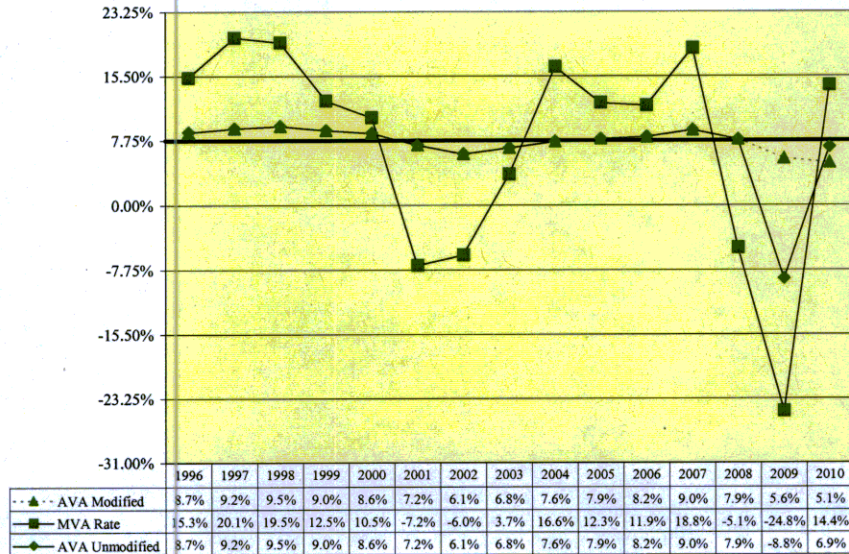


CITY OF PASADENA
CALPERS ACTUARIAL ISSUES – 6/30/08 VALUATION
CALPERS INVESTMENT RETURNS

CalPERS Historical Investment Return

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



The 2010 return shown is estimated based on CalPERS December 31, 2009 published rates of 12.6% and a loss of 1.5% through January 31, 2010 and 7.75% to June 30, 2010. CalPERS' 10 year average annual return is 2.6%.

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 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 smooth 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

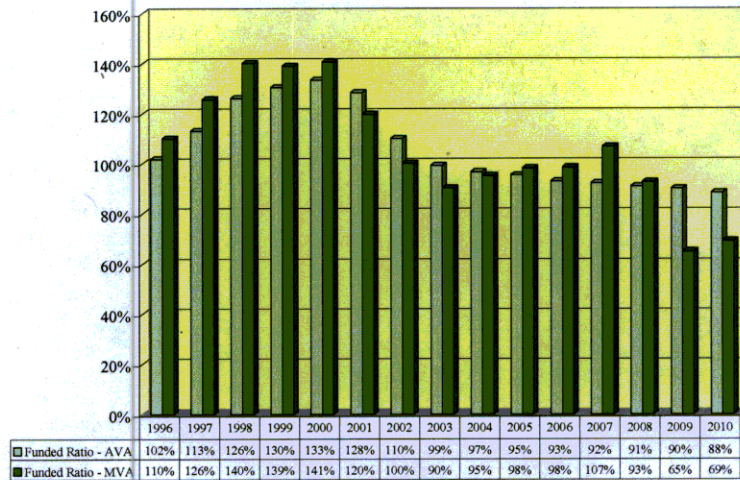


CITY OF PASADENA
CALPERS ACTUARIAL ISSUES – 6/30/07 VALUATION
MISCELLANEOUS

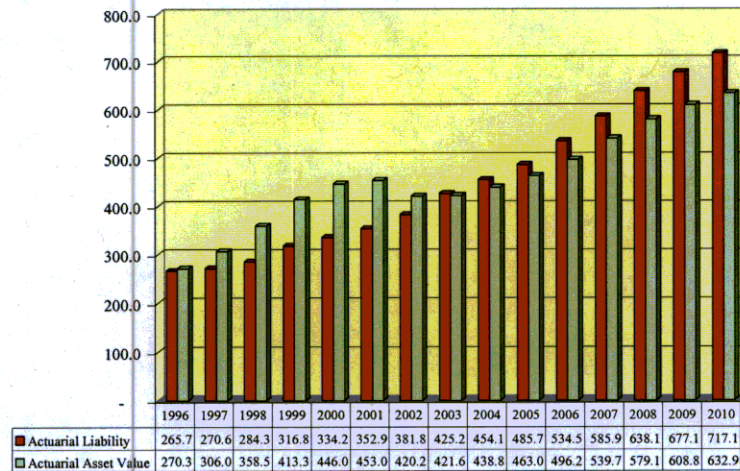
Miscellaneous Plan

Funded Status

The following two charts show the City's Miscellaneous Plan's funded status. The first chart displays the funded status as a percentage of Actuarial Value of Assets and Market Value of Assets; the second chart compares the Actuarial Accrued Liability to the Actuarial Value of Assets (amount in millions). Note that the 6/30/09 and 6/30/10 asset values are estimated.



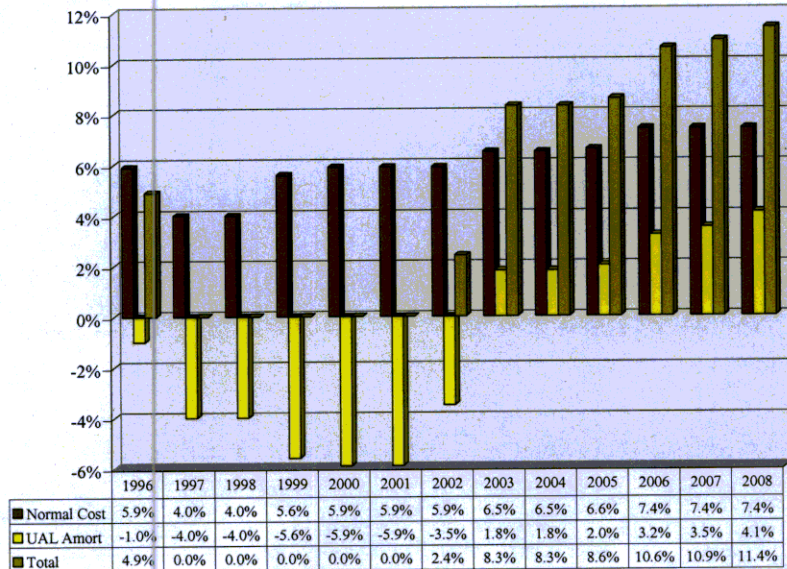
Having assets equal to Actuarial Liability should be viewed as a target. While this is an appropriate measuring stick, it is perfectly expected that assets will move above and sometimes below the actuarial liability. The funding percentage is subject to annual fluctuations based on numerous factors including asset and actuarial (non-asset) gains and losses, and will only become a concern if the plan is consistently under-funded or runs the risk of not being able to pay benefits.



CITY OF PASADENA
CALPERS ACTUARIAL ISSUES – 6/30/08 VALUATION
MISCELLANEOUS

Contribution Rates

The following chart shows historical contribution rates for the City's Miscellaneous Plan over the past several years:



The years in the above table reflect CalPERS valuation dates, which determine the City's contribution rates two years later. For example 2008 reflects CalPERS June 30, 2008 valuation which determines the City's 2010/11 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.

■ Valuation	6/30/07	6/30/08
■ Contribution Year	<u>2009/2010</u>	<u>2010/2011</u>
■ Normal cost	7.4%	7.4%
■ Amortization bases:		
● Method Change	-0.2%	-0.2%
● (Gain)/Losses	-0.1%	0.6%
● Benefit Changes	1.8%	1.7%
● Fresh Start	<u>2.0%</u>	<u>1.9%</u>
● Sub-total	<u>3.5%</u>	<u>4.1%</u>
■ Total	10.9%	11.4%

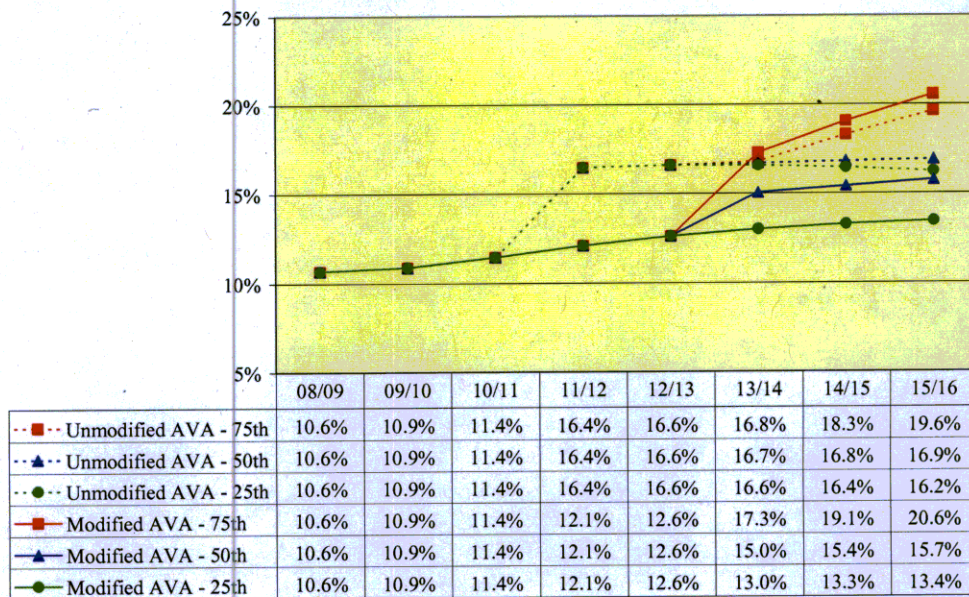


CITY OF PASADENA
CALPERS ACTUARIAL ISSUES – 6/30/08 VALUATION
MISCELLANEOUS

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 (6/30/10 and beyond) investment returns will average 0.4% - 4.3%, 7.75% and 11.8% - 15.3% (the 75th, 50th and 25th confidence limits²) respectively. The projections use an estimated 14.4%³ return for June 30, 2010. This assumes no future benefit increases or Tier 2 implementation to the City's retirement plans.

Investment Return Varies



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 asset loss of fiscal year 2008/09 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.

² Investment Return will exceed the confidence limit by the given probability

³ Based on CalPERS 12/31/09 published rate of return of 12.6%, a loss of 1.5% through 1/31/10 and 7.75% to 6/30/10.

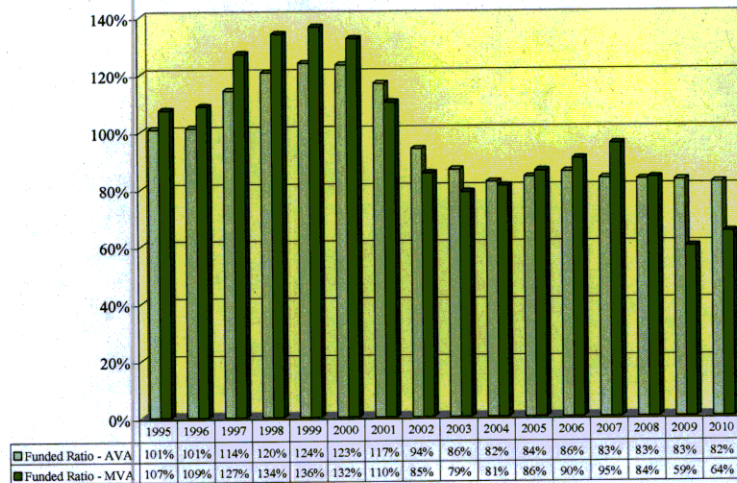


CITY OF PASADENA
CALPERS ACTUARIAL ISSUES – 6/30/07 VALUATION
SAFETY

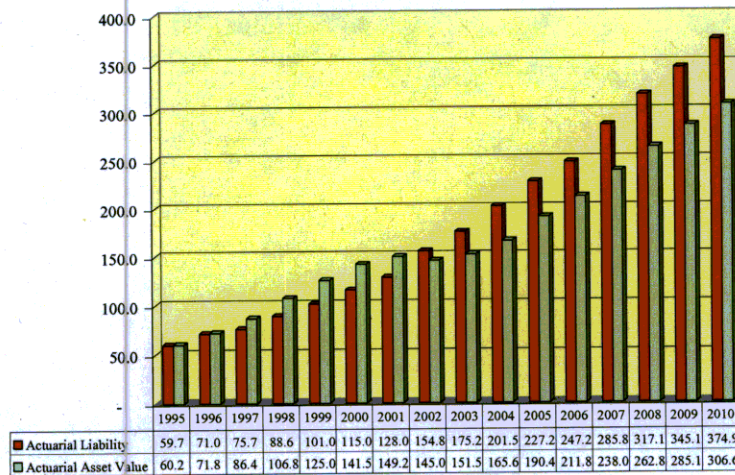
Safety Plan

Funded Status

The following two charts show the City's Safety Plan's funded status. The first chart displays the funded status as a percentage of Actuarial Value of Assets and Market Value of Assets; the second chart compares the Actuarial Accrued Liability to the Actuarial Value of Assets (amount in millions). Note that the 6/30/09 and 6/30/10 asset values are estimated.



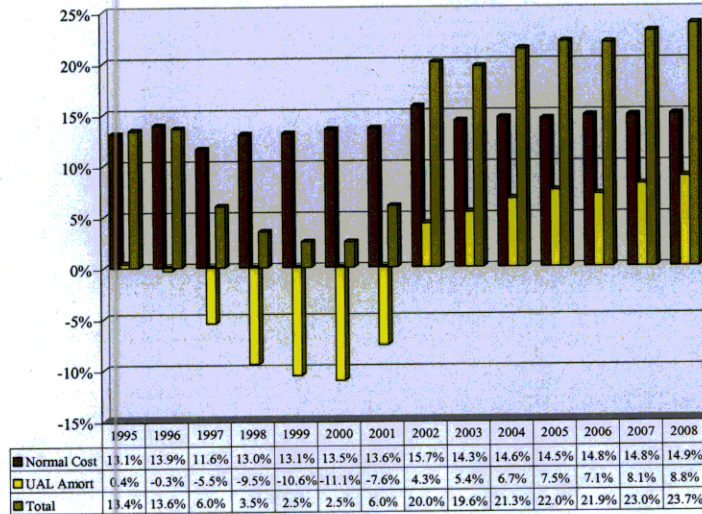
Having assets equal to Actuarial Liability should be viewed as a target. While this is an appropriate measuring stick, it is expected that assets will move sometimes above and sometimes below the actuarial liability. The funding percentage is subject to annual fluctuations based on numerous factors including asset and actuarial (non-asset) gains and losses, and will only become a concern if the plan is consistently under-funded or runs the risk of not being able to pay benefits.



CITY OF PASADENA
CALPERS ACTUARIAL ISSUES – 6/30/08 VALUATION
SAFETY

Contribution Rates

The following chart shows historical contribution rates for the City's Safety Plan over the past several years:



The years in the above table reflect CalPERS valuation dates, which determine the City's contribution rates two years later. For example 2008 reflects CalPERS June 30, 2008 valuation which determines the City's 2010/11 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.

■ Valuation	<u>6/30/07</u>	<u>6/30/08</u>
■ Contribution Year	<u>2009/2010</u>	<u>2010/2011</u>
■ Normal cost	14.8%	14.9%
■ Amortization bases:		
● Initial UAL	-0.3%	-0.2%
● (Gains)/Losses	3.9%	4.5%
● Benefit Changes	7.2%	7.0%
● Assumption Changes	-2.4%	-2.3%
● Method Changes	<u>-0.2%</u>	<u>-0.2%</u>
● Sub-total	<u>8.1%</u>	<u>8.8%</u>
■ Total	23.0%	23.7%

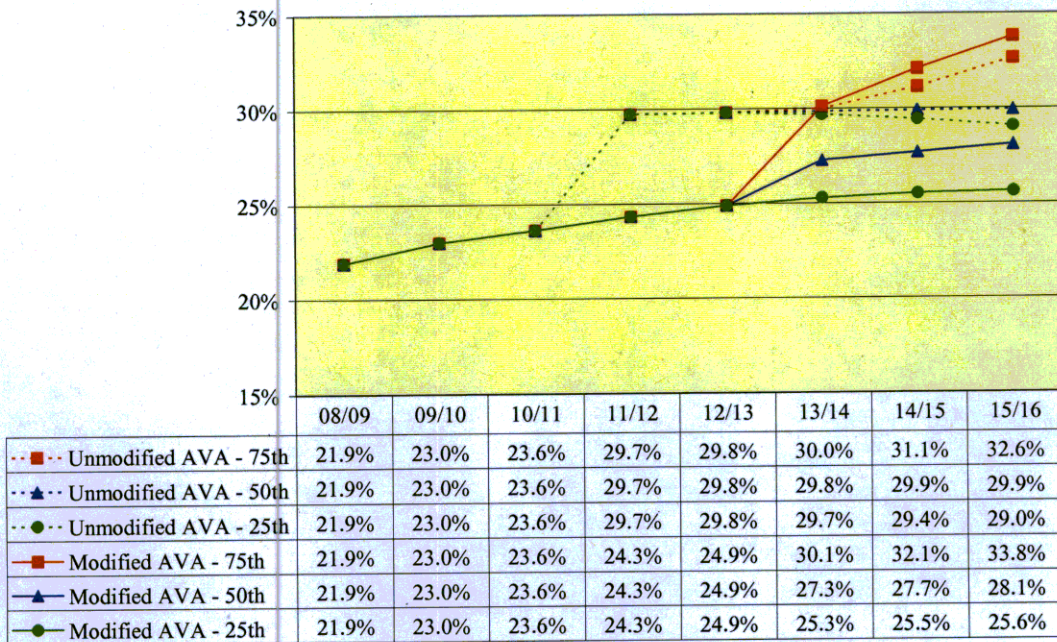


CITY OF PASADENA
CALPERS ACTUARIAL ISSUES – 6/30/08 VALUATION
SAFETY

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 (6/30/10 and beyond) investment returns will average 0.4% - 4.3%, 7.75% and 11.8% - 15.3% (the 75th, 50th and 25th confidence limits⁵) respectively. The projections use an estimated 15.7%⁶ return for June 30, 2010. This assumes no future benefit increases or Tier 2 implementation to the City's retirement plans.

Investment Return Varies



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 asset loss of fiscal year 2008/09 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.

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

⁶ Based on CalPERS 12/31/09 published rate of return of 12.6%, a loss of 1.5% through 1/31/10 and 7.75% to 6/30/10.