

**SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

349



FROM: Executive Office

SUBMITTAL DATE:
June 12, 2012




SUBJECT: Pension Advisory Review Committee 2012 Annual Pension Report

RECOMMENDED MOTION: That the Board of Supervisors:

1. Receive and file the attached FY 2011/12 Annual Report;
2. Approve the use of \$931,000 in the Liability Management Fund to reduce the County's pension liability and authorize staff to redeem pension bonds if available and if not, to transfer funds to CalPERS; and
3. Approve pre-payment of \$83.5 million toward the County's FY 2012/13 pension cost.

BACKGROUND: Board Policy B-25 (Pension Management Policy) requires the Pension Advisory Review Committee (PARC) to file an annual report on the County's pension plan status. The attached report fulfills that requirement.

(Continued)

 _____ Don Kent County Treasurer/Tax Collector	 _____ Barbara A. Olivier Assistant County Executive Officer Human Resources Director	 _____ Ed Corser County Finance Director
--	---	--

FINANCIAL DATA	Current F.Y. Total Cost:	\$ N/A	In Current Year Budget:
	Current F.Y. Net County Cost:	\$ N/A	Budget Adjustment:
	Annual Net County Cost:	\$ N/A	For Fiscal Year: 2011-2012

SOURCE OF FUNDS:	Positions To Be Deleted Per A-30
	<input type="checkbox"/>
	Requires 4/5 Vote
	<input type="checkbox"/>

C.E.O. RECOMMENDATION: *APPROVE*



 County Executive Office Signature George A. Johnson

Policy Policy
 Consent Consent

Dep't Recomm.:
 Per Exec. Ofc.:

Prev. Agn. Ref.: 3.13 of 05/04/11 **District:** ALL **Agenda Number:**

ATTACHMENTS FILED
WITH THE CLERK OF THE BOARD

3.6

(Background Continued)

REPORT SUMMARY

Funded Status

The June 30, 2012 Actuarial Value of Assets (AVA) funded status for the CalPERS Miscellaneous and Safety Retirement Plans is projected by Bartel Associates, LLC (Bartel) to be 82.4 percent and 85.5 percent, respectively, when Pension Obligation Bonds (POB) of \$280 million and \$77 million are included. The June 30, 2012 AVA funded status is estimated at 88.3 percent and 89.2 percent for Miscellaneous and Safety Plans when the POB is not included. The Market Value of Assets (MVA) funded status is projected at 76 percent for both Miscellaneous and Safety Plans for the same period; the MVA funded status is lower than AVA due to recent investment returns and actuarial smoothing methods used by CalPERS. Bartel projects a combined Miscellaneous and Safety projected June 30, 2012 Unfunded Accrued Actuarial Liability (UAAL) of \$787 million and POB of \$357 million; while assets total \$6.095 billion.

Employer Rate Outlook

Pension costs continue to trend upward. Employer Contribution rates for the Miscellaneous plan will increase from 13.112 percent in FY 2012 to 13.494 percent in FY 2013. Safety Employer Contribution rates will increase from 21.286 percent in FY 2012 to 22.459 in FY 2013. The combined increase is projected to be equivalent to \$6.1 million. CalPERS estimates FY 2013 Miscellaneous employer contributions of approximately \$127 million and Safety employer contributions of \$65 million.

Effective March 14, 2012, CalPERS lowered its discount rate assumptions from 7.75 percent to 7.50 percent. Bartel estimates that this change will increase the County's employer contribution rate for Miscellaneous by 1.9 percent and for Safety by 3.2 percent over a two year period, beginning in FY 2014. Based on current payroll, this change will result in an estimated increase in employer contributions of \$8.2 million in FY 2014 and \$20.3 million in FY 2015.

Pension Reform

Pension reform has been a topic of debate at the local and national levels; at the County the Board of Supervisors has taken the initiative on pension reform. With the Board's direction, collective bargaining agreements have been completed with all employee unions to eliminate Employer Paid Member Contributions (EPMC) and implement the Miscellaneous 2% @ 60 and Safety 2% @ 50 Tier II (lower benefit) for new employees. We anticipate that the CalPERS process to implement Tier II will be completed in Calendar Year (CY) 2012.

In April 2011, Bartel performed an analysis that projected Tier II cumulative ten year savings for Safety and Miscellaneous of \$206 million and a first four year savings of \$22 million. At PARC's request, in May 2012, Bartel performed an updated analysis through FY 2018 based on various payroll growth scenarios. One payroll scenario Bartel analyzed was payroll growth based on negotiated labor agreements for represented employees and estimated increases for non-represented employees. Bartel's updated analysis estimated first four year savings that ranges from \$17 million to \$24 million for the different payroll scenarios with a \$22 million savings for payroll growth reflective of the negotiated labor agreements.

(Background Continued)

In May 2012, CalPERS also performed an actuarial valuation of the County's 2% @ 60 Miscellaneous and 2% @ 50 Safety planned Tier II pension benefits. CalPERS, calculated that starting July 1, 2014 the new Miscellaneous tier will decrease the employer contribution rate gradually and produce an ultimate decrease of 4.4 percent (the employee contribution rate will decrease by 1 percent); the new Safety tier will decrease the employer contribution rate gradually and produce an ultimate decrease of 5.6 percent (no impact on the employee contribution rate). The CalPERS calculations are consistent with Bartel's savings projections.

Additionally, the elimination of EPMC is anticipated to save the County \$59 million annually when fully implemented. In his April 2011 report, Bartel estimated cumulative ten year savings from the elimination of EPMC for the Miscellaneous and Safety plans of approximately \$650 million.

Liability Management Fund

The purpose of the Liability Management Fund is to reduce pension costs by accelerating the repayment of pension liabilities. By Board policy, each year PARC recommends whether the funds should be used to pay down the CalPERS unfunded liability or to make advance payments toward outstanding Pension Obligation Bonds. As of the writing of this report, the fund has a balance of \$931,000 but some of this balance will be used to repay PERS prepay bonds. PARC recommends any remaining balance be paid to CalPERS toward the County's outstanding unfunded liability.

Annual Prepayment

CalPERS offers early payment discounts of 3.75 percent in lieu of the normal periodic payments that coincide with payroll disbursements. PARC first recommended seizing this opportunity in 2004, and the county has done so each year since then. Cash for the prepayment comes from the county's yearly sale of TRAN bonds – the cost of these bonds in FY 2013 will be well below 1.0 percent. The savings in FY 2012 was \$3.1 million and PARC recommends that the county again pay \$83.5 million to PERS in July 2012.

Pension Advisory Review Committee



2012 Annual Pension Report

Table of Contents

I	Executive Summary.....	3
II	Pension Plan Funding Status	7
III	Employer Rate Outlook.....	11
IV	Pension Reform	15
V	Financing Status Update.....	21
VI	OPEB Liability.....	23
VII	Recommendations.....	25

Appendices

1. *Bartel Associates CalPERS Actuarial Issues – 6/30/10 Valuation- January 23, 2012*
2. *Bartel Associates CalPERS Actuarial Issues I -6/30/10 Valuation-County- May 29, 2012*
3. *Bartel Associates CalPERS Actuarial Issues II -6/30/10 Valuation-County- June 5, 2012*

I Executive Summary

Introduction

The County's Pension Advisory Review Committee (PARC) was established in 2003 to guide policy decisions about retirement benefits. PARC is a Brown Act Committee and consists of those members appointed by the Board of Supervisors, including the Treasurer/Tax Collector, County Finance Director, and the Assistant County Executive Officer/Human Resources Director.

A key responsibility of PARC is to report to the Board and the Public about important developments affecting County retirement benefit plans and provide information about projected costs and funding status. This report includes information from the most recent actuarial report prepared for the County by John Bartel of Bartel Associates, LLC.

Summary

1. **Funding Status:** The June 30, 2012 projected actuarial funded status for:
 - a. The Miscellaneous Plan, including \$280 million Pension Obligation Bonds (POB) balance, as an unfunded liability, is expected to be 82.4 percent; without the POB balance, the funded status is expected to be 88.3 percent.
 - b. The Safety Plan, including the \$77 million POB balance as an unfunded liability, is expected to be 85.5 percent; without the POB balance, the funded status is expected to be 89.2 percent.

The July 2008 State and Local Government Pension Plans report published by the United States Government Accountability Office states, "Many experts consider a funded ratio based on the actuarial asset value of 80 percent or better to be sound for government pensions." Bartel suggests that in order to increase the funding status, an alternative is to place additional funds into the pension plan, which would the unfunded liability.

2. **Employer Rate Outlook:** Pension costs continue to trend upward. Employer Contribution rates for the Miscellaneous plan will increase from 13.112 percent of payroll in FY 11/12 to 13.494 percent in FY 12/13. Safety Employer Contribution rates will increase from 21.286 percent in FY 11/12 to 22.459 in FY 12/13. The combined increase is projected to be equivalent to \$6.1 million based current payroll. Employer Contribution rates are dependent on CalPERS investment return performance; lower than expected returns in the future will significantly increase the County's pension costs.

Effective March 14, 2012, CalPERS lowered its discount rate assumptions from 7.75 percent to 7.50 percent. Bartel estimates that this change will increase the County's employer contribution rate for Miscellaneous by 1.9 percent and for Safety by 3.2 percent over a two year period, beginning in FY 13/14. This will result in an estimated increase in employer contributions of \$8.2 million in FY 13/14 and \$20.6 million in FY 14/15.

3. **Pension Reform:** Pension reform has been a topic of debate at local and national levels. Governor Brown has put forth a bill and proposed constitutional amendment for his pension reform proposal. If enacted, Governor Brown's pension reform will impact all California public employees.

At the County, the Board of Supervisors has taken the initiative on pension reform. With the Board's direction, collective bargaining negotiations have been completed, or in the near future will be completed with all employee unions to implement a Tier II (lower benefit) for new employees. Tier II will be implemented in Calendar Year (CY) 2012.

In April 2011 Bartel performed an analysis that illustrated how Tier II will reduce the impact of future CalPERS contribution rate increases; he projected a cumulative ten year savings for Safety and Miscellaneous of \$206 million and savings in the first four years of \$22 million. At PARC's request, in May 2012 Bartel performed an updated analysis and projected Tier II savings through FY 17/18 based on payroll scenarios with various growth assumptions (see page 17). One scenario included payroll growth based on negotiated labor agreements for represented employees and estimated increases for non-represented employees. For the purpose of the analysis payroll growth only reflects compensation components included by CalPERS for pension benefit calculations. Bartel's updated analysis estimates four-year savings for the five payroll scenarios that range from \$17.7 million to \$26.4 million (see page 20). Tier II produces \$22.7 million in savings for the payroll growth scenario that is reflective of the negotiated labor agreements.

In May 2012 CalPERS performed an actuarial valuation on the County's 2% @ 60 Miscellaneous and 2% @ 50 Safety Tier II pension benefits. CalPERS, calculated that starting July 1, 2014 the new Miscellaneous tier would decrease the employer contribution rate gradually with an ultimate decrease of 4.4 percent and the employee contribution rate by 1 percent; and the new Safety tier would decrease the employer contribution rate gradually with an ultimate decrease of 5.6 percent, with no impact on the employee contribution rate. At current payroll, the full impact of the Tier II rate decrease would result in an annual savings of approximately \$50 million. However, the employer contribution rate decrease will occur gradually, in proportion to employees hired in the second tier compared to the first tier. The CalPERS calculations are consistent with Bartel's savings projections.

Also, Employer Paid Member Contributions (EPMC) are being eliminated for all represented and unrepresented employees, mostly in a phased approach. It is anticipated that the County will realize \$59 million annual savings once all EPMC payments are eliminated.

- 4. Pension Obligation Bond (POB):** The remaining POB debt is \$358 million and the bonds have a remaining 23-year life maturity. Bartel's analysis shows that as of February 12, 2012, the County lost \$23.1 million as a result of the sale of the bonds in February 2005. Since the POB has a relatively low break-even rate (4.91 percent) and CalPERS' expected return is 7.50 percent (recently changed from 7.75 percent), it is reasonable to expect that the bonds over the remaining life will produce savings.
- 5. Liability Management Fund:** The purpose of the fund is to reduce pension costs and accelerate the repayment of pension liabilities. By Board policy, each year PARC recommends whether the funds should be used to pay down the CalPERS unfunded liability or to buy down the POB. As of the writing of this report, the fund has a balance of \$931,000.
- 6. Annual Prepayment:** CalPERS offers early payment discounts in lieu of periodic payments that coincide with payroll disbursements. PARC first recommended seizing this opportunity in 2004 and expects to continue to do so if market conditions prove to be favorable in funding the prepayment.
- 7. Other Post-Employment Benefits (OPEB):** The County invests its OPEB assets with the California Public Employers' Retirement Benefit Trust program (CERBT). Effective January 1, 2011, CalPERS introduced three new investment allocation strategies for CERBT. PARC reviewed the details of the strategies and adopted Strategy 1, an asset allocation strategy most similar to the investment allocation strategy followed by CERBT prior to January 1, 2011, with a rate of return of 7.61 percent. It is anticipated CERBT will lower its investment strategy expected return in the near future to 7.36 percent.

Recommendations

1. Receive and file the 2012 PARC Annual Pension Report
2. Adopt the recommendation to use the money in the Liability Management Fund to reduce the County's CalPERS liability by transferring the funds to CalPERS. (See page 21)
3. Adopt the recommendation to pre-pay up to two-thirds of the County's FY 2012/13 pension cost if, in the judgment of the Chief Executive Officer or his designee, market conditions prove to be favorable. (See page 22)

II Pension Plan Funding Status

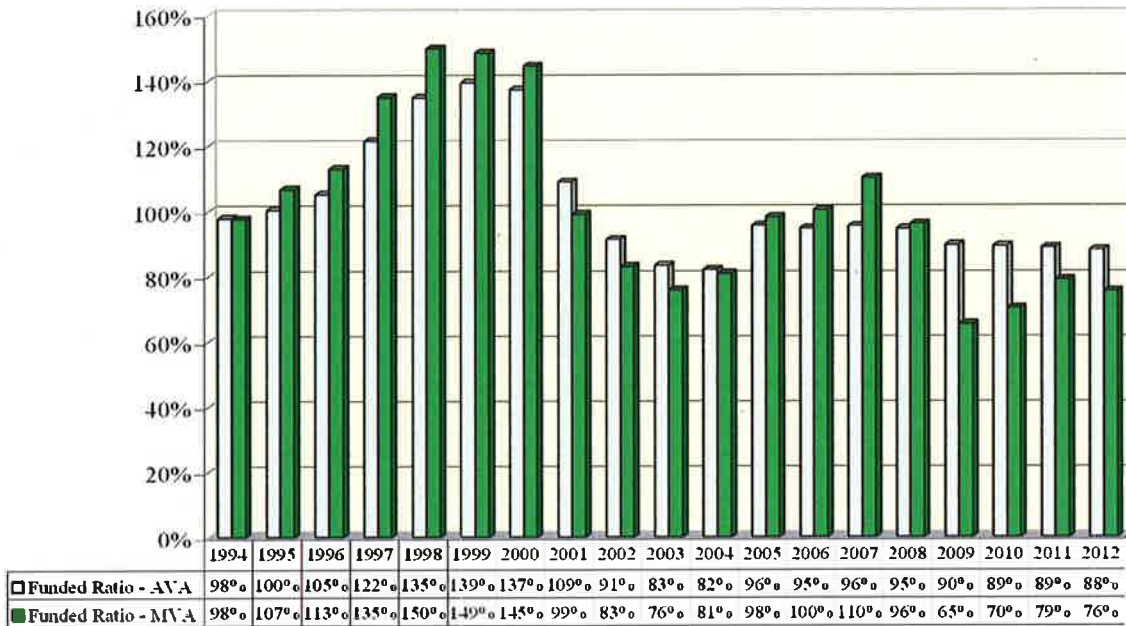
Funding status (the value of assets compared to liabilities) has decreased primarily due to lower than expected investment returns.

Bartel Associates, LLC (Bartel), PARC’s independent actuary projects that the June 30, 2012 gross combined actuarial funded status for the Miscellaneous and Safety plans is 88.6 percent; this represents an unfunded actuarial liability of \$787 million. On a net basis, taking into account the outstanding Pension Obligation Bond (POB) liability of \$358 million, the combined actuarial funded status is 83.4 percent.

Funded Status Ratio

The graphs below show the Miscellaneous and Safety Plans’ funded status (without taking into account POB), using actuarial value of assets (AVA) and market value of assets (MVA) over the last several years (expressed as a ratio of asset to liability). As a result of CalPERS’ smoothing methodology, AVA has exceeded MVA in years after the FY 08/09 financial market decline. CalPERS’ actuarial smoothing spreads the FY 08/09 investment losses over a 15-year period.

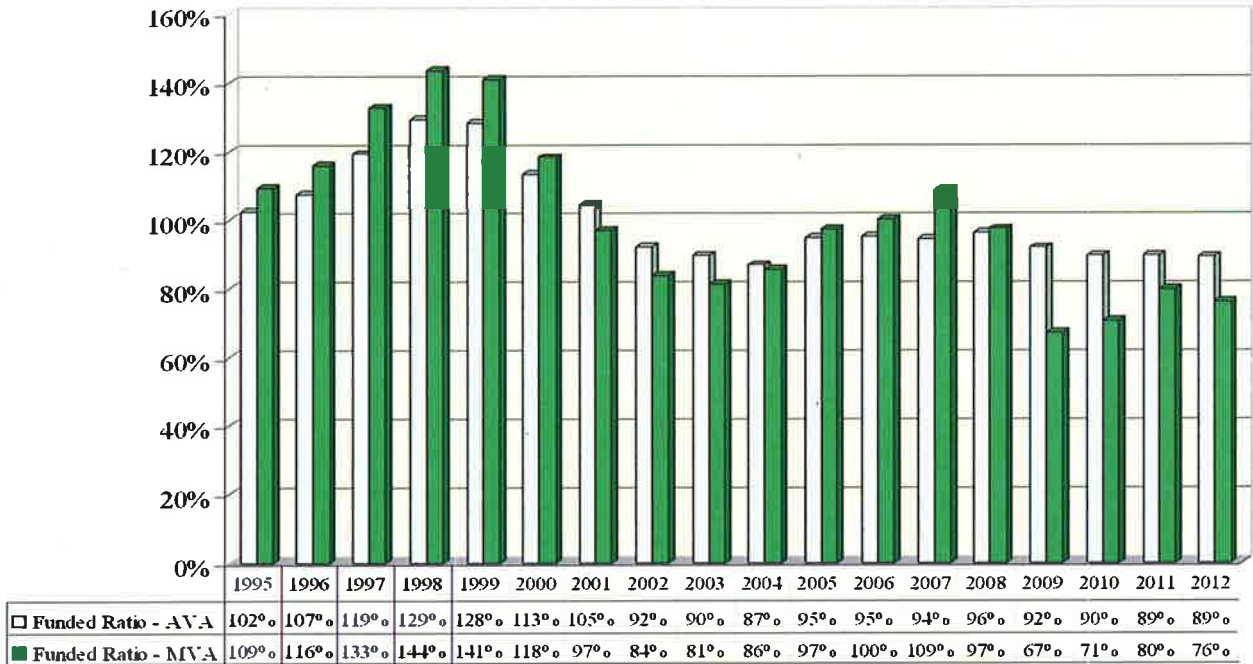
Miscellaneous Plan



Bartel Associates, LLC, January 2012

6/30/11 and 6/30/12 funded status’ are estimated (Excludes POB Debt)

Safety Plan



Bartel Associates, LLC, January 2012

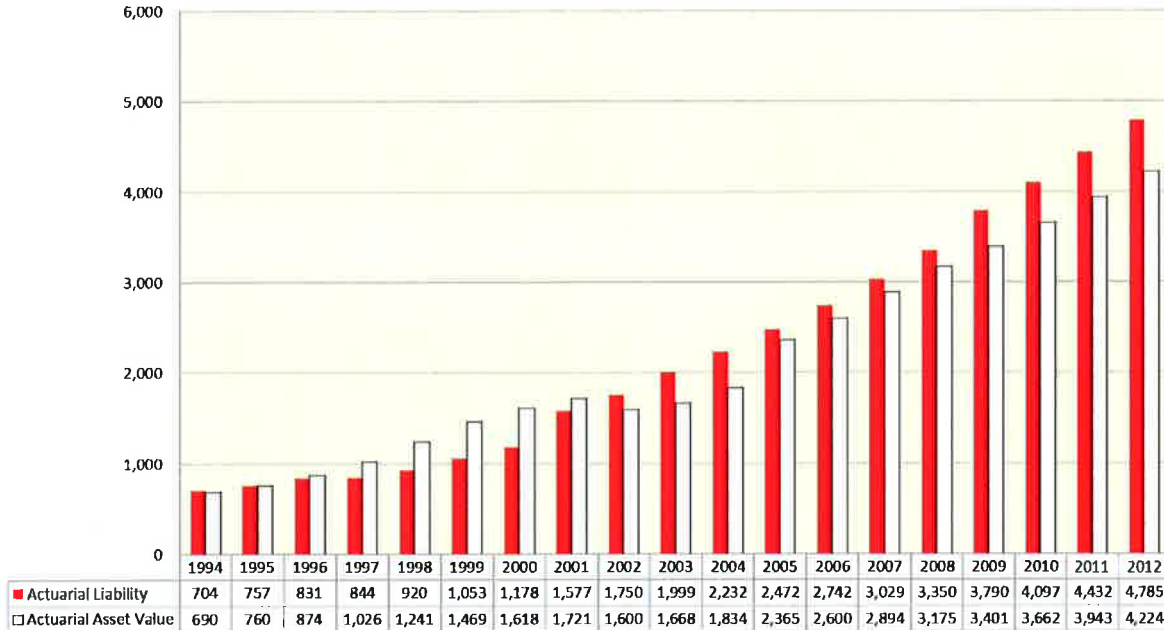
6/30/11 and 6/30/12 funded status' are estimated (Excludes POB Debt)

While funded status has declined in recent years, it should be noted that according to a July 2008 State and Local Government Pension Plans report published by the United States Government Accountability Office states, "Many experts consider a funded ratio based on the actuarial asset value of 80 percent or better to be sound for government pensions." Bartel suggests that in order to increase the funding status, an alternative is to place additional funds into the pension plan, which would the unfunded liability.

Actuarial Value of Assets versus Actuarial Liability

The graphs below compare AVA with actuarial liability for the Miscellaneous and Safety plans. Actuarial liabilities have exceeded AVA since 2002 and are increasing at a faster rate than AVA.

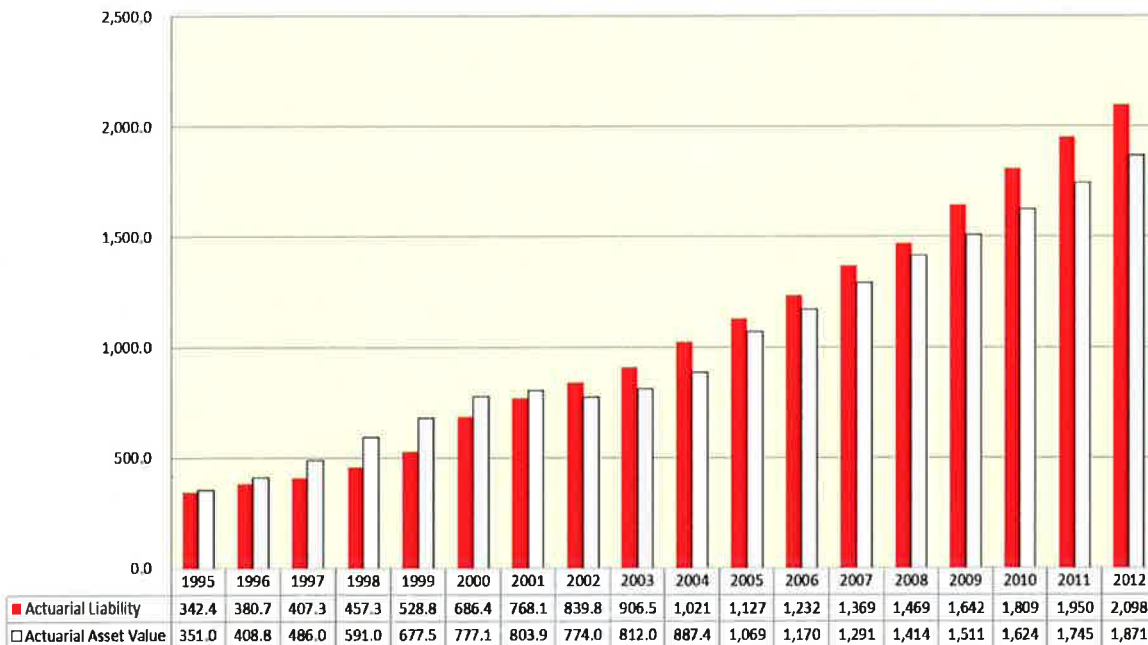
Miscellaneous Plan



Bartel Associates, LLC- January, 2012

6/30/11 and 6/30/12 funded status' are estimated (millions) Excludes POB Debt

Safety Plan



Bartel Associates, LLC- January 2012

6/30/11 and 6/30/12 funded status' are estimated (millions) Excludes POB Debt

Pension Liabilities

CalPERS uses certain assumptions as a basis for its actuarial valuation. To the extent these assumptions are not realized, future contributions and unfunded liability will increase. Currently, unfunded liabilities are amortized over separate payment schedules; unfunded liabilities are separated by "cause", creating "bases" that are then amortized and paid for over a specific period of time.

CalPERS requires participating employers to contribute an amount sufficient to cover accruing benefits on an annual basis. The chart below compares employer contribution rates, which is the Normal Cost (current accruals) to the payment on the Amortization Bases (liability for past service) over a two year period. The year-to-year employer rate increase is attributable to the increase of the payment on the Amortization Bases; the Normal Cost actually declined.

	Miscellaneous		Safety	
	FY 2012	FY 2013	FY 2012	FY 2013
Normal Cost	10.370%	10.227%	18.395%	18.063%
Amortization Bases	2.742%	3.267%	2.891%	4.396%
Total	13.112%	13.494%	21.286%	22.459%

On an actuarial basis, Bartel projects the amortization period not to decline but to remain at 26 and 24 years respectively. In order to pay down the unfunded liability at a faster rate the County needs to contribute more to the Plans than the amount required each year by CalPERS.

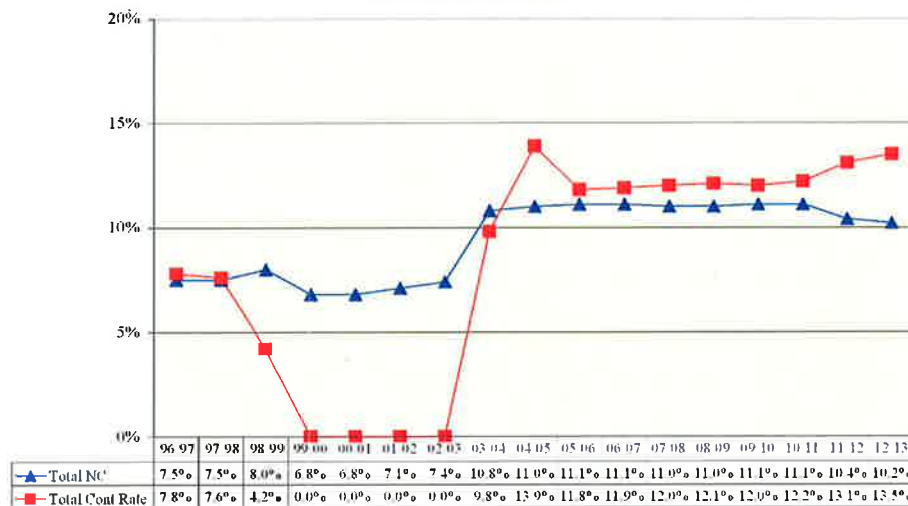
Given expected CalPERS investment returns for Miscellaneous and Safety, Bartel projects an indefinite deferral of the pay down of the unfunded liability on a market value of assets basis through FY 18/19.

III Employer Rate Outlook

Employer Contribution

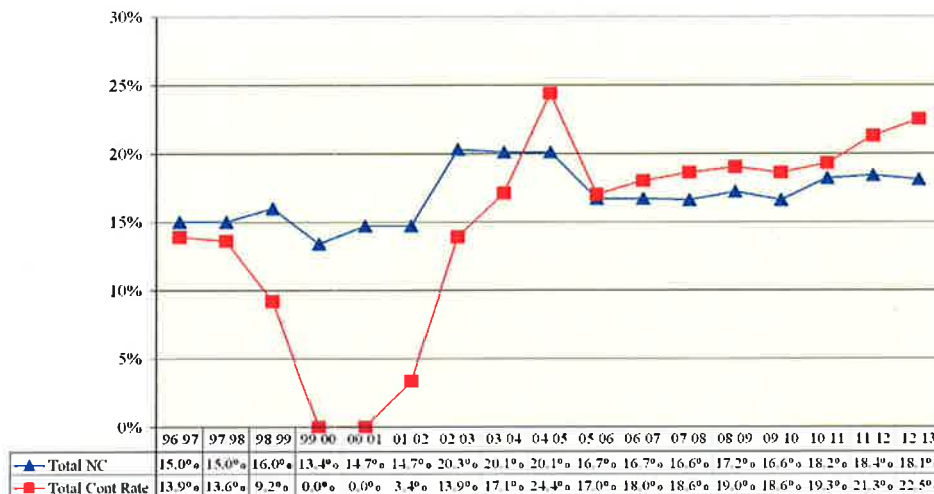
Pension cost for the County’s Miscellaneous Plan will rise from 13.112 percent in FY 11/12 to 13.494 percent in FY 12/13; Safety plan employer contribution rates will rise from 21.286 percent to 22.459 percent. The combined increase is projected to be approximately \$ 6.1 million in CalPERS contributions for FY 12/13 based on current payroll. The charts below show Miscellaneous and Safety Employer Contribution rate history. The rate increase since FY 10/11 is primarily due to the financial sector collapse in CY 2008 and the subsequent poor CalPERS investment performance.

Miscellaneous Plan Contribution Rates



Bartel Associates, LLC-January 2012

Safety Plan Contribution Rates



Bartel Associates, LLC-January 2012

CalPERS Potential Impact on Employer Rates

On March 14, 2012, CalPERS adopted a lower discount rate assumption of 7.5 percent, down from 7.75 percent for all Plans that participate in the Public Employees' Retirement Fund (PERF) for actuarial valuations dated June 30, 2011. This assumption change will impact County employer contribution rates beginning FY 13/14. Bartel estimates the following increase in employer contribution rates, phased over a two year period (see table below).

Impact on Employer Rate and Cost Due to Assumption Changes

Estimated County Impact	FY 13/14		FY 14/15	
	Employer Contribution Rate Increase	Employer Contribution Dollar Increase	Employer Contribution Rate Increase	Employer Contribution Dollar Increase
Miscellaneous	0.60%	\$5.3M	1.3%	\$13.3M
Safety	1.00%	\$2.9M	2.2%	\$7.3M

Bartel Associates LLC, March 2012

CalPERS reviews economic assumptions every four years. Economic assumptions include a review of price inflation, wage inflation, and the discount rate assumption. The discount rate assumption used for actuarial valuations is comprised of a real return assumption and inflation assumption. The real return assumption of 4.75 percent, and prior to the change, the price inflation assumption was 3 percent, which resulted in the 7.75 percent discount rate.

With its March 14, 2012 action, CalPERS reduced the price inflation assumption to 2.75 percent, resulting in the discount rate of 7.50 percent. The wage assumption was left unchanged because CalPERS anticipates public sector salary growth, in light of current economic conditions, to remain suppressed. In order to minimize the frequency of assumption changes, CalPERS staff will be conducting another review in two years to review both economic and demographic assumptions.

CalPERS Historical Investment Performance

CalPERS investment performance since June 30, 2008 has been volatile and resulted in an accumulated market value loss through June 30, 2011 of 26.3 percent when compared to the previously expected annual return of 7.75 percent. See the chart below, showing CalPERS investment return history and a calculation of the accumulated market versus actuarial value loss since June 30, 2008.

	Market	Actuarial
■ June 30, 2008		
● Return	(5.1)%	8.1%
● Gain/Loss	(12.9)%	(0.3)%
■ June 30, 2009		
● Return	(24.0)%	6.1%
● Gain/Loss	(31.8)%	(1.7)%
■ June 30, 2010		
● Return	13.3%	6.0%
● Gain/Loss	5.5%	(1.8)%
■ June 30, 2011		
● Return	20.7%	6.8%
● Gain/Loss	12.9%	(1.0)%
■ June 30, 2012		
● Return through 10/30/11	(2.7)%	n/a
● Est. Annualized Return	2.3%	6.9%
● Est. Gain/Loss	(5.5)%	(0.9)%

Accumulated Market Value Gains/(Losses) through June 30, 2011 ≈ (26.3) percent
 [(12.9) percent + (31.8) percent + 5.5 percent + 12.9 percent]

Bartel Associates LLC, January 2012

It should be noted that in February 2012, CalPERS announced a 1.1 percent return on investment for Calendar year 2011; estimated fiscal year earnings are anticipated to be higher.

CalPERS Investment Performance Projections

At PARC's request, Bartel modeled projected employer contribution rate increases through FY 17/18 utilizing three CalPERS investment return scenarios: poor, expected, and good. Expected investment return is an annual return of 7.50 percent, poor investment return is assumed as an annual return ranging from 0.2 percent to 3.4 percent, and good investment return is assumed as an annual return ranging from 11.6 percent to 15.1 percent.

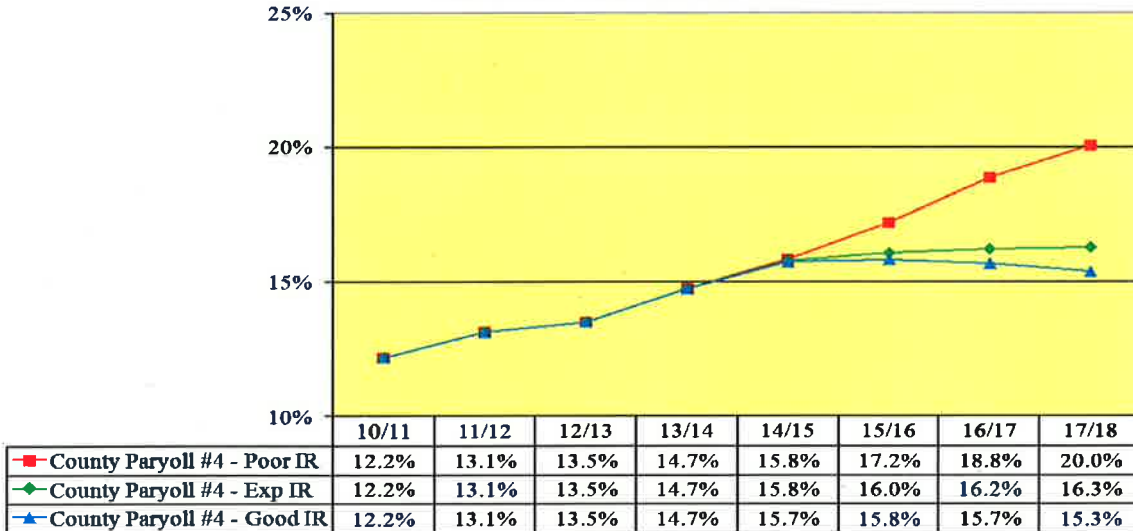
The charts below, for Miscellaneous and Safety respectively, indicate that Employer Contribution rates remain relatively stable if CalPERS investment returns prove to be as expected or better than expected, but poor investment returns will result in markedly increased employer contribution rates.

Miscellaneous with Assumption Changes (7.5%)

Investment Return Varies

Miscellaneous Plan Tier 1 Only (Assumes No 2nd Tier)

Includes POB Proceeds But Not Debt Service



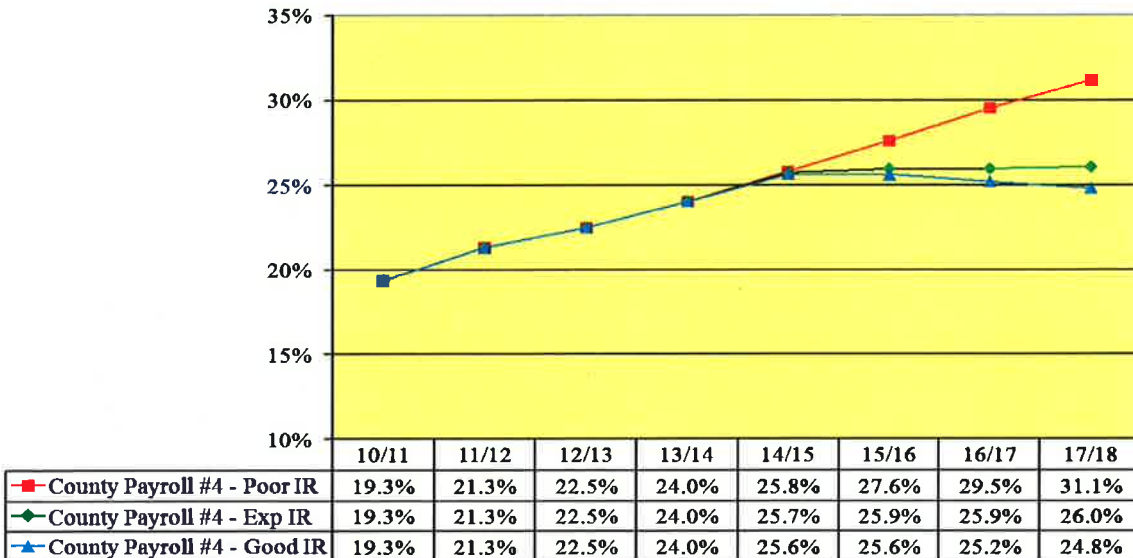
Bartel Associates, LLC, May 2012

Safety with Assumption Changes (7.5%)

Investment Return Varies

Safety Plan Tier 1 Only (Assumes No 2nd Tier)

Includes POB Proceeds But Not Debt Service



Bartel Associates, LLC, May 2012

IV Pension Reform

Pension Reform Review

In recent years, Public Sector Pensions have become a focus of national, state, and local debate. On February 2, 2012, Governor Brown released the text of a Bill and proposed constitutional amendment on Pension Reform. The proposal follows his prior announced policy and includes a number of limits that will impact all California public sector employees if the Bill is enacted. Most importantly, the proposal introduces a hybrid defined contribution/defined benefit plan that targets a 75 percent career retirement income for new hires after July 1, 2013. According to Hanson Bridgett, LLP provides an accrual of about 2 percent per year of service for Miscellaneous members and 2.5 percent per year of service accrual for Safety members. The Pension Reform Proposal requires new and current employees to cover 50 percent of the normal cost of their pensions. We will update the Board as the legislature takes action on this proposal.

Recognizing the need for pension reform, the Board in 2011 requested and received a comprehensive analysis of pension reform options. In April 2011, the Board approved pension reform in concept with the recommendation of: a Tier II (lower benefit formula) plan for new employees, three-year final average earnings for new employees, and the elimination of Employer Paid Member Contributions (EPMC) for all employees. The Board also directed Human Resources to initiate negotiations with all employee unions to implement such changes.

As of the time of this writing, the County has successfully reached agreement on pension reform with the following unions: Service Employees International Union (SEIU), Laborers' International Union of North America (LIUNA), Deputy District Attorney Association (DDAA), the Law Enforcement Management Unit (LEMU), and the Riverside Sheriffs' Association (RSA) Law Enforcement Unit. The enactment of the Board directed pension reform is anticipated during CY 2012 for all employees.

In 2011, CalPERS received over 700 requests for the implementation of a Second Tier benefit. The table below indicates the number of local agencies that adopted a Second Tier over the last two years for Miscellaneous and Safety plan.

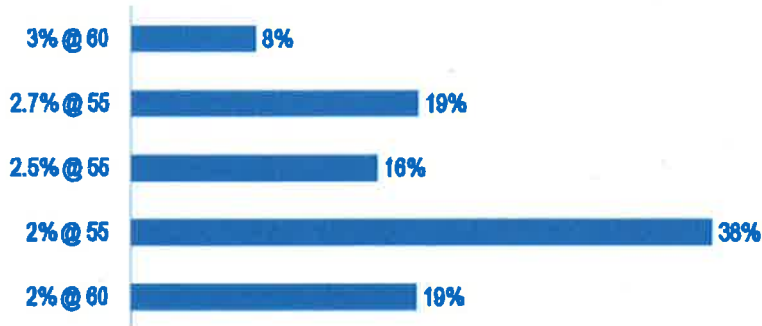
	Lower Benefit Formula Only	Lower Final Compensation Only	Lower Benefit Formula & Lower Final Compensation
Miscellaneous Plans	68	6	51
Safety Plans	43	2	41

CalPERS Update, 2/12/2012

The most popular Miscellaneous retirement benefit formula for Second Tier is 2 % @ 60, and for Safety plans the most popular benefit formula is 3 % @55.

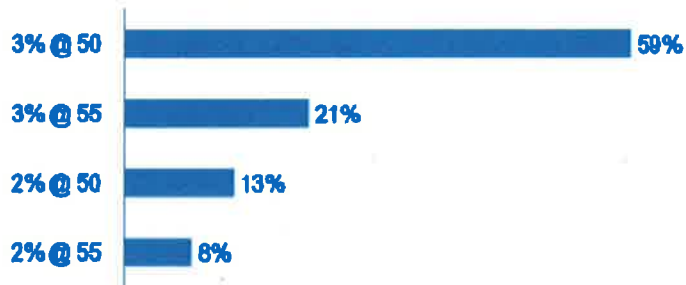
The tables below reflects the proportion of Miscellaneous and Safety plans by formula currently being offered by the different public agencies. The most popular current Miscellaneous formula is 2 %@ 55 and the most popular current Safety formula is 3 % at 50.

Percentage of All Miscellaneous Plans by Formula



CalPERS Update, 2/12/2012

Percentage of All Safety Plans by Formula



CalPERS Update, 2/12/2012

Employer Contribution Projections with and without Tier II

Bartel has studied the impact of implementing Tier II on projected Employer Contribution rate increases through FY 17/18. Given the following five hypothetical County payroll scenarios, Bartel estimated projected employer contribution rates through FY 17/18 for the Miscellaneous and Safety plans with and without the respective 2% @ 60 and 2% @ 55 Tier II, assuming that CalPERS earns its expected investment return.

Miscellaneous and Safety Payroll Growth Assumptions								
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
County #1	-10.00%	-10.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
County #2	-5.00%	-5.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
County #3	0.00%	5.00%	13.50%	3.00%	3.00%	3.00%	3.00%	3.00%
County #4 Miscellaneous	-7.31%	1.12%	2.23%	4.81%	6.41%	6.56%	3.00%	3.00%
County #4 Safety	-1.13%	-0.43%	3.78%	8.13%	5.16%	5.33%	3.00%	3.00%
CalPERS	3.25%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%

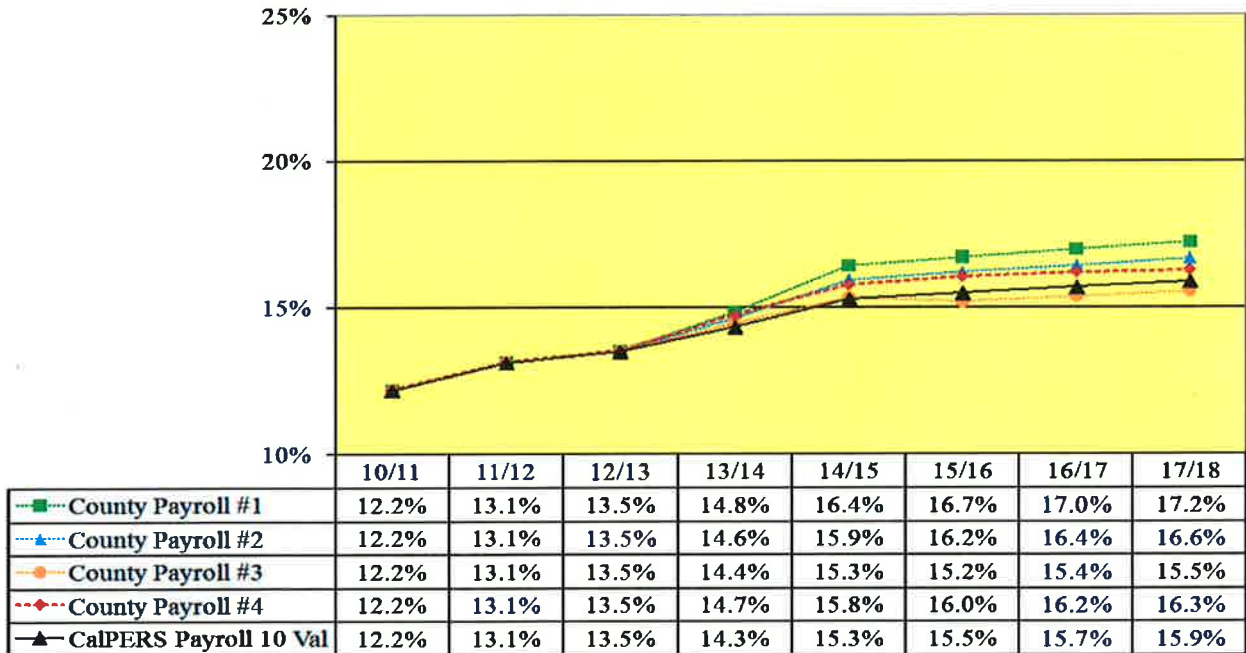
Bartel Associates, LLC, May 2012

County Payroll scenario #4 illustrates payroll growth based on negotiated labor agreements for represented employees and estimated increases for non-represented employees. For the purpose of this illustration, payroll growth only reflects compensation components that are included by CalPERS in pension benefit calculations.

The charts on page 18 and page 19 show projected employer contribution rate increases through FY 17/18 with and without a Tier II for new employees. The data shows that Tier II produces cost savings starting FY 14/15, when it first has impact (CalPERS has a two year lag after the implementation of Tier II) through FY 17/18, a four year period. The charts on page 18 reflect projected employer contribution rates for Miscellaneous and Safety with Tier I only. The charts on page 19 reflect projected employer contribution rates for Miscellaneous and Safety with Tier I and Tier II. A comparison of the charts shows that the implementation of a Tier II lower pension benefit for new employees produces a reduced rate of increase for employer contributions.

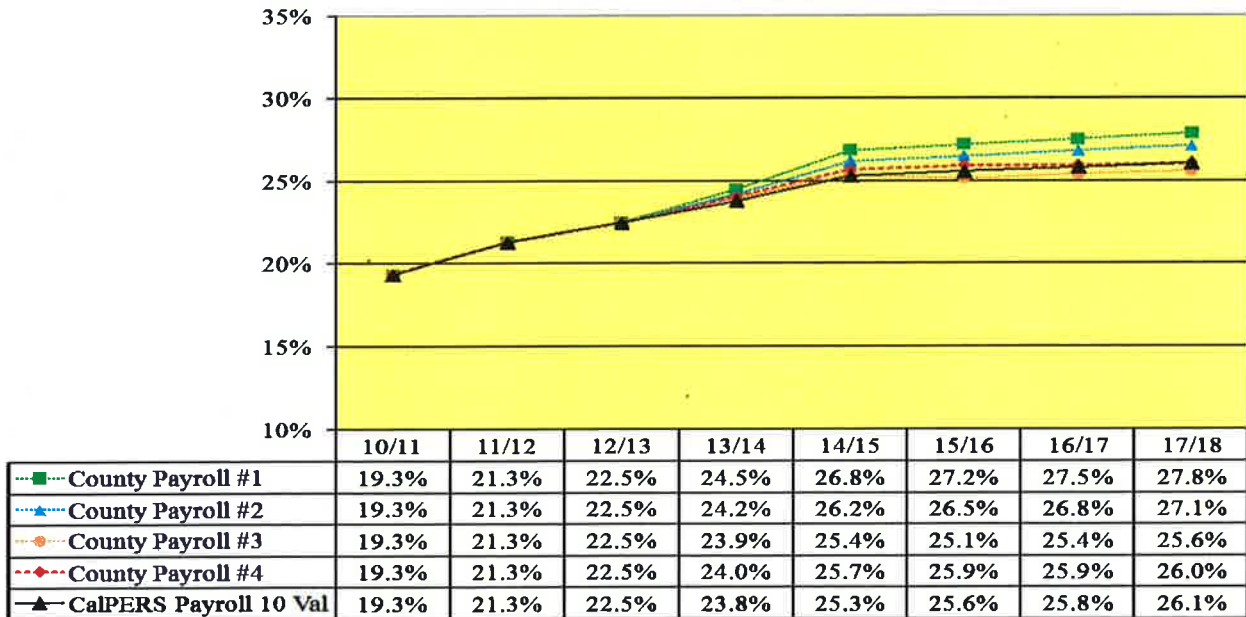
Projected Employer Contribution Rate Increases

**Expected Investment Return (7.5%)
Miscellaneous Plan Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds But Not Debt Service**



Bartel Associates, LLC, June 2012

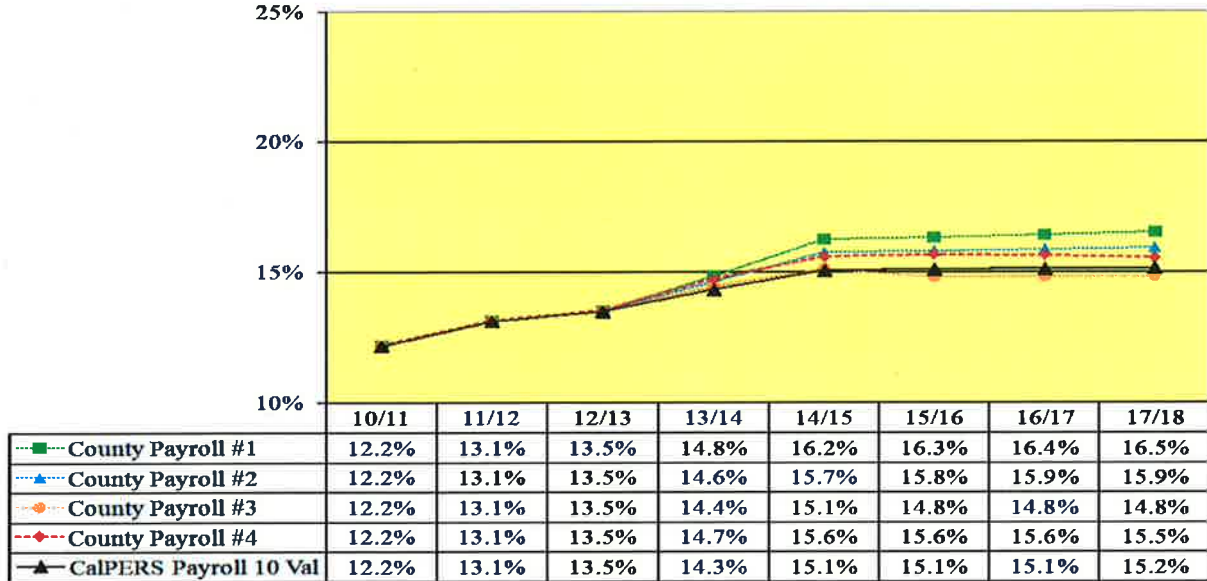
**Expected Investment Return (7.5%)
Safety Plan Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds But Not Debt Service**



Bartel Associates, LLC, June 2012

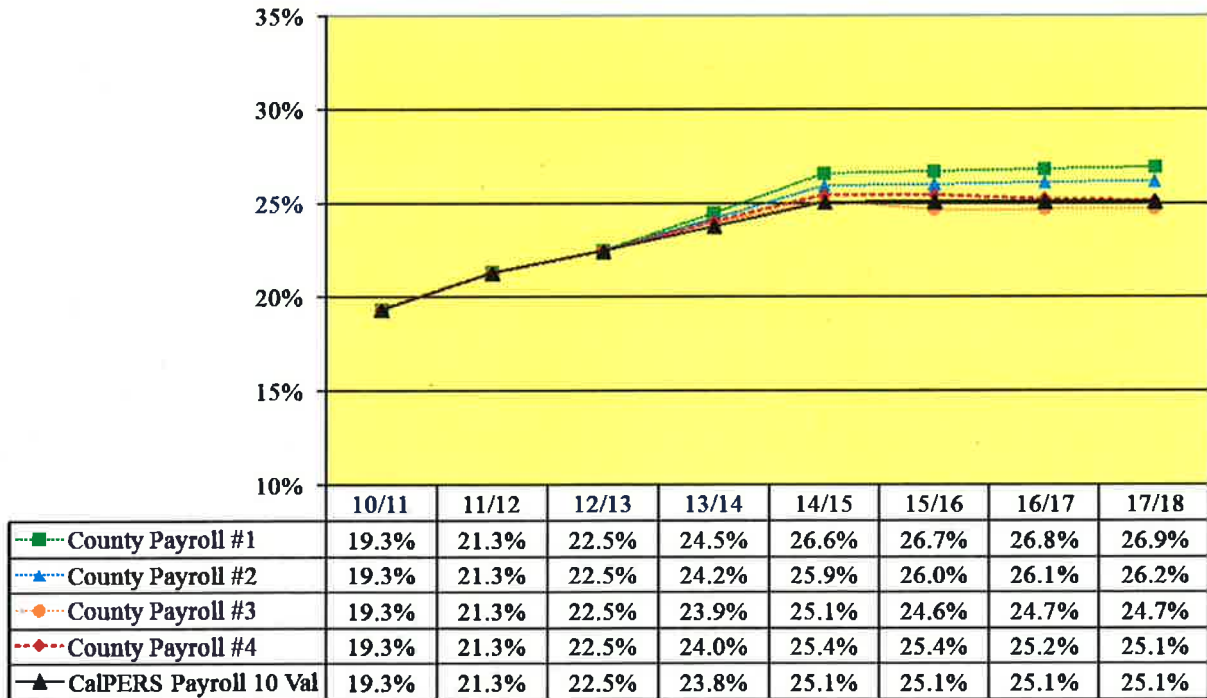
Projected Employer Contribution Rate Increases

**Expected Investment Return (7.5%)
Miscellaneous Plan Tier 1 and Tier 2
Includes POB But Not Debt Service**



Bartel Associates, LLC, June 2012

**Expected Investment Return (7.5%)
Safety Plan Tier 1 and Tier 2
Includes POB Proceeds But Not Debt Service**



Bartel Associates, LLC, June 2012

The chart below shows projected Miscellaneous and Safety employer contributions savings in thousands of dollars as a result of the implementation of a Tier II lower benefit for new employees over the four year period for each payroll assumption:

Payroll Assumptions	Misc. Savings	Safety. Savings	Four Year Cost Savings From FY 14/15 to 17/18
County Payroll #1	\$ 14,770	\$ 2,970	\$ 17,740
County Payroll #2	\$ 16,460	\$ 3,640	\$ 20,100
County Payroll #3	\$ 21,010	\$ 5,430	\$ 26,440
County Payroll #4	\$ 17,910	\$ 4,780	\$ 22,690
CalPERS Payroll 10 Val	\$ 19,390	\$ 4,880	\$ 24,270

These savings projections are consistent with Bartel's April 2011 Pension Reform report presented to the Board. In that report Bartel estimated a Miscellaneous Tier II 2% @ 60 cost savings of \$2.4 million in year one, \$26.7 million in year ten; a cumulative savings after four years of \$22 million and after ten years of \$153.6 million. Similarly, a 2% @ 50 Safety Tier II was estimated to yield \$0.48 million in year one, \$8.7 million in year ten; a cumulative savings after four years of \$6 million and ten years of \$48 million. The combined Miscellaneous and Safety cumulative ten-year savings, is estimated by Bartel at \$206 million.

Bartel also estimated that the elimination of Employer Paid Member Contributions (EPMC) for Miscellaneous and Safety employees would result in an annual cost savings of \$59 million, resulting in an accumulated \$561 million ten year savings. As of this writing, the elimination of EPMC, or a similar cost sharing arrangement has been implemented for most represented and all unrepresented employees in a phased approach.

In May 2012, CalPERS performed an actuarial valuation on the County's 2% @ 60 Miscellaneous and 2% @ 50 Safety Tier II pension benefits. CalPERS, stated that starting July 1, 2014 the new Miscellaneous tier would decrease the employer contribution rate gradually with an ultimate decrease of 4.4 percent and the employee contribution rate by 1 percent; and the new Safety tier would decrease the employer contribution rate gradually with an ultimate decrease of 5.6 percent, with no impact on the employee contribution rate. At current payroll, the full impact of the Tier II rate decrease would result in an annual savings of approximately \$50 million. However, the employer contribution rate decrease will occur gradually, in proportion to employees hired in the second tier compared to the first tier. The May 2012 CalPERS Tier II savings calculations are consistent with Bartel's April 2011 savings projections.

The CalPERS actuarial valuation and the Bartel analysis show that the implementation of Pension Reform Tier II for new employees continues to be an important means by which public employee pension costs can be managed at sustainable levels.

V Financing Status Update

Pension Obligation Bonds (POB)

The County sold \$400 million of Pension Obligation Bonds (POB) in February 2005 and made its first payment on August 15, 2005. Contemporaneous projections show the POB's were expected to save \$161.8 million over the life of the bonds. The projections assumed CalPERS would earn a 7.75 percent actuarial rate of return over the life of the bonds. The "break-even" rate for the bond transaction is 4.91 percent, the rate on the POBs.

Based on Bartel's analysis, the County has lost \$23.1 million as a result of the sale of the POB. In recent years, due to volatile investment returns, net savings have fluctuated from \$130 million in CY 2007 to a net loss of \$72 million in 2009. Given the relatively low break-even rate of 4.91 percent, it is reasonable to believe that over the remaining 23 year life of the bonds, the transaction will eventually produce savings.

■	Net Estimated Losses through February 12, 2012 (Millions):	
A.	CalPERS Investment Earnings	\$109.7
B.	POB Interest Payments Made	129.7
C.	Cost of Issuance	<u>3.1</u>
D.	Net [(A) – (B) – (C)]	(23.1)

Liability Management Fund

One key aspect incorporated in the POB structure is the Liability Management Fund. The fund collects an amount representing 50 percent of the projected savings that would otherwise be passed on to departments. The purpose is to accelerate repayment of the pension liabilities, reducing pension costs in the long term and reducing the marginal risk associated with issuing POBs.

Board policy dictates that at the end of the year, PARC is to recommend whether the funds should be used to pay down any liability at CalPERS or buy down POBs. As of this writing the fund has a balance of \$931,000.

In prior years, the Committee has recommended using the captured savings to pay down its unfunded pension liability. The Unfunded Actuarial Liability's assumed rate of return is 7.50 percent and is more expensive than the POB's interest rate of 4.91 percent (the imputed rate). The Committee recommends that the balance in the Liability Management Fund be sent to CalPERS to pay down the County's unfunded liability.

CalPERS Annual Prepayment

CalPERS offers participants a discount for prepaying its projected annual employer's pension cost in a lump sum at the beginning of every fiscal year. The discount amounts to 50 percent of CalPERS' assumed actuarial return.

For FY 12/13, the County is obligated to pay \$192.5 million, which is the employer's projected contribution amount for pension costs. The Committee recommends that if, in the judgment of the County Executive Officer or his designee, market conditions are favorable at the time the pre-payment must be made, up to two thirds of the projected cost be prepaid.

VI OPEB Liability

Other Post Employment Benefits (OPEB)

The liability and annual costs for the County's contribution and non-pension promises to retirees are calculated and reported in accordance with GASB 45. Aon's Actuarial Valuation on Post Retirement Benefits (dated January 23, 2012) calculates the Annual Required Contribution (ARC) for FY 11/12 at \$2.5 million, assuming actual contributions are made equal to the ARC and the Present Value of Benefits (PVB) at \$49 million. The ARC for FY 12/13 is estimated at \$2.58 million.

Although GASB 45 does not require pre-funding, the portion of the ARC that is not funded each year accumulates as a liability on the County's financial statements. In order to take advantage of higher discount rates resulting in lower ARC and PVB, in CY 2007 the Board adopted a policy to pre-fund the ARC, other than the portion attributable to the "implicit subsidy."

The implicit subsidy represents the liability that resulted from the pooling of active and pre-65 retirees for the purpose of health care insurance. The County, as a result of Board action, no longer has an implicit subsidy. Effective January 1, 2011, all retirees pay premiums based on their "true" retiree only cost.

On November 19, 2008, the County entered into an agreement with the California Employers' Retirement Benefit Trust Program (CERBT) and made an initial deposit of \$10 million to pre-fund the County's OPEB liability. In accordance with Board policy, a rate structure was also developed for OPEB costs as a percentage of payroll. The rate structure provides funding for the ARC payment.

Effective August 15, 2011, CalPERS Investment Committee adopted three asset allocation strategies for selection by employers who participate in CERBT. The asset allocation and associated expected asset return, and thus the assumed discount rate, have considerable impact on valuation results and the magnitude of liabilities. The following table summarizes financial characteristics of the three strategies*:

	Strategy 1	Strategy 2	Strategy 3
Expected Return/Discount Rate	7.61%	7.06%	6.39%
Standard Deviation of Expected Returns	11.73%	9.46%	7.27%

*Source: Aon Hewitt Postretirement Benefits Study dated January 23, 2012

All three asset allocation strategies invest to some extent in each of the five asset classes (Global Equity, U.S. Nominal Bonds, U.S. Inflation Linked Bonds, Global Public Real Estate and Commodities). The portion of assets allocated to each asset class varies among the strategies, and thus the long term expected rate of return and the level of risk of each asset allocation is different for each strategy.

Asset Strategy 1 is the allocation strategy most similar to the CERBT asset allocation strategy previously used by CERBT. PARC, after reviewing with CALPERS detail on each asset allocation strategy, adopted asset allocation Strategy 1. PARC will continue to monitor the return versus risk balance of the asset allocation strategies and update the Board on asset allocation strategy developments.

Based on CalPERS adoption of assumption changes to the Public Employees' Retirement Fund (PERF), we anticipate that the CalPERS Actuarial Office will also recommend assumption changes for the CERBT affiliate fund. PARC will continue to monitor and report on the impact of any proposed changes.

VII Recommendations

1. Receive and file the 2012 PARC Annual Pension Report
2. Adopt the recommendation to use the money in the Liability Management Fund to reduce the County's CalPERS liability by transferring the funds to CalPERS. (See page 21)
3. Adopt the recommendation to pre-pay up to two-thirds of the County's FY 2012/13 pension cost if, in the judgment of the Chief Executive Officer or his designee, market conditions prove to be favorable. (See page 22)



BARTTEL
ASSOCIATES, LLC

**COUNTY OF RIVERSIDE
MISCELLANEOUS AND SAFETY PLANS**

**CalPERS Actuarial Issues – 6/30/10 Valuation
Preliminary Results**

Presented by **John E. Bartel, President**
Prepared by **Bianca Lin, Assistant Vice President & Actuary**
Tina Haugbro, Actuarial Analyst
Bartel Associates, LLC

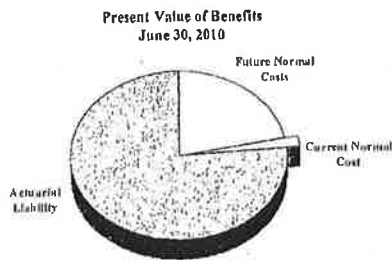
January 23, 2012

Agenda

<u>Topic</u>	<u>Page</u>
Definitions	1
Miscellaneous Plan:	
Demographic Information	3
Plan Funded Status	9
Plan Assets & Actuarial Obligations	13
Contribution Rates & Projections	17
Safety Plan:	
Demographic Information	29
Plan Funded Status	35
Plan Assets & Actuarial Obligations	39
Contribution Rates & Projections	43
Contribution Policy	51
POB	57
CalPERS Smoothing	67



Definitions



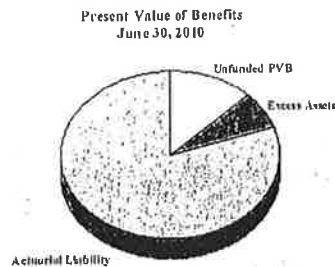
- **PVB - Present Value of all Projected Benefits:**
 - Discounted value (at valuation date - 6/30/10), of all future expected benefit payments based on various (actuarial) assumptions
- **Actuarial Liability:**
 - Discounted value (at valuation date) of benefits earned through valuation date [value of past service benefit]
 - Portion of PVB "earned" at measurement
- **Current Normal Cost:**
 - Portion of PVB allocated to (or "earned" during) current year
 - Value of employee and employer current service benefit



January 23, 2012



Definitions



- **Target-** Have money in the bank to cover Actuarial Liability (past service)
- **Unfunded Liability** - Money short of target at valuation date
- **Excess Assets / Surplus:**
 - Money over and above target at that point in time.
 - Doesn't mean you're done contributing.
- **Super Funded:**
 - Assets cover whole pie (PVB)
 - If everything goes exactly like PERS calculated, you'll never have to put another (employer or employee) dime in.



January 23, 2012



Summary of Demographic Information – Miscellaneous

	1994	2001	2009	2010
Actives				
■ Counts	8,585	11,562	15,550	15,446
■ Average				
• Age	43	43	43	43
• City Service <i>County</i>	8	8	8	9
• PERSable Wages	\$34,000	\$40,400	\$54,100	\$55,400
■ Total PERSable Wages (millions)	318.8	521.4	925.8	941.0
Receiving Payments				
■ Counts				
• Service		3,278	6,043	6,336
• Disability		530	585	585
• Beneficiaries		548	757	789
• Total	3,155	4,356	7,385	7,710
■ Average Annual City Provided Benefit ¹				
• Service		\$10,000	\$19,800	\$20,600
• Disability		5,900	7,900	8,100
• Service Retirements in last 5 years		12,300	25,500	25,900

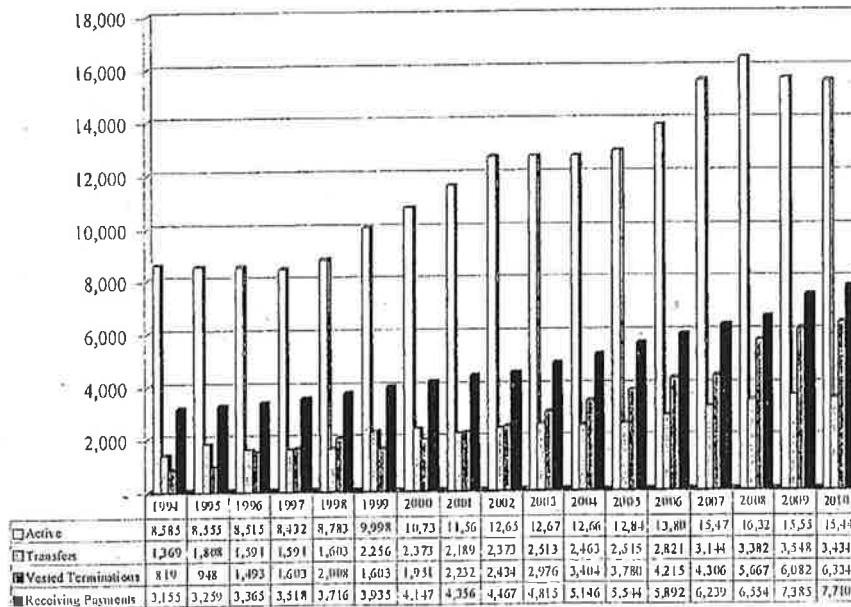
¹ Average City provided pensions are based on City service & City benefit formula, and are not representative of benefits for long service employees.



January 23, 2012



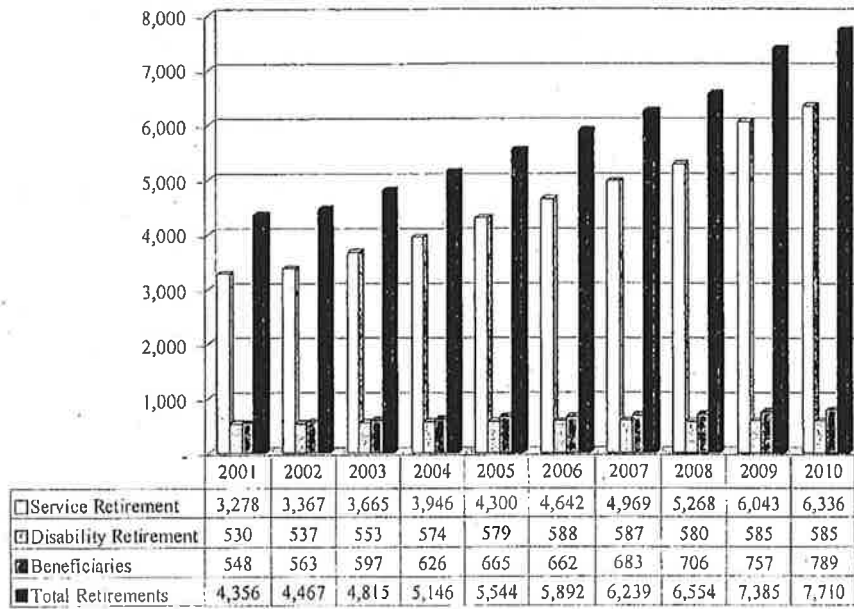
Members Included in Valuation Miscellaneous



January 23, 2012



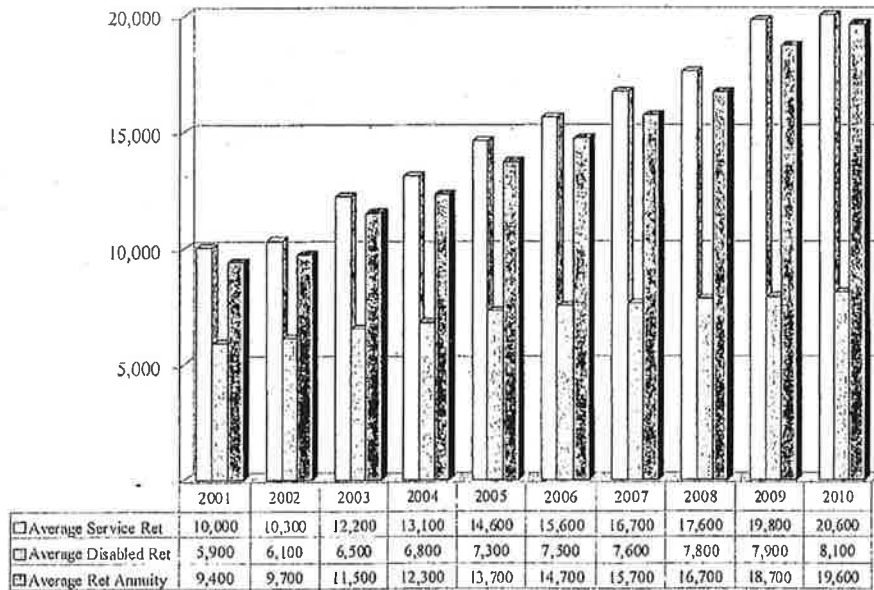
Members Receiving Payments Miscellaneous



January 23, 2012



Average Annuity Miscellaneous



January 23, 2012



Average Annuity Miscellaneous

Service Retirement Retirees' Benefit										
Years Retired	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Under 5	\$ 12,349	\$ 12,462	\$ 16,831	\$ 18,135	\$ 20,680	\$ 21,383	\$ 23,154	\$ 22,930	\$ 25,452	\$ 25,933
5-9	11,755	12,175	12,835	13,079	12,996	13,688	13,474	18,143	19,709	22,185
10-14	9,780	10,414	11,106	11,844	12,261	12,351	12,996	13,308	13,906	14,618
15-19	8,238	8,486	9,030	9,158	10,059	10,348	10,992	11,832	12,558	12,874
20-24	4,605	5,780	6,361	7,358	8,098	9,061	9,181	9,818	10,223	10,636
25-29	3,096	3,176	3,321	3,605	5,336	5,590	6,915	7,442	8,311	8,428
Over 30	4,564	3,703	4,247	3,610	5,881	5,387	5,242	5,414	5,424	5,372
All Years	9,982	10,312	12,223	13,099	14,560	15,586	16,664	17,631	19,751	20,628



January 23, 2012



Average Annuity Miscellaneous

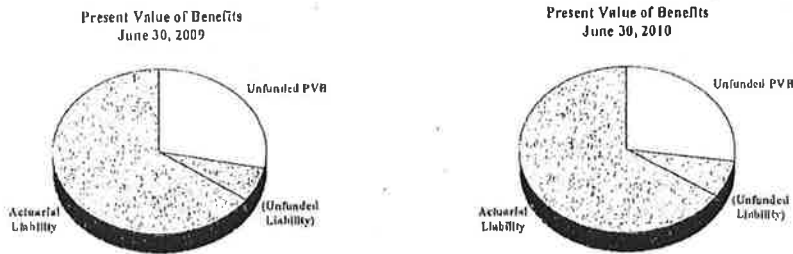
Service Retirement Retirees' Benefit										
Attained Age	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
50-54	\$ 8,352	\$ 8,270	\$ 11,218	\$ 10,905	\$ 13,909	\$ 15,136	\$ 15,599	\$ 15,620	\$ 19,486	\$ 19,522
55-59	11,771	11,299	14,832	16,591	17,653	18,881	19,904	20,836	23,886	24,313
60-64	11,791	12,027	16,809	17,708	19,425	20,574	21,735	22,549	24,770	26,059
65-69	11,024	11,945	13,184	14,094	15,593	16,628	18,226	19,717	21,406	22,613
70-74	10,884	10,889	11,224	11,483	12,482	12,874	13,991	14,974	16,200	16,835
75-79	8,957	9,537	10,418	10,954	11,645	12,257	12,310	12,820	12,882	13,835
80-84	7,196	7,640	8,304	9,316	10,352	10,510	10,758	11,762	12,590	12,912
85 & over	5,201	5,645	5,811	6,016	7,409	8,220	8,929	9,524	9,991	10,394
All Ages	9,982	10,312	12,223	13,099	14,560	15,586	16,664	17,631	19,751	20,628



January 23, 2012



Plan Funded Status Miscellaneous



<u>June 30, 2009</u>		<u>June 30, 2010</u>	
\$	3,790,200,000	Actuarial Liability	\$ 4,097,200,000
	3,401,000,000	Actuarial Asset Value	3,652,900,000
	(389,200,000)	(Unfunded Liability)	(444,300,000)
<u>June 30, 2009</u>		<u>June 30, 2010</u>	
\$	3,790,200,000	Actuarial Liability	\$ 4,097,200,000
	2,482,300,000	Market Asset Value	2,882,400,000
	(1,307,900,000)	(Unfunded Liability)	(1,214,800,000)



January 23, 2012



Plan Funded Status Miscellaneous

- What happened between 6/30/09 and 6/30/10?
 - Market Value Asset Gain/(Loss) ≈ 148.9 million
 - Unfunded Liability (Increase)/Decrease ≈ (55.1) million

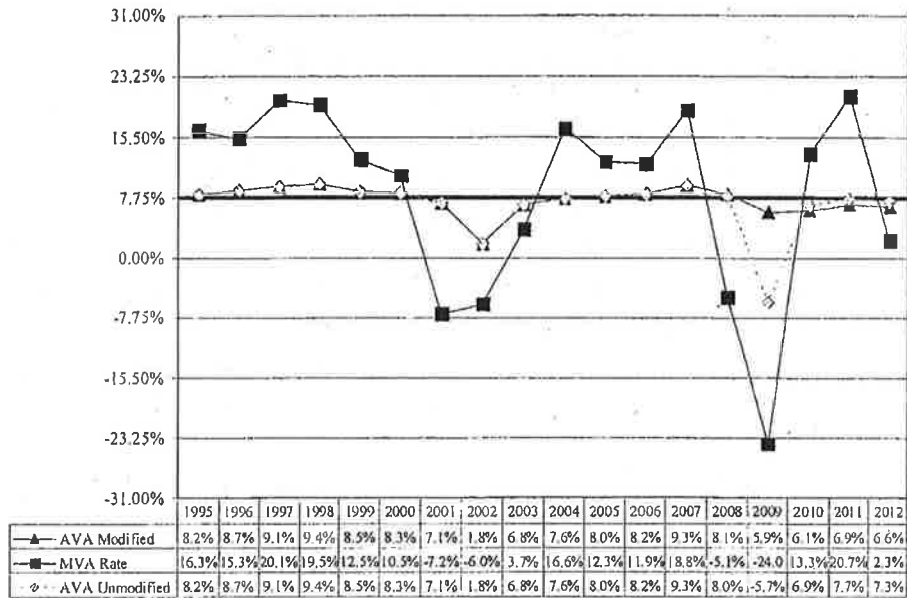
- Reasons for Unfunded Liability increase
 - Actuarial Asset gain/(loss): ≈ (55.0) million
 - \$770 million remaining unrecognized asset losses
 - Actuarial gain/(loss): ≈ (2.5) million
 - Average Salary \$54,100 → \$55,400
 - Number of Actives 15,550 → 15,446
 - Number of Inactives 9,630 → 9,768
 - Number of Retirees 7,385 → 7,710
 - Golden Handshake ≈ (1.0) million
 - Other gain/(loss): ≈ 3.4 million
 - Contributions
 - Other (expected)



January 23, 2012



Actuarial Investment Return Miscellaneous



Above assumes contributions, payments, etc. received evenly throughout year.



January 23, 2012



Actuarial Investment Return Miscellaneous

	Market	Actuarial
■ June 30, 2008		
● Return	(5.1)%	8.1%
● Gain/Loss	(12.9)%	(0.3)%
■ June 30, 2009		
● Return	(24.0)%	6.1%
● Gain/Loss	(31.8)%	(1.7)%
■ June 30, 2010		
● Return	13.3%	6.0%
● Gain/Loss	5.5%	(1.8)%
■ June 30, 2011		
● Return	20.7%	6.8%
● Gain/Loss	12.9%	(1.0)%
■ June 30, 2012		
● Return through 10/30/11	(2.7)%	n/a
● Est. Annualized Return	2.3%	6.9%
● Est. Gain/Loss	(5.5)%	(0.9)%

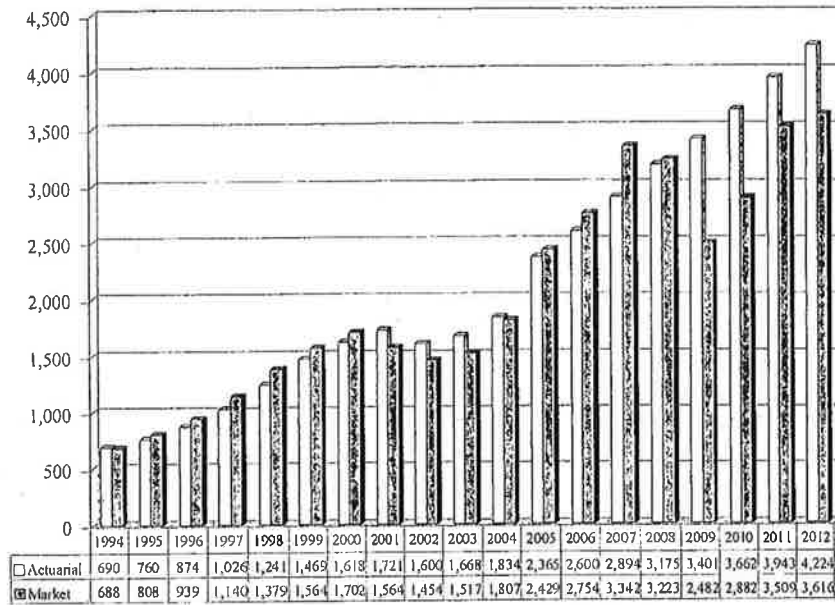
■ Accumulated Market Value Gains/(Losses) through June 30, 2011 \approx (26.3)%
 [(12.9)% + (31.8)% + 5.5% + 12.9%]



January 23, 2012



Asset Values (Millions) Miscellaneous



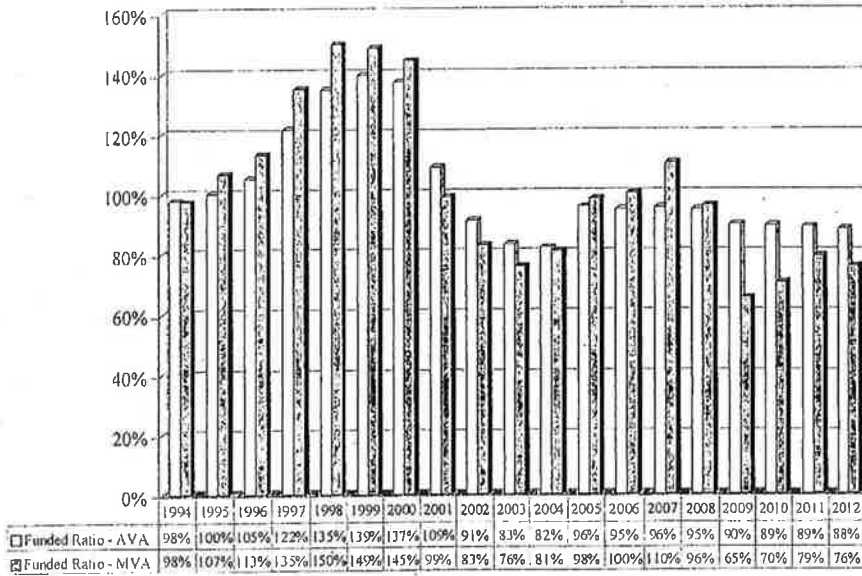
6/30/11 & 6/30/12 asset values estimated.



January 23, 2012



Funded Status Miscellaneous



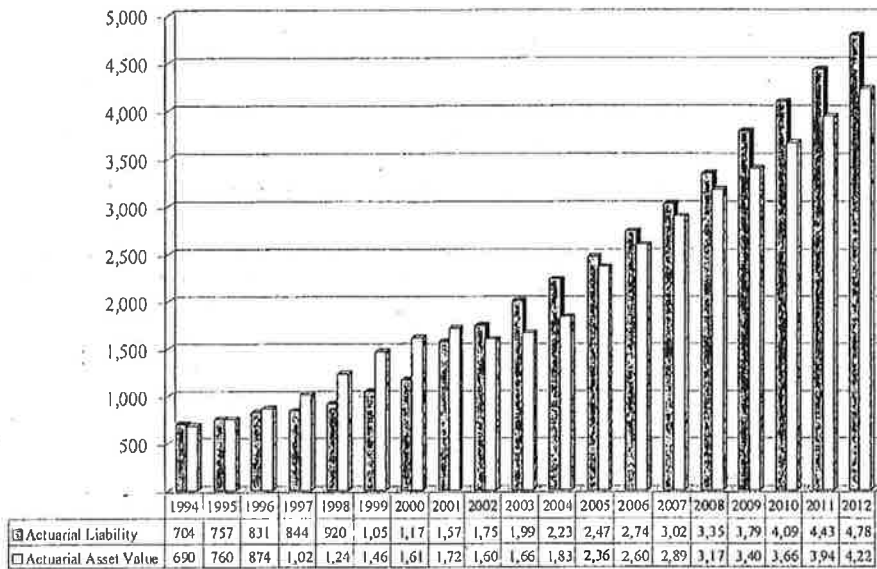
6/30/11 & 6/30/12 funded status estimated



January 23, 2012



**Funded Status (Millions)
Miscellaneous**



6/30/11 & 6/30/12 funded status estimated

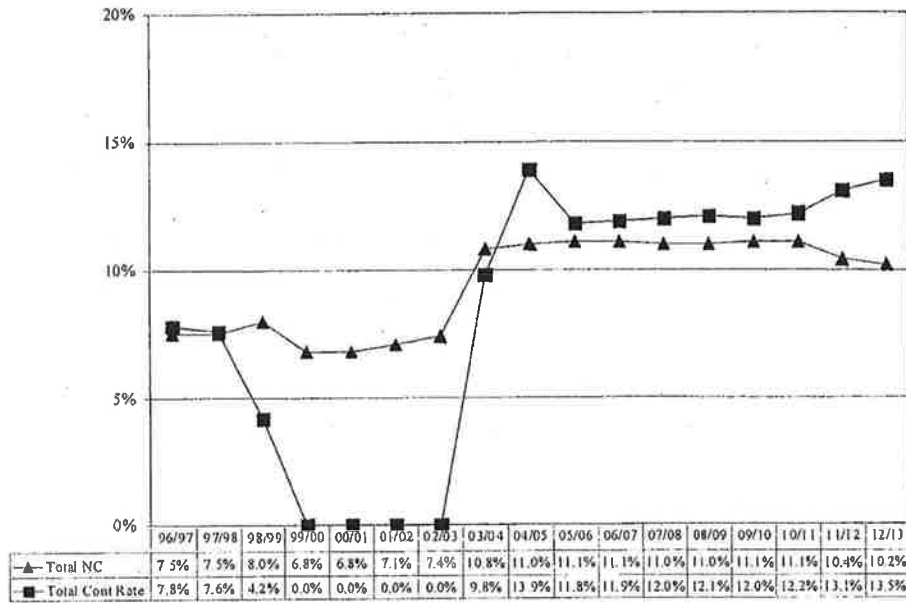


**Funded Status (Millions)
Miscellaneous**
This page intentionally left blank.

BA



Contribution Rates Miscellaneous



January 23, 2012



Contribution Rates Miscellaneous

	6/30/09 <u>2011/2012</u>	6/30/10 <u>2012/2013</u>
■ Normal cost	10.4%	10.2%
■ Amortization bases:	<u>2.7%</u>	<u>3.3%</u>
■ Total Contribution Rate	13.3%	13.5%
■ Amortization period	Multiple ≈ 26 years	Multiple ≈ 26 years
■ What Happened from 6/30/09 to 6/30/10:		
● 2011/12 Rate	13.3%	
● (Gains)/Losses	<u>0.2</u>	
● 2012/13 Rate	13.5%	



January 23, 2012



Employer Rate Projections Miscellaneous

■ Market Value Investment Return:

- June 30, 2010 13.3%²
- June 30, 2011 20.7%³
- June 30, 2012⁴
 - Poor Investment Return: \approx -2.44%
 - Expected Investment Ret: \approx 2.26%
 - Good Investment Return: \approx 7.00%
- June 30, 2013 - 2016
 - Poor Investment Return: \approx 0.4% - 3.6%
 - Expected Investment Ret: \approx 7.75%
 - Good Investment Return: \approx 11.8% - 15.3%

■ No Other: Gains or Losses, Method or Assumption Changes or Benefit Improvements

■ Excludes Employer Paid Member Contributions (EPMC)

² As reported by CalPERS.

³ As reported by CalPERS.

⁴ Based on CalPERS actual return -2.7% through 10/31/11 and various returns for the remaining 8 months.

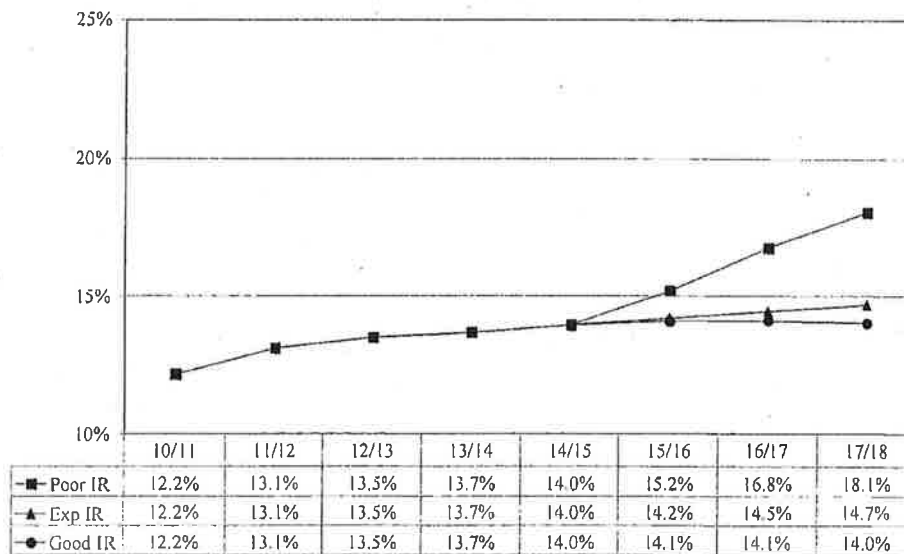


January 23, 2012



Employer Rate Projections Miscellaneous

Investment Return Varies



January 23, 2012



**Employer Rate Projections
Miscellaneous**

Payroll Growth Assumptions

	2010/11	2011/12	2012/13	2012/13/14
County #1	-10.00%	-10.00%	3.25%	3.25%
County #2	-5.00%	-5.00%	3.25%	3.25%
County #3	0.00%	+5.00%	13.50%	3.25%
CalPERS	3.25%	3.25%	3.25%	3.25%

**Projected PERSable Wages
(^{'000})**

	2009/10	2010/11	2011/12	2012/13	2012/13/14
County #1	\$854,932	\$769,439	\$692,495	\$715,001	\$738,239
County #2	854,932	812,186	771,576	796,652	822,544
County #3	854,932	854,932	897,679	1,018,865	1,051,978
CalPERS	854,932	882,717	911,406	941,026	971,610



January 23, 2012



**Employer Rate Projections
Miscellaneous**

This page intentionally left blank.

B-1

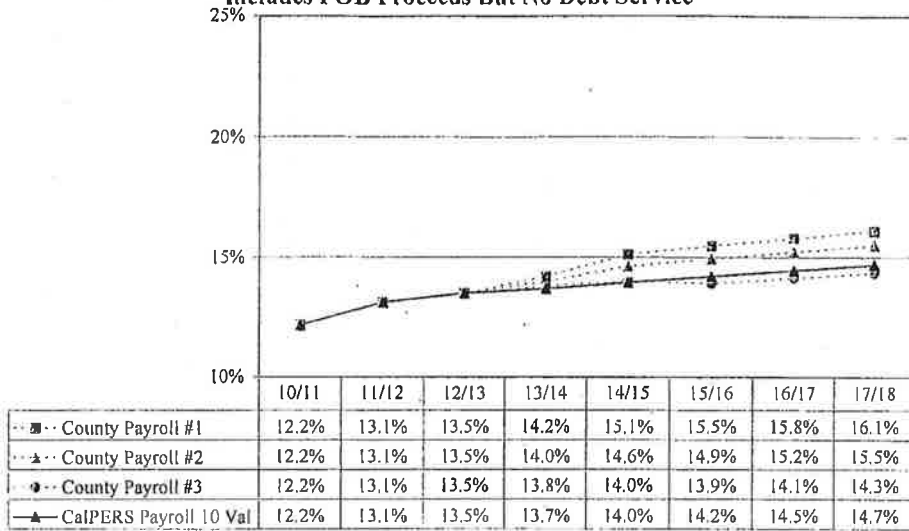


January 23, 2012



Employer Rate Projections Miscellaneous

**Expected Investment Return
Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds But No Debt Service**

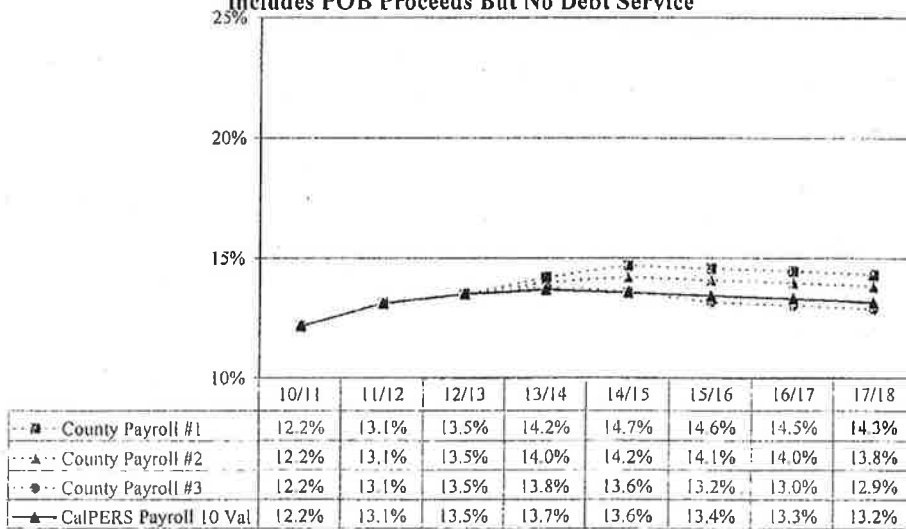


January 23, 2012



Employer Rate Projections Miscellaneous

**Expected Investment Return
Tier 1 + Tier 2
Includes POB Proceeds But No Debt Service**

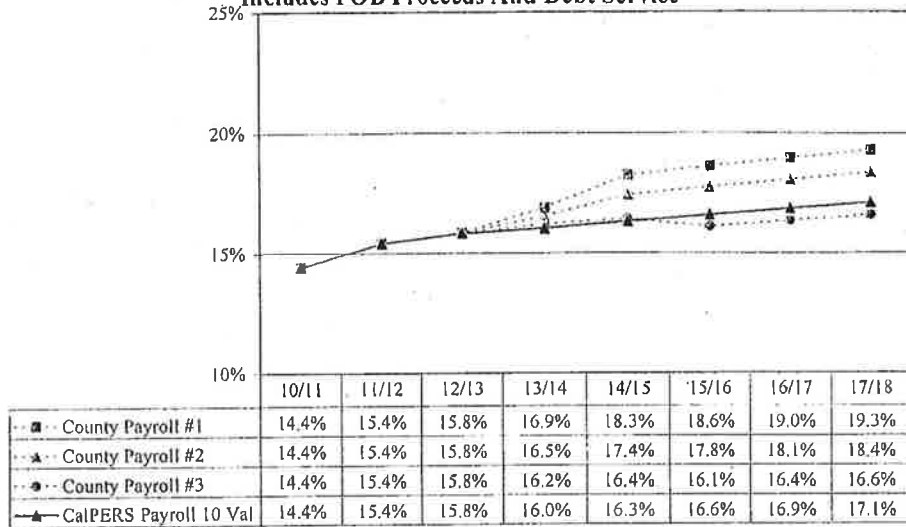


January 23, 2012



Employer Rate Projections Miscellaneous

**Expected Investment Return
Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds And Debt Service**

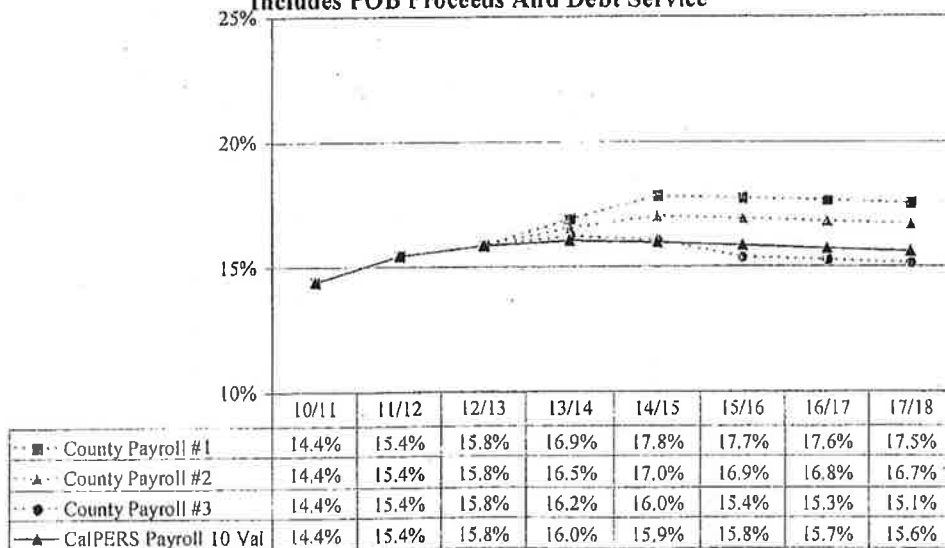


January 23, 2012



Employer Rate Projections Miscellaneous

**Expected Investment Return
Tier 1 + Tier 2
Includes POB Proceeds And Debt Service**

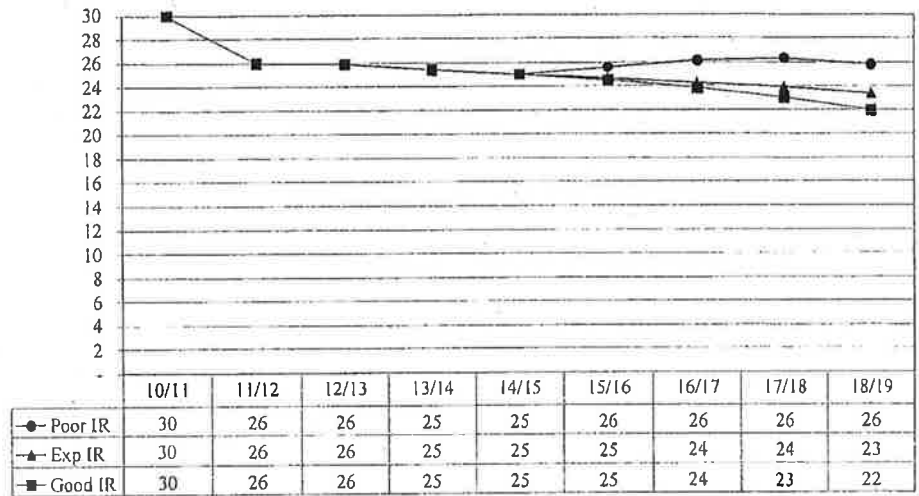


January 23, 2012



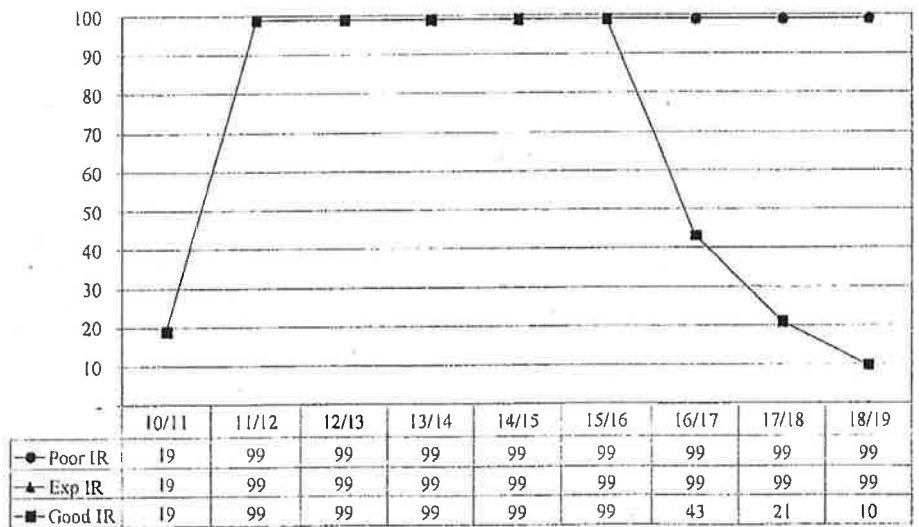
**UAL Amortization Period (Number of Years)
Miscellaneous**

**Based on Actuarial Value of Assets
(Investment Return > 6/30/11 Varies)**



**UAL Amortization Period (Number of Years)
Miscellaneous**

**Based on Market Value of Assets
(Investment Return > 6/30/11 Varies)**



Summary of Demographic Information -- Safety

	1994	2001	2009	2010
Actives				
■ Counts	1,839	2,385	3,687	3,490
■ Average				
• Age	38	39	38	38
• City Service	10	10	8	9
• PERSable Wages	\$44,200	\$53,600	\$71,900	\$76,000
■ Total PERSable Wages (millions)	88.8	142.8	142.8	291.9
Receiving Payments				
■ Counts				
• Service		353	1,073	1,302
• Disability		417	505	522
• Beneficiaries		102	150	158
• Total	520	872	1,728	1,982
■ Average Annual City Provided Benefit ⁵				
• Service		\$24,700	\$35,700	\$39,000
• Disability		17,900	23,300	23,800
• Service Retirements in last 5 years		25,400	38,100	42,900

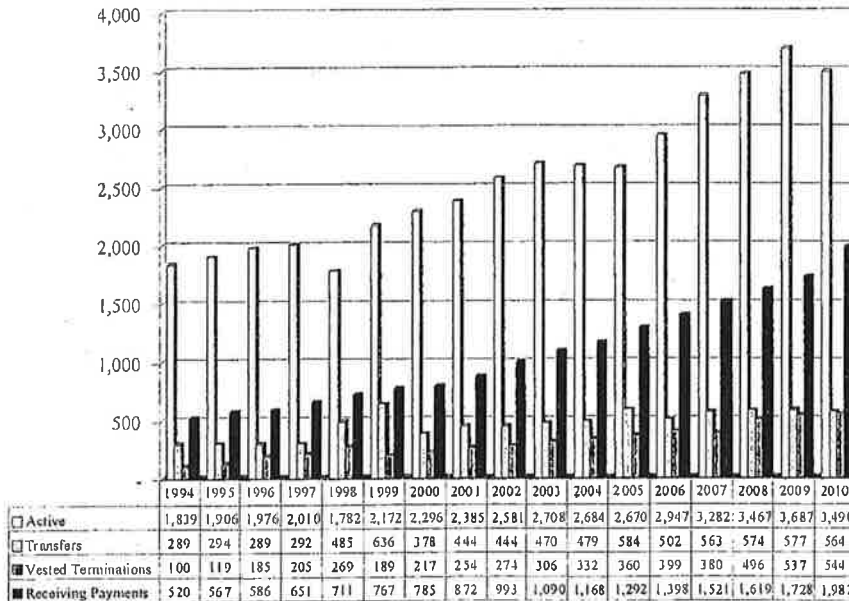
⁵ Average City provided pensions are based on City service & City benefit formula, and are not representative of benefits for long service employees.



January 23, 2012



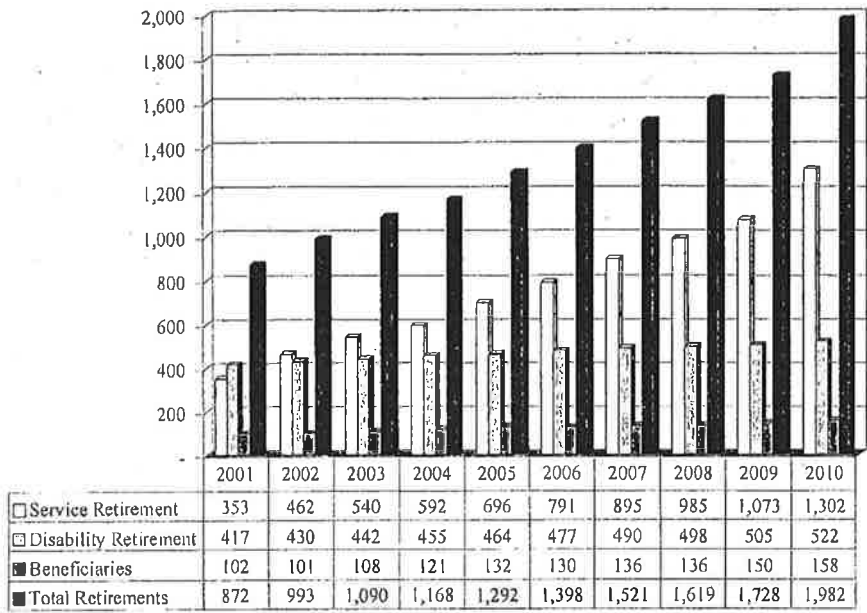
Members Included in Valuation Safety



January 23, 2012



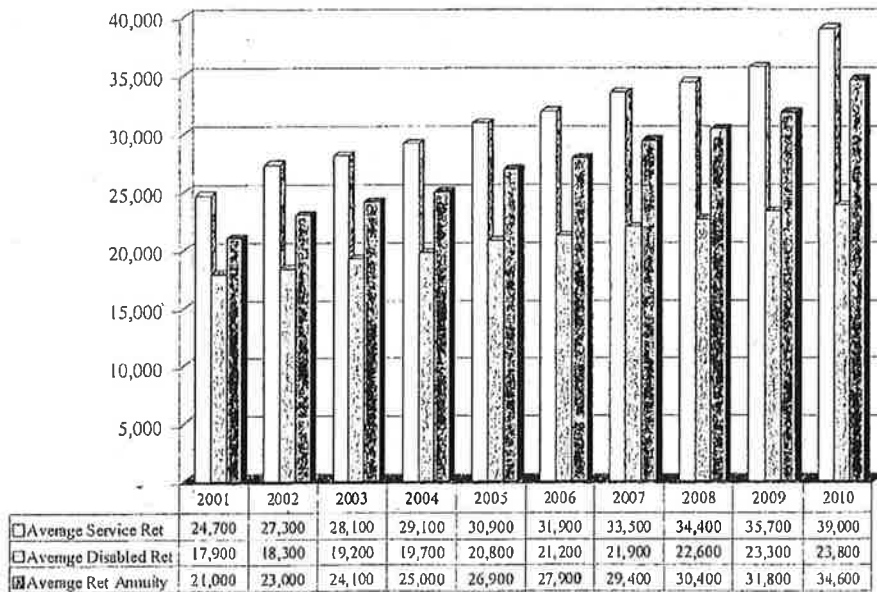
Members Receiving Payments Safety



January 23, 2012



Average Annuity Safety



January 23, 2012



Average Annuity Safety

Service Retirement Retirees' Benefit										
Years Retired	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Under 5	\$ 25,410	\$ 28,618	\$ 29,840	\$ 31,179	\$ 33,743	\$ 34,479	\$ 35,472	\$ 36,745	\$ 38,145	\$ 42,927
5-9	26,844	28,779	27,501	27,368	27,163	28,123	33,159	32,663	34,196	36,699
10-14	26,808	26,587	29,249	29,933	30,681	30,133	29,406	32,464	32,436	30,916
15-19	21,763	27,324	27,928	29,250	26,964	29,224	30,587	31,357	32,982	34,805
20-24	13,781	14,519	12,651	11,994	19,537	20,399	25,112	29,849	34,166	33,624
25-29	10,288	11,069	13,487	15,318	19,288	20,385	20,993	21,005	19,198	20,761
Over 30	15,207	15,511	10,162	16,455	30,776	31,920	28,299	27,267	29,573	28,211
All Years	24,718	27,306	28,111	29,141	30,929	31,915	33,481	34,389	35,729	38,956



January 23, 2012



Average Annuity Safety

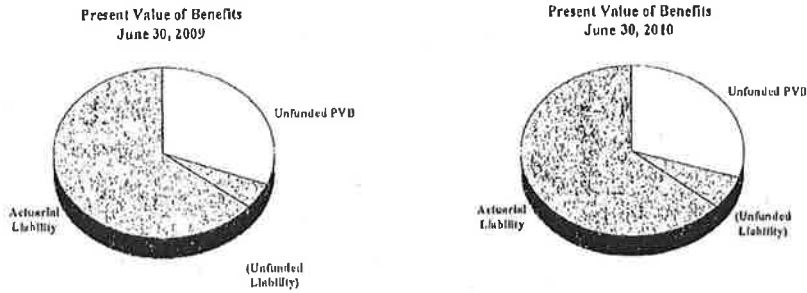
Service Retirement Retirees' Benefit										
Attained Age	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
50-54	\$ 20,025	\$ 25,957	\$ 28,252	\$ 26,541	\$ 32,567	\$ 33,130	\$ 35,650	\$ 35,300	\$ 37,007	\$ 44,173
55-59	30,032	31,824	31,929	34,435	34,387	35,298	36,108	36,764	36,697	40,669
60-64	29,058	30,745	29,848	31,148	32,237	33,440	34,861	36,194	37,904	39,455
65-69	24,112	24,239	26,224	25,829	28,826	28,986	29,985	32,552	34,509	35,161
70-74	21,428	23,823	24,635	25,451	24,448	24,980	28,068	27,947	30,079	31,361
75-79	15,609	16,445	20,918	21,740	23,092	23,810	26,745	28,006	29,780	28,419
80-84	8,264	13,491	10,934	14,589	19,692	21,258	19,489	25,344	27,089	26,978
85 & over	6,621	5,589	6,758	8,475	13,285	13,803	19,099	15,185	18,624	28,647
All Ages	24,718	27,306	28,111	29,141	30,929	31,915	33,481	34,389	35,729	38,956



January 23, 2012



Plan Funded Status Safety



	June 30, 2009		June 30, 2010
\$	1,642,600,000	Actuarial Liability	\$ 1,809,500,000
	1,511,000,000	Actuarial Asset Value	1,624,700,000
	(131,600,000)	(Unfunded Liability)	(184,800,000)
\$	<u>1,642,600,000</u>	Actuarial Liability	\$ 1,809,500,000
	<u>1,100,400,000</u>	Market Asset Value	<u>1,279,800,000</u>
	(542,200,000)	(Unfunded Liability)	(529,700,000)



January 23, 2012



Plan Funded Status Safety

- What happened between 6/30/09 and 6/30/10?
 - Market Value Asset Gain/(Loss) ≈ 66.0 million
 - Unfunded Liability increase ≈ (53.2) million

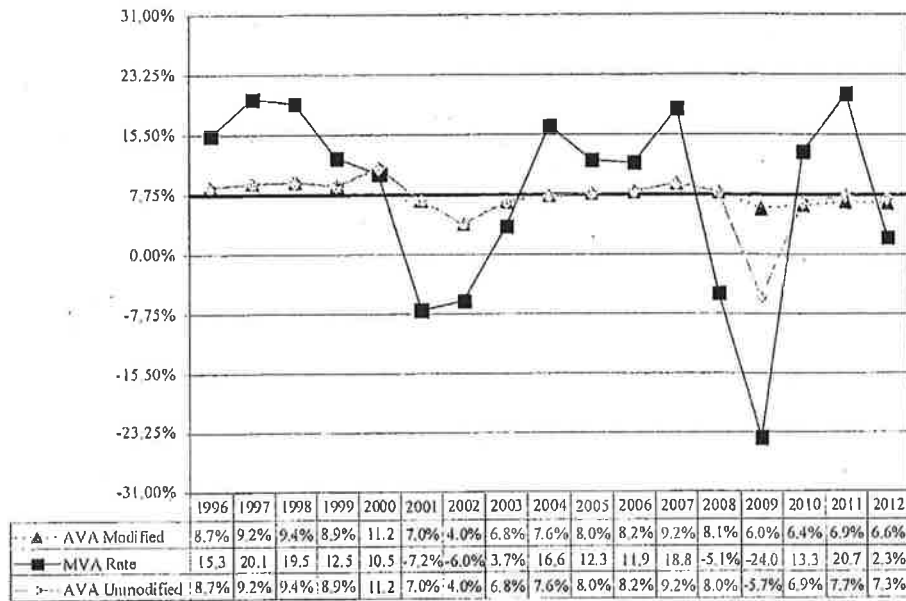
- Reasons for Unfunded Liability increase
 - Actuarial Asset gain/(loss): ≈ (24.6) million
 - \$345 million remaining unrecognized asset losses
 - Actuarial gain/(loss): ≈ (18.6) million
 - Average Salary \$71,900 → \$76,000
 - Number of Actives 3,687 → 3,490
 - Number of Inactives 1,114 → 1,108
 - Number of Retirees 1,728 → 1,982
 - Golden Handshake: ≈ (11.1) million
 - Other gain/(loss): ≈ 1.1 million
 - Contributions
 - Other (expected)



January 23, 2012



Actuarial Investment Return Safety



Above assumes contributions, payments, etc. received evenly throughout year.



January 23, 2012



Actuarial Investment Return Safety

	Market	Actuarial
■ June 30, 2008		
● Return	(5.1)%	8.1%
● Gain/Loss	(12.9)%	(0.3)%
■ June 30, 2009		
● Return	(24.0)%	6.1%
● Gain/Loss	(31.8)%	(1.7)%
■ June 30, 2010		
● Return	13.3%	6.0%
● Gain/Loss	5.5%	(1.8)%
■ June 30, 2011		
● Return	20.7%	6.8%
● Gain/Loss	12.9%	(1.0)%
■ June 30, 2012		
● Return through 10/30/11	(2.7)%	n/a
● Est. Annualized Return	2.3%	6.9%
● Est. Gain/Loss	(5.5)%	(0.9)%

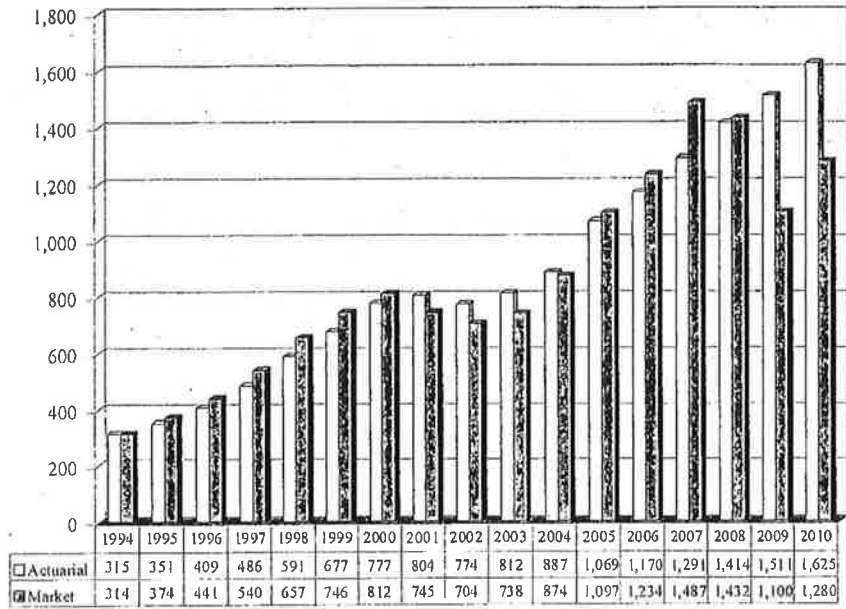
■ Accumulated Market Value Gains/(Losses) through June 30, 2011 ≈ (26.3)%
 [(12.9)% + (31.8)% + 5.5% + 12.9%]



January 23, 2012



Asset Values (Millions) Safety



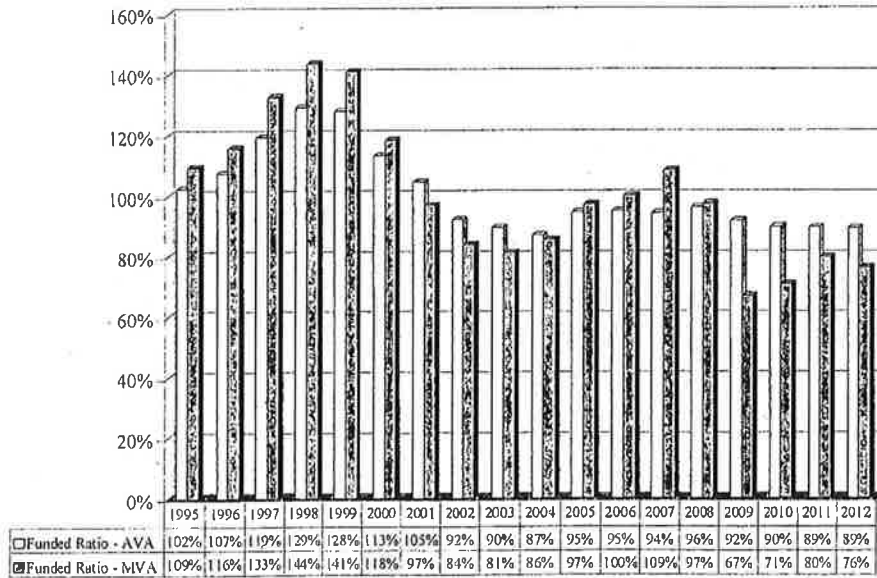
6/30/11 & 6/30/12 asset values estimated.



January 23, 2012



Funded Status Safety



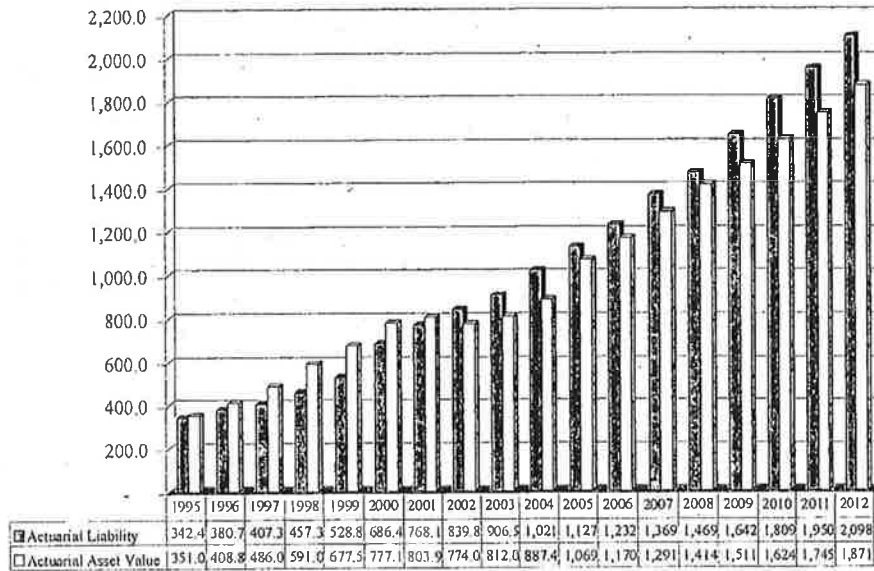
6/30/11 & 6/30/12 funded status estimated



January 23, 2012



**Funded Status (Millions)
Safety**



6/30/11 & 6/30/12 funded status estimated



January 23, 2012



**Funded Status (Millions)
Safety**
This page intentionally left blank.

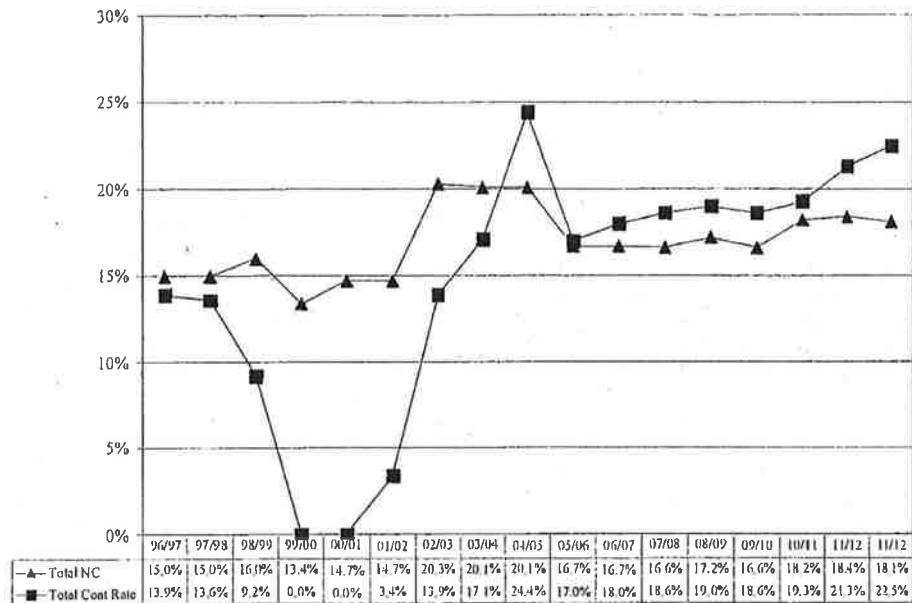
B/A



January 23, 2012



Contribution Rates Safety



January 23, 2012



Contribution Rates Safety

	<u>6/30/09</u> <u>2011/2012</u>	<u>6/30/10</u> <u>2012/2013</u>
■ Normal cost	18.4%	18.1%
■ Amortization bases:	<u>2.9%</u>	<u>4.4%</u>
■ Total Contribution Rate	21.3%	22.5%
■ Amortization period	Multiple ≈ 28 years	Multiple ≈ 27 years
■ What Happened from 6/30/09 to 6/30/10:		
● 2011/12 Rate	21.3%	
● (Gains)/Losses	<u>1.2</u>	
● 2012/13 Rate	22.5%	



January 23, 2012



Employer Rate Projections Safety

■ **Market Value Investment Return:**

- June 30, 2010 13.3%⁶
- June 30, 2011 20.7%⁷
- June 30, 2012 ⁸
 - Poor Investment Return: \approx -2.44%
 - Expected Investment Ret: \approx 2.26%
 - Good Investment Return: \approx 7.00%
- June 30, 2013 - 2016
 - Poor Investment Return: \approx 0.4% - 3.6%
 - Expected Investment Ret: \approx 7.75%
 - Good Investment Return: \approx 11.8% - 15.3%

■ **No Other: Gains or Losses, Method or Assumption Changes or Benefit Improvements**

■ **Excludes Employer Paid Member Contributions (EPMC)**

⁶ As reported by CalPERS.

⁷ As reported by CalPERS.

⁸ Based on CalPERS actual return -2.7% through 10/31/11 and various returns for the remaining 8 months.

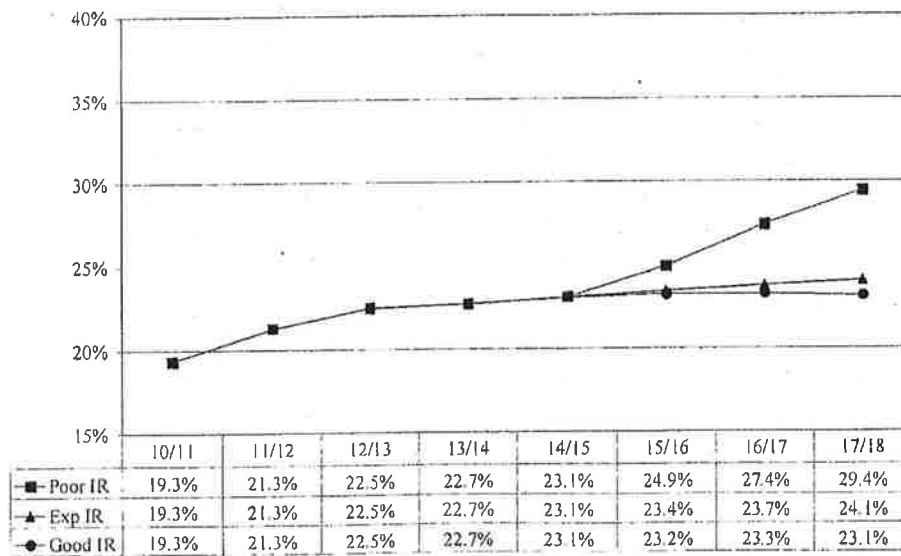


January 23, 2012



Employer Rate Projections Safety

Investment Return Varies



January 23, 2012



**Employer Rate Projections
Safety**

Payroll Growth Assumptions

	2010/11	2011/12	2012/13	2012/13
County #1	-10.00%	-10.00%	3.25%	3.25%
County #2	-5.00%	-5.00%	3.25%	3.25%
County #3	0.00%	+5.00%	13.50%	3.25%
CalPERS	3.25%	3.25%	3.25%	3.25%

Projected PERSable Wages

('000)

	2009/10	2010/11	2011/12	2012/13	2012/13
County #1	\$ 265,165	\$238,649	\$214,784	\$221,764	228,972
County #2	265,165	251,907	239,312	247,089	255,120
County #3	265,165	265,165	278,424	316,011	326,281
CalPERS	265,165	273,783	282,681	291,868	301,354



January 23, 2012



**Employer Rate Projections
Safety**

This page intentionally left blank.

BA



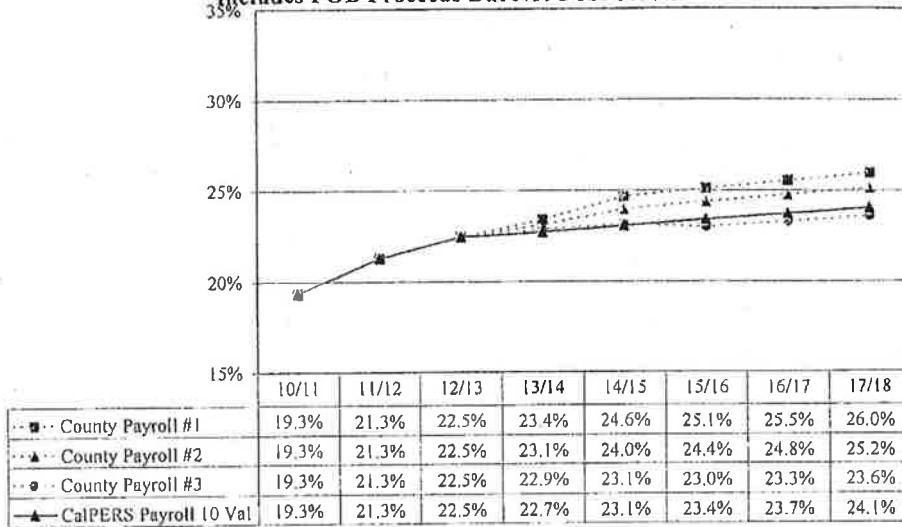
January 23, 2012



Employer Rate Projections Safety

Expected Investment Return
Tier 1 Only (Assumes No 2nd Tier)

Includes POB Proceeds But Not Debt Service



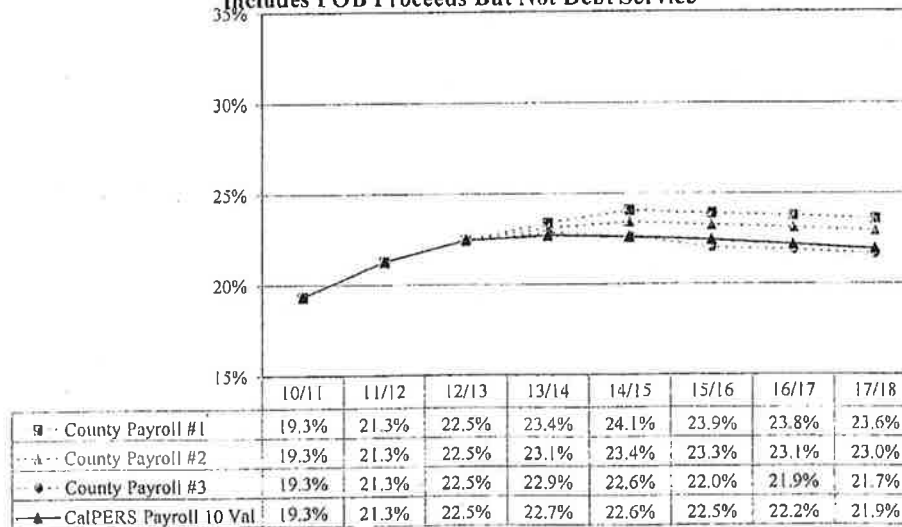
January 23, 2012



Employer Rate Projections Safety

Expected Investment Return
Tier 1 + Tier 2

Includes POB Proceeds But Not Debt Service

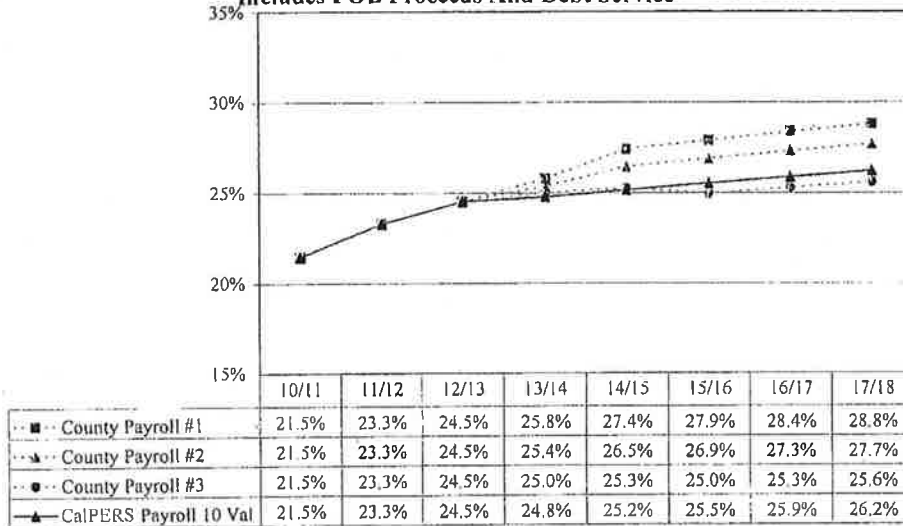


January 23, 2012



Employer Rate Projections Safety

**Expected Investment Return
Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds And Debt Service**



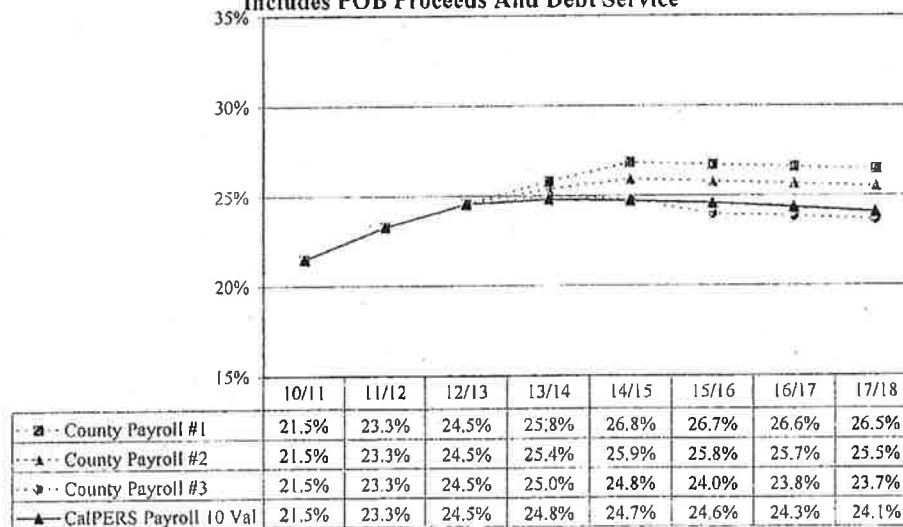
January 23, 2012

51



Employer Rate Projections Safety

**Expected Investment Return
Tier 1 + Tier 2
Includes POB Proceeds And Debt Service**



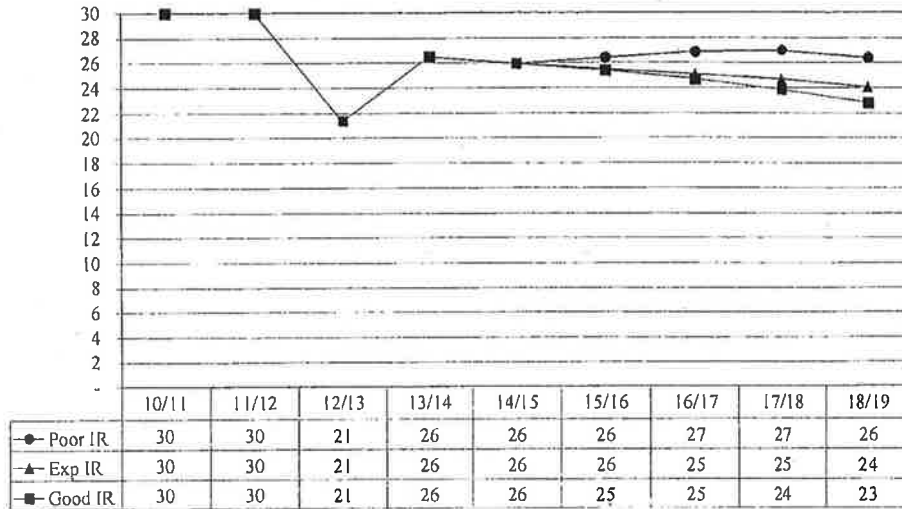
January 23, 2012

52



UAL Amortization Period (Number of Years) Safety

**Based on Actuarial Value of Assets
(Investment Return > 6/30/11 Varies)**

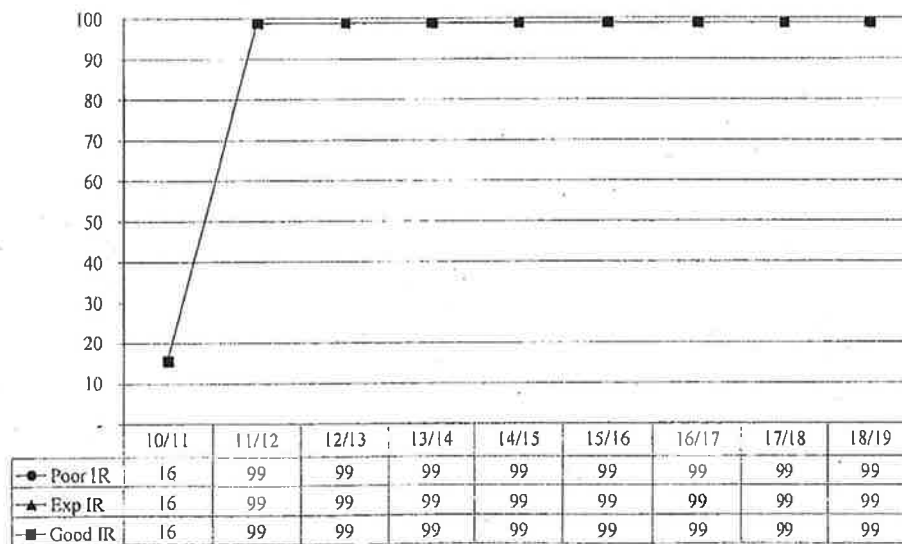


January 23, 2012



UAL Amortization Period (Number of Years) Safety

**Based on Market Value of Assets
(Investment Return > 6/30/11 Varies)**



January 23, 2012



Contribution Policy

- Consider policy implications of not increasing CalPERS contributions:
 - UAL not being paid off
 - Generational shift of Unfunded Liability
- Similar to minimum payment on credit card balance



January 23, 2012

55



Contribution Policy

- Consider one of the following:
 - **Adjust contribution to get rate close to rate prior to asset smoothing modification**
 - Requires changing amortization period each year
 - Asking CalPERS to use "Fresh Start"
 - Higher rates 2011/12 and beyond
 - **Use one time money to buy down the UAL**
 - Requires discussing with CalPERS before sending money



January 23, 2012

56



POB (Millions)
Bond Proceeds Balance

	<u>Safety</u>	<u>Misc.</u>	<u>Total</u>
■ POB @ 2/16/05	\$ 85.7	\$ 311.2	\$ 396.9
■ Earnings to 6/30/05 ⁹	3.8	13.8	17.6
■ Amortization Payment through 6/30/05 ¹⁰	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
■ Balance @ 6/30/05	89.5	325.0	414.5
■ Earnings to 2/15/06 ⁹	6.5	23.7	30.3
■ Amortization Payment through 2/15/06 ¹⁰	<u>(3.4)</u>	<u>(12.2)</u>	<u>(15.6)</u>
■ Balance @ 2/15/06	92.7	336.5	429.2
■ Earnings 2/16 - 6/30/06 ⁹	\$ 4.0	\$ 14.5	\$ 18.5
■ Amortization payment through 6/30/06 ¹⁰	<u>(2.0)</u>	<u>(7.3)</u>	<u>(9.3)</u>
■ Balance @ 6/30/06	94.7	343.7	438.4

⁹ Estimated based on CalPERS market value returns: 12.2% for 04/05, 11.9% for 05/06, 18.8% for 06/07, -5.1% for 07/08, -24.0% for 2008/09, 13.3% for 2009/10, 20.7% for 2010/11, and an estimated 2.3% for 2011/12.

¹⁰ Based on a rolling 30-year amortization except CalPERS 6/30/04 reports show no reduction in 04/05 contribution



January 23, 2012

57



POB (Millions)
Bond Proceeds Balance

	<u>Safety</u>	<u>Misc.</u>	<u>Total</u>
■ Balance @ 6/30/06	94.7	343.7	438.4
■ Earnings 7/1/06 - 2/15/07 ⁹	10.8	39.1	49.9
■ Amortization payment through 2/15/07 ¹⁰	<u>(3.6)</u>	<u>(12.9)</u>	<u>(16.5)</u>
■ Balance @ 2/15/07	101.9	369.9	471.8
■ Earnings 2/16 - 6/30/07 ⁹	6.8	24.7	31.5
■ Amortization payment through 6/30/07 ¹⁰	<u>(2.3)</u>	<u>(8.3)</u>	<u>(10.6)</u>
■ Balance @ 6/30/07	106.4	386.3	492.7
■ Earnings 7/1/07- 2/15/08 ^{9, 11}	(3.4)	(12.4)	(15.9)
■ Amortization payment through 2/15/08 ¹⁰	<u>(4.0)</u>	<u>(14.5)</u>	<u>(18.5)</u>
■ Balance @ 2/15/08	99.0	359.4	458.4
■ Earnings 2/16 - 6/30/08 ⁹	(1.9)	(7.0)	(8.9)
■ Amortization payment through 6/30/08 ¹⁰	<u>(2.2)</u>	<u>(8.1)</u>	<u>(10.3)</u>
■ Balance @ 6/30/08	94.8	344.3	439.1

¹¹ February 4, 2008 discussion outline showed \$37.1 estimated earnings. Adjusted because CalPERS does not credit earnings except at fiscal year end (June 30).



January 23, 2012

58



POB (Millions)
Bond Proceeds Balance

	<u>Safety</u>	<u>Misc.</u>	<u>Total</u>
■ Balance @ 6/30/08	94.8	344.3	439.1
■ Earnings 7/1/08- 2/15/09 ⁹ .	(14.9)	(54.3)	(69.2)
■ Amortization payment through 2/15/09 ¹⁰	(3.6)	(12.9)	(16.5)
■ Balance @ 2/15/09	76.3	277.1	353.4
■ Earnings 2/16 - 6/30/09 ⁹	(7.5)	(27.1)	(34.6)
■ Amortization payment through 6/30/09 ¹⁰	(1.7)	(6.2)	(7.9)
■ Balance @ 6/30/09	67.1	243.8	310.9
■ Earnings 7/1/09- 2/15/10 ⁹ .	5.5	19.8	25.2
■ Amortization payment through 2/15/10 ¹⁰	(2.5)	(9.1)	(11.7)
■ Balance @ 2/15/10	70.1	254.4	324.5
■ Earnings 2/16 - 6/30/10 ⁹	3.4	12.2	15.6
■ Amortization payment through 6/30/10 ¹⁰	(1.6)	(5.7)	(7.3)
■ Balance @ 6/30/10	71.9	260.9	332.7
■ Earnings 7/1/10- 2/15/11 ⁹ .	9.0	32.6	41.5
■ Amortization payment through 2/15/11 ¹⁰	(2.7)	(9.8)	(12.5)
■ Balance @ 2/15/11	78.1	283.6	361.8



January 23, 2012

59



POB (Millions)
Bond Proceeds Balance

	<u>Safety</u>	<u>Misc.</u>	<u>Total</u>
■ Earnings 2/16 - 6/30/11 ⁹	.7	2.4	3.1
■ Amortization payment through 6/30/10 ¹⁰	(2.9)	(10.6)	(13.6)
■ Balance @ 6/30/11	75.9	275.4	351.3
■ Earnings 7/1/11- 2/15/12 ⁹ .	1.1	3.9	5.
■ Amortization payment through 2/15/12 ¹⁰	(2.8)	(10.3)	(13.2)
■ Balance @ 2/15/12	74.1	269.	343.1



January 23, 2012

60



**POB (Millions)
Bond Proceeds Balance**

	<u>Payments</u>			<u>Balance</u>
	<u>Principal</u>	<u>Interest</u>	<u>Total</u>	
■ 2/17/05	n/a	n/a	n/a	\$400.0
■ 8/15/05	n/a	9.4	9.4	400.0
■ 2/15/06	3.2	9.5	12.7	396.8
■ 8/15/06	n/a	9.5	9.5	396.8
■ 2/15/07	4.0	9.5	13.4	392.9
■ 8/15/07	n/a	9.4	9.4	392.9
■ 2/15/08	4.9	9.4	14.3	388.0
■ 8/15/08	n/a	9.3	9.3	388.0
■ 2/15/09	5.9	9.3	15.2	382.1
■ 8/15/09	n/a	9.2	9.2	382.1
■ 2/15/10	7.0	9.2	16.2	375.1
■ 8/15/10	n/a	9.1	9.1	375.1
■ 2/15/11	8.2	9.1	17.2	366.9



January 23, 2012



**POB (Millions)
Bond Proceeds Balance**

	<u>Payments</u>			<u>Principal</u>
	<u>Principal</u>	<u>Interest</u>	<u>Total</u>	
■ 8/15/11	n/a	8.9	8.9	366.9
■ 2/15/12	9.4	8.9	18.3	357.5



January 23, 2012



**POB (Millions)
Estimated Savings**

■ Net Estimated Losses through February 12, 2012:		
A. CalPERS Estimated Balance		\$ 343.1
B. Bond Proceeds Balance		357.5
C. Cash Flow Savings/(Deficit)		
[Payments that would have been paid to CalPERS less POB debt service]		<u>(8.7)</u>
D. Net [(A) – (B) + (C)]		<u>(23.1)</u>
■ Net Estimated Losses through February 12, 2012:		
E. CalPERS Investment Earnings		\$109.7
F. POB Interest Payments		129.7
G. Cost of Issuance		<u>3.1</u>
H. Net [(E) – (F) – (G)]		<u>(23.1)</u>
■ Above estimates based on market rate of return. Savings (losses) based on actuarial rate of return would be higher (lower).		



January 23, 2012



POB (Millions)

		Safety							
		6/30/05	6/30/06	6/30/07	6/30/08	6/30/09	6/30/10	Proj. 6/30/11 ¹²	Proj. 6/30/12 ¹³
(1)	AAL	\$ 1,127	\$ 1,232	\$ 1,370	\$ 1,469	\$ 1,643	\$ 1,810	\$ 1,950	\$ 2,098
(2)	AVA	<u>1,069</u>	<u>1,170</u>	<u>1,291</u>	<u>1,414</u>	<u>1,511</u>	<u>1,625</u>	<u>1,746</u>	<u>1,872</u>
(3)	UAAL [(1) - (2)]	58	62	79	55	132	185	204	226
(4)	Funding Ratio [(2)/(1)]	94.9%	95.0%	94.2%	96.3%	92.0%	89.9%	89.5%	89.2%
(5)	POB Balance	\$ 86	\$ 86	\$ 85	\$ 84	\$ 83	\$ 81	\$ 79	\$ 77
(6)	Net AVA [(2) - (5)]	983	1,084	1,206	1,330	1,428	1,544	1,667	1,795
(7)	Net Funding Ratio [(6)/(1)]	87.2%	88.0%	88.0%	90.5%	86.9%	85.3%	85.5%	85.5%

¹² 6/30/11 CalPERS published rate 20.7%.

¹³ Projected 6/30/12 AVA based on modified asset smoothing method and estimated 2011/12 CalPERS investment return 2.3%, which is based on CalPERS 10/31/11 published rate of return of -2.7%, and 7.75% from 11/1/11 through 6/30/12.



January 23, 2012



POB (Millions)

		Miscellaneous							
		<u>6/30/05</u>	<u>6/30/06</u>	<u>6/30/07</u>	<u>6/30/08</u>	<u>6/30/09</u>	<u>6/30/10</u>	<u>Proj.</u> <u>6/30/11</u> ¹⁴	<u>Proj.</u> <u>6/30/12</u> ¹⁵
(1)	AAL	\$ 2,472	\$ 2,742	\$ 3,029	\$ 3,350	\$ 3,790	\$ 4,097	\$ 4,432	\$ 4,785
(2)	AVA	<u>2,365</u>	<u>2,600</u>	<u>2,894</u>	<u>3,175</u>	<u>3,401</u>	<u>3,662</u>	<u>3,943</u>	<u>4,224</u>
(3)	UAAL [(1) - (2)]	107	142	135	175	389	435	489	561
(4)	Funding Ratio [(2)/(1)]	95.7%	94.8%	95.5%	94.8%	89.7%	89.4%	89.0%	88.3%
(5)	POB Balance	\$ 314	\$ 311	\$ 308	\$ 304	\$ 300	\$ 294	\$ 288	\$ 280
(6)	Net AVA [(2) - (5)]	2,051	2,289	2,586	2,871	3,101	3,368	3,655	3,944
(7)	Net Funding Ratio [(6)/(1)]	83.0%	83.5%	85.4%	85.7%	81.8%	82.2%	82.5%	82.4%

¹⁴ 6/30/11 CalPERS published rate 20.7%.

¹⁵ Projected 6/30/12 AVA based on modified asset smoothing method and estimated 2011/12 CalPERS investment return 2.3%, which is based on CalPERS 10/31/11 published rate of return of -2.7%, and 7.75% from 11/1/11 through 6/30/12.



January 23, 2012



POB (Millions)

		Total							
		<u>6/30/05</u>	<u>6/30/06</u>	<u>6/30/07</u>	<u>6/30/08</u>	<u>6/30/09</u>	<u>6/30/10</u>	<u>Proj.</u> <u>6/30/11</u> ¹⁶	<u>Proj.</u> <u>6/30/12</u> ¹⁷
(1)	AAL	\$ 3,599	\$ 3,974	\$ 4,399	\$ 4,819	\$ 5,433	\$ 5,907	\$ 6,382	\$ 6,883
(2)	AVA	<u>3,434</u>	<u>3,770</u>	<u>4,185</u>	<u>4,589</u>	<u>4,912</u>	<u>5,287</u>	<u>5,689</u>	<u>6,096</u>
(3)	UAAL [(1) - (2)]	165	204	214	230	521	620	693	787
(4)	Funding Ratio [(2)/(1)]	95.4%	94.9%	95.1%	95.2%	90.4%	89.5%	89.1%	88.6%
(5)	POB Balance	\$ 400	\$ 397	\$ 393	\$ 388	\$ 383	\$ 375	\$ 367	\$ 358
(6)	Net AVA [(2) - (5)]	3,034	3,373	3,792	4,201	4,529	4,912	5,322	5,738
(7)	Net Funding Ratio [(6)/(1)]	84.3%	84.9%	86.2%	87.2%	83.4%	83.2%	83.4%	83.4%

¹⁶ 6/30/11 CalPERS published rate 20.7%.

¹⁷ Projected 6/30/12 AVA based on modified asset smoothing method and estimated 2011/12 CalPERS investment return 2.3%, which is based on CalPERS 10/31/11 published rate of return of -2.7%, and 7.75% from 11/1/11 through 6/30/12.



January 23, 2012



CalPERS Smoothing Method

	<u>Unmodified</u>	<u>Modified</u>
6/30/2009:		
Market Value	100.0%	100.0%
Actuarial Value	120.0%	137.0%
6/30/2010:	13.3%	13.3%
Market Value	113.3%	113.3%
Actuarial Value:		
1. Project @ 7.75%	129.3%	147.6%
2. Adjust: [(MV-AV) x (1/15)]	128.2%	145.3%
3. Limited by corridor [Unmodified: 120%, Modified: 130%]	128.2%	145.3%
Actuarial Rate of Return	6.9%	6.1%
Ratio of Actuarial Value to Market Value	113.2%	128.2%



January 23, 2012



CalPERS Smoothing Method

Actuarial Asset Values	<u>Unmodified</u>	<u>Modified</u>
● Project Assets forward	7.75%	7.75%
● Asset Gain/Losses Recognized	15 Years	15 Years
● Ratio of Actuarial to Market Value of Assets	80-120%	60-140%
Actuarial Asset Methods		
● Amortization		
○ Years	30 Years	30 Years
○ Factor	6%	6%
● Minimum	Normal Cost less 30 Year Amortization of Surplus	Normal Cost less 30 Year Amortization of Surplus



January 23, 2012





**COUNTY OF RIVERSIDE
MISCELLANEOUS AND SAFETY PLANS**

**CalPERS Actuarial Issues – 6/30/10 Valuation
Preliminary Results**

Presented by **John E. Bartel, President**
Prepared by Bianca Lin, Assistant Vice President & Actuary
Tina Haugbro, Actuarial Analyst
Bartel Associates, LLC

May 29, 2012

Agenda

<u>Topic</u>	<u>Page</u>
Miscellaneous Plan:	
Contribution Rates & Projections	1
Safety Plan:	
Contribution Rates & Projections	5



**Employer Rate Projections
Miscellaneous**

- **Market Value Investment Return:**
 - June 30, 2010 13.3%
 - June 30, 2011 21.7%¹
 - June 30, 2012 ²
 - Poor Investment Ret: ≈ 1.4%
 - Expected Investment Ret: ≈ 3.9%
 - Good Investment Ret ≈ 6.2%
 - June 30, 2013 - 2015
 - Poor Investment Ret: ≈ 0.2%-3.4%
 - Expected Investment Ret: ≈ 7.5%
 - Good Investment Ret ≈ 11.6%-15.1%
- **No Other: Gains or Losses, Method or Assumption Changes or Benefit Improvements**
- **Excludes Employer Paid Member Contributions (EPMC)**
- **Impact of 0.25% reduction in price inflation assumption**
 - Assuming phase in over two years
 - 2013/14 0.7%
 - 2014/15+ 1.4%

¹ As reported by CalPERS.

² Based on CalPERS actual return 1.3% through 2/29/12 and various returns for the remaining 4 months.



May 29, 2012



**Employer Rate Projections
Miscellaneous**

This page intentionally left blank.



May 29, 2012



Employer Rate Projections Miscellaneous

Payroll Growth Assumptions

	2010/11	2011/12	2012/13	2013/14	2014/15
County #4 ³	-7.31%	+1.12%	2.23%	4.81%	6.41%

	2015/16	2016/17	2017/18
County #4	6.56%	3.00%	3.00%

Projected PERSable Wages (*000)

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
County #4	\$854,932	\$ 792,479	\$801,358	\$819,474	\$858,890	\$913,932

	2015/16	2016/17	2017/18
County #4	\$973,899	\$1,003,116	\$1,033,210

³ Based on County provided budget costs/savings dated 5/29/12.

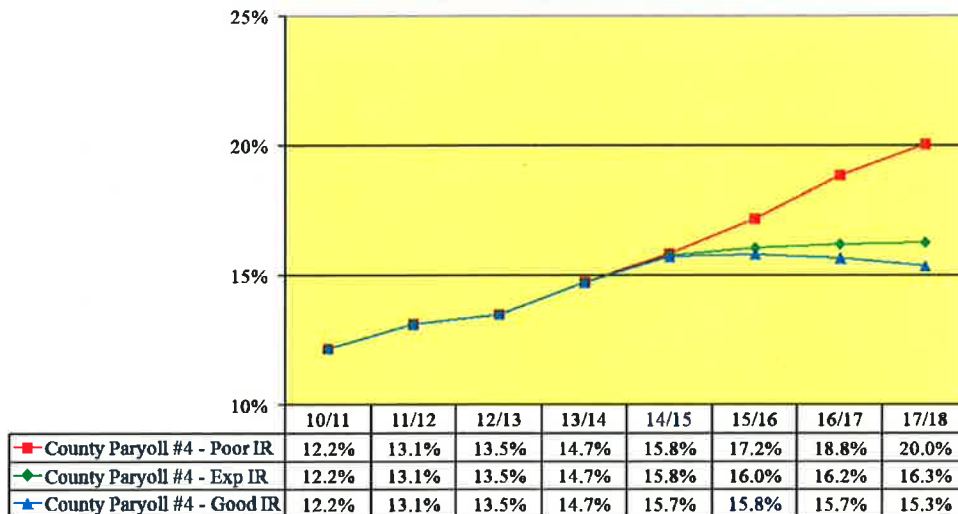


May 29, 2012



Employer Rate Projections Miscellaneous

Investment Return Varies
Miscellaneous Plan Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds But Not Debt Service



May 29, 2012



Employer Rate Projections Safety

- **Market Value Investment Return:**
 - June 30, 2010 13.3%
 - June 30, 2011 21.7%⁴
 - June 30, 2012 ⁵
 - Poor Investment Ret: ≈ 1.4%
 - Expected Investment Ret: ≈ 3.9%
 - Good Investment Ret ≈ 6.2%
 - June 30, 2013 - 2015
 - Poor Investment Ret: ≈ 0.2%-3.4%
 - Expected Investment Ret: ≈ 7.5%
 - Good Investment Ret ≈ 11.6%-15.1%
- **No Other: Gains or Losses, Method or Assumption Changes or Benefit Improvements**
- **Excludes Employer Paid Member Contributions (EPMC)**
- **Impact of 0.25% reduction in price inflation assumption**
 - Assuming phase in over two years
 - 2013/14 1.1%
 - 2014/15+ 2.3%

⁴ As reported by CalPERS.

⁵ Based on CalPERS actual return 1.3% through 2/29/12 and various returns for the remaining 4 months.



May 29, 2012

5



Employer Rate Projections Safety

This page intentionally left blank.



May 29, 2012

6



**Employer Rate Projections
Safety**

Payroll Growth Assumptions

	2010/11	2011/12	2012/13	2013/14	2014/15
County #4 ⁶	-1.13%	-0.43%	3.78%	8.13%	5.16%

	2015/16	2016/17	2017/18
County #4	5.33%	3.00%	3.00%

Projected PERSable Wages

(*000)

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
County #4	\$265,165	\$262,176	\$261,044	\$270,912	\$292,934	\$308,062

	2015/16	2016/17	2017/18
County #4	\$324,473	\$334,207	\$344,234

⁶ Based on County provided budget costs/savings dated 5/29/12

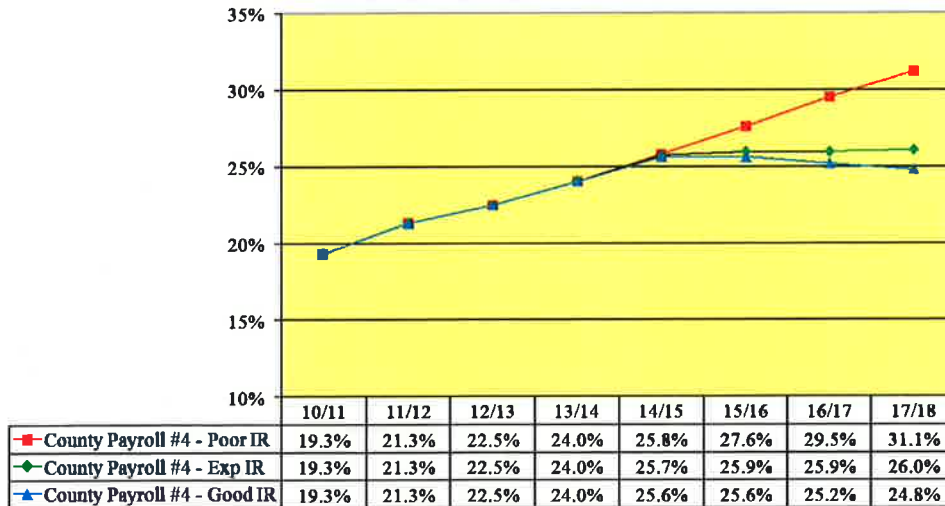


May 29, 2012



**Employer Rate Projections
Safety**

**Investment Return Varies
Safety Plan Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds But Not Debt Service**



May 29, 2012





BARTTEL
ASSOCIATES, LLC

**COUNTY OF RIVERSIDE
MISCELLANEOUS AND SAFETY PLANS**

**CalPERS Actuarial Issues – 6/30/10 Valuation
Preliminary Results**

Presented by **John E. Bartel, President**
Prepared by Bianca Lin, Assistant Vice President & Actuary
Tina Haugbro, Actuarial Analyst
Bartel Associates, LLC

June 5, 2012

Agenda

<u>Topic</u>	<u>Page</u>
Miscellaneous Plan:	
Contribution Rates & Projections	1
Safety Plan:	
Contribution Rates & Projections	13



**Employer Rate Projections
Miscellaneous**

- Market Value Investment Return:
 - June 30, 2010 13.3%
 - June 30, 2011 21.7%¹
 - June 30, 2012² Expected Investment Ret: ≈ 3.9%
 - June 30, 2013 - 2015 Expected Investment Ret: ≈ 7.5%
- No Other: Gains or Losses, Method or Assumption Changes or Benefit Improvements
- Excludes Employer Paid Member Contributions (EPMC)
- Impact of 0.25% reduction in price inflation assumption
 - Assuming phase in over two years
 - 2013/14 0.7%
 - 2014/15+ 1.4%
- 2nd Tier 2% @ 60 effective 10/1/2011

¹ As reported by CalPERS.

² Based on CalPERS actual return 1.3% through 2/29/12 and various returns for the remaining 4 months.



June 5, 2012



**Employer Rate Projections
Miscellaneous**

This page intentionally left blank.



June 5, 2012



**Employer Rate Projections
Miscellaneous**

Payroll Growth Assumptions

	2010/11	2011/12	2012/13	2013/14	2014/15
County #1	-10.00%	-10.00%	3.00%	3.00%	3.00%
County #2	-5.00%	-5.00%	3.00%	3.00%	3.00%
County #3	0.00%	+5.00%	13.50%	3.00%	3.00%
County #4 ³	-7.31%	+1.12%	2.23%	4.81%	6.41%
CalPERS	3.25%	3.00%	3.00%	3.00%	3.00%

	2015/16	2016/17	2017/18
County #1	3.00%	3.00%	3.00%
County #2	3.00%	3.00%	3.00%
County #3	3.00%	3.00%	3.00%
County #4	6.56%	3.00%	3.00%
CalPERS	3.00%	3.00%	3.00%

³ Based on County provided budget costs/savings dated 5/29/12.



June 5, 2012



**Employer Rate Projections
Miscellaneous**

**Projected PERSable Wages
(*000)**

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
County #1	\$854,932	\$769,439	\$692,495	\$713,270	\$734,668	\$756,708
County #2	854,932	812,186	771,576	794,724	818,565	843,122
County #3	854,932	854,932	897,679	1,018,865	1,049,431	1,080,914
County #4 ⁴	854,932	792,479	801,358	819,474	858,890	913,932
CalPERS	854,932	882,717	909,199	936,475	964,569	993,506

	2015/16	2016/17	2017/18
County #1	\$779,409	\$802,792	\$826,875
County #2	868,416	894,468	921,302
County #3	1,113,342	1,146,742	1,181,144
County #4	973,899	1,003,116	1,033,210
CalPERS	1,023,311	1,054,011	1,085,631

⁴ Based on County provided budget costs/savings dated 5/29/12.

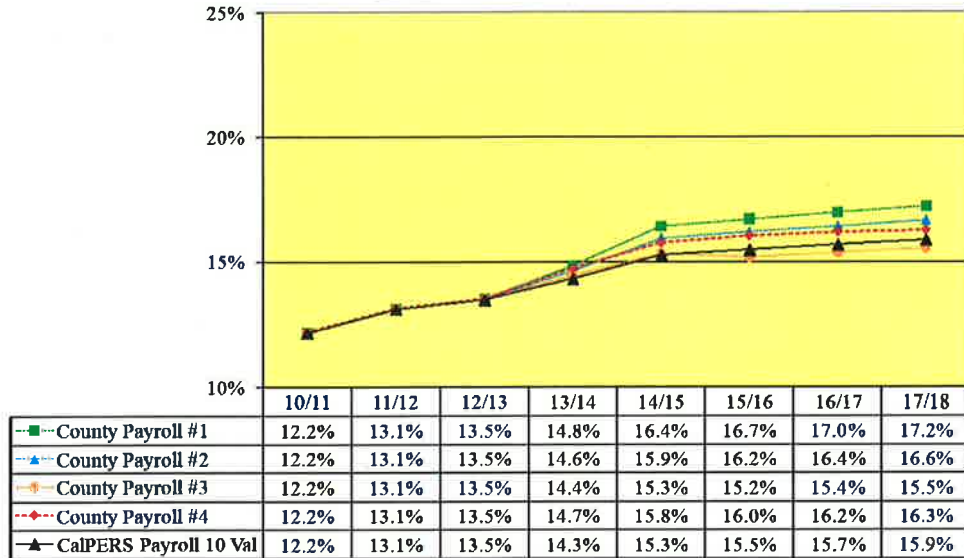


June 5, 2012



Employer Rate Projections Miscellaneous

Expected Investment Return (7.5%)
Miscellaneous Plan Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds But Not Debt Service



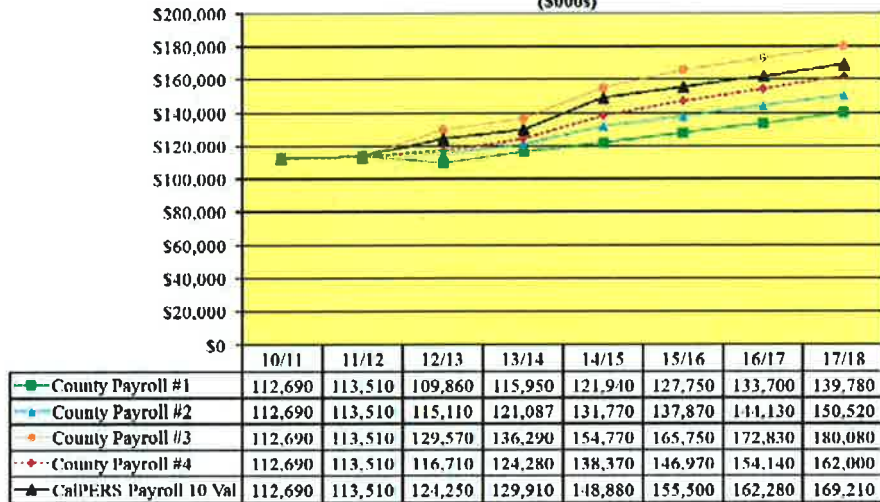
June 5, 2012

5



Employer Rate Projections Miscellaneous

Expected Investment Return (7.5%)
Miscellaneous Plan Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds But Not Debt Service
(\$000s)



- * 10/11 is shown the same as CalPERS reports, without lump sum prepayment.
- 11/12 is based on actual contribution through 5/17/2012 and projected contribution for the last 3 pay period.
- Prepayment percentage is assumed the same as in the 11/12 (52.2%).



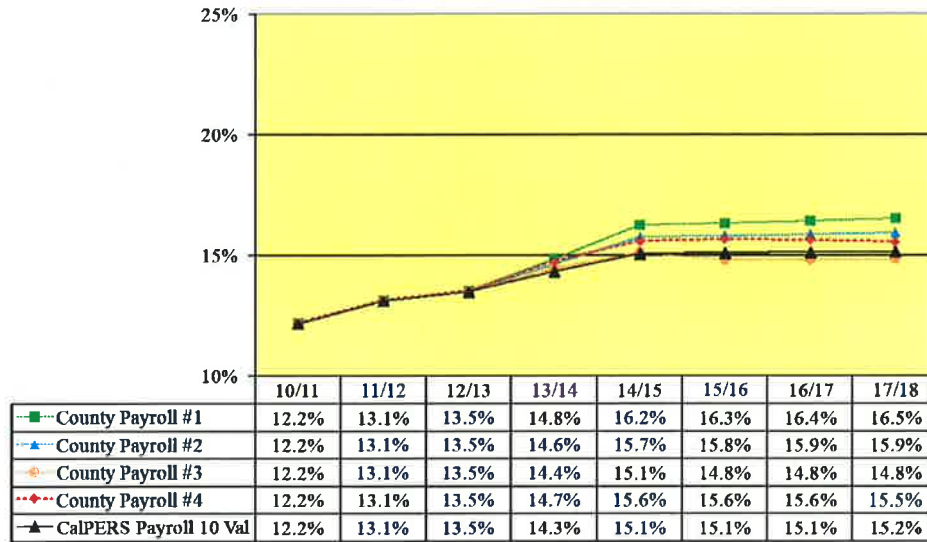
June 5, 2012

6



Employer Rate Projections Miscellaneous

Expected Investment Return (7.5%)
Miscellaneous Plan Tier 1 and Tier 2
Includes POB But Not Debt Service

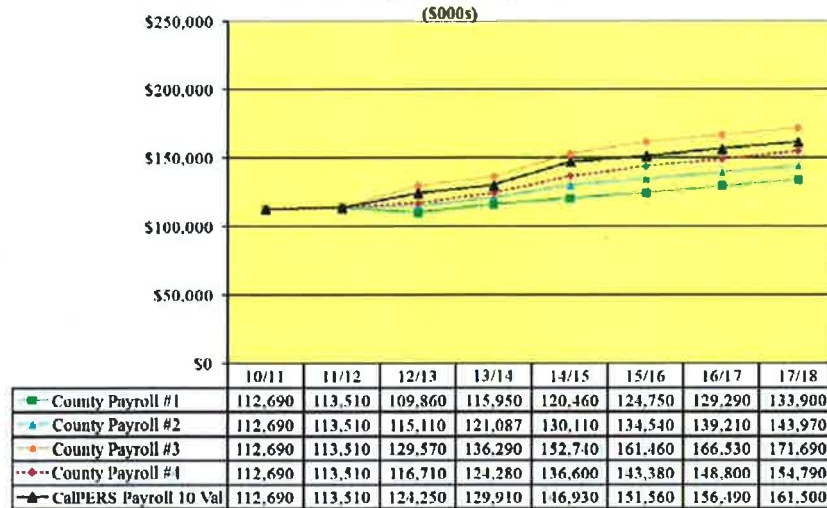


June 5, 2012



Employer Rate Projections Miscellaneous

Expected Investment Return (7.5%)
Miscellaneous Plan Tier 1 and Tier 2
Includes POB But Not Debt Service



* 10/11 is shown the same as CalPERS reports, without lump sum prepayment.
11/12 is based on actual contribution through 5/17/2012 and projected contribution for the last 3 pay period.
Prepayment percentage is assumed the same as in the 11/12 (52.2%).

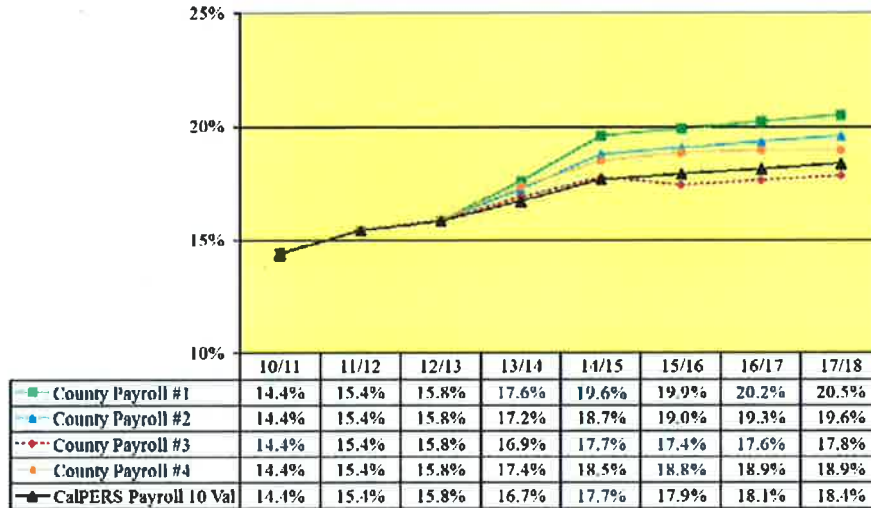


June 5, 2012



Employer Rate Projections Miscellaneous

**Expected Investment Return (7.5%)
Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds And Debt Service**



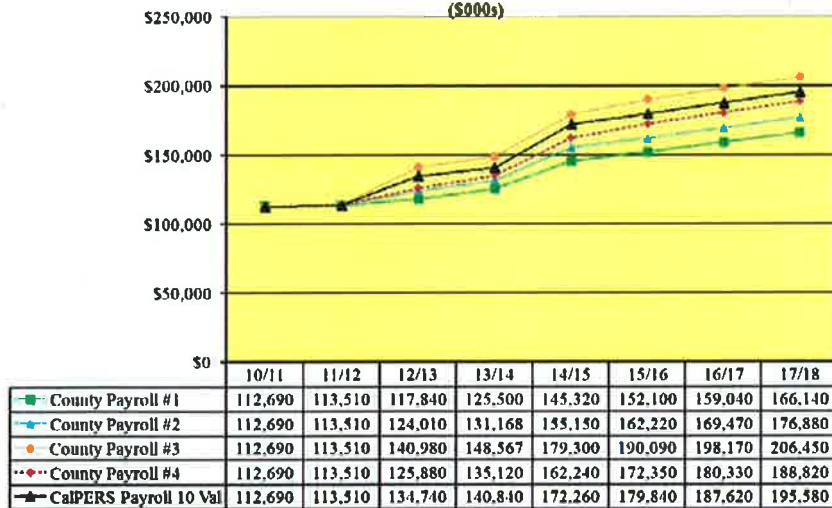
June 5, 2012

9



Employer Rate Projections Miscellaneous

**Expected Investment Return (7.5%)
Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds And Debt Service
(\$000s)**



* 10/11 is shown the same as CalPERS reports, without lump sum prepayment.
11/12 is based on actual contribution through 5/17/2012 and projected contribution for the last 3 pay period.
Prepayment percentage is assumed the same as in the 11/12 (52.2%).



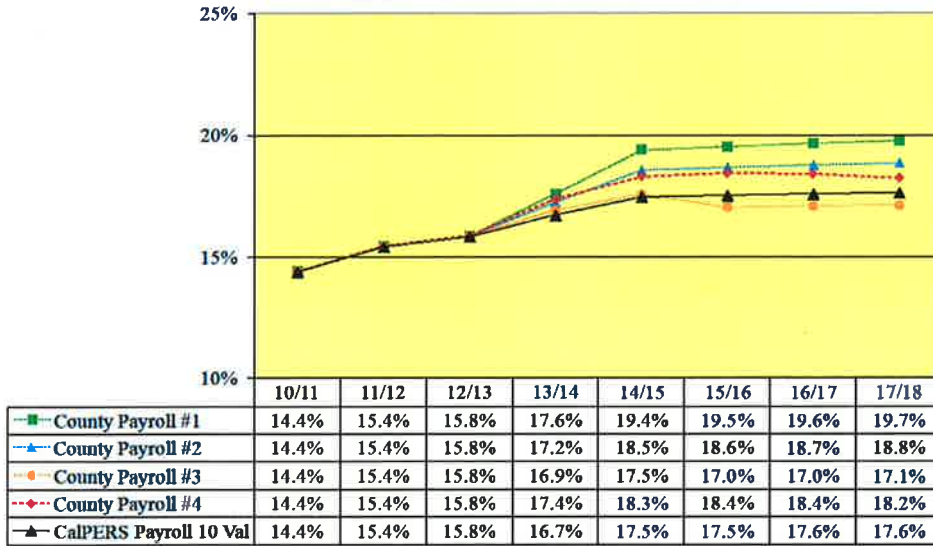
June 5, 2012

10



Employer Rate Projections Miscellaneous

Expected Investment Return (7.5%)
Tier 1 + Tier 2
Includes POB Proceeds And Debt Service



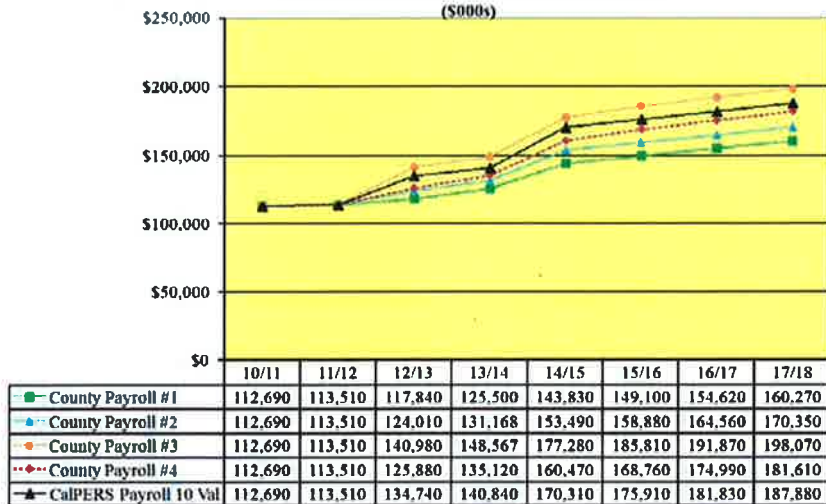
June 5, 2012

11



Employer Rate Projections Miscellaneous

Expected Investment Return (7.5%)
Tier 1 + Tier 2
Includes POB Proceeds And Debt Service



- * 10/11 is shown the same as CalPERS reports, without lump sum prepayment.
11/12 is based on actual contribution through 5/17/2012 and projected contribution for the last 3 pay period.
Prepayment percentage is assumed the same as in the 11/12 (52.2%).



June 5, 2012

12



Employer Rate Projections Safety

- Market Value Investment Return:
 - June 30, 2010 13.3%
 - June 30, 2011 21.7%⁵
 - June 30, 2012⁶ Expected Investment Ret: ≈ 3.9%
 - June 30, 2013 - 2015 Expected Investment Ret: ≈ 7.5%
- No Other: Gains or Losses, Method or Assumption Changes or Benefit Improvements
- Excludes Employer Paid Member Contributions (EPMC)
- Impact of 0.25% reduction in price inflation assumption
 - Assuming phase in over two years
 - 2013/14 1.1%
 - 2014/15+ 2.3%
- 2nd Tier 2% @ 50 effective 10/1/2011

⁵ As reported by CalPERS.

⁶ Based on CalPERS actual return 1.3% through 2/29/12 and various returns for the remaining 4 months.



June 5, 2012

13



Employer Rate Projections Safety

This page intentionally left blank.



June 5, 2012

14



**Employer Rate Projections
Safety**

Payroll Growth Assumptions

	2010/11	2011/12	2012/13	2013/14	2014/15
County #1	-10.00%	-10.00%	3.00%	3.00%	3.00%
County #2	-5.00%	-5.00%	3.00%	3.00%	3.00%
County #3	0.00%	+5.00%	13.50%	3.00%	3.00%
County #4 ⁷	-1.13%	-0.43%	3.78%	8.13%	5.16%
CalPERS	3.25%	3.00%	3.00%	3.00%	3.00%

	2015/16	2016/17	2017/18
County #1	3.00%	3.00%	3.00%
County #2	3.00%	3.00%	3.00%
County #3	3.00%	3.00%	3.00%
County #4	5.33%	3.00%	3.00%
CalPERS	3.00%	3.00%	3.00%

⁷ Based on County provided budget costs/savings dated 5/29/12



June 5, 2012



**Employer Rate Projections
Safety**

**Projected PERSable Wages
(‘000)**

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
County #1	\$265,165	\$238,649	\$214,784	\$221,227	\$227,864	\$ 234,700
County #2	265,165	251,907	239,312	247,089	253,886	261,502
County #3	265,165	265,165	278,424	316,011	325,491	335,256
County #4 ⁸	265,165	262,176	261,044	270,912	292,934	308,062
CalPERS	265,165	273,783	281,997	290,457	299,170	308,145

	2015/16	2016/17	2017/18
County #1	\$241,741	\$248,993	\$256,463
County #2	269,348	277,428	285,751
County #3	345,314	355,673	366,343
County #4	324,473	334,207	344,234
CalPERS	317,390	326,912	336,719

⁸ Based on County provided budget costs/savings dated 5/29/12

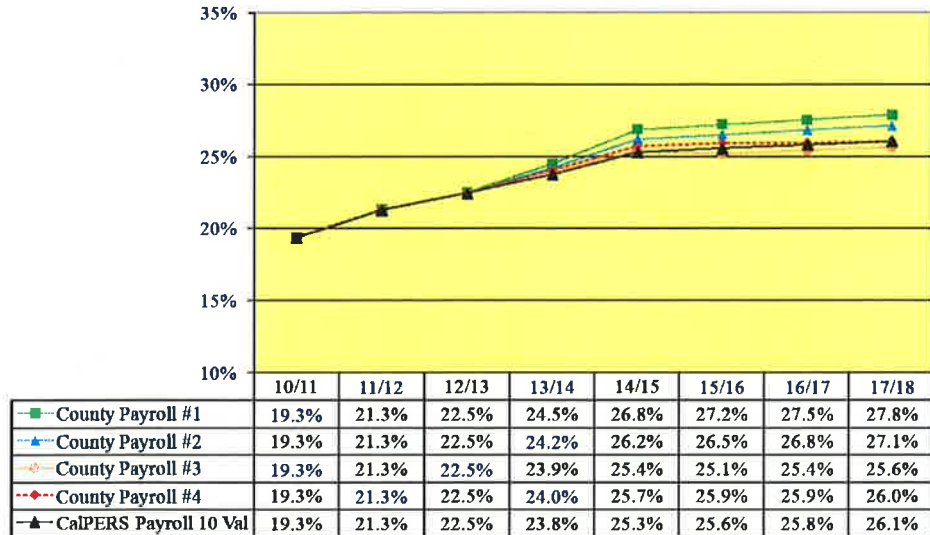


June 5, 2012



Employer Rate Projections Safety

**Expected Investment Return (7.5%)
Safety Plan Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds But Not Debt Service**



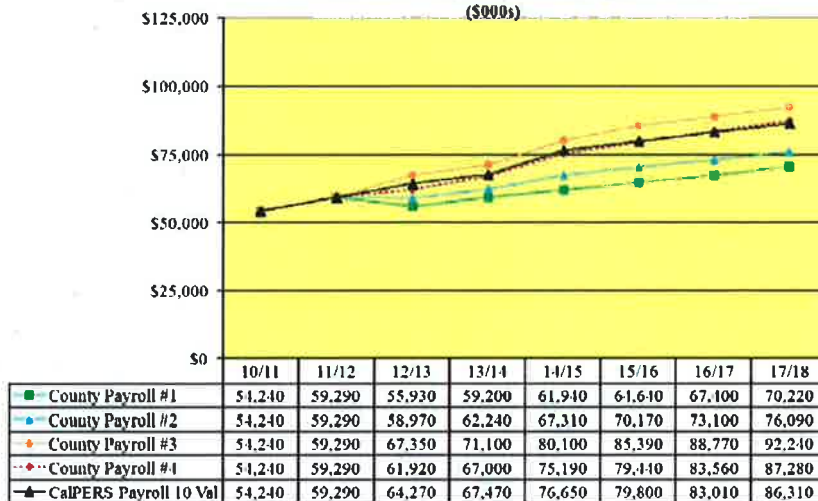
June 5, 2012

17



Employer Rate Projections Safety

**Expected Investment Return (7.5%)
Safety Plan Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds But Not Debt Service**



* 10/11 is shown the same as CalPERS reports, without lump sum prepayment.
11/12 is based on actual contribution through 5/17/2012 and projected contribution for the last 3 pay period.
Prepayment percentage is assumed the same as in the 11/12 (46.3%).



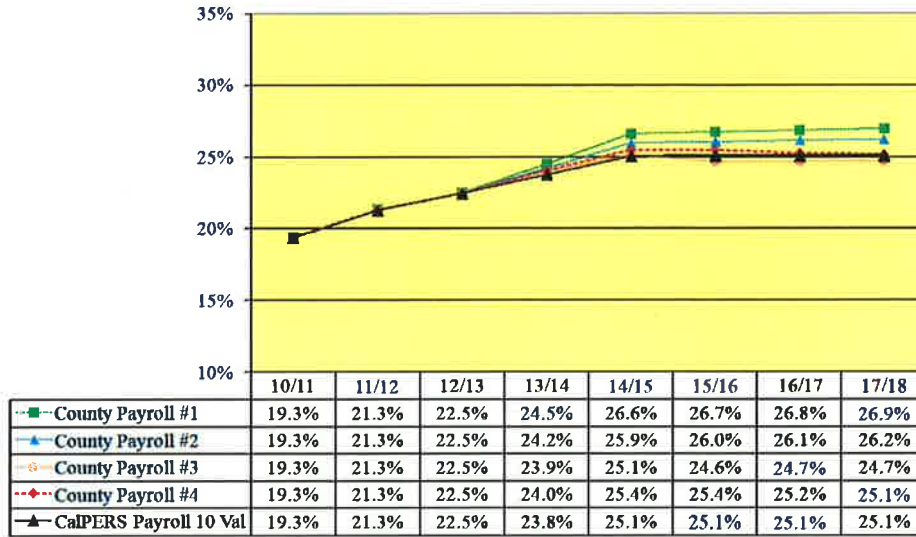
June 5, 2012

18



Employer Rate Projections Safety

Expected Investment Return (7.5%)
Safety Plan Tier 1 and Tier 2
Includes POB Proceeds But Not Debt Service



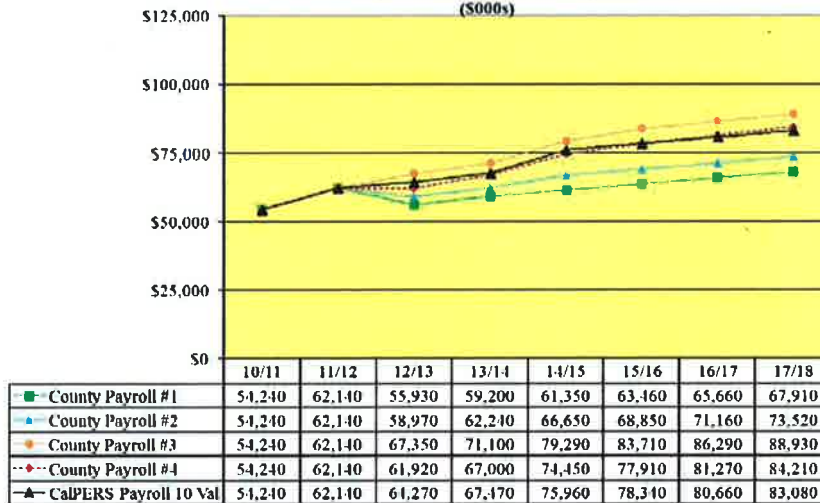
June 5, 2012

19



Employer Rate Projections Safety

Expected Investment Return (7.5%)
Safety Plan Tier 1 and Tier 2
Includes POB Proceeds But Not Debt Service
(\$000s)



* 10/11 is shown the same as CalPERS reports, without lump sum prepayment.
11/12 is based on actual contribution through 5/17/2012 and projected contribution for the last 3 pay period.
Prepayment percentage is assumed the same as in the 11/12 (46.3%).



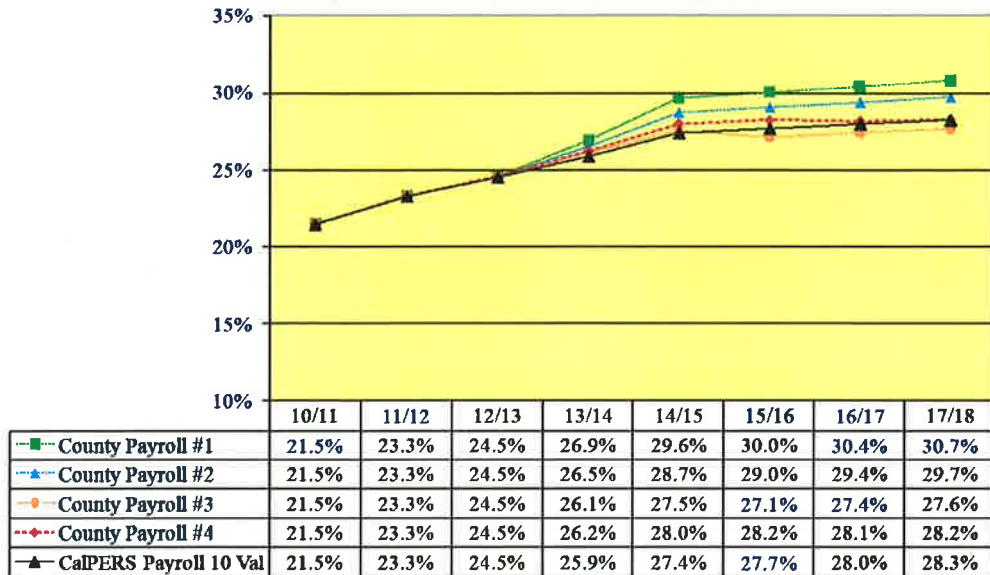
June 5, 2012

20



Employer Rate Projections Safety

Expected Investment Return (7.5%)
Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds And Debt Service



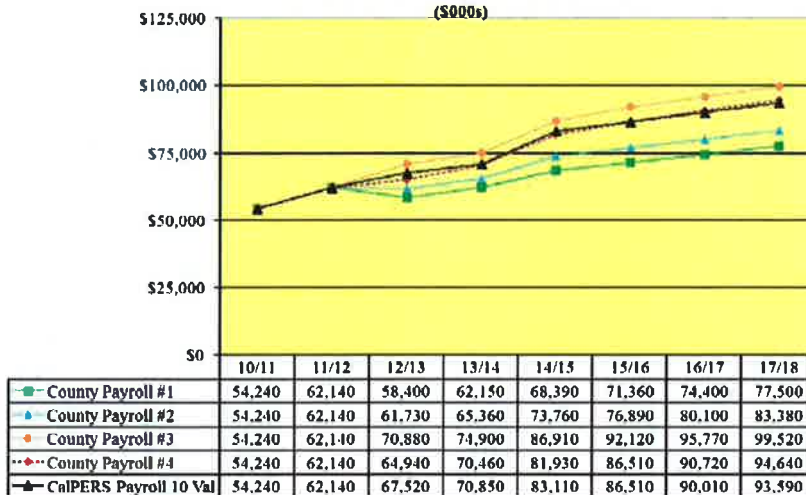
June 5, 2012

21



Employer Rate Projections Safety

Expected Investment Return (7.5%)
Tier 1 Only (Assumes No 2nd Tier)
Includes POB Proceeds And Debt Service
(\$000s)



* 10/11 is shown the same as CalPERS reports, without lump sum prepayment.

11/12 is based on actual contribution through 5/17/2012 and projected contribution for the last 3 pay period. Prepayment percentage is assumed the same as in the 11/12 (46.3%).



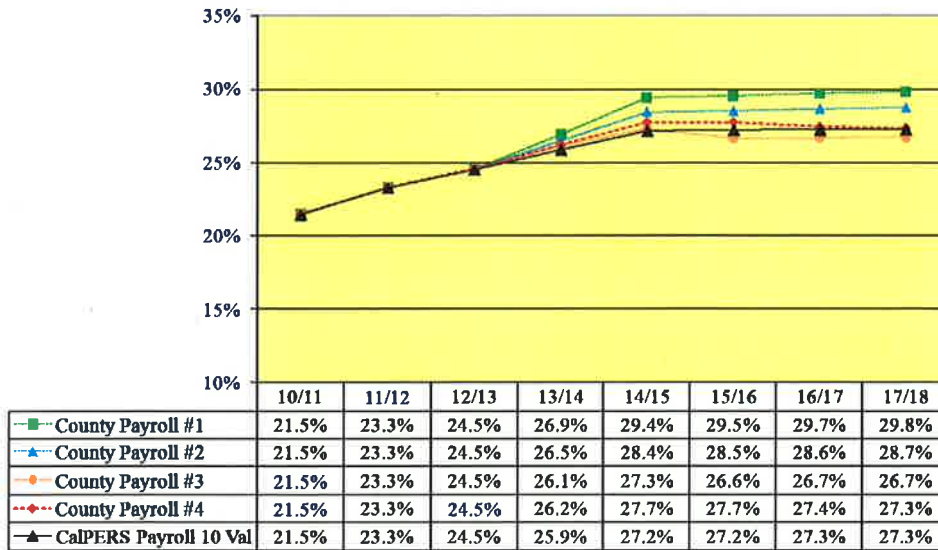
June 5, 2012

22



Employer Rate Projections Safety

**Expected Investment Return (7.5%)
Tier 1 + Tier 2
Includes POB Proceeds And Debt Service**



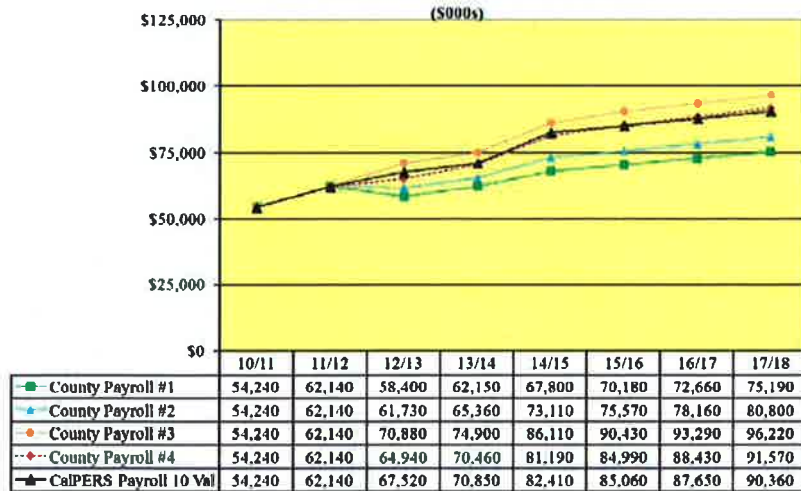
June 5, 2012

23



Employer Rate Projections Safety

**Expected Investment Return (7.5%)
Tier 1 + Tier 2
Includes POB Proceeds And Debt Service**



- * 10/11 is shown the same as CalPERS reports, without lump sum prepayment.
- 11/12 is based on actual contribution through 5/17/2012 and projected contribution for the last 3 pay period. Prepayment percentage is assumed the same as in the 11/12 (46.3%).



June 5, 2012

24

