



Office of the State Actuary
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State Actuary's Recommendations On Long-Term Economic Assumptions



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State Actuary



September 20, 2011

Today's Presentation

- Highlights of two reports
 - Financial Condition
 - Long-Term Economic Assumptions
 - Full reports included in meeting materials
- Discuss next steps
- Informational only - no action required at today's meeting



Summary Of Financial Condition

- Financial condition improved from last report
- Benefit changes lowered contribution requirements
 - Future contribution increases expected
- Litigation may change financial condition



Financial Condition Improved From Last Report

- Since our last report, investment returns for commingled trust fund
 - 13.2 and 21.1 percent for fiscal years ending June 30, 2010, and June 30, 2011, respectively
- Plans recovered about 20 percent of 30-40 expected drop in funded status reported two years ago
- Further decline in funded status expected as plans recover fully
- Actual decline in funded status will depend on actual investment performance, future contribution levels, and future benefit levels



Benefit Changes Lowered Contribution Requirements

- Removal of automatic UCOLA increases in PERS 1 and TRS 1 lowered Plan 1 UAAL and associated required employer contributions
 - PERS 1 UAAL decreased from \$4.2 to \$2.2 billion (\$2.7 to \$1.0 b in TRS)*
 - PERS 1 UAAL contribution rate decreased by 1.54 percent in 2012 and 2.10 percent in 2013 (4.07 percent in 2012 and 4.41 percent in 2013 in TRS)*
- We still expect contribution increases as plans recover fully from drop in funded status from Great Recession
- We're currently preparing updated contribution rate projections

** Please see our actuarial fiscal note for SHB 2021 for supporting information.*

Litigation May Change Financial Condition

- Potential reinstatement of gain-sharing benefits or Plan 1 UCOLA would change results of this financial condition report
- Following tables display how current funded status and budget impacts would change should the court reinstate recently repealed benefits*

** As of the date of this presentation, no lawsuit has been filed on the repeal of the UCOLA.*



Funded Status Impacts

Funded Status on an Actuarial Value Basis				
	2010 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	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%
PSERS 2	129%	N/A	N/A	N/A
LEOFF 1	127%	N/A	N/A	N/A
WSPRS	118%	N/A	N/A	N/A

¹Based on preliminary 2010 Actuarial Valuation results (preliminary AVR).

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

³Based on preliminary AVR results after restoration of UCOLA.

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



2013-15 GF-S Budget Impacts

2013-15 Employer Contributions from the State General Fund				
(Dollars in Millions)	Expected Contributions ¹	Increase in Contributions After Restoration of Gain-Sharing ²	Increase in Contributions After Restoration of UCOLA ³	Increase in Contributions After Restoration of Gain-Sharing and UCOLA ⁴
PERS	\$296.7	\$26.1	\$73.7	\$104.1
TRS	583.3	142.1	300.8	459.4
SERS	122.9	36.5	28.5	66.7
PSERS	36.2	1.8	7.4	9.6
Total	\$1,039.2	\$206.5	\$410.5	\$639.7

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

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2013-15 Total Employer Budget Impacts

2013-15 Total Employer Contributions				
(Dollars in Millions)	Expected Contributions ¹	Increase in Contributions After Restoration of Gain-Sharing ²	Increase in Contributions After Restoration of UCOLA ³	Increase in Contributions After Restoration of Gain-Sharing and UCOLA ⁴
PERS	\$1,489.5	\$131.1	\$370.1	\$522.4
TRS	879.8	214.3	453.6	692.9
SERS	275.8	81.8	64.0	149.5
PSERS	51.0	2.5	10.5	13.6
Total	\$2,696.1	\$429.8	\$898.2	\$1,378.4

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Concluding Remarks On Financial Condition

- Financial condition improved since last report due to
 - Better than expected investment returns
 - Legislative reduction in benefits
- Considerations before future pension action
 - Contribution rates expected to increase before approaching expected long-term levels
 - Court reinstatement of recently repealed benefits would negatively impact financial condition of affected systems
 - Increased volatility 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 increased volatility
- Questions on Report on Financial Condition?

Summary Of Report On Long-Term Economic Assumptions

- All current assumptions reasonable, but not representative of my best estimate
- Several changes in long-term economic assumptions recommended
 - Supporting data and analysis in full report
- Adopting recommendation will improve system health and lessen some financial risks, but increase short-term budget impacts
- Phase-in of change in assumed rate of return recommended
- Note: report excludes LEOFF 2



Several Assumption Changes Recommended

Assumption	Current	Recommended
Inflation	3.50%	3.00%
General salary growth	4.00%	3.75%
Annual investment return	8.00%	7.50%
Growth in system membership	0.90% (TRS), 1.25% (Others)	0.80% (TRS), 0.95% (Others)



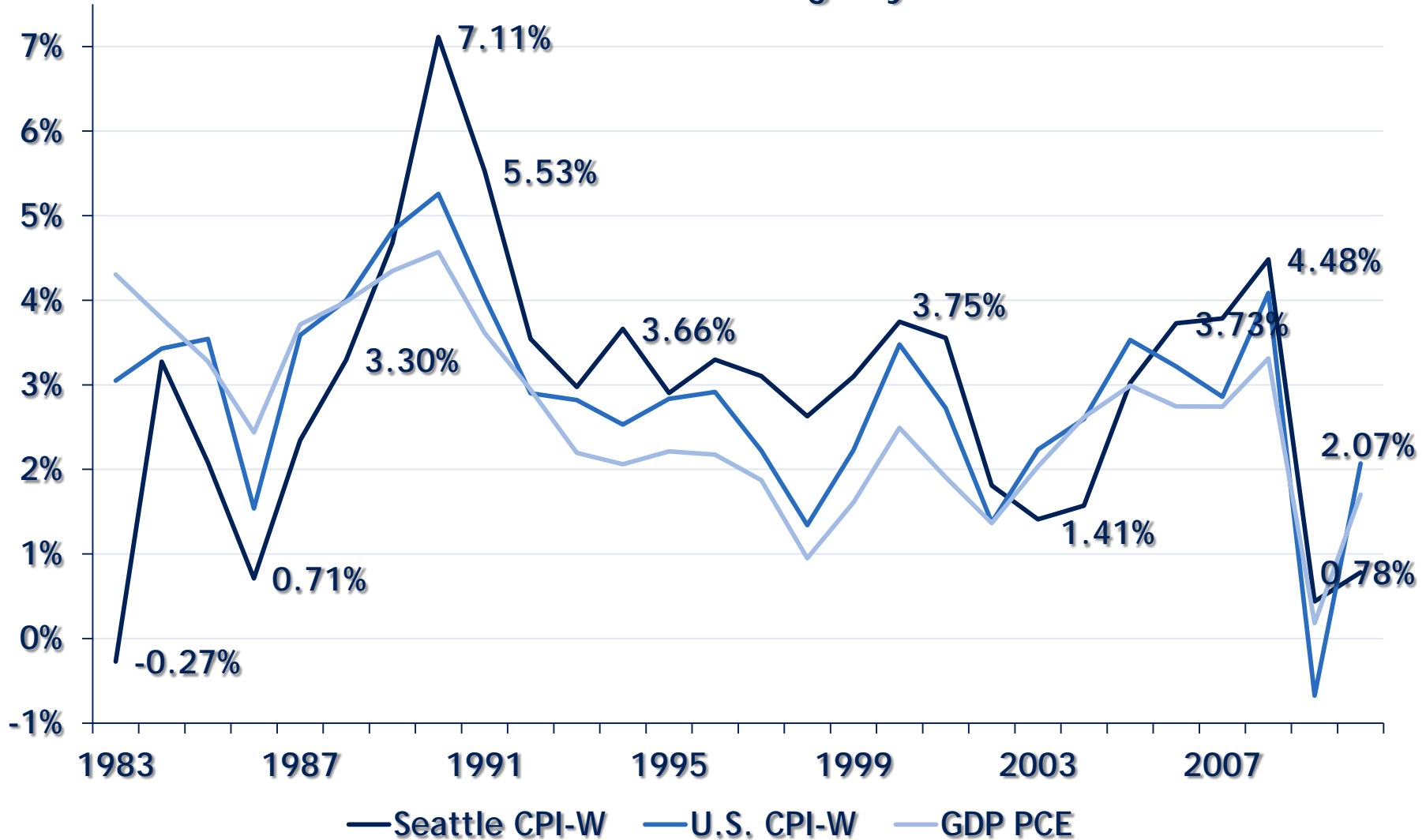
Inflation

- 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 a decrease in total inflation assumption due to decrease in average total inflation over past 20 years and expectations of lower future inflation



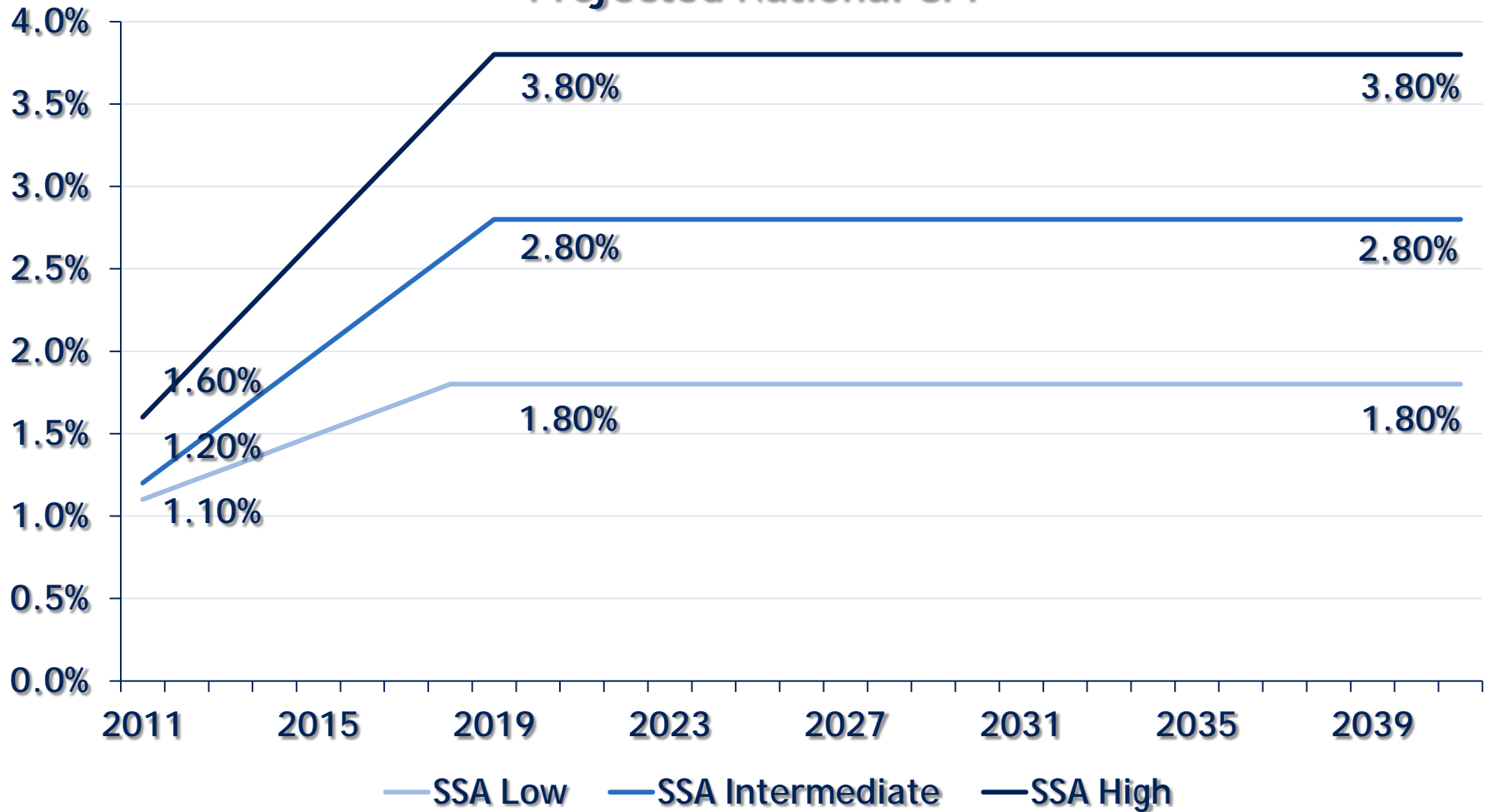
Historical Inflation Data

Annual Percent Change By Year



Social Security Administration's CPI Forecasts

Projected National CPI*



* SSA does not provide a year-by-year projected national CPI forecast. We linearly interpolated the years between 2011 and the ultimate rate year. Please see the full report for more details.



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
- Service-based salary increases included in plan-specific demographic assumptions
- Recommending a decrease in general salary growth assumption due to recommended reduction in inflation assumption
- Economic forecasts we reviewed for inflation, and capital market assumptions from WSIB, suggest lower economic growth over next 15-20 years than what occurred in the past



General Salary Growth Experience

General Salary Growth Experience 1984 - 2010			
	Observed Inflation	Observed Productivity	Total General Salary Growth
PERS	3.04%	0.82%	3.86%
TRS	3.04%	0.83%	3.87%
SERS	3.04%	0.37%	3.41%
WSPRS	3.04%	0.74%	3.78%

Note: Insufficient data to study PSERS (new plan).

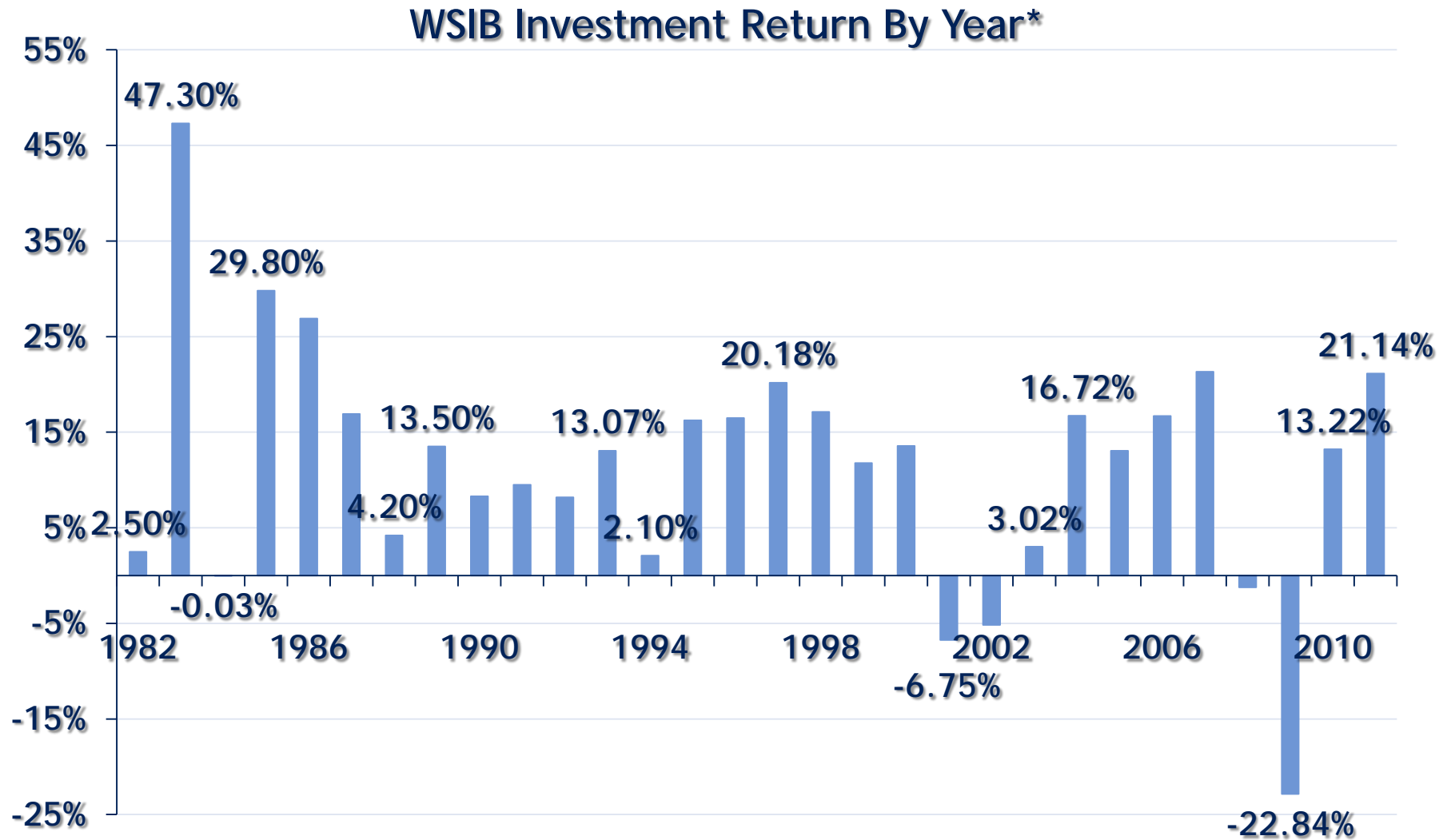


Annual Investment Return

- 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
- Recommending a decrease in annual investment return assumption consistent with WSIB's capital market assumptions
- I don't expect historical conditions that produced strong investment markets of the past to repeat for some time



Historical Investment Returns



*Fiscal year ending June 30.



Simulated Future Investment Returns

Simulated Future Returns*		
Measurement Period		
	15 Years	50 Years
75th percentile	10.14%	8.95%
60th percentile	8.50%	8.04%
55th percentile	8.01%	7.76%
Expected Return	7.52%	7.49%
45th percentile	7.04%	7.22%
40th percentile	6.55%	6.94%
25th percentile	4.94%	6.03%

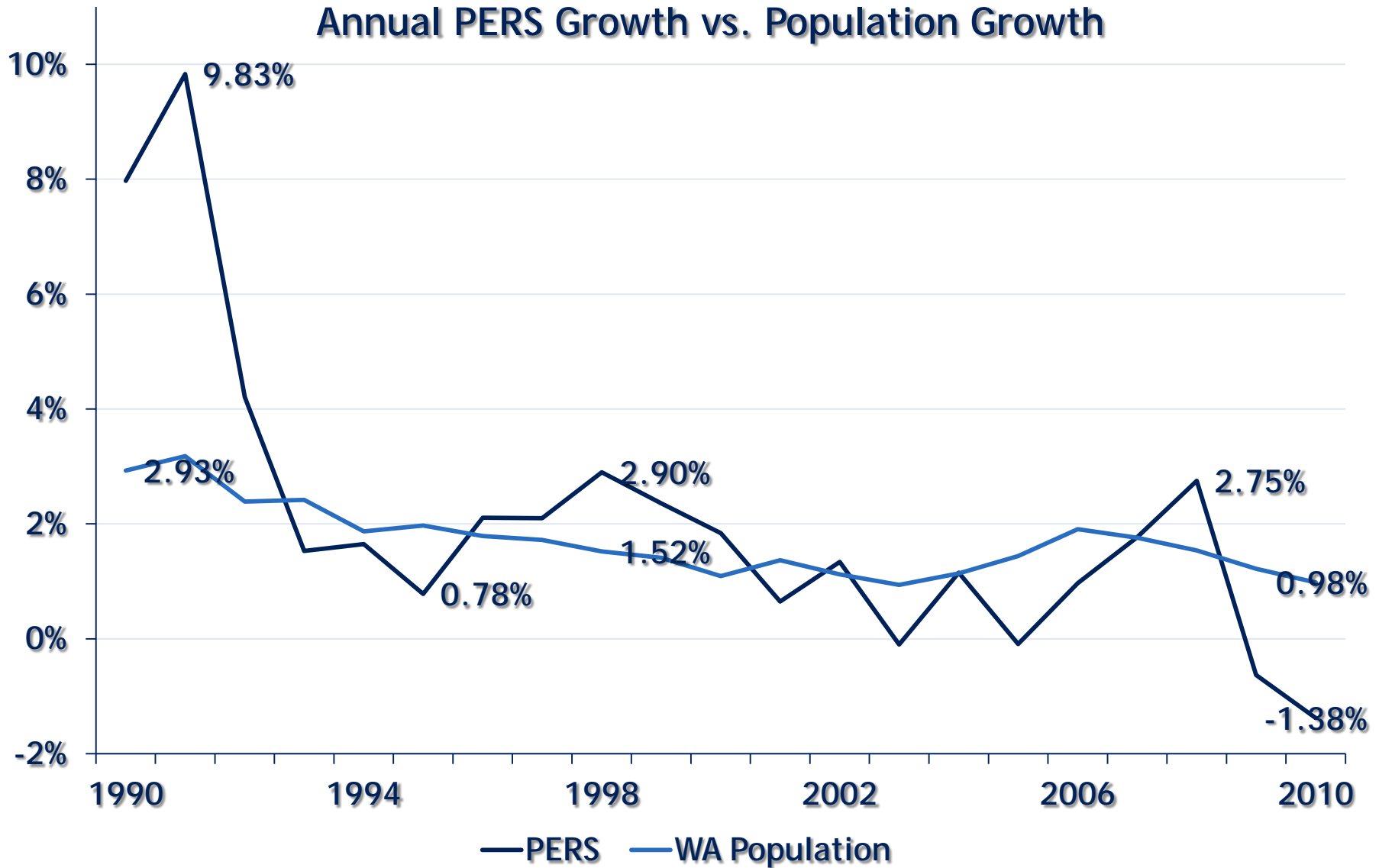
* Based on WSIB's capital market assumptions.

Growth In System Membership

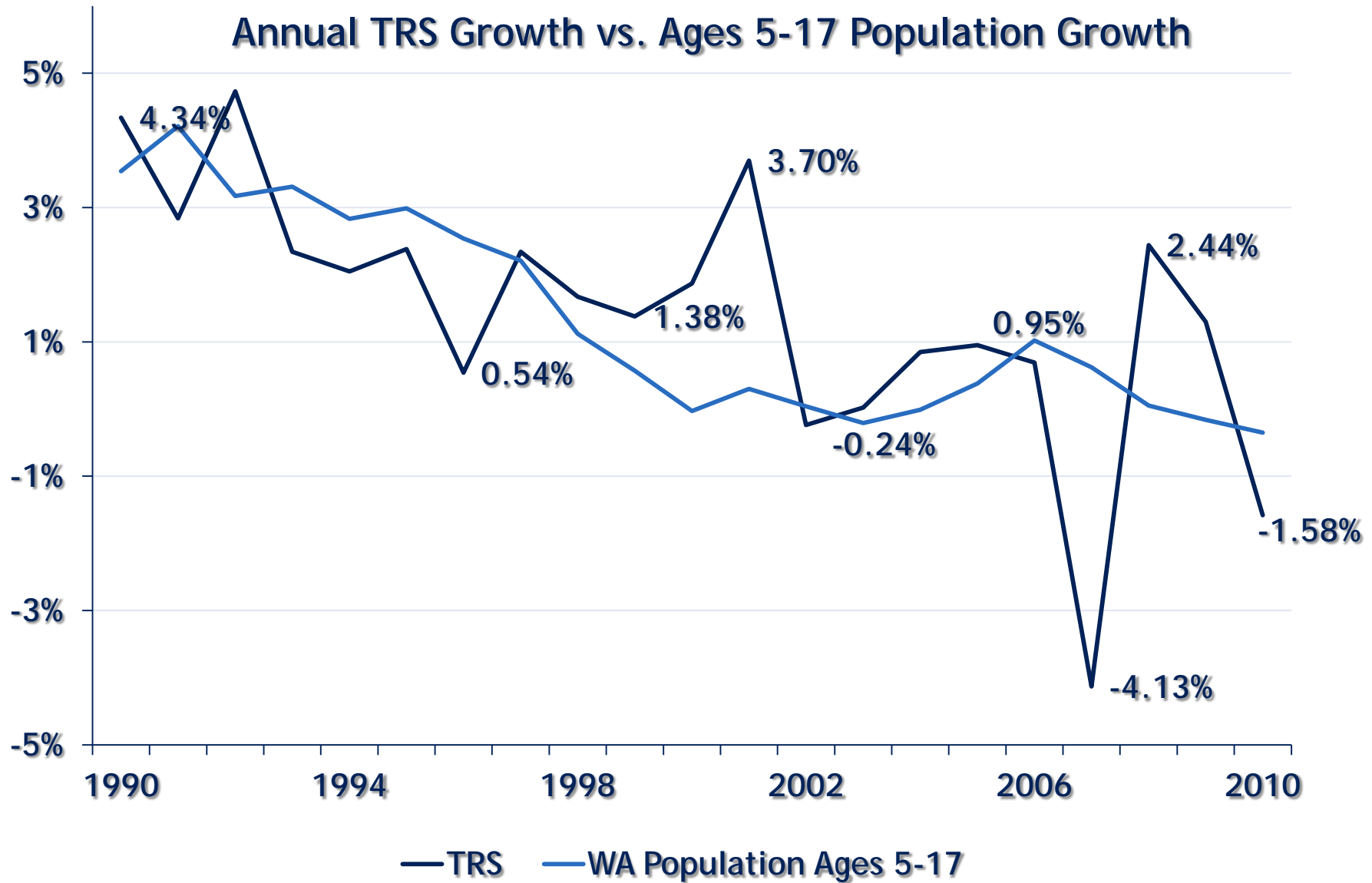
- Assumption used to determine amortization payments for Plan 1 UAAL
 - Under current law, Plan 1 UAAL amortized over a rolling ten-year period as a percentage of system payrolls
- Short-term forces materially impact this assumption since we're projecting membership growth over ten years
- Recommending a decrease in growth in system membership assumption due to a decrease in system growth and state population growth over past 20 years
- OFM expects both general state population and school age population (ages 5-17) growth to decrease
 - Retirement system growth correlated with state population growth
- Expect short-term reduction in system growth due to state and local government budget cuts in response to recent recession



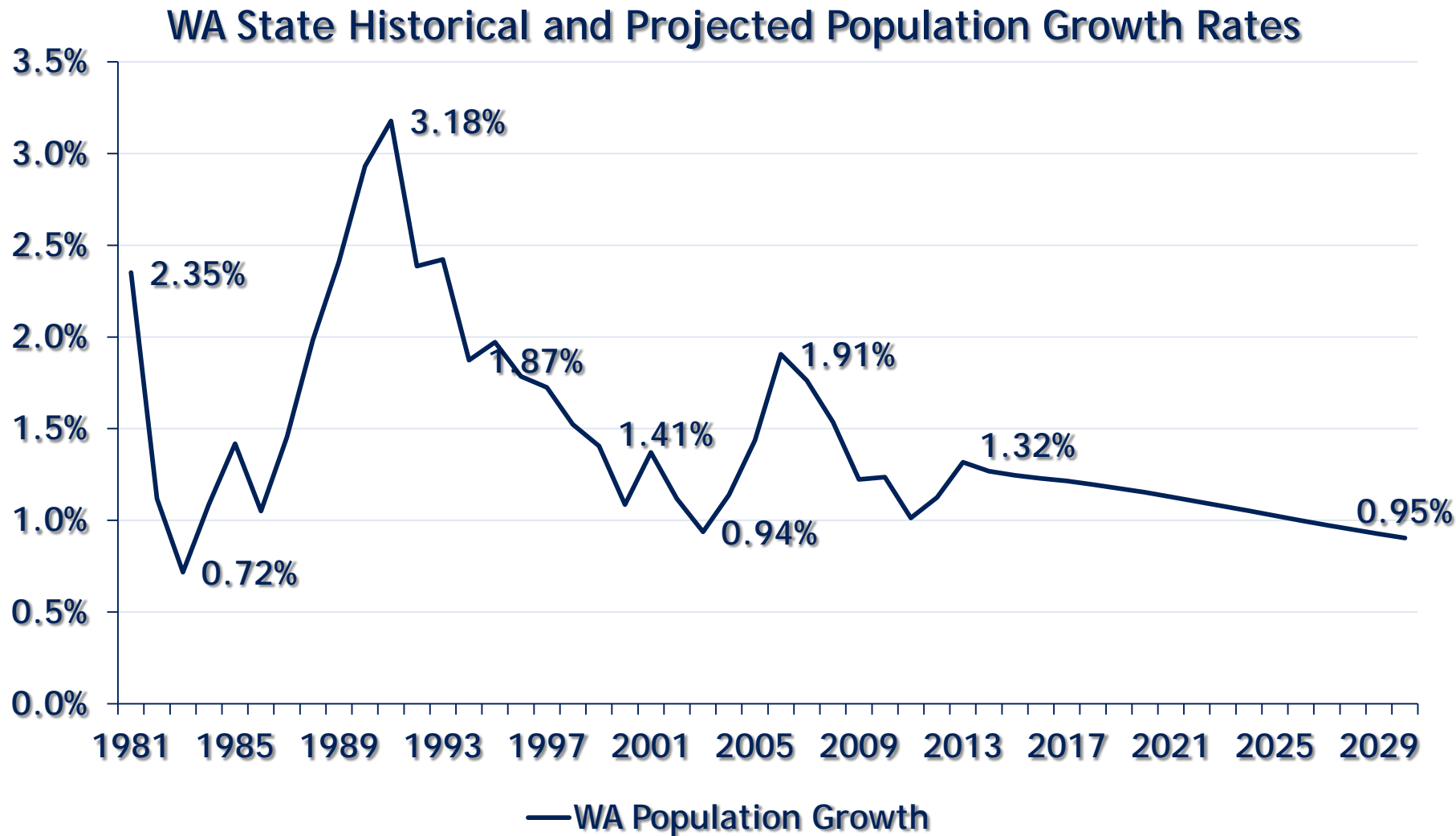
Historical System Growth - PERS



Historical System Growth - TRS



Historical And Projected Population Growth Rates



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



Concluding Remarks On Economic Assumptions

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- Several changes in long-term economic assumptions recommended
- Adopting recommendation will improve system health and lessen some financial risks, but increase short-term budget impacts
- Phase-in of change in assumed rate of return recommended



Budget Impact Of Full Recommendation (No Phase-In)

Increase in Contributions from Adopting Full Recommendation						
(Dollars in Millions)	PERS	TRS	SERS	PSERS	WSPRS	Total
2013-2015						
General Fund	\$69.7	\$157.8	\$28.7	\$4.8	\$0.1	\$261.1
Non-General Fund	99.4	0.0	0.0	0.5	1.2	101.1
Total State	\$169.1	\$157.8	\$28.7	\$5.3	\$1.3	\$362.1
Local Government	180.8	80.2	35.7	1.5	0.0	298.1
Total Employer	\$349.9	\$238.0	\$64.4	\$6.8	\$1.3	\$660.3
Total Employee	\$193.3	\$25.6	\$18.4	\$3.9	\$1.3	\$242.4

Note: Revised from August 31, 2011 report.

Totals may not agree due to rounding.



Contribution Rate Impact Of Full Recommendation

Increase in Contribution Rates from Adopting Full Recommendation (Effective 7/1/2013)					
2013-2015 State Budget	PERS	TRS	SERS	PSERS	WSPRS*
Employee (Plan 2)	1.39%	1.52%	1.52%	0.71%	0.63%
Employer					
Current Annual Cost	1.39%	1.52%	1.52%	0.71%	0.63%
Plan 1 Past Cost	0.51%	0.89%	0.51%	0.51%	N/A
Total Employer	1.90%	2.41%	2.03%	1.21%	0.63%

* Represents change in minimum contribution rate.

Recommended Investment Return Phase-In

Recommended Phase-In Investment Return	
Biennium	Assumption
2011-13	8.00%
2013-15	7.90%
2015-17	7.80%
2017-19	7.70%
2019-21	7.60%
2021-23	7.50%



Budget Impact Of Phase-In

Increase in Contributions from Adopting Phase-In						
<i>(Dollars in Millions)</i>	PERS	TRS	SERS	PSERS	WSPRS	Total
2013-2015						
General Fund	\$7.5	\$15.8	\$3.4	\$0.6	\$0.0	\$27.4
Non-General Fund	10.7	0.0	0.0	0.1	(0.1)	10.7
Total State	\$18.3	\$15.8	\$3.4	\$0.6	(\$0.1)	\$38.0
Local Government	19.5	8.1	4.3	0.2	0.0	32.0
Total Employer	\$37.8	\$23.9	\$7.7	\$0.8	(\$0.1)	\$70.0
Total Employee	\$3.7	(\$0.4)	\$0.7	(\$0.2)	(\$0.1)	\$3.8

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Contribution Rate Impact Of Phase-In

Increase in Contribution Rates from Adopting Phase-In (Effective 7/1/2013)					
2013-2015 State Budget	PERS	TRS	SERS	PSERS	WSPRS*
Employee (Plan 2)	0.04%	0.02%	0.08%	(0.02%)	(0.06%)
Employer					
Current Annual Cost	0.04%	0.02%	0.08%	(0.02%)	(0.06%)
Plan 1 Past Cost	0.16%	0.21%	0.16%	0.16%	N/A
Total Employer	0.20%	0.23%	0.23%	0.13%	(0.06%)

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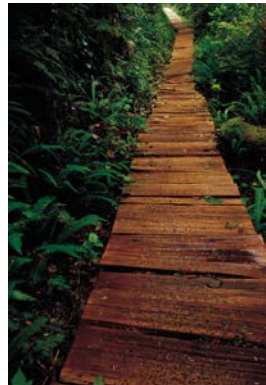












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- PFC scheduled to meet and receive recommendation on October 12
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14 **Social Security Administration's CPI Forecasts**

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27 **Recommended Investment Return Phase-In**

28 **Budget Impact Of Phase-In**

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