

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

311



**FROM:** Executive Office

**SUBMITTAL DATE:**  
April 30, 2013

**SUBJECT:** Pension Advisory Review Committee 2013 Annual Pension Report

**RECOMMENDED MOTION:** That the Board of Supervisors:

1. Receive and file the attached FY 2012/13 Annual 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; and,
3. Adopt the recommendation to pre-pay a portion up to two-thirds of the County's FY 2013/14 pension cost if, in the judgment of the County Executive Officer or his designee, if market conditions prove to be favorable.

**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)

 <b>Don Kent</b> County Treasurer/Tax Collector	 <b>Barbara A. Olivier</b> Assistant County Executive Officer Human Resources Director	 <b>Ed Corser</b> County Finance Director
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<b>FINANCIAL DATA</b>	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:	2012-2013

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

**C.E.O. RECOMMENDATION:** **APPROVE**

BY   
**George A. Johnson**

**County Executive Office Signature**

**MINUTES OF THE BOARD OF SUPERVISORS**

On motion of Supervisor Stone, seconded by Supervisor Ashley and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Jeffries, Tavaglione, Stone, Benoit and Ashley  
 Nays: None  
 Absent: None  
 Date: April 30, 2013  
 xc: EO, Treasurer, HR

Kecia Harper-Ihem  
 Clerk of the Board  
 By:   
 Deputy

STAMP: RECEIVED BY AGENCY COMPLEX

**3-1**

Policy ☒ Policy ☒  
 Consent ☐ Consent ☐  
 Dep't Recomm.: Per Exec. Ofc.:

## REPORT SUMMARY

### Funded Status:

The June 30, 2013 projected actuarial funded status for the Miscellaneous Plan, including Pension Obligation Bonds (POB), is expected to be 87 percent funded on an Actuarial Value basis and 75 percent on a Market Value basis. The Safety Plan, including POB, is expected to be 85 percent funded on an Actuarial Value basis and 74 percent on a Market Value basis. PARC Advisor, Bartel Associates, projects a combined Miscellaneous and Safety projected June 30, 2013 Unfunded Accrued Actuarial Liability (UAAL) of \$1.011 billion on an Actuarial Value Basis and POB of \$347 million; while the Actuarial Value of assets net of POB total \$6.084 billion.

### Employer Rate Outlook:

Pension costs continue to trend upward. Employer Contribution rates for the Miscellaneous plan will increase from 13.5 percent of payroll in FY 12/13 to 15.0 percent in FY 13/14. Safety Employer Contribution rates will increase from 22.5 percent in FY 12/13 to 23.4 percent in FY 13/14. The combined increase is projected to be equivalent to \$22 million based on 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 estimated that this change would 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. The Committee elected not to phase in the assumption change for FY 13/14, as employer rates for 2014/15 through 2032/33 will be lower without a phase in than they would be with a phase in. The Miscellaneous plan without the phase in will increase by 0.581 percent in FY 13/14, and the Safety plan without the phase in will increase by 0.766 percent in FY 13/14. This will result in an estimated increase in employer contributions of \$7.1 million in FY 13/14.

In the upcoming months, CalPERS is expected to make several changes that will increase contribution rates beginning July 1, 2015.

### Pension Reform:

Pension reform has been a topic of debate at the local and state level. At the County, the Board of Supervisors took the initiative on pension reform. Due to the recent passage of Assembly Bill (AB) 340, which created the Public Employee's Pension Reform Act (PEPRA), a third tier was added to the County's pension plan. The attached report has additional detail outlining the changes; however, listed below is a table of the changes.

	Plan	EPMC	Earliest Retirement Age	PEPRA Compensation Limits	Final Compensation	Effective Date
<b>County Plan Tier I</b>						
Misc	3% at 60	Yes	50	N/A	12 months	N/A
Safety	3% at 50	Yes	50	N/A	12 months	N/A
<b>County Plan Tier II</b>						
Misc	2% at 60	No	50	N/A	36 months	8/23/2012
Safety	2% at 50	No	50	N/A	36 months	8/23/2012
<b>County Plan Tier III (PEPRA)</b>						
Misc	2% at 62	No	52	\$ 113,700	36 months	01/01/13
Safety	2.7% at 57	No	50	\$ 136,440	36 months	01/01/13

## **Form 11 – Pension Advisory Review Committee Annual Report**

**April 30, 2013**

**Page 3**

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 II 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 II 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 \$70 million. However, the employer contribution rate decrease will occur gradually, in proportion to employees hired in the second and third tiers compared to the first tier. The CalPERS' calculations are consistent with Bartel's FY 2013/14 savings projections.

Also, Employer Paid Member Contributions (EPMC) will be eliminated in 2014 for all represented and unrepresented employees, mostly in a phased approach. It is anticipated that the County will realize approximately \$80 million annual savings once all EPMC payments are eliminated.

### **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. At the end of last fiscal year a payment of \$1 million was made to PERS from this fund. As of the writing of this report, the fund has a balance of \$2.3 million.

### **Annual Prepayment:**

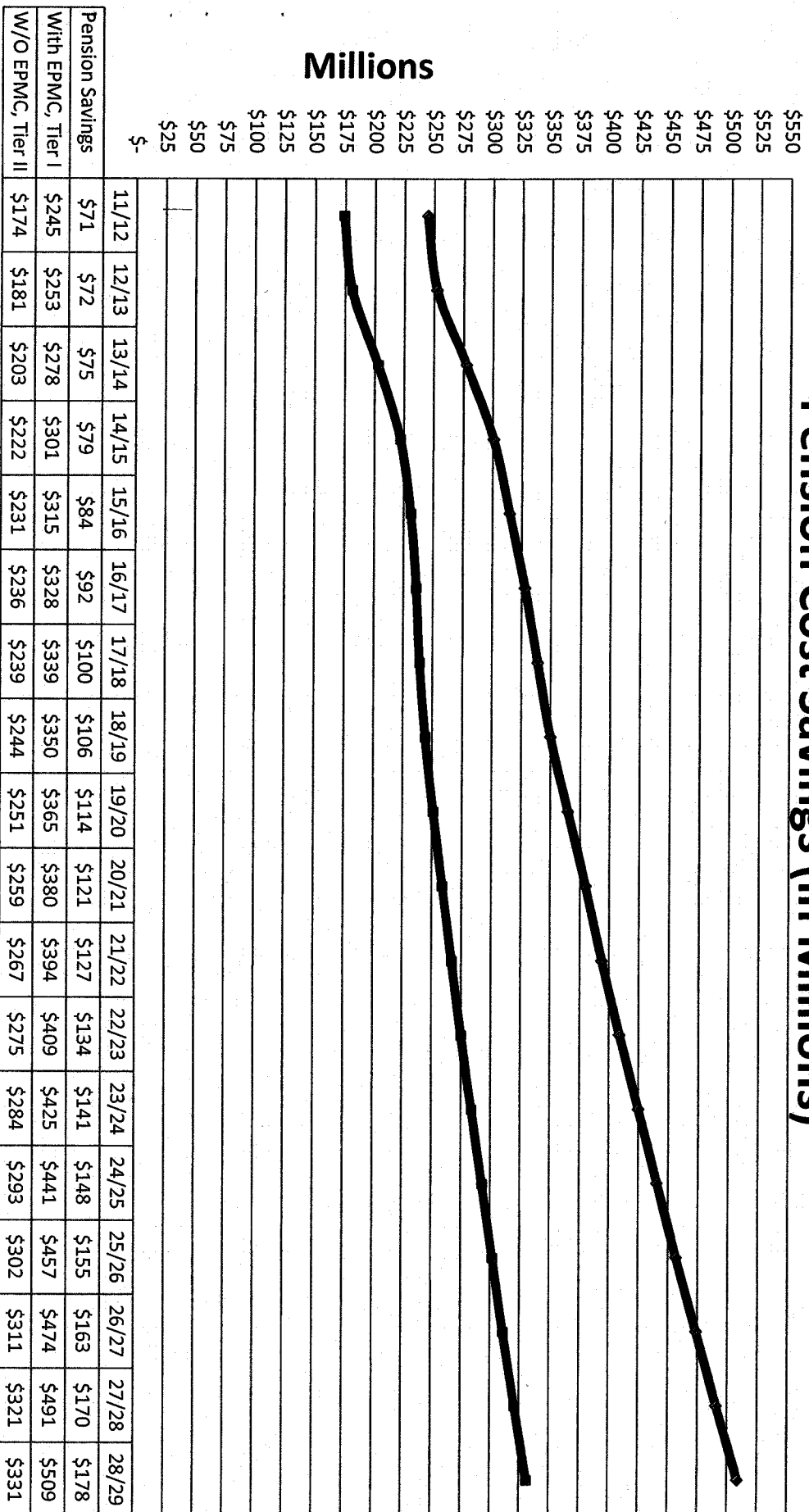
CalPERS offers early payment discounts of 3.75 percent in lieu of periodic payments that coincide with payroll disbursements. PARC first recommended seizing this opportunity in 2004 and expects to continue to do so if market conditions prove to be favorable in funding the pre-payment. The amount we pay is based on up to two-thirds of the County's annual liability. During FY 12/13 the County prepaid \$83 million of its PERS liability. In FY 13/14, we expect to prepay CalPERS \$90 million. We will be calculating the final amount as part of our TRANS financing. If market conditions remain consistent up to the time of the TRANS financing, and the County is able to issue at approximately 0.4 percent with the prepayment savings from CalPERS of approximately 3.75 percent, that will produce a net savings of 3.35 percent, or approximately \$3 million.

### **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 an expected 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.

# Attachment 1

## Pension Cost Savings (in Millions)



With EPMC, Tier I    
 W/O EPMC, Tier II

## Contribution Projections Safety

### ■ Market Value Investment Return:

- June 30, 2011 21.7%
  - June 30, 2012 1.0%<sup>7</sup>
  - June 30, 2013 - 2016
- Poor Investment Return: ≈ 0.2% - 3.4%  
 Expected Investment Ret: ≈ 7.50%/7.25%  
 Good Investment Return: ≈ 11.6% - 15.1%

- #1 – No County pension change. Tier 1 only, County pays EPMC<sup>8</sup>
- #2 – Include all County pension change. Tier 1 & Tier 2, County does not pay EPMC.
- #3 – #2 plus PEPR
- #4 – #3 plus estimated impact on the following changes
  - Mortality improvement
  - Asset smoothing change from 15 years to 5 years
  - Discount rate change from 7.5% to 7.25%
  - First impact on FY14/15
- #1 - #4 based on County payroll #2

<sup>7</sup> Based on CalPERS press release.

<sup>8</sup> Average County paid EPMC 7.6%. Average PERSable EPMC 1.6%.



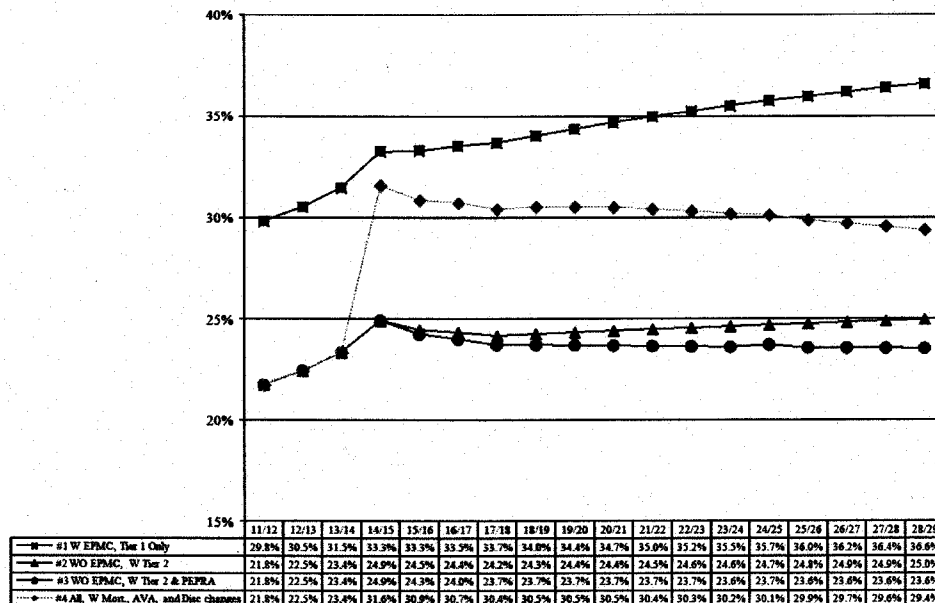
March 27, 2013

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## Contribution Projections Safety

Expected Investment Return (7.50%/7.25%)  
Includes POB Proceeds But Not Debt Service



March 27, 2013

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**Riverside County Board of Supervisors  
Request to Speak**

Submit request to Clerk of Board (right of podium),  
Speakers are entitled to three (3) minutes, subject  
Board Rules listed on the reverse side of this form.

**SPEAKER'S NAME:** 3 Holmstrom

**Address:** \_\_\_\_\_  
(only if follow-up mail response requested)

**City:** \_\_\_\_\_ **Zip:** \_\_\_\_\_

**Phone #:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Agenda #** 3-1

**PLEASE STATE YOUR POSITION BELOW:**

**Position on "Regular" (non-appealed) Agenda Item:**

\_\_\_\_\_ **Support**      \_\_\_\_\_ **Oppose**      \_\_\_\_\_ **Neutral**

**Note:** If you are here for an agenda item that is filed  
for "Appeal", please state separately your position on  
the appeal below:

\_\_\_\_\_ **Support**      \_\_\_\_\_ **Oppose**      \_\_\_\_\_ **Neutral**

**I give my 3 minutes to:** \_\_\_\_\_

## **BOARD RULES**

### **Requests to Address Board on "Agenda" Items:**

You may request to be heard on a published agenda item. Requests to be heard must be submitted to the Clerk of the Board before the scheduled meeting time.

### **Requests to Address Board on items that are "NOT" on the Agenda:**

Notwithstanding any other provisions of these rules, member of the public shall have the right to address the Board during the mid-morning "Oral Communications" segment of the published agenda. Said purpose for address must pertain to issues which are under the direct jurisdiction of the Board of Supervisors. YOUR TIME WILL BE LIMITED TO THREE (3) MINUTES.

### **Power Point Presentations/Printed Material:**

Speakers who intend to conduct a formalized Power Point presentation or provide printed material must notify the Clerk of the Board's Office by 12 noon on the Monday preceding the Tuesday Board meeting, insuring that the Clerk's Office has sufficient copies of all printed materials and at least one (1) copy of the Power Point CD. Copies of printed material given to the Clerk (by Monday noon deadline) will be provided to each Supervisor. If you have the need to use the overhead "Elmo" projector at the Board meeting, please insure your material is clear and with proper contrast, notifying the Clerk well ahead of the meeting, of your intent to use the Elmo.

### **Individual Speaker Limits:**

**Individual speakers are limited to a maximum of three (3) minutes.** Please step up to the podium when the Chairman calls your name and begin speaking immediately. Pull the microphone to your mouth so that the Board, audience, and audio recording system hear you clearly. Once you start speaking, the "green" podium light will light. The "yellow" light will come on when you have one (1) minute remaining. When you have 30 seconds remaining, the "yellow" light will begin flash, indicating you must quickly wrap up your comments. Your time is up when the "red" light flashes. The Chairman adheres to a strict three (3) minutes per speaker. ***Note: If you intend to give your time to a "Group/Organized Presentation", please state so clearly at the very bottom of the reverse side of this form.***

### **Group/Organized Presentations:**

Group/organized presentations with more than one (1) speaker will be limited to nine (9) minutes at the Chairman's discretion. The organizer of the presentation will automatically receive the first three (3) minutes, with the remaining six (6) minutes relinquished by other speakers, as requested by them on a completed "Request to Speak" form, and clearly indicated at the front bottom of the form.

### **Addressing the Board & Acknowledgement by Chairman:**

The Chairman will determine what order the speakers will address the Board, and will call on all speakers in pairs. The first speaker should immediately step to the podium and begin addressing the Board. The second speaker should take up a position in one of the chamber aisles in order to quickly step up to the podium after the preceding speaker. This is to afford an efficient and timely Board meeting, giving all attendees the opportunity to make their case. Speakers are prohibited from making personal attacks, and/or using coarse, crude, profane or vulgar language while speaking to the Board members, staff, the general public and/or meeting participants. Such behavior, at the discretion of the Board Chairman may result in removal from the Board Chambers by Sheriff Deputies.

# 2013

## **Pension Advisory Review Committee**



## **2013 Annual Pension Report**



## ANNUAL PARC REPORT

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 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. (Attachment 2). It also includes the latest CalPERS' Valuation Reports for Miscellaneous and Safety (Attachments 3 and 4).

**1. Funding Status:** The June 30, 2013 projected actuarial funded status for:

- a. The Miscellaneous Plan, including Pension Obligation Bonds (POB), is expected to be 87 percent.
- b. The Safety Plan, including POB, is expected to be 85 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 option is to place additional funds into the pension plan, which would reduce the unfunded liability.

**2. Employer Rate Outlook:** Pension costs continue to trend upward. Employer Contribution rates for the Miscellaneous plan will increase from 13.5 percent of payroll in FY 12/13 to 15.0 percent in FY 13/14. Safety Employer Contribution rates will increase from 22.5 percent in FY 12/13 to 23.4 percent in FY 13/14. The combined increase is projected to be equivalent to \$22 million based on 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 estimated that this change would 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. The Committee elected not to phase in the assumption change for FY 13/14, as employer rates for 2014/15 through 2032/33 will be lower without a phase in than they would be with a phase in. The Miscellaneous plan without the phase in will increase by 0.581 percent in FY 13/14, and the Safety plan without the phase in will increase by 0.766 percent in FY 13/14. This will result in an estimated increase in employer contributions of \$7.1 million in FY 13/14.

In the upcoming months, CalPERS is expected to make several changes that will increase contribution rates beginning July 1, 2015.

- 3. Pension Reform:** For some time, pension reform has been a topic of debate at local and national levels. Riverside County took the lead in initiating pension reform with its bargaining units. As a result of bargaining, employees of the County took on the responsibility of paying their Employee Paid Member Contribution (EPMC) and a new Tier, effective August 23, 2012, was added in both the Miscellaneous and Safety units of the County. At the same time, Governor Brown initiated proposals that resulted in changes to the pension benefits. The recent passage of Assembly Bill (AB) 340 created the Public Employees' Pension Reform Act (PEPRA) that implemented new lower benefit formulas, final compensation periods, and new contribution requirements for new employees hired on or after January 1, 2013 who meet the definition of a new member under PEPRA. The lower benefit formula for Tier III is 2% at 62 for Miscellaneous and 2.7% at 57 for Safety. Employee contribution rates for Tier III vary based on PEPRA rules. Listed below is a table with the new options and the important changes.

	Plan	EPMC	Earliest Retirement Age	PEPRA Compensation Limits	Final Compensation	Effective Date
<b>County Plan Tier I</b>						
Misc	3% at 60	Yes	50	N/A	12 months	N/A
Safety	3% at 50	Yes	50	N/A	12 months	N/A
<b>County Plan Tier I with Tier II</b>						
Misc	2% at 60	No	50	N/A	36 months	8/23/12
Safety	2% at 50	No	50	N/A	36 months	8/23/12
<b>County Plan Tier I, Tier II and Tier III (PEPRA)</b>						
Misc	2% at 62	No	52	\$ 113,700	36 months	01/01/13
Safety	2.7% at 57	No	50	\$ 136,440	36 months	01/01/13

At the end of this report is a chart (Attachment 1) showing the pension costs if no action was taken and the changes in rates as a result of the action taken by the Board of Supervisors.

- 4.** At the County, the Board of Supervisors took the initiative on pension reform. With the Board's direction, collective bargaining negotiations have been completed, with all employee unions to implement a Tier II (lower benefit) for new employees. Tier II was implemented on August 23, 2012: Miscellaneous members' retirement formula is 2% at 60, and Safety is 2% at 50.

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 II 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 II 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 \$70 million. However, the employer contribution rate decrease will occur gradually, in proportion to employees hired in the second and third tiers compared to the first tier. The CalPERS' calculations are consistent with Bartel's FY 2013/14 savings projections.

Also, Employer Paid Member Contributions (EPMC) will be eliminated in 2014 for all represented and unrepresented employees, mostly in a phased approach. It is anticipated that the County will realize approximately \$80 million annual savings once all EPMC payments are eliminated.

5. **Pension Obligation Bond (POB):** The remaining POB debt is \$347 million and the bonds have a remaining 22-year life maturity. Bartel's analysis shows that as of February 11, 2013, the County is basically breaking even (the County has a \$5 million net savings) as a result of the sale of the bonds in February 2005. This is a \$23 million improvement compared to last year's report. 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). So long as CalPERS comes close to their return target, we can expect that the bonds over the remaining life will produce savings.
6. **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. At the end of last fiscal year a payment of \$1 million was made to PERS from this fund. As of the writing of this report, the fund has a balance of \$2.3 million.
7. **Annual Prepayment:** CalPERS offers early payment discounts of 3.75 percent 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 pre-payment. The amount we pay is based on up to two-thirds of the County's annual liability. During FY 12/13 the County prepaid \$83 million of its PERS liability. In FY 13/14, we expect to prepay CalPERS \$90 million. We will be calculating the final amount as part of our TRANS financing. The County is able to issue TRANS at approximately 0.4 percent in interest costs and the prepayment savings from CalPERS are at approximately 3.75 percent which is approximately \$3 million.
8. **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 an expected 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:**

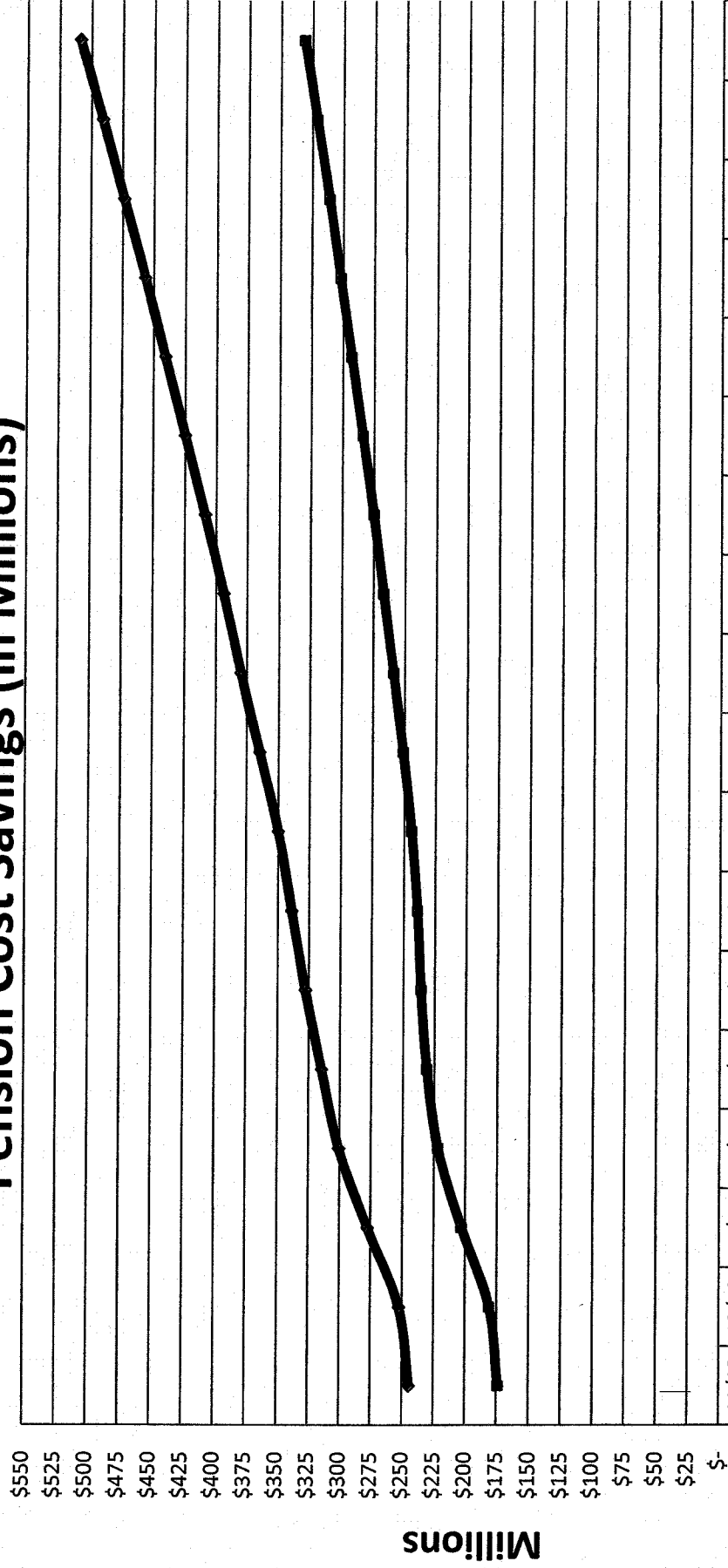
1. Receive and file the 2013 PARC Annual Pension Report.
2. Adopt the recommendation to use the money in the Liability Management Fund to reduce the County's CalPERS liability by transferring the funds to CalPERS. Adopt the recommendation to pre-pay a portion up to two-thirds of the County's FY 2013/14 pension cost if, in the judgment of the County Executive Officer or his designee, market conditions prove to be favorable.

**Appendices:**

- 
1. *Pension Savings Chart*
  2. *Bartel Associates CalPERS Actuarial Issues – 6/30/11 Valuation- February 25, 2013*
  3. *CalPERS 06/30/11 Miscellaneous Actuarial Valuation Reports*
  4. *CalPERS 06/30/11 Safety Actuarial Valuation Reports*

# Attachment 1

## Pension Cost Savings (in Millions)



Pension Savings	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29
With EPMC, Tier I	\$245	\$253	\$278	\$301	\$315	\$328	\$339	\$350	\$365	\$380	\$394	\$409	\$425	\$441	\$457	\$474	\$491	\$509
W/O EPMC, Tier II	\$174	\$181	\$203	\$222	\$231	\$236	\$239	\$244	\$251	\$259	\$267	\$275	\$284	\$293	\$302	\$311	\$321	\$331

With EPMC, Tier I
 W/O EPMC, Tier II



**COUNTY OF RIVERSIDE  
MISCELLANEOUS AND SAFETY PLANS**

**CalPERS Actuarial Issues – 6/30/11 Valuation  
Preliminary Results**

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

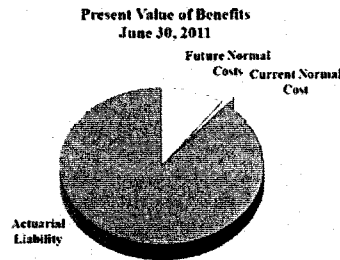
March 27, 2013

**Agenda**

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## Definitions



- **PVB - Present Value of all Projected Benefits:**
  - Discounted value (at valuation date - 6/30/11), 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

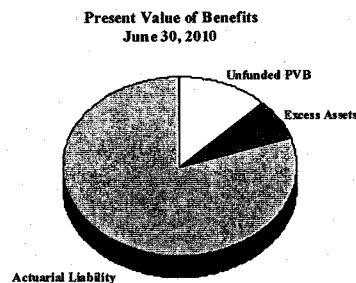


March 27, 2013

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## 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.



March 27, 2013

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### Summary of Demographic Information – Miscellaneous

	1994	2003	2010	2011
<b>Actives</b>				
■ Counts	8,585	12,671	15,446	15,243
■ Average				
• Age	43	43	43	43
• County Service	8	8	9	9
• PERSable Wages	\$34,000	\$42,800	\$55,400	\$53,300
■ Total PERSable Wages (millions)	318.8	596.6	941.0	887.7
<b>Receiving Payments</b>				
■ Counts				
• Service		3,665	6,336	6,923
• Disability		553	585	590
• Beneficiaries		597	789	805
• Total	3,155	4,815	7,710	8,318
■ Average Annual County Provided Benefit <sup>1</sup>				
• Service		\$12,200	\$20,600	\$22,100
• Disability		6,500	8,100	8,500
• Service Retirements in last 5 years		16,800	25,900	27,700

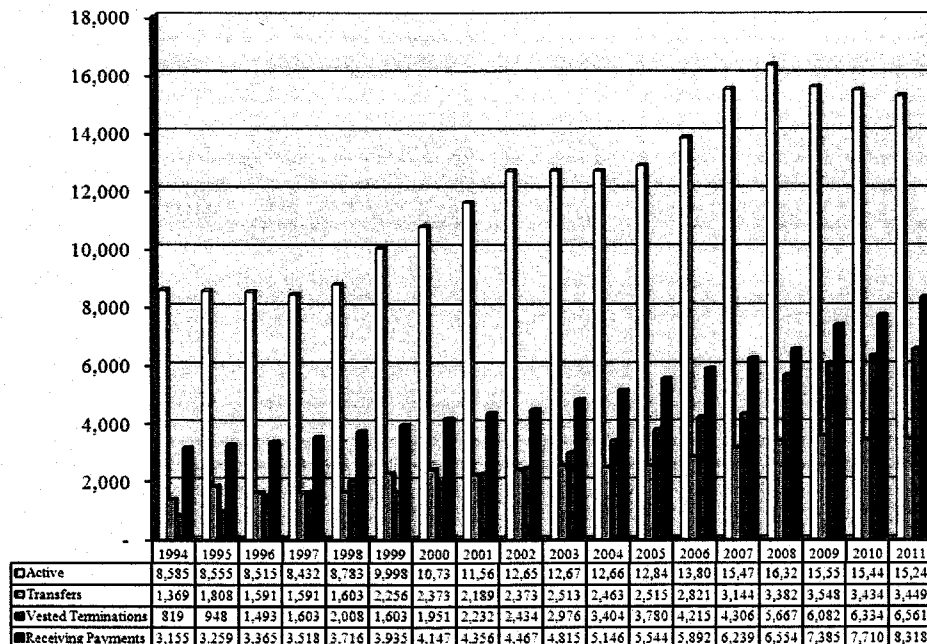
<sup>1</sup> Average County provided pensions are based on County service & County benefit formula, and are not representative of benefits for long service employees.



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### Members Included in Valuation Miscellaneous

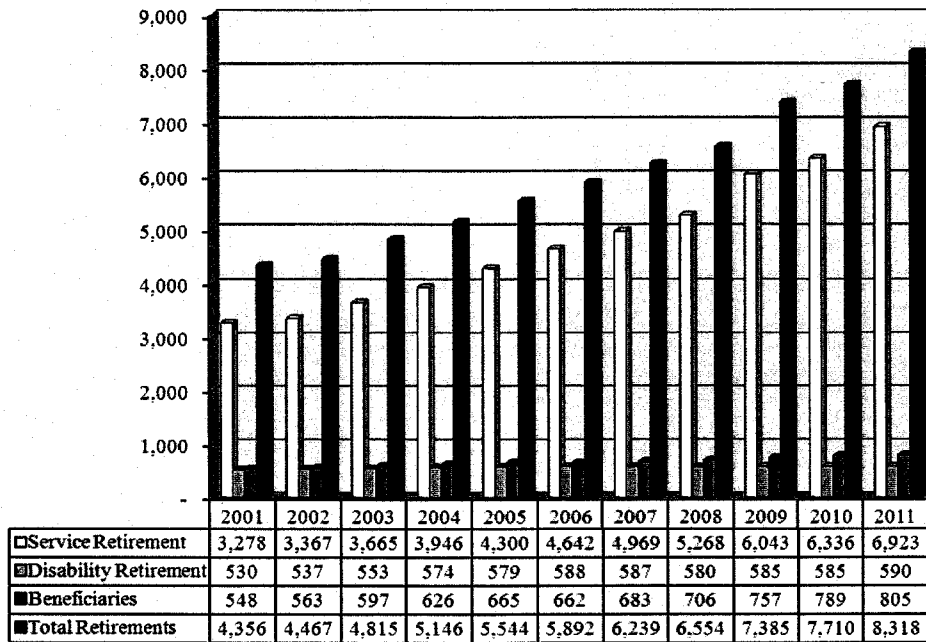


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## Members Receiving Payments Miscellaneous

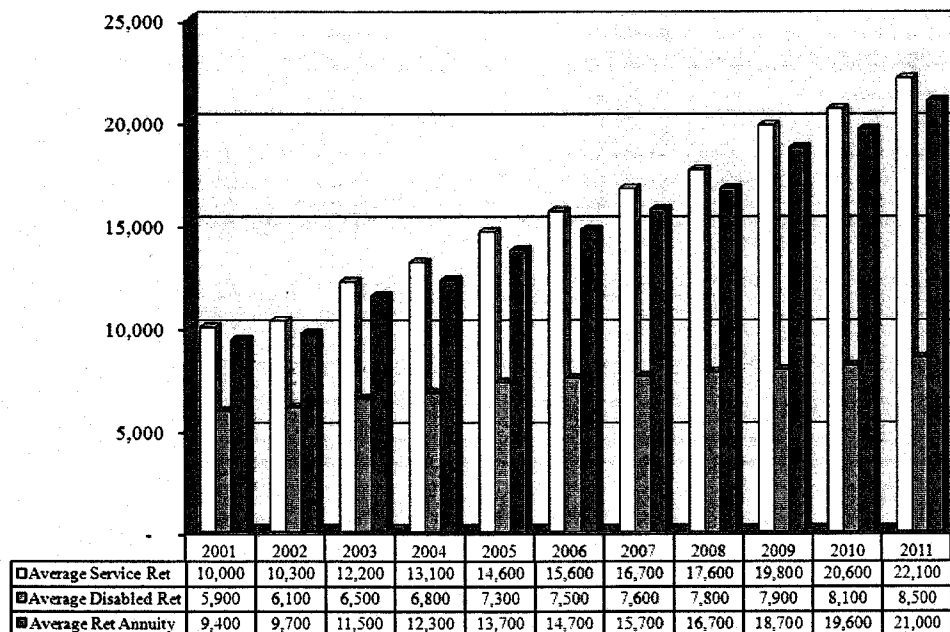


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## Average Annuity Miscellaneous



March 27, 2013

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## Average Annuity Miscellaneous

### Service Retirement Retirees' Benefit

<b>Years Retired</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>Under 5</b>	\$12,349	\$12,462	\$16,831	\$18,135	\$20,680	\$21,383	\$23,154	\$22,930	\$25,452	\$25,933	\$27,660
<b>5-9</b>	11,755	12,175	12,835	13,079	12,996	13,688	13,474	18,143	19,709	22,185	23,731
<b>10-14</b>	9,780	10,414	11,106	11,844	12,261	12,351	12,996	13,308	13,906	14,618	15,147
<b>15-19</b>	8,238	8,486	9,030	9,158	10,059	10,348	10,992	11,832	12,558	12,874	13,274
<b>20-24</b>	4,605	5,780	6,361	7,358	8,098	9,061	9,181	9,818	10,223	10,636	11,402
<b>25-29</b>	3,096	3,176	3,321	3,605	5,336	5,590	6,915	7,442	8,311	8,428	8,992
<b>Over 30</b>	4,564	3,703	4,247	3,610	5,881	5,387	5,242	5,414	5,424	5,372	5,606
<b>All Years</b>	9,982	10,312	12,223	13,099	14,560	15,586	16,664	17,631	19,751	20,628	22,062



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## Average Annuity Miscellaneous

### Service Retirement Retirees' Benefit

<b>Attained Age</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>50-54</b>	\$ 8,352	\$ 8,270	\$11,218	\$10,905	\$13,909	\$15,136	\$15,599	\$15,620	\$19,486	\$19,522	\$21,685
<b>55-59</b>	11,771	11,299	14,832	16,591	17,653	18,881	19,904	20,836	23,886	24,313	26,563
<b>60-64</b>	11,791	12,027	16,809	17,708	19,425	20,574	21,735	22,549	24,770	26,059	27,138
<b>65-69</b>	11,024	11,945	13,184	14,094	15,593	16,628	18,226	19,717	21,406	22,613	23,414
<b>70-74</b>	10,884	10,889	11,224	11,483	12,482	12,874	13,991	14,974	16,200	16,835	18,978
<b>75-79</b>	8,957	9,537	10,418	10,954	11,645	12,257	12,310	12,820	12,882	13,835	14,161
<b>80-84</b>	7,196	7,640	8,304	9,316	10,352	10,510	10,758	11,762	12,590	12,912	14,074
<b>85 &amp; over</b>	5,201	5,645	5,811	6,016	7,409	8,220	8,929	9,524	9,991	10,394	10,533
<b>All Ages</b>	9,982	10,312	12,223	13,099	14,560	15,586	16,664	17,631	19,751	20,628	22,062



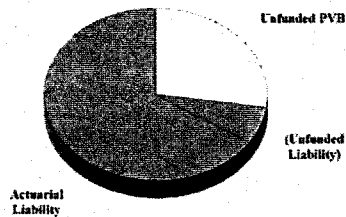
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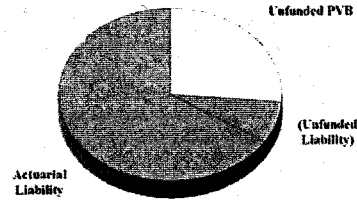


## Plan Funded Status Miscellaneous

Present Value of Benefits  
June 30, 2010



Present Value of Benefits  
June 30, 2011



<u>June 30, 2010</u>		<u>June 30, 2011</u>
\$ 4,097,200,000	Actuarial Liability	\$ 4,461,600,000
3,652,900,000	Actuarial Asset Value	3,923,500,000
(444,300,000)	(Unfunded Liability)	(538,100,000)

<u>June 30, 2010</u>		<u>June 30, 2011</u>
\$ 4,097,200,000	Actuarial Liability	\$ 4,461,600,000
2,882,400,000	Market Asset Value	3,525,600,000
(1,214,800,000)	(Unfunded Liability)	(936,000,000)



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## Plan Funded Status Miscellaneous

- What happened between 6/30/10 and 6/30/11?
  - Market Value Asset Gain/(Loss) ≈ 455.0 million
  - Unfunded Liability (Increase)/Decrease ≈ (93.8) million
- Reasons for Unfunded Liability increase
  - Actuarial Asset gain/(loss): ≈ (28.4) million
    - \$398 million remaining unrecognized asset losses
  - Assumption Change ≈ (82.5) million
  - Golden Handshake ≈ (28.3) million
  - Actuarial gain/(loss): ≈ 52.0 million
    - Average Salary \$55,400 → \$53,300
    - Number of Actives 15,446 → 15,243
    - Number of Inactives 9,768 → 10,010
    - Number of Retirees 7,710 → 8,318
  - Other gain/(loss): ≈ (6.6) million
    - Contributions
    - Other (expected)

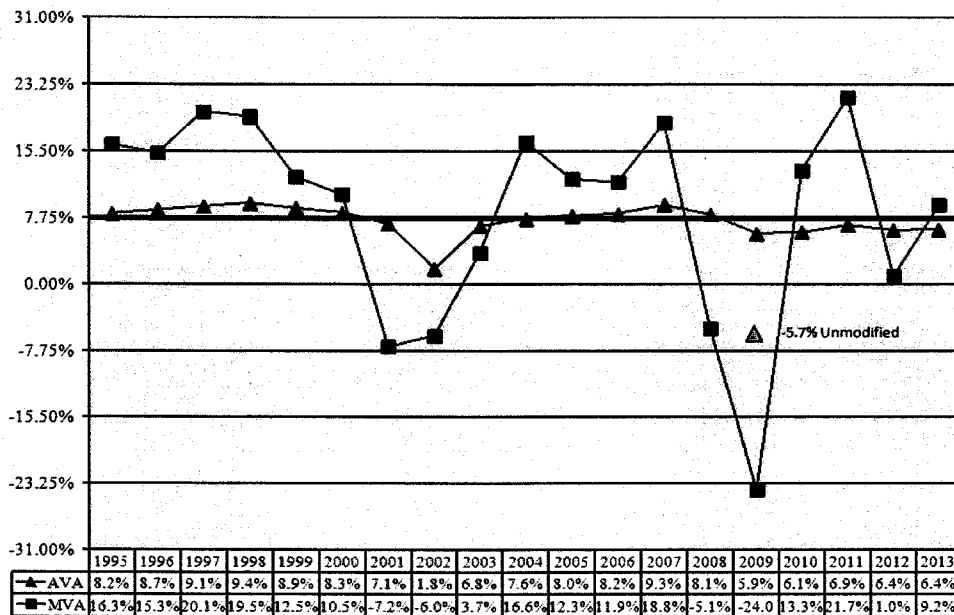


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## Actuarial Investment Return Miscellaneous



Above assumes contributions, payments, etc. received evenly throughout year.  
2013 estimate based on 12/13 return of 4.1% through October 31, 2012



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## 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)%	5.9%
● Gain/(Loss)	(31.8)%	(1.9)%
■ June 30, 2010		
● Return	13.3%	6.1%
● Gain/(Loss)	5.5%	(1.7)%
■ June 30, 2011		
● Return	21.7%	6.9%
● Gain/(Loss)	13.9%	(0.9)%
■ June 30, 2012		
● Return	1.0%	6.4%
● Gain/(Loss)	(6.5)%	(1.1)%

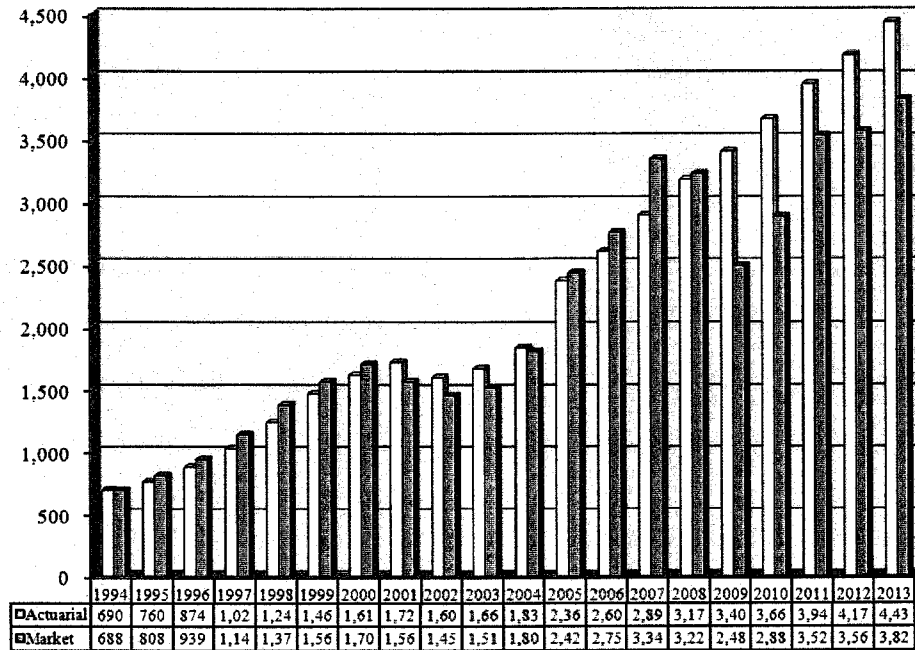
■ Accumulated Market Value Gains/(Losses) through June 30, 2012 ≈ (31.8)%  
[(12.9)% + (31.8)% + 5.5% + 13.9% + (6.5%)]



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## Asset Values (Millions) Miscellaneous



6/30/12 & 6/30/13 asset values estimated.

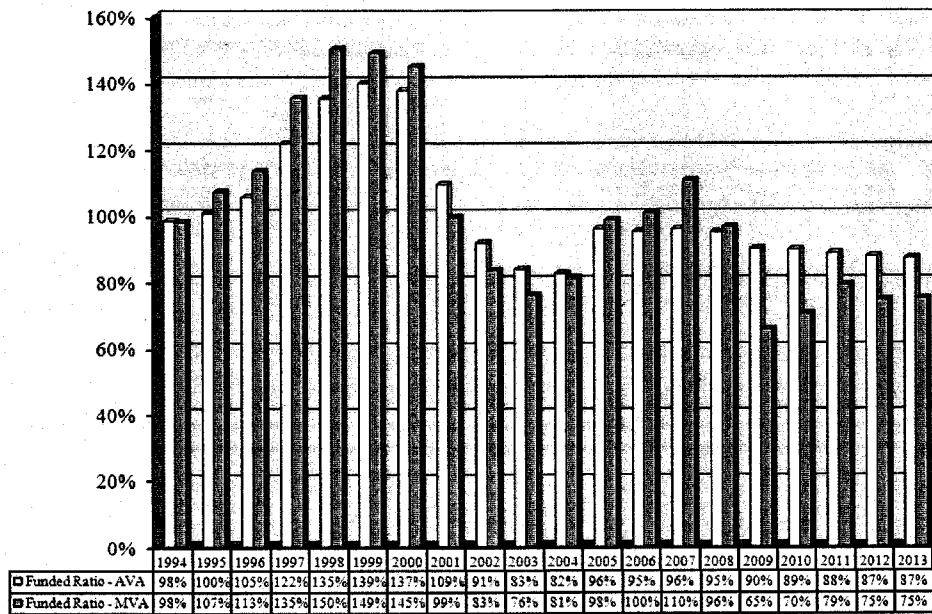


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## Funded Status Miscellaneous



6/30/12 & 6/30/13 funded status estimated

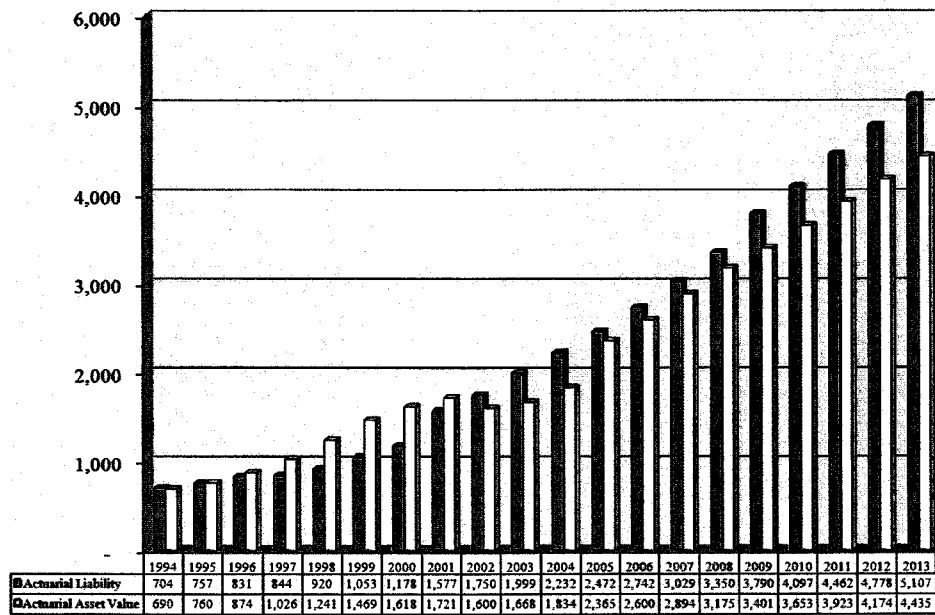


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## Funded Status (Millions) Miscellaneous



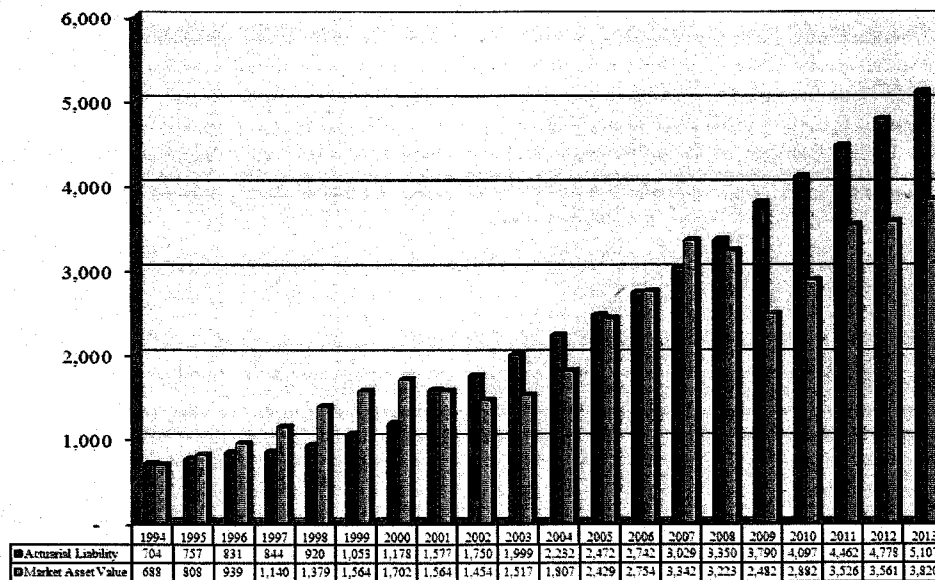
6/30/12 & 6/30/13 funded status estimated



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## Funded Status (Millions) Miscellaneous



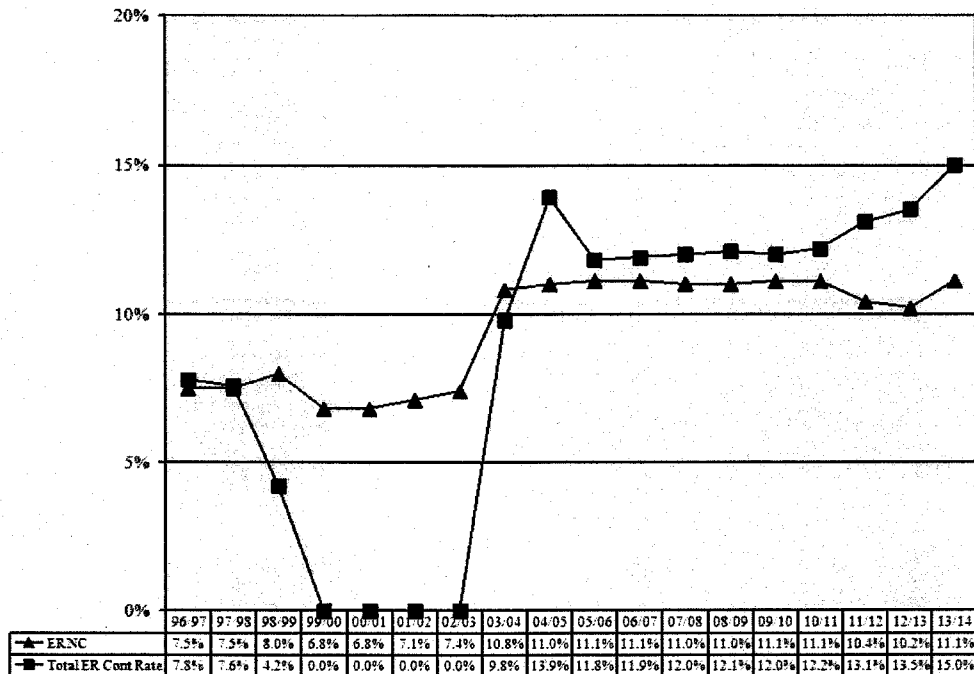
6/30/12 & 6/30/13 funded status estimated



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### Contribution Rates Miscellaneous



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### Contribution Rates Miscellaneous

	<u>6/30/10</u> <u>2012/2013</u>	<u>6/30/11</u> <u>2013/2014</u>
■ Total Normal Cost	18.2%	19.1%
■ Employee Normal Cost	8.0%	8.0%
■ Employer Normal Cost	10.2%	11.1%
■ Amortization Bases:	<u>3.3%</u>	<u>3.9%</u>
■ Total Employer Contribution Rate	13.5%	15.0%
■ Amortization Period	Multiple ≈ 26 years	Multiple ≈ 30 years
■ What Happened from 6/30/10 to 6/30/11:		
● 2012/13 Rate	13.5%	
● (Gains)/Losses	0.6	
● Golden Handshake	0.3	
● Assumption Change	<u>0.6</u>	
● 2013/14 Rate	15.0%	



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## Contribution Projections Miscellaneous

- Market Value Investment Return:
  - June 30, 2011 21.7%
  - June 30, 2012 1.0%<sup>2</sup>
  - June 30, 2013 - 2016
    - Poor Investment Return: ≈ 0.2% - 3.4%
    - Expected Investment Ret: ≈ 7.50%
    - Good Investment Return: ≈ 11.6% - 15.1%
- No Other: Gains/Losses, Method/Assumption Changes, Benefit Improvements
- Excludes Employer Paid Member Contributions (EPMC)
- Includes Tier 2 (2%@60 FAE3) effective October 1, 2011
- Impact of assumption changes (excluding Normal Cost impact)

	2 Years Phase In	Without Phase In
Initial 2013/14 Rate Impact	0.290%	0.870%
Rate Impact 2014/15+	0.915%	0.870%

- Contribution projections assume 2 years phase in.
- New hire assumptions:
  - Assumes 50% of 2013 new hires will be Tier 2 (2%@60) and 50% will be New Members with PEPRAs benefits.
  - Assumes Tier 2 Members will decrease from 50% to 0% of new hires over 20 years.

<sup>2</sup> Based on CalPERS press release.



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## Contribution Projections Miscellaneous

### Payroll Growth Assumptions

	2013/14	2014/15	2015/16	2016/17
County #1	3.00%	3.00%	3.00%	3.00%
County #2	4.81%	6.41%	6.56%	3.00%
CalPERS	3.00%	3.00%	3.00%	3.00%
	2017/18	2018/19	2019/20	
County #1	3.00%	3.00%	3.00%	
County #2	3.00%	3.00%	3.00%	
CalPERS	3.00%	3.00%	3.00%	

### Projected PERSable Wages ('000)

	2012/13	2013/14	2014/15	2015/16	2016/17
County #1	\$806,975	\$831,184	\$856,120	\$881,803	\$908,258
County #2	806,975	845,791	900,006	959,046	987,818
CalPERS	861,936	887,691	914,321	941,751	970,003
		2017/18	2018/19	2019/20	
County #1		\$935,505	\$963,570	\$992,478	
County #2		1,017,452	1,047,976	1,079,415	
CalPERS		999,104	1,029,077	1,059,949	



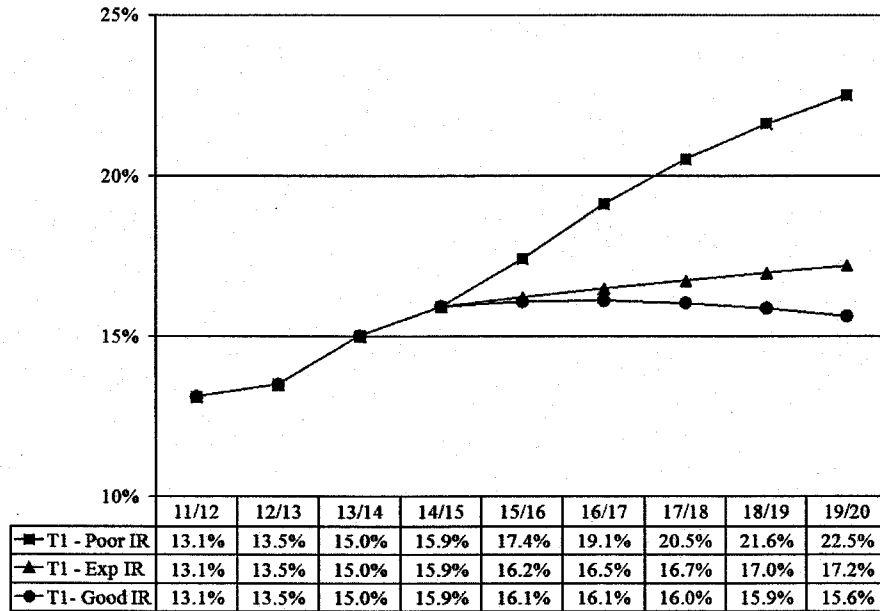
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## Contribution Projections Miscellaneous

Investment Return Various  
Tier 1 Only  
Includes POB Proceeds But Not Debt Service



(B-1)

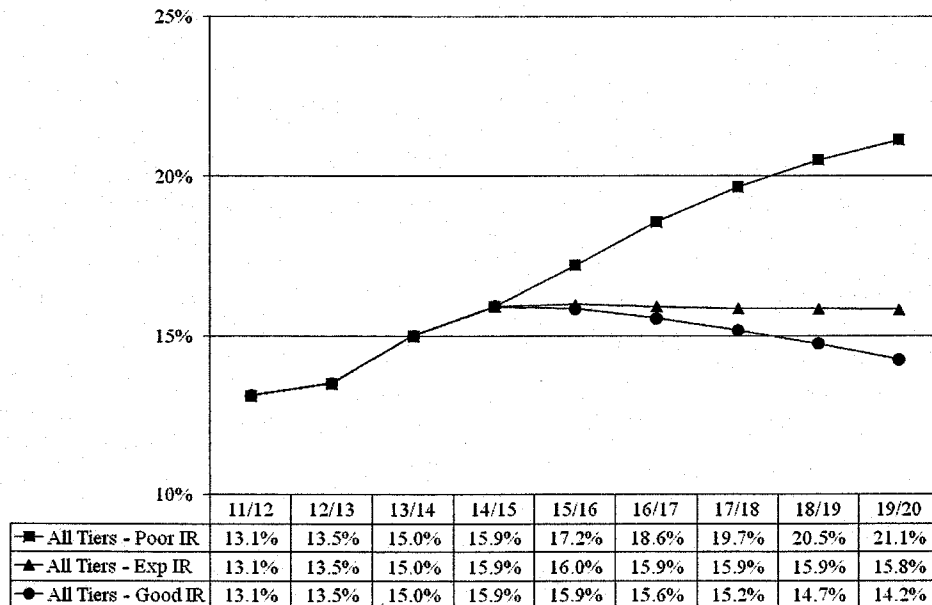
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## Contribution Projections Miscellaneous

Investment Return Various  
All Tiers  
Includes POB Proceeds But Not Debt Service



(B-1)

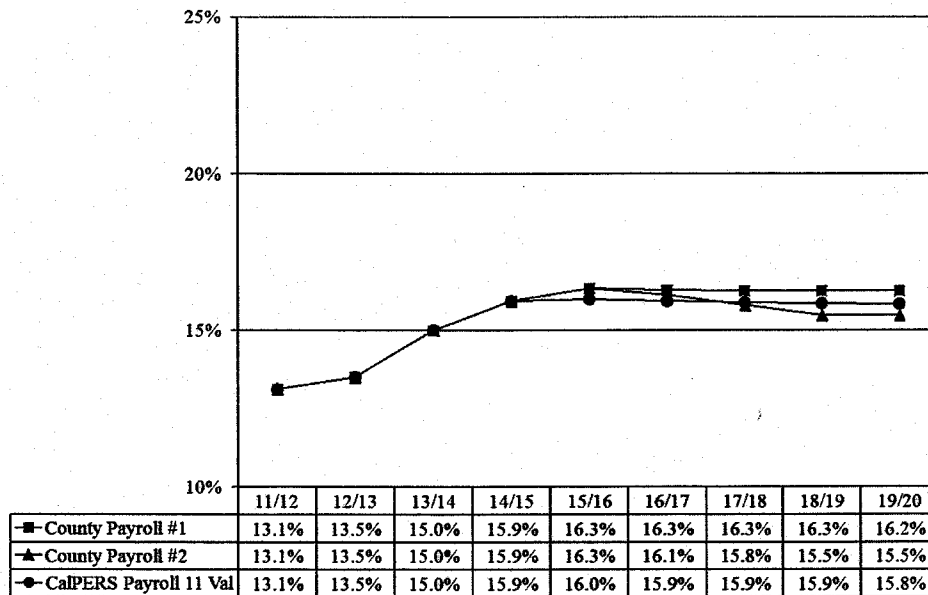
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## Contribution Projections Miscellaneous

Expected Investment Return (7.50%)  
Tier 1 + Tier 2 + PEPR  
Includes POB Proceeds But Not Debt Service

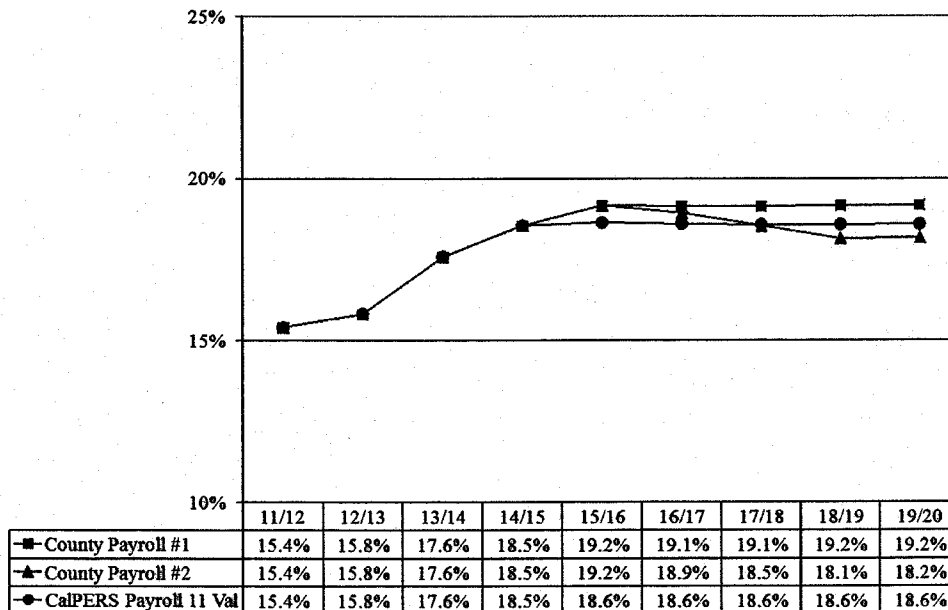


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## Contribution Projections Miscellaneous

Expected Investment Return (7.50%)  
Tier 1 + Tier 2 + PEPR  
Includes POB Proceeds And Debt Service

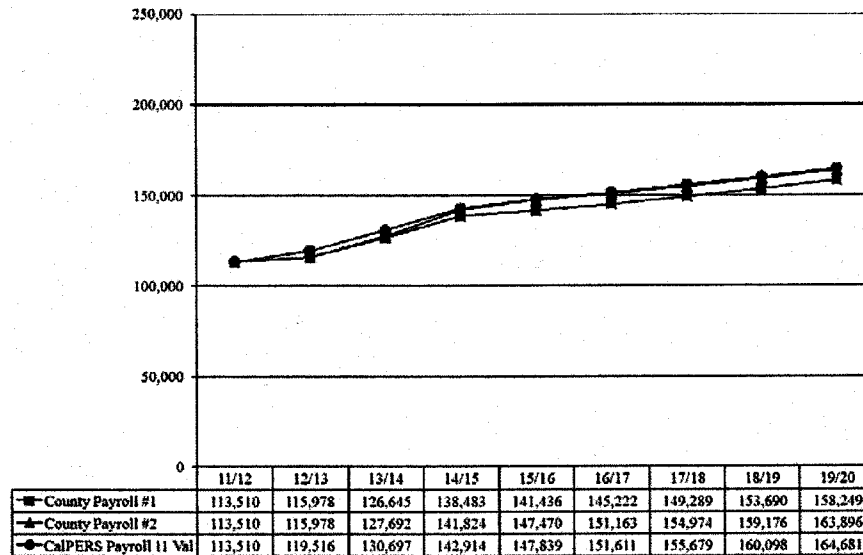


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## Contribution Projections Miscellaneous

Expected Investment Return (7.50%)  
Tier 1 + Tier 2 + PEPRA  
Includes POB Proceeds But Not Debt Service



\*11/12 is based on 6/5/12 projection  
Prepayment percentage is assumed the same as in the 11/12 (52.2%)

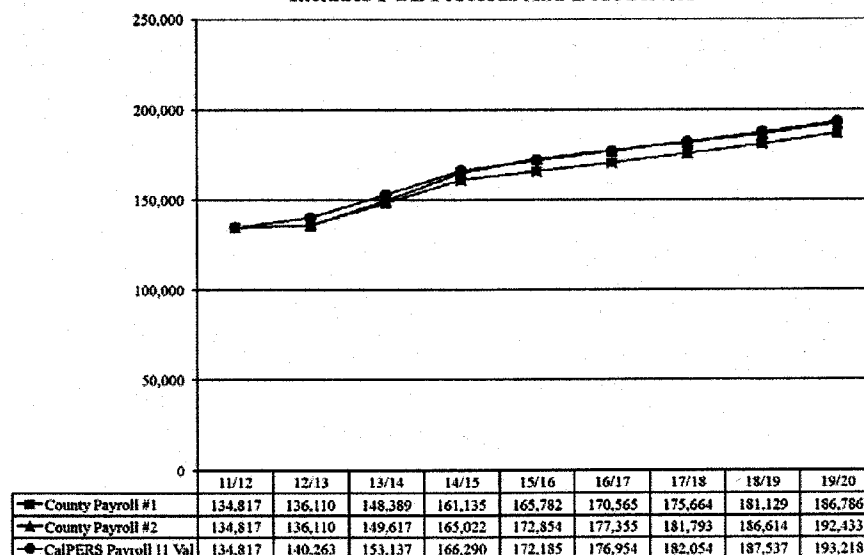


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## Contribution Projections Miscellaneous

Expected Investment Return (7.50%)  
Tier 1 + Tier 2 + PEPRA  
Includes POB Proceeds And Debt Service



\*11/12 is based on 6/5/12 projection  
Prepayment percentage is assumed the same as in the 11/12 (52.2%)



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## Contribution Projections Miscellaneous

- **Market Value Investment Return:**
  - June 30, 2011 21.7%
  - June 30, 2012 1.0%<sup>3</sup>
  - June 30, 2013 - 2016
    - Poor Investment Return: ≈ 0.2% - 3.4%
    - Expected Investment Ret: ≈ 7.50%/7.25%
    - Good Investment Return: ≈ 11.6% - 15.1%
- #1 – No County pension change. Tier 1 only, County pays EPMC<sup>4</sup>
- #2 – Include all County pension change. Tier 1 & Tier 2, County does not pay EPMC.
- #3 - #2 plus PEPPRA
- #4 - #3 plus estimated impact on the following changes
  - Mortality improvement
  - Asset smoothing change from 15 years to 5 years
  - Discount rate change from 7.5% to 7.25%
  - First impact on FY14/15
- #1 - #4 based on County payroll #2

<sup>3</sup> Based on CalPERS press release.

<sup>4</sup> Average County paid EPMC 5.4%. Average PERSable EPMC 1.6%.



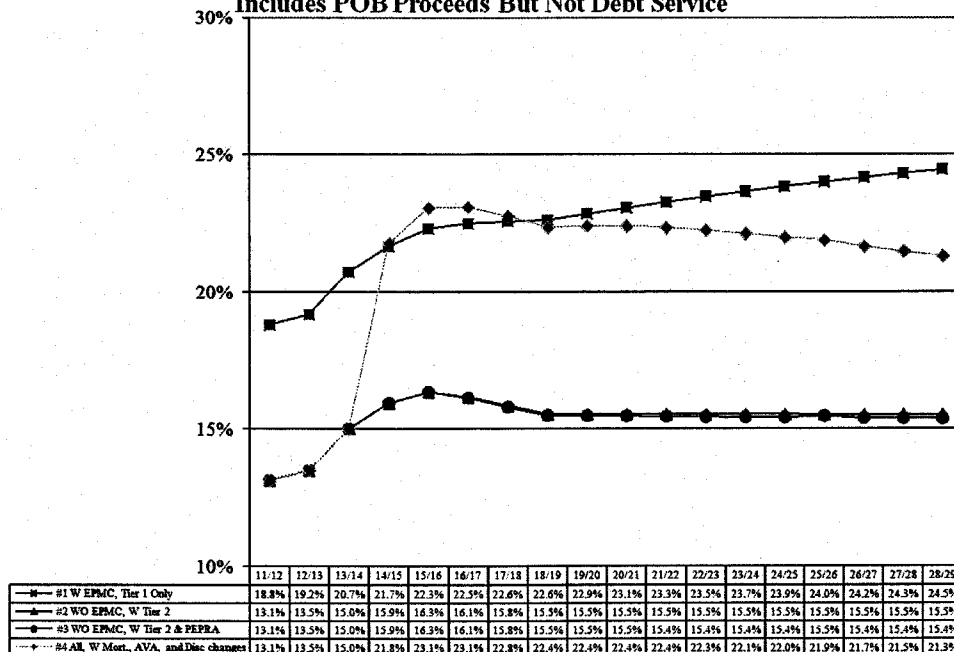
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## Contribution Projections Miscellaneous

**Expected Investment Return (7.50%/7.25%)  
Includes POB Proceeds But Not Debt Service**



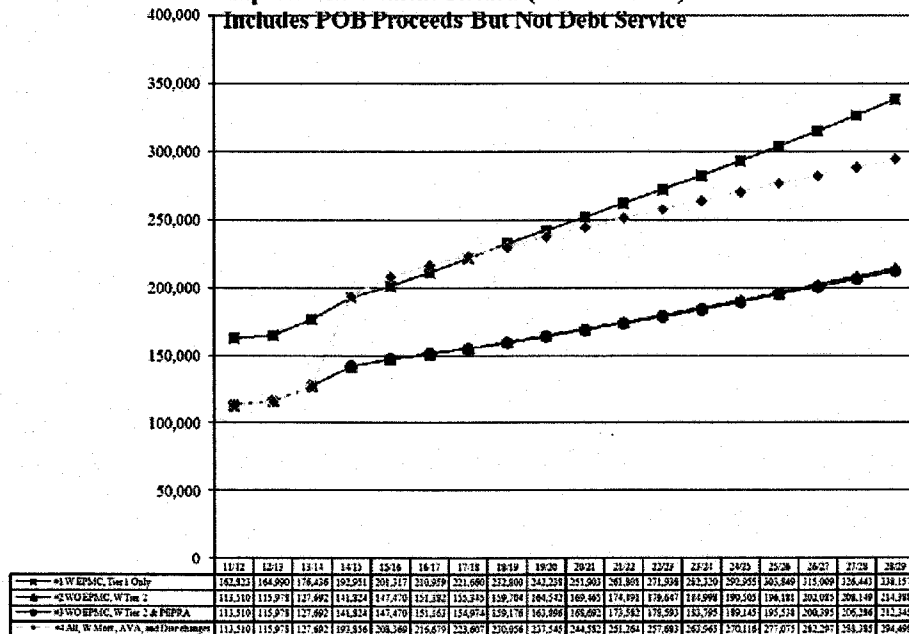
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## Contribution Projections Miscellaneous

**Expected Investment Return (7.50%/7.25%)  
Includes POB Proceeds But Not Debt Service**



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## Contribution Projections Miscellaneous

### Employer Contribution Rate if Market Value of Assets were used

	<b>Actuarial 2013/14 AVA</b>	<b>Market 2013/14 MVA</b>
■ Plan Assets		
■ ER Normal cost	11.1%	11.1%
■ Amortization bases:	<u>3.9%</u>	<u>7.1%</u>
■ Total Contribution Rate	15.0%	18.2%
■ Amortization period	≈ 30 years	30 years



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## Summary of Demographic Information – Safety

	1994	2003	2010	2011
<b>Actives</b>				
■ Counts	1839	2708	3490	3455
■ Average				
• Age	38	39	38	39
• County Service	10	9	9	9
• PERSable Wages	\$44,200	\$54,500	\$76,000	\$79,100
■ Total PERSable Wages (millions)	88.8	162.4	291.9	298.5
<b>Receiving Payments</b>				
■ Counts				
• Service		540	1302	1401
• Disability		442	522	547
• Beneficiaries		108	158	164
• Total	520	1090	1982	2112
■ Average Annual County Provided Benefit <sup>5</sup>				
• Service		\$28,100	\$39,000	\$39,400
• Disability		19,200	23,800	24,200
• Service Retirements in last 5 years		29,800	42,900	43,400

<sup>5</sup> Average County provided pensions are based on County service & County benefit formula, and are not representative of benefits for long service employees.

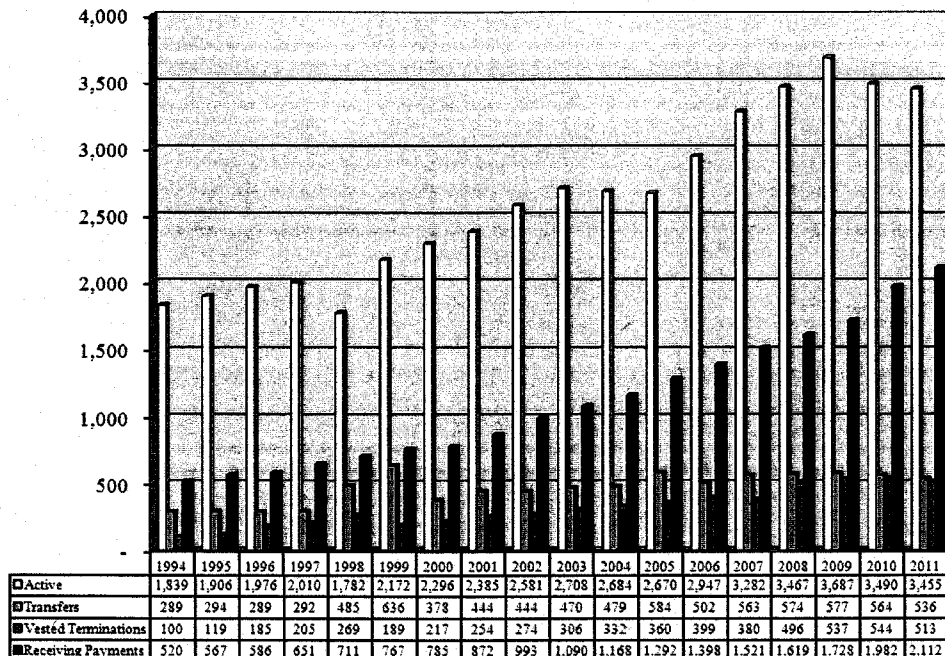


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## Members Included in Valuation Safety

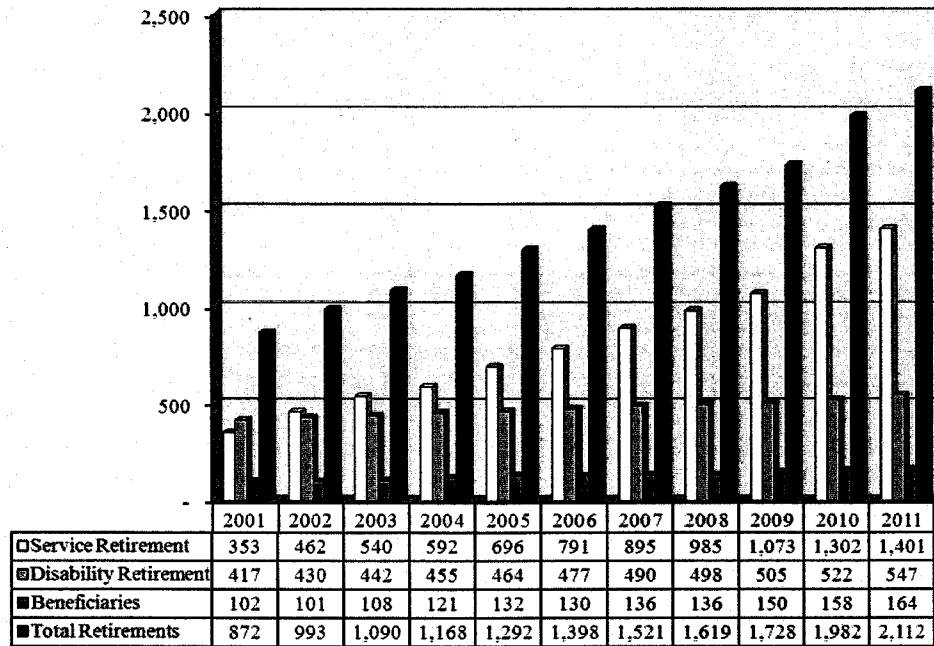


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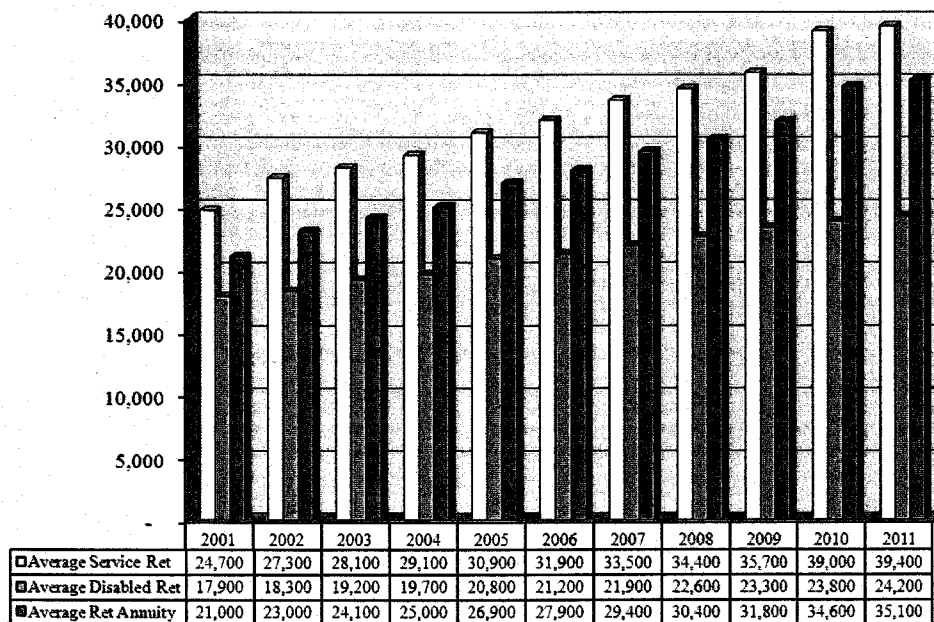
## Members Receiving Payments Safety



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## Average Annuity Safety



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## Average Annuity Safety

### Service Retirement Retirees' Benefit

<b>Years Retired</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>Under 5</b>	\$ 25,410	\$ 28,618	\$ 29,840	\$ 31,179	\$ 33,743	\$ 34,479	\$ 35,472	\$ 36,745	\$ 38,145	\$ 42,927	\$ 43,393
<b>5-9</b>	26,844	28,779	27,501	27,368	27,163	28,123	33,159	32,663	34,196	36,699	37,848
<b>10-14</b>	26,808	26,587	29,249	29,933	30,681	30,133	29,406	32,464	32,436	30,916	31,020
<b>15-19</b>	21,763	27,324	27,928	29,250	26,964	29,224	30,587	31,357	32,982	34,805	34,981
<b>20-24</b>	13,781	14,519	12,651	11,994	19,537	20,399	25,112	29,849	34,166	33,624	32,642
<b>25-29</b>	10,288	11,069	13,487	15,318	19,288	20,385	20,993	21,005	19,198	20,761	28,500
<b>Over 30</b>	15,207	15,511	10,162	16,455	30,776	31,920	28,299	27,267	29,573	28,211	27,756
<b>All Years</b>	24,718	27,306	28,111	29,141	30,929	31,915	33,481	34,389	35,729	38,956	39,395



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## Average Annuity Safety

### Service Retirement Retirees' Benefit

<b>Attained Age</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>50-54</b>	\$ 20,025	\$ 25,957	\$ 28,252	\$ 26,541	\$ 32,567	\$ 33,130	\$ 35,650	\$ 35,300	\$ 37,007	\$ 44,173	\$ 42,235
<b>55-59</b>	30,032	31,824	31,929	34,435	34,387	35,298	36,108	36,764	36,697	40,669	41,700
<b>60-64</b>	29,058	30,745	29,848	31,148	32,237	33,440	34,861	36,194	37,904	39,455	40,275
<b>65-69</b>	24,112	24,239	26,224	25,829	28,826	28,986	29,985	32,552	34,509	35,161	37,497
<b>70-74</b>	21,428	23,823	24,635	25,451	24,448	24,980	28,068	27,947	30,079	31,361	32,759
<b>75-79</b>	15,609	16,445	20,918	21,740	23,092	23,810	26,745	28,006	29,780	28,419	27,586
<b>80-84</b>	8,264	13,491	10,934	14,589	19,692	21,258	19,489	25,344	27,089	26,978	27,831
<b>85 &amp; over</b>	6,621	5,589	6,758	8,475	13,285	13,803	19,099	15,185	18,624	28,647	32,476
<b>All Ages</b>	24,718	27,306	28,111	29,141	30,929	31,915	33,481	34,389	35,729	38,956	39,395



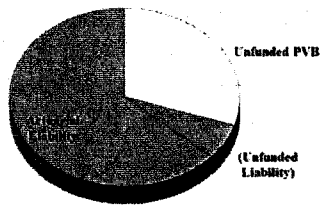
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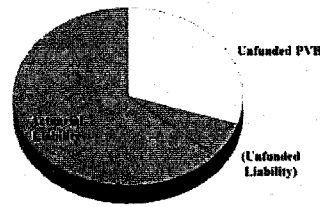


## Plan Funded Status Safety

Present Value of Benefits  
June 30, 2010



Present Value of Benefits  
June 30, 2011



<u>June 30, 2010</u>		<u>June 30, 2011</u>
\$ 1,809,500,000	<b>Actuarial Liability</b>	\$ 2,032,000,000
1,624,700,000	<b>Actuarial Asset Value</b>	1,745,900,000
(184,800,000)	<b>(Unfunded Liability)</b>	(286,100,000)
<u>June 30, 2010</u>		<u>June 30, 2011</u>
\$ 1,809,500,000	<b>Actuarial Liability</b>	\$ 2,032,000,000
1,279,800,000	<b>Market Asset Value</b>	1,565,800,000
(529,700,000)	<b>(Unfunded Liability)</b>	(466,200,000)



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## Plan Funded Status Safety

- What happened between 6/30/10 and 6/30/11?
  - Market Value Asset Gain/(Loss) ≈ 202. million
  - Unfunded Liability increase ≈ (101.3) million
- Reasons for Unfunded Liability increase
  - Actuarial Asset gain/(loss): ≈ (12.9) million
    - \$180 million remaining unrecognized asset losses
  - Assumption change ≈ (36.6) million
  - Actuarial gain/(loss): ≈ (43.7) million
    - Average Salary \$76,000 → \$79,100
    - Number of Actives 3,490 → 3,455
    - Number of Inactives 1,108 → 1,049
    - Number of Retirees 1,982 → 2,112
  - Other gain/(loss): ≈ (8.1) million
    - Contributions
    - Other (expected)

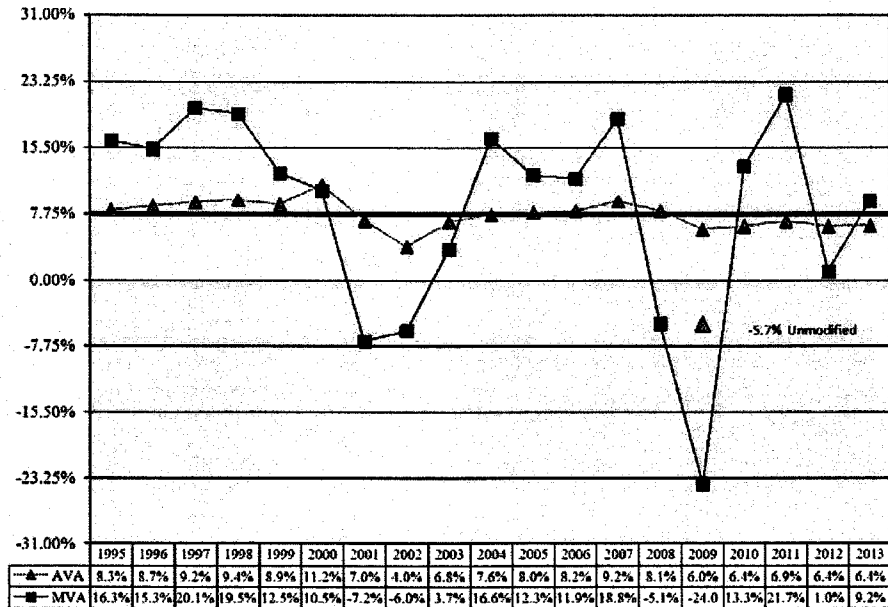


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## Actuarial Investment Return Safety



Above assumes contributions, payments, etc. received evenly throughout year.  
2013 estimate based on 12/13 return of 4.1% through October 31, 2012



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## 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)%	6.0%
● Gain/(Loss)	(31.8)%	(1.8)%
■ June 30, 2010		
● Return	13.3%	6.4%
● Gain/(Loss)	5.5%	(1.4)%
■ June 30, 2011		
● Return	21.7%	6.9%
● Gain/(Loss)	13.9%	(0.9)%
■ June 30, 2012		
● Return	1.0%	6.4%
● Gain/(Loss)	(6.5)%	(1.1)%

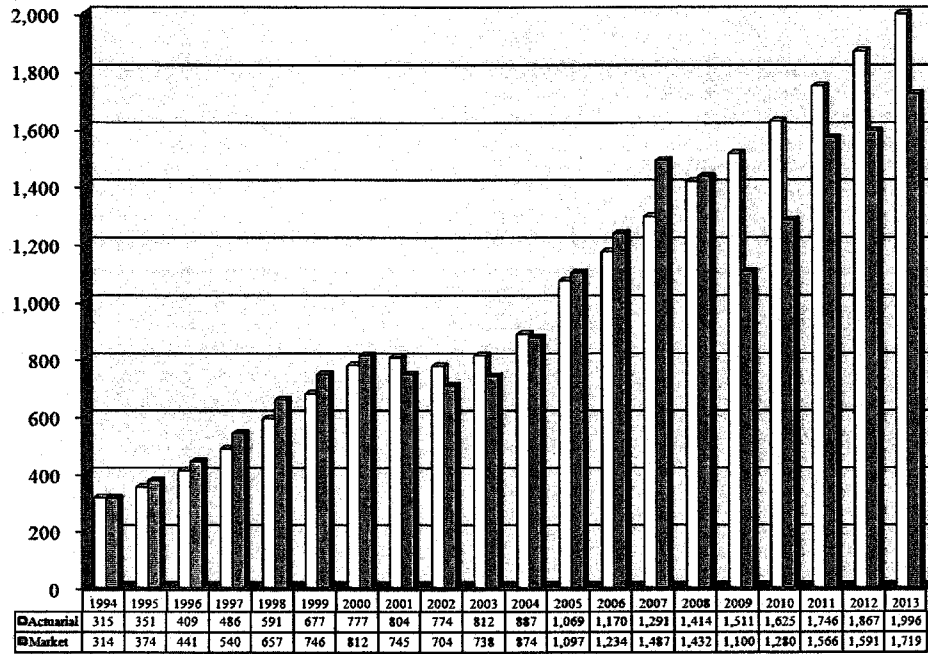
■ Accumulated Market Value Gains/(Losses) through June 30, 2012 ≈ (31.8)%  
[(12.9)% + (31.8)% + 5.5% + 13.9% + (6.5)%]



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## Asset Values (Millions) Safety



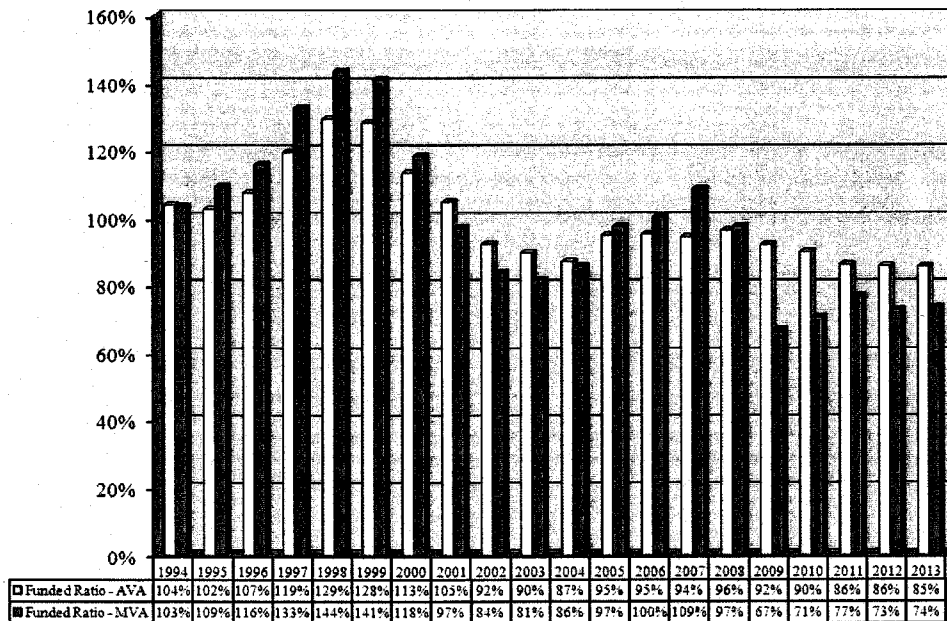
6/30/12 & 6/30/13 asset values estimated.



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## Funded Status Safety



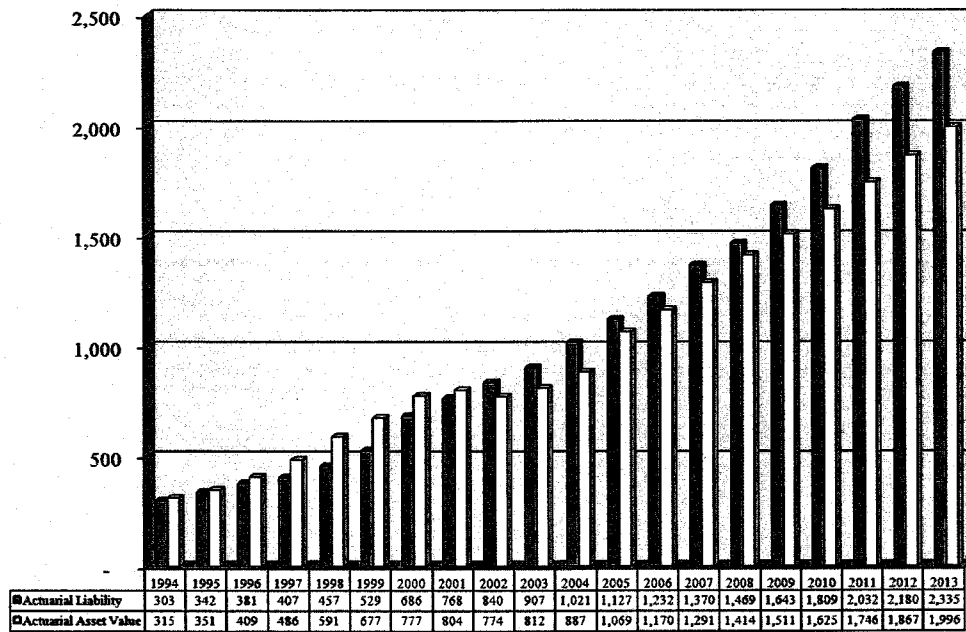
6/30/12 & 6/30/13 funded status estimated



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## Funded Status (Millions) Safety



6/30/12 & 6/30/13 funded status estimated

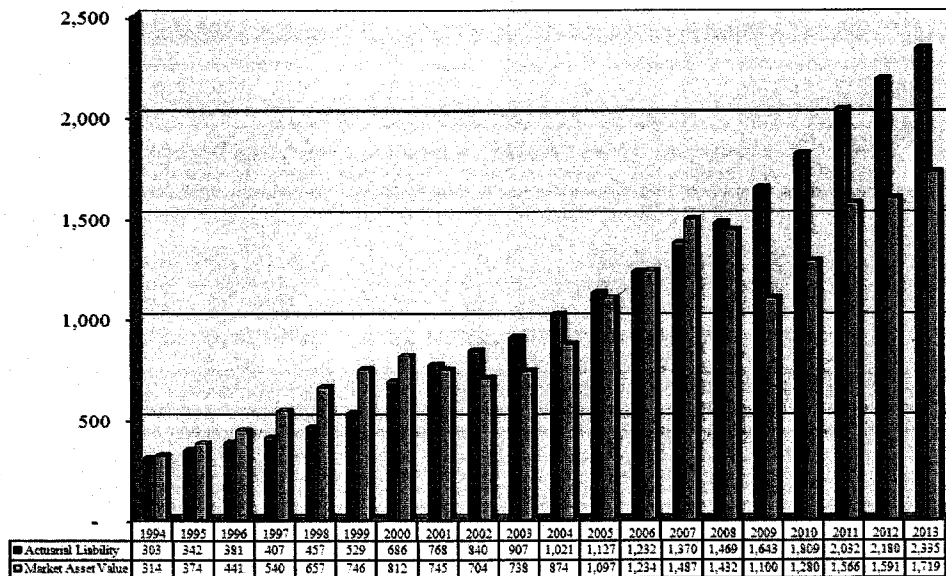


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## Funded Status (Millions) Safety



6/30/12 & 6/30/13 funded status estimated

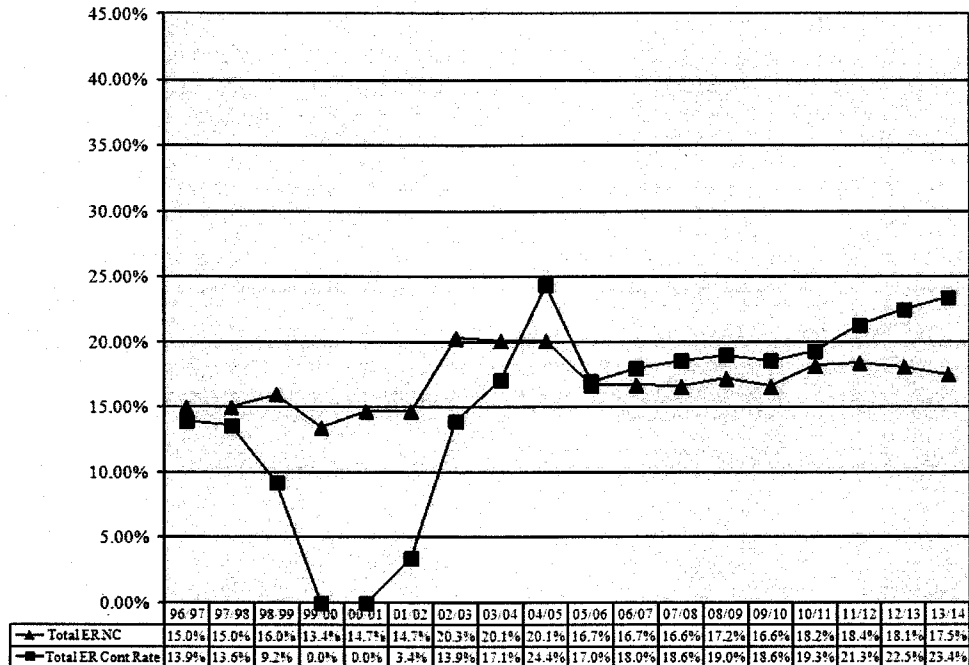


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## Contribution Rates Safety



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## Contribution Rates Safety

	<u>6/30/10</u> <u>2012/2013</u>	<u>6/30/11</u> <u>2013/2014</u>
■ Total Normal Cost	27.1%	26.5%
■ Employee Normal Cost	9.0%	9.0%
■ Employer Normal Cost	18.1%	17.5%
■ Amortization Bases:	4.4%	5.9%
■ Total Employer Contribution Rate	22.5%	23.4%
■ Amortization Period	Multiple ≈ 27 years	Multiple ≈ 33 years
■ What Happened from 6/30/10 to 6/30/11:		
● 2012/13 Rate	22.5%	
● (Gains)/Losses	0.0	
● Assumption Change	<u>0.9</u>	
● 2013/14 Rate	23.4%	



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## Contribution Projections Safety

- Market Value Investment Return:
  - June 30, 2011 21.7%
  - June 30, 2012 1.0%<sup>6</sup>
  - June 30, 2013 - 2016
    - Poor Investment Return: ≈ 0.2% - 3.4%
    - Expected Investment Ret: ≈ 7.50%
    - Good Investment Return: ≈ 11.6% - 15.1%
- No Other: Gains/Losses, Method/Assumption Changes, Benefit Improvements
- Excludes Employer Paid Member Contributions (EPMC)
- Includes Tier 2 (2%@50) effective October 1, 2011
- Impact of assumption changes (excluding Normal Cost impact)
 

	2 Years Phase In	Without Phase In
Initial 2013/14 Rate Impact	0.383%	1.149%
Rate Impact 2014/15+	1.211%	1.149%
- Contribution projections assume 2 years phase in.
- New hire assumptions:
  - Assumes 50% of 2013 new hires will be Tier 2 Members (2%@50) with current benefits and 50% will be New Members with PEPRAs benefits.
  - Assumes Tier 2 Members will decrease from 50% to 0% of new hires over 10 years.

<sup>6</sup> Based on CalPERS press release.



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## Contribution Projections Safety

### Payroll Growth Assumptions

	2013/14	2014/15	2015/16	2016/17
County #1	3.00%	3.00%	3.00%	3.00%
County #2	8.13%	5.16%	5.33%	3.00%
CalPERS	3.00%	3.00%	3.00%	3.00%
	2017/18	2018/19	2019/20	
County #1	3.00%	3.00%	3.00%	
County #2	3.00%	3.00%	3.00%	
CalPERS	3.00%	3.00%	3.00%	

### Projected PERSable Wages ('000)

	2012/13	2013/14	2014/15	2015/16	2016/17
County #1	\$ 261,467	\$269,311	\$277,390	\$285,712	\$294,284
County #2	261,467	282,724	297,313	313,160	322,555
CalPERS	289,806	298,500	307,455	316,678	326,179
		2017/18	2018/19	2019/20	
County #1		\$303,112	\$312,205	\$321,572	
County #2		332,231	342,198	352,464	
CalPERS		335,964	346,043	356,424	



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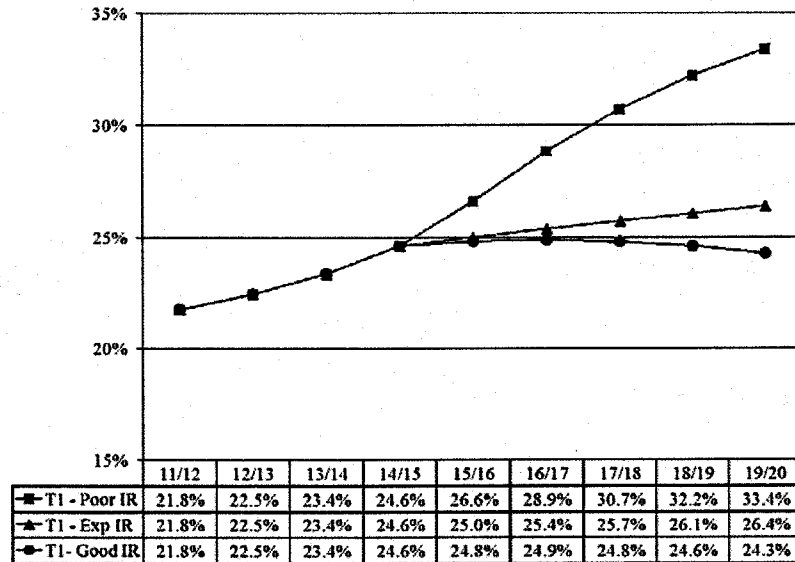
## Contribution Projections

### Safety

Investment Return Varies

Tier 1 Only

Includes POB Proceeds But Not Debt Service



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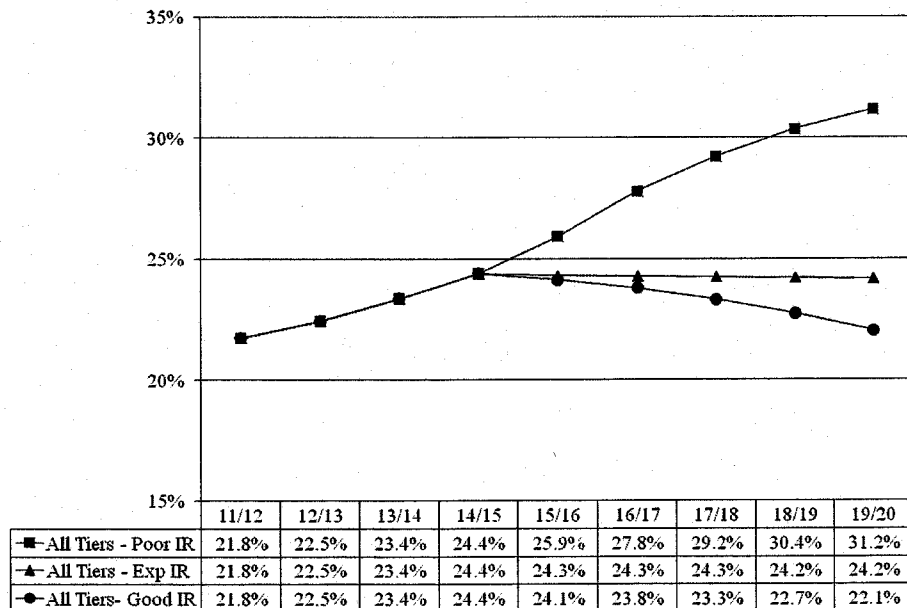
## Contribution Projections

### Safety

Investment Return Varies

All Tiers

Includes POB Proceeds But Not Debt Service



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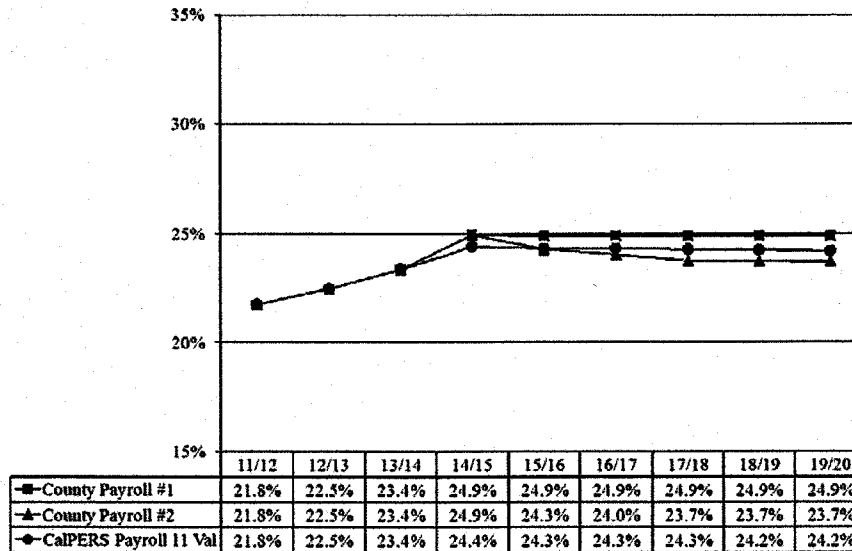


## Contribution Projections Safety

Expected Investment Return (7.50%)

T1 + T2 + PEPRA

Includes POB Proceeds But Not Debt Service



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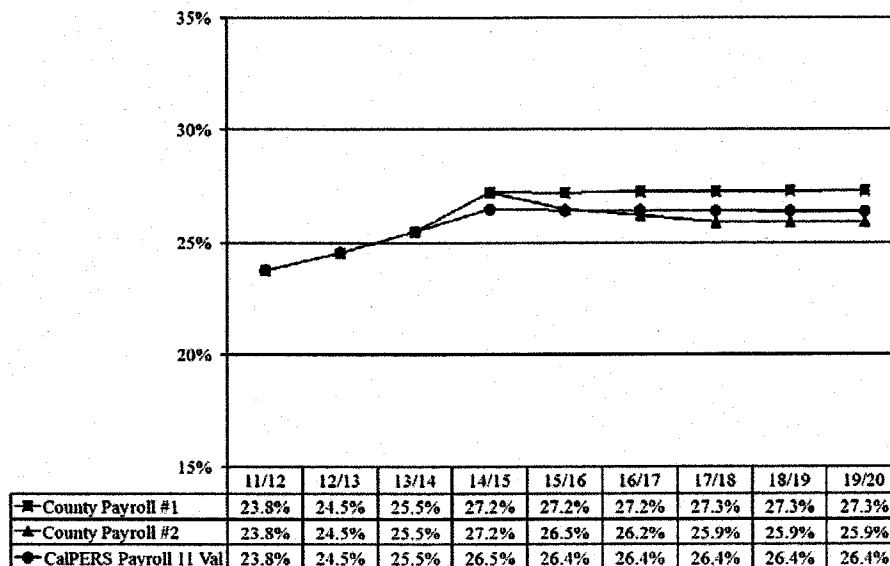


## Contribution Projections Safety

Expected Investment Return (7.50%)

T1 + T2 + PEPRA

Includes POB Proceeds And Debt Service



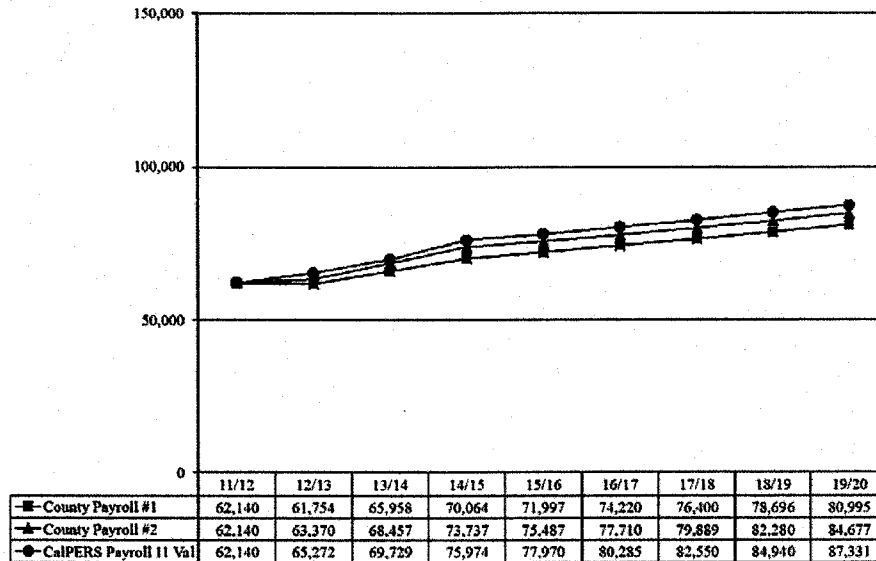
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## Contribution Projections Safety

Expected Investment Return (7.50%)  
Tier 1 + Tier 2 + PEPRA  
Includes POB Proceeds But Not Debt Service



\*11/12 is based on 6/5/12 projection

Prepayment percentage is assumed the same as in the 11/12 (46.3%)

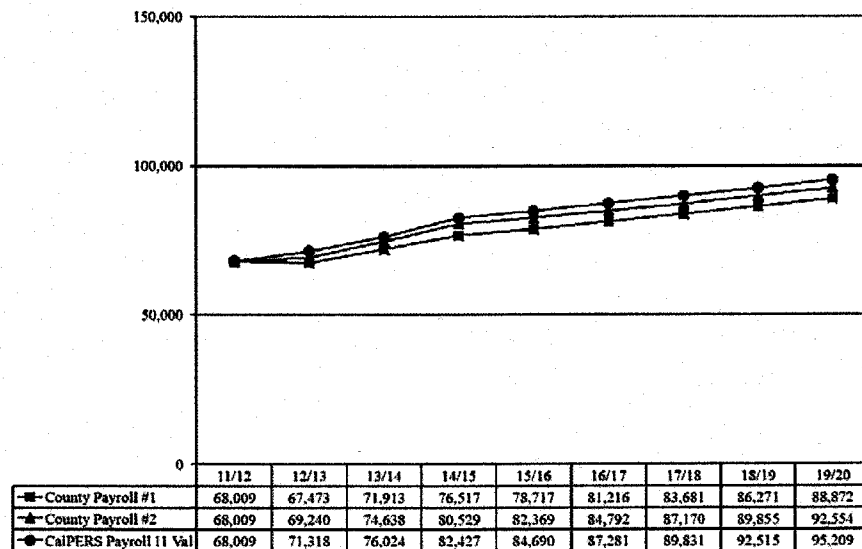


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## Contribution Projections Safety

Expected Investment Return (7.50%)  
Tier 1 + Tier 2 + PEPRA  
Includes POB Proceeds And Debt Service



\*11/12 is based on 6/5/12 projection

■ Prepayment percentage is assumed the same as in the 11/12 (46.3%)



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## Contribution Projections Safety

- **Market Value Investment Return:**
  - June 30, 2011 21.7%
  - June 30, 2012 1.0%<sup>7</sup>
  - June 30, 2013 - 2016
    - Poor Investment Return: ≈ 0.2% - 3.4%
    - Expected Investment Ret: ≈ 7.50%/7.25%
    - Good Investment Return: ≈ 11.6% - 15.1%
- #1 - No County pension change. Tier 1 only, County pays EPMC<sup>8</sup>
- #2 - Include all County pension change. Tier 1 & Tier 2, County does not pay EPMC.
- #3 - #2 plus PEPR
- #4 - #3 plus estimated impact on the following changes
  - Mortality improvement
  - Asset smoothing change from 15 years to 5 years
  - Discount rate change from 7.5% to 7.25%
  - First impact on FY14/15
- #1 - #4 based on County payroll #2

<sup>7</sup> Based on CalPERS press release.

<sup>8</sup> Average County paid EPMC 7.6%. Average PERSable EPMC 1.6%.



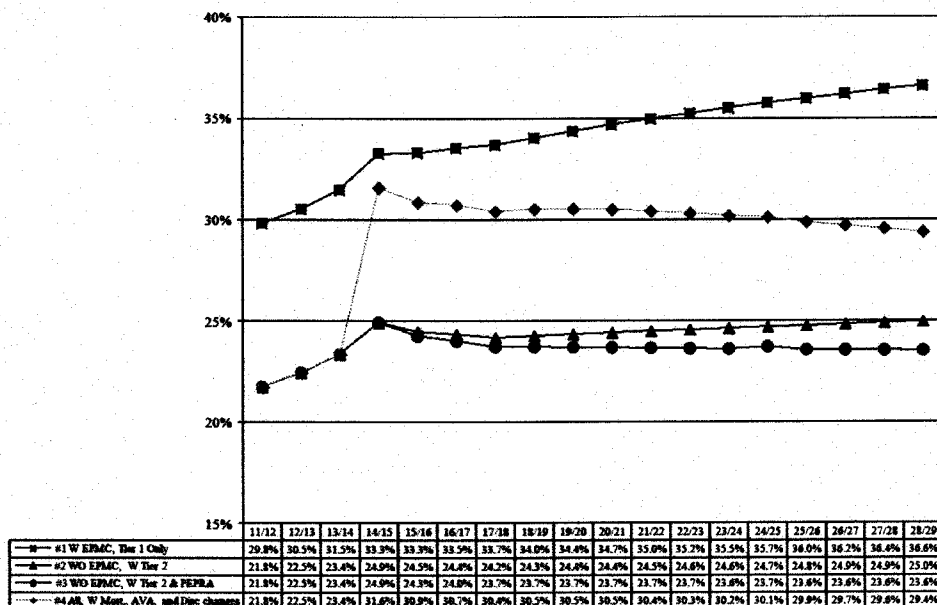
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## Contribution Projections Safety

**Expected Investment Return (7.50%/7.25%)  
Includes POB Proceeds But Not Debt Service**



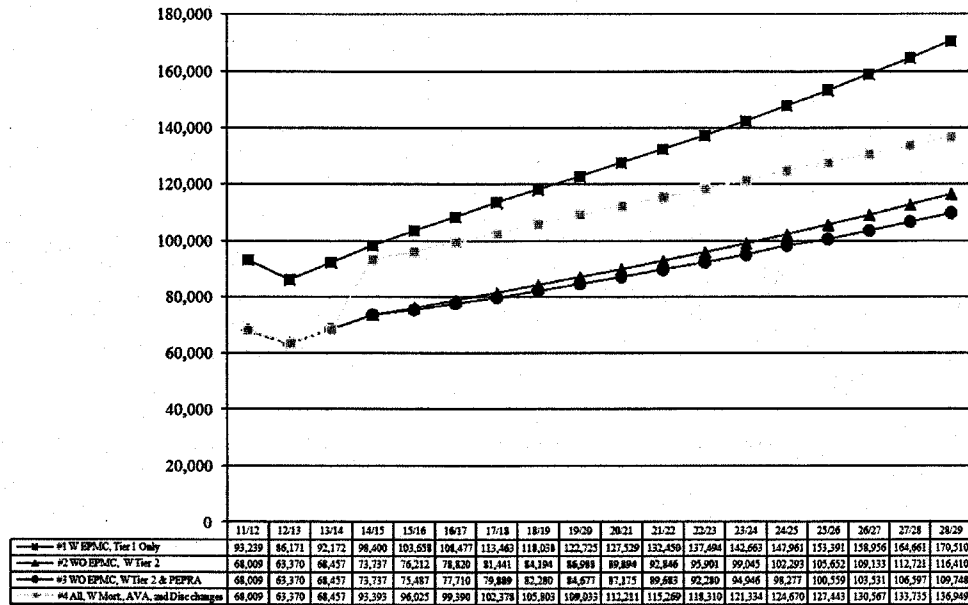
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## Contribution Projections Safety

Expected Investment Return (7.50%/7.25%)  
Includes POB Proceeds But Not Debt Service



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## Contribution Projections Safety

### Employer Contribution Rate if Market Value of Assets were used

	Actuarial 2013/14 AVA	Market 2013/14 MVA
■ Plan Assets		
■ ER Normal cost	17.5%	17.5%
■ Amortization bases:	<u>5.9%</u>	<u>9.9%</u>
■ Total Contribution Rate	23.4%	27.4%
■ Amortization period	≈ 33 years	33 years



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## 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
- 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 2013/14 and beyond
  - **Use one time money to buy down the UAL**
    - ☐ Requires discussing with CalPERS before sending money



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

<sup>9</sup> 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, 1.0% for 2011/12 and an estimated 9.2% for 2012/13.

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



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**POB (Millions)**  
**Bond Proceeds Balance**

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

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



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**POB (Millions)**  
**Bond Proceeds Balance**

	<u>Safety</u>	<u>Misc.</u>	<u>Total</u>
■ <b>Balance @ 6/30/08</b>	94.8	344.3	439.1
■ Earnings 7/1/08 - 2/15/09 <sup>9</sup>	(14.9)	(54.3)	(69.2)
■ Amortization payment through 2/15/09 <sup>10</sup>	<u>(3.6)</u>	<u>(12.9)</u>	<u>(16.5)</u>
■ <b>Balance @ 2/15/09</b>	76.3	277.1	353.4
■ Earnings 2/16 - 6/30/09 <sup>9</sup>	(7.5)	(27.1)	(34.6)
■ Amortization payment through 6/30/09 <sup>10</sup>	<u>(1.7)</u>	<u>(6.2)</u>	<u>(7.9)</u>
■ <b>Balance @ 6/30/09</b>	67.1	243.8	310.9
■ Earnings 7/1/09 - 2/15/10 <sup>9</sup>	5.5	19.8	25.2
■ Amortization payment through 2/15/10 <sup>10</sup>	<u>(2.5)</u>	<u>(9.1)</u>	<u>(11.7)</u>
■ <b>Balance @ 2/15/10</b>	70.1	254.4	324.5
■ Earnings 2/16 - 6/30/10 <sup>9</sup>	3.4	12.2	15.6
■ Amortization payment through 6/30/10 <sup>10</sup>	<u>(1.6)</u>	<u>(5.7)</u>	<u>(7.3)</u>
■ <b>Balance @ 6/30/10</b>	71.9	260.9	332.7
■ Earnings 7/1/10 - 2/15/11 <sup>9</sup>	9.4	34.1	43.5
■ Amortization payment through 2/15/11 <sup>10</sup>	<u>(2.7)</u>	<u>(9.8)</u>	<u>(12.5)</u>
■ <b>Balance @ 2/15/11</b>	78.5	285.1	363.7



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**POB (Millions)**  
**Bond Proceeds Balance**

	<u>Safety</u>	<u>Misc.</u>	<u>Total</u>
■ Earnings 2/16 - 6/30/11 <sup>9</sup>	6.0	21.8	27.8
■ Amortization payment through 6/30/10 <sup>10</sup>	<u>(2.9)</u>	<u>(10.7)</u>	<u>(13.7)</u>
■ <b>Balance @ 6/30/11</b>	<b>81.6</b>	<b>296.2</b>	<b>377.8</b>
■ Earnings 7/1/11- 2/15/12 <sup>9</sup>	0.5	1.8	2.4
■ Amortization payment through 2/15/12 <sup>10</sup>	<u>(3.1)</u>	<u>(11.1)</u>	<u>(14.2)</u>
■ <b>Balance @ 2/15/12</b>	<b>79.0</b>	<b>287.0</b>	<b>366.0</b>
■ Earnings 2/16 - 6/30/12 <sup>9</sup>	.3	1.1	1.4
■ Amortization payment through 6/30/12 <sup>10</sup>	<u>(3.0)</u>	<u>(10.8)</u>	<u>(13.7)</u>
■ <b>Balance @ 6/30/12</b>	<b>76.4</b>	<b>277.3</b>	<b>353.6</b>
■ Earnings 7/1/12- 2/15/13 <sup>9</sup>	4.3	15.7	20.1
■ Amortization payment through 2/15/13 <sup>10</sup>	<u>(2.9)</u>	<u>(10.4)</u>	<u>(13.3)</u>
■ <b>Balance @ 2/15/13</b>	<b>77.8</b>	<b>282.6</b>	<b>360.5</b>



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**POB (Millions)**  
**Bond Proceeds Balance**  
**Payments**

	<u>Principal</u>	<u>Interest</u>	<u>Total</u>	<u>Balance</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



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**POB (Millions)**  
**Bond Proceeds Balance**  
**Payments**

	<u>Principal</u>	<u>Interest</u>	<u>Total</u>	<u>Balance</u>
■ 8/15/11	n/a	8.9	8.9	366.9
■ 2/15/12	9.4	8.9	18.3	357.5
■ 8/15/12	n/a	8.7	8.7	357.5
■ 2/15/13	10.8	8.7	19.5	346.8



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**POB (Millions)**  
**Estimated Savings**

■ Net Estimated Gains through February 15, 2013:	
A. CalPERS Estimated Balance	\$ 360.5
B. Bond Proceeds Balance	346.8
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)]	5.0
■ Net Estimated Gains through February 15, 2013:	
E. CalPERS Investment Earnings	\$155.1
F. POB Interest Payments	147.0
G. Cost of Issuance	<u>3.1</u>
H. Net [(E) – (F) – (G)]	5.0
■ Above estimates based on market rate of return. Savings (losses) based on actuarial rate of return would be higher (lower).	



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# POB (Millions)

## Safety

	<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>6/30/11</u> <sup>12</sup>	<u>Proi.</u> <u>6/30/12</u> <sup>13</sup>	<u>Proi.</u> <u>6/30/13</u> <sup>14</sup>
		\$							
(1) AAL	\$ 1,127	1,232	\$ 1,370	\$ 1,469	\$ 1,643	\$ 1,810	\$ 2,032	\$ 2,180	\$ 2,335
(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>1,748</u>	<u>1,867</u>	<u>1,996</u>
(3) UAAL [(1) - (2)]	58	62	79	55	132	185	284	313	339
(4) Funding Ratio [(2)/(1)]	94.9%	95.0%	94.2%	96.3%	92.0%	89.9%	86.0%	85.6%	85.5%
(5) POB Balance	\$ 86	\$ 86	\$ 85	\$ 84	\$ 83	\$ 81	\$ 79	\$ 77	\$ 75
(6) Net AVA [(2) - (5)]	983	1,084	1,206	1,330	1,428	1,544	1,669	1,790	1,921
(7) Net Funding Ratio [(6)/(1)]	87.2%	88.0%	88.0%	90.5%	86.9%	85.3%	82.1%	82.1%	82.3%

<sup>12</sup> 6/30/11 CalPERS published rate 21.7%.

<sup>13</sup> 6/30/12 CalPERS published rate 1.0%.

<sup>14</sup> Projected 6/30/13 AVA based on modified asset smoothing method and estimated 2012/13 CalPERS investment return 9.2%, which is based on CalPERS 10/31/12 published rate of return of 4.1%, and 7.50% from 11/1/12 through 6/30/13.



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# 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>6/30/11</u> <sup>15</sup>	<u>Proi.</u> <u>6/30/12</u> <sup>16</sup>	<u>Proi.</u> <u>6/30/13</u> <sup>17</sup>
		\$							
(1) AAL	\$ 2,472	2,742	\$ 3,029	\$ 3,350	\$ 3,790	\$ 4,097	\$ 4,462	\$ 4,778	\$ 5,107
(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>3,923</u>	<u>4,174</u>	<u>4,435</u>
(3) UAAL [(1) - (2)]	107	142	135	175	389	435	539	604	672
(4) Funding Ratio [(2)/(1)]	95.7%	94.8%	95.5%	94.8%	89.7%	89.4%	87.9%	87.4%	86.8%
(5) POB Balance	\$ 314	\$ 311	\$ 308	\$ 304	\$ 300	\$ 294	\$ 288	\$ 280	\$ 272
(6) Net AVA [(2) - (5)]	2,051	2,289	2,586	2,871	3,101	3,368	3,635	3,894	4,163
(7) Net Funding Ratio [(6)/(1)]	83.0%	83.5%	85.4%	85.7%	81.8%	82.2%	81.5%	81.5%	81.5%

<sup>15</sup> 6/30/11 CalPERS published rate 21.7%.

<sup>16</sup> 6/30/12 CalPERS published rate 1.0%.

<sup>17</sup> Projected 6/30/13 AVA based on modified asset smoothing method and estimated 2012/13 CalPERS investment return 9.5%, which is based on CalPERS 10/31/12 published rate of return of 4.3%, and 7.50% from 11/1/12 through 6/30/13.



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## 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>6/30/11<sup>18</sup></u>	<u>Proj. 6/30/12<sup>19</sup></u>	<u>Proj. 6/30/13<sup>20</sup></u>
(1)	AAL	\$ 3,599	\$ 3,974	\$ 4,399	\$ 4,819	\$ 5,433	\$ 5,907	\$ 6,494	\$ 6,958	\$ 7,442
(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>5,671</u>	<u>6,041</u>	<u>6,431</u>
(3)	UAAL [(1) - (2)]	165	204	214	230	521	620	823	917	1011
(4)	Funding Ratio [(2)/(1)]	95.4%	94.9%	95.1%	95.2%	90.4%	89.5%	87.3%	86.8%	86.4%
(5)	POB Balance	\$ 400	\$ 397	\$ 393	\$ 388	\$ 383	\$ 375	\$ 367	\$ 358	\$ 347
(6)	Net AVA [(2) - (5)]	3,034	3,373	3,792	4,201	4,529	4,912	5,304	5,683	6,084
(7)	Net Funding Ratio [(6)/(1)]	84.3%	84.9%	86.2%	87.2%	83.4%	83.2%	81.7%	81.7%	81.8%

<sup>18</sup> 6/30/11 CalPERS published rate 21.7%.

<sup>19</sup> 6/30/12 CalPERS published rate 1.0%.

<sup>20</sup> Projected 6/30/13 AVA based on modified asset smoothing method and estimated 2012/13 CalPERS investment return 9.2%, which is based on CalPERS 10/31/12 published rate of return of 4.1%, and 7.50% from 11/1/12 through 6/30/13.



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## GASB 68

### ■ Pension Accounting:

- GASB 68, Accounting for Employers, approved June 25, 2012
- Replaces GASB 27
- Effective 2014/15

### ■ Major Issues:

- Unfunded liability on balance sheet
  - Expense calculation disconnected from contribution calculation
  - Discount rate is
    - ☐ Expected return on plan assets when assets sufficient to pay benefits
    - ☐ Municipal bond rate when assets not sufficient to pay benefits
- Likely cause CalPERS to modify assets smoothing and/or amortization policy*

### ■ Other Issues:

- Immediate recognition of AAL for plan changes
- Deferred recognition for gains & losses and assumption changes over active and inactive members' average future working lifetime
- Deferred recognition of investment gains & losses over 5 years
- Disclosure of asset allocation and expected real rates of return by asset class
- Entry age normal cost method



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## Actuarial Investment Return

### Development of 7.5% Discount Rate

■ History:

	6/30/09	6/30/10	6/30/11
● Real rate of return			
□ 50% Confidence Level	5.04%	4.78%	4.78%
□ Margin for adverse deviation	(0.29)	(0.03)	(0.03)
● Price Inflation	<u>3.00</u>	<u>3.00</u>	<u>2.75</u>
● Total	7.75%	7.75%	7.50%

■ Details of New Assumption:

	Project Period (Years)		New
	1-10	11-19	
● Real rate of return			
□ 50% Confidence Level	4.23%	5.39%	4.78%
● Price Inflation	<u>2.75</u>	<u>2.75</u>	<u>2.75</u>
● Total	6.98%	8.14%	7.53%



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## Actuarial Investment Return

- Lowered assumed price inflation rate from 3% to 2.75%
- Current expected net real rate of return remains at 4.75%
- Margin for adverse deviation remains low
  - difference between expected net long-term rate of return and discount rate
  - margin of conservatism
- CalPERS Chief Actuary recommended 0.28% margin
  - Bartel Associates typically recommends 0.25% to 0.50% margin

	6/30/11			
● Real rate of return	4.75%	4.75%	4.50%	4.50%
● Price Inflation	<u>3.00</u>	<u>2.75</u>	<u>3.00</u>	<u>2.75</u>
● Total	7.75%	7.50%	7.50%	7.25%
● 2013/14 ER Rate - Misc	13.8%	15.6% <sup>21</sup>	17.4%	19.2%
● 2013/14 ER Rate - Safety	22.5%	24.1% <sup>22</sup>	25.7%	27.3%

<sup>21</sup> Shown full impact of discount rate change, without phase in.

<sup>22</sup> Shown full impact of discount rate change, without phase in.



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## PEPRA Summary

- **New Members** – Generally, employees hired after 1/1/13 who did not previously participate in a reciprocal retirement system
- **Pension Formulas for New Members**
  - Miscellaneous – 2.5% @ 67; earliest svc. ret. age 52
  - Safety – 2% @ 57, 2.5% @ 57, and 2.7% @ 57; earliest svc. ret. age 50
- **Plan Compensation Limit for New Members**
  - \$113,700 (100% of 2013 Social Security Wage Base)
  - \$136,440 (120% for members not in Social Security)
  - Increasing annually with CPI
  - Employer can provide a defined contribution plan for pay above the limit
- **Final Compensation for New Members**
  - Highest average plan compensation over 36 consecutive months
  - Plan compensation is the normal monthly rate of pay or base pay
- **Cost Sharing**
  - Target of 50% of total normal cost
  - New members must pay greatest of 50% of total normal cost, amount paid by similar current members, or bargained amount if higher
  - Employers cannot pay any part of new member required employee contributions
  - Employer may impose current employees paying 50% of total normal cost (with certain limits) if not agreed through collective bargaining by 1/1/18



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## PEPRA Summary

- **Benefit Enhancements**
  - Benefit enhancements after 1/1/13 apply only to future service
  - No limits on COLAs
- **Safety Industrial Disability**
  - Increase in benefit for those under 50 with long service
  - Trial period ending 1/1/18
- **Supplemental Defined Benefit Pension Plans**
  - Employer cannot adopt a supplemental defined benefit pension plan after 1/1/13
  - New employees cannot participate in existing plan
- **Pension Holidays**
  - Total employer and employee contributions cannot be less than the normal cost
- **Air Time Service Purchase**
  - Eliminated for all members 1/1/13
- **OPEB**
  - An employer cannot provide better vesting schedule to unrepresented employees as is provided to represented employees
  - Law is unclear whether applies:
    - ☐ Only to vesting schedule or also to the amount of benefit provided
    - ☐ To new members, existing members, and/or current retirees



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## PEPRA Cost Sharing

- Target of 50% of total normal cost for everyone
- *New members* must pay greater of 50% of total normal cost or bargained amount if higher
- Employer cannot pay any part of *new member* required employee contributions
- Employer may impose current employees pay 50% of total normal cost (limited to certain amounts) if not agreed through collective bargaining by 1/1/18
- Miscellaneous Plan:

	<u>Tier 1</u>	<u>Tier 2</u>	
	<u>Current Members</u>		<u>New Members</u>
● Total Normal Cost			
● Employer Normal Cost	11.1%	6.8%	6.5%
● Member Normal Cost	<u>8.0%</u>	<u>7.0%</u>	<u>6.5%</u>
● Total Normal Cost	19.1%	13.8%	13.0%
● 50% Target	9.55%	6.9%	6.5%



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## PEPRA Cost Sharing

- Safety Plan

	<u>Tier 1</u>	<u>Tier 2</u>	
	<u>Current Members</u>		<u>New Members</u>
● Total Normal Cost			
● Employer Normal Cost	17.5%	13.2%	10.75%
● Member Normal Cost	<u>9.0%</u>	<u>9.0%</u>	<u>10.75%</u>
● Total Normal Cost	26.5%	22.2%	21.50%
● 50% Target	13.25%	11.1%	10.75%



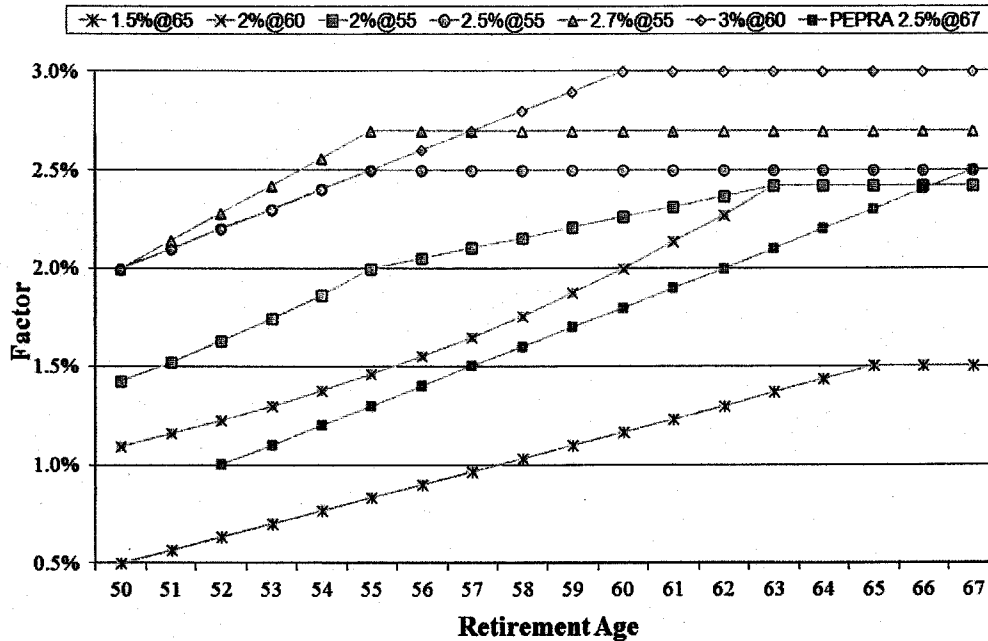
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# **California Public Employees' Pension Reform Act of 2013** **Miscellaneous Benefit Factors**

## **Benefit Factor Comparison**



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# **California Public Employees' Pension Reform Act of 2013** **Miscellaneous Benefit Factors**

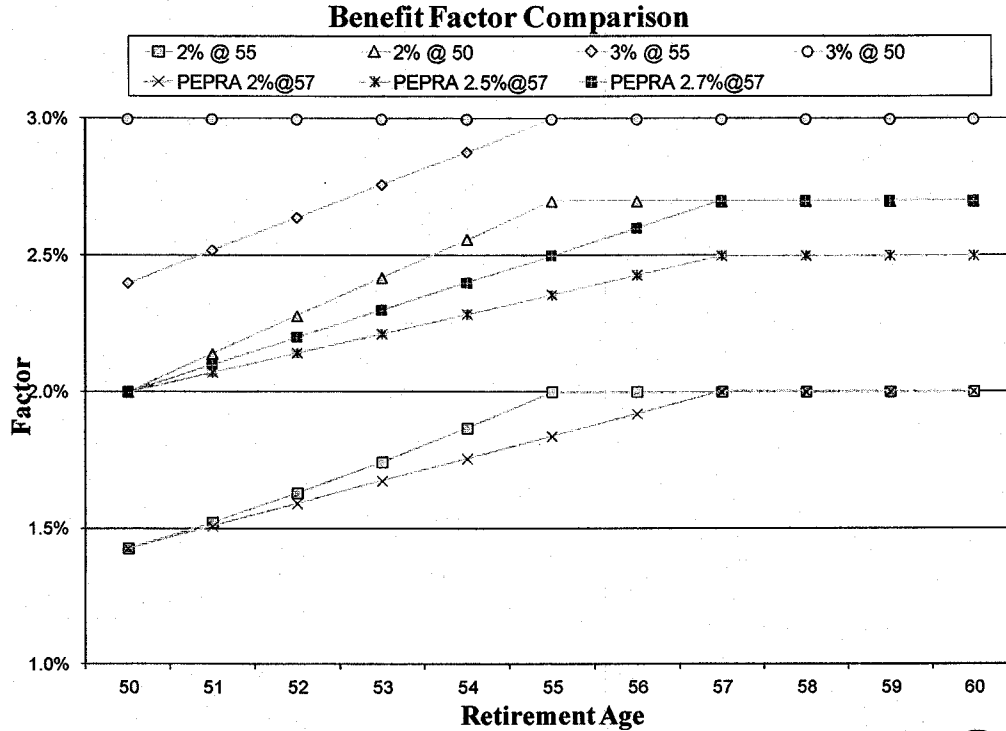
<u>Age</u>	<u>1.5%@65</u>	<u>2%@60</u>	<u>2%@55</u>	<u>2.5%@55</u>	<u>2.7%@55</u>	<u>3%@60</u>	<u>PEPRA</u> <u>2.5%@67</u>
50	0.500%	1.092%	1.426%	2.000%	2.000%	2.000%	n/a
51	0.567%	1.156%	1.522%	2.100%	2.140%	2.100%	n/a
52	0.633%	1.224%	1.628%	2.200%	2.280%	2.200%	1.000%
53	0.700%	1.296%	1.742%	2.300%	2.420%	2.300%	1.100%
54	0.767%	1.376%	1.866%	2.400%	2.560%	2.400%	1.200%
55	0.833%	1.460%	2.000%	2.500%	2.700%	2.500%	1.300%
56	0.900%	1.552%	2.052%	2.500%	2.700%	2.600%	1.400%
57	0.967%	1.650%	2.104%	2.500%	2.700%	2.700%	1.500%
58	1.033%	1.758%	2.156%	2.500%	2.700%	2.800%	1.600%
59	1.100%	1.874%	2.210%	2.500%	2.700%	2.900%	1.700%
60	1.167%	2.000%	2.262%	2.500%	2.700%	3.000%	1.800%
61	1.233%	2.134%	2.314%	2.500%	2.700%	3.000%	1.900%
62	1.300%	2.272%	2.366%	2.500%	2.700%	3.000%	2.000%
63	1.367%	2.418%	2.418%	2.500%	2.700%	3.000%	2.100%
64	1.433%	2.418%	2.418%	2.500%	2.700%	3.000%	2.200%
65	1.500%	2.418%	2.418%	2.500%	2.700%	3.000%	2.300%
66	1.500%	2.418%	2.418%	2.500%	2.700%	3.000%	2.400%
67	1.500%	2.418%	2.418%	2.500%	2.700%	3.000%	2.500%
<b>Member Contribution Rate</b>							
	2%	7%	7%	8%	8%	8%	≈6%



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## California Public Employees' Pension Reform Act of 2013 Safety Benefit Factors



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## California Public Employees' Pension Reform Act of 2013 Safety Benefit Factors

<u>Age</u>	<u>2% @ 55</u>	<u>2% @ 50</u>	<u>3% @ 55</u>	<u>3% @ 50</u>	<u>PEPRA</u> <u>2% @ 57</u>	<u>PEPRA</u> <u>2.5% @ 57</u>	<u>PEPRA</u> <u>2.7% @ 57</u>
50	1.426%	2.00%	2.40%	3.00%	1.43%	2.00%	2.00%
51	1.522%	2.14%	2.52%	3.00%	1.51%	2.07%	2.10%
52	1.628%	2.28%	2.64%	3.00%	1.59%	2.14%	2.20%
53	1.742%	2.42%	2.76%	3.00%	1.67%	2.21%	2.30%
54	1.866%	2.56%	2.88%	3.00%	1.75%	2.29%	2.40%
55	2.00%	2.70%	3.00%	3.00%	1.84%	2.36%	2.50%
56	2.00%	2.70%	3.00%	3.00%	1.92%	2.43%	2.60%
57	2.00%	2.70%	3.00%	3.00%	2.00%	2.50%	2.70%
58	2.00%	2.70%	3.00%	3.00%	2.00%	2.50%	2.70%
59	2.00%	2.70%	3.00%	3.00%	2.00%	2.50%	2.70%
60	2.00%	2.70%	3.00%	3.00%	2.00%	2.50%	2.70%

### Member Contribution Rate

7%      9%      9%      9%      ≈8.4%      ≈10.0%      ≈10.5%



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## CalPERS Smoothing Method

**6/30/2011:**

	<u>CalPERS</u>
<b>Market Value</b>	100.0%
<b>Actuarial Value</b>	112.5%

**6/30/2012:**

<b>Market Value</b>	101.0%
<b>Actuarial Value:</b>	
1. <b>Project @ 7.5%</b>	120.9%
2. <b>Adjust: [(MV-AV) x (1/15)]</b>	119.6%
3. <b>Limited by corridor</b>	119.6%
<b>Actuarial Rate of Return</b>	6.3%
<b>Ratio of Actuarial Value to Market Value</b>	118.4%



March 27, 2013





California Public Employees' Retirement System  
 Actuarial Office  
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[www.calpers.ca.gov](http://www.calpers.ca.gov)

October 2012

**MISCELLANEOUS PLAN OF THE COUNTY OF RIVERSIDE (CalPERS ID 5982690295)**  
**Annual Valuation Report as of June 30, 2011**

Dear Employer,

As an attachment to this letter, you will find a copy of the June 30, 2011 actuarial valuation report of your pension plan. This report contains important actuarial information about your pension plan at CalPERS. Your CalPERS staff actuary is available to discuss the report with you.

**Changes Since the Prior Year's Valuation**

The CalPERS' Board of Administration adopted updated actuarial assumptions to be used beginning with the June 30, 2011 valuation. In addition, a temporary modification to our method of determining the actuarial value of assets and amortizing gains and losses was implemented for the valuations as of June 30, 2009 through June 30, 2011. The effect of those modifications continue in this valuation.

There may also be changes specific to your plan such as contract amendments and funding changes.

Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A, "Statement of Actuarial Data, Methods and Assumptions." The effect of the changes on your rate is included in the "Reconciliation of Required Employer Contributions." **As noted on page 13 of the report, your plan can elect not to phase-in the cost of the assumption change by notifying your plan actuary prior to May 1, 2013.**

**Future Contribution Rates**

The exhibit below displays the required employer contribution rate before any cost sharing and Superfunded status for 2013/2014 along with estimates of the contribution rate for 2014/2015 and 2015/2016 and the probable Superfunded status for 2014/2015. The estimated rate for 2014/2015 is based solely on a projection of the investment return for fiscal 2011/2012, namely 0%. The estimated rate for 2015/2016 uses the valuation assumption of 7.5% as the investment return for fiscal 2012/2013. See Appendix D, "Analysis of Future Investment Return Scenarios", for rate projections under a variety of investment return scenarios. **These rates may not be GASB compliant.** See Appendix C for the GASB compliant rate. Please disregard any projections that we may have provided to you in the past.

Fiscal Year	Employer Contribution Rate	Superfunded?
2013/2014	15.001%	NO
2014/2015	16.0% (projected)	NO
2015/2016	16.3% (projected)	N/A

Member contributions other than cost sharing, (whether paid by the employer or the employee) are in addition to the above rates.

The estimates for 2014/2015 and 2015/2016 also assume that there are no future amendments and no liability gains or losses (such as larger than expected pay increases, more retirements than expected, etc.). This is a very important assumption because these gains and losses do occur and can have a significant impact on your contribution rate. Even for the largest plans, such gains and losses often cause a change in the employer's contribution rate of one or two percent and may be even larger in some less common instances. These gains and losses cannot be predicted in advance so the projected employer contribution rates are just estimates. Your actual rate for 2014/2015 will be provided in next year's report.



### **California Actuarial Advisory Panel Recommendations**

The report satisfies all basic disclosure requirements under the Model Disclosure Elements for Actuarial Valuation Reports recommended by the California Actuarial Advisory Panel, except for the original base amounts of the various components of the unfunded liability amortization.

The report gives the following additional information classified as enhanced risk disclosures under the Model Disclosure Elements for Actuarial Valuation Reports recommended by the California Actuarial Advisory Panel:

- "Deterministic stress test", projecting future results under different investment income scenarios. (See Appendix D's Analysis of Future Investment Return Scenarios.)
- "Sensitivity analysis", showing the impact on current valuation results of a plus or minus 1% change in the discount rate. (See Appendix D's Analysis of Discount Rate Sensitivity.)

We are very busy preparing actuarial valuations for other public agencies and expect to complete all such valuations by the end of October. We understand that you might have a number of questions about these results. While we are very interested in discussing these results with your agency, in the interest of allowing us to give every public agency their result, we ask that, if at all possible, you wait until after October 31 to contact us with questions. If you have questions, please call (888) CalPERS (225-7377).

Sincerely,

A handwritten signature in black ink, appearing to read "Alan Milligan", with a stylized flourish at the end.

ALAN MILLIGAN  
Chief Actuary



# **ACTUARIAL VALUATION**

**as of June 30, 2011**

## **for the MISCELLANEOUS PLAN of the COUNTY OF RIVERSIDE**

**(CalPERS ID 5982690295)**

### **REQUIRED CONTRIBUTIONS FOR FISCAL YEAR**

**July 1, 2013 – June 30, 2014**

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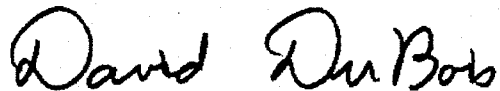
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## ACTUARIAL CERTIFICATION

To the best of our knowledge, this report is complete and accurate and contains sufficient information to disclose, fully and fairly, the funded condition of the MISCELLANEOUS PLAN OF THE COUNTY OF RIVERSIDE. This valuation is based on the member and financial data as of June 30, 2011 provided by the various CalPERS databases and the benefits under this plan with CalPERS as of the date this report was produced. It is our opinion that the valuation has been performed in accordance with generally accepted actuarial principles, in accordance with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for this plan, as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

The undersigned is an actuary for CalPERS, who is a member of the American Academy of Actuaries and the Society of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



DAVID DU BOIS, FSA  
Senior Pension Actuary, CalPERS

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# **HIGHLIGHTS AND EXECUTIVE SUMMARY**

- **PURPOSE OF THE REPORT**
- **REQUIRED CONTRIBUTIONS**
- **FUNDED STATUS**
- **COST**
- **CHANGES SINCE THE PRIOR VALUATION**

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## Purpose of the Report

This report presents the results of the June 30, 2011 actuarial valuation of the MISCELLANEOUS PLAN OF THE COUNTY OF RIVERSIDE of the California Public Employees' Retirement System (CalPERS). The valuation was prepared by the Plan Actuary in order to:

- set forth the actuarial assets and accrued liabilities of this plan as of June 30, 2011;
- determine the required employer contribution rate for this plan for the fiscal year July 1, 2013 through June 30, 2014;
- provide actuarial information as of June 30, 2011 to the CalPERS Board of Administration and other interested parties; and
- provide pension information as of June 30, 2011 to be used in financial reports subject to Governmental Accounting Standards Board (GASB) Statement Number 27 for a Single Employer Defined Benefit Pension Plan.

The use of this report for any other purposes may be inappropriate. In particular, this report does not contain information applicable to alternative benefit costs. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

## Required Employer Contribution

	Fiscal Year 2012/2013	Fiscal Year 2013/2014
<b>Required Employer Contributions</b>		
1. Contribution in Projected Dollars		
a) Total Normal Cost	\$ 169,262,421	\$ 167,320,797
b) Employee Contribution <sup>1</sup>	73,023,650	68,796,020
c) Employer Normal Cost [(1a) - (1b)]	96,238,771	98,524,777
d) Unfunded Contribution	30,739,472	34,640,635
e) Total Employer Contribution [(1c) + (1d)]	\$ 126,978,243	\$ 133,165,412
f) Employee Cost Sharing		0
g) Net Employer Contribution [(1e) - (1f)]		133,165,412
Annual Lump Sum Prepayment Option <sup>2</sup> [(1g) / 1.075 <sup>^</sup> .5]	\$ 122,326,535	\$ 128,436,128
2. Contribution as a Percentage of Payroll		
a) Total Normal Cost	17.987%	18.849%
b) Employee Contribution <sup>1</sup>	7.760%	7.750%
c) Employer Normal Cost [(2a) - (2b)]	10.227%	11.099%
d) Unfunded Rate	3.267%	3.902%
e) Total Employer Rate [(2c) + (2d)]	13.494%	15.001%
f) Employee Cost Sharing		0.000%
g) Net Employer Contribution Rate [(2e) - (2f)]		15.001%

<sup>1</sup>This is the percentage specified in the Public Employees Retirement Law, net of any reduction from the use of a modified formula. Employee cost sharing is shown separately and is therefore not included in this line item.

<sup>2</sup>Payment must be received by CalPERS before the first payroll reported to CalPERS of the new fiscal year and after June 30.

## Funded Status

	June 30, 2010	June 30, 2011
1. Present Value of Projected Benefits	\$ 5,353,889,273	\$ 5,706,172,110
2. Entry Age Normal Accrued Liability	4,097,191,707	4,461,553,672
3. Actuarial Value of Assets (AVA)	3,652,860,802	3,923,498,630
4. Unfunded Liability (AVA Basis) [(2) - (3)]	\$ 444,330,905	\$ 538,055,042
5. Funded Ratio (AVA Basis) [(3) / (2)]	89.2%	87.9%
6. Market Value of Assets (MVA)	\$ 2,882,444,152	\$ 3,525,640,733
7. Unfunded Liability (MVA Basis) [(2) - (6)]	\$ 1,214,747,555	\$ 935,912,939
8. Funded Ratio (MVA Basis) [(6) / (2)]	70.4%	79.0%
Superfunded Status	No	No

## Cost

### Actuarial Cost Estimates in General

What will this pension plan cost? Unfortunately, there is no simple answer. There are two major reasons for the complexity of the answer. First, all actuarial calculations, including the ones in this report, are based on a number of assumptions about the future. These assumptions can be divided into two categories.

- Demographic assumptions include the percentage of employees that will terminate, die, become disabled, and retire in each future year.
- Economic assumptions include future salary increases for each active employee, and the assumption with the greatest impact, future asset returns at CalPERS for each year into the future until the last dollar is paid to current members of your plan.

While CalPERS has set these assumptions to reflect our best estimate of the real future of your plan, it must be understood that these assumptions are very long term predictors and will surely not be realized in any one year. For example, while the asset earnings at CalPERS have averaged more than the assumed return of 7.5% for the past twenty year period ending June 30, 2012, returns for each fiscal year ranged from -24% to +21.7%

Second, the very nature of actuarial funding produces the answer to the question of plan cost as the sum of two separate pieces.

- The Normal Cost (i.e., the future annual premiums in the absence of surplus or unfunded liability) expressed as a percentage of total active payroll.
- The Past Service Cost or Accrued Liability (i.e., the current value of the benefit for all credited past service of current members) which is expressed as a lump sum dollar amount.

The cost is the sum of a percent of future pay and a lump sum dollar amount (the sum of an apple and an orange if you will). To communicate the total cost, either the Normal Cost (i.e., future percent of payroll) must be converted to a lump sum dollar amount (in which case the total cost is the present value of benefits), or the Past Service Cost (i.e., the lump sum) must be converted to a percent of payroll (in which case the total cost is expressed as the employer's rate, part of which is permanent and part temporary). Converting the Past Service Cost lump sum to a percent of payroll requires a specific amortization period, and the employer rate will vary depending on the amortization period chosen.

## Changes since the Prior Valuation

### Actuarial Assumptions

The CalPERS Actuarial office conducted a study and hired an independent evaluator to assess current economic assumptions. Based on the information from both studies, the CalPERS Board of Administration has adopted updated economic assumptions to be used beginning with the June 30, 2011 valuation. In particular, the recommendation based on both studies was to lower the price inflation from 3.00 to 2.75 percent.

Lowering the price inflation had a direct impact on the Investment Return and the Overall Payroll Growth assumptions. The Investment Return assumption is calculated as the sum of the price inflation and the real rate of return. Our assumed real rate of return is 4.75 percent. When added to our new price inflation of 2.75 percent, the resulting investment return is 7.50 percent. The Overall Payroll Growth is calculated as the sum of the price inflation and real wage inflation. Our assumed real wage inflation is 0.25 percent. When added to our new price inflation of 2.75 percent, the resulting overall payroll growth is 3.00 percent.

The new assumptions are described in Appendix A. The effect of change in assumption on the unfunded liability is shown in the "(Gain)/Loss Analysis" and the effect on your employer contribution rate is included in the "Reconciliation of Required Employer Contributions". **As noted on page 13 of the report, your plan can elect not to phase-in the cost of the assumption change by notifying your plan actuary prior to May 1, 2013.**

The limitations on benefits imposed by Internal Revenue Code Section 415 were taken into account in this valuation. The effect of these limitations has been deemed immaterial on the overall results and no additional charge to the change in assumptions base was added.

### Actuarial Methods

A method change was adopted by the CalPERS Board in June 2009. We are in the third year of a 3-year temporary change to the asset smoothing method and the amortization of gains and losses in order to phase in the impact of the -24% investment loss experienced by CalPERS in fiscal year 2008-2009. The following changes were adopted:

- Increase the corridor limits for the actuarial value of assets from 80%-120% of market value to 60%-140% of market value on June 30, 2009
- Reduce the corridor limits for the actuarial value of assets to 70%-130% of market value on June 30, 2010
- Return to the 80%-120% of market value corridor limits for the actuarial value of assets on June 30, 2011 and thereafter
- Isolate and amortize all gains and losses during fiscal year 2008-2009, 2009-2010 and 2010-2011 over fixed and declining 30 year periods (as opposed to the current rolling 30 year amortization)

A complete description of all methods is in Appendix A. The detailed calculation of the actuarial value of assets is shown in the "Development of the Actuarial Value of Assets."

### Benefits

The standard actuarial practice at CalPERS is to recognize mandated legislative benefit changes in the first annual valuation whose valuation date follows the effective date of the legislation. Voluntary benefit changes by plan amendment are generally included in the first valuation that is prepared after the amendment becomes effective even if the valuation date is prior to the effective date of the amendment.

This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to Appendix B for a summary of the plan provisions used in the valuation. The effect of any mandated benefit changes or plan amendments on the unfunded liability is shown in the "(Gain)/Loss Analysis" and the effect on your employer contribution rate is shown in the "Reconciliation of Required Employer Contributions". It should be noted that no change in liability or rate is shown for any plan changes which were already included in the prior year's valuation.

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# **SUMMARY OF LIABILITIES AND RATES**

- **DEVELOPMENT OF ACCRUED AND UNFUNDED LIABILITIES**
- **(GAIN) / LOSS ANALYSIS 06/30/10 - 06/30/11**
- **SCHEDULE OF AMORTIZATION BASES**
- **RECONCILIATION OF REQUIRED EMPLOYER CONTRIBUTIONS**
- **EMPLOYER CONTRIBUTION RATE HISTORY**
- **FUNDING HISTORY**
- **HYPOTHETICAL TERMINATION LIABILITY**

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## Development of Accrued and Unfunded Liabilities

1.	Present Value of Projected Benefits		
	a) Active Members	\$	3,432,303,924
	b) Transferred Members		150,777,809
	c) Terminated Members		109,193,754
	d) Members and Beneficiaries Receiving Payments		2,013,896,623
	e) Total	\$	<u>5,706,172,110</u>
2.	Present Value of Future Employer Normal Costs	\$	709,878,104
3.	Present Value of Future Employee Contributions	\$	534,740,334
4.	Entry Age Normal Accrued Liability		
	a) Active Members [(1a) - (2) - (3)]	\$	2,187,685,486
	b) Transferred Members (1b)		150,777,809
	c) Terminated Members (1c)		109,193,754
	d) Members and Beneficiaries Receiving Payments (1d)		2,013,896,623
	e) Total	\$	<u>4,461,553,672</u>
5.	Actuarial Value of Assets (AVA)	\$	3,923,498,630
6.	Unfunded Accrued Liability (AVA Basis) [(4e) - (5)]	\$	538,055,042
7.	Funded Ratio (AVA Basis) [(5) / (4e)]		87.9%
8.	Market Value of Assets (MVA)	\$	3,525,640,733
9.	Unfunded Liability (MVA Basis) [(4e) - (8)]	\$	935,912,939
10.	Funded Ratio (MVA Basis) [(8) / (4e)]		79.0%

## (Gain)/Loss Analysis 6/30/10 – 6/30/11

To calculate the cost requirements of the plan, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is compared to the expected experience based on the actuarial assumptions. This results in actuarial gains or losses, as shown below.

### A Total (Gain)/Loss for the Year\*

1.	Unfunded Accrued Liability (UAL) as of 6/30/10	\$	444,330,905
2.	Expected Payment on the UAL during 2010/2011		12,984,773
3.	Interest through 6/30/11 $[(.0775 \times (A1) - ((1.0775)^{1/2} - 1) \times (A2))]$		33,941,874
4.	Expected UAL before all other changes $[(A1) - (A2) + (A3)]$		465,288,006
5.	Change due to plan changes		28,260,065
6.	Change due to assumption change		82,515,407
7.	Expected UAL after all other changes $[(A4) + (A5) + (A6)]$		576,063,478
8.	Actual UAL as of 6/30/11		538,055,042
9.	Total (Gain)/Loss for 2010/2011 $[(A8) - (A7)]$	\$	(38,008,436)

### B Contribution (Gain)/Loss for the Year

1.	Expected Contribution (Employer and Employee)	\$	171,759,154
2.	Interest on Expected Contributions		6,531,481
3.	Actual Contributions		185,646,609
4.	Interest on Actual Contributions		7,059,579
5.	Expected Contributions with Interest $[(B1) + (B2)]$		178,290,635
6.	Actual Contributions with Interest $[(B3) + (B4)]$		192,706,188
7.	Contribution (Gain)/Loss $[(B5) - (B6)]$	\$	(14,415,553)

### C Asset (Gain)/Loss for the Year

1.	Actuarial Value of Assets as of 6/30/10 Including Receivables	\$	3,652,860,802
2.	Receivables as of 6/30/10		6,341,715
3.	Actuarial Value of Assets as of 6/30/10		3,646,519,087
4.	Contributions Received		185,646,609
5.	Benefits and Refunds Paid		(169,537,631)
6.	Transfers and miscellaneous adjustments		(378,775)
7.	Expected Int. $[(.0775 \times (C3) + ((1.0775)^{1/2} - 1) \times ((C4) + (C5) + (C6))]$		283,203,401
8.	Expected Assets as of 6/30/11 $[(C3) + (C4) + (C5) + (C6) + (C7)]$		3,945,452,691
9.	Receivables as of 6/30/11		6,464,360
10.	Expected Assets Including Receivables		3,951,917,051
11.	Actual Actuarial Value of Assets as of 6/30/11		3,923,498,630
12.	Asset (Gain)/Loss $[(C10) - (C11)]$	\$	28,418,421

### D Liability (Gain)/Loss for the Year

1.	Total (Gain)/Loss (A9)	\$	(38,008,436)
2.	Contribution (Gain)/Loss (B7)		(14,415,553)
3.	Asset (Gain)/Loss (C12)		28,418,421
4.	Liability (Gain)/Loss $[(D1) - (D2) - (D3)]$	\$	(52,011,304)

### Development of the (Gain)/Loss Balance as of 6/30/11\*\*

1.	(Gain)/Loss Balance as of 6/30/10	\$	230,258,992
2.	Payment Made on the Balance during 2010/2011		13,827,277
3.	Interest through 6/30/11 $[(.0775 \times (1) - ((1.0775)^{1/2} - 1) \times (2))]$		17,319,262
4.	Scheduled (Gain)/Loss Balance as of 6/30/11 $[(1) - (2) + (3)]$	\$	233,750,977

\* The Total (Gain)/Loss for 2010/2011 is being amortized over a fixed and declining 30-year period and is shown as "Special (Gain)/Loss" in the "Schedule of Amortization Bases" on the following page.

\*\* This (Gain)/Loss represents the 6/30/11 balance of the accumulation of (gains)/losses through 6/30/08 and is amortized using a rolling 30-year period. Gains and losses incurred after 6/30/2011 will again accumulate to this base.



## Schedule of Amortization Bases

There is a two year lag between the Valuation Date and the Contribution Fiscal Year.

- The assets, liabilities and funded status of the plan are measured as of the valuation date (June 30, 2011).
- The employer contribution rate determined by the valuation is for the fiscal year beginning two years after the valuation date (fiscal year 2013/2014).

This two year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and due to the need to provide public agencies with their employer contribution rates well in advance of the start of the fiscal year.

The Unfunded Liability is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The Unfunded Liability is rolled forward each year by subtracting the expected Payment on the Unfunded Liability for the fiscal year and adjusting for interest. The Expected Payment on the Unfunded Liability for a fiscal year is equal to the Expected Employer Contribution for the fiscal year minus the Expected Normal Cost for the year. The Employer Contribution Rate for the first fiscal year is determined by the actuarial valuation two years ago and the rate for the second year is from the actuarial valuation one year ago. The Normal Cost Rate for each of the two fiscal years is assumed to be the same as the rate determined by the current valuation. All expected dollar amounts are determined by multiplying the rate by the expected payroll for the applicable fiscal year, based on payroll as of the valuation date.

Reason for Base	Date Established	Amortization Period	Amounts for Fiscal 2013/2014				
			Expected Payment	Balance	Expected Payment	Balance	Payment as Percent-age of Payroll
FS 30-YEAR AMORTIZATION	06/30/08	27	\$ (9,828,712)	\$ (9,828,712)	\$ (619,812)	\$ (10,046,584)	(0.072%)
(GAIN)/LOSS	06/30/08	30	\$233,750,977	\$236,728,456	\$14,249,852	\$239,708,529	1.622%
GOLDEN HANDSHAKE	06/30/09	18	\$33,816,076	\$33,704,065	\$2,637,178	\$33,497,586	0.305%
ASSUMPTION CHANGE	06/30/09	18	\$86,209,097	\$85,923,540	\$6,723,096	\$85,397,151	0.778%
SPECIAL (GAIN)/LOSS	06/30/09	28	\$111,311,272	\$112,729,135	\$6,901,592	\$114,028,097	0.799%
GOLDEN HANDSHAKE	06/30/10	19	\$1,097,906	\$1,180,249	\$89,353	\$1,176,125	0.010%
SPECIAL (GAIN)/LOSS	06/30/10	29	\$73,385,437	\$78,889,345	\$4,748,399	\$79,882,801	0.550%
GOLDEN HANDSHAKE	06/30/11	20	\$28,260,065	\$30,379,570	\$0	\$32,658,038	0.278%
ASSUMPTION CHANGE	06/30/11	20	\$82,515,407	\$91,966,027	\$ (3,240,502)	\$102,223,303	0.290%
SPECIAL (GAIN)/LOSS	06/30/11	30	\$ (38,008,433)	\$ (40,859,065)	\$0	\$ (43,923,495)	(0.297%)
PAYMENT (GAIN)/LOSS	06/30/11	30	\$ (64,454,050)	\$ (59,813,076)	\$ (10,762,012)	\$ (3,191,131)	(0.359%)
<b>TOTAL</b>			<b>\$538,055,042</b>	<b>\$560,884,787</b>	<b>\$20,727,144</b>	<b>\$581,460,786</b>	<b>3.902%</b>

The special (gain)/loss bases were established using the temporary modification recognized in the 2009, 2010 and 2011 annual valuations. Unlike the gain/loss occurring in previous and subsequent years, the gain/loss recognized in the 2009, 2010, and 2011 annual valuations will be amortized over fixed and declining 30 year periods so that these annual gain/losses will be fully paid off in 30 years.

The discount rate assumption is 7.5% after June 30, 2011 in the amortization schedule above.

Note: The assumption change at June 30, 2011 was phased-in over a two-year period. Without the phase-in, the total payment on the amortization bases would increase from 3.902% to 4.482%. Your plan can elect not to phase-in the cost of the assumption change by notifying your plan actuary prior to May 1, 2013. The required employer contribution rate with no phase-in is 15.581%.

## Reconciliation of Required Employer Contributions

	Percentage of Projected Payroll	Estimated \$ Based on Projected Payroll
1. Contribution for 7/1/12 – 6/30/13	13.494%	\$ 126,978,243
2. Effect of changes since the prior year annual valuation		
a) Effect of unexpected changes in demographics and financial results	0.563%	5,004,508
b) Effect of plan changes	0.278%	2,467,780
c) Effect of changes in Assumptions	0.666%	5,912,019
d) Effect of change in payroll	-	(7,197,138)
e) Effect of elimination of amortization base	0.000%	0
f) Effect of changes due to Fresh Start	0.000%	0
g) Net effect of the changes above [Sum of (a) through (f)]	1.507%	6,187,169
3. Contribution for 7/1/13 – 6/30/14 [(1)+(2g)]	15.001%	133,165,412

The contribution actually paid (item 1) may be different if a prepayment of unfunded actuarial liability is made or a plan change became effective after the prior year's actuarial valuation was performed.

## Employer Contribution Rate History

The table below provides a recent history of the employer contribution rates for your plan, as determined by the annual actuarial valuation. It does not account for prepayments or benefit changes made in the middle of the year.

### Required By Valuation

Fiscal Year	Employer Normal Cost	Unfunded Rate	Total Employer Contribution Rate
2009 - 2010	11.089%	0.910%	11.999%
2010 - 2011	11.084%	1.081%	12.165%
2011 - 2012	10.370%	2.742%	13.112%
2012 - 2013	10.227%	3.267%	13.494%
2013 - 2014	11.099%	3.902%	15.001%

## Funding History

The Funding History below shows the recent history of the actuarial accrued liability, the market value of assets, the actuarial value of assets, funded ratios and the annual covered payroll. The Actuarial Value of Assets is used to establish funding requirements and the funded ratio on this basis represents the progress toward fully funding future benefits for current plan participants. The funded ratio based on the Market Value of Assets is an indicator of the short-term solvency of the plan.

Valuation Date	Accrued Liability	Actuarial Value of Assets (AVA)	Market Value of Assets (MVA)	Funded Ratio AVA MVA	Annual Covered Payroll
06/30/07	\$ 3,029,360,507	\$ 2,894,148,219	\$ 3,342,375,894	95.5% 110.3%	\$ 754,117,986
06/30/08	3,350,222,866	3,174,974,787	3,222,895,376	94.8% 96.2%	841,612,805
06/30/09	3,790,232,824	3,401,036,977	2,482,332,809	89.7% 65.5%	841,103,683
06/30/10	4,097,191,707	3,652,860,802	2,882,444,152	89.2% 70.4%	854,932,117
06/30/11	4,461,553,672	3,923,498,630	3,525,640,733	87.9% 79.0%	812,362,628

## Hypothetical Termination Liability

In August 2011, the CalPERS Board adopted an investment policy and asset allocation strategy that more closely reflects expected benefit payments of the Terminated Agency Pool. With this change, CalPERS increased benefit security for members while limiting its funding risk.

The table below shows the hypothetical termination liability, the market value of assets, the unfunded termination liability and the termination funded ratio. The assumptions used, including the discount rate, are stated in Appendix A and take into account the yields available in the US Treasury market on the valuation date and the mortality load for contingencies. The discount rate is duration weighted and is not necessarily the rate that would be used for this plan if it were to terminate. The discount rate for this plan's termination liability would depend on the duration of the liabilities of this plan. For purposes of this estimate, the discount rate used, 4.82%, is the June 30, 2011 30-year US Treasury Stripped Coupon Rate. Please note, as of June 30, 2012 the 30-year US Treasury Stripped Coupon Rate was 2.87%.

Valuation Date	Hypothetical Termination Liability	Market Value of Assets (MVA)	Unfunded Termination Liability	Termination Funded Ratio	Discount Rate
06/30/11	\$ 6,004,192,526	\$ 3,525,640,733	\$ 2,478,551,793	58.7%	4.82%

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# **SUMMARY OF ASSETS**

- **RECONCILIATION OF THE MARKET VALUE OF ASSETS**
- **DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS**
- **ASSET ALLOCATION**
- **CALPERS HISTORY OF INVESTMENT RETURNS**

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## Reconciliation of the Market Value of Assets

1. Market Value of Assets as of 6/30/10 Including Receivables	\$ 2,882,444,152
2. Receivables for Service Buybacks as of 6/30/10	6,341,715
3. Market Value of Assets as of 6/30/10	2,876,102,437
4. Employer Contributions	112,367,186
5. Employee Contributions	73,279,423
6. Benefit Payments to Retirees and Beneficiaries	(162,208,054)
7. Refunds	(6,836,658)
8. Lump Sum Payments	(492,919)
9. Transfers and Miscellaneous Adjustments	(378,775)
10. Investment Return	627,343,734
11. Market Value of Assets as of 6/30/11	\$ 3,519,176,373
12. Receivables for Service Buybacks as of 6/30/11	6,464,360
13. Market Value of Assets as of 6/30/11 Including Receivables	\$ 3,525,640,733

## Development of the Actuarial Value of Assets

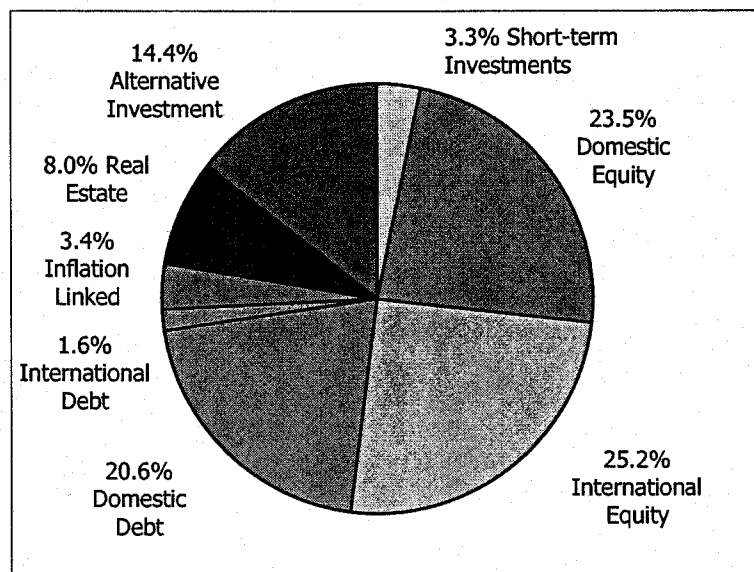
1. Actuarial Value of Assets as of 6/30/10 Used For Rate Setting Purposes	\$ 3,652,860,802
2. Receivables for Service Buybacks as of 6/30/10	6,341,715
3. Actuarial Value of Assets as of 6/30/10	3,646,519,087
4. Employer Contributions	112,367,186
5. Employee Contributions	73,279,423
6. Benefit Payments to Retirees and Beneficiaries	(162,208,054)
7. Refunds	(6,836,658)
8. Lump Sum Payments	(492,919)
9. Transfers and Miscellaneous Adjustments	(378,775)
10. Expected Investment Income at 7.75%	283,203,401
11. Expected Actuarial Value of Assets	\$ 3,945,452,691
12. Market Value of Assets as of 6/30/11	\$ 3,519,176,373
13. Preliminary Actuarial Value of Assets $[(11) + ((12) - (11)) / 15]$	3,917,034,270
14. Maximum Actuarial Value of Assets (120% of (12))	4,223,011,648
15. Minimum Actuarial Value of Assets (80% of (12))	2,815,341,098
16. Actuarial Value of Assets {Lesser of [(14), Greater of ((13), (15))]}]	3,917,034,270
17. Actuarial Value to Market Value Ratio	111.3%
18. Receivables for Service Buybacks as of 6/30/11	6,464,360
19. Actuarial Value of Assets as of 6/30/11 Used for Rate Setting Purposes	\$ 3,923,498,630

## Asset Allocation

CalPERS follows a strategic asset allocation policy that identifies the percentage of funds to be invested in each asset class. The current target allocation was adopted by the Board in December 2010.

The asset allocation and market value of assets shown below reflect the values of the Public Employees Retirement Fund (PERF) in its entirety as of June 30, 2011. The assets for COUNTY OF RIVERSIDE MISCELLANEOUS PLAN are part of the Public Employees Retirement Fund (PERF) and are invested accordingly.

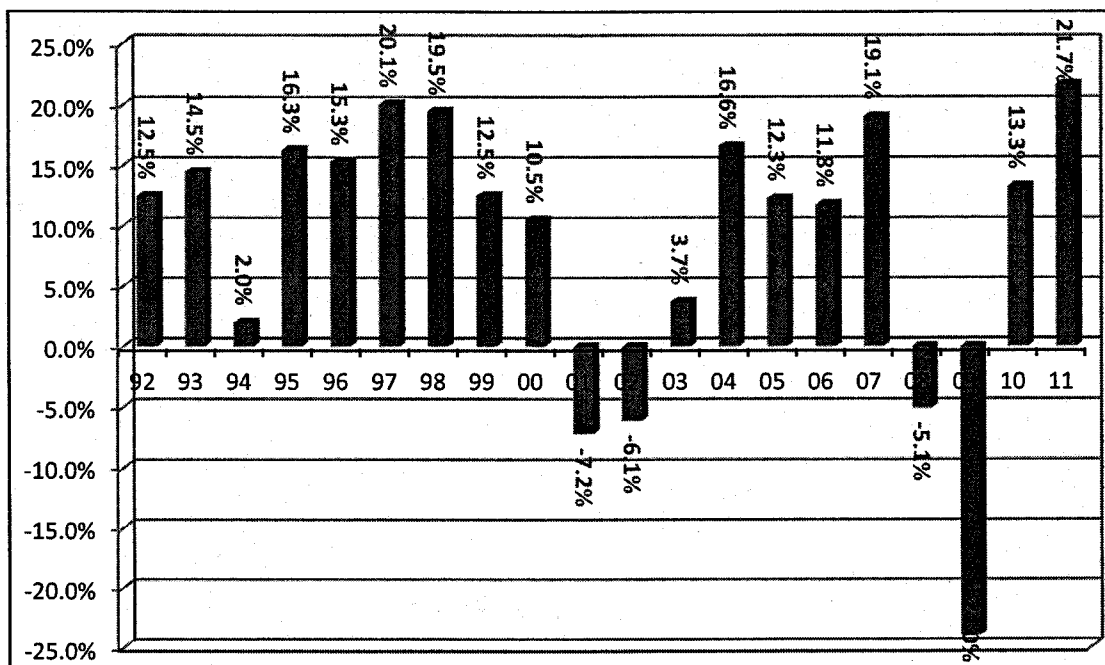
(A) Asset Class	(B) Market Value (\$ Billion)	(C) Current Allocation
1) Short-Term Investments	7.9	3.3%
2) Domestic Equity	56.3	23.5%
3) International Equity	60.4	25.2%
4) Domestic Debt	49.2	20.6%
5) International Debt	3.9	1.6%
6) Inflation Linked	8.1	3.4%
7) Real Estate	19.1	8.0%
8) Alternative Investment	34.4	14.4%
<b>Total Fund</b>	<b>\$239.3</b>	<b>100.0%</b>





## CalPERS History of Investment Returns

The following is a chart with historical annual returns of the Public Employees Retirement Fund for each fiscal year ending on June 30. Beginning with June 30, 2002 the figures are reported as gross of fees.



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# **SUMMARY OF PARTICIPANT DATA**

- **SUMMARY OF VALUATION DATA**
- **ACTIVE MEMBERS**
- **TRANSFERRED AND TERMINATED MEMBERS**
- **RETIRED MEMBERS AND BENEFICIARIES**

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## Summary of Valuation Data

	June 30, 2010	June 30, 2011
<b>1. Active Members</b>		
a) Counts	15,446	15,243
b) Average Attained Age	43.28	43.42
c) Average Entry Age to Rate Plan	34.68	34.54
d) Average Years of Service	8.60	8.88
e) Average Annual Covered Pay	\$ 55,350	\$ 53,294
f) Annual Covered Payroll	854,932,117	812,362,628
g) Projected Annual Payroll for Contribution Year	941,026,413	887,690,577
h) Present Value of Future Payroll	7,257,981,968	6,859,588,602
<b>2. Transferred Members</b>		
a) Counts	3,434	3,449
b) Average Attained Age	42.83	43.03
c) Average Years of Service	2.71	2.66
d) Average Annual Covered Pay	\$ 70,555	\$ 73,408
<b>3. Terminated Members</b>		
a) Counts	6,334	6,561
b) Average Attained Age	42.35	42.57
c) Average Years of Service	2.22	2.18
d) Average Annual Covered Pay	\$ 40,600	\$ 40,937
<b>4. Retired Members and Beneficiaries</b>		
a) Counts	7,710	8,318
b) Average Attained Age	67.97	67.82
c) Average Annual Benefits	\$ 18,587	\$ 19,969
<b>5. Active to Retired Ratio [(1a) / (4a)]</b>	2.00	1.83

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

## Active Members

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

### Distribution of Active Members by Age and Service

Attained Age	Years of Service at Valuation Date						Total
	0-4	5-9	10-14	15-19	20-25	25+	
15-24	383	17	0	0	0	0	400
25-29	1259	327	9	0	0	0	1,595
30-34	1143	692	194	9	0	0	2,038
35-39	906	637	462	100	5	0	2,110
40-44	739	588	500	209	105	5	2,146
45-49	623	514	446	240	276	105	2,204
50-54	536	462	462	259	290	217	2,226
55-59	360	333	372	186	193	170	1,614
60-64	166	192	187	76	74	43	738
65 and over	57	46	40	15	8	6	172
<b>All Ages</b>	<b>6172</b>	<b>3808</b>	<b>2672</b>	<b>1094</b>	<b>951</b>	<b>546</b>	<b>15,243</b>

### Distribution of Average Annual Salaries by Age and Service

Attained Age	Years of Service at Valuation Date						Average
	0-4	5-9	10-14	15-19	20-25	25+	
15-24	\$28,908	\$33,063	\$0	\$0	\$0	\$0	\$29,085
25-29	38,022	42,058	48,762	0	0	0	38,910
30-34	45,565	50,367	47,742	56,683	0	0	47,452
35-39	50,185	54,315	57,922	56,434	65,638	0	53,459
40-44	49,052	57,105	61,511	62,263	61,356	63,782	56,084
45-49	52,041	54,538	58,638	63,899	64,829	66,372	57,534
50-54	51,174	52,439	58,451	63,782	65,863	72,539	58,410
55-59	60,502	57,613	60,885	60,278	64,951	69,407	61,438
60-64	52,358	53,678	60,834	65,815	58,483	72,328	58,013
65 and over	53,623	57,949	56,121	83,814	55,945	55,653	58,173
<b>All Ages</b>	<b>\$46,358</b>	<b>\$52,984</b>	<b>\$58,624</b>	<b>\$62,608</b>	<b>\$64,221</b>	<b>\$70,095</b>	<b>\$53,294</b>

## Transferred and Terminated Members

### Distribution of Transfers to Other CalPERS Plans by Age and Service

Attained Age	Years of Service at Valuation Date						Total	Average Salary
	0-4	5-9	10-14	15-19	20-25	25+		
15-24	50	0	0	0	0	0	50	\$58,371
25-29	333	3	0	0	0	0	336	65,754
30-34	558	21	2	0	0	0	581	70,456
35-39	479	45	2	0	0	0	526	74,489
40-44	434	51	12	4	1	0	502	77,606
45-49	349	79	26	16	2	0	472	73,728
50-54	294	91	36	14	11	0	446	75,037
55-59	202	71	25	9	4	1	312	76,630
60-64	109	30	19	8	2	1	169	76,751
65 and over	38	12	5	0	0	0	55	71,874
<b>All Ages</b>	<b>2846</b>	<b>403</b>	<b>127</b>	<b>51</b>	<b>20</b>	<b>2</b>	<b>3,449</b>	<b>73,408</b>

### Distribution of Terminated Participants with Funds on Deposit by Age and Service

Attained Age	Years of Service at Valuation Date						Total	Average Salary
	0-4	5-9	10-14	15-19	20-25	25+		
15-24	195	0	0	0	0	0	195	\$26,530
25-29	702	19	0	0	0	0	721	33,119
30-34	966	57	0	0	0	0	1,023	38,005
35-39	864	89	8	3	0	0	964	43,407
40-44	791	127	39	9	2	0	968	44,921
45-49	694	132	58	25	14	1	924	45,242
50-54	597	97	41	20	5	1	761	41,538
55-59	468	63	31	9	3	2	576	43,150
60-64	262	27	7	3	1	0	300	39,688
65 and over	120	6	2	0	1	0	129	39,944
<b>All Ages</b>	<b>5659</b>	<b>617</b>	<b>186</b>	<b>69</b>	<b>26</b>	<b>4</b>	<b>6,561</b>	<b>40,937</b>

## Retired Members and Beneficiaries

### Distribution of Retirees and Beneficiaries by Age and Retirement Type\*

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 30	0	0	0	1	0	16	17
30-34	0	0	2	0	1	5	8
35-39	0	1	3	0	1	7	12
40-44	0	11	13	0	1	6	31
45-49	0	34	14	1	0	17	66
50-54	372	49	10	2	0	14	447
55-59	1058	71	30	9	0	43	1,211
60-64	1728	85	33	7	0	72	1,925
65-69	1437	72	13	4	0	83	1,609
70-74	936	48	11	5	0	93	1,093
75-79	609	40	5	5	0	96	755
80-84	392	26	1	2	0	122	543
85 and Over	391	18	0	3	0	183	595
<b>All Ages</b>	<b>6923</b>	<b>455</b>	<b>135</b>	<b>39</b>	<b>3</b>	<b>757</b>	<b>8,312</b>

### Distribution of Average Annual Amounts for Retirees and Beneficiaries by Age and Retirement Type\*

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Average
Under 30	\$0	\$0	\$0	\$821	\$0	\$3,176	\$3,038
30-34	0	0	162	0	131	3,339	2,144
35-39	0	5,565	115	0	96	9,217	5,877
40-44	0	9,206	3,266	0	793	3,859	5,409
45-49	0	10,134	817	38,132	0	8,053	8,046
50-54	21,685	10,285	1,387	8,979	0	11,276	19,599
55-59	26,563	10,343	1,126	7,005	0	11,443	24,300
60-64	27,138	11,830	1,006	7,185	0	14,176	25,457
65-69	23,414	11,992	1,920	12,458	0	14,145	22,224
70-74	18,978	10,573	329	10,705	0	11,833	17,775
75-79	14,161	8,406	1,121	3,367	0	10,822	13,273
80-84	14,074	10,069	102	5,670	0	10,516	13,027
85 and Over	10,533	8,468	0	9,930	0	7,778	9,620
<b>All Ages</b>	<b>\$22,062</b>	<b>\$10,586</b>	<b>\$1,257</b>	<b>\$8,502</b>	<b>\$340</b>	<b>\$10,545</b>	<b>\$19,975</b>



## Retired Members and Beneficiaries (continued)

### Distribution of Retirees and Beneficiaries by Years Retired and Retirement Type\*

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 5 Yrs	2989	71	25	13	2	311	3,411
5-9	1771	96	31	7	0	182	2,087
10-14	933	128	27	7	1	117	1,213
15-19	572	71	21	3	0	64	731
20-24	328	31	15	3	0	9	386
25-29	211	28	10	3	0	28	280
30 and Over	119	30	6	3	0	46	204
<b>All Years</b>	<b>6923</b>	<b>455</b>	<b>135</b>	<b>39</b>	<b>3</b>	<b>757</b>	<b>8,312</b>

### Distribution of Average Annual Amounts for Retirees and Beneficiaries by Years Retired and Retirement Type\*

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Average
Under 5 Yrs	\$27,660	\$12,318	\$1,343	\$8,507	\$462	\$10,690	\$25,512
5-9	23,731	13,097	2,418	12,323	0	13,098	21,960
10-14	15,147	9,037	1,110	4,799	96	10,017	13,623
15-19	13,274	10,063	905	13,827	0	7,789	12,128
20-24	11,402	10,250	493	4,004	0	10,924	10,817
25-29	8,992	8,200	291	6,862	0	9,494	8,630
30 and Over	5,606	8,871	314	9,019	0	5,205	5,890
<b>All Years</b>	<b>\$22,062</b>	<b>\$10,586</b>	<b>\$1,257</b>	<b>\$8,502</b>	<b>\$340</b>	<b>\$10,545</b>	<b>\$19,975</b>

\* Counts of members do not include alternate payees receiving benefits while the member is still working. Therefore, the total counts may not match information on page 25 of the report. Multiple records may exist for those who have service in more than one coverage group. This does not result in double counting of liabilities.

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# **APPENDICES**

- **APPENDIX A - ACTUARIAL METHODS AND ASSUMPTIONS**
- **APPENDIX B - PLAN PROVISIONS**
- **APPENDIX C - GASB STATEMENT NO. 27**
- **APPENDIX D - RISK ANALYSIS**
- **APPENDIX E - GLOSSARY OF ACTUARIAL TERMS**

# **APPENDIX A**

## **ACTUARIAL METHODS AND ASSUMPTIONS**

- **ACTUARIAL DATA**
- **ACTUARIAL METHODS**
- **ACTUARIAL ASSUMPTIONS**
- **MISCELLANEOUS**

## Actuarial Data

As stated in the Actuarial Certification, the data which serves as the basis of this valuation has been obtained from the various CalPERS databases. We have reviewed the valuation data and believe that it is reasonable and appropriate in aggregate. We are unaware of any potential data issues that would have a material effect on the results of this valuation, except that data does not always contain the latest salary information for former members now in reciprocal systems and does not recognize the potential for unusually large salary deviation in certain cases such as elected officials. Therefore, salary information in these cases may not be accurate. These situations are relatively infrequent, however, and when they do occur, they generally do not have a material impact on the employer contribution rates.

## Actuarial Methods

### Funding Method

The actuarial funding method used for the Retirement Program is the Entry Age Normal Cost Method. Under this method, projected benefits are determined for all members and the associated liabilities are spread in a manner that produces level annual cost as a percent of pay in each year from the age of hire (entry age) to the assumed retirement age. The cost allocated to the current fiscal year is called the normal cost.

The actuarial accrued liability for active members is then calculated as the portion of the total cost of the plan allocated to prior years. The actuarial accrued liability for members currently receiving benefits, for active members beyond the assumed retirement age, and for members entitled to deferred benefits, is equal to the present value of the benefits expected to be paid. No normal costs are applicable for these participants.

The excess of the total actuarial accrued liability over the actuarial value of plan assets is called the unfunded actuarial accrued liability. Funding requirements are determined by adding the normal cost and an amortization of the unfunded liability as a level percentage of assumed future payrolls. All changes in liability due to plan amendments, changes in actuarial assumptions, or changes in actuarial methodology are amortized separately over a 20-year period. All gains or losses are tracked and amortized over a rolling 30-year period with the exception of special gains and losses in fiscal years 2008-2009, 2009-2010 and 2010-2011. Each of these years' gains or losses will be isolated and amortized over fixed and declining 30 year periods (as opposed to the current rolling 30 year amortization). If a plan's accrued liability exceeds the actuarial value of assets, the annual contribution with respect to the total unfunded liability may not be less than the amount produced by a 30-year amortization of the unfunded liability.

Additional contributions will be required for any plan or pool if their cash flows hamper adequate funding progress by preventing the expected funded status on a market value of assets basis of the plan to either:

- Increase by at least 15% by June 30, 2043; or
- Reach a level of 75% funded by June 30, 2043

The necessary additional contribution will be obtained by changing the amortization period of the gains and losses prior to 2009 to a period which will result in the satisfaction of the above criteria. CalPERS actuaries will reassess the criteria above when performing each future valuation to determine whether or not additional contributions are necessary.

An exception to the funding rules above is used whenever the application of such rules results in inconsistencies. In these cases a "fresh start" approach is used. This simply means that the current unfunded actuarial liability is projected and amortized over a set number of years. As mentioned above, if the annual contribution on the total unfunded liability was less than the amount produced by a 30-year amortization of the unfunded liability, the plan actuary would implement a 30-year fresh start. However, in the case of a 30-year fresh start, just the unfunded liability not already in the (gain)/loss base (which already is amortized over 30 years) will go into the new fresh start base. In addition, a fresh start is needed in the following situations:

- 1) when a positive payment would be required on a negative unfunded actuarial liability (or conversely a negative payment on a positive unfunded actuarial liability); or
- 2) when there are excess assets, rather than an unfunded liability. In this situation a 30-year fresh start is used, unless a longer fresh start is needed to avoid a negative total rate.

It should be noted that the actuary may choose to use a fresh start under other circumstances. In all cases, the fresh start period is set by the actuary at what he deems appropriate, and will not be less than five years nor greater than 30 years.

#### **Asset Valuation Method**

In order to dampen the effect of short term market value fluctuations on employer contribution rates, the following asset smoothing technique is used. First an Expected Value of Assets is computed by bringing forward the prior year's Actuarial Value of Assets and the contributions received and benefits paid during the year at the assumed actuarial rate of return. The Actuarial Value of Assets is then computed as the Expected Value of Assets plus one-fifteenth of the difference between the actual Market Value of Assets and the Expected Value of Assets as of the valuation date. However in no case will the Actuarial Value of Assets be less than 80% or greater than 120% of the actual Market Value of Assets.

In June 2009, the CalPERS Board adopted changes to the asset smoothing method in order to phase in over a three year period the impact of the -24% investment loss experienced by CalPERS in fiscal year 2008-2009. The following changes were adopted:

- Increase the corridor limits for the actuarial value of assets from 80%-120% of market value to 60%-140% of market value on June 30, 2009
- Reduce the corridor limits for the actuarial value of assets to 70%-130% of market value on June 30, 2010
- Return to the 80%-120% of market value corridor limits for the actuarial value of assets on June 30, 2011 and thereafter

## Actuarial Assumptions

### Economic Assumptions

#### **Discount Rate**

7.5% compounded annually (net of expenses). This assumption is used for all plans.

#### **Termination Liability Discount Rate**

The discount rate is set by taking into account the yields available in the US Treasury market on the valuation date according to treasury rates along the yield curve that match the cash flows of the plans' expected benefit payout stream in future years. For purposes of this report, the termination liability discount rate used, 4.82%, is the 30-year US Treasury Stripped Coupon Rate as of the valuation date. Please note, as of June 30, 2012 the 30-year US Treasury Stripped Coupon Rate was 2.87%.

#### **Salary Growth**

Annual increases vary by category, entry age, and duration of service. Sample assumed increases are shown below.

#### **Public Agency Miscellaneous**

Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)
0	0.1420	0.1240	0.0980
1	0.1190	0.1050	0.0850
2	0.1010	0.0910	0.0750
3	0.0880	0.0800	0.0670
4	0.0780	0.0710	0.0610
5	0.0700	0.0650	0.0560
10	0.0480	0.0460	0.0410
15	0.0430	0.0410	0.0360
20	0.0390	0.0370	0.0330
25	0.0360	0.0360	0.0330
30	0.0360	0.0360	0.0330

#### **Public Agency Fire**

Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)
0	0.1050	0.1050	0.1020
1	0.0950	0.0940	0.0850
2	0.0870	0.0830	0.0700
3	0.0800	0.0750	0.0600
4	0.0740	0.0680	0.0510
5	0.0690	0.0620	0.0450
10	0.0510	0.0460	0.0350
15	0.0410	0.0390	0.0340
20	0.0370	0.0360	0.0330
25	0.0350	0.0350	0.0330
30	0.0350	0.0350	0.0330

**Salary Growth** (continued)

<b>Public Agency Police</b>			
<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1090	0.1090	0.1090
1	0.0930	0.0930	0.0930
2	0.0810	0.0810	0.0780
3	0.0720	0.0700	0.0640
4	0.0650	0.0610	0.0550
5	0.0590	0.0550	0.0480
10	0.0450	0.0420	0.0340
15	0.0410	0.0390	0.0330
20	0.0370	0.0360	0.0330
25	0.0350	0.0340	0.0330
30	0.0350	0.0340	0.0330

<b>Public Agency County Peace Officers</b>			
<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1290	0.1290	0.1290
1	0.1090	0.1060	0.1030
2	0.0940	0.0890	0.0840
3	0.0820	0.0770	0.0710
4	0.0730	0.0670	0.0610
5	0.0660	0.0600	0.0530
10	0.0460	0.0420	0.0380
15	0.0410	0.0380	0.0360
20	0.0370	0.0360	0.0340
25	0.0350	0.0340	0.0330
30	0.0350	0.0340	0.0330

<b>Schools</b>			
<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1080	0.0960	0.0820
1	0.0940	0.0850	0.0740
2	0.0840	0.0770	0.0670
3	0.0750	0.0700	0.0620
4	0.0690	0.0640	0.0570
5	0.0630	0.0600	0.0530
10	0.0450	0.0440	0.0410
15	0.0390	0.0380	0.0350
20	0.0360	0.0350	0.0320
25	0.0340	0.0340	0.0320
30	0.0340	0.0340	0.0320

- The Miscellaneous salary scale is used for Local Prosecutors.
- The Police salary scale is used for Other Safety, Local Sheriff, and School Police.

**Overall Payroll Growth**

3.00% compounded annually (used in projecting the payroll over which the unfunded liability is amortized). This assumption is used for all plans.

**Inflation**

2.75% compounded annually. This assumption is used for all plans.



**Non-valued Potential Additional Liabilities**

The potential liability loss for a cost-of-living increase exceeding the 2.75% inflation assumption, and any potential liability loss from future member service purchases are not reflected in the valuation.

**Miscellaneous Loading Factors**

**Credit for Unused Sick Leave**

Benefit are increased by 1% for those plans with the provision providing Credit for Unused Sick Leave.

**Conversion of Employer Paid Member Contributions (EPMC)**

Final Average Salary is increased by the Employee Contribution Rate for those plans with the provision providing for the Conversion of Employer Paid Member Contributions (EPMC) during the final compensation period.

**Norris Decision (Best Factors)**

Employees hired prior to July 1, 1982 have projected benefit amounts increased in order to reflect the use of "Best Factors" in the calculation of optional benefit forms. This is due to a 1983 Supreme Court decision, known as the Norris decision, which required males and females to be treated equally in the determination of benefit amounts. Consequently, anyone already employed at that time is given the best possible conversion factor when optional benefits are determined. No loading is necessary for employees hired after July 1, 1982.

**Termination Liability**

The termination liabilities include a 7% contingency load. This load is for unforeseen improvements in mortality.

**Demographic Assumptions**

**Pre-Retirement Mortality**

Non-Industrial Death Rates vary by age and gender. Industrial Death rates vary by age. See sample rates in table below. The non-industrial death rates are used for all plans. The industrial death rates are used for Safety Plans (except for Local Prosecutor safety members where the corresponding Miscellaneous Plan does not have the Industrial Death Benefit).

Age	Non-Industrial Death (Not Job-Related)		Industrial Death (Job-Related)
	Male	Female	Male and Female
20	0.00047	0.00016	0.00003
25	0.00050	0.00026	0.00007
30	0.00053	0.00036	0.00010
35	0.00067	0.00046	0.00012
40	0.00087	0.00065	0.00013
45	0.00120	0.00093	0.00014
50	0.00176	0.00126	0.00015
55	0.00260	0.00176	0.00016
60	0.00395	0.00266	0.00017
65	0.00608	0.00419	0.00018
70	0.00914	0.00649	0.00019
75	0.01220	0.00878	0.00020
80	0.01527	0.01108	0.00021

Miscellaneous Plans usually have Industrial Death rates set to zero unless the agency has specifically contracted for Industrial Death benefits. If so, each Non-Industrial Death rate shown above will be split into two components: 99% will become the Non-Industrial Death rate and 1% will become the Industrial Death rate.

### Post-Retirement Mortality

Rates vary by age, type of retirement and gender. See sample rates in table below. These rates are used for all plans.

Age	Healthy Recipients		Non-Industrially Disabled (Not Job-Related)		Industrially Disabled (Job-Related)	
	Male	Female	Male	Female	Male	Female
50	0.00239	0.00125	0.01632	0.01245	0.00443	0.00356
55	0.00474	0.00243	0.01936	0.01580	0.00563	0.00546
60	0.00720	0.00431	0.02293	0.01628	0.00777	0.00798
65	0.01069	0.00775	0.03174	0.01969	0.01388	0.01184
70	0.01675	0.01244	0.03870	0.03019	0.02236	0.01716
75	0.03080	0.02071	0.06001	0.03915	0.03585	0.02665
80	0.05270	0.03749	0.08388	0.05555	0.06926	0.04528
85	0.09775	0.07005	0.14035	0.09577	0.11799	0.08017
90	0.16747	0.12404	0.21554	0.14949	0.16575	0.13775
95	0.25659	0.21556	0.31025	0.23055	0.26108	0.23331
100	0.34551	0.31876	0.45905	0.37662	0.40918	0.35165
105	0.58527	0.56093	0.67923	0.61523	0.64127	0.60135
110	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

The mortality assumptions are based on mortality rates resulting from the most recent CalPERS Experience Study adopted by the CalPERS Board, first used in the June 30, 2009 valuation. For purposes of the post-retirement mortality rates, those revised rates include 5 years of projected ongoing mortality improvement using Scale AA published by the Society of Actuaries until June 30, 2010. There is no margin for future mortality improvement beyond the valuation date. The mortality assumption will be reviewed with the next experience study expected to be completed for the June 30, 2013 valuation to determine an appropriate margin to be used.

### Marital Status

For active members, a percentage married upon retirement is assumed according to the following table.

Member Category	Percent Married
Miscellaneous Member	85%
Local Police	90%
Local Fire	90%
Other Local Safety	90%
School Police	90%

### Age of Spouse

It is assumed that female spouses are 3 years younger than male spouses. This assumption is used for all plans.

### Terminated Members

It is assumed that terminated members refund immediately if non-vested. Terminated members who are vested are assumed to follow the same service retirement pattern as active members but with a load to reflect the expected higher rates of retirement, especially at lower ages. The following table shows the load factors that are applied to the service retirement assumption for active members to obtain the service retirement pattern for separated vested members:

Age	Load Factor
50	450%
51	250%
52 through 56	200%
57 through 60	150%
61 through 64	125%
65 and above	100% (no change)

**Termination with Refund**

Rates vary by entry age and service for Miscellaneous Plans. Rates vary by service for Safety Plans.  
 See sample rates in tables below.

**Public Agency Miscellaneous**

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40	Entry Age 45
0	0.1742	0.1674	0.1606	0.1537	0.1468	0.1400
1	0.1545	0.1477	0.1409	0.1339	0.1271	0.1203
2	0.1348	0.1280	0.1212	0.1142	0.1074	0.1006
3	0.1151	0.1083	0.1015	0.0945	0.0877	0.0809
4	0.0954	0.0886	0.0818	0.0748	0.0680	0.0612
5	0.0212	0.0193	0.0174	0.0155	0.0136	0.0116
10	0.0138	0.0121	0.0104	0.0088	0.0071	0.0055
15	0.0060	0.0051	0.0042	0.0032	0.0023	0.0014
20	0.0037	0.0029	0.0021	0.0013	0.0005	0.0001
25	0.0017	0.0011	0.0005	0.0001	0.0001	0.0001
30	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001
35	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

**Public Agency Safety**

Duration of Service	Fire	Police	County Peace Officer
0	0.0710	0.1013	0.0997
1	0.0554	0.0636	0.0782
2	0.0398	0.0271	0.0566
3	0.0242	0.0258	0.0437
4	0.0218	0.0245	0.0414
5	0.0029	0.0086	0.0145
10	0.0009	0.0053	0.0089
15	0.0006	0.0027	0.0045
20	0.0005	0.0017	0.0020
25	0.0003	0.0012	0.0009
30	0.0003	0.0009	0.0006
35	0.0003	0.0009	0.0006

The Police Termination and Refund rates are used for Public Agency Local Prosecutors, Other Safety, Local Sheriff, and School Police.

**Schools**

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40	Entry Age 45
0	0.1730	0.1627	0.1525	0.1422	0.1319	0.1217
1	0.1585	0.1482	0.1379	0.1277	0.1174	0.1071
2	0.1440	0.1336	0.1234	0.1131	0.1028	0.0926
3	0.1295	0.1192	0.1089	0.0987	0.0884	0.0781
4	0.1149	0.1046	0.0944	0.0841	0.0738	0.0636
5	0.0278	0.0249	0.0221	0.0192	0.0164	0.0135
10	0.0172	0.0147	0.0122	0.0098	0.0074	0.0049
15	0.0115	0.0094	0.0074	0.0053	0.0032	0.0011
20	0.0073	0.0055	0.0038	0.0020	0.0002	0.0002
25	0.0037	0.0023	0.0010	0.0002	0.0002	0.0002
30	0.0015	0.0003	0.0002	0.0002	0.0002	0.0002
35	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002

**Termination with Vested Benefits**

Rates vary by entry age and service for Miscellaneous Plans. Rates vary by service for Safety Plans. See sample rates in tables below.

**Public Agency Miscellaneous**

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40
5	0.0656	0.0597	0.0537	0.0477	0.0418
10	0.0530	0.0466	0.0403	0.0339	0.0000
15	0.0443	0.0373	0.0305	0.0000	0.0000
20	0.0333	0.0261	0.0000	0.0000	0.0000
25	0.0212	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000

**Public Agency Safety**

Duration of Service	Fire	Police	County Peace Officer
5	0.0162	0.0163	0.0265
10	0.0061	0.0126	0.0204
15	0.0058	0.0082	0.0130
20	0.0053	0.0065	0.0074
25	0.0047	0.0058	0.0043
30	0.0045	0.0056	0.0030
35	0.0000	0.0000	0.0000

- When a member is eligible to retire, the termination with vested benefits probability is set to zero.
- After termination with vested benefits, a miscellaneous member is assumed to retire at age 59 and a safety member at age 54.
- The Police Termination with vested benefits rates are used for Public Agency Local Prosecutors, Other Safety, Local Sheriff, and School Police.

**Schools**

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40
5	0.0816	0.0733	0.0649	0.0566	0.0482
10	0.0629	0.0540	0.0450	0.0359	0.0000
15	0.0537	0.0440	0.0344	0.0000	0.0000
20	0.0420	0.0317	0.0000	0.0000	0.0000
25	0.0291	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000

**Non-Industrial (Not Job-Related) Disability**

Rates vary by age and gender for Miscellaneous Plans.  
 Rates vary by age and category for Safety Plans.

Age	Miscellaneous		Fire	Police	County Peace Officer	Schools	
	Male	Female	Male and Female	Male and Female	Male and Female	Male	Female
20	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
25	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
30	0.0002	0.0002	0.0001	0.0002	0.0001	0.0002	0.0001
35	0.0006	0.0009	0.0001	0.0003	0.0004	0.0006	0.0004
40	0.0015	0.0016	0.0001	0.0004	0.0007	0.0014	0.0009
45	0.0025	0.0024	0.0002	0.0005	0.0013	0.0028	0.0017
50	0.0033	0.0031	0.0005	0.0008	0.0018	0.0044	0.0030
55	0.0037	0.0031	0.0010	0.0013	0.0010	0.0049	0.0034
60	0.0038	0.0025	0.0015	0.0020	0.0006	0.0043	0.0024

- The Miscellaneous Non-Industrial Disability rates are used for Local Prosecutors.
- The Police Non-Industrial Disability rates are used for Other Safety, Local Sheriff, and School Police.

**Industrial (Job-Related) Disability**

Rates vary by age and category.

Age	Fire	Police	County Peace Officer
20	0.0002	0.0007	0.0003
25	0.0012	0.0032	0.0015
30	0.0025	0.0064	0.0031
35	0.0037	0.0097	0.0046
40	0.0049	0.0129	0.0063
45	0.0061	0.0161	0.0078
50	0.0074	0.0192	0.0101
55	0.0721	0.0668	0.0173
60	0.0721	0.0668	0.0173

- The Police Industrial Disability rates are used for Local Sheriff and Other Safety.
- Fifty Percent of the Police Industrial Disability rates are used for School Police.
- One Percent of the Police Industrial Disability rates are used for Local Prosecutors.
- Normally, rates are zero for Miscellaneous Plans unless the agency has specifically contracted for Industrial Disability benefits. If so, each miscellaneous non-industrial disability rate will be split into two components: 50% will become the Non-Industrial Disability rate and 50% will become the Industrial Disability rate.

**Service Retirement**

Retirement rate vary by age, service, and formula, except for the safety ½ @ 55 and 2% @ 55 formulas, where retirement rates vary by age only.

**Service Retirement**

**Public Agency Miscellaneous 1.5% @ 65**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.008	0.011	0.013	0.015	0.017	0.019
51	0.007	0.010	0.012	0.013	0.015	0.017
52	0.010	0.014	0.017	0.019	0.021	0.024
53	0.008	0.012	0.015	0.017	0.019	0.022
54	0.012	0.016	0.019	0.022	0.025	0.028
55	0.018	0.025	0.031	0.035	0.038	0.043
56	0.015	0.021	0.025	0.029	0.032	0.036
57	0.020	0.028	0.033	0.038	0.043	0.048
58	0.024	0.033	0.040	0.046	0.052	0.058
59	0.028	0.039	0.048	0.054	0.060	0.067
60	0.049	0.069	0.083	0.094	0.105	0.118
61	0.062	0.087	0.106	0.120	0.133	0.150
62	0.104	0.146	0.177	0.200	0.223	0.251
63	0.099	0.139	0.169	0.191	0.213	0.239
64	0.097	0.136	0.165	0.186	0.209	0.233
65	0.140	0.197	0.240	0.271	0.302	0.339
66	0.092	0.130	0.157	0.177	0.198	0.222
67	0.129	0.181	0.220	0.249	0.277	0.311
68	0.092	0.129	0.156	0.177	0.197	0.221
69	0.092	0.130	0.158	0.178	0.199	0.224
70	0.103	0.144	0.175	0.198	0.221	0.248

**Public Agency Miscellaneous 2% @ 60**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.011	0.015	0.018	0.021	0.023	0.026
51	0.009	0.013	0.016	0.018	0.020	0.023
52	0.013	0.018	0.022	0.025	0.028	0.031
53	0.011	0.016	0.019	0.022	0.025	0.028
54	0.015	0.021	0.025	0.028	0.032	0.036
55	0.023	0.032	0.039	0.044	0.049	0.055
56	0.019	0.027	0.032	0.037	0.041	0.046
57	0.025	0.035	0.042	0.048	0.054	0.060
58	0.030	0.042	0.051	0.058	0.065	0.073
59	0.035	0.049	0.060	0.068	0.076	0.085
60	0.062	0.087	0.105	0.119	0.133	0.149
61	0.079	0.110	0.134	0.152	0.169	0.190
62	0.132	0.186	0.225	0.255	0.284	0.319
63	0.126	0.178	0.216	0.244	0.272	0.305
64	0.122	0.171	0.207	0.234	0.262	0.293
65	0.173	0.243	0.296	0.334	0.373	0.418
66	0.114	0.160	0.194	0.219	0.245	0.274
67	0.159	0.223	0.271	0.307	0.342	0.384
68	0.113	0.159	0.193	0.218	0.243	0.273
69	0.114	0.161	0.195	0.220	0.246	0.276
70	0.127	0.178	0.216	0.244	0.273	0.306

**Service Retirement**

**Public Agency Miscellaneous 2% @ 55**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.015	0.020	0.024	0.029	0.033	0.039
51	0.013	0.016	0.020	0.024	0.027	0.033
52	0.014	0.018	0.022	0.027	0.030	0.036
53	0.017	0.022	0.027	0.032	0.037	0.043
54	0.027	0.034	0.041	0.049	0.056	0.067
55	0.050	0.064	0.078	0.094	0.107	0.127
56	0.045	0.057	0.069	0.083	0.095	0.113
57	0.048	0.061	0.074	0.090	0.102	0.122
58	0.052	0.066	0.080	0.097	0.110	0.131
59	0.060	0.076	0.092	0.111	0.127	0.151
60	0.072	0.092	0.112	0.134	0.153	0.182
61	0.089	0.113	0.137	0.165	0.188	0.224
62	0.128	0.162	0.197	0.237	0.270	0.322
63	0.129	0.164	0.199	0.239	0.273	0.325
64	0.116	0.148	0.180	0.216	0.247	0.294
65	0.174	0.221	0.269	0.323	0.369	0.439
66	0.135	0.171	0.208	0.250	0.285	0.340
67	0.133	0.169	0.206	0.247	0.282	0.336
68	0.118	0.150	0.182	0.219	0.250	0.297
69	0.116	0.147	0.179	0.215	0.246	0.293
70	0.138	0.176	0.214	0.257	0.293	0.349

**Public Agency Miscellaneous 2.5% @ 55**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.026	0.033	0.040	0.048	0.055	0.062
51	0.021	0.026	0.032	0.038	0.043	0.049
52	0.021	0.026	0.032	0.038	0.043	0.049
53	0.026	0.033	0.040	0.048	0.055	0.062
54	0.043	0.054	0.066	0.078	0.089	0.101
55	0.088	0.112	0.136	0.160	0.184	0.208
56	0.055	0.070	0.085	0.100	0.115	0.130
57	0.061	0.077	0.094	0.110	0.127	0.143
58	0.072	0.091	0.111	0.130	0.150	0.169
59	0.083	0.105	0.128	0.150	0.173	0.195
60	0.088	0.112	0.136	0.160	0.184	0.208
61	0.083	0.105	0.128	0.150	0.173	0.195
62	0.121	0.154	0.187	0.220	0.253	0.286
63	0.105	0.133	0.162	0.190	0.219	0.247
64	0.105	0.133	0.162	0.190	0.219	0.247
65	0.143	0.182	0.221	0.260	0.299	0.338
66	0.105	0.133	0.162	0.190	0.219	0.247
67	0.105	0.133	0.162	0.190	0.219	0.247
68	0.105	0.133	0.162	0.190	0.219	0.247
69	0.105	0.133	0.162	0.190	0.219	0.247
70	0.125	0.160	0.194	0.228	0.262	0.296

**Service Retirement**

**Public Agency Miscellaneous 2.7% @ 55**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.028	0.035	0.043	0.050	0.058	0.065
51	0.022	0.028	0.034	0.040	0.046	0.052
52	0.022	0.028	0.034	0.040	0.046	0.052
53	0.028	0.035	0.043	0.050	0.058	0.065
54	0.044	0.056	0.068	0.080	0.092	0.104
55	0.091	0.116	0.140	0.165	0.190	0.215
56	0.061	0.077	0.094	0.110	0.127	0.143
57	0.063	0.081	0.098	0.115	0.132	0.150
58	0.074	0.095	0.115	0.135	0.155	0.176
59	0.083	0.105	0.128	0.150	0.173	0.195
60	0.088	0.112	0.136	0.160	0.184	0.208
61	0.085	0.109	0.132	0.155	0.178	0.202
62	0.124	0.158	0.191	0.225	0.259	0.293
63	0.107	0.137	0.166	0.195	0.224	0.254
64	0.107	0.137	0.166	0.195	0.224	0.254
65	0.146	0.186	0.225	0.265	0.305	0.345
66	0.107	0.137	0.166	0.195	0.224	0.254
67	0.107	0.137	0.166	0.195	0.224	0.254
68	0.107	0.137	0.166	0.195	0.224	0.254
69	0.107	0.137	0.166	0.195	0.224	0.254
70	0.129	0.164	0.199	0.234	0.269	0.304

**Public Agency Miscellaneous 3% @ 60**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.026	0.033	0.040	0.048	0.055	0.062
51	0.021	0.026	0.032	0.038	0.043	0.049
52	0.019	0.025	0.030	0.035	0.040	0.046
53	0.025	0.032	0.038	0.045	0.052	0.059
54	0.039	0.049	0.060	0.070	0.081	0.091
55	0.083	0.105	0.128	0.150	0.173	0.195
56	0.055	0.070	0.085	0.100	0.115	0.130
57	0.061	0.077	0.094	0.110	0.127	0.143
58	0.072	0.091	0.111	0.130	0.150	0.169
59	0.080	0.102	0.123	0.145	0.167	0.189
60	0.094	0.119	0.145	0.170	0.196	0.221
61	0.088	0.112	0.136	0.160	0.184	0.208
62	0.127	0.161	0.196	0.230	0.265	0.299
63	0.110	0.140	0.170	0.200	0.230	0.260
64	0.110	0.140	0.170	0.200	0.230	0.260
65	0.149	0.189	0.230	0.270	0.311	0.351
66	0.110	0.140	0.170	0.200	0.230	0.260
67	0.110	0.140	0.170	0.200	0.230	0.260
68	0.110	0.140	0.170	0.200	0.230	0.260
69	0.110	0.140	0.170	0.200	0.230	0.260
70	0.132	0.168	0.204	0.240	0.276	0.312



**Service Retirement**

**Public Agency Fire ½ @ 55 and 2% @ 55**

Age	Rate	Age	Rate
50	0.01588	56	0.11079
51	0.00000	57	0.00000
52	0.03442	58	0.09499
53	0.01990	59	0.04409
54	0.04132	60	1.00000
55	0.07513		

**Public Agency Police ½ @ 55 and 2% @ 55**

Age	Rate	Age	Rate
50	0.02552	56	0.06921
51	0.00000	57	0.05113
52	0.01637	58	0.07241
53	0.02717	59	0.07043
54	0.00949	60	1.00000
55	0.16674		

**Public Agency Police 2% @ 50**

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.014	0.014	0.014	0.014	0.025	0.045
51	0.012	0.012	0.012	0.012	0.023	0.040
52	0.026	0.026	0.026	0.026	0.048	0.086
53	0.052	0.052	0.052	0.052	0.096	0.171
54	0.070	0.070	0.070	0.070	0.128	0.227
55	0.090	0.090	0.090	0.090	0.165	0.293
56	0.064	0.064	0.064	0.064	0.117	0.208
57	0.071	0.071	0.071	0.071	0.130	0.232
58	0.063	0.063	0.063	0.063	0.115	0.205
59	0.140	0.140	0.140	0.140	0.174	0.254
60	0.140	0.140	0.140	0.140	0.172	0.251
61	0.140	0.140	0.140	0.140	0.172	0.251
62	0.140	0.140	0.140	0.140	0.172	0.251
63	0.140	0.140	0.140	0.140	0.172	0.251
64	0.140	0.140	0.140	0.140	0.172	0.251
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

**Service Retirement**

<b>Public Agency Fire 2%@50</b>						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.007	0.007	0.007	0.007	0.010	0.015
51	0.008	0.008	0.008	0.008	0.013	0.019
52	0.017	0.017	0.017	0.017	0.027	0.040
53	0.047	0.047	0.047	0.047	0.072	0.107
54	0.064	0.064	0.064	0.064	0.098	0.147
55	0.087	0.087	0.087	0.087	0.134	0.200
56	0.078	0.078	0.078	0.078	0.120	0.180
57	0.090	0.090	0.090	0.090	0.139	0.208
58	0.079	0.079	0.079	0.079	0.122	0.182
59	0.073	0.073	0.073	0.073	0.112	0.168
60	0.114	0.114	0.114	0.114	0.175	0.262
61	0.114	0.114	0.114	0.114	0.175	0.262
62	0.114	0.114	0.114	0.114	0.175	0.262
63	0.114	0.114	0.114	0.114	0.175	0.262
64	0.114	0.114	0.114	0.114	0.175	0.262
65	1.000	1.000	1.000	1.000	1.000	1.000

<b>Public Agency Police 3%@ 55</b>						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.019	0.019	0.019	0.019	0.040	0.060
51	0.024	0.024	0.024	0.024	0.049	0.074
52	0.024	0.024	0.024	0.024	0.051	0.077
53	0.059	0.059	0.059	0.059	0.121	0.183
54	0.069	0.069	0.069	0.069	0.142	0.215
55	0.116	0.116	0.116	0.116	0.240	0.363
56	0.076	0.076	0.076	0.076	0.156	0.236
57	0.058	0.058	0.058	0.058	0.120	0.181
58	0.076	0.076	0.076	0.076	0.157	0.237
59	0.094	0.094	0.094	0.094	0.193	0.292
60	0.141	0.141	0.141	0.141	0.290	0.438
61	0.094	0.094	0.094	0.094	0.193	0.292
62	0.118	0.118	0.118	0.118	0.241	0.365
63	0.094	0.094	0.094	0.094	0.193	0.292
64	0.094	0.094	0.094	0.094	0.193	0.292
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

**Service Retirement**

<b>Public Agency Fire 3%@55</b>						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.012	0.012	0.012	0.018	0.028	0.033
51	0.008	0.008	0.008	0.012	0.019	0.022
52	0.018	0.018	0.018	0.027	0.042	0.050
53	0.043	0.043	0.043	0.062	0.098	0.114
54	0.057	0.057	0.057	0.083	0.131	0.152
55	0.092	0.092	0.092	0.134	0.211	0.246
56	0.081	0.081	0.081	0.118	0.187	0.218
57	0.100	0.100	0.100	0.146	0.230	0.268
58	0.081	0.081	0.081	0.119	0.187	0.219
59	0.078	0.078	0.078	0.113	0.178	0.208
60	0.117	0.117	0.117	0.170	0.267	0.312
61	0.078	0.078	0.078	0.113	0.178	0.208
62	0.098	0.098	0.098	0.141	0.223	0.260
63	0.078	0.078	0.078	0.113	0.178	0.208
64	0.078	0.078	0.078	0.113	0.178	0.208
65	1.000	1.000	1.000	1.000	1.000	1.000

<b>Public Agency Police 3%@ 50</b>						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.070	0.070	0.070	0.131	0.193	0.249
51	0.050	0.050	0.050	0.095	0.139	0.180
52	0.061	0.061	0.061	0.116	0.171	0.220
53	0.069	0.069	0.069	0.130	0.192	0.247
54	0.071	0.071	0.071	0.134	0.197	0.255
55	0.090	0.090	0.090	0.170	0.250	0.322
56	0.069	0.069	0.069	0.130	0.191	0.247
57	0.080	0.080	0.080	0.152	0.223	0.288
58	0.087	0.087	0.087	0.164	0.242	0.312
59	0.090	0.090	0.090	0.170	0.251	0.323
60	0.135	0.135	0.135	0.255	0.377	0.485
61	0.090	0.090	0.090	0.170	0.251	0.323
62	0.113	0.113	0.113	0.213	0.314	0.404
63	0.090	0.090	0.090	0.170	0.251	0.323
64	0.090	0.090	0.090	0.170	0.251	0.323
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

**Service Retirement**

<b>Public Agency Fire 3%@50</b>						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.034	0.034	0.034	0.048	0.068	0.080
51	0.046	0.046	0.046	0.065	0.092	0.109
52	0.069	0.069	0.069	0.097	0.138	0.163
53	0.084	0.084	0.084	0.117	0.166	0.197
54	0.103	0.103	0.103	0.143	0.204	0.241
55	0.127	0.127	0.127	0.177	0.252	0.298
56	0.121	0.121	0.121	0.169	0.241	0.285
57	0.101	0.101	0.101	0.141	0.201	0.238
58	0.118	0.118	0.118	0.165	0.235	0.279
59	0.100	0.100	0.100	0.140	0.199	0.236
60	0.150	0.150	0.150	0.210	0.299	0.354
61	0.100	0.100	0.100	0.140	0.199	0.236
62	0.125	0.125	0.125	0.175	0.249	0.295
63	0.100	0.100	0.100	0.140	0.199	0.236
64	0.100	0.100	0.100	0.140	0.199	0.236
65	1.000	1.000	1.000	1.000	1.000	1.000

<b>Schools 2%@ 55</b>						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.005	0.009	0.013	0.015	0.016	0.018
51	0.005	0.010	0.014	0.017	0.019	0.021
52	0.006	0.012	0.017	0.020	0.022	0.025
53	0.007	0.014	0.019	0.023	0.026	0.029
54	0.012	0.024	0.033	0.039	0.044	0.049
55	0.024	0.048	0.067	0.079	0.088	0.099
56	0.020	0.039	0.055	0.065	0.072	0.081
57	0.021	0.042	0.059	0.070	0.078	0.087
58	0.025	0.050	0.070	0.083	0.092	0.103
59	0.029	0.057	0.080	0.095	0.105	0.118
60	0.037	0.073	0.102	0.121	0.134	0.150
61	0.046	0.090	0.126	0.149	0.166	0.186
62	0.076	0.151	0.212	0.250	0.278	0.311
63	0.069	0.136	0.191	0.225	0.251	0.281
64	0.067	0.133	0.185	0.219	0.244	0.273
65	0.091	0.180	0.251	0.297	0.331	0.370
66	0.072	0.143	0.200	0.237	0.264	0.295
67	0.067	0.132	0.185	0.218	0.243	0.272
68	0.060	0.118	0.165	0.195	0.217	0.243
69	0.067	0.133	0.187	0.220	0.246	0.275
70	0.066	0.131	0.183	0.216	0.241	0.270

## **Miscellaneous**

### **Superfunded Status**

If a rate plan is superfunded (actuarial value of assets exceeds the present value of benefits), as of the most recently completed annual valuation, the employer may cover their employees' member contributions (both taxed and tax-deferred) using their employer assets during the fiscal year for which this valuation applies. This would entail transferring assets within the Public Employees' Retirement Fund (PERF) from the employer account to the member accumulated contribution accounts. This change was implemented effective January 1, 1999 pursuant to Chapter 231 (Assembly Bill 2099) which added Government Code Section 20816.

Superfunded status applies only to individual plans, not risk pools. For rate plans within a risk pool, actuarial value of assets is the sum of the rate plan's side fund plus the rate plan's pro-rata share of non-side fund assets.

### **Internal Revenue Code Section 415**

The limitations on benefits imposed by Internal Revenue Code Section 415 were taken into account in this valuation. Each year the impact of any changes in this limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base.

### **Internal Revenue Code Section 401(a)(17)**

The limitations on compensation imposed by Internal Revenue Code Section 401(a)(17) were taken into account in this valuation. Each year the impact of any changes in this compensation limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base.

## **APPENDIX B**

### **PLAN PROVISIONS**

- **SUMMARY OF PLAN'S MAJOR BENEFIT OPTIONS**
- **DESCRIPTIONS OF CALPERS' PRINCIPAL PLAN PROVISIONS**

## Summary of Plan's Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in the following section of this Appendix.

Benefit Provision	Coverage Group						
	70001	70002	70003	70004	70005	70006	70102
Benefit Formula Social Security Coverage Full/Modified	2.0% @ 55 No Full	2.0% @ 55 Yes Modified	2.0% @ 55 Yes Modified	3.0% @ 60 Yes Modified	3.0% @ 60 Yes Modified	3.0% @ 60 No Full	2.0% @ 55 Yes Modified
Final Average Compensation Period	12 mos.	12 mos.	12 mos.	12 mos.	12 mos.	12 mos.	12 mos.
Sick Leave Credit	No	No	No	No	No	No	No
Non-Industrial Disability	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Industrial Disability	No	No	No	No	No	No	No
Pre-Retirement Death Benefits Optional Settlement 2W	No	No	No	No	No	No	No
1959 Survivor Benefit Level Special	Indexed	No	No	No	No	Indexed	No
Alternate (firefighters)	No	No	No	No	No	No	No
Post-Retirement Death Benefits Lump Sum	\$500 Yes	\$500 Yes	\$500 Yes	\$500 Yes	\$500 Yes	\$500 Yes	\$500 Yes
Survivor Allowance (PRSA)	2%	2%	2%	2%	2%	2%	2%
COLA							
Employee Contributions Contractual Employer Paid	No	No	7%	No	7%	No	No

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## Description of CalPERS' Principal Plan Provisions

The following is a description of the principal plan provisions used in calculating costs and liabilities. We have indicated whether a plan provision is standard or optional. Standard benefits are applicable to all members while optional benefits vary among employers. Optional benefits that apply to a single period of time, such as Golden Handshakes, have not been included. Many of the statements in this summary are general in nature, and are intended to provide an easily understood summary of the complex Public Employees' Retirement Law. The law itself governs in all situations.

### Service Retirement

#### Eligibility

A CalPERS member becomes eligible for Service Retirement upon attainment of age 50 with at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements). For employees hired into a plan with the 1.5% at 65 formula, eligibility for service retirement is age 55 with at least 5 years of service.

#### Benefit

The Service Retirement benefit is a monthly allowance equal to the product of the *benefit factor*, *years of service*, and *final compensation*.

- The *benefit factor* depends on the benefit formula specified in your agency's contract. The table below shows the factors for each of the available formulas. Factors vary by the member's age at retirement. Listed are the factors for retirement at whole year ages:

#### Miscellaneous Plan Formulas

Retirement Age	1.5% at 65	2% at 60	2% at 55	2.5% at 55	2.7% at 55	3% at 60
50	0.5000%	1.092%	1.426%	2.0%	2.0%	2.0%
51	0.5667%	1.156%	1.522%	2.1%	2.14%	2.1%
52	0.6334%	1.224%	1.628%	2.2%	2.28%	2.2%
53	0.7000%	1.296%	1.742%	2.3%	2.42%	2.3%
54	0.7667%	1.376%	1.866%	2.4%	2.56%	2.4%
55	0.8334%	1.460%	2.0%	2.5%	2.7%	2.5%
56	0.9000%	1.552%	2.052%	2.5%	2.7%	2.6%
57	0.9667%	1.650%	2.104%	2.5%	2.7%	2.7%
58	1.0334%	1.758%	2.156%	2.5%	2.7%	2.8%
59	1.1000%	1.874%	2.210%	2.5%	2.7%	2.9%
60	1.1667%	2.0%	2.262%	2.5%	2.7%	3.0%
61	1.2334%	2.134%	2.314%	2.5%	2.7%	3.0%
62	1.3000%	2.272%	2.366%	2.5%	2.7%	3.0%
63	1.3667%	2.418%	2.418%	2.5%	2.7%	3.0%
64	1.4334%	2.418%	2.418%	2.5%	2.7%	3.0%
65 & Up	1.5000%	2.418%	2.418%	2.5%	2.7%	3.0%

### **Safety Plan Formulas**

<b>Retirement Age</b>	<b>½ at 55 *</b>	<b>2% at 55</b>	<b>2% at 50</b>	<b>3% at 55</b>	<b>3% at 50</b>
50	1.783%	1.426%	2.0%	2.40%	3.0%
51	1.903%	1.522%	2.14%	2.52%	3.0%
52	2.035%	1.628%	2.28%	2.64%	3.0%
53	2.178%	1.742%	2.42%	2.76%	3.0%
54	2.333%	1.866%	2.56%	2.88%	3.0%
55 & Up	2.5%	2.0%	2.7%	3.0%	3.0%

\* For this formula, the benefit factor also varies by entry age. The factors shown are for members with an entry age of 35 or greater. If entry age is less than 35, then the age 55 benefit factor is 50% divided by the difference between age 55 and entry age. The benefit factor for ages prior to age 55 is the same proportion of the age 55 benefit factor as in the above table.

- The *years of service* is the amount credited by CalPERS to a member while he or she is employed in this group (or for other periods that are recognized under the employer's contract with CalPERS). For a member who has earned service with multiple CalPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance. An agency may contract for an optional benefit where any unused sick leave accumulated at the time of retirement will be converted to credited service at a rate of 0.004 years of service for each day of sick leave.
- The *final compensation* is the monthly average of the member's highest 36 or 12 consecutive months' full-time equivalent monthly pay (no matter which CalPERS employer paid this compensation). The standard benefit is 36 months. Employers have the option of providing a final compensation equal to the highest 12 consecutive months. Final compensation must be defined by the highest 36 consecutive months' pay under the 1.5% at 65 formula.
- Employees must be covered by Social Security with the 1.5% at 65 formula. Social Security is optional for all other benefit formulas. For employees covered by Social Security, the Modified formula is the standard benefit. Under this type of formula, the final compensation is offset by \$133.33 (or by one third if the final compensation is less than \$400). Employers may contract for the Full benefit with Social Security that will eliminate the offset applicable to the final compensation. For employees not covered by Social Security, the Full benefit is paid with no offsets. Auxiliary organizations of the CSUC system may elect reduced contribution rates, in which case the offset is \$317 if members are not covered by Social Security or \$513 if members are covered by Social Security.
- The Miscellaneous Service Retirement benefit is not capped. The Safety Service Retirement benefit is capped at 90% of final compensation.

## **Vested Deferred Retirement**

### **Eligibility for Deferred Status**

A CalPERS member becomes eligible for a deferred vested retirement benefit when he or she leaves employment, keeps his or her contribution account balance on deposit with CalPERS, **and** has earned at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements).

### **Eligibility to Start Receiving Benefits**

The CalPERS member becomes eligible to receive the deferred retirement benefit upon satisfying the eligibility requirements for Deferred Status and upon attainment of age 50 (55 for employees hired into a 1.5% @ 65 plan).

### **Benefit**

The vested deferred retirement benefit is the same as the Service Retirement benefit, where the benefit factor is based on the member's age at allowance commencement. For members who have earned service with multiple CalPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance.

## **Non-Industrial (Non-Job Related) Disability Retirement**

### **Eligibility**

A CalPERS member is eligible for Non-Industrial Disability Retirement if he or she becomes *disabled* and has at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements). There is no special age requirement. *Disabled* means the member is unable to perform his or her job because of an illness or injury which is expected to be permanent or to last indefinitely. The illness or injury does not have to be job related. A CalPERS member must be actively employed by any CalPERS employer at the time of disability in order to be eligible for this benefit.

### **Standard Benefit**

The standard Non-Industrial Disability Retirement benefit is a monthly allowance equal to 1.8% of final compensation, multiplied by *service*, which is determined as follows:

- *service* is CalPERS credited service, for members with less than 10 years of service or greater than 18.518 years of service; or
- *service* is CalPERS credited service plus the additional number of years that the member would have worked until age 60, for members with at least 10 years but not more than 18.518 years of service. The maximum benefit in this case is 33 1/3% of Final Compensation.

### **Improved Benefit**

Employers have the option of providing the improved Non-Industrial Disability Retirement benefit. This benefit provides a monthly allowance equal to 30% of final compensation for the first 5 years of service, plus 1% for each additional year of service to a maximum of 50% of final compensation.

Members who are eligible for a larger service retirement benefit may choose to receive that benefit in lieu of a disability benefit. Members eligible to retire, and who have attained the normal retirement age determined by their service retirement benefit formula, will receive the same dollar amount for disability retirement as that payable for service retirement. For members who have earned service with multiple CalPERS employers, the benefit attributed to each employer is the total disability allowance multiplied by the ratio of service with a particular employer to the total CalPERS service.

## **Industrial (Job Related) Disability Retirement**

All safety members have this benefit. For miscellaneous members, employers have the option of providing this benefit. An employer may choose to provide the Increased benefit option or the Improved benefit option.

### **Eligibility**

An employee is eligible for Industrial Disability Retirement if he or she becomes disabled while working, where disabled means the member is unable to perform the duties of the job because of a work-related illness or injury which is expected to be permanent or to last indefinitely. A CalPERS member who has left active employment within this group is not eligible for this benefit, except to the extent described below.

### **Standard Benefit**

The standard Industrial Disability Retirement benefit is a monthly allowance equal to 50% of final compensation.

**Increased Benefit (75% of Final Compensation)**

The increased Industrial Disability Retirement benefit is a monthly allowance equal to 75% of final compensation for total disability.

**Improved Benefit (50% to 90% of Final Compensation)**

The improved Industrial Disability Retirement benefit is a monthly allowance equal to the Workman's Compensation Appeals Board permanent disability rate percentage (if 50% or greater, with a maximum of 90%) times the final compensation.

For a CalPERS member not actively employed in this group who became disabled while employed by some other CalPERS employer, the benefit is a return of accumulated member contributions with respect to employment in this group. With the standard or increased benefit, a member may also choose to receive the annuitization of the accumulated member contributions.

If a member is eligible for Service Retirement and if the Service Retirement benefit is more than the Industrial Disability Retirement benefit, the member may choose to receive the larger benefit.

## **Post-Retirement Death Benefit**

**Standard Lump Sum Payment**

Upon the death of a retiree, a one-time lump sum payment of \$500 will be made to the retiree's designated survivor(s), or to the retiree's estate.

**Improved Lump Sum Payment**

Employers have the option of providing an improved lump sum death benefit of \$600, \$2,000, \$3,000, \$4,000 or \$5,000.

## **Form of Payment for Retirement Allowance**

**Standard Form of Payment**

Generally, the retirement allowance is paid to the retiree in the form of an annuity for as long as he or she is alive. The retiree may choose to provide for a portion of his or her allowance to be paid to any designated beneficiary after the retiree's death. CalPERS provides for a variety of such benefit options, which the retiree pays for by taking a reduction in his or her retirement allowance. Such reduction takes into account the amount to be provided to the beneficiary and the probable duration of payments (based on the ages of the member and beneficiary) made subsequent to the member's death.

**Improved Form of Payment (Post Retirement Survivor Allowance)**

Employers have the option to contract for the post retirement survivor allowance.

For retirement allowances with respect to service subject to the modified formula, 25% of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. For retirement allowances with respect to service subject to the full or supplemental formula, 50% of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. This additional benefit is often referred to as post retirement survivor allowance (PRSA) or simply as survivor continuance.

In other words, 25% or 50% of the allowance, the continuance portion, is paid to the retiree for as long as he or she is alive, and that same amount is continued to the retiree's spouse (or if no eligible spouse, to unmarried children until they attain age 18; or, if no eligible children, to a qualifying dependent parent) for the rest of his or her lifetime. This benefit will not be discontinued in the event the spouse remarries.

The remaining 75% or 50% of the retirement allowance, which may be referred to as the option portion of the benefit, is paid to the retiree as an annuity for as long as he or she is alive. Or, the retiree may choose to provide for some of this option portion to be paid to any designated beneficiary after the retiree's death. Benefit options applicable to the option portion are the same as those offered with the standard form. The reduction is calculated in the same manner but is applied only to the option portion.

## **Pre-Retirement Death Benefits**

### **Basic Death Benefit**

This is a standard benefit.

#### **Eligibility**

An employee's beneficiary (or estate) may receive the Basic Death benefit if the member dies while actively employed. A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this Basic Death benefit.

#### **Benefit**

The Basic Death Benefit is a lump sum in the amount of the member's accumulated contributions, where interest is currently credited at 7.5% per year, plus a lump sum in the amount of one month's salary for each completed year of current service, up to a maximum of six months' salary. For purposes of this benefit, one month's salary is defined as the member's average monthly full-time rate of compensation during the 12 months preceding death.

### **1957 Survivor Benefit**

This is a standard benefit.

#### **Eligibility**

An employee's *eligible survivor(s)* may receive the 1957 Survivor benefit if the member dies while actively employed, has attained at least age 50, and has at least 5 years of credited service (total service across all CalPERS employers and with certain other Retirement Systems with which CalPERS has reciprocity agreements). A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. An eligible survivor means the surviving spouse to whom the member was married at least one year before death or, if there is no eligible spouse, to the member's unmarried children under age 18. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this 1957 Survivor benefit.

#### **Benefit**

The 1957 Survivor benefit is a monthly allowance equal to one-half of the unmodified Service Retirement benefit that the member would have been entitled to receive if the member had retired on the date of his or her death. If the benefit is payable to the spouse, the benefit is discontinued upon the death of the spouse. If the benefit is payable to a dependent child, the benefit will be discontinued upon death or attainment of age 18, unless the child is disabled. The total amount paid will be at least equal to the Basic Death benefit.

### **Optional Settlement 2W Death Benefit**

This is an optional benefit.

#### **Eligibility**

An employee's *eligible survivor* may receive the Optional Settlement 2W Death benefit if the member dies while actively employed, has attained at least age 50, and has at least 5 years of credited service (total service across all

CalPERS employers and with certain other Retirement Systems with which CalPERS has reciprocity agreements). A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married at least one year before death. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this Optional Settlement 2W Death benefit.

#### **Benefit**

The Optional Settlement 2W Death benefit is a monthly allowance equal to the Service Retirement benefit that the member would have received had the member retired on the date of his or her death and elected Optional Settlement 2W. (A retiree who elects Optional Settlement 2W receives an allowance that has been reduced so that it will continue to be paid after his or her death to a surviving beneficiary.) The allowance is payable as long as the surviving spouse lives, at which time it is continued to any unmarried children under age 18, if applicable. The total amount paid will be at least equal to the Basic Death Benefit.

## **Special Death Benefit**

This is a standard benefit for safety members. An employer may elect to provide this benefit for miscellaneous members.

#### **Eligibility**

An employee's *eligible survivor(s)* may receive the Special Death benefit if the member dies while actively employed and the death is job-related. A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an eligible survivor means the member's unmarried children under age 22. An eligible survivor who chooses to receive this benefit will not receive any other death benefit.

#### **Benefit**

The Special Death benefit is a monthly allowance equal to 50% of final compensation, and will be increased whenever the compensation paid to active employees is increased but ceasing to increase when the member would have attained age 50. The allowance is payable to the surviving spouse until death at which time the allowance is continued to any unmarried children under age 22. There is a guarantee that the total amount paid will at least equal the Basic Death Benefit.

If the member's death is the result of an accident or injury caused by external violence or physical force incurred in the performance of the member's duty, and there are *eligible* surviving children (*eligible* means unmarried children under age 22) in addition to an eligible spouse, then an **additional monthly allowance** is paid equal to the following:

- |                                   |                             |
|-----------------------------------|-----------------------------|
| • if 1 eligible child:            | 12.5% of final compensation |
| • if 2 eligible children:         | 20.0% of final compensation |
| • if 3 or more eligible children: | 25.0% of final compensation |

## **Alternate Death Benefit for Local Fire Members**

This is an optional benefit available only to local fire members.

#### **Eligibility**

An employee's *eligible survivor(s)* may receive the Alternate Death benefit in lieu of the Basic Death Benefit or the 1957 Survivor Benefit if the member dies while actively employed and has at least 20 years of total CalPERS service. A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an eligible survivor means the member's unmarried children under age 18.