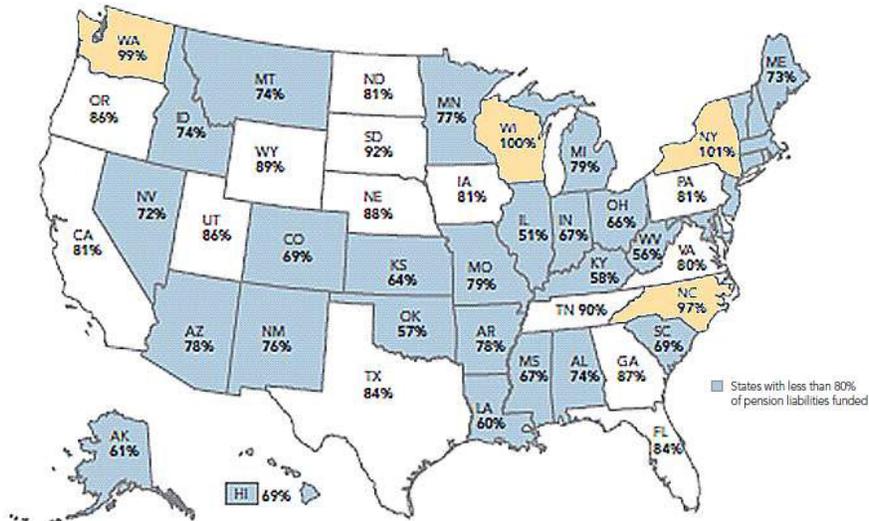
Unfunded Actuarial Accrued Liability

- Occurs when a plan does not have sufficient assets to cover earned pension liabilities
 - Funded status less than 100 percent
- Off track with systematic actuarial funding plan
- Requires additional contributions to get back on track
 - Normal cost plus UAAL contributions
 - Intergenerational equity is weakened
- If you don't get back on track, funding plan will ultimately become pay-as-you-go

Recap: Pensions 101

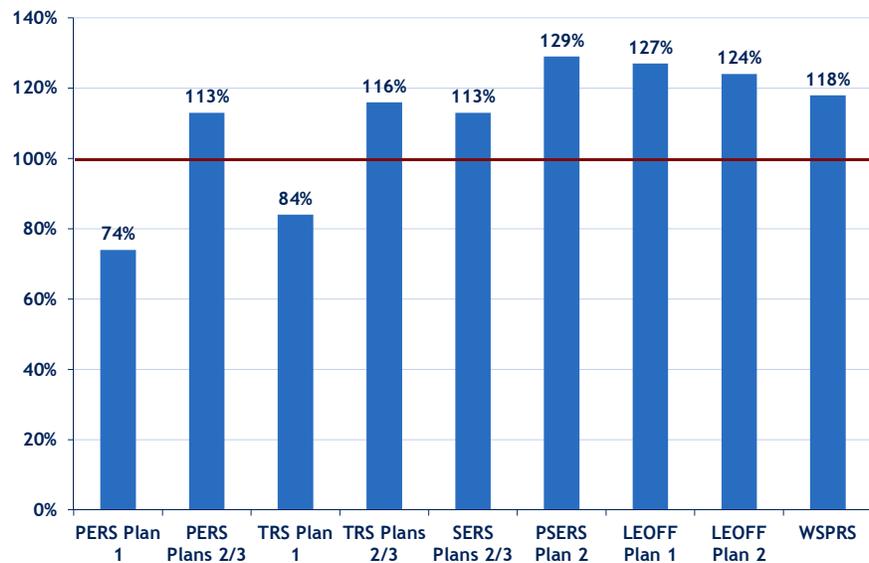
- Pensions are promises made today to make lifetime retirement payments in the future
- Funded by member and employer contributions plus investment returns
- Washington uses systematic actuarial funding to secure future pensions
- Systematic actuarial funding supports intergenerational equity
- Actuarial measurements determine whether the state's on track with the financing plan
- Two key measurements
 - Funded status
 - Unfunded actuarial accrued liability

Top Three Funded Status Nationally



Source: The PEW Center on the States April 25, 2011, report, "The Widening Gap: The Great Recession's Impact on State Pension and Retiree Health Care Costs."

Latest Funded Status For Washington, June 30, 2010



Latest Funded Status And Unfunded Liability

Funded Status on an Actuarial Value Basis*										
(Dollars in Millions)	PERS		TRS		SERS	PSERS	LEOFF		WSPRS	Total
	Plans		Plans		Plans		Plan 1	Plan 2		
	Plan 1	2/3	Plan 1	2/3	2/3	Plan 2	Plan 1	Plan 2		
Accrued Liability	\$12,531	\$17,272	\$9,231	\$5,708	\$2,368	\$80	\$4,381	\$4,863	\$782	\$57,216
Valuation Assets	\$9,293	\$19,474	\$7,791	\$6,593	\$2,664	\$103	\$5,561	\$6,043	\$920	\$58,442
Unfunded Liability	\$3,238	(\$2,202)	\$1,439	(\$886)	(\$296)	(\$23)	(\$1,180)	(\$1,179)	(\$137)	(\$1,226)
Funded Ratio										
	2010	74%	113%	84%	116%	113%	129%	127%	124%	118%

Note: Totals may not agree due to rounding. Source: June 30, 2010, Actuarial Valuation Report.

*Accrued liabilities represent the present value of future benefits for current members earned at the valuation date assuming an expected rate of return on assets of 8% per year. All assets have been valued under the actuarial asset method (the "smoothing" method).

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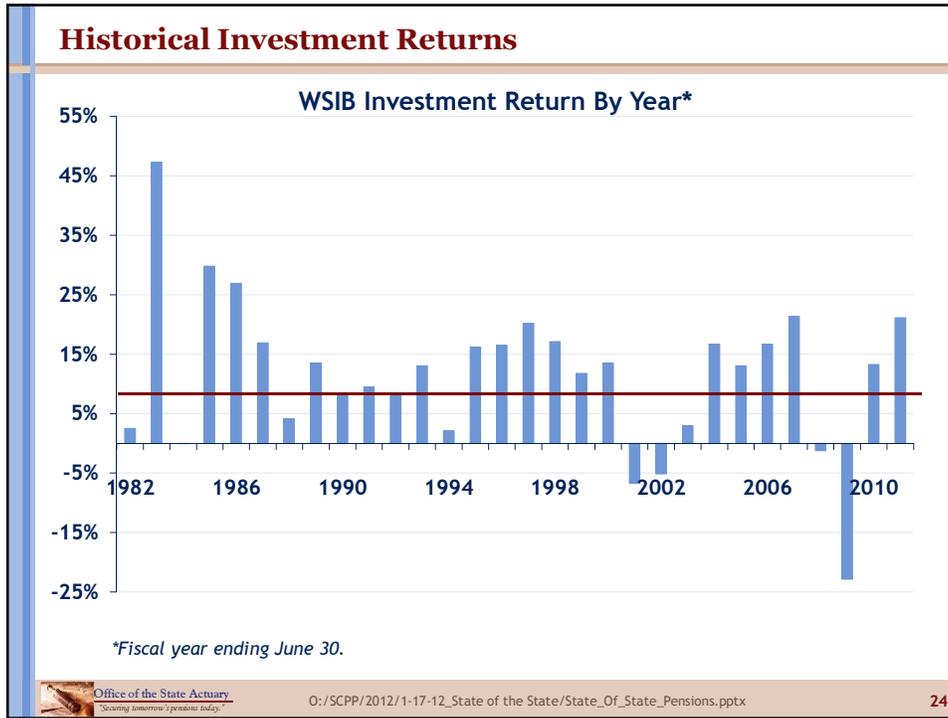
*Accrued liabilities represent the present value of future benefits for current members earned at the valuation date assuming an expected rate of return on assets of 8% per year. All assets have been valued under the actuarial asset method (the "smoothing" method).

Amortization Of Unfunded Liability

- Phasing in new method adopted in 2009
- Full requirements begin in 2015
 - Increase from 2.34 to 3.50 percent in PERS
 - Increase from 2.42 to 5.75 percent in TRS
- Paid by employers only
- Expected amortization dates
 - 2025 in PERS 1
 - 2022 in TRS 1
 - Will occur sooner/later under optimistic/pessimistic outcomes

Top Investment Performance

- WSIB's ten-year returns through June 30, 2010, after fees, best for public funds
- Based on Bloomberg survey of public pension funds with more than \$20 billion in assets
- According to Bloomberg, WSIB's ten-year returns benefitted from investments in
 - Private equity
 - Real estate



- ### Complex Plans With Cost Effective Administration
- Third most complex public pension plan/system
 - DRS' cost per active member and annuitant well below peer average
 - \$59 for DRS
 - \$82 for peer average
 - According to CEM Benchmarking analysis
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Leader In Pension Reform

- Closed Plans 1 to new members in 1977
- Created Plans 2 with age 65 normal retirement age
- One of the first states to adopt hybrid plan design in 1996 (TRS 3)
- Other states following Washington's earlier examples

Litigation Risks Remain

- Potential reinstatement of recently repealed benefits would weaken affected plans' financial health
 - Gain-sharing benefits in PERS 1, TRS 1, and Plan 3
 - PERS 1 and TRS 1 Uniform Cost-of-Living-Adjustment (UCOLA)
- Full analysis included in recent Report on Financial Condition
- Potential funded status and budget impacts

Funded Status Impacts

Funded Status on an Actuarial Value Basis				
	2010 Funded Status ¹	After Restoration of Gain-Sharing ²	After Restoration of UCOLA ³	After Restoration of Gain-Sharing and UCOLA ⁴
PERS 1	74%	72%	66%	63%
PERS 2/3	113%	112%	N/A	112%
TRS 1	84%	82%	72%	70%
TRS 2/3	116%	109%	N/A	109%
SERS 2/3	113%	105%	N/A	105%

¹Based on 2010 Actuarial Valuation Report (AVR).

²Based on AVR results after restoration of gain-sharing and continuation of replacement benefits.

³Based on AVR results after restoration of UCOLA.

⁴Based on AVR results after restoration of gain-sharing and UCOLA.

2013-15 Budget Impacts

Increase in 2013-15 Employer Contributions			
(Dollars in Millions)	After Restoration of Gain-Sharing ¹	After Restoration of UCOLA ²	After Restoration of Gain-Sharing and UCOLA ³
General Fund	\$206.5	\$410.5	\$639.7
Non General Fund	37.4	105.9	149.4
Total State	243.9	516.4	789.1
Local Government	185.9	381.9	589.2
Total Employer	\$429.8	\$898.2	\$1,378.4

Note: Totals may not agree due to rounding.

¹Based on AVR results after restoration of gain-sharing and continuation of replacement benefits.

²Based on AVR results after restoration of UCOLA.

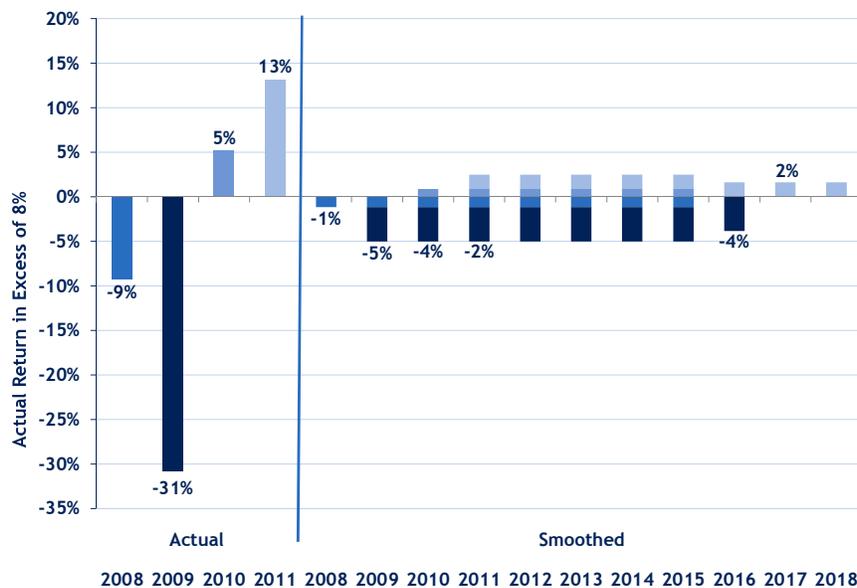
³Based on AVR results after restoration of gain-sharing and UCOLA.

Recovery Underway, Not Complete

- Investment returns of 13.2 and 21.1 percent for last two fiscal years
- Recovered most, but not all of past investment losses from Great Recession
- Actuarial funding based on “smoothed” investment returns
- Smoothing method determines “actuarial value of assets”



Illustration Of Asset Smoothing Method



Actuarial Value Of Assets At June 30, 2011 - Preliminary

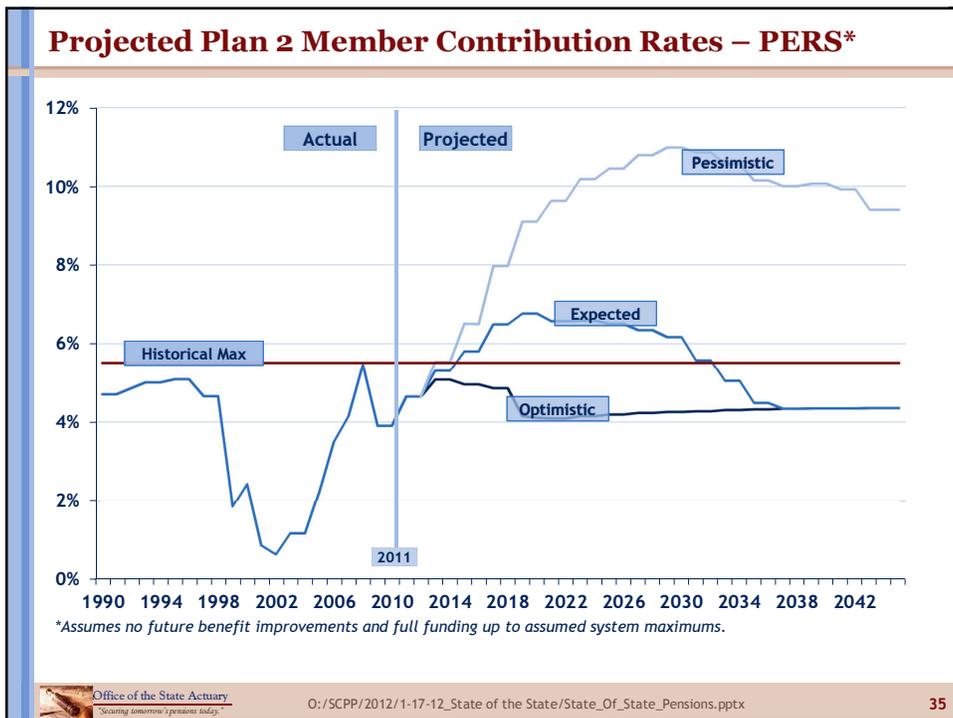
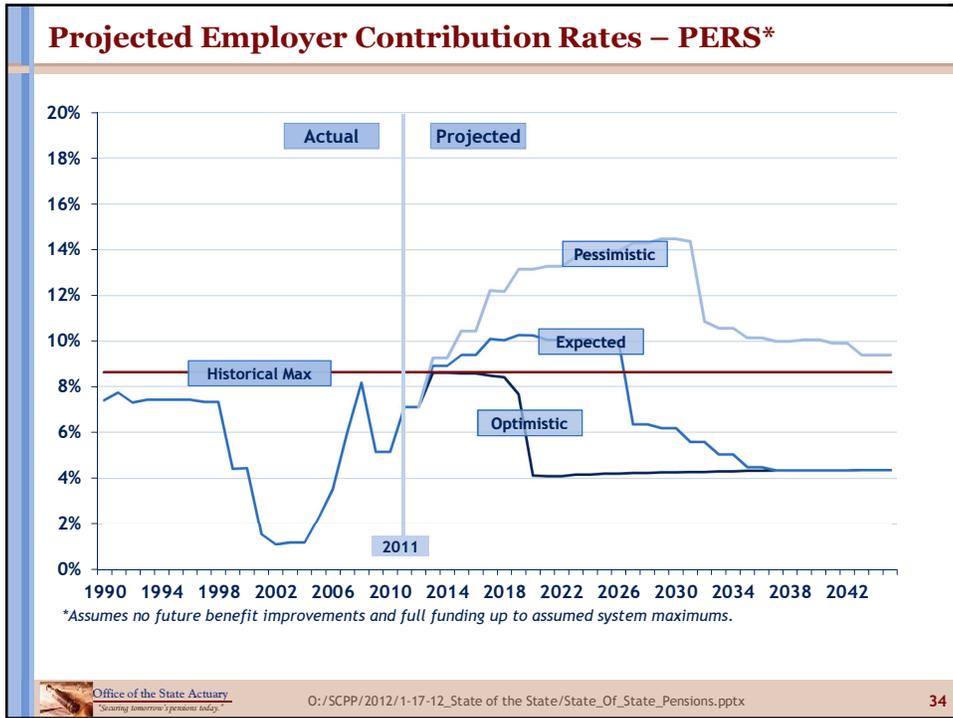
Calculation of Actuarial Value of Assets All Plans	
(Dollars in Millions)	Total
a. Market Value of Assets	\$58,995
b. Deferred Gains and (Losses)	
Plan Year Ending	
6/30/2011	5,599
6/30/2010	1,531
6/30/2009	(11,090)
6/30/2008	(2,724)
6/30/2007	2,058
9/30/2006	892
9/30/2005	482
Total Deferral	(\$3,252)
c. Market Value less Deferral (a-b)	\$62,247
d. 70% of Market Value of Assets	\$41,297
e. 130% of Market Value of Assets	\$76,694
f. Actuarial Value of Assets*	\$62,247

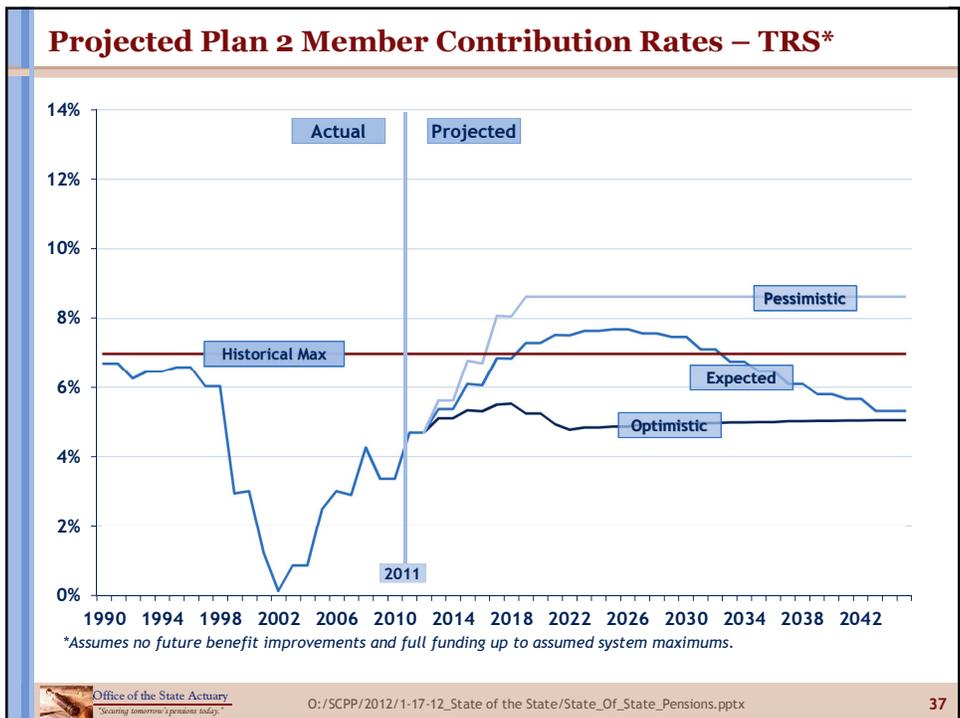
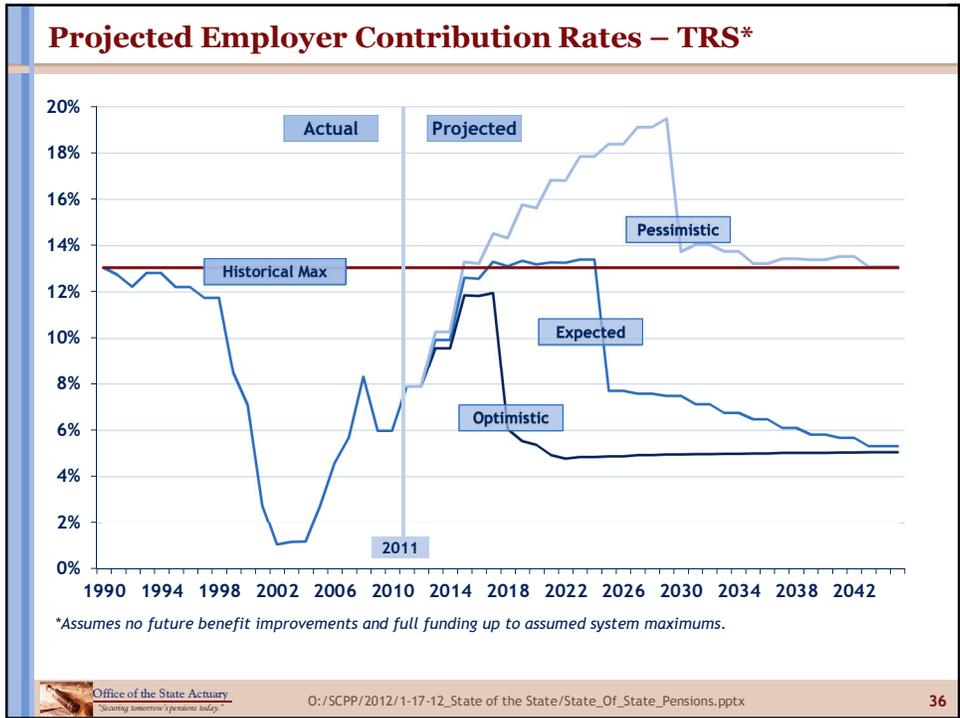
Note: Totals may not agree due to rounding.

*Actuarial Value of Assets can never be less than 70% or greater than 130% of the Market Value of Assets.

Future Contribution Increases Expected

- With \$3.3 billion in deferred investment losses at June 30, 2011, we expect contributions to increase above current levels
- Also phasing-in higher Plan 1 UAAL requirements
- Important note: future contribution increases depend on actual investment performance plus actual funding and benefit levels

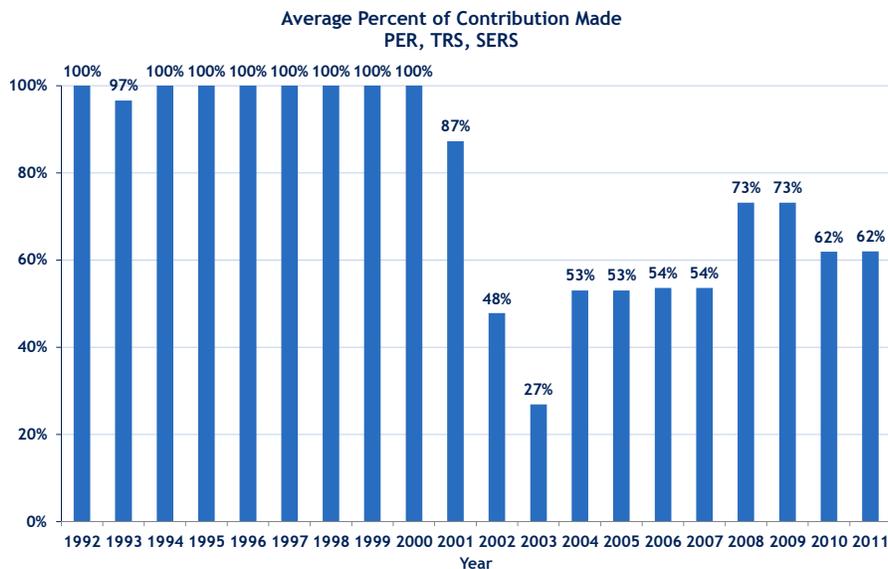




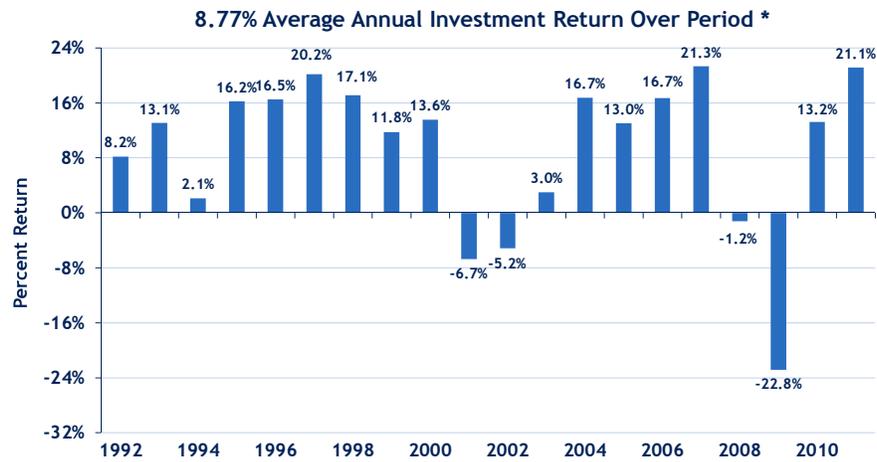
Planning For The Future

- Apply lessons learned
- Pension plans require consistent, stable, and adequate funding to remain affordable
 - Funding shortfalls today increase future contribution requirements
 - Pay now or pay more later
- Investment returns can cover the majority of plan costs, but these premium returns come with expected, inevitable volatility and no guarantees
 - Understand and plan for these outcomes

Funding Practices Over Past Twenty Years



Investment Returns On Track

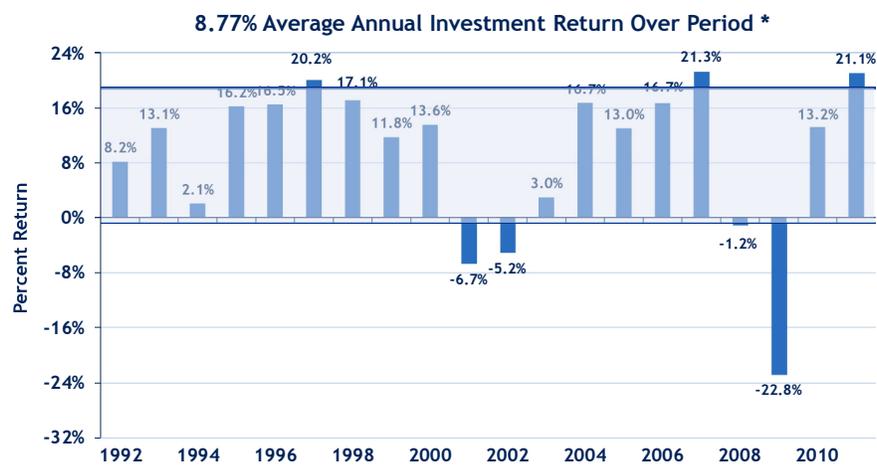


*Notes

Fiscal year, time-weighted returns. Dollar-weighted returns vary by plan.

The Commingled Trust Fund (CTF) was created in 1993. Returns for 1993 and later are for the CTF as reported by WSIB. Returns prior to 1993 are total fund returns reported by the Department of Retirement Systems' Comprehensive Annual Financial Report.

Investment Returns On Track, Came With Expected Volatility



*Notes

Fiscal year, time-weighted returns. Dollar-weighted returns vary by plan.

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State Of The State's Pensions

- Top three funded status nationally
- Best investment performance over past ten years
- Complex plans with cost effective administration
- Leader in pension reform
- Litigation risks remain
- Recovery underway, not complete
- Future contribution increases expected
- Full and stable long-term funding required to maintain plan health and sustainable costs
- Opportunities to plan for the future and remain a national leader

Additional Pension References

- [Department of Retirement Systems](#)
- [Washington State Investment Board](#)
- [Office of the State Actuary](#)
 - [2010 Actuarial Valuation Report](#)
 - [Report on Financial Condition](#)
 - [Risk Assessment Report](#)
- [Select Committee on Pension Policy](#)
 - [Pension Primer](#)
 - [Pensions 101](#)
 - [Pensions 102 - Plan Design](#)
 - [Pensions 103 - Governance](#)

Questions?



Appendix

