Pension and Other Post Employment Benefits (OPEB) Liabilities

City Council Study Session

September 18, 2012

Purpose of Study Session

- Basics of CalPERS retirement
- Examine funding status for CalPERS plans.
  - CalPERS perspective
  - SIEPR perspective
- Briefly examine OPEB liabilities
- Preliminary discussion of options to reduce or eliminate unfunded liabilities
- Preliminary analysis of AB 340 impacts

What is an unfunded liability?

When the value of a promised benefit

is greater than

the value of assets set aside to provide the benefit plus the potential growth of or investment earnings on those assets,

the difference is the unfunded liability.

What causes unfunded liabilities to change over time?

- Changing the benefit
- Increasing plan assets
- Variations from actuarial assumptions
  - Examples
    - Investment earnings less than assumptions
    - Payroll growth less than assumptions
    - Annuitant longevity greater than assumptions
- Changes to actuarial assumptions

Remedial Action by City and Employees

- No cost of living increase since 2007 and 2008 through 2014 or 2015
- Second tier for Safety new hires
- Eliminate "Single Highest Year" for new hires
- Increased employee cost sharing for PERS
- 50/50 cost sharing of all medical premium increases beginning 1/1/13
- Reduced retiree medical for new hires

AB 340 – Public Employees' Pension Reform Act of 2013

- For employees new to the system on or after 1/1/2013:
  - Establishes new benefit tiers
    - Miscellaneous: 2% @ 62
    - Safety: 2.7% @ 57 (Option Plan Two)
  - Benefits based on three year average and subject to limits and exclusion of some forms of compensation
  - Establishes 50/50 cost sharing of normal rates
- For current system employees:
  - Sets "standard" for employee cost sharing at 50% of normal costs
  - Allows imposing of normal cost sharing after 1/1/2018 up to limits (8% for Miscellaneous; 12% for Safety)

Presenters

- Kerry Worgan, Senior Pension Actuary, California Public Employees Retirement System (CalPERS)
- Joe Nation, Ph.D., Stanford Institute of Economic Policy Research (SIEPR)

Next Steps - Options

- Schedule regular session discussions
  - Consider phase-in option for the PERS change to a 7.5% discount rate
  - Consider PERS options – pay ahead and Fresh Start
  - Consider SIEPR final report and options
- Complete 2013 OPEB evaluation and schedule presentation by consultant
- Consider funding options for OPEB
- Begin preparing strategy for future negotiations

City of Fullerton

Pension Information Session
September 18, 2012

Kerry Worgan, FSA, FCIA
Senior Pension Actuary, CalPERS

Today's Topics

- CalPERS Overview
- How are the Plans Doing?
- Where Are Rates Going?
- Other Important Events
- What Can Agencies Do?

CalPERS - Overview

- Established in 1932 to administer and pay pensions to state employees
- Currently administering pension entitlements for more than 1.6 million members and more than 2,500 employers
- ACTO performs annual valuations for each employer to determine annual contribution requirements

CalPERS Overview (continued)

- CalPERS public agency plans are pre-funded
- Plan assets come from three different sources (ER Contributions, EE Contributions, Investment Returns)
- Most of the benefits are paid through investment earnings – (approx 2/3 of every dollar)
- CalPERS funding method is designed to collect contributions as a level percent of payroll over the members working career

How are the Plans Doing?

- Accrued Liability (AL) is the present value of all expected benefits accrued to the valuation date
- Market Value of Assets (MVA)
- Actuarial Value of Assets (AVA)
- Funded Ratio is MVA / AL

How is the Misc. Plan Doing?

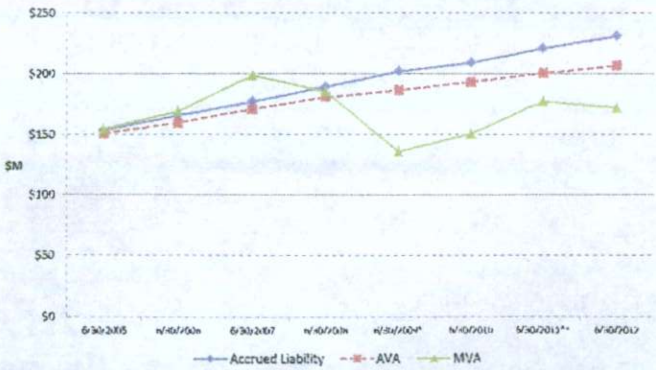
	Valuation Date	Accrued Liability	AVA	MVA	Funded Ratio	AVA/MVA
	6/30/2005	$ 154.0	$ 150.8	$ 155.0	100.7%	97.2%
	6/30/2006	$ 165.7	$ 159.6	$ 169.5	102.3%	94.2%
	6/30/2007	$ 177.2	$ 170.7	$ 198.7	112.1%	85.9%
	6/30/2008	$ 189.4	$ 180.8	$ 185.3	97.9%	97.6%
	6/30/2009*	$ 202.3	$ 186.3	$ 136.2	67.3%	136.8%
	6/30/2010	$ 209.4	$ 193.1	$ 151.0	72.1%	127.9%
Prelim.	**6/30/2011****	**$ 221.1**	**$ 200.6**	**$ 177.5**	**80.3%**	**113.0%**
Proj.	*6/30/2012*	*$ 231.2*	*$ 206.6*	*$ 172.2*	*74.5%*	*120.0%*

* updated actuarial assumptions

** discount rate @7.50%

- In $Millions

How is the Misc. Plan Doing?



- This reflects an assumed 0% return for 2011-12

How is the Safety Plan Doing?

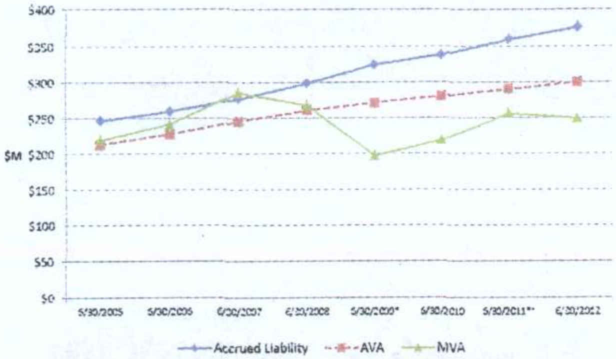
	Valuation Date	Accrued Liability	AVA	MVA	Funded Ratio	AVA/MVA
	6/30/2005	$ 246.3	$ 212.3	$ 218.8	88.8%	97.0%
	6/30/2006	$ 259.5	$ 227.1	$ 241.7	93.1%	94.0%
	6/30/2007	$ 277.1	$ 245.2	$ 285.9	103.2%	85.7%
	6/30/2008	$ 298.7	$ 261.2	$ 267.9	89.7%	97.5%
	6/30/2009*	$ 324.3	$ 270.7	$ 197.4	60.9%	137.1%
	6/30/2010	$ 338.2	$ 280.3	$ 218.7	64.7%	128.1%
Prelim.	**6/30/2011****	**$ 360.1**	**$ 290.3**	**$ 256.8**	**71.3%**	**113.1%**
Proj.	*6/30/2012*	*$ 376.7*	*$ 299.6*	*$ 249.7*	*66.3%*	*120.0%*

* updated actuarial assumptions

** discount rate @7.50%

- In $Millions

How is the Safety Plan Doing?



- This reflects an assumed 0% return for 2011-12

Why use an Actuarial Value of Assets?

Annual Returns on the PERF (1990-2010)

- Market returns are very volatile.
- Using MVA would result in volatile employer rates

Components of Every Rate

- Every employer rate is made up of two parts
  - The normal cost or annual premium
    - pays for future benefit accruals
  - The amortization bases or unfunded liability payment
    - pays for any deficit or surplus accrued over the years

Where Are Misc. Rates Going?

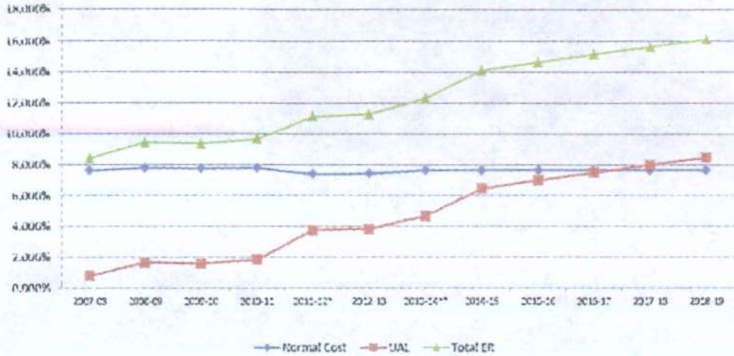
	Fiscal Year	Normal Cost	UAL	Total ER
	2007-08	7.619%	0.787%	8.406%
	2008-09	7.750%	1.648%	9.398%
	2009-10	7.742%	1.574%	9.316%
	2010-11	7.775%	1.842%	9.617%
	2011-12*	7.384%	3.735%	11.119%
	2012-13	7.416%	3.826%	11.242%
Prelim.	**2013-14****	**7.643%**	**4.658%**	**12.301%**
Projected	*2014-15*	*7.643%*	*6.452%*	*14.095%*
	2015-16	*7.643%*	*6.989%*	*14.632%*
	2016-17	*7.643%*	*7.502%*	*15.145%*
	2017-18	*7.643%*	*7.991%*	*15.634%*
	2018-19	*7.643%*	*8.458%*	*16.101%*

* updated actuarial assumptions

** discount rate @7.50%

- This reflects a 0% return for 11-12, 7.50% subsequently
- This assumes no future demographic gains or losses
- Projected Employer Contribution for 2013-14 is $3.4M

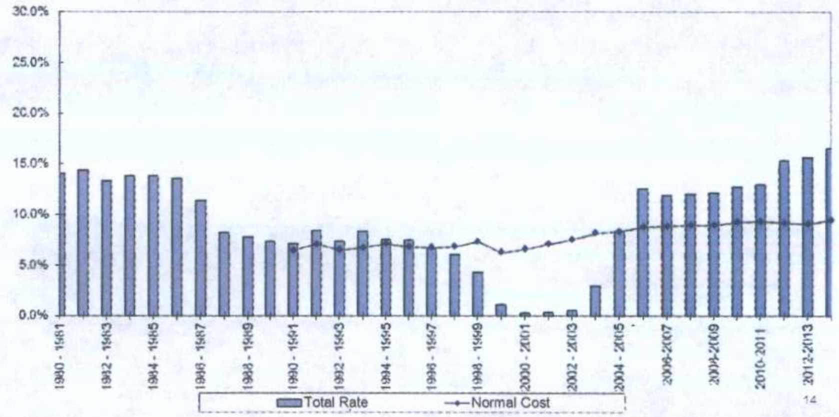
Where Are Misc. Rates Going?



- This reflects a 0% return for 2011-12, 7.50% subsequently
- This assumes no future demographic gains or losses

Where Are Misc. Rates Going?

History of Average Employer Contribution Rates for Public Agency Miscellaneous Plans



Where Are Safety Rates Going?

	Fiscal Year	Normal Cost	UAL	Total ER
	2007-08	16.194%	8.974%	25.168%
	2008-09	16.141%	8.511%	24.652%
	2009-10	15.815%	7.494%	23.309%
	2010-11	15.958%	8.827%	24.785%
	2011-12*	17.203%	12.997%	30.200%
	2012-13	17.319%	14.387%	31.706%
Prelim.	**2013-14****	**17.791%**	**16.890%**	**34.681%**
Projected	*2014-15*	*17.791%*	*19.679%*	*37.470%*
	2015-16	*17.791%*	*20.397%*	*38.188%*
	2016-17	*17.791%*	*21.078%*	*38.869%*
	2017-18	*17.791%*	*21.726%*	*39.517%*
	2018-19	*17.791%*	*22.341%*	*40.132%*

* updated actuarial assumptions
** discount rate @7.50%

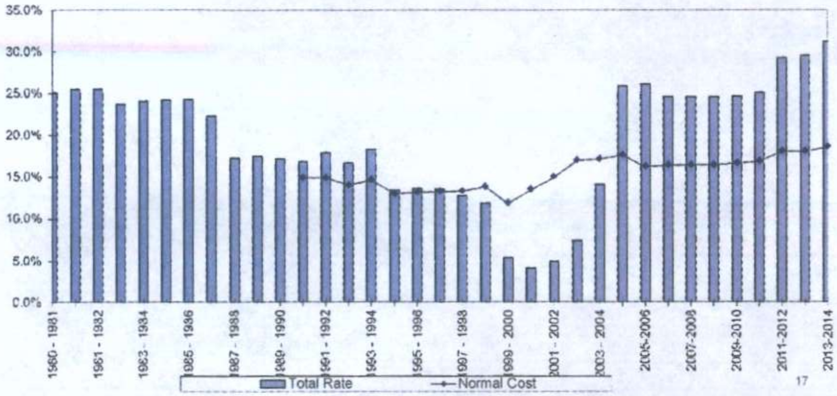
- This reflects a 0% return for 11-12, 7.50% subsequently
- This assumes no future demographic gains or losses
- Projected Employer Contribution for 2013-14 is $8.9M

Where Are Safety Rates Going?

- This reflects a 0% return for 2011-12, 7.50% subsequently
- This assumes no future demographic gains or losses

Where Are Safety Rates Going?

History of Average Employer Contribution Rates for Public Agency Safety Plans



Other Important Events

- For the June 30, 2011 valuation the discount rate was lowered to 7.50%
- Board elected to phase-in the impact over 2 years
- Non-pooled plans can elect not to phase-in the higher rates
- Electing <u>not</u> to phase-in saves money over the long-term
  - Misc. (13.165% vs. 12.301%)
  - Safety (36.127% vs. 34.681%)

What Can Agencies Do?

- Payments towards UAL → paying off the "mortgage" sooner saves money
- Reduce amortization period via Fresh Start

Miscellaneous Plan		Safety Plan	
Period	Rate	Period	Rate
22	5.579%	26	18.404%
20	5.971%	24	19.246%
18	6.336%	22	20.256%
16	6.864%	20	21.485%

Second Tier/ Pension Reform

- Second tier offer little in the way of immediate rate relief, new formula applies to new hires after effective date (1/1/2013)
- Estimated long term savings would be:

Plan	Miscellaneous 2% @62	Safety 2.7% @57
Tier 1	2.5%	4.7%
Tier 2	2.0%	2.4%

- Full savings would not be realized until all members remaining are in second tier

Termination Valuation

- New addition to Valuation Reports this year
- Estimate of the Financial position of the plans assuming a Hypothetical Termination on the valuation date – 6/30/2011
- Assets at Market Value
- Accrued Liabilities
  - Discount rate based on US Treasury rates
  - 4.82% at 6/30/2011
  - 7% contingency reserve added (for mortality)

Termination Valuation

- Hypothetical Results at 6/30/2011

	Miscellaneous	Safety
Accrued Liability (Termination Basis)	$303 M	$540 M
Market Value of Assets	$178 M	$257 M
Unfunded Liability	$125 M	$283 M

- If termination occurs, agency would pay off UAL over maximum 10 years
  - Miscellaneous $15.7M /yr
  - Safety $35.5M /yr

Questions

- ?

Unfunded Public Pension and Retiree Health Care Liabilities

—In Fullerton, Anaheim, Costa Mesa, and Newport Beach

Joe Nation, Ph.D.
Professor of the Practice of Public Policy
Stanford Institute for Economic Policy Research (SIEPR)
Stanford University

Sept. 18, 2012

Project Background and Roadmap

- Sponsored by city of Fullerton
- Objectives
  - Compare public, private pension characteristics
  - Examine, compare benefit levels across several cities
  - Estimate funded status, unfunded liabilities
  - Estimate future contribution rates, assess impacts on city budgets
- Deliverables
  - Report, this presentation

Public Sector Mostly Defined Benefit (DB) Plans

- Contrast with Defined Contribution (DC) plans in private sector
- DB obligations considered by many to be ironclad
- Different set of "rules" than in private sector

Public Sector "Rules" Push Costs to Future

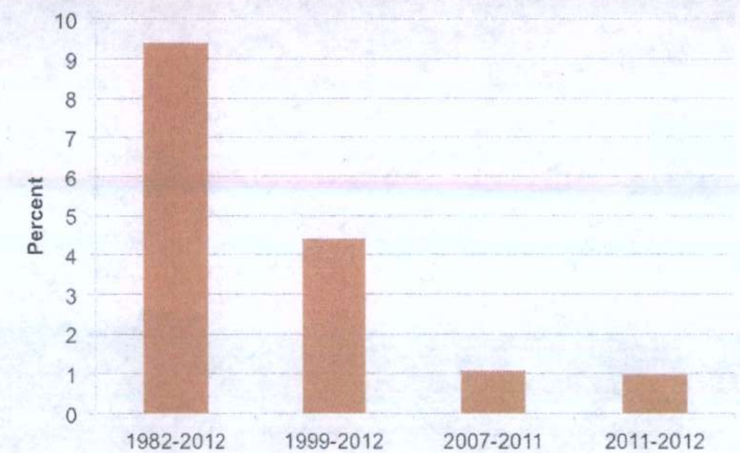
Assumption or Method	CalPERS[a]	Private Sector DB
Discount rate	7.5%	~4-5%
Investment rate of return (percent)	7.5%	Varies
Amortization period (years)	30 years[b]	7 years
Asset smoothing period	15 years	2 years

[a]Public Employees' Retirement Fund (PERF).
[b]The amortization period is 20 years for unfunded liability attributable to changes in [illegible]
Sources: CalPERS, "Comprehensive Annual Financial Report Fiscal Year Ended June 30, 2010," p. [illegible] [illegible]financial/comprehensive-annual-fin-rept-10.pdf, retrieved Oct. 14, 2011; Internal Revenue Code Section 430 [illegible] Internal_Revenue_Code-Sec._430._Minimum_Funding_Standards_for_Single-Employer_Defined_Benefit_Pension_Plans, retrieved Nov. 3, 2011.

Example: Discount Rates Determine Funded Status

	High Discount Rate	Low Discount Rate
Discount rate	7.5%	5%
Assets	$300 million	$300 million
Liabilities	$283 million	$412 million
Unfunded liability	-$17 million (i.e., a surplus)	$112 million
Funded ratio	300/283 = 106%	300/415 = 73%

Much Debate Over the "Correct" Investment Rate of Return for CalPERS



Source: CalPERS, "Facts at a Glance," July 2012, pp. 2-3, http://www.calpers.ca.gov/eip-docs/about/facts/july-2012.pdf, retrieved August 20, 2012. 1982-1989 investment performance data comes from e-mail correspondence with CalPERS, Nov. 16, 2011.

Different Perspectives Result in Different Investment Rates of Return

Investment Rate of Return	Probability Based on 1982-2012 Historical Returns	Probability Based on 1999-2012 Historical Returns
4.0%	96.2%	63.2%
5.0%	93.1%	51.0%
6.0%	87.7%	40.0%
7.5%	75.3%	22.3%
10.0%	43.4%	5.3%

Source: Author's calculations, based on a 9.98 percent average rate of return for the 1982-2012 period and a 5.72 average rate of return for the 1999-2012 period, 25,000 simulations.

Focus on 1982-2012 Says Things Are OK

Investment Rate of Return	Probability Based on 1982-2012 Historical Returns	Probability Based on 1999-2012 Historical Returns
4.0%	96.2%	63.2%
5.0%	93.1%	51.0%
6.0%	87.7%	40.0%
7.5%	75.3%	22.3%
10.0%	43.4%	5.3%

Source: Author's calculations, based on a 9.98 percent average rate of return for the 1982-2012 period and a 5.72 average rate of return for the 1999-2012 period, 25,000 simulations.

Focus on More Recent Period Says Things Aren't So Rosy

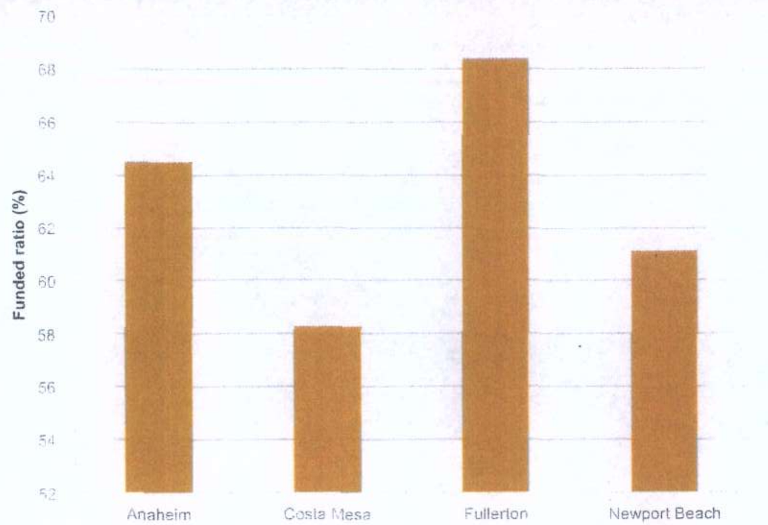
Investment Rate of Return	Probability Based on 1982-2012 Historical Returns	Probability Based on 1999-2012 Historical Returns
4.0%	96.2%	63.2%
5.0%	93.1%	51.0%
6.0%	87.7%	40.0%
7.5%	75.3%	22.3%
10.0%	43.4%	5.3%

Source: Author's calculations based on a 9.88 percent average rate of return for the 1982-2012 period and a 5.72 average rate of return for the 1999-2012 period. 25,000 simulations.

Benefit Levels Across Cities Similar

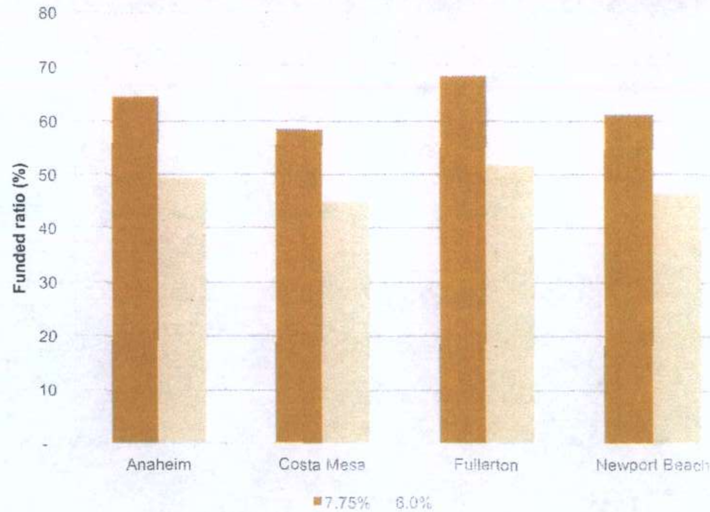
- Fullerton Miscellaneous 2.0% at 55
  - Notably excludes Social Security
- Fullerton Safety 3% at 50
- Both with 12 month final salary determination
- Cities "pick up" some/all of required employee contribution
- Cities moving to lower tiers with lower costs
- Retiree health benefits occur after five years, but this also being reduced across cities

Reported Funded Ratio (in 2010) Highest in Fullerton



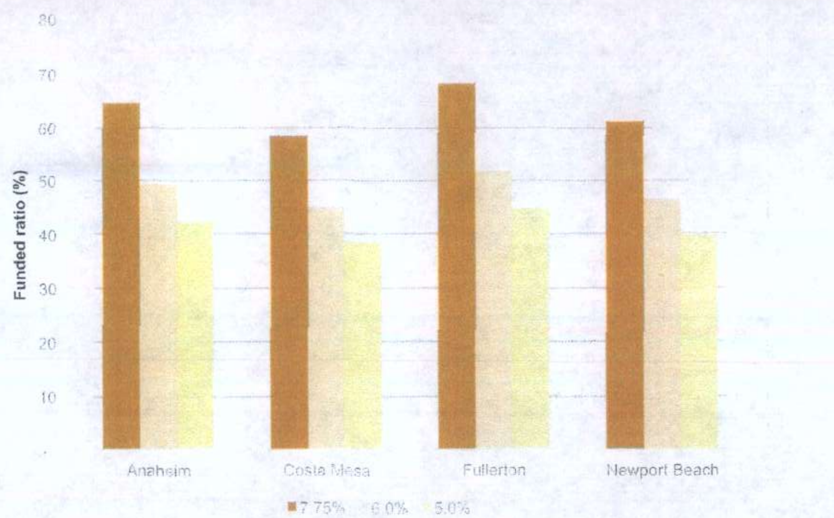
Source: CalPERS annual valuation letters.

Assuming 6% Investment Rate of Return Lowers Funded Ratios to About 50 Percent



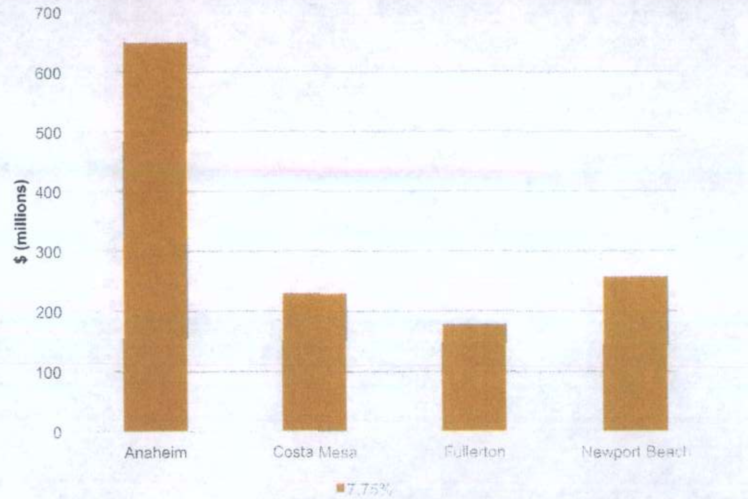
Source: CalPERS annual valuation letters; author's calculations.

Further Reduction to 5 Percent Drops Funded Ratios to About 40%



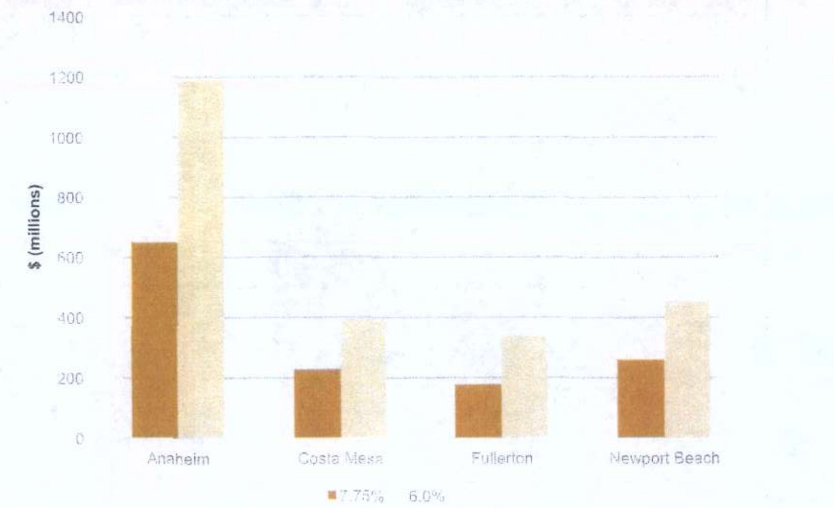
Source: CalPERS annual valuation letters; author's calculations.

Reported Unfunded Liabilities for Four Cities Total $1.3 Billion



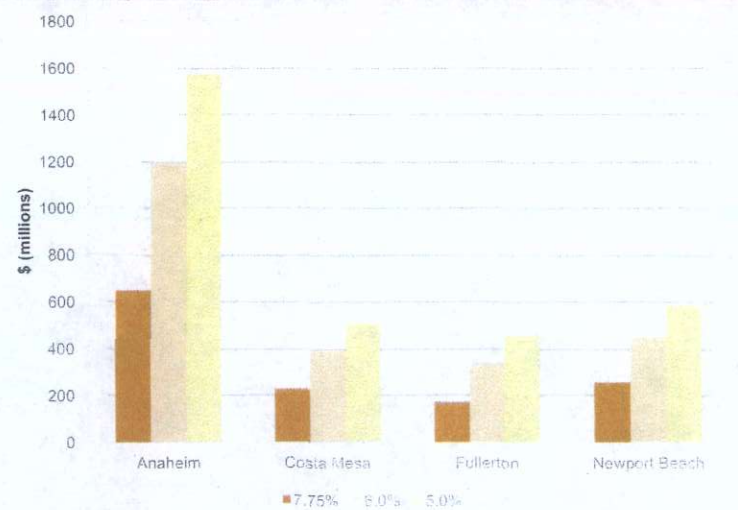
Source: CalPERS annual valuation letters.

Investment Return Assumption of 6% Increases Total Shortfall to $2.4 Billion



Source: CalPERS annual valuation letters.

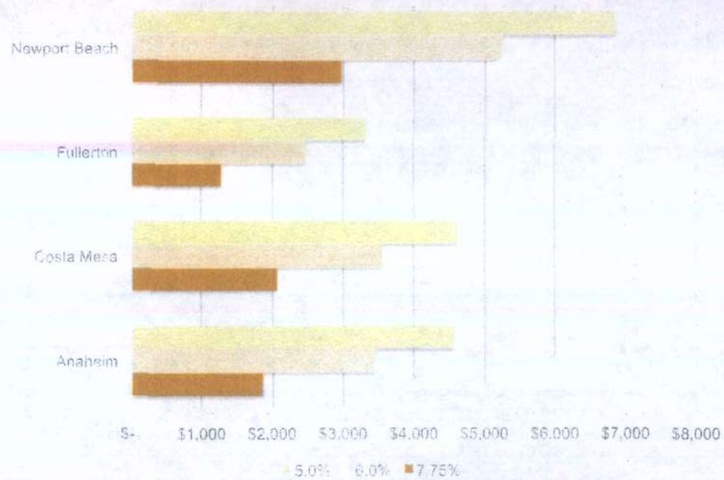
Investment Return Assumption of 5% Results in $3.1 Billion Unfunded Liability for Four Cities



Source: CalPERS annual valuation letters.

Unfunded Liability Per Capita Highest in Newport Beach, Lowest in Fullerton

Pension Background | Benefit Levels | ***Funded Status*** | Contribution Rates & Budgets | Moving Forward



Source: CalPERS annual valuation letters. Per capita unfunded liability amounts are based on 2012 population data from RAND California, retrieved August 21, 2012.

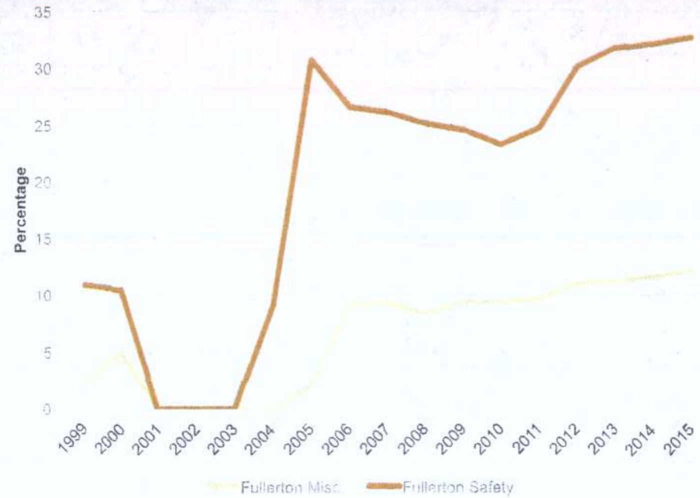
Unfunded Retiree Health Care Liability Smaller

Pension Background | Benefit Levels | ***Funded Status*** | Contribution Rates & Budgets | Moving Forward

Category	Anaheim (2010)	Costa Mesa (2011)	Fullerton (2011)	Newport Beach (2008)
Unfunded Liabilities (millions)	$148.0	$35.5	$37.8	$40.2
Funded Ratio	30.1%	0%	0%	17.9%
Per capita retiree health care unfunded liabilities	$434	$317	$276	$468
Per capita pension unfunded liablity	$1,884	$2,067	$1,294	$2,983

Contribution Rates Have Grown Substantially

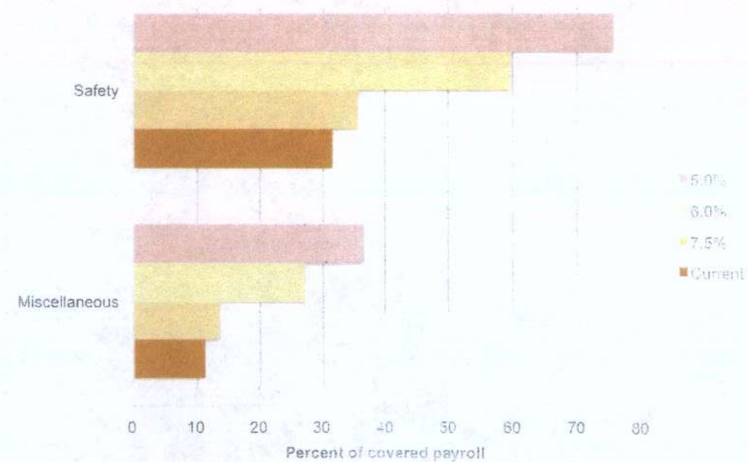
Pension Background | Benefit Levels | Funded Status | ***Contribution Rates & Budgets*** | Moving Forward



Source: Office of the State Controller, CalPERS annual valuation letters
2014-2015 are CalPERS projections.
Safety is Fire, Police average from 1999-2005

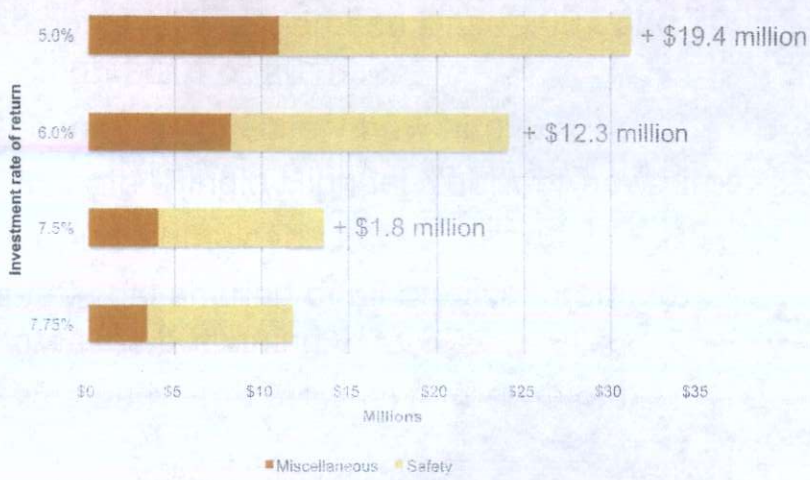
Lower Investment Rates of Return Push Up Fullerton Contribution Rates Even More

Pension Background | Benefit Levels | Funded Status | ***Contribution Rates & Budgets*** | Moving Forward



Source: Author's estimates based on current reported contribution rates and CalPERS-reported contribution rate effects. See CalPERS "Agenda Item 7a to Members of the Benefits and Administration Committee," Attachment 2, Mar. 15, 2010, http://www.calpers.ca.gov/eip-docs/about/board-cal-agenda/agendas/bpac/201103/item7a-0.pdf, retrieved Nov. 20, 2011.

Higher Contribution Rates Translate into Higher Annual City of Fullerton Pension Spending



Source: Author's estimates based on current reported contribution rates and CalPERS-reported contribution rate effects. See CalPERS, "Agenda Item 7a to Members of the Benefits and Administration Committee," Attachment 2, Mar. 15, 2010, http://www.calpers.ca.gov/eip-docs/about/board-cal-agenda/agendas/bpac/201103/item7a-0.pdf, retrieved Nov. 20, 2011

Moving Forward Starts With Recognizing the Magnitude of the Problem

- Higher investment rates of return won't solve this
  - CalPERS needs almost a 14% annual investment rate of return to achieve an 85% chance of assets greater than liabilities over next 15-20 years
  - (BTW, Bernie Madoff averaged 10.5% per year for about 17 years)
- Solutions required
  - Benefit reductions
  - Greater cost sharing
  - New revenues

Cities, Including Fullerton, Have Begun to Reduce Benefits

- But most of these provide minimal savings that are also concentrated in the distant future
  - E.g., 36- vs. 12-month final salary determination for new employees
    - With little hiring (if any) and about 3% attrition, this reduces costs only slowly
  - 2nd tiers (e.g., moving from 3.0% at 50 to 3.0% at 55 for new Safety employees) also produce savings, but these are modest (total employer contribution rate falls about 4%)

Increased Cost-Sharing Will Also Reduce City Pension Expenditures, But Only Slightly

- A 50/50 share of *all* costs could save Fullerton $4-$13 million per year
- However, AB 340 permits cost sharing of Normal Costs *only* (and it caps employee contributions), so saving are likely to be a fraction of this
  - Estimated savings from a 50/50 Normal Cost share for Safety saves $630,000 per year, or 7.4% of current city pension expenditures for Safety employees
- In the long-run, shifting pension costs to employees may also lead to recruitment and retention challenges

New Revenues Will Likely Be Needed Along With Reforms

- A one-half cent sales tax raises $7 million annually, closing one-half of the shortfall in the 6.0 percent investment return case
- A parcel tax of $270 *per year* per household would also address most, if not all of the shortfall

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