



ALAMEDA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
ASSET LIABILITY STUDY PART IV
RESULTS & RECOMMENDATION

September, 2012

STRATEGIC INVESTMENT SOLUTIONS, INC.

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(415) 362-3484

ACERA Basic Asset Mixes

	Return	Risk	Current Policy	7% Mix	7¼% Mix	7½% Mix	7¾% Mix	8% Mix	Constraints
US Equity	8.2%	18.1%	34%	28%	31%	34%	40%	46%	
International Equity	8.4%	19.1%	25%	21%	23%	25%	25%	25%	Max current % of Public Equity, or 25%
US Fixed Income	3.1%	4.9%	20%	30%	25%	20%	14%	8%	
Real Estate	6.6%	18.5%	6%	6%	6%	6%	6%	6%	Current allocation
PEARLS	8.8%	22.0%	10%	10%	10%	10%	10%	10%	Current allocation
Real Return Pool	4.2%	13.4%	5%	5%	5%	5%	5%	5%	Current allocation
Total Public Equity			59%	49%	54%	59%	65%	71%	
Return			7.46%	7.00%	7.25%	7.50%	7.75%	8.00%	
Risk			13.29%	11.83%	12.61%	13.41%	14.26%	15.16%	

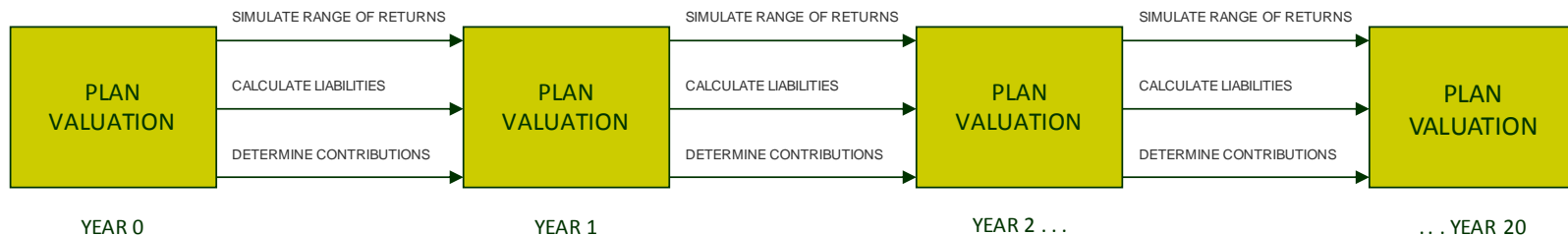
ACERA Asset Mixes w/ More PEARLS

	Return	Risk	Current Policy	7% Mix	7¼% Mix	7½% Mix	7¾% Mix	8% Mix	Constraints
US Equity	8.2%	18.1%	34%	25%	28%	31%	34%	40%	
International Equity	8.4%	19.1%	25%	18%	21%	23%	25%	25%	Max current % of Public Equity, or 25%
US Fixed Income	3.1%	4.9%	20%	31%	25%	20%	15%	9%	
Real Estate	6.6%	18.5%	6%	6%	6%	6%	6%	6%	Current allocation
PEARLS	8.8%	22.0%	10%	15%	15%	15%	15%	15%	15%
Real Return Pool	4.2%	13.4%	5%	5%	5%	5%	5%	5%	Current allocation
Total Public Equity			59%	43%	49%	54%	59%	65%	
Return			7.46%	7.00%	7.25%	7.50%	7.76%	8.01%	
Risk			13.29%	11.76%	12.50%	13.28%	14.11%	14.98%	

ACERA Asset Mixes w/ More PEARLS & Intl Equity

	Return	Risk	Current Policy	7% Mix	7¼% Mix	7½% Mix	7¾% Mix	8% Mix	Constraints
US Equity	8.2%	18.1%	34%	21%	24%	26%	32%	37%	
International Equity	8.4%	19.1%	25%	22%	24%	27%	27%	27%	Max 50% of Public Equity, or 27%
US Fixed Income	3.1%	4.9%	20%	31%	26%	21%	15%	10%	
Real Estate	6.6%	18.5%	6%	6%	6%	6%	6%	6%	Current allocation
PEARLS	8.8%	22.0%	10%	15%	15%	15%	15%	15%	15%
Real Return Pool	4.2%	13.4%	5%	5%	5%	5%	5%	5%	Current allocation
Total Public Equity			59%	43%	48%	53%	59%	64%	
Return			7.46%	7.00%	7.25%	7.50%	7.75%	8.00%	
Risk			13.29%	11.74%	12.48%	13.28%	14.09%	14.95%	

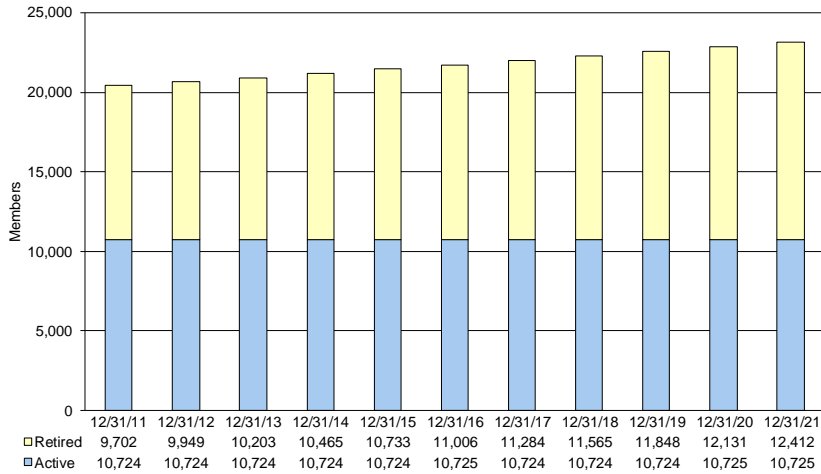
Simulating the Performance of Current & Alternative Asset Mixes



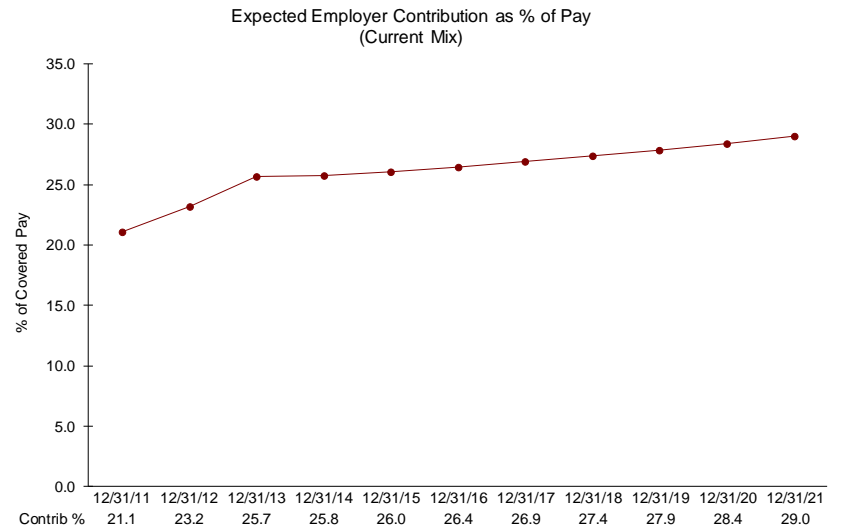
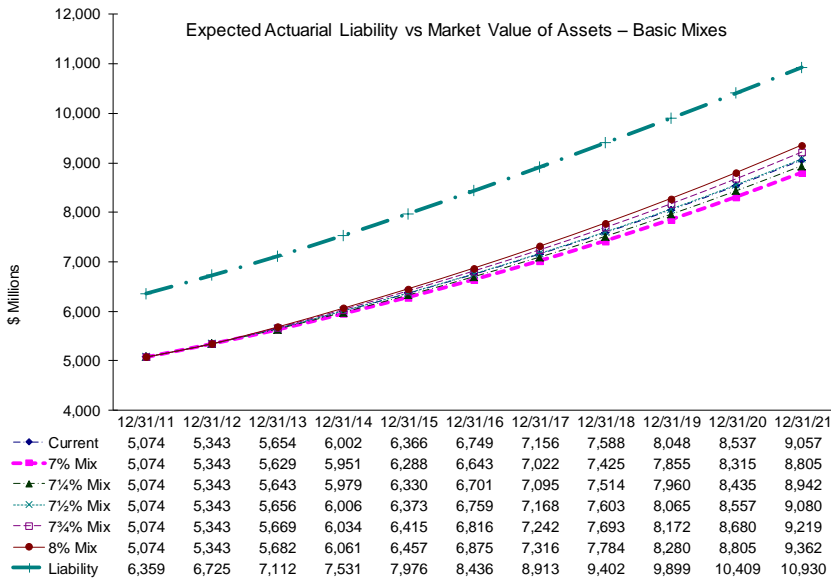
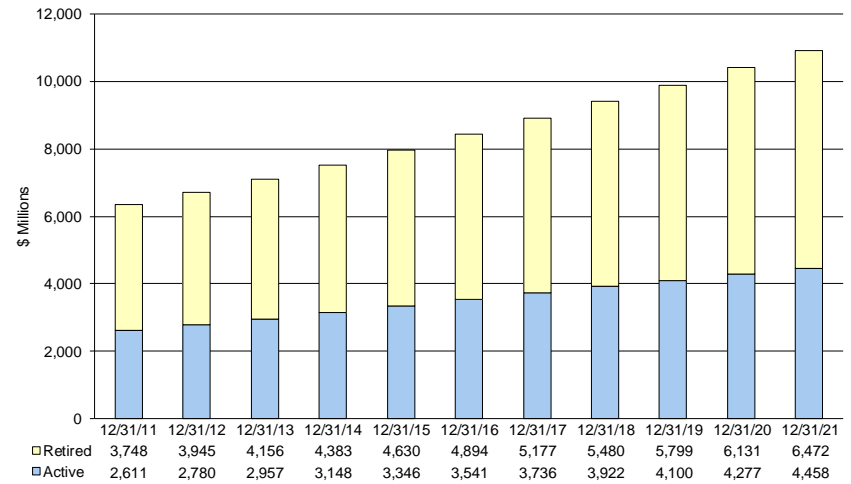
- Monte Carlo – 5000 “random” multi-year outcomes
- Starts with December 31, 2011 Actuarial Valuation Report
- Payroll growth assumptions
 - Workforce growth 0%
 - Long-term per-capita pay growth 4.0%
- Focus on outcomes at five-year planning horizon (December 31, 2016)

Constant-Rate Projections

Expected Plan Membership

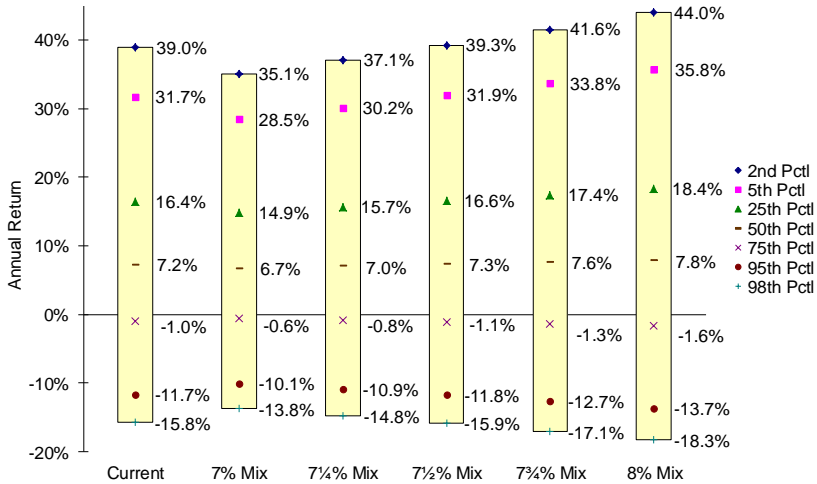


Expected Actuarial Liability

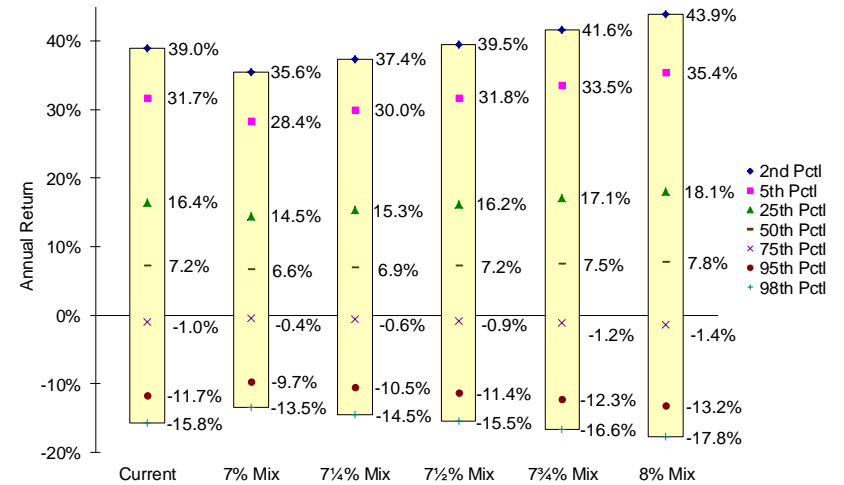


Range of Returns

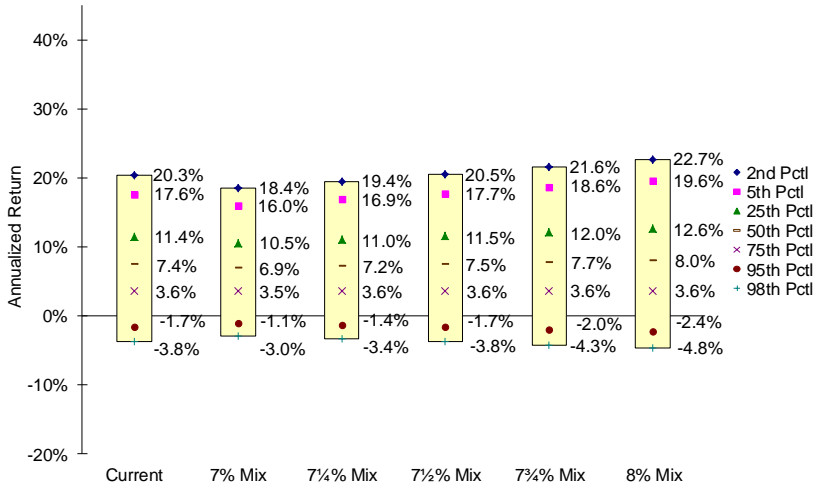
Range of Returns – Basic Mixes
(One Year Horizon)



Range of Returns – More PEARLS & Intl
(One Year Horizon)



Range of Returns – Basic Mixes
(Five Year Horizon)

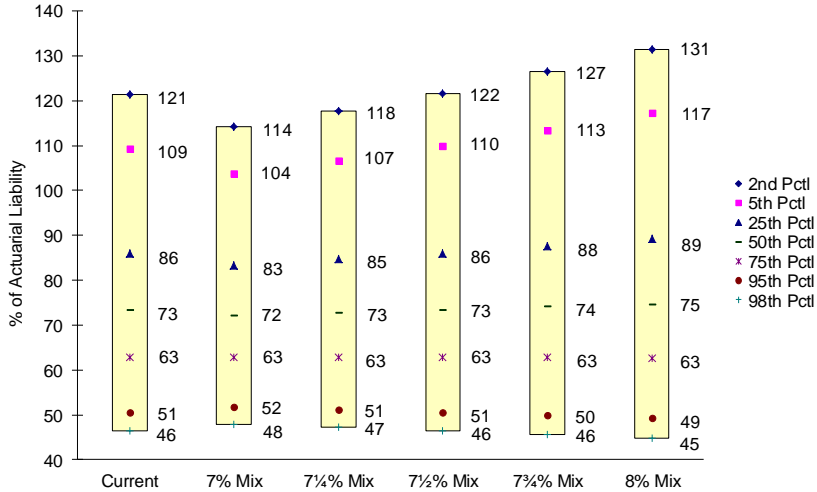


Range of Returns – More PEARLS & Intl
(Five Year Horizon)

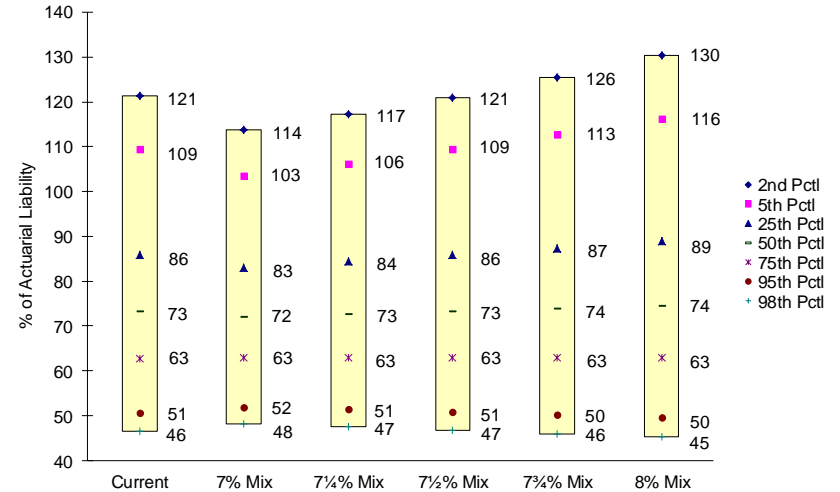


Range of Funded Status, & Contributions

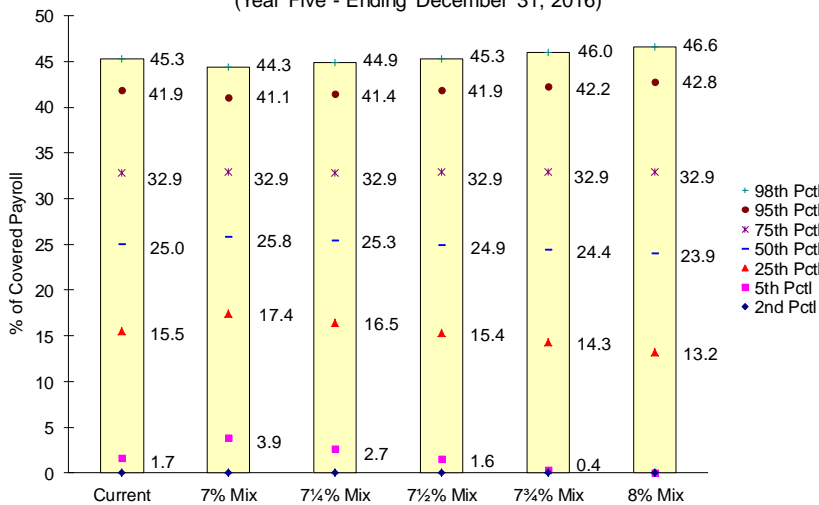
Range of Actuarial Value Funded Status – Basic Mixes
(End of Year Five - December 31, 2016)



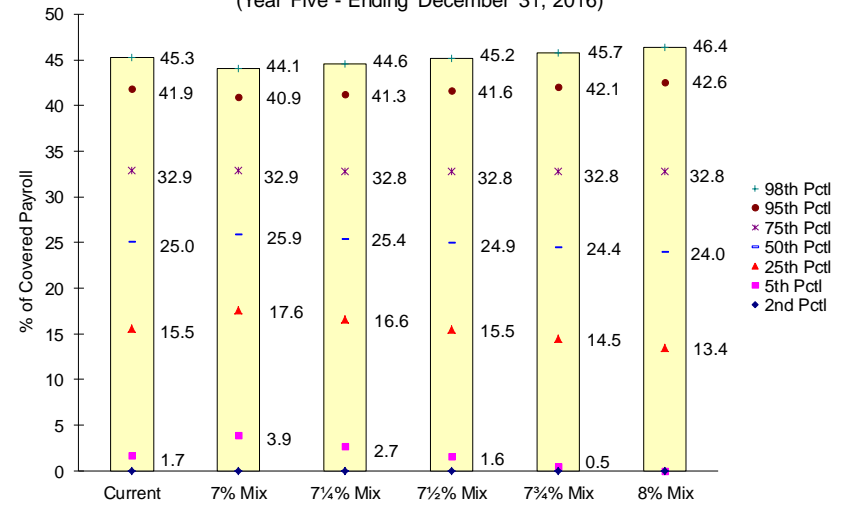
Range of Actuarial Value Funded Status – More PEARLS & Intl
(End of Year Five - December 31, 2016)



Range of Employer Contributions as % of Pay – Basic Mixes
(Year Five - Ending December 31, 2016)

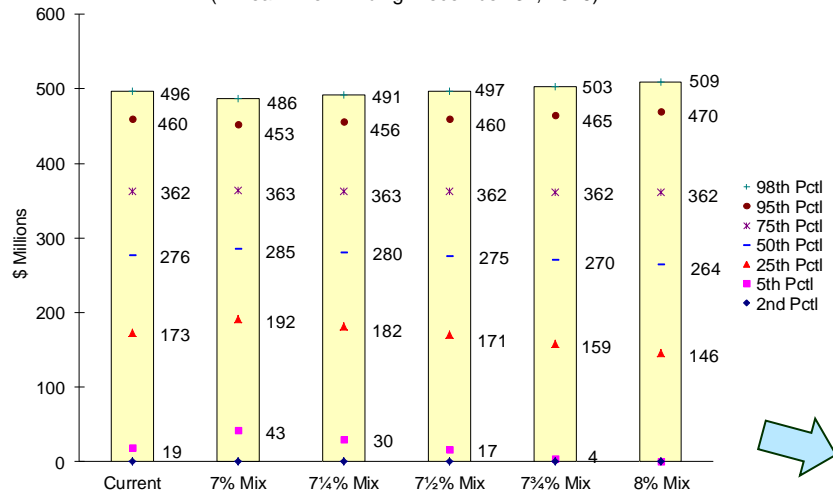


Range of Employer Contributions as % of Pay – More PEARLS & Intl
(Year Five - Ending December 31, 2016)

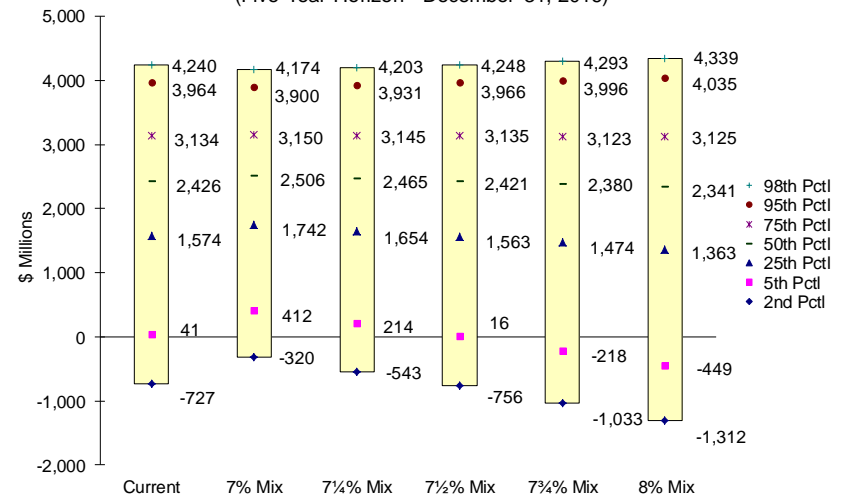


“Ultimate Net Cost” = Present Value of Contributions & Unfunded Liability

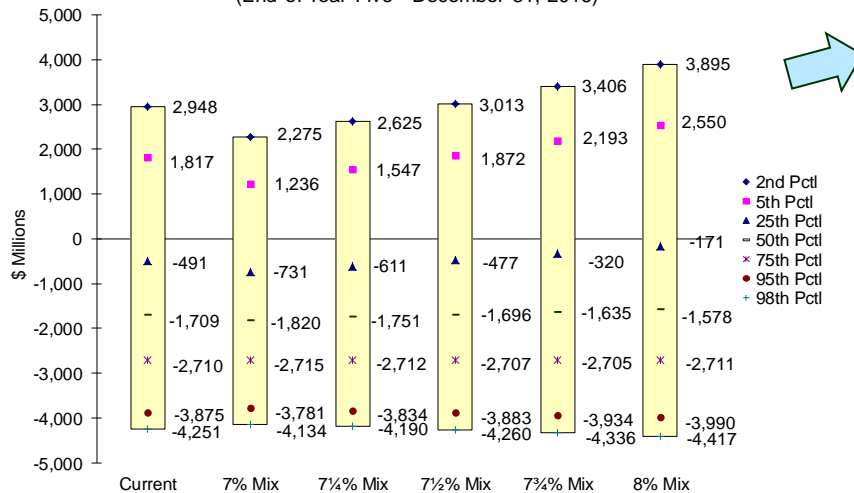
Range of Employer Contributions – Basic Mixes
(in Year Five - Ending December 31, 2016)



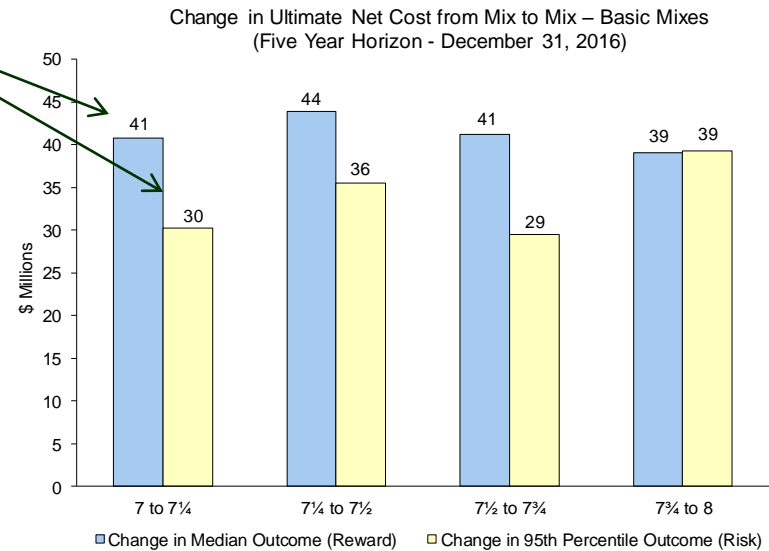
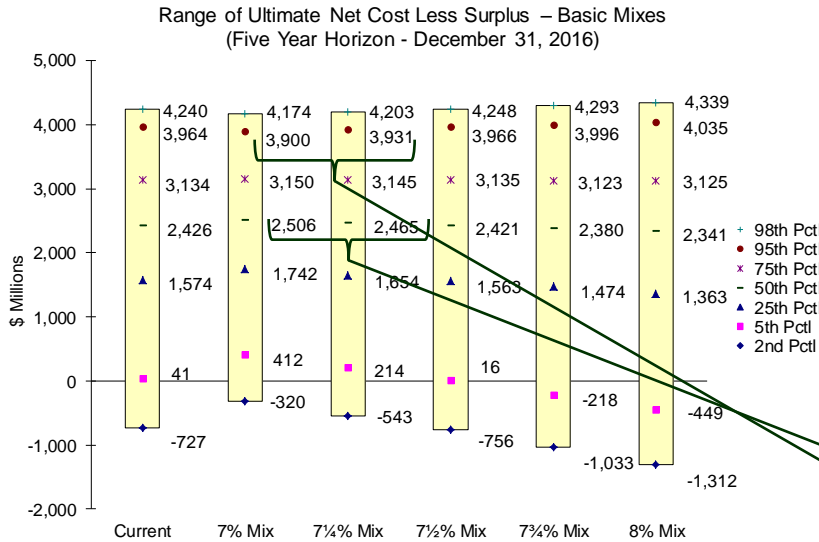
Range of Ultimate Net Cost Less Surplus – Basic Mixes
(Five Year Horizon - December 31, 2016)



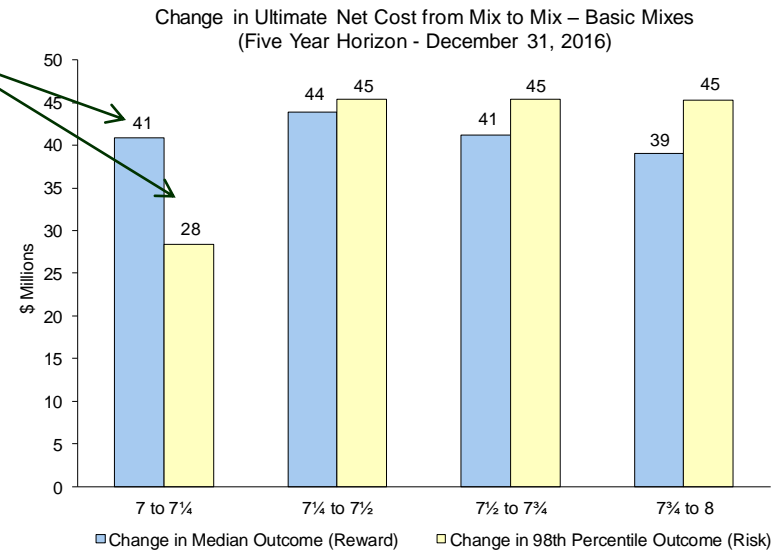
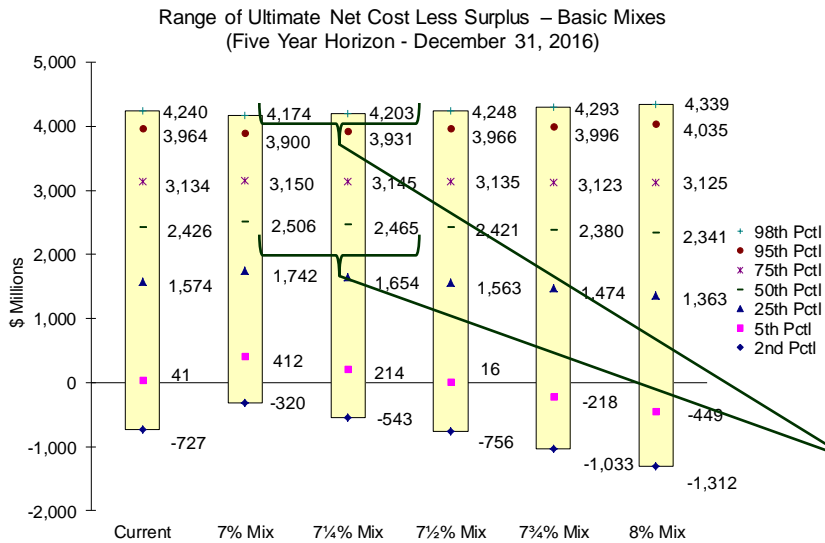
Range of Market Value Surplus – Basic Mixes
(End of Year Five - December 31, 2016)



Ultimate Net Cost Trade-Off Is Favorable Up to the 7¾% Mix (Five-Year Horizon, Standard 95th Percentile Risk Tolerance)

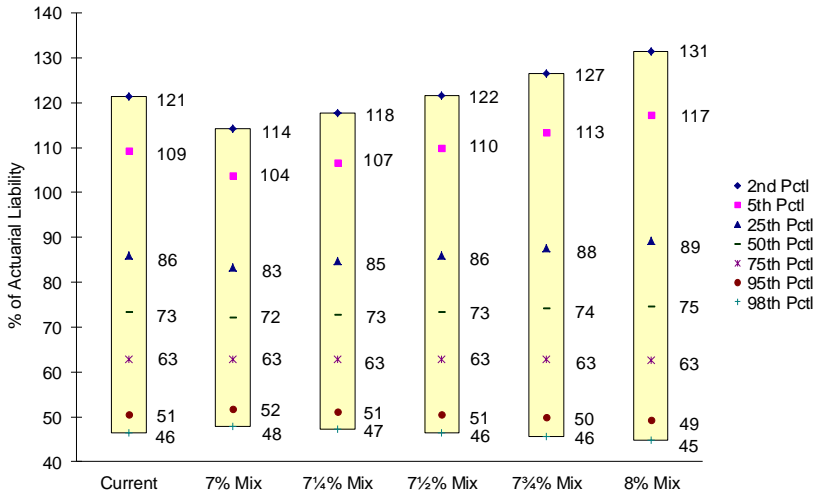


Ultimate Net Cost Trade-Off Is Favorable Up to the 7¼% Mix (Five-Year Horizon, Defensive 98th Percentile Risk Tolerance)

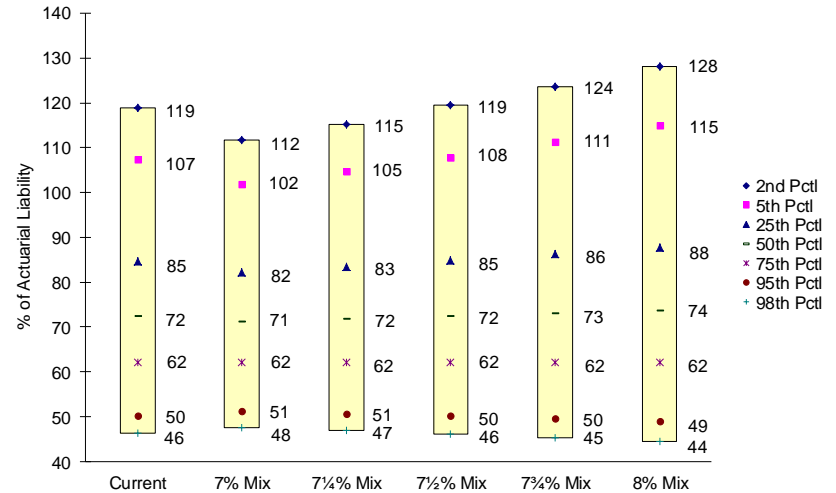


Choosing 7¼% Mix May Lead to Lower Actuarial Interest Rate on 12/31/2012

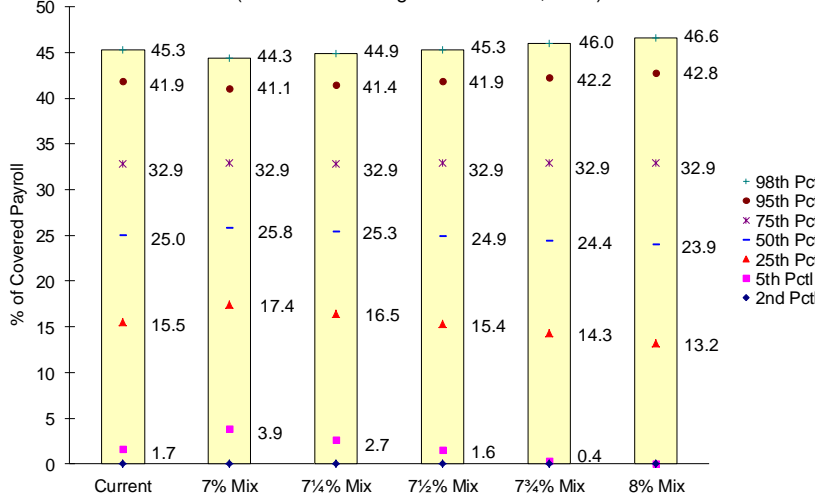
Range of Actuarial Value Funded Status – Basic Mixes
(End of Year Five - December 31, 2016)



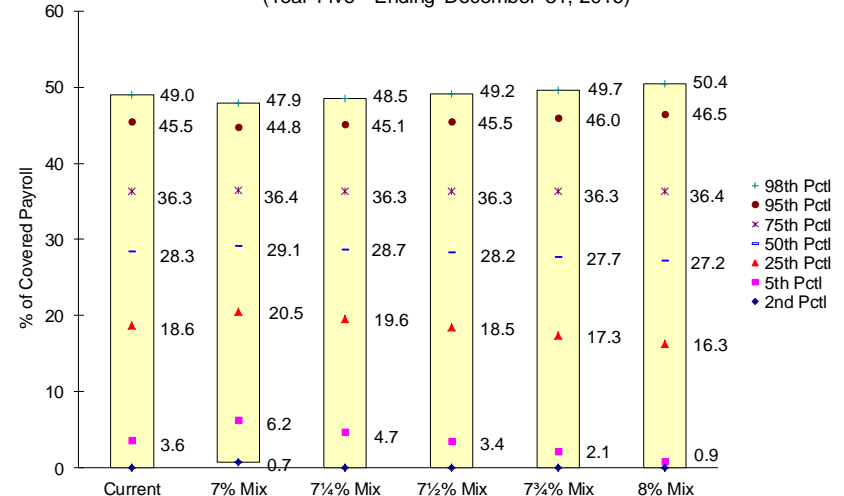
Range of Actuarial Value Funded Status – Basic Mixes, 7½% Interest
(End of Year Five - December 31, 2016)



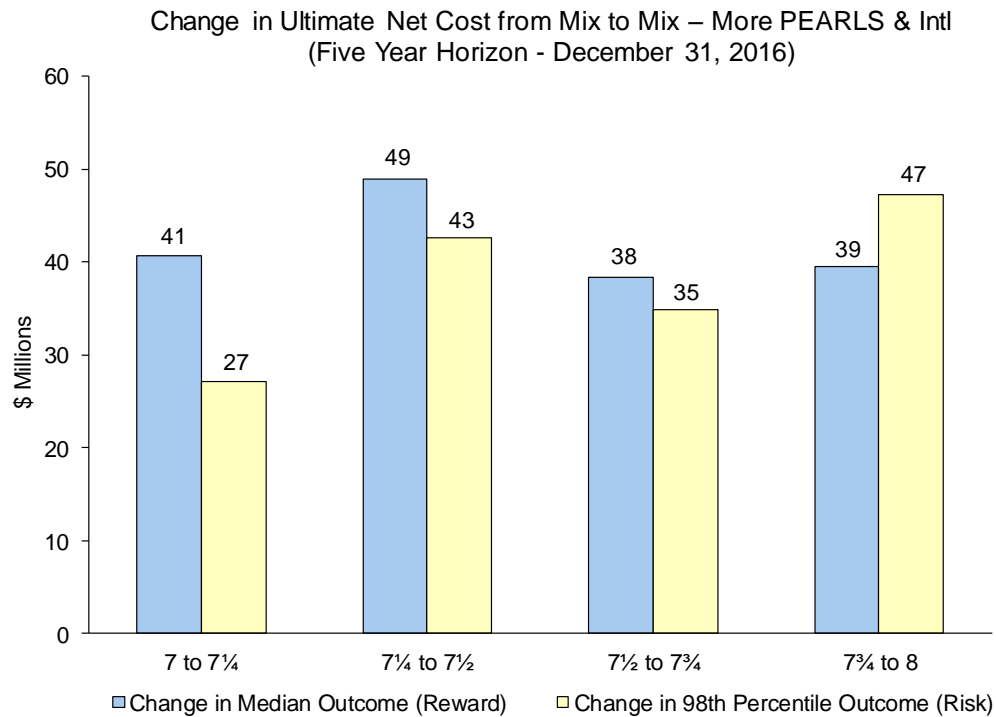
Range of Employer Contributions as % of Pay – Basic Mixes
(Year Five - Ending December 31, 2016)



Range of Employer Contributions as % of Pay – Basic Mixes, 7½% Int.
(Year Five - Ending December 31, 2016)



Ultimate Net Cost Trade-Off Is Favorable Up to the 7¾% More PEARLS & Intl Equity Mix for Defensive Risk Tolerance



Recommendations

- 1) Because funded status is expected to erode a bit further as remainder of 2008 loss is recognized, a defensive risk tolerance (98th Percentile) may be preferred.
- 2) Given a defensive risk tolerance, the 7¾% mix with more PEARLS and International Equity is appropriate.
- 3) If the Board does not favor increasing the PEARLS and International Equity allocations, the current policy is appropriate, as lowering the expected return any farther may lead to a lower actuarial interest rate.

	Current Policy	Basic	More PEARLS & Intl	
		7½% Mix	7½% Mix	7¾% Mix
US Equity	34%	34%	26%	32%
International Equity	25%	25%	27%	27%
US Fixed Income	20%	20%	21%	15%
Real Estate	6%	6%	6%	6%
PEARLS	10%	10%	15%	15%
Real Return Pool	5%	5%	5%	5%
Total Public Equity	59%	59%	53%	59%
Return	7.46%	7.50%	7.50%	7.75%
Risk	13.29%	13.41%	13.28%	14.09%