Workshop: Securing CalPERS' Future -

Managing Funding Risks, Stakeholder Outreach and Engagement

Finance & Administration Committee

December 20, 2016

CalPERS

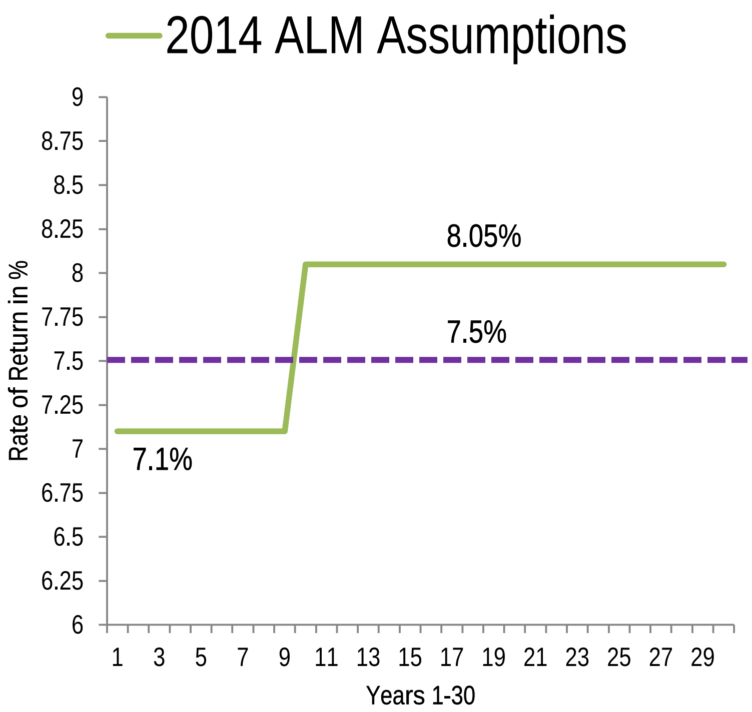
Workshop Objective

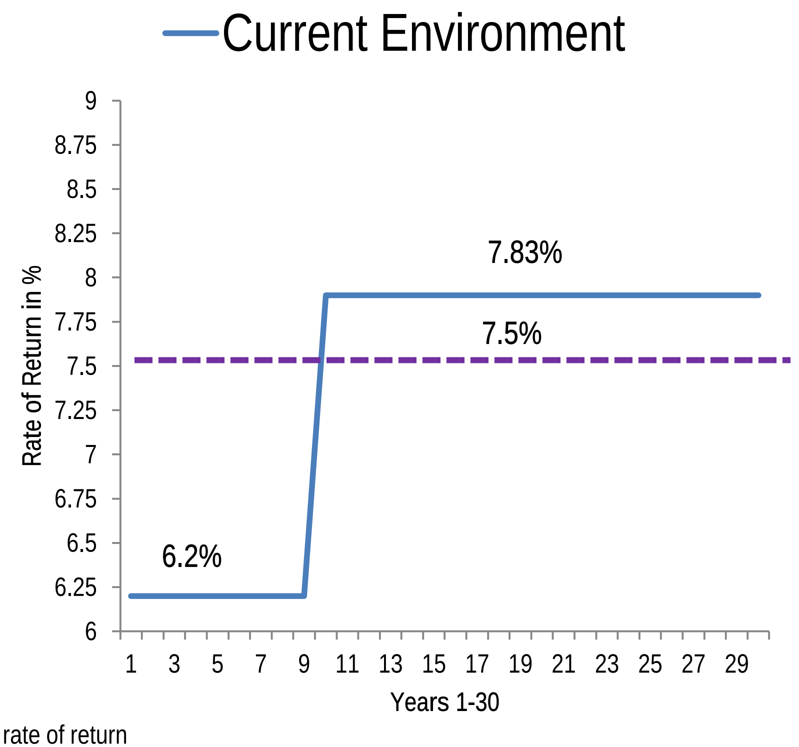
- Why now?
- Impacts
- Timing

Why Now?

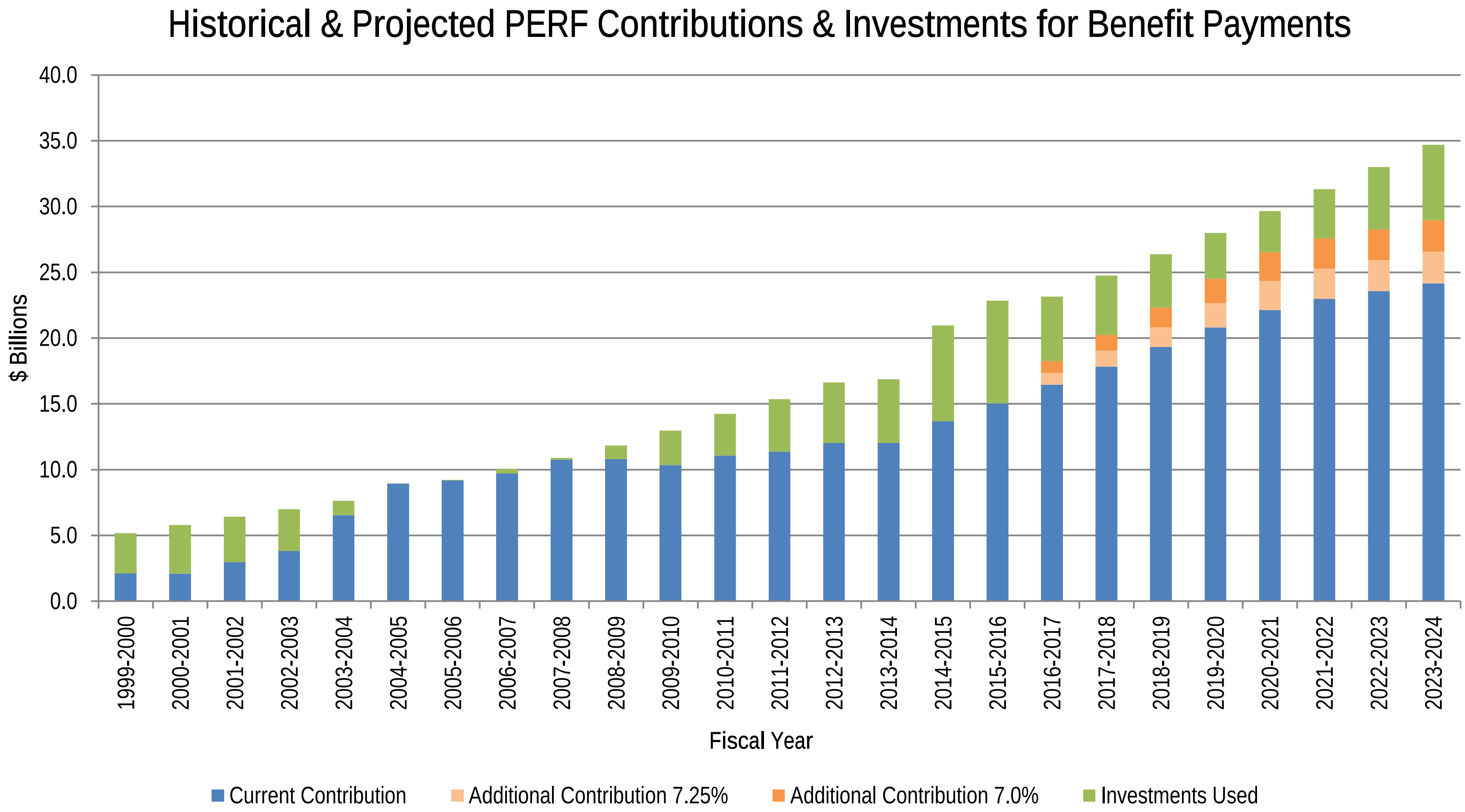
- Market conditions have changed
- Seeing more uncertainty in the forecast
- Next 10 years are consequential
- To close the cash flow funding gap
- Risks in system continue to grow

Change in Market Conditions

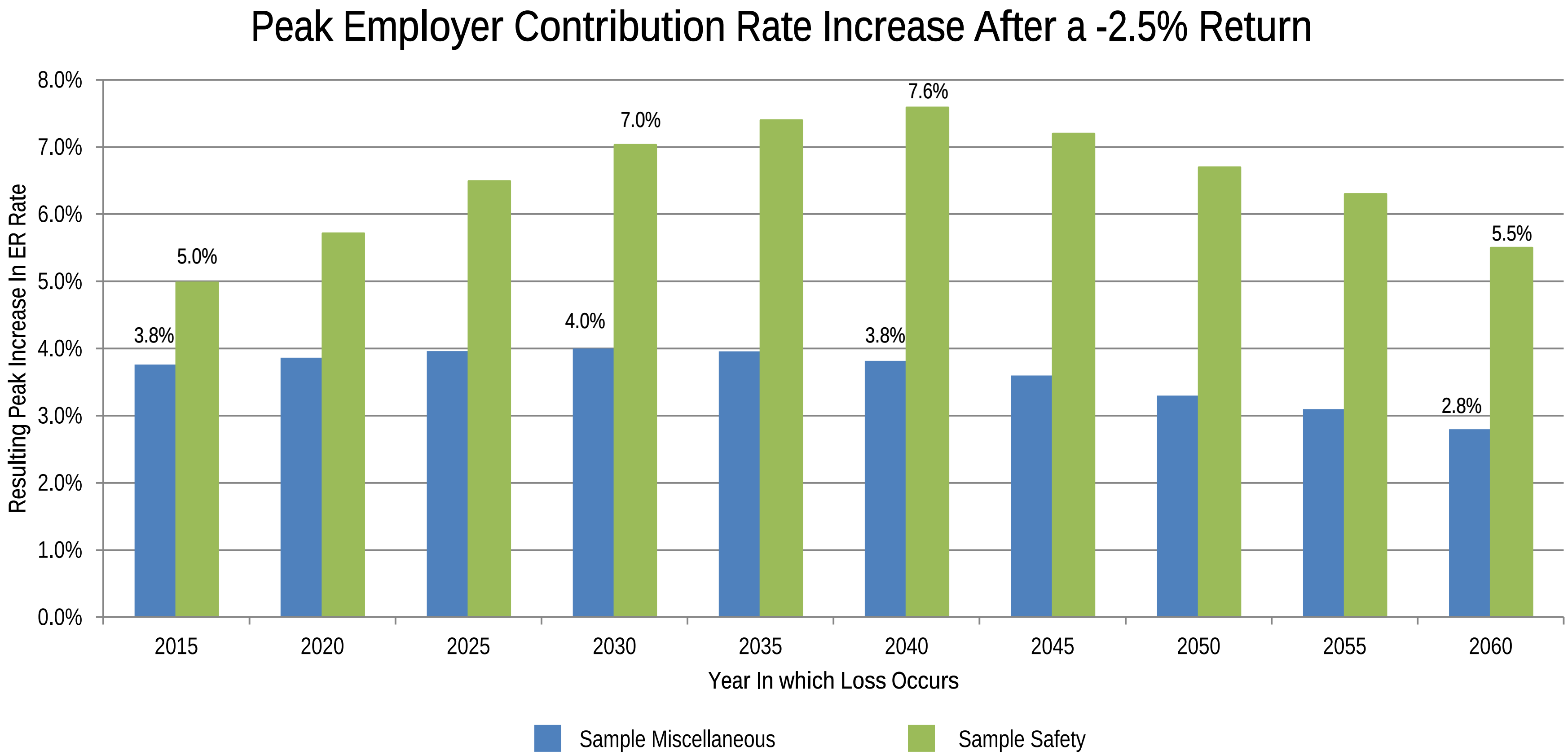




Contribution & Benefit Payments



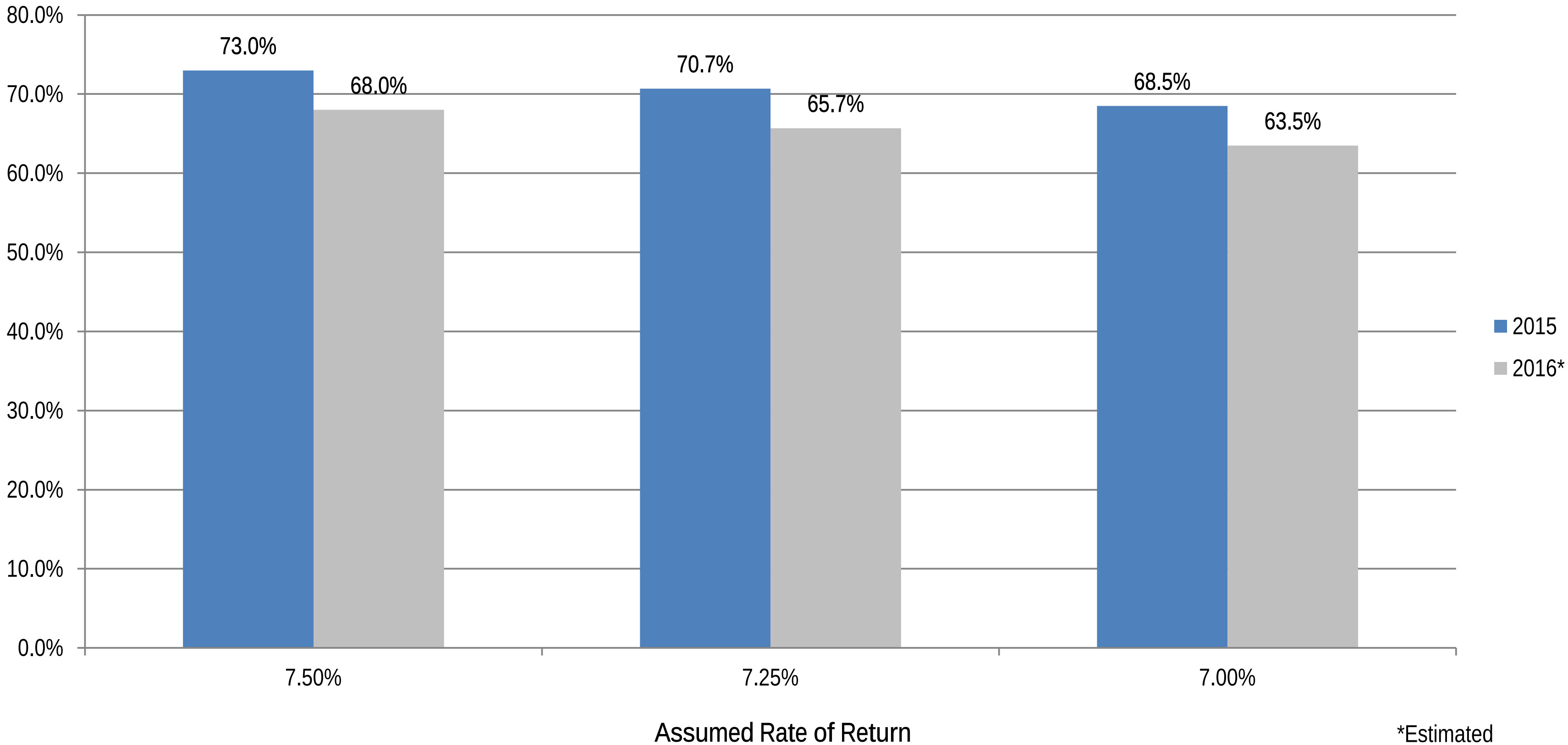
Sensitivity to Negative Investment Returns



Impacts

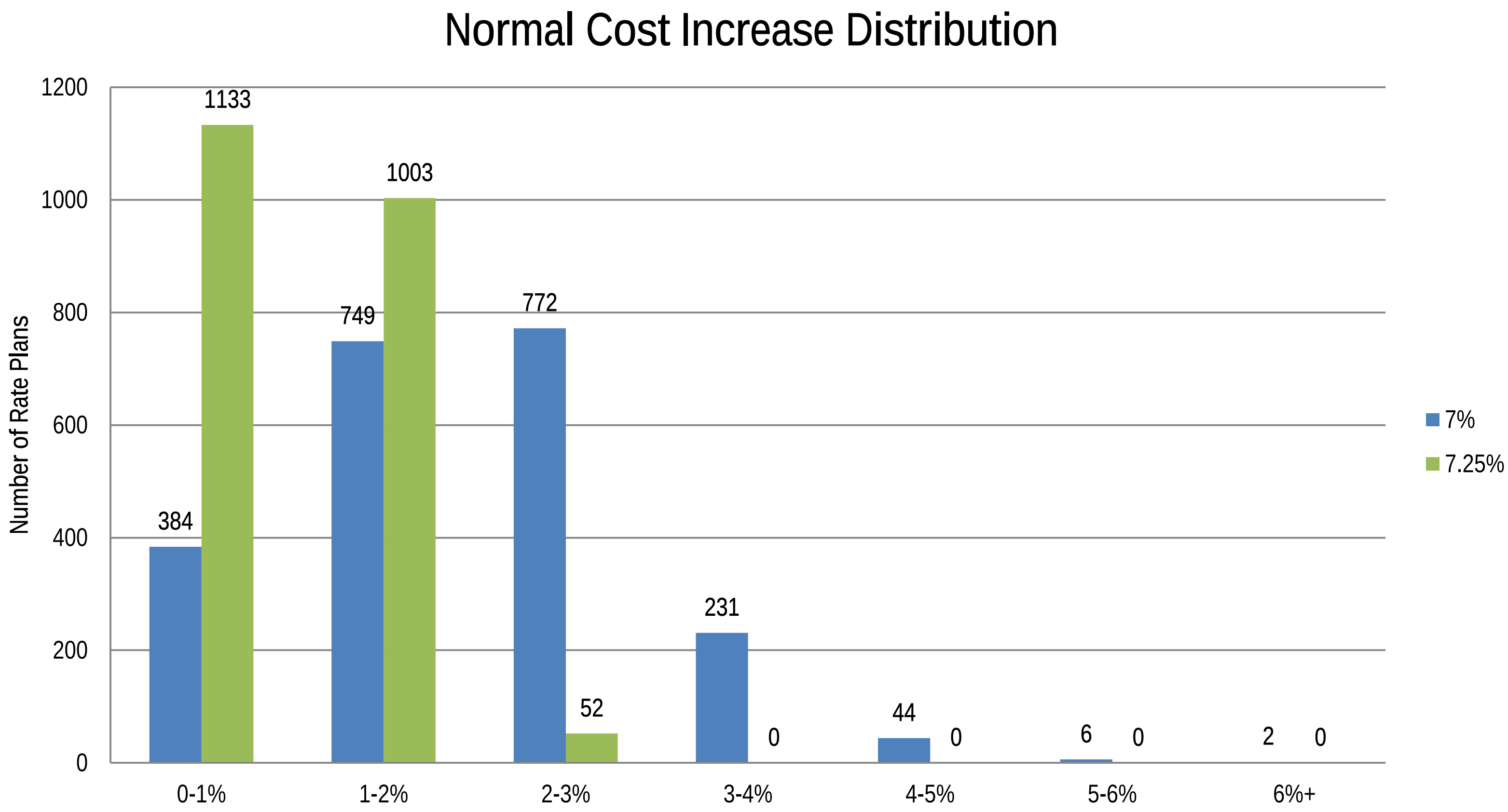
- Funded Status
- Normal Cost
- Unfunded Accrued Liabilities

Total PERF Funded Status

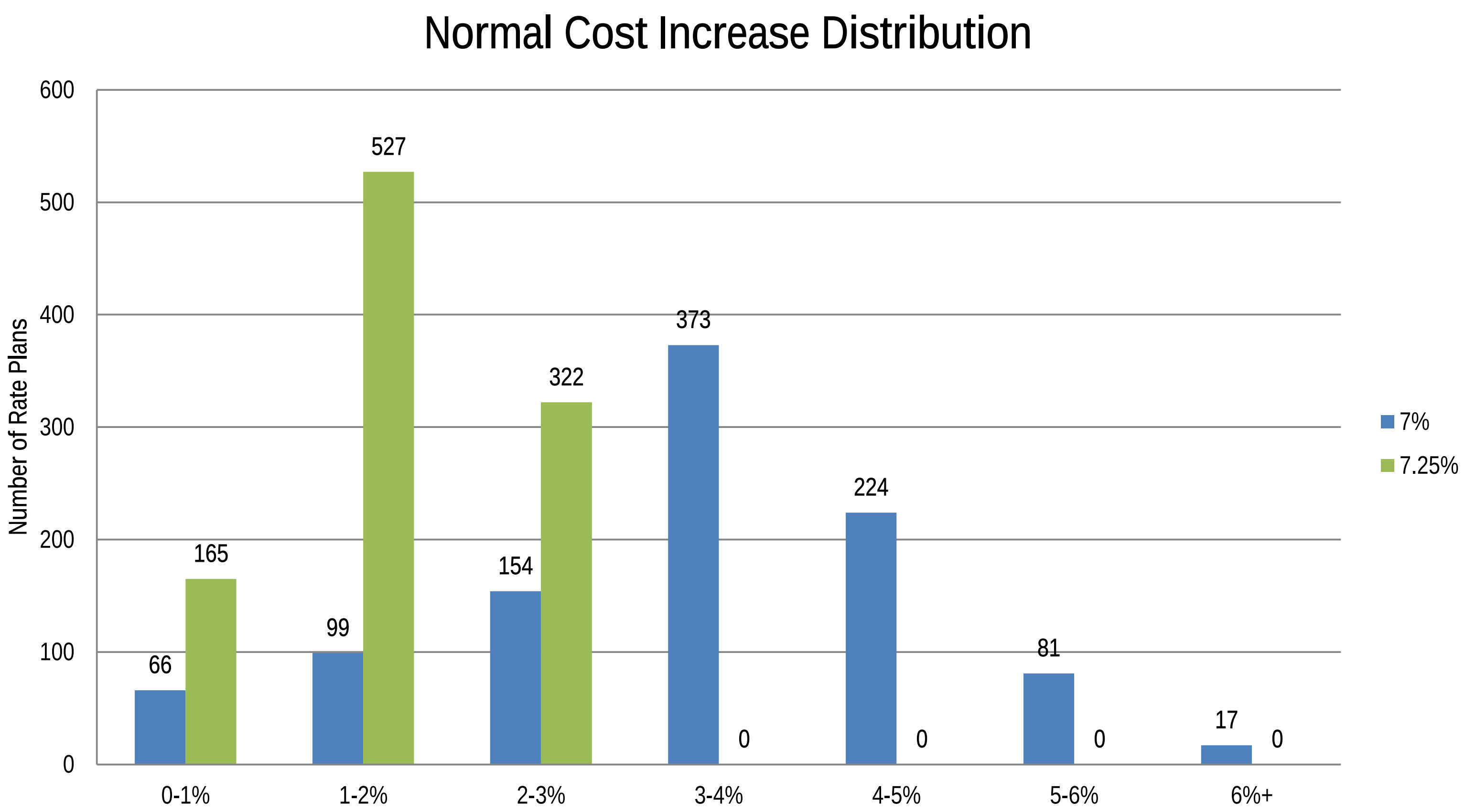


*Estimated

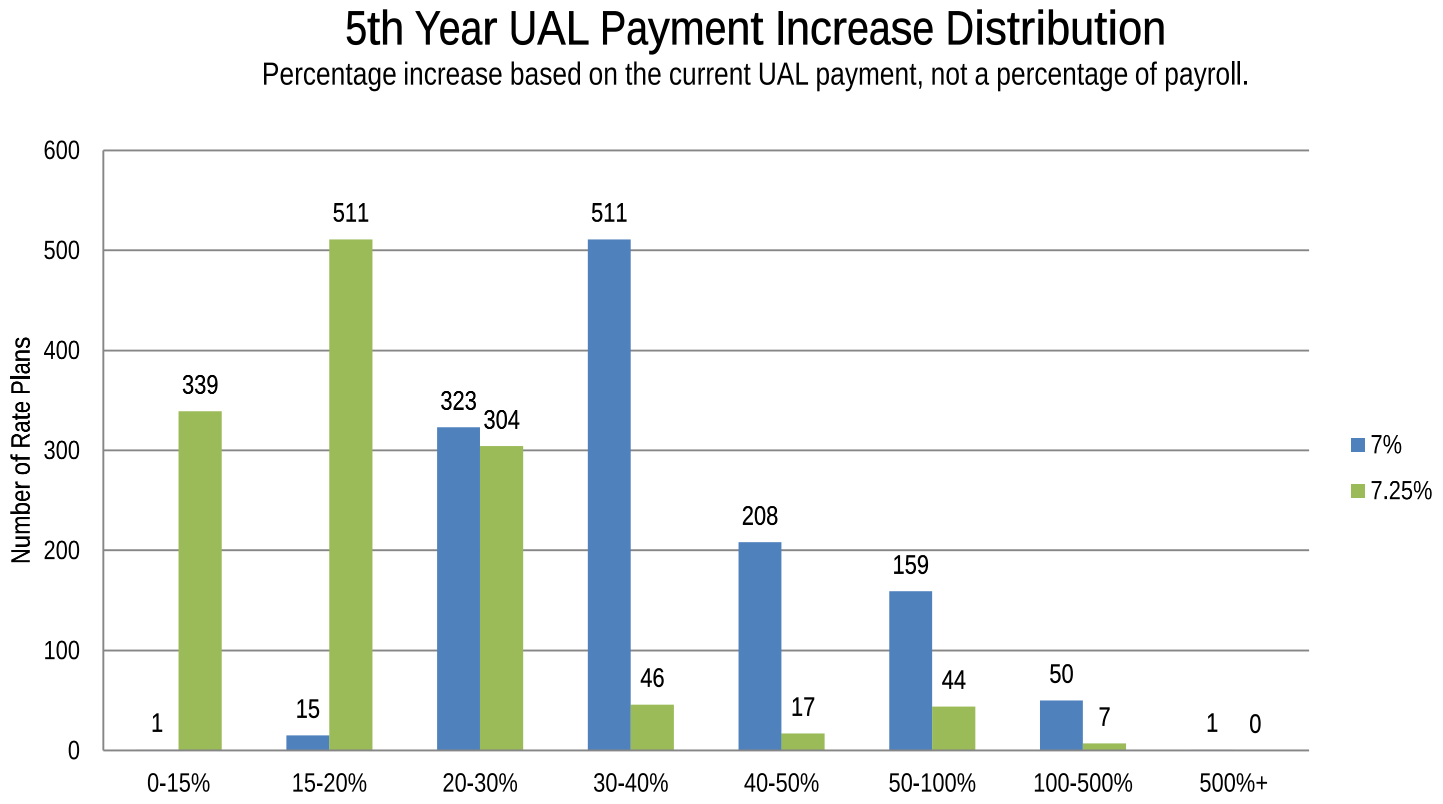
Normal Cost Increase - Miscellaneous



Normal Cost Increase - Safety

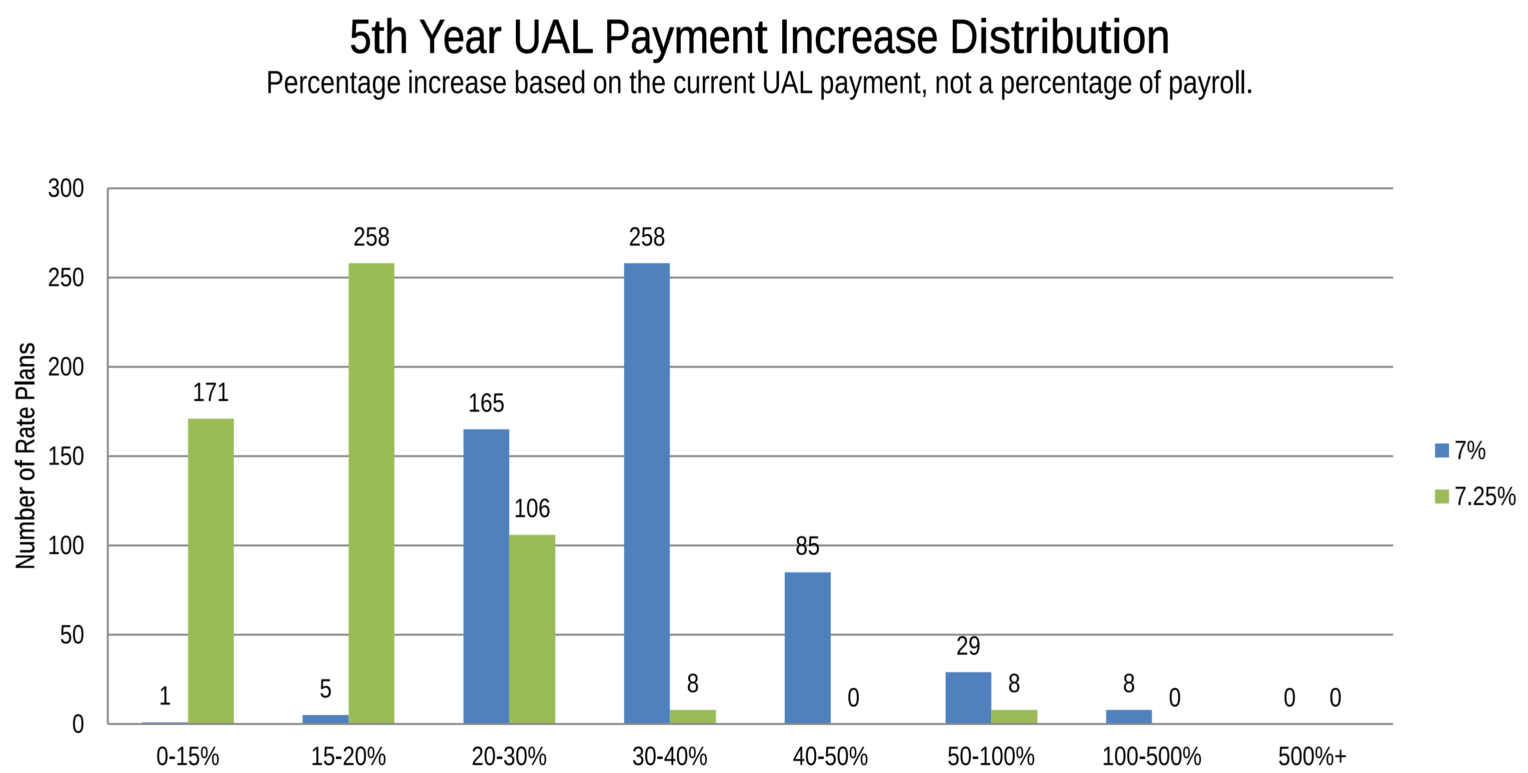


5th Year UAL* - Miscellaneous



*Unfunded accrued liability

5^{th} Year UAL - Safety



Lowering the Assumed Rate of Return Increases Normal Cost

- Below are employer normal cost as a percent of payroll, at various assumed rates of return for sample miscellaneous and safety plans with classic formulas.

Classic Normal Cost Comparison			
Plan	7.50%	7.25%	7.00%
Miscellaneous Plan A	8.73%	9.75%	10.77%
Miscellaneous Plan B	8.24%	9.18%	10.12%
Safety Plan A	16.00%	17.93%	19.85%
Safety Plan B	16.23%	18.08%	19.92%

PEPRA Normal Cost Comparison

- Lowering the assumed rate of return increases normal cost as a percent of payroll, which will increase member contributions under PEPRA.

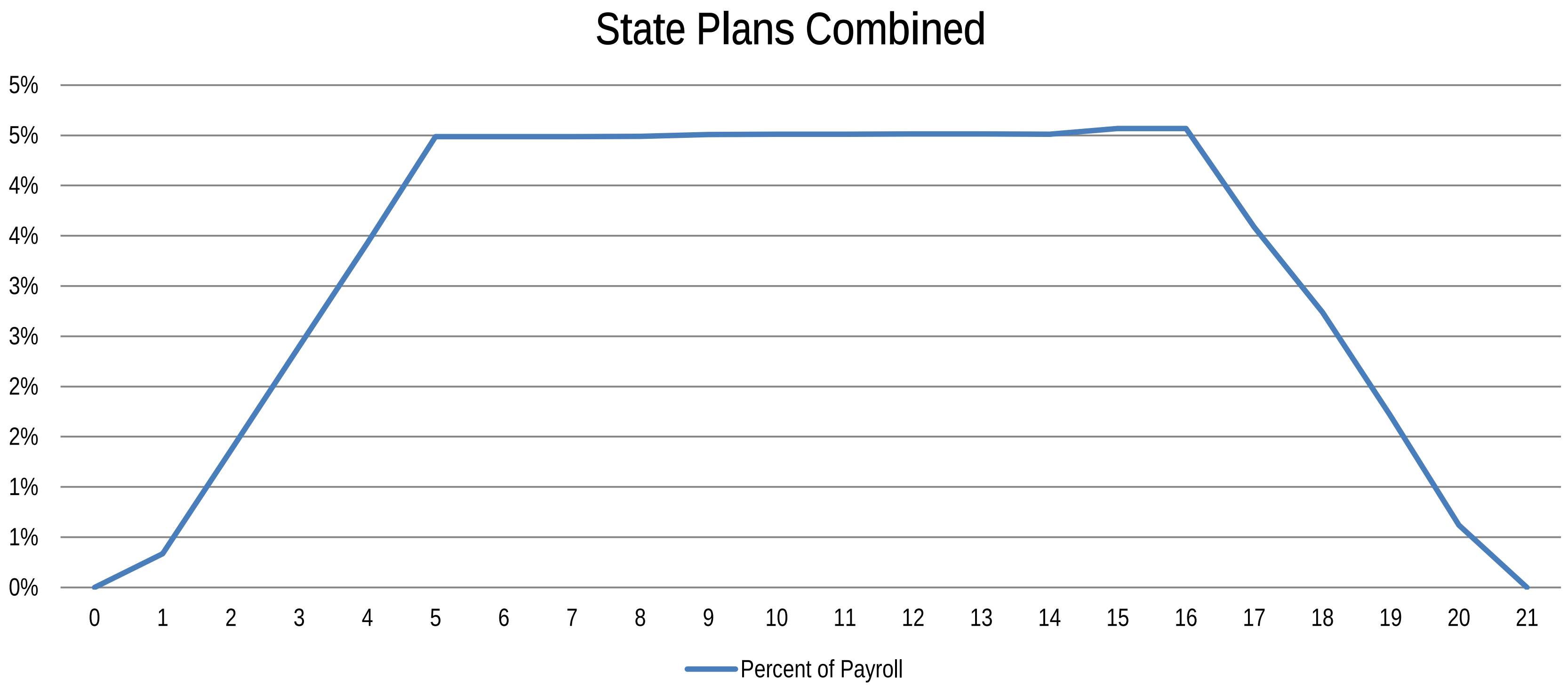
Average Misc. Plan	7.50%	7.25%	7.00%
Employer	6.12%	6.51%	7.15%
Employee	6.25%	6.75%	7.00%
Total	12.37%	13.26%	14.15%

Average Safety Plan	7.50%	7.25%	7.00%
Employer	11.45%	12.40%	13.10%
Employee	11.50%	12.25%	13.25%
Total	22.95%	24.65%	26.35%

Timing

- Phase-in of costs
- Valuation

Smoothed Amortization of UAL Contributions Based on 7.0% Assumed Rate of Return



Timing of Change to Annual Valuations

	Valuation Date	Contribution Rate Change
State and Schools	6/30/16	17/18
Public Agencies	6/30/16	18/19
Affiliate Plans	6/30/16	17/18

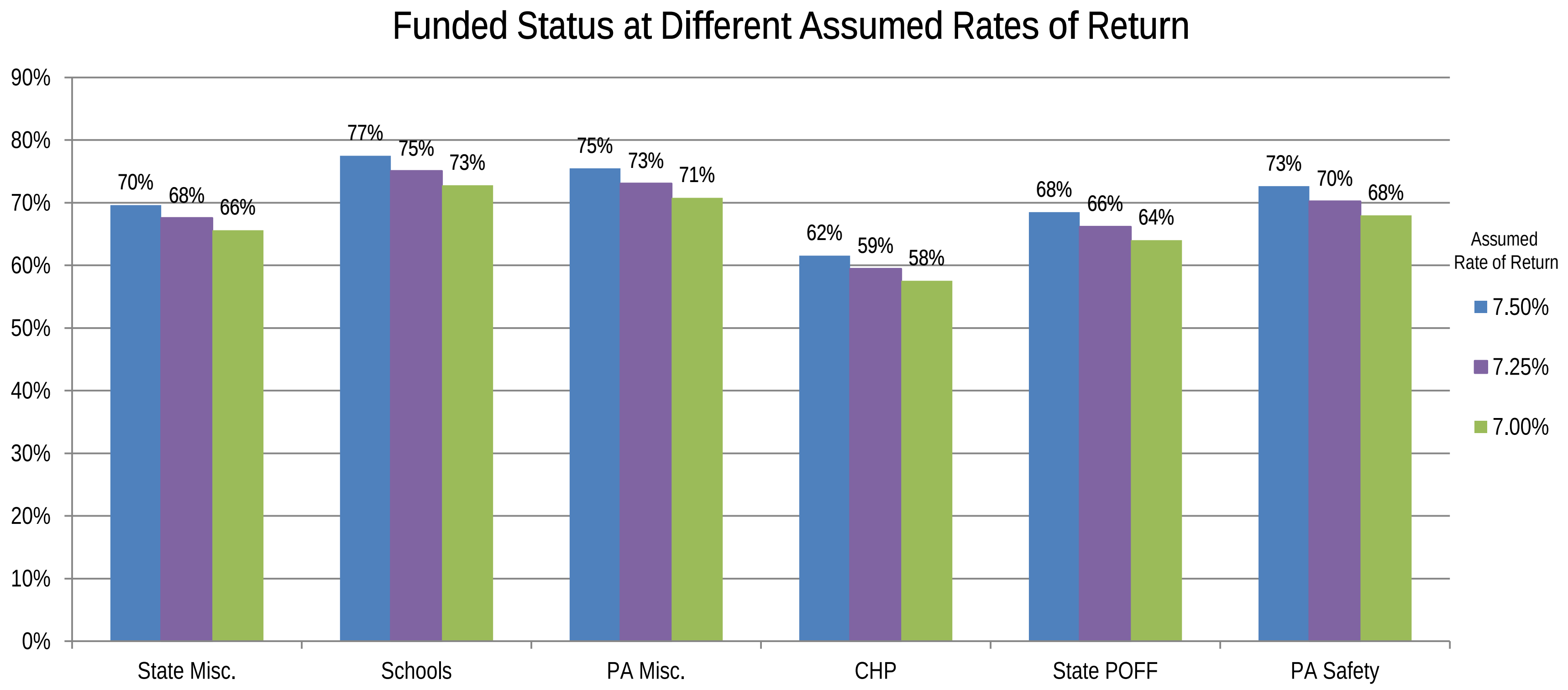
Benefits of Reducing the Assumed Rate of Return

- Strengthens long-term sustainability of the fund to pay promised benefits
- Reduces negative cash flow; additional contributions will help to offset growing pension payments
- Reduces the long-term chances of falling below a 50% or 60% funded status that would weaken the sustainability of the fund
- Improves our chances of earning our assumed rate of return

Appendix Slides

- State and School
  - Funded Status
  - Rates
- November Follow-up
  - Stakeholder Outreach
  - NASRA Assumed Rate of Return Trends
- CalPERS Historical Allocation Assumed Rate of Return and 10yr US Treasury Yield
- Definitions

Sample Large Plans



State and School Normal Cost

	Employer Normal Cost		
	7.50%	7.25%	7.00%
State Miscellaneous	8.7%	9.8%	10.8%
State Industrial	10.2%	11.3%	12.4%
State Safety	11.3%	12.4%	13.6%
State POFF	16.2%	18.1%	19.9%
CHP	16.0%	17.9%	19.9%
Schools	8.2%	9.2%	10.1%

State and Schools UAL Increase with 7.25% Assumed Rate of Return

	Unfunded Liability Increase		
	Total	1st Year Payment	5th Year Payment
State Miscellaneous	$ 2,964,121,000	$ 16,191,000	$ 263,420,000
State Industrial	$ 124,582,000	$ 1,432,000	$ 12,138,000
State Safety	$ 344,950,000	$ 3,358,000	$ 33,621,000
State POFF	$ 1,372,849,000	$ 8,558,000	$ 124,875,000
CHP	$ 383,755,000	$ 1,331,000	$ 33,482,000
State	$ 5,190,256,000	$ 30,870,000	$ 467,536,000
Schools	$ 2,379,715,000	$ 31,312,000	$ 222,739,000

State and Schools UAL Increase with 7.0% Assumed Rate of Return

	Unfunded Liability Increase		
	Total	1st Year Payment	5th Year Payment
State Miscellaneous	$ 5,928,242,000	$ 32,381,000	$ 526,841,000
State Industrial	$ 249,164,000	$ 2,864,000	$ 24,276,000
State Safety	$ 689,900,000	$ 6,716,000	$ 67,241,000
State POFF	$ 2,745,698,000	$ 17,117,000	$ 249,750,000
CHP	$ 767,509,000	$ 2,663,000	$ 66,964,000
State	$ 10,380,512,000	$ 61,741,000	$ 935,072,000
Schools	$ 4,759,429,000	$ 62,624,000	$ 445,477,000

Stakeholder Outreach Since November

- Surveyed school employers for input
  - Questions designed to elicit level of awareness, preparation, risk tolerance and preferences related to potential assumed rate of return reduction
  - 259 school employers provided responses
- Meetings and engagements with stakeholders:
  - Member association leaders
  - Retiree association leaders
  - Employer association leaders

School Employer Associations Surveyed

- Association of California School Administrators
- California School Boards Association
- California Association of School Business Officials
- Small School Districts Association
- School Employers Association of California

Awareness

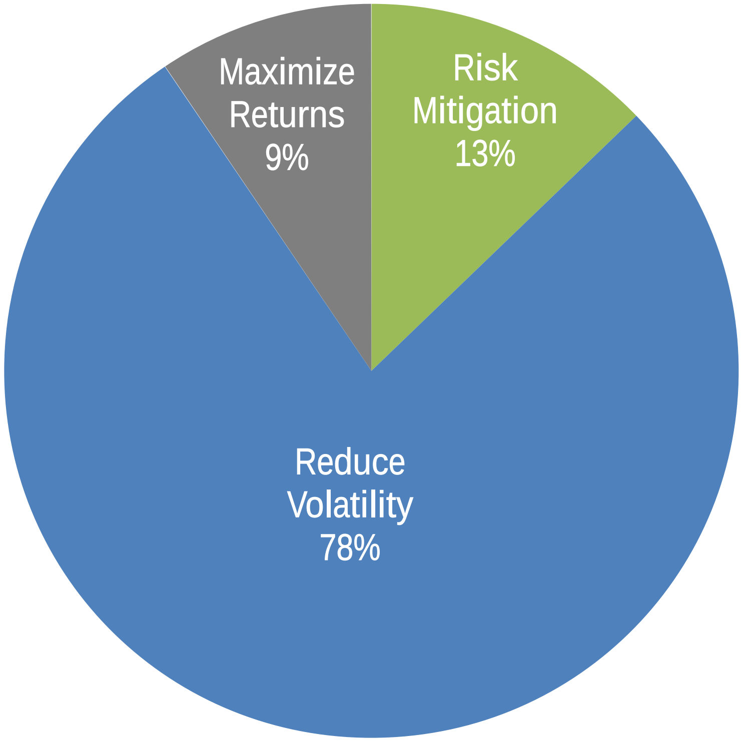
- 56% of respondents are following the discussions on market impact on CalPERS' investment performance
- Some level of planning for higher rates through forecasting future budgets

Financial Readiness

- How are schools financially preparing in anticipation of an increase in future contribution rates?
  - 64% Budget forecasting out three & five years
  - 24% Considering a pre-funding trust
  - 6% Pre-funding a trust already
  - 4% Considering making additional payments to CalPERS
  - 7% Other

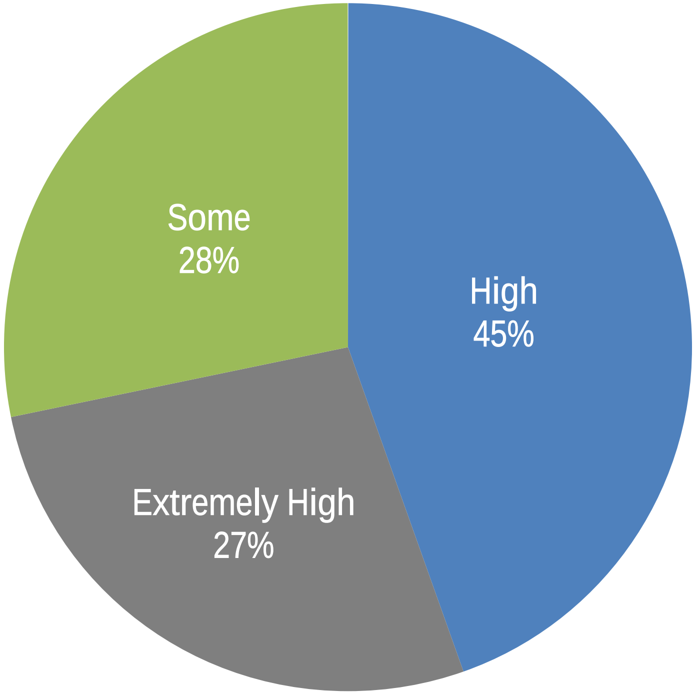
School Employers' Priorities

- 78% of employers said most important is reducing volatility of contribution rates
  - 13% - Risk Mitigation
  - 9% - Maximize Returns



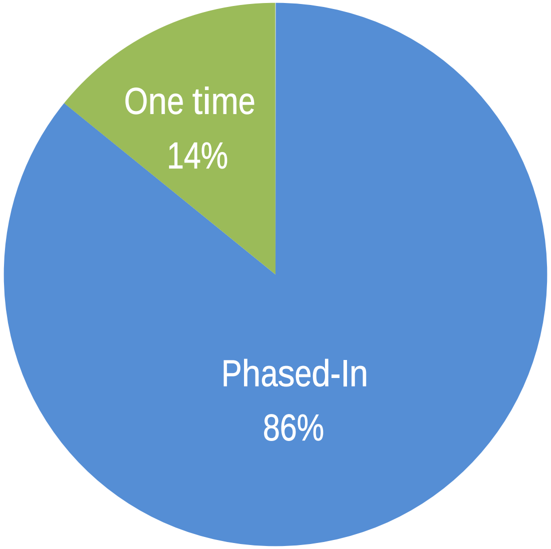
CalPERS

Impact of Assumed Rate of Return Decrease in Next 12 Months



Phased-In Reduction vs One-Time Reduction in Assumed Rate of Return

- 86% of employers favor phasing in reduction



Stakeholder Meetings

- Meetings with key member, employer, and retiree stakeholder leaders
- Presented fiscal impacts analysis (UAL payments and normal cost) on a potential 25 and 50 basis point drop in the assumed rate of return
- Gathered feedback and input to inform December Board discussion

Members

- California School Employees Association
- California Professional Firefighters
- American Federation of State, County & Municipal Employees
- California Association of Highway Patrolmen
- CAL FIRE Local 2881
- Peace Officers Research Association of California

Employers

- League of California Cities
- California State Association of Counties
- California County Superintendents Educational Services Association
- California School Boards Association
- California Special Districts Association
- Rural County Representatives of California
- Small School Districts Association
- Association of California School Administrators

Retirees

- California State Retirees
- Retired Public Employees Association
- California School Employees Association – Retirees
- CAL FIRE Local 2881 - Retirees

Member Association Feedback

- Uncertainty around multiple factors impacting public employees at Federal, state, and local levels
- Preference for shared negotiation of timelines and rates with all stakeholder parties
- Preference for a long-term focused plan instead of incremental approaches and revisiting of policies

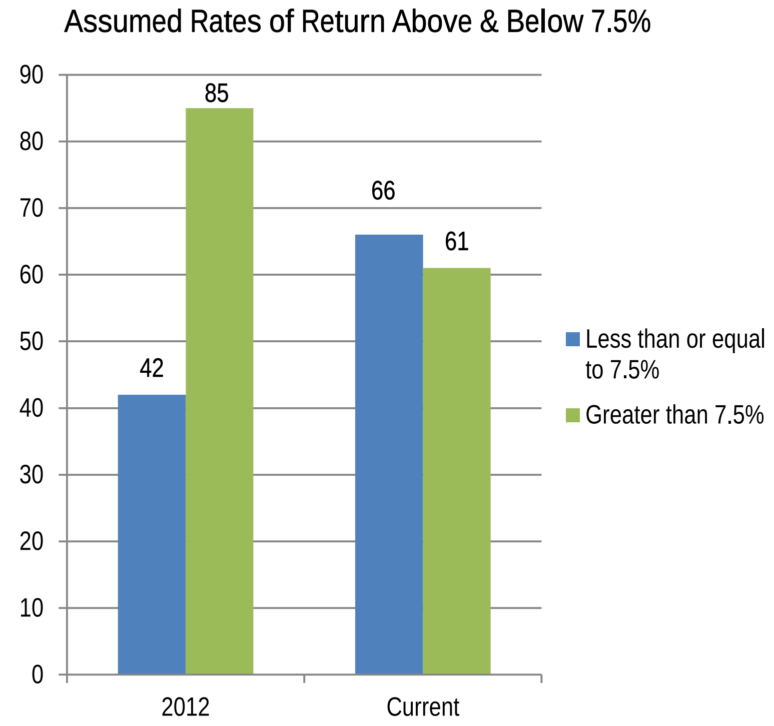
Retiree Association Feedback

- Long-term sustainability of the fund for current and future retirees is paramount
- Review of asset allocation to address shifting investment environment
- Concern for public agency employers who are struggling financially to make contributions and continue paying benefits

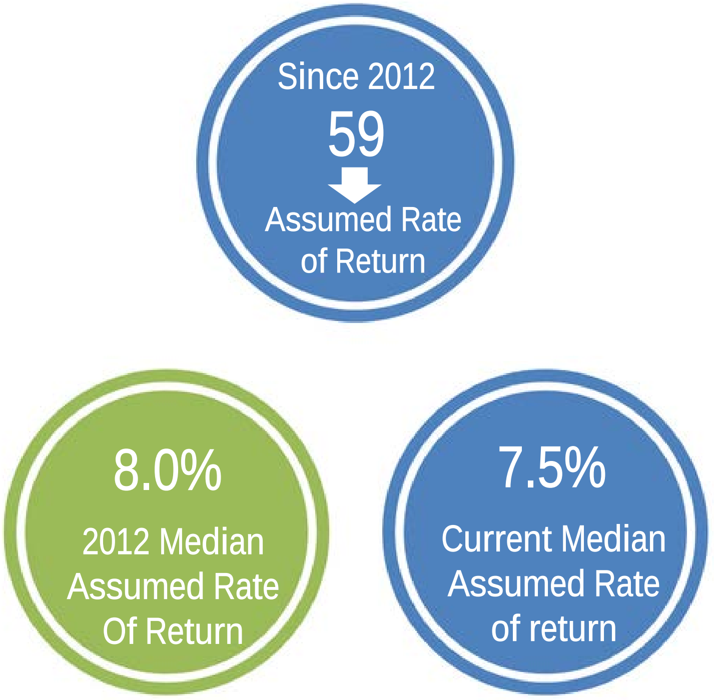
Employer Association Feedback

- Recognize cost impacts but understand necessity to take action
- Seek data on the positive effect that lowering the assumed rate of return will have for the System and stakeholders
- Flexibility for employers who may be financially unable to withstand increase employer contribution requirements

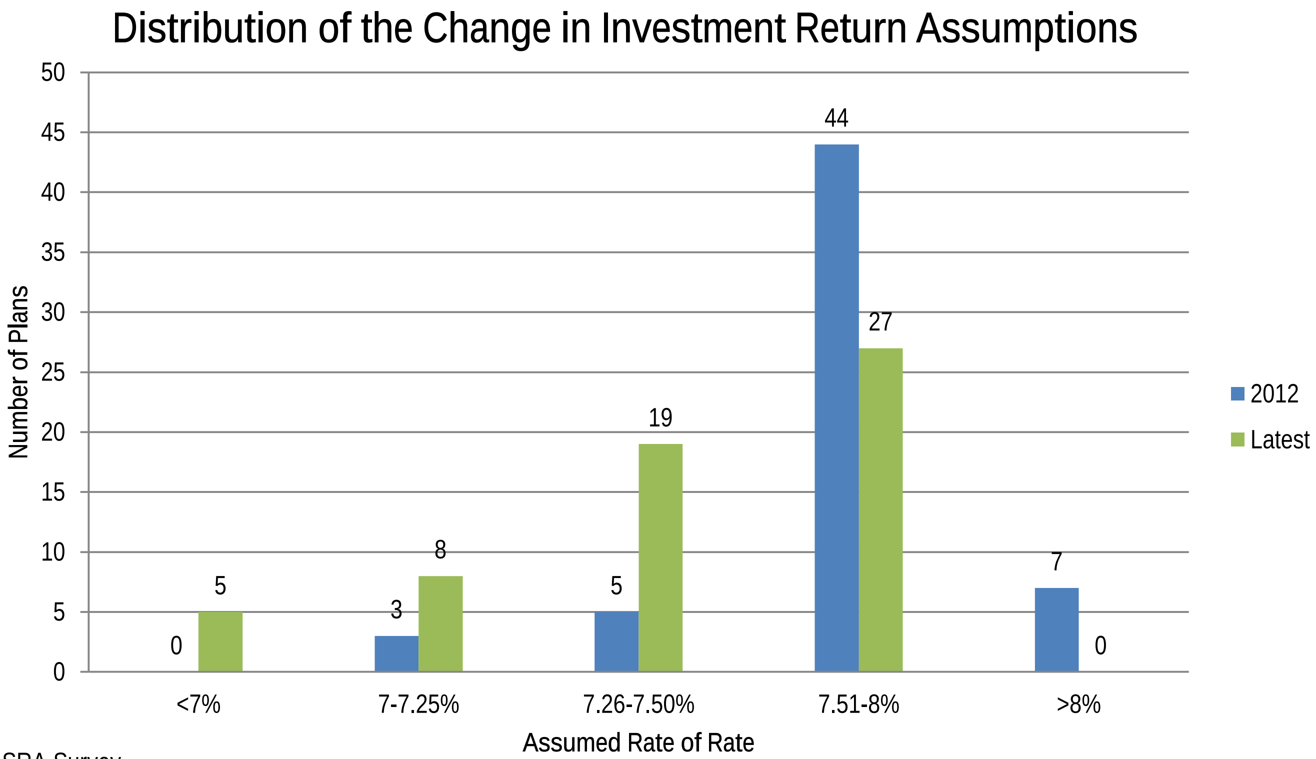
Assumed Rates of Return are Trending Downward



Based on 2016 NASRA Survey

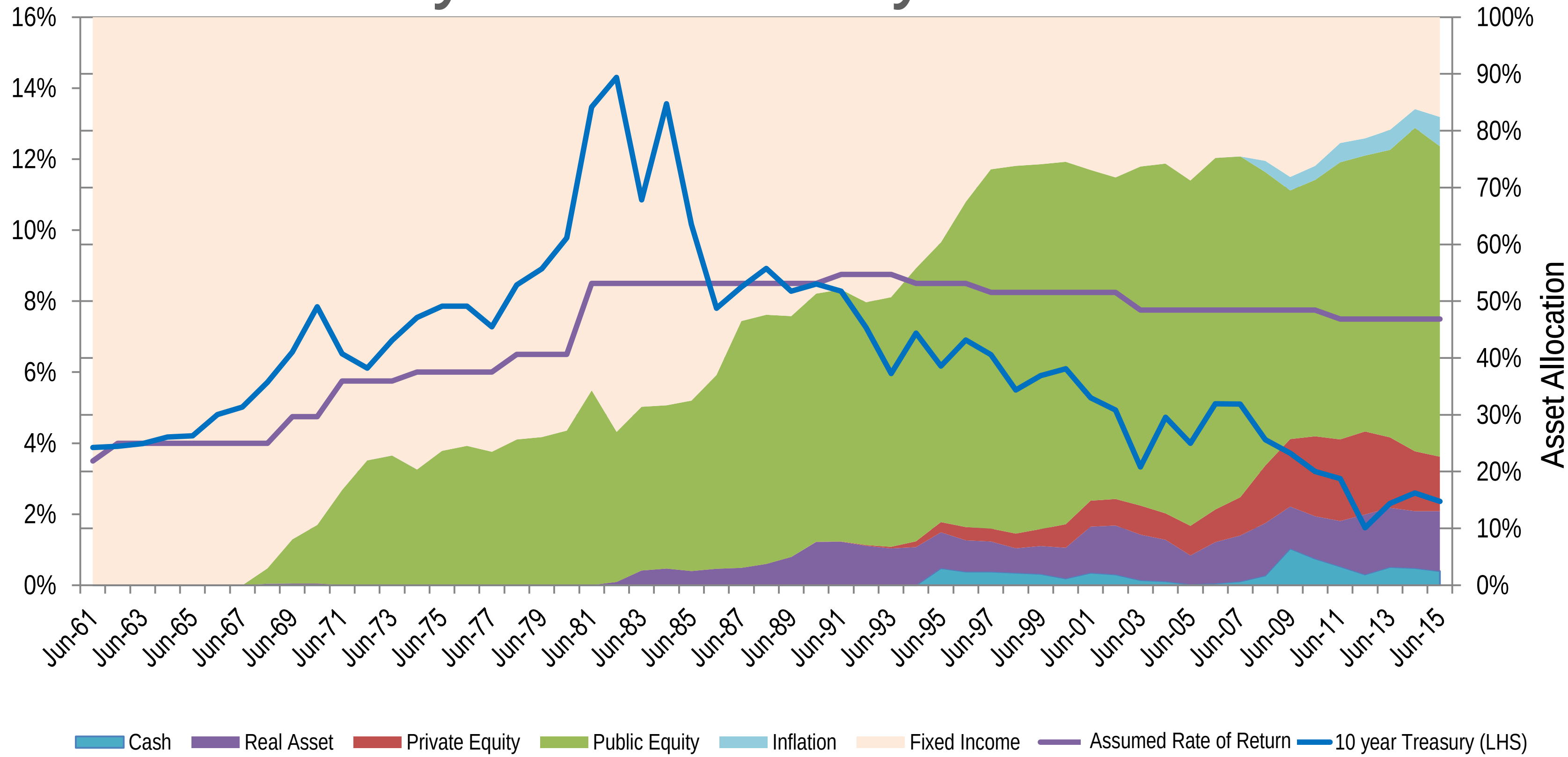


Assumed Rates of Return are Trending Downward



Based on 2016 NASRA Survey

CalPERS Historical Allocation Assumed Rate of Return and 10yr US Treasury Yield



- Data Source: CalPERS Comprehensive Annual Financial Reports (CAFR) for assumed rate of return and allocation
- Data Source: Bloomberg for 10YR US Treasury Constant Maturity Rate (H15T10Y)
- Inflation asset class was not provided as a separate line item in the 2014 & 2015 CAFRs. Used the asset allocations from the AA-Spreadsheet

CalPERS

Monte Carlo Return Simulations – PCA

- Simulations using PCA CMA information with and without net actuarial cash flow information.

Scenario	Arithmetic Return	Standard Deviation	Probability Above 6.5%, 10yr Horizon	Probability Above 7.0%, 10yr Horizon	Probability Above 7.5%, 10yr Horizon
Interim AA with PCA CMAs, no cash flows	7%	11.7%	50%	44%	39%
Interim AA with PCA CMAs, with net actuarial cash flows	7%	11.7%	25%	21%	18%
Strategic with PCA CMAs, no cash flows	7.4%	12.3%	52%	48%	43%
Strategic with PCA CMAs, with net actuarial cash flows	7.4%	12.3%	29%	26%	22%

Monte Carlo Return Simulations – Wilshire

- Simulations using Wilshire CMA information with and without net actuarial cash flow information.

Scenario	Arithmetic Return	Standard Deviation	Probability Above 6.5%, 10yr Horizon	Probability Above 7.0%, 10yr Horizon	Probability Above 7.5%, 10yr Horizon
Interim AA with Wilshire CMAs, no cash flows	6.44%	11.41%	44%	39%	34%
Interim AA with Wilshire CMAs, with net actuarial cash flows	6.44%	11.41%	20%	17%	14%
Strategic with Wilshire CMAs, no cash flows	6.87%	12.56%	46%	42%	37%
Strategic with Wilshire CMAs, with net actuarial cash flows	6.87%	12.56%	26%	22%	19%

Definitions

- Normal costs
  - The annual cost of service accrual for the upcoming fiscal year for active employees. The normal cost should be viewed as the long-term contribution rate.
- Unfunded accrued liability (UAL)
  - When a plan or pool's Actuarial Value of Assets is less than its Accrued Liability, the difference is the plan or pool's Unfunded Liability. If the Unfunded Liability is positive, the plan or pool will have to pay contributions exceeding the Normal Cost.