State Actuary's Recommendations On Long-Term Economic Assumptions

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

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Today's Presentation

- Highlights of two reports
  - Financial Condition
  - Economic Experience Study
- Full reports included in meeting materials

Summary Of Financial Condition

- Financial condition declined slightly from last report
- Long-term improvement expected
- Current litigation may change financial condition
- Reporting changes from GASB and Moody's will not change financial condition of pension systems unless they lead to changes in funding policy

Financial Condition Declined Slightly From Last Report

- Still recognizing deferred asset losses from Great Recession under asset smoothing method
- Average investment return for last six fiscal years ending June 30, 2013, below long-term expectations
  - 2.95 percent actual versus 7.97 percent expected

Funded Status as of June 30			
Plan	**2010**	**2011**	**2012**
PERS 1	74%	71%	69%
PERS 2/3	113%	112%	111%
TRS 1	84%	81%	79%
TRS 2/3	116%	113%	114%
SERS 2/3	113%	110%	110%
PSERS 2	129%	132%	134%
LEOFF 1	127%	135%	135%
WSPRS 1/2	118%	115%	114%

Long-Term Improvement Expected

- Factors pulling down funded status in short-run
  - Lingering effects of Great Recession
  - Lower assumed rate of return
- Factors that will improve funded status in long-run
  - Above-expected investment returns since Great Recession
  - Higher contributions from lower assumed rate of return
  - Recent benefit changes for new hires
- Actual funded status will depend on actual investment returns, future contribution levels, and future benefit levels

Current Litigation May Change Financial Condition

- Potential reinstatement of gain-sharing benefits or Plan 1 UCOLA would change results of this report
- Following tables display how current funded status and budget impacts would change should the court reinstate repealed benefits
- Actual impacts will depend on final court decision and may vary from these estimates

Estimated Funded Status Impacts

Estimated Funded Status on an Actuarial Value Basis				
	2012 Funded Status[1]	Funded Status After Restoration of Gain-Sharing[2]	Funded Status After Restoration of UCOLA[3]	Funded Status After Restoration of Gain-Sharing and UCOLA[4]
PERS 1	69%	66%	60%	57%
PERS 2/3	111%	111%	N/A	111%
TRS 1	79%	76%	65%	63%
TRS 2/3	114%	108%	N/A	108%
SERS 2/3	110%	103%	N/A	103%
PSERS 2	134%	N/A	N/A	N/A
LEOFF 1	135%	N/A	N/A	N/A
WSPRS	114%	N/A	N/A	N/A

[1]Based on 2012 Actuarial Valuation results (AVR).
[2]Based on AVR results after restoration of gain-sharing and continuation of all replacement benefits.
[3]Based on AVR results after restoration of UCOLA for all members.
[4]Based on AVR results after restoration of gain-sharing and UCOLA.

2015-17 Estimated GF-S Budget Impacts

2015-17 Estimated Employer Contributions From the State General Fund			
(Dollars in Millions)	Increase in Contributions After Restoration of Gain-Sharing[1]	Increase in Contributions After Restoration of UCOLA[2]	Increase in Contributions After Restoration of Gain-Sharing and UCOLA[3]
PERS	$24	$67	$95
TRS	$139	$293	$447
SERS	$35	$28	$65
PSERS	$2	$7	$9
Total	$199	$395	$616

[1]Based on 2012 Actuarial Valuation results (AVR) after restoration of gain-sharing and continuation of all replacement benefits.
[2]Based on AVR results after restoration of UCOLA for all members.
[3]Based on AVR results after restoration of gain-sharing and UCOLA.

2015-17 Estimated Total Employer Budget Impacts

2015-17 Estimated Total Employer Contributions			
(Dollars in Millions)	Increase in Contributions After Restoration of Gain-Sharing[1]	Increase in Contributions After Restoration of UCOLA[2]	Increase in Contributions After Restoration of Gain-Sharing and UCOLA[3]
PERS	$126	$356	$502
TRS	$209	$441	$675
SERS	$79	$62	$145
PSERS	$3	$10	$14
Total	$417	$871	$1,336

[1]Based on 2012 Actuarial Valuation results (AVR) after restoration of gain-sharing and continuation of all replacement benefits.
[2]Based on AVR results after restoration of UCOLA for all members.
[3]Based on AVR results after restoration of gain-sharing and UCOLA.

Reporting Changes From GASB And Moody's

- State and local governments will be required to report pension liabilities differently
  - Governmental Accounting Standards Board (GASB)
  - Moody's credit rating agency
- Changes will not impact financial condition of pension systems unless they lead to changes in funding policy
- Different measurements for different purposes and audiences

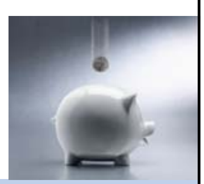
	GASB	Moody's
Purpose	Standardize financial reporting of pensions for accounting purposes	Calculate how pension obligations affect credit worthiness
Primary Audience	Users of government financial statements	Credit ratings analysts and bond investors

Concluding Remarks On Financial Condition

- Considerations before future pension action
  - Contribution rates expected to increase before approaching expected long-term levels
  - Court reinstatement of repealed benefits would negatively impact financial condition of affected systems
  - Volatility or swings in financial markets can weaken/improve system's financial condition over short period of time
  - Continued full funding and maintenance of affordable/sustainable plan designs will help systems weather such volatility
- Questions on Report on Financial Condition?

Summary Of Report On Long-Term Economic Assumptions

- All current assumptions reasonable, fall within best estimate range
- Lower long-term rate of return recommended
- Adopting recommendation will improve system health and lessen some financial risks, but increase short-term budget impacts
- Continued phase-in of change in assumed rate of return recommended
- Supporting data and analysis in full report



Lower Long-Term Rate Of Return Recommended, No Other Changes

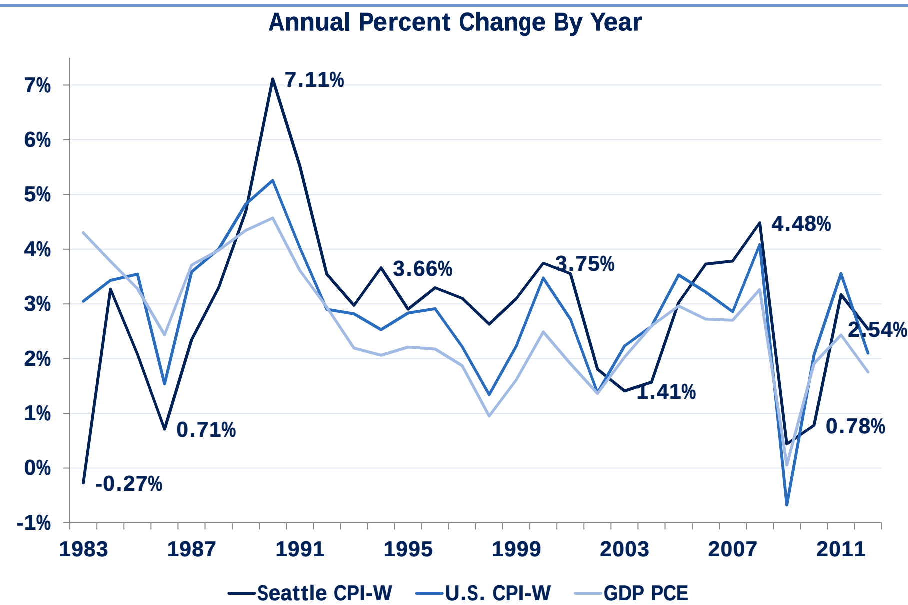
Assumption	Current	Recommended
Inflation	3.00%	3.00%
General salary growth	3.75%	3.75%
Annual investment return	7.90%	7.50%
Growth in system membership	0.80% (TRS), 0.95% (PERS)	0.80% (TRS), 0.95% (PERS)

Note: Excludes LEOFF 2. The LEOFF 2 Board adopts assumptions for LEOFF 2.

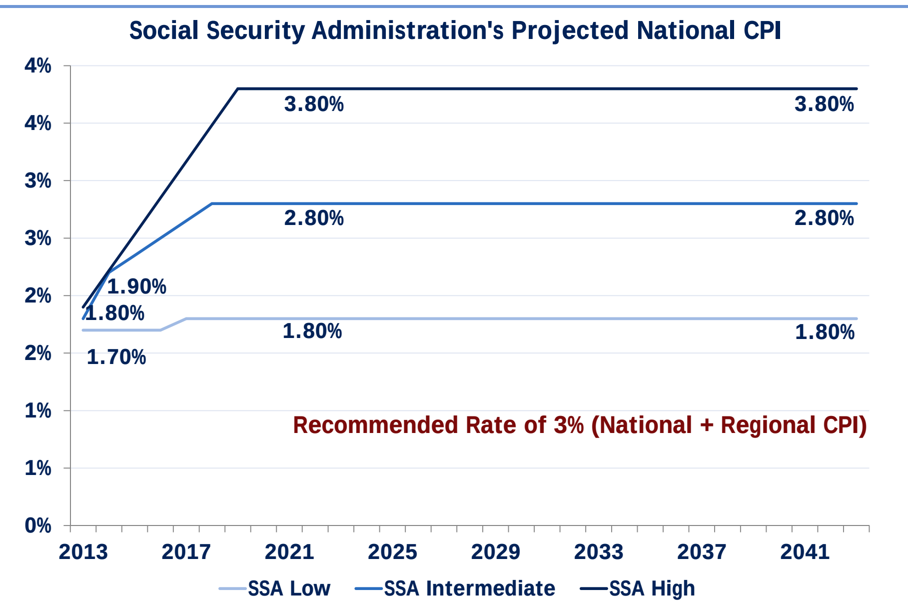
Inflation

- Assumption used to model post-retirement COLAs based on changes in CPI for Seattle, Tacoma, Bremerton
- Also used as a "building block" for general salary growth and nominal rate of return assumption
- Components of total inflation assumption
  - Broad economic inflation
  - Adjustments for national and regional price inflation
- Recommending no change in the total inflation assumption from the current assumption

Historical Inflation Data



Social Security Administration's CPI Forecasts



General Salary Growth

- Assumption used to project salaries to determine future retirement benefits and contribution rates as a percentage of payroll
- Components of general salary growth assumption
  - Inflation
  - "Productivity growth" (salary growth above inflation)
  - Economic growth factors only
- Service-based salary increases included in plan-specific demographic assumptions
- Adjusted experience study data to remove short-term salary practices in response to Great Recession
- Recommending no change in the general salary increase assumption from the current assumption

General Salary Growth Experience

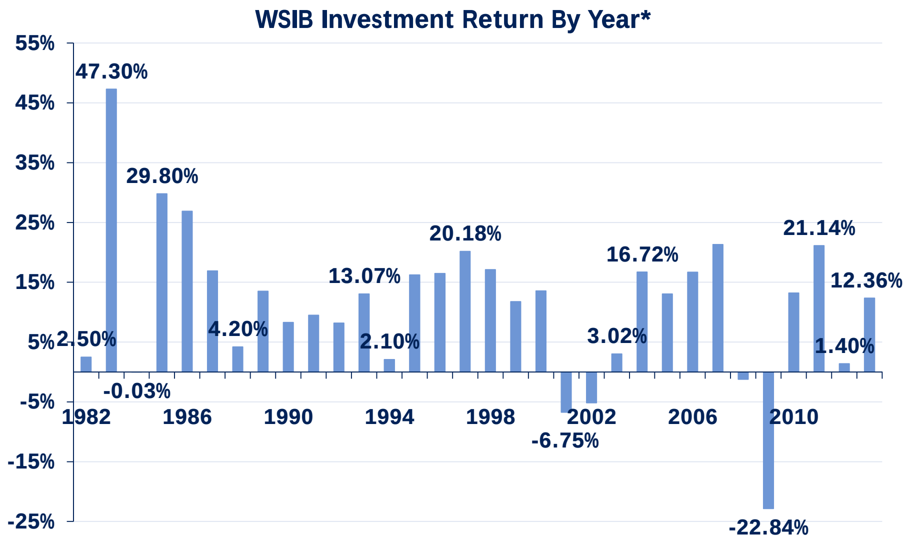
General Salary Growth Experience 1984 - 2009				
	Observed Inflation	Observed Productivity	Total General Salary Growth	Recommended Assumption*
PERS	3.13%	0.89%	4.02%	3.75%
TRS	3.13%	0.97%	4.10%	3.75%
SERS	3.13%	0.57%	3.70%	3.75%
WSPRS	3.13%	0.92%	4.05%	3.75%

Note: Insufficient data to study PSERS.
** 3% assumed inflation + 0.75% assumed productivity*

Annual Investment Return

- Assumption used to determine today's value of future benefit payments and salaries
- Key assumption for determining contribution requirements
- Components of annual investment return assumption
  - Inflation
  - "Real rate of return" (return above inflation)
- Recommending a decrease in annual investment return assumption consistent with WSIB's capital market assumptions

Historical Investment Returns



*Fiscal year ending June 30.

Simulated Future Investment Returns

Simulated Future Returns*			
	Measurement Period		Recommended Rate
	15 Years	50 Years	
75th percentile	9.65%	8.62%	
60th percentile	8.31%	7.86%	
55th percentile	7.90%	7.63%	
Expected Return	7.49%	7.40%	7.50%
45th percentile	7.08%	7.17%	
40th percentile	6.67%	6.93%	
25th percentile	5.27%	6.13%	

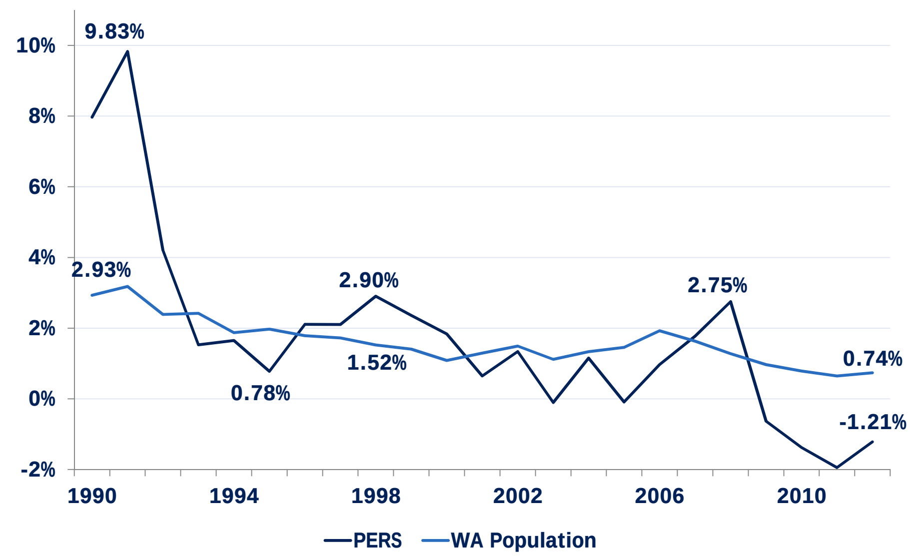
**Based on WSIB's capital market assumptions.*

Growth In System Membership

- Assumption used to determine amortization payments for Plan 1 UAAL
  - Plan 1 UAAL amortized over a rolling ten-year period as a percentage of system payrolls
- Short-term forces materially impact this ten-year assumption
- OFM expects both general state population and school age population (ages 5-17) growth to moderately increase over the next ten years
  - Retirement system growth correlated with state population growth
- Expect short-term reduction in system growth due to lingering effects of the state and local government budget cuts in response to the Great Recession
- Recommending no change in system growth assumption from the current assumption

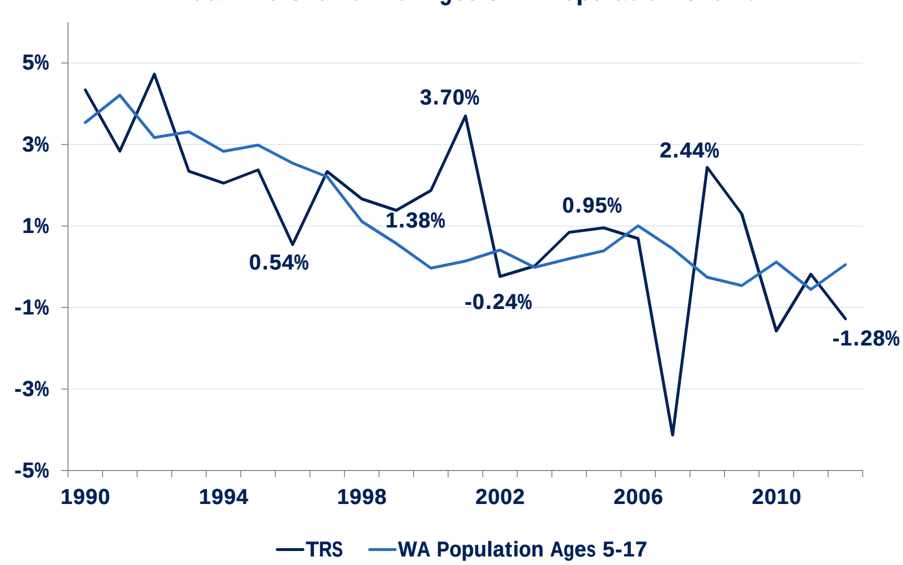
Historical System Growth - PERS

Annual PERS Growth vs. Population Growth

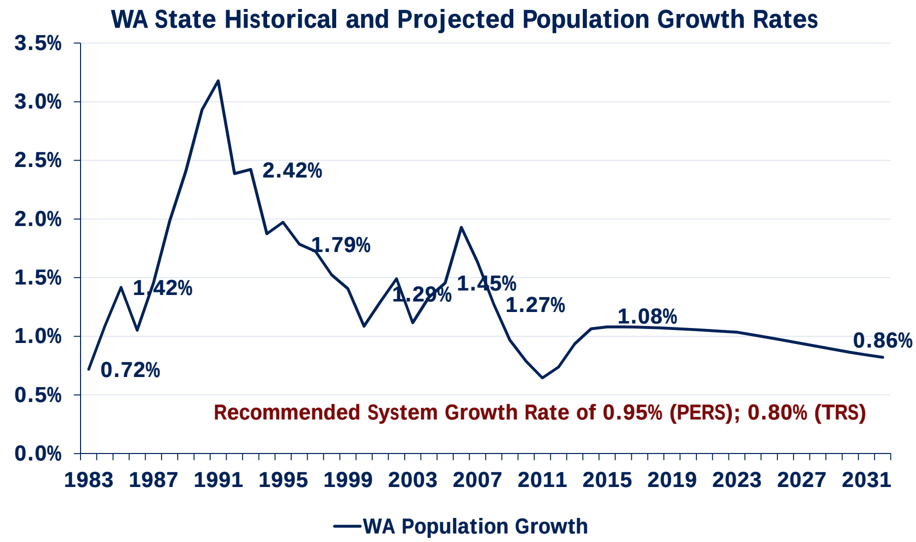


Historical System Growth - TRS

Annual TRS Growth vs. Ages 5-17 Population Growth



Historical And Projected Population Growth Rates



Source: Office of Financial Management. Additional computations have been performed to summarize data.

Concluding Remarks On Economic Assumptions

- All current assumptions reasonable, but not representative of my best estimate
- Lower rate of return recommended
- No other changes recommended
- Adopting the recommended rate of return assumption without phase-in will improve system health and lessen some financial risks, but increase short-term budget impacts
- Continued phase-in of assumed rate of return assumption recommended

2015-17 Budget Impact - No Phase-In
7.8 Percent to 7.5 Percent

Increase in Contributions from Adopting Full Recommendation*						
(Dollars in Millions)	PERS	TRS	SERS	PSERS	WSPRS	Total
2015-2017						
General Fund	$45.0	$73.9	$19.4	$3.3	$0.1	$141.7
Non-General Fund	70.4	0.0	0.0	0.5	1.0	71.9
Total State	$115.4	$73.9	$19.4	$3.9	$1.0	$213.6
Local Government	123.4	37.6	24.1	1.1	0.0	186.1
Total Employer	$238.8	$111.5	$43.5	$4.9	$1.0	$399.7
Total Employee	$149.5	$22.2	$14.5	$3.5	$1.0	$190.9

** In current law, we assume 7.80% rate of return for the 2015-17 Biennium. This table displays the cost in the 2015-17 Biennium from lowering the assumed rate of return from 7.8% to 7.5%. Short-term costs would continue beyond 2015-17 and ultimately become a long-term savings. We estimated the 2015-17 impact by applying the change in contribution rates from the 2012 AVR to projected payroll. Actual impacts may vary from this estimate.*

Recommended Investment Return Phase-In

Investment Return Phase-In		
Biennium	Current Law	Recommended
2013-15	7.90%	7.90%
2015-17	7.80%	7.80%
2017-19	7.70%	7.70%
2019-21	7.70%	7.60%
2021-23	7.70%	7.50%

Estimated 2019-21 Budget Impact - Phase-In
7.7 Percent to 7.6 Percent

Estimated Increase in Contributions from Adopting Phase-In*						
(Dollars in Millions)	**PERS**	**TRS**	**SERS**	**PSERS**	**WSPRS**	**Total**
2019-2021						
General Fund	**$15.1**	**$26.0**	**$6.2**	**$1.3**	**$0.0**	**$48.6**
Non-General Fund	**23.6**	**0.0**	**0.0**	**0.2**	**0.4**	**24.2**
Total State	**$38.7**	**$26.0**	**$6.2**	**$1.5**	**$0.4**	**$72.8**
Local Government	**41.4**	**13.2**	**7.7**	**0.4**	**0.0**	**62.7**
Total Employer	**$80.1**	**$39.2**	**$13.9**	**$1.9**	**$0.4**	**$135.5**
Total Employee	**$47.4**	**$9.9**	**$4.8**	**$1.3**	**$0.4**	**$63.9**

Totals may not agree due to rounding.

**In current law, we assume 7.70% rate of return for the 2019-21 Biennium. This table displays the cost in the 2019-21 Biennium from lowering the assumed rate of return from 7.7% to 7.6%. Short-term costs would continue beyond 2019-21 and ultimately become a long-term savings. We estimated the 2019-21 impact by applying the change in contribution rates from the 2012 AVR to projected payroll. Actual impacts may vary from this estimate.*

Estimated 2021-23 Budget Impact - Phase-In
7.6 Percent to 7.5 Percent

Additional Increase in Contributions from Adopting Phase-In*						
(Dollars in Millions)	**PERS**	**TRS**	**SERS**	**PSERS**	**WSPRS**	**Total**
2021-2023						
General Fund	**$15.4**	**$27.3**	**$6.2**	**$1.4**	**$0.0**	**$50.4**
Non-General Fund	**24.1**	**0.0**	**0.0**	**0.2**	**0.5**	**24.8**
Total State	**$39.6**	**$27.3**	**$6.2**	**$1.6**	**$0.5**	**$75.2**
Local Government	**42.3**	**13.9**	**7.7**	**0.4**	**0.0**	**64.4**
Total Employer	**$81.9**	**$41.2**	**$13.9**	**$2.1**	**$0.5**	**$139.6**
Total Employee	**$47.0**	**$11.6**	**$4.9**	**$1.4**	**$0.5**	**$65.4**

Totals may not agree due to rounding.

**In current law, we assume 7.70% rate of return for the 2021-23 Biennium. This table displays the additional costs for the 2021-23 Biennium from lowering the assumed rate of return from 7.6% to 7.5%, but excludes the 2021-23 cost of lowering the rate of return from 7.7% to 7.6%. Short-term costs would continue beyond 2021-23 and ultimately become a long-term savings. We estimated the 2021-23 impact by applying the change in contribution rates from the 2012 AVR to projected payroll. Actual impacts may vary from this estimate.*

Recap

- Report on Financial Condition
  - Financial condition declined slightly from last report
  - Long-term improvement expected
  - Current litigation may change financial condition
  - Reporting changes from GASB and Moody's will not change financial condition of pension systems unless they lead to changes in funding policy
- Economic Experience Study
  - All current assumptions reasonable, fall within best estimate range
  - Lower long-term rate of return recommended
  - Adopting recommendation will improve system health and lessen some financial risks, but increase short-term budget impacts
  - Continued phase-in of change in assumed rate of return recommended
- Full reports included in meeting materials

Next Steps

- SCPP has opportunity to make recommendation to PFC at next SCPP meeting
  - SCPP scheduled to meet on October 15
- PFC may adopt changes to economic assumptions by October 31
  - Any changes subject to revision by Legislature

Appendix

Estimated 2015-17 Contribution Rate Impact - No Phase-In 7.8 Percent to 7.5 Percent

Increase in Contribution Rates from Adopting Full Recommendation* *(Effective 7/1/2015)*					
2015-2017 State Budget	**PERS**	**TRS**	**SERS**	**PSERS**	**WSPRS**
Employee (Plan 2)	1.12%	1.20%	1.18%	0.63%	0.52%
Employer					
Current Annual Cost	1.12%	1.20%	1.18%	0.63%	0.52%
Plan 1 Past Cost	0.24%	0.00%	0.24%	0.24%	N/A
Total Employer	1.36%	1.20%	1.42%	0.87%	0.52%

**In current law, we assume 7.80% rate of return for the 2015-17 Biennium. This table displays the rate impacts in the 2015-17 Biennium from lowering the assumed rate of return from 7.8% to 7.5%. Short-term impacts would continue beyond 2015-17 and ultimately become a long-term savings. We estimated the 2015-17 impact with the change in contribution rates from the 2012 AVR. Actual impacts may vary from this estimate. WSPRS rate reflects increase in minimum rate from the assumption change. TRS 1 Past Cost rate remains below minimum rate after assumption change.*

Estimated 2019-21 Contribution Rate Impact - Phase-In 7.7 Percent to 7.6 Percent

Increase in Contribution Rates from Adopting Phase-In* (Effective 7/1/2019)					
2019-2021 State Budget	**PERS**	**TRS**	**SERS**	**PSERS**	**WSPRS**
Employee (Plan 2)	0.37%	0.40%	0.39%	0.21%	0.17%
Employer					
Current Annual Cost	0.37%	0.40%	0.39%	0.21%	0.17%
Plan 1 Past Cost	0.08%	0.00%	0.08%	0.08%	N/A
Total Employer	0.45%	0.40%	0.47%	0.29%	0.17%

**In current law, we assume 7.70% rate of return for the 2019-21 Biennium. This table displays the rate impact in the 2019-21 Biennium from lowering the assumed rate of return from 7.7% to 7.6%. Short-term rate impacts would continue beyond 2019-21 and ultimately become a long-term savings. We estimated the 2019-21 impact with the impact from the 2012 AVR. Actual impacts may vary from this estimate. WSPRS rate reflects increase in minimum rate from the assumption change. TRS 1 Past Cost rate remains below minimum rate after assumption change.*

Estimated 2021-23 Contribution Rate Impact - Phase-In 7.6 Percent to 7.5 Percent

Additional Increase in Contribution Rates from Adopting Phase-In* (Effective 7/1/2021)					
2021-2023 State Budget	**PERS**	**TRS**	**SERS**	**PSERS**	**WSPRS**
Employee (Plan 2)	0.38%	0.41%	0.40%	0.21%	0.18%
Employer					
Current Annual Cost	0.38%	0.41%	0.40%	0.21%	0.18%
Plan 1 Past Cost	0.08%	0.00%	0.08%	0.08%	N/A
Total Employer	0.46%	0.41%	0.48%	0.29%	0.18%

**In current law, we assume 7.70% rate of return for the 2021-23 Biennium. This table displays the additional rate impact for the 2021-23 Biennium from lowering the assumed rate of return from 7.6% to 7.5%, but excludes the 2021-23 impacts of lowering the rate of return from 7.7% to 7.6%. Short-term impacts would continue beyond 2021-23 and ultimately become a long-term savings. We estimated the 2021-23 impact with the change in contribution rates from the 2012 AVR. Actual impacts may vary from this estimate. WSPRS rate reflects increase in minimum rate from the assumption change. TRS 1 Past Cost rate remains below minimum rate after assumption change.*