City of Sausalito

CalPERS Actuarial Issues
June 30, 2008 Valuation

March 2010

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INTRODUCTION

The City of Sausalito retained Bartel Associates to provide actuarial consulting services. The following Executive Summary provides the City analysis of their CalPERS Miscellaneous and Safety pension plans. This analysis is designed to assist the City in evaluating their current funding situation.

It may be helpful to first review the summary of basic definitions starting on page 23.

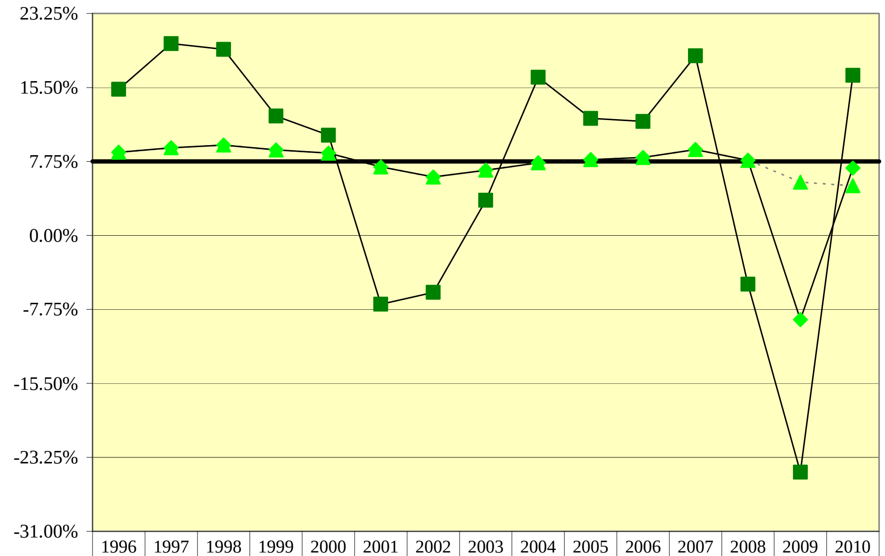
Study Highlights

- CalPERS investment losses will significantly increase pension contributions. However, due to rate smoothing and subsequent modifications, these higher contribution rates will not materialize for several years.
- When considering a second tier benefit level, several things are important to understand that cost savings are:
  1. Limited to Normal Cost difference between the old and new tier and
  2. Very modest until the second tier payroll becomes dominant, and, even then will not solve very many budget problems.

  There are reasons to consider a second pension tier, such as implementing a more appropriate benefit level, or encouraging longer City service.. However there are very minor short term financial benefits.
- The City can realize significant savings by paying off its "Side Fund" balances for each plan (Miscellaneous, Fire Safety & Police Safety) early because balances are charge 7.75%. For example the Police Safety Plan's $3.1 million June 30, 2010 Side Fund balance, if paid off at June 30, results in a $2.1 million cash savings. If the cash savings is discounted at 4%, then savings becomes $0.8 million. The Miscellaneous and Fire Safety Plans have similar (although smaller in magnitude) results.

CalPERS Historical Investment Return

The following chart illustrates CalPERS market and actuarial value investment returns over the past several years:



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
AVA Modified	8.7%	9.2%	9.5%	9.0%	8.6%	7.2%	6.1%	6.8%	7.6%	7.9%	8.2%	9.0%	7.9%	5.6%	5.2%
MVA Rate	15.3%	20.1%	19.5%	12.5%	10.5%	-7.2%	-6.0%	3.7%	16.6%	12.3%	11.9%	18.8%	-5.1%	-24.8	16.8%
AVA Unmodified	8.7%	9.2%	9.5%	9.0%	8.6%	7.2%	6.1%	6.8%	7.6%	7.9%	8.2%	9.0%	7.9%	-8.8%	7.1%

The 2010 return shown is estimated based on CalPERS January 31, 2010 published rates of 10.8%, an additional gain of 3.0% through March 8, 2010 and 7.75% to June 30, 2010. CalPERS' 10 year average annual return (from July 1, 2000 through June 30, 2009) is 3.1%, while their 20 year average annual return (from July 1, 1990 through June 30, 2009) is 8.0%.

The chart shows three lines, AVA Modified (Actuarial Value of Assets with CalPERS recent smoothing modification), MVA (Market Value of Assets) Rate and AVA Unmodified (Actuarial Value of Assets based on CalPERS smoothing method prior to recent asset smoothing modification). The MVA Rate is the investment return CalPERS' assets actually earned during the respective fiscal year ends, while the AVA shows the investment return as a smoothed rate reflecting asset gains and losses over a period of time, rather than immediately. The actuarial value of asset investment return directly affects City contribution rates.

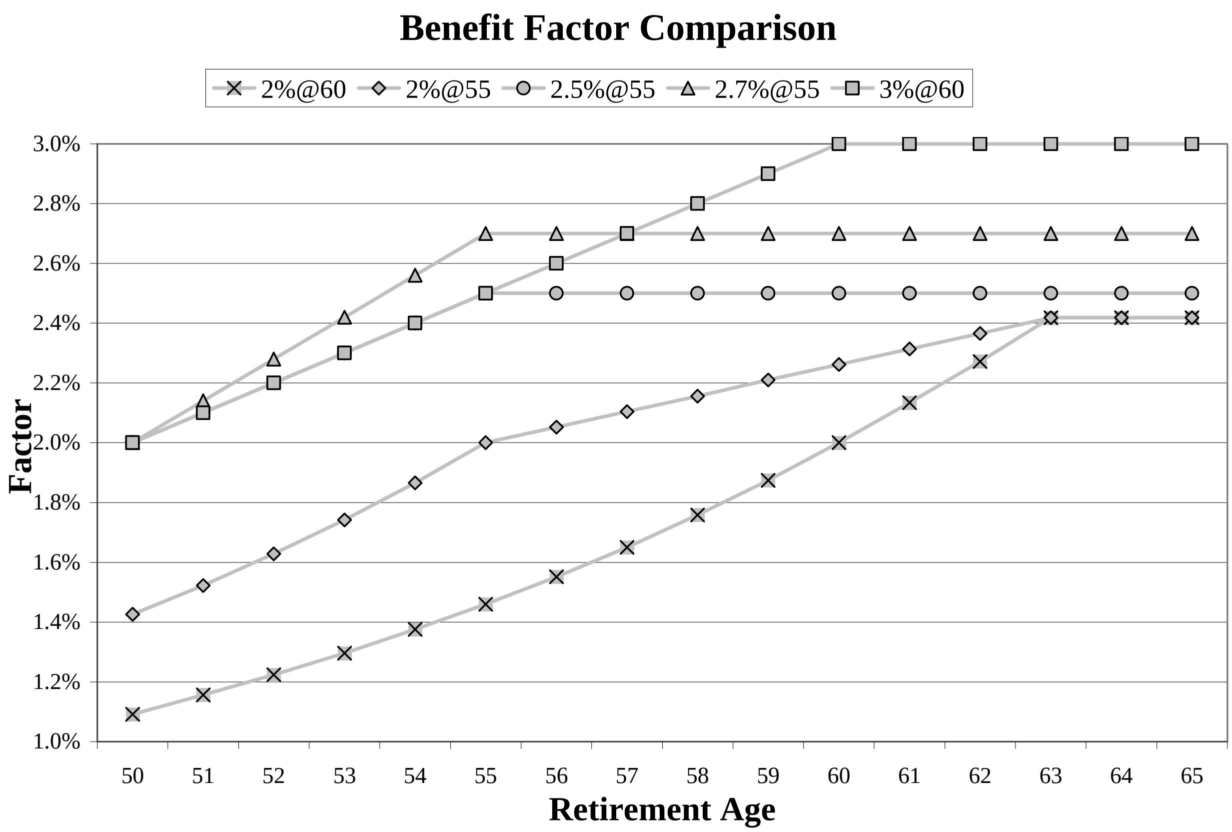
The chart indicates a -24.8% June 30, 2009 year end investment return. This compares to an expected return of +7.75%, for a net loss of 32.6%. This loss would have had a significant impact on the City's 2011/12 Miscellaneous and Safety contribution rates. However, CalPERS smoothes asset gains and losses using a technique that generally recognizes one fifteenth of market asset gains or losses in a given year. In addition, the smoothing method does not allow the smoothed (actuarial) value to be less than 80% or more than 120% of the market value (the 80-120% corridor). To mitigate the economic impact of the June 30, 2009 market decline, on June 13, 2009, CalPERS' Board approved a modification to the corridor, increasing it to 140% for the June 30, 2009 valuation and to 130% for June 30, 2010 valuation. The corridor will return to 120% for the June 30, 2011 and subsequent valuations. Complicating matters a bit is that each CalPERS valuation determines agency contribution rates two years later (for example, the June 30, 2009 valuation determines fiscal year 2011/12 contribution rates.)

Implication of a Second Benefit Tier

For purposes of this report we have assumed employees hired on and after July 1, 2010 would be placed into a second tier (Tier 2) providing lower pension benefits. For current employees (Tier 1), benefits would remain the same. Contribution calculations would be then calculated on benefits depending on which tier they belong. However, it is important to note that moving new employees into a different benefit level has no impact on existing unfunded liabilities; it only impacts the level of benefit future employees would earn. This means that the amortization of any unfunded liability component of the contribution rate would remain the same for Tier 2 as it is for Tier 1, but the Normal Cost component of the contribution rate would be lower. As Tier 2 grows, and Tier 1 is closed, the cost for Tier 1 will decrease (as a dollar amount) and the replacement cost of the new Tier 2 participants would be less than if they had been in the current Tier 1 plan. This results in deceasing City contribution as a percent of payroll.

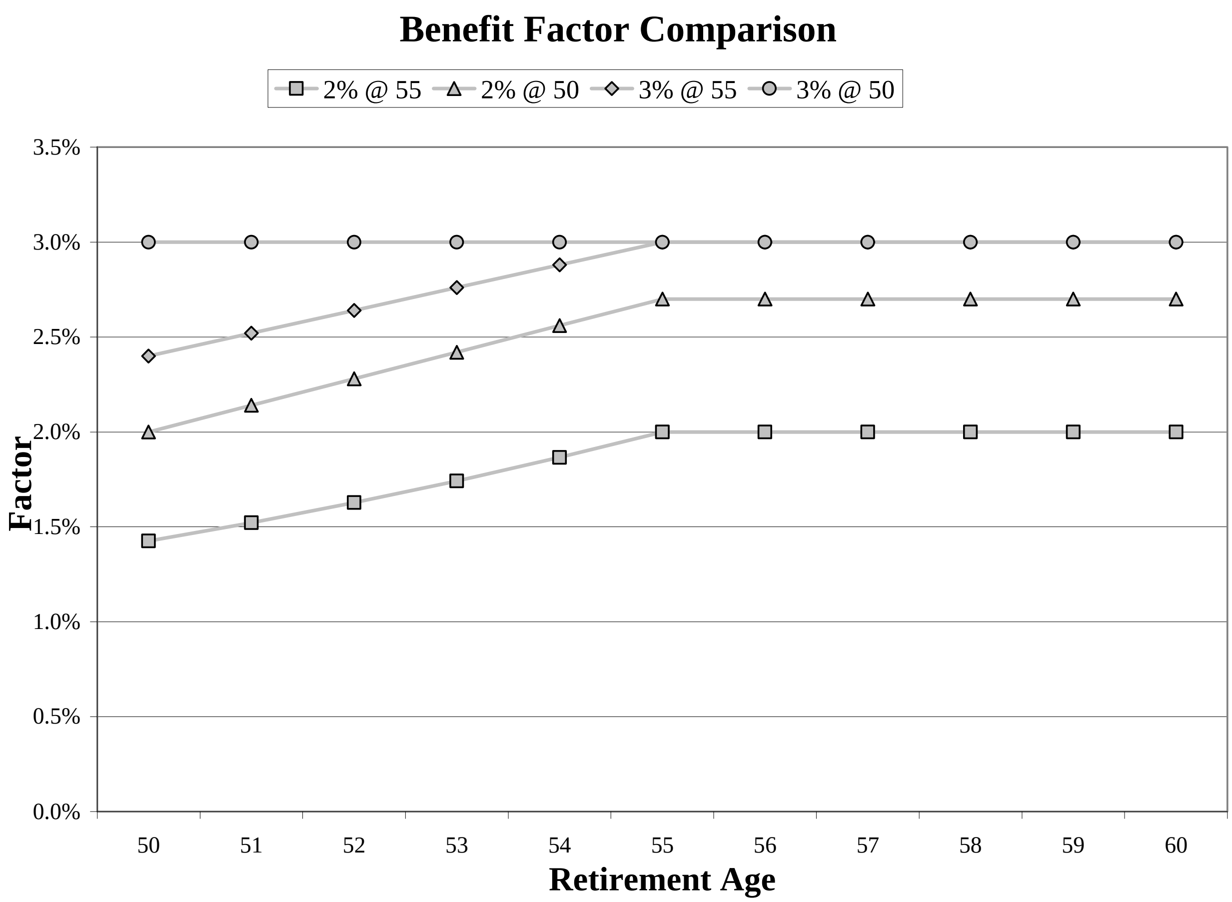
The following two pages show the CalPERS benefit factor comparison for Miscellaneous and Safety Plans.

Miscellaneous Plans



Age	2%@60	2%@55	2.5%@55	2.7%@55	3.0%@60
50	1.092%	1.426%	2.000%	2.000%	2.000%
51	1.156%	1.522%	2.100%	2.140%	2.100%
52	1.224%	1.628%	2.200%	2.280%	2.200%
53	1.296%	1.742%	2.300%	2.420%	2.300%
54	1.376%	1.866%	2.400%	2.560%	2.400%
55	1.460%	2.000%	2.500%	2.700%	2.500%
56	1.552%	2.052%	2.500%	2.700%	2.600%
57	1.650%	2.104%	2.500%	2.700%	2.700%
58	1.758%	2.156%	2.500%	2.700%	2.800%
59	1.874%	2.210%	2.500%	2.700%	2.900%
60	2.000%	2.262%	2.500%	2.700%	3.000%
61	2.134%	2.314%	2.500%	2.700%	3.000%
62	2.272%	2.366%	2.500%	2.700%	3.000%
63	2.418%	2.418%	2.500%	2.700%	3.000%
64	2.418%	2.418%	2.500%	2.700%	3.000%
65	2.418%	2.418%	2.500%	2.700%	3.000%

Safety Plans



Age	2%@55	2%@50	3%@55	3%@50
50	1.426%	2.000%	2.400%	3.000%
51	1.522%	2.140%	2.520%	3.000%
52	1.628%	2.280%	2.640%	3.000%
53	1.742%	2.420%	2.760%	3.000%
54	1.866%	2.560%	2.880%	3.000%
55	2.000%	2.700%	3.000%	3.000%
56	2.000%	2.700%	3.000%	3.000%
57	2.000%	2.700%	3.000%	3.000%
58	2.000%	2.700%	3.000%	3.000%
59	2.000%	2.700%	3.000%	3.000%
60	2.000%	2.700%	3.000%	3.000%

The City's current benefit formula and 2009/10 contribution rates are:

	Miscellaneous	Police Safety	Fire Safety
● Benefit Formula	2.5% @ 55	3% @ 55	3% @ 55
● FAE	One Year (FAE1)	One Year (FAE1)	One Year (FAE1)
● PRSA	Yes	Yes	Yes
● COLA	2%	2%	2%
● EPMC	No	No	9%, by Resolution
● 10/11 ER Contr.			
➢ Normal Cost	8.5%	13.3%	13.3%
➢ Class 1 Ben.	1.5	2.6	2.6
➢ Pool Amort.	1.2	2.3	2.3
➢ Side Fund	1.5	14.8	8.9
➢ Subtotal	12.7	33.0	27.1
● EPMC	0.0	0.0	9.0
● Rates on EPMC			
➢ Normal Cost	0.0	0.0	1.4
➢ Pool Amort.	0.0	0.0	0.2
➢ Side Fund	0.0	0.0	0.8
➢ Subtotal	0.0	0.0	2.4
● Total	12.7	33.0	38.5

Miscellaneous Alternative Formulas

Miscellaneous alternative Tier 2 benefits could be 2%@55 and 2%@60, both with 1 year final average earnings (FAE1) and Pre Retirement Survivor Allowance (PRSA). Each of these produces a cost savings for the City. The table below shows the Tier 2 Employer rates and net savings for the reduced Tier 2 benefits.

Formula	Miscellaneous	
	2%@55	2%@60
➢ Normal Cost	7.7%	6.6%
➢ Surcharge for Class 1	1.4	1.2
➢ Pool Amortization	0.7	0.2
➢ Subtotal	9.9	8.0
➢ EPMC	0.0	0.0
➢ Rates on EPMC	0.0	0.0
➢ Total	9.9	8.0
➢ Saving from current formula	1.4%	3.3%

The following table below shows estimated cost savings (000s omitted) for the Miscellaneous Plan in dollar amounts. It is split between the two alternative benefit levels (2%@55 and 2%@60) for Tier 2 participants.

Estimated Savings – Miscellaneous

Year	2% @ 55	2% @ 60
2010/11	$ 2	$ 6
2011/12	5	12
2012/13	8	18
2013/14	10	24
2014/15	13	31
2015/16	16	37
2016/17	19	44
2017/18	22	52
2018/19	25	59
2019/20	29	68
2020/21	32	76

The above savings are based on the following Miscellaneous payroll projections shown separately for current (Tier 1) participants and future (Tier 2) participants (000s omitted):

Payroll Projections - Miscellaneous

	Tier 1		Tier 2		Total	
Year	Counts	Payroll	Counts	Payroll	Counts	Payroll
2010/11	40	$ 2,831	2	$ 175	42	$ 3,006
2011/12	37	2,732	5	372	42	3,104
2012/13	35	2,653	7	552	42	3,205
2013/14	33	2,570	9	739	42	3,309
2014/15	30	2,472	12	944	42	3,416
2015/16	28	2,385	14	1,142	42	3,527
2016/17	26	2,274	16	1,368	42	3,642
2017/18	24	2,163	18	1,597	42	3,760
2018/19	22	2,053	20	1,830	42	3,883
2019/20	20	1,922	22	2,087	42	4,009
2020/21	18	1,804	24	2,335	42	4,139

Total payroll is expected to grow annually at 3.25% each year. A slower payroll growth results in lower cost savings while a more rapid payroll growth results in greater cost savings.

Police Safety Alternative Formulas

Safety alternative Tier 2 benefits could be 2%@50 and 2% @55, both retaining FAE1 and PRSA. Each of these produces a cost savings for the City. The table below shows the Tier 2 Employer rates and net savings for the reduced Tier 2 benefits.

Formula	Police Safety	
	2%@50	2%@55
➢ Normal Cost	11.2%	11.0%
➢ Surcharge for Class 1	2.1	1.8
➢ Pool Amortization	2.0	0.6
➢ Subtotal	15.6	13.4
➢ EPMC	0.0	0.0
➢ Rates on EPMC	0.0	0.0
➢ Total	15.6	13.4
➢ Saving from current formula	2.6%	4.8%

The following table below shows estimated cost savings (000s omitted) for the Police Safety Plan in dollar amounts. It is split between the two alternative benefit levels (2%@50 and 2%@55) for Tier 2 participants.

Estimated Savings – Police Safety

Year	2% @ 50	2% @ 55
2010/11	$ 2	$ 4
2011/12	4	8
2012/13	7	13
2013/14	10	18
2014/15	13	25
2015/16	17	31
2016/17	20	37
2017/18	24	44
2018/19	29	52
2019/20	33	61
2020/21	37	69

The above savings are based on the following Police Safety payroll projections shown separately for current (Tier 1) participants and future (Tier 2) participants (000s omitted):

Payroll Projections – Police Safety

Year	Tier 1		Tier 2		Total	
	Counts	Payroll	Counts	Payroll	Counts	Payroll
2010/11	19	$ 1,910	1	$ 78	20	$ 1,989
2011/12	18	1,891	2	162	20	2,053
2012/13	18	1,859	2	261	20	2,120
2013/14	17	1,815	3	374	20	2,189
2014/15	15	1,748	5	512	20	2,260
2015/16	15	1,696	5	638	20	2,333
2016/17	14	1,632	6	777	20	2,409
2017/18	13	1,565	7	923	20	2,488
2018/19	12	1,479	8	1,089	20	2,568
2019/20	11	1,393	9	1,259	20	2,652
2020/21	10	1,311	10	1,427	20	2,738

Total payroll is expected to grow annually at 3.25% each year. A slower payroll growth results in lower cost savings while a more rapid payroll growth results in greater cost savings.

Fire Safety Alternative Formulas

Safety alternative Tier 2 benefits could be 2%@50 and 2% @55, both retaining FAE1 and PRSA benefits. Each of these produces a cost savings for the City. Because the City currently pays 9% employee contribution (EPMC) for Fire Safety employees, the savings are also calculated if the Tier 2 employees pay the full employee contributions. The table below shows the Tier 2 Employer rates and net savings for the reduced Tier 2 benefits.

Fire Safety Alternative Formulas	Tier 1 & Tier 2 with EPMC		Tier 1 with EPMC, Tier 2 without EPMC	
	2%@50	2%@55	2%@50	2%@55
➢ Normal Cost	11.2%	11.0%	11.2%	11.0%
➢ Surcharge for Class 1	2.1	1.8	2.1	1.8
➢ Pool Amortization	2.0	0.6	2.0	0.6
➢ Subtotal	15.6	13.4	15.6	13.4
➢ EPMC	9.0	8.0	0.0	0.0
➢ Rates on EPMC	1.4	1.0	0.0	0.0
➢ Total	26.0	22.4	15.6	13.4
➢ Saving from current formula	2.9%	6.4%	13.3%	15.5%

The following two tables below show estimated cost savings (000s omitted) for the Fire Safety Plan in dollar amounts. It is split between the four alternative benefit levels (2%@50 and 2%@55, with and without EPMC) for Tier 2 participants. The estimated cost savings are broken down into employer contribution savings and employee contribution savings (savings on EPMC).

Estimated Savings - Fire Safety Tier 1 & Tier 2 with EPMC

	2%@50			2%@55		
Year	**Employer Contr. Savings**	**Employee Contr. Savings**	**Total Savings**	**Employer Contr. Savings**	**Employee Contr. Savings**	**Total Savings**
2010/11	$ 1	$ -	$ 1	$ 3	$ 0	$ 3
2011/12	3	-	3	5	1	6
2012/13	5	-	5	8	2	10
2013/14	7	-	7	12	2	14
2014/15	9	-	9	16	3	19
2015/16	11	-	11	20	4	24
2016/17	13	-	13	25	5	30
2017/18	16	-	16	29	6	35
2018/19	19	-	19	35	7	42
2019/20	22	-	22	40	8	48
2020/21	25	-	25	46	9	55

Tier 1 with EPMC, Tier2 without EPMC

	2%@50			2%@55		
Year	**Employer Contr. Savings**	**Employee Contri. Savings**	**Total Savings**	**Employer Contr. Savings**	**Employee Contr. Savings**	**Total Savings**
2010/11	$ 2	$ 4	$ 6	$ 3	$ 4	$ 7
2011/12	4	9	13	6	9	15
2012/13	7	14	21	10	14	24
2013/14	10	21	31	15	21	36
2014/15	13	28	41	20	28	48
2015/16	17	35	52	25	35	60
2016/17	20	42	62	30	42	72
2017/18	24	50	74	36	50	86
2018/19	28	60	88	43	60	103
2019/20	33	69	102	49	69	118
2020/21	37	78	115	56	78	134

The above savings are based on the following Fire Safety payroll projections shown separately for current (Tier 1) participants and future (Tier 2) participants (000s omitted):

Payroll Projections - Fire Safety
Both Tier 1 & Tier 2 with EPMC

	Tier 1		Tier 2		Total	
Year	Counts	Payroll	Counts	Payroll	Counts	Payroll
2010/11	13	$ 1,266	1	$ 52	14	$ 1,318
2011/12	13	1,254	1	107	14	1,361
2012/13	12	1,233	2	173	14	1,405
2013/14	12	1,203	2	248	14	1,451
2014/15	11	1,159	3	340	14	1,498
2015/16	10	1,124	4	423	14	1,547
2016/17	9	1,082	5	515	14	1,597
2017/18	9	1,037	5	612	14	1,649
2018/19	8	980	6	722	14	1,703
2019/20	7	923	7	835	14	1,758
2020/21	7	869	7	946	14	1,815

Payroll Projections - Fire Safety
Tier 1 with EPMC, Tier 2 without EPMC

	Tier 1		Tier 2		Total	
Year	Counts	Payroll	Counts	Payroll	Counts	Payroll
2010/11	13	$ 1,266	1	$ 48	14	$ 1,314
2011/12	13	1,254	1	99	14	1,352
2012/13	12	1,233	2	159	14	1,391
2013/14	12	1,203	2	228	14	1,430
2014/15	11	1,159	3	312	14	1,470
2015/16	10	1,124	4	388	14	1,512
2016/17	9	1,082	5	472	14	1,555
2017/18	9	1,037	5	561	14	1,599
2018/19	8	980	6	662	14	1,643
2019/20	7	923	7	766	14	1,689
2020/21	7	869	7	868	14	1,737

Total payroll is expected to grow annually at 3.25% each year. A slower payroll growth results in lower cost savings while a more rapid payroll growth results in greater cost savings.

Miscellaneous Plan

The City participates in CalPERS 2.5%@55 risk pool for Miscellaneous employees.

Contribution Rates

In October 2009, CalPERS completed its June 30, 2008 valuation cycle. The following table shows the contribution rates for the 2009/10 and 2010/11 fiscal years.

	6/30/07 2009/2010	6/30/08 2010/2011
■ Employer Contribution Required		
● Normal Cost		
➢ Pool Rate	8.4%	8.5%
➢ Surcharge for Class 1 Benefits	1.5%	1.5%
➢ Phase out of Normal Cost Difference	0.3%	0.0%
➢ Subtotal	10.2%	10.0%
● Amortization Bases		
➢ Risk Pool's Payment on Bases	0.8%	1.2%
➢ Amortization of Side Fund	1.4%	1.5%
➢ Subtotal	2.2%	2.7%
● **Total Employer Contribution**	**12.4%**	**12.7%**

Side Fund

A "side fund" was set up when the City's Miscellaneous Plan joined CalPERS' 2.5% @ 55 Risk Pool at June 30, 2003. The side fund's purpose was to account for the difference between the City plan's funded status and the Risk Pool when risk pools were established (June 30, 2003). Side fund payment are calculated as a level percentage of payroll based on a 7.75% interest rate and a 3.25% aggregate payroll increase. The City's Miscellaneous Plan June 30, 2010 side fund balance is $442,474 and expected 2010/11 payment are $45,061. However, actual 2010/11 side fund amounts paid will be based on a contribution rate (1.5%) times actual 2010/11 payroll. Any difference between expected and actual payments will go to the pool. Overpayments or underpayments do not decrease or increase the side fund's outstanding balance. CalPERS adjusts side fund contribution rate each year based on amortization payment and City projected payroll. There are 13 years of payment remaining.

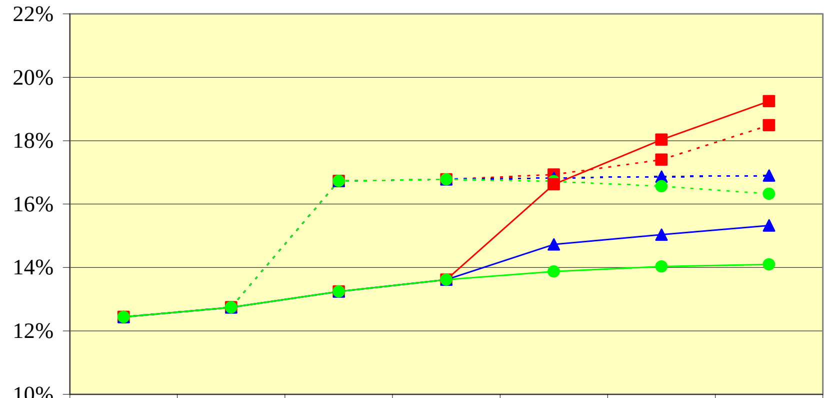
The City can realize significant savings by paying off its Side Fund balance for the Miscellaneous Plan early because balances are charge 7.75%. The Miscellaneous Plan's $443 thousand June 30, 2010 Side Fund balance, if paid off at June 30, results in a $272 thousand cash savings. If the cash savings is discounted at 4%, then savings becomes $108 thousand.

Projected Contribution Rates

CalPERS' actual investment return will significantly impact future City contribution rates. The following chart shows the City's projected contribution rates assuming future (beyond June 30, 2010) investment returns will average 0.4% - 4.3%, 7.75% and 11.8% - 15.3% (the

75th, 50th and 25th confidence limits[1]) respectively. The projections use an estimated June 30, 2010 return of 16.8%[2]. This assumes no future benefit increases or Tier 2 implementation to the City's retirement plans.

Investment Return Varies



	09/10	10/11	11/12	12/13	13/14	14/15	15/16
Unmodified AVA - 75th	12.4%	12.7%	16.7%	16.8%	16.9%	17.4%	18.5%
Unmodified AVA - 50th	12.4%	12.7%	16.7%	16.8%	16.8%	16.9%	16.9%
Unmodified AVA - 25th	12.4%	12.7%	16.7%	16.8%	16.7%	16.6%	16.3%
Modified AVA - 75th	12.4%	12.7%	13.2%	13.6%	16.6%	18.0%	19.2%
Modified AVA - 50th	12.4%	12.7%	13.2%	13.6%	14.7%	15.0%	15.3%
Modified AVA - 25th	12.4%	12.7%	13.2%	13.6%	13.9%	14.0%	14.1%

The graph above projects future contribution rates under both CalPERS' modified and unmodified asset smoothing methods. As mentioned in Page 2 of this report, last year CalPERS' Board approved a modification to increase the corridor used in the actuarial value assets to 140% for the June 30, 2009 valuation and to 130% for the June 30, 2010 valuation. As illustrated above, the June 30, 2009 asset loss is deferred for several years under the modified asset smoothing method. This will give the economy time to recover while allowing the City proper time to plan for the increases contribution rates. However, it will also likely result in higher contributions in future years.

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1 Investment Return will exceed the confidence limit by the given probability

2 Based on CalPERS 1/31/10 published rate of return of 10.8%, an additional gain of 3.0% through 3/08/10 and 7.75% to 6/30/10.

Police Safety Plan

The City participates in CalPERS 3%@55 risk pool for Police Safety employees.

Contribution Rates

In October 2009, CalPERS completed its June 30, 2008 valuation cycle. The following table shows the Police Safety Plan's contribution rates for the 2009/10 and 2010/11 fiscal years.

	6/30/07 2009/2010	6/30/08 2010/2011
■ Employer Contribution Required		
● Normal Cost		
➢ Pool Rate	13.4%	13.3%
➢ Surcharge for Class 1 Benefits	2.6%	2.6%
➢ Phase out of Normal Cost Difference	-0.0%	0.0%
➢ Subtotal	16.0%	15.9%
● Amortization Bases		
➢ Risk Pool's Payment on Bases	1.7%	2.3%
➢ Amortization of Side Fund	16.6%	14.8%
➢ Subtotal	18.3%	17.1%
● **Total Employer Contribution**	**34.3%**	**33.0%**

Side Fund

A "side fund" was set up when the City's Police Safety Plan joined the 3% @ 55 Risk Pool at June 30, 2003. The side fund's purpose was to account for the difference between the City plan's funded status and the Risk Pool when risk pools were established (June 30, 2003). Side fund payment are calculated as a level percentage of payroll based on a 7.75% interest rate and a 3.25% aggregate payroll increase. The City's Police Safety Plan June 30, 2010 side fund balance is $3,057,656 and expected 2010/11 payment are $294,777. However, actual 2010/11 side fund amounts paid will be based on a contribution rate (14.8%) times actual 2010/11 payroll. Any difference between expected and actual payments will go to the pool. Overpayments or underpayments do not decrease or increase the side fund's outstanding balance. CalPERS adjusts side fund contribution rate each year based on amortization payment and City projected payroll. There are 14 years of payment remaining.

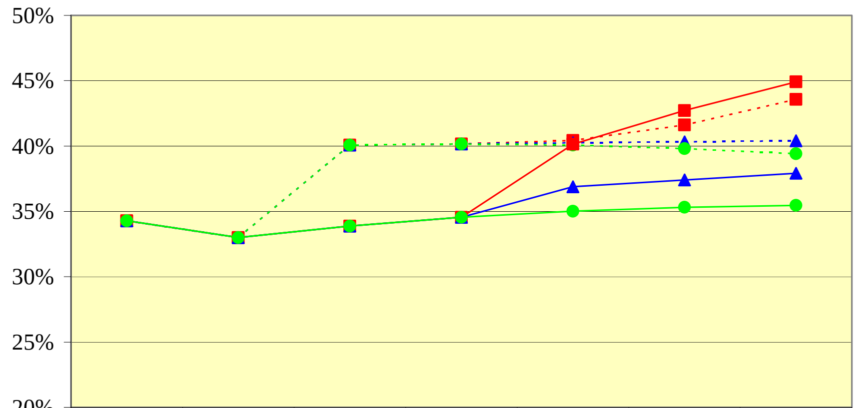
The City can realize significant savings by paying off its Side Fund balance for the Police Safety Plan early because balances are charge 7.75%. The Police Safety Plan's $3.1 million June 30, 2010 Side Fund balance, if paid off at June 30, results in a $2.1 million cash savings. If the cash savings is discounted at 4%, then savings becomes $0.8 million.

Projected Contribution Rates

CalPERS' actual investment return will significantly impact future City contribution rates. The following chart shows the City's projected contribution rates assuming future (beyond June 30, 2010) investment returns will average 0.4% - 4.3%, 7.75% and 11.8% - 15.3% (the

75th, 50th and 25th confidence limits[3]) respectively. The projections use an estimated 16.8%[4] June 30, 2010return. This assumes no future benefit increases or Tier 2 implementation to the City's retirement plans.

Investment Return Varies



	09/10	10/11	11/12	12/13	13/14	14/15	15/16
Unmodified AVA - 75th	34.3%	33.0%	40.1%	40.2%	40.4%	41.6%	43.6%
Unmodified AVA - 50th	34.3%	33.0%	40.1%	40.2%	40.3%	40.3%	40.4%
Unmodified AVA - 25th	34.3%	33.0%	40.1%	40.2%	40.1%	39.8%	39.4%
Modified AVA - 75th	34.3%	33.0%	33.9%	34.6%	40.1%	42.7%	44.9%
Modified AVA - 50th	34.3%	33.0%	33.9%	34.6%	36.9%	37.4%	37.9%
Modified AVA - 25th	34.3%	33.0%	33.9%	34.6%	35.0%	35.3%	35.5%

The graph above projects future contribution rates under both CalPERS' modified and unmodified asset smoothing methods. As mentioned in Page 2 of this report, last year CalPERS' Board approved a modification to increase the corridor used in the actuarial value assets to 140% for the June 30, 2009 valuation and to 130% for the June 30, 2010 valuation. As illustrated above, the June 30, 2009 asset loss is deferred for several years under the modified asset smoothing method. This will give the economy time to recover while allowing the City proper time to plan for the increases contribution rates. However, it will also likely result in higher contributions in future years.

3 Investment Return will exceed the confidence limit by the given probability

4 Based on CalPERS 1/31/10 published rate of return of 10.8%, an additional gain of 3.0% through 3/08/10 and 7.75% to 6/30/10.

Fire Safety Plan
The City participates in CalPERS 3%@55 risk pool for Fire Safety employees.

Contribution Rates
In October 2009, CalPERS completed its June 30, 2008 valuation cycle. The following table shows the Fire Safety Plan's contribution rates for the 2009/10 and 2010/11 fiscal years.

	6/30/07 2009/2010	6/30/08 2010/2011
■ Employer Contribution Required		
● Normal Cost		
➢ Pool Rate	13.4%	13.3%
➢ Surcharge for Class 1 Benefits	2.6%	2.6%
➢ Phase out of Normal Cost Difference	0.0%	0.0%
➢ Subtotal	16.0%	15.9%
● Amortization Bases		
➢ Risk Pool's Payment on Bases	1.7%	2.3%
➢ Amortization of Side Fund	9.0%	8.9%
➢ Subtotal	10.7%	11.2%
● **Total Employer Contribution**	**26.7%**	**27.1%**

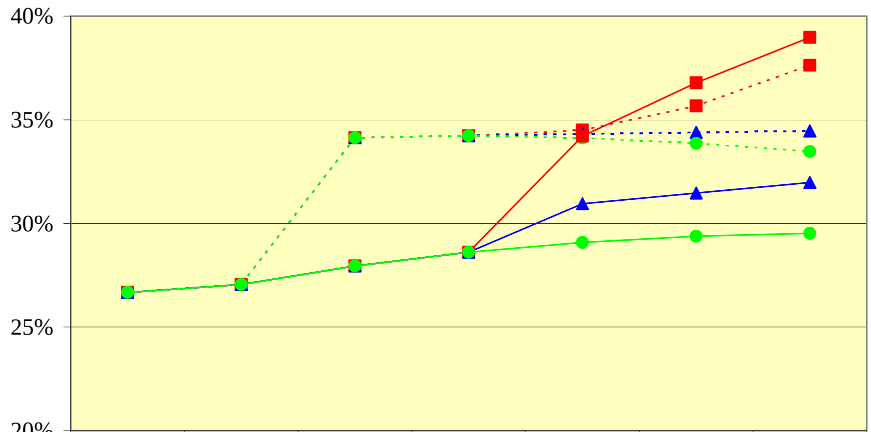
Side Fund
A "side fund" was set up when the City's Fire Safety Plan joined the 3% @ 55 Risk Pool at June 30, 2003. The side fund's purpose was to account for the difference between the City plan's funded status and the Risk Pool when risk pools were established (June 30, 2003). Side fund payments are calculated as a level percentage of payroll based on a 7.75% interest rate and a 3.25% aggregate payroll increase. The City's Fire Safety Plan June 30, 2010 side fund balance is $1,393,374 and expected 2010/11 payment are $177,112. However, actual 2010/11 side fund amounts paid will be based on a contribution rate (8.9%) times actual 2010/11 payroll. Any difference between expected and actual payments will go to the pool. Overpayments or underpayments do not decrease or increase the side fund's outstanding balance. CalPERS adjusts side fund contribution rate each year based on amortization payment and City projected payroll. There are 17 years of payment remaining.

The City can realize significant savings by paying off its Side Fund balance for the Fire Safety Plan early because balances are charge 7.75%. The Fire Safety Plan's $1.4 million June 30, 2010 Side Fund balance, if paid off at June 30, results in a $1.2 million cash savings. If the cash savings is discounted at 4%, then savings becomes $0.5 million.

Projected Contribution Rates
CalPERS' actual investment return will significantly impact future City contribution rates. The following chart shows the City's projected contribution rates assuming future (beyond June 30, 2010) investment returns will average 0.4% - 4.3%, 7.75% and 11.8% - 15.3% (the

75th, 50th and 25th confidence limits[5]) respectively. The projections use an estimated 16.8%[6] June 30, 2010return. This assumes no future benefit increases or Tier 2 implementation to the City's retirement plans.

Investment Return Varies



	09/10	10/11	11/12	12/13	13/14	14/15	15/16
Unmodified AVA - 75th	26.7%	27.1%	34.1%	34.2%	34.5%	35.7%	37.6%
Unmodified AVA - 50th	26.7%	27.1%	34.1%	34.2%	34.3%	34.4%	34.5%
Unmodified AVA - 25th	26.7%	27.1%	34.1%	34.2%	34.1%	33.9%	33.5%
Modified AVA - 75th	26.7%	27.1%	27.9%	28.6%	34.2%	36.8%	39.0%
Modified AVA - 50th	26.7%	27.1%	27.9%	28.6%	30.9%	31.5%	32.0%
Modified AVA - 25th	26.7%	27.1%	27.9%	28.6%	29.1%	29.4%	29.5%

The graph above projects future contribution rates under both CalPERS' modified and unmodified asset smoothing methods. As mentioned in Page 2 of this report, last year CalPERS' Board approved a modification to increase the corridor used in the actuarial value assets to 140% for the June 30, 2009 valuation and to 130% for the June 30, 2010 valuation. As illustrated above, the June 30, 2009 asset loss is deferred for several years under the modified asset smoothing method. This will give the economy time to recover while allowing the City proper time to plan for the increases contribution rates. However, it will also likely result in higher contributions in future years.

[5] Investment Return will exceed the confidence limit by the given probability

[6] Based on CalPERS 1/31/10 published rate of return of 10.8%, an additional gain of 3.0% through 3/08/10 and 7.75% to 6/30/10.

Study Conclusions

- CalPERS investment losses will significantly increase pension contributions. However, due to rate smoothing and subsequent modifications, these higher contribution rates will not materialize for several years.
- When considering a second tier benefit level, several things are important to understand that cost savings are:
  3. Limited to Normal Cost difference between the old and new tier and
  4. Very modest until the second tier payroll becomes dominant, and, even then will not solve very many budget problems.

  There are reasons to consider a second pension tier, such as implementing a more appropriate benefit level, or encouraging longer City service.. However there are very minor short term financial benefits.
- The City can realize significant savings by paying off its "Side Fund" balances for each plan (Miscellaneous, Fire Safety & Police Safety) early because balances are charge 7.75%. For example the Police Safety Plan's $3.1 million June 30, 2010 Side Fund balance, if paid off at June 30, results in a $2.1 million cash savings. If the cash savings is discounted at 4%, then savings becomes $0.8 million. The Miscellaneous and Fire Safety Plans have similar (although smaller in magnitude) results.

BASIC DEFINITIONS

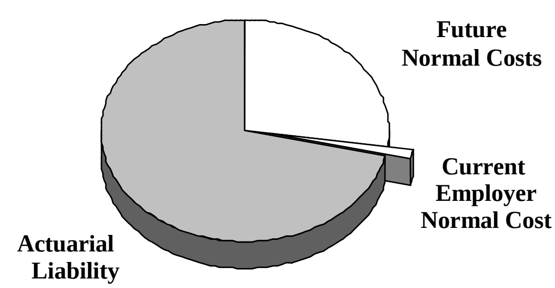
Understanding these terms makes it easier to understand the City's CalPERS actuarial information.

Present Value of Benefits: When CalPERS (or any actuary) prepares a pension valuation, they first gather participant data (including active employees, former employees not in payment status, participants and beneficiaries in payment status) at the valuation date (for example June 30, 2008). Using this data and some actuarial assumptions, they project future benefit payments. (The assumptions predict, among other things, when people will retire, terminate, die or become disabled, as well as what salary increases, inflation and investment return might be.) Those future benefit payments are discounted, using expected future investment return, back to the valuation date. This discounted present value is the plan's present value of benefits. It represents the amount the plan needs as of the valuation date to pay all future benefits – if all assumptions are met and no future contributions (employee or employer) are made.

Actuarial Liability: This represents the portion of the present value of benefits that participants have earned (on an actuarial, not actual, basis) through the valuation date.

Current Employer Normal Cost: The total normal cost represents the portion of the present value of benefits expected to be earned (on an actuarial, not actual, basis) in the coming year. The current employer normal cost represents the employer's portion of the total normal cost – that is, the total normal cost offset by employee contributions.

Present Value of Benefits



The above chart shows the Present Value of Benefits as the sum of Actuarial Liability, Current Normal Cost, and Future Normal Costs. Once these amounts are calculated, the actuary compares actuarial assets to the Actuarial Liability. When assets equal liabilities, a plan is considered on track for funding. When assets are greater than liabilities, the plan has excess assets; when assets are less than liabilities, the plan has an unfunded liability.

Contribution Rate: CalPERS does not require an agency to make up any shortfall (unfunded liability) immediately, nor do they allow an immediate credit for any excess assets. Instead, the difference is amortized over time. An agency's contribution rate is nothing more complicated than the current employer normal cost, plus the amortized unfunded liability or less the amortized excess assets. Simply put, this contribution is the value of employer benefits earned during the year plus something to move the plan toward being on track for funding. There is a two-year delay from the valuation date to the contribution effective date. For example, the June 30, 2008 valuation generates an agency's 2010/11 fiscal year contribution. CalPERS instituted this delay a few years ago to ensure public agencies would have contribution rates as they begin their budgeting process for each fiscal year.

Fresh Start: When CalPERS prepares a valuation and determines an agency's contribution rate, it's usually in layers, such as gains/losses or plan changes, with each layer (base) adding up to the contribution rate. But if that calculation results in a zero contribution rate, CalPERS combines it into one base and tells the agency it will have a zero contribution for a fixed period. That combination is called a "fresh start." An agency with a fresh start will know it; the actuarial report will show a single base (labeled *fresh start*).

Super-Funded: A plan is super-funded when actuarial assets are greater than the present value of benefits. Referring to the above circle chart a plan has excess assets when assets exceed the Actuarial Liability and a super-surplus when asset exceed the Present Value of Benefit. When a plan is Super-Funded, the super-surplus (actuarial assets over present value of benefits) may be used to pay employee contributions. However, any super-surplus use must occur in the fiscal year for which the valuation report's contribution rate was calculated. For example, a plan super-funded in the June 30, 2008 valuation can use super-surplus to pay 2010/11 fiscal year employee contributions.

Employer Paid Member Contribution (EPMC): Each employee contributes towards his or her retirement based on the retirement formula. If employer chooses to pick up a portion or entire contribution for employees, the portion of member contribution that paid by employer is called Employer Paid Member Contribution.