City of Long Beach
Miscellaneous and Safety Plans

CalPERS Actuarial Analysis – 6/30/09 Valuation

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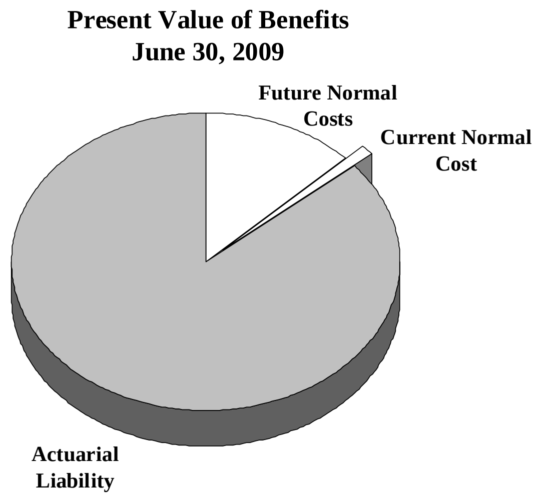
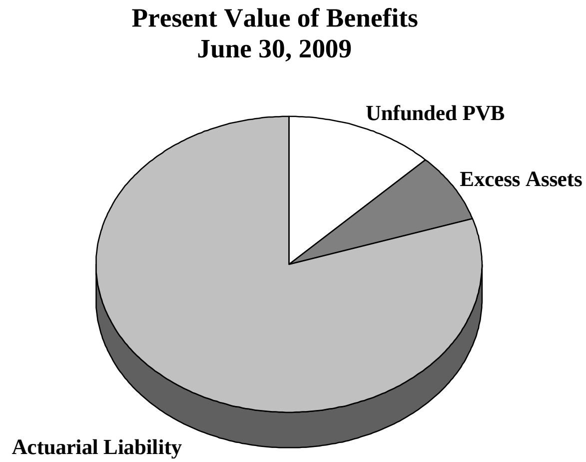
December 7, 2010

Agenda

Definitions





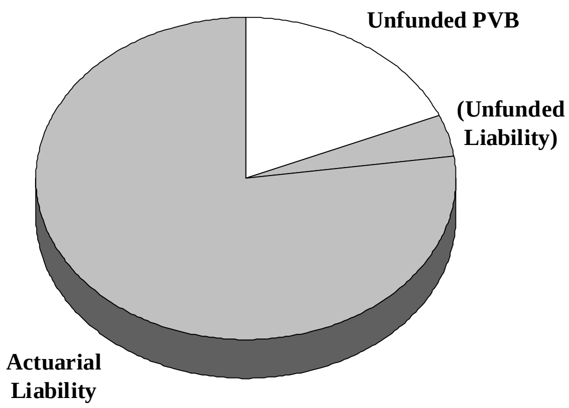
- **PVB - Present Value of all Projected Benefits:**
  - Discounted value (at valuation date - 6/30/09), of all future expected benefit payments based on various (actuarial) assumptions
- **Actuarial Liability:**
  - Discounted value (at valuation date) of benefits earned through valuation date [value 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
- **Target-** Have money in the bank to cover Actuarial Liability (past service)

Definitions

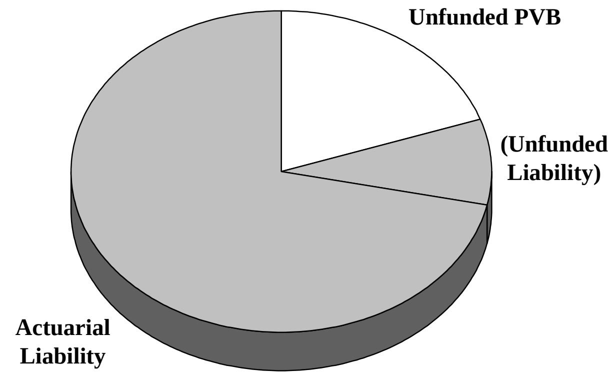
- **Asset Values:**
  - Market value – Assets measured at valuation date (6/30/09). Investments, segregated and restricted in a trust, which are:
    (a) irrevocable, and
    (b) dedicated to provide benefits to plan participants
  - Actuarial value – Smoothed market value
    - Period – Gains/losses recognized over 15 years and
    - Corridor – Not allowed to get too far from Market value:
      - Policy 80%/120%
      - Temporarily 120% increased to
        - 140% for June 30, 2009 and
        - 130% for June 30, 2010
- **Unfunded Liability -** Assets (on Actuarial basis) short of target <u>at valuation date</u>
- **Excess Assets / Surplus:**
  - Assets (on Actuarial basis) over and above target <u>at that point in time</u>.
  - 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.

Plan Funded Status
Miscellaneous

Present Value of Benefits
June 30, 2008



Present Value of Benefits
June 30, 2009



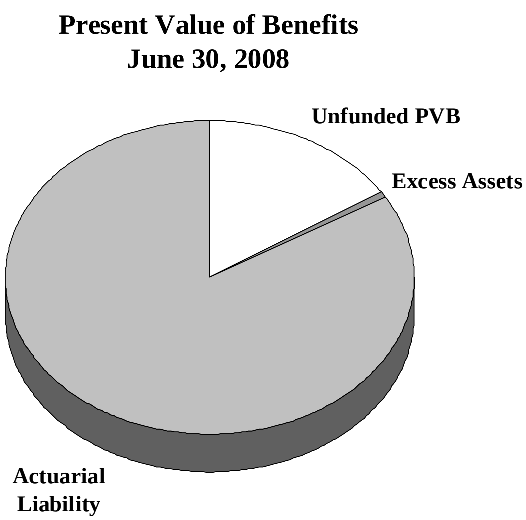
	June 30, 2008	Increase	June 30, 2009
Unfunded PVB	$ 401,700,000	$ 108,500,000	$ 510,200,000
(Unfunded Liability)	(91,600,000)	(123,700,000)	(215,300,000)
Actuarial Liability	1,667,800,000	178,300,000	1,846,100,000
PVB	1,977,800,000	163,200,000	2,141,000,000

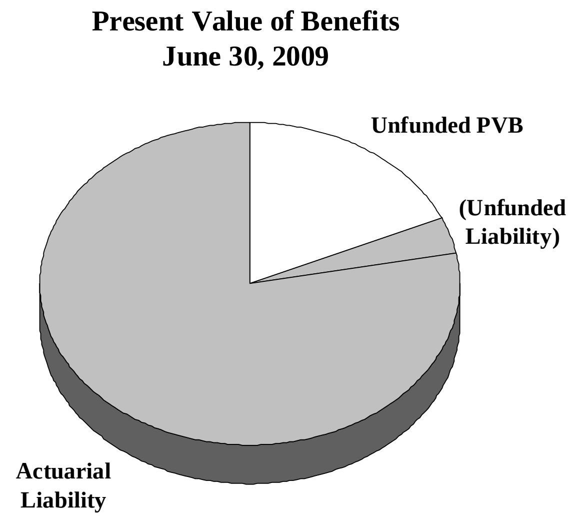
What Happened Between June 30, 2008 & June 30, 2009
Miscellaneous

■ Actuarial Asset gain/(loss):		≈ (31.4) million
■ Actuarial gain/(loss):		≈ (16.8) million
● Average Salary	\$59,200 → \$61,700	
● Number of Actives	3,643 → 3,603	
● Number of Inactives	3,179 → 3,249	
● Number of Retirees	3,573 → 3,602	
■ Contribution gain/(loss):		≈ 3.8 million
● Expected	≈ (46.1)	
● Actual	≈ 49.9	
■ Assumption Change gain/(loss)		≈ (77.5) million
■ Expected UAL Decrease/(Increase):		≈ (1.7) million

■ Market Value Asset gain/(loss)	≈ (512.1) million

Plan Funded Status
Safety



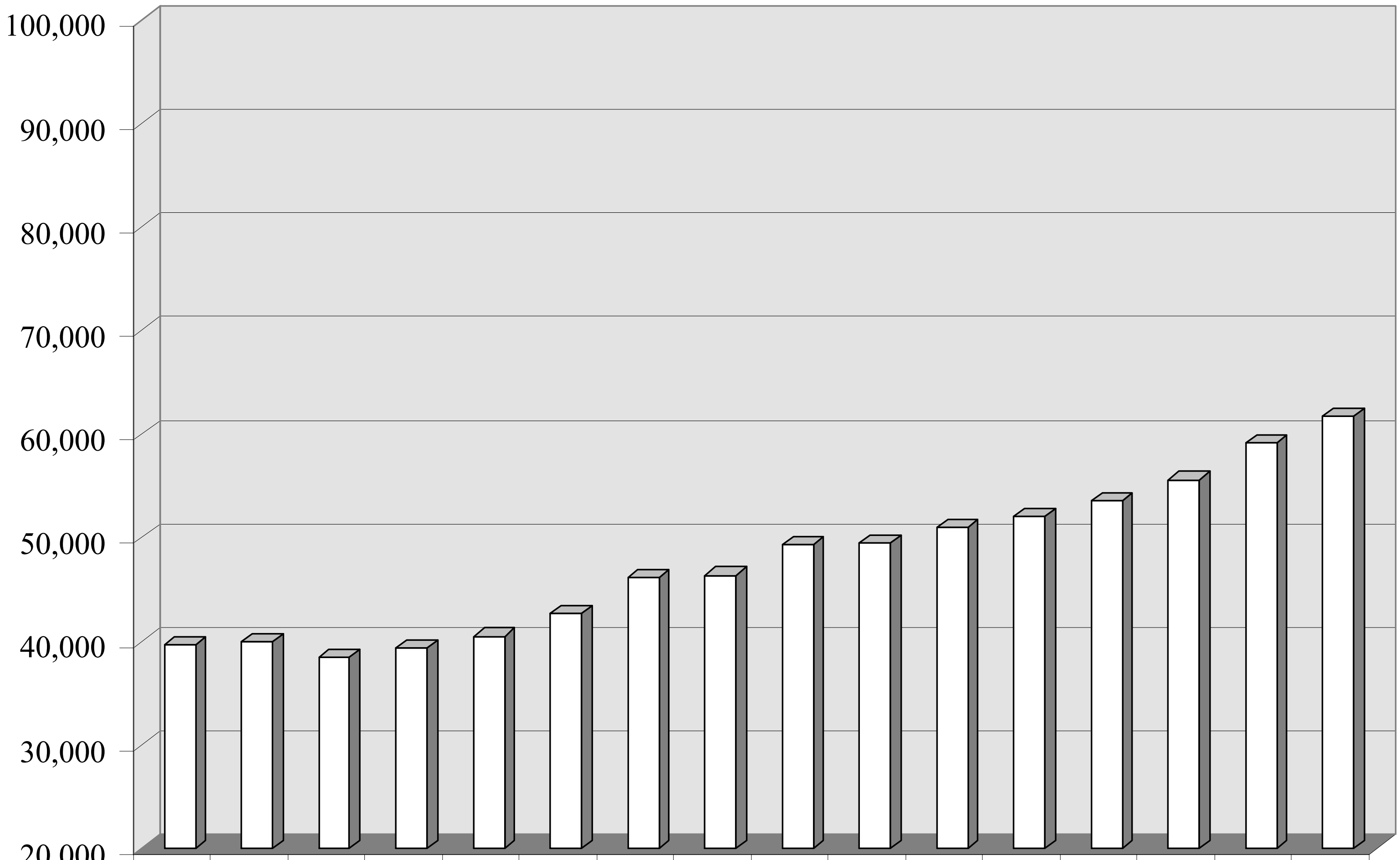


	June 30, 2008	Increase	June 30, 2009
Unfunded PVB	$ 301,200,000	$ 107,600,000	$ 408,800,000
Excess Assets/	9,800,000		
(Unfunded Liability)		(87,400,000)	(77,600,000)
Actuarial Liability	1,592,700,000	137,800,000	1,730,500,000
PVB	1,903,600,000	158,200,000	2,061,800,000

What Happened Between June 30, 2008 & June 30, 2009
Safety

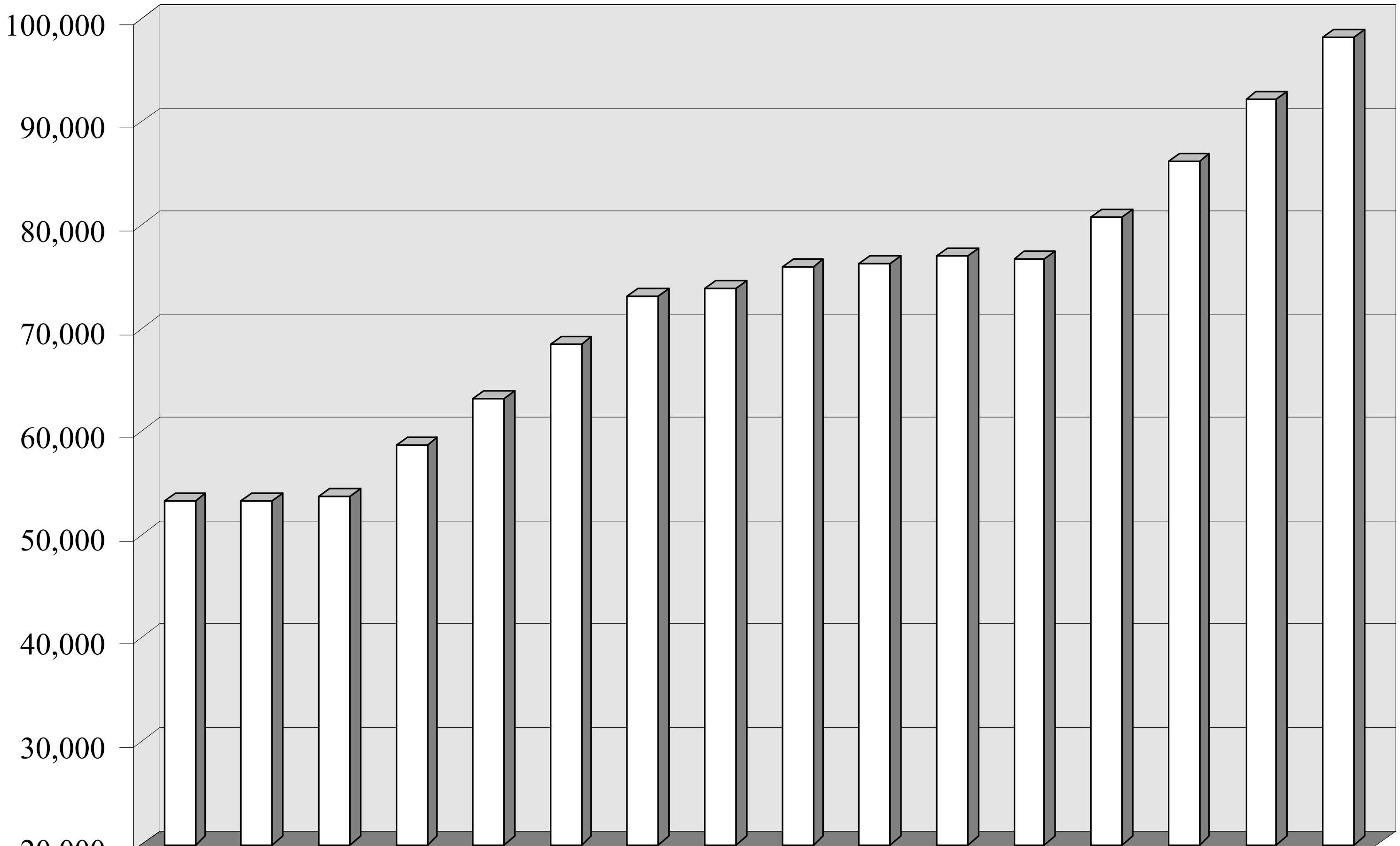
■ Actuarial Asset gain/(loss):		≈ (31.7) million
■ Actuarial gain/(loss):		≈ (21.8) million
● Average Salary	\$92,100 → \$98,200	
● Number of Actives	1,434 → 1,404	
● Number of Inactives	341 → 339	
● Number of Retirees	1,458 → 1,479	
■ Contribution gain/(loss):		≈ 0.7 million
● Expected	≈ (35.2)	
● Actual	≈ 35.9	
■ Assumption Changes:		≈ (33.0) million
■ Expected UAL Decrease/(Increase):		≈ (1.4) million
■ Market Value Asset gain/(loss):		≈ (521.3) million

Average PERSable Wages
Miscellaneous



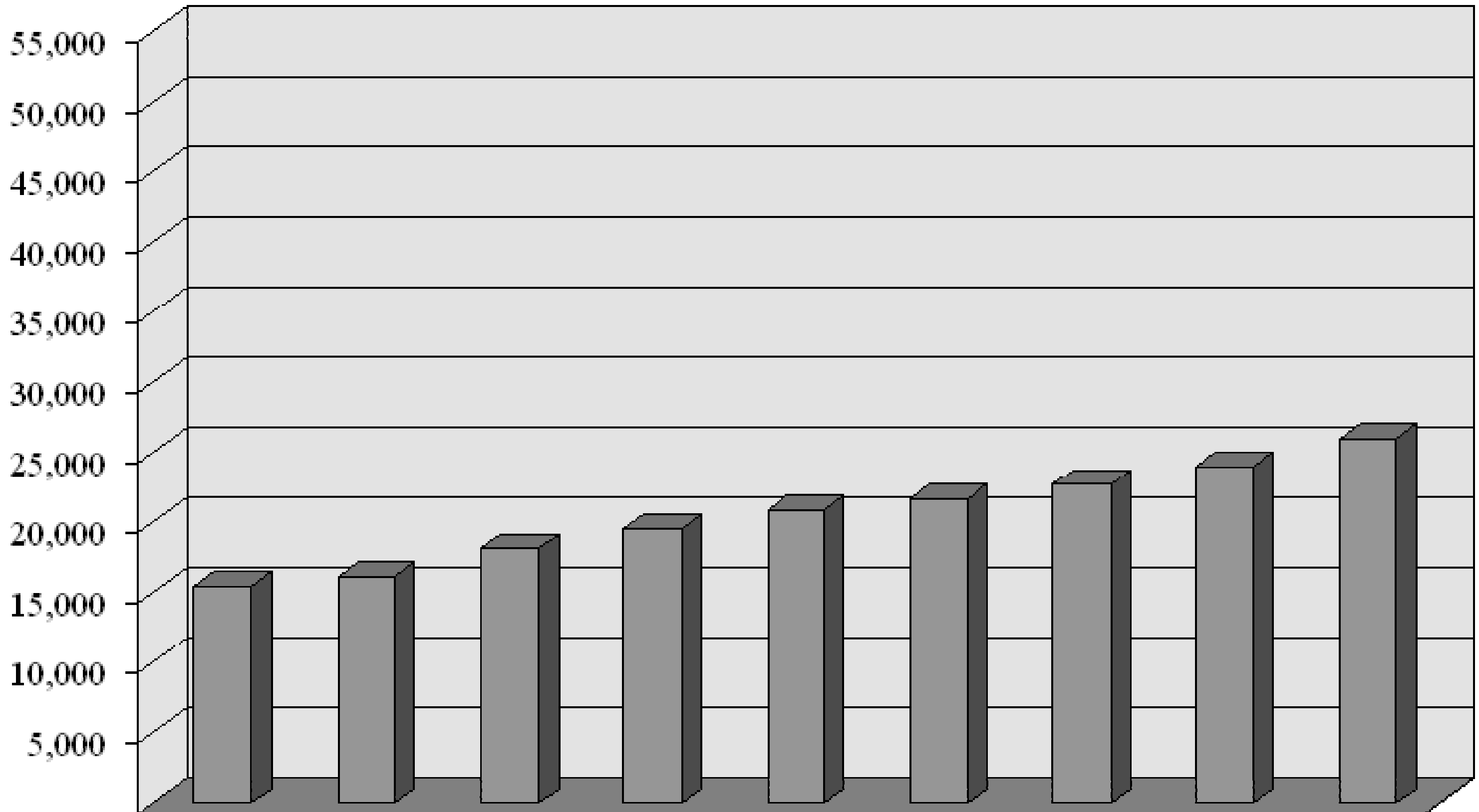
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Average	39,600	40,000	38,400	39,300	40,500	42,700	46,100	46,400	49,400	49,500	51,000	52,100	53,500	55,600	59,200	61,700
Active	3,391	3,317	3,194	3,094	3,173	3,313	3,416	3,614	3,826	3,876	3,747	3,582	3,622	3,681	3,634	3,603

Average PERSable Wages
Safety



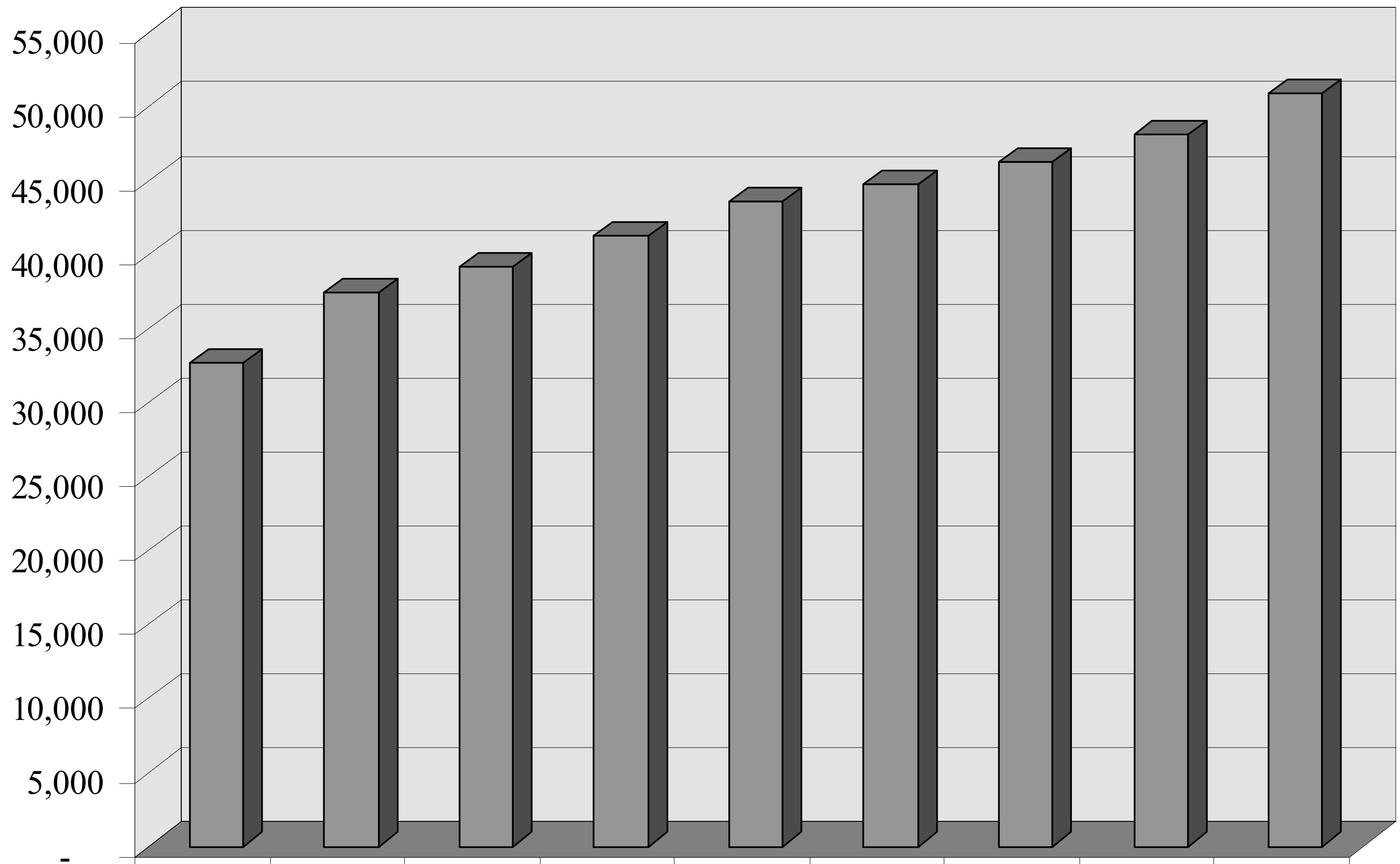
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
□ Average	53,200	53,300	53,700	58,700	63,200	68,500	73,100	73,900	76,000	76,300	77,000	76,700	80,800	86,200	92,200	98,200
□ Active	1,236	1,267	1,266	1,294	1,333	1,299	1,288	1,361	1,354	1,356	1,336	1,351	1,363	1,389	1,434	1,404

Average Retirement Annuity
Miscellaneous



	2001	2002	2003	2004	2005	2006	2007	2008	2009
Average Ret Annuity	15,500	16,100	18,100	19,500	20,900	21,700	22,700	24,000	26,000

Average Retirement Annuity
Safety



	2001	2002	2003	2004	2005	2006	2007	2008	2009
Average Ret Annuity	32,700	37,400	39,200	41,200	43,600	44,700	46,200	48,100	50,900

Average Retirement Annuity
Miscellaneous

Attained Age	Service Retirement Retirees' Benefit								
	2001	2002	2003	2004	2005	2006	2007	2008	2009
50-54	$ 10,059	**$ 9,578**	**$ 16,409**	$ 19,353	$ 17,660	$ 20,323	$ 19,471	$ 22,902	$ 20,803
55-59	15,191	**15,683**	**27,245**	31,174	31,819	31,051	31,101	31,242	32,255
60-64	20,017	**20,542**	**25,271**	27,211	29,037	30,123	32,270	34,231	34,360
65-69	18,641	**18,730**	**19,826**	22,299	24,502	25,845	27,081	28,669	31,438
70-74	16,962	**18,850**	**19,722**	20,390	21,321	22,263	22,143	23,785	23,737
75 & over	14,864	**15,473**	**15,758**	16,203	17,039	17,477	18,624	19,455	17,764
All Ages	16,282	**17,103**	**19,420**	21,077	22,603	23,505	24,510	25,958	27,293

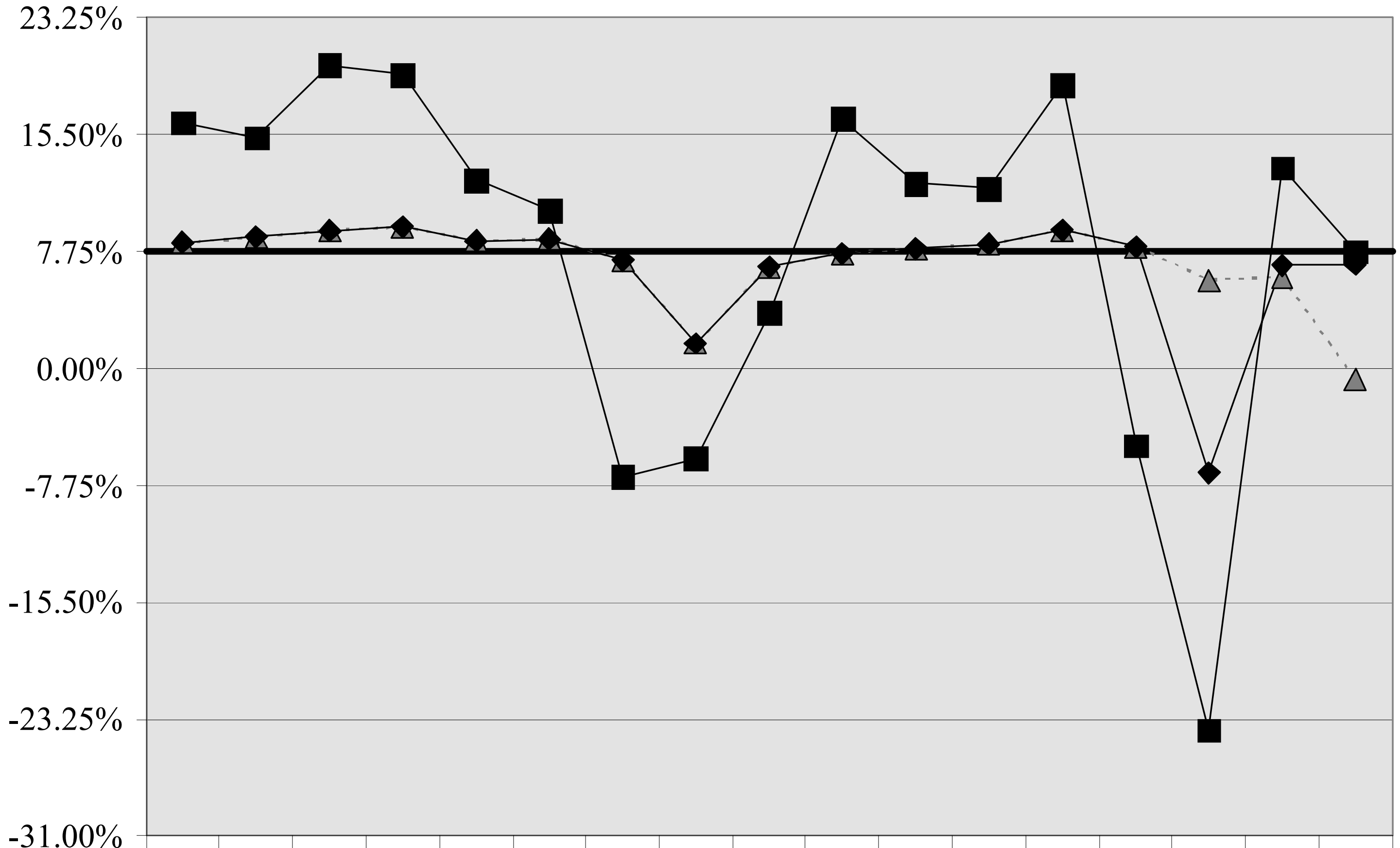
- Note: 2.7@55 was effective in 2002

Average Retirement Annuity
Safety

Attained Age	Service Retirement Retirees' Benefit								
	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
50-54	**$ 31,629**	**$ 63,343**	$ 59,727	$ 61,854	$ 58,989	$ 59,171	$ 60,913	$ 63,731	$ 69,744
55-59	**42,471**	**55,598**	59,564	60,870	64,451	64,187	69,042	64,771	70,502
60-64	**42,970**	**51,316**	54,494	57,320	60,495	62,899	63,327	66,908	68,842
65-69	**36,756**	**41,340**	42,617	45,988	51,964	54,185	56,951	61,561	65,693
70-74	**36,928**	**38,985**	40,489	41,532	41,771	44,459	46,471	47,941	50,613
75 & over	**37,601**	**40,441**	41,209	41,864	42,127	42,814	44,641	46,336	48,478
All Ages	**38,589**	**46,632**	48,264	50,241	52,163	53,641	55,651	57,458	60,536

- Note: 3@50 was effective in 2001

Actuarial Investment Return



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
AVA Modified	8.3%	8.7%	9.1%	9.4%	8.5%	8.6%	7.2%	1.7%	6.8%	7.6%	8.0%	8.2%	9.2%	8.1%	5.9%	6.1%	-0.7%
MVA Rate	16.3	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%	-24.0	13.3	7.8%
AVA Unmodified	8.3%	8.7%	9.1%	9.4%	8.5%	8.6%	7.2%	1.7%	6.8%	7.6%	8.0%	8.2%	9.2%	8.1%	-6.9%	6.9%	6.9%

Actuarial Investment Return

- Above assumes contributions, payments, etc. received evenly throughout year.
- 6/30/09:
  - Market Value return ≈ (24.0)%
  - Actuarial Value return
    - Modified ≈ 5.9%
    - Unmodified ≈ (6.9)%
- 6/30/10:
  - Market Value return ≈ 13.3% [1]
  - Actuarial Value return
    - Modified ≈ 6.1%
    - Unmodified ≈ 6.9%
- 6/30/11:
  - Market Value return through 09/30/10 ≈ 7.9 %
  - Estimated Annualized MVA Return[2] ≈ 7.8%
  - Est. Annualized Modified AVA Return ≈ (0.7)%

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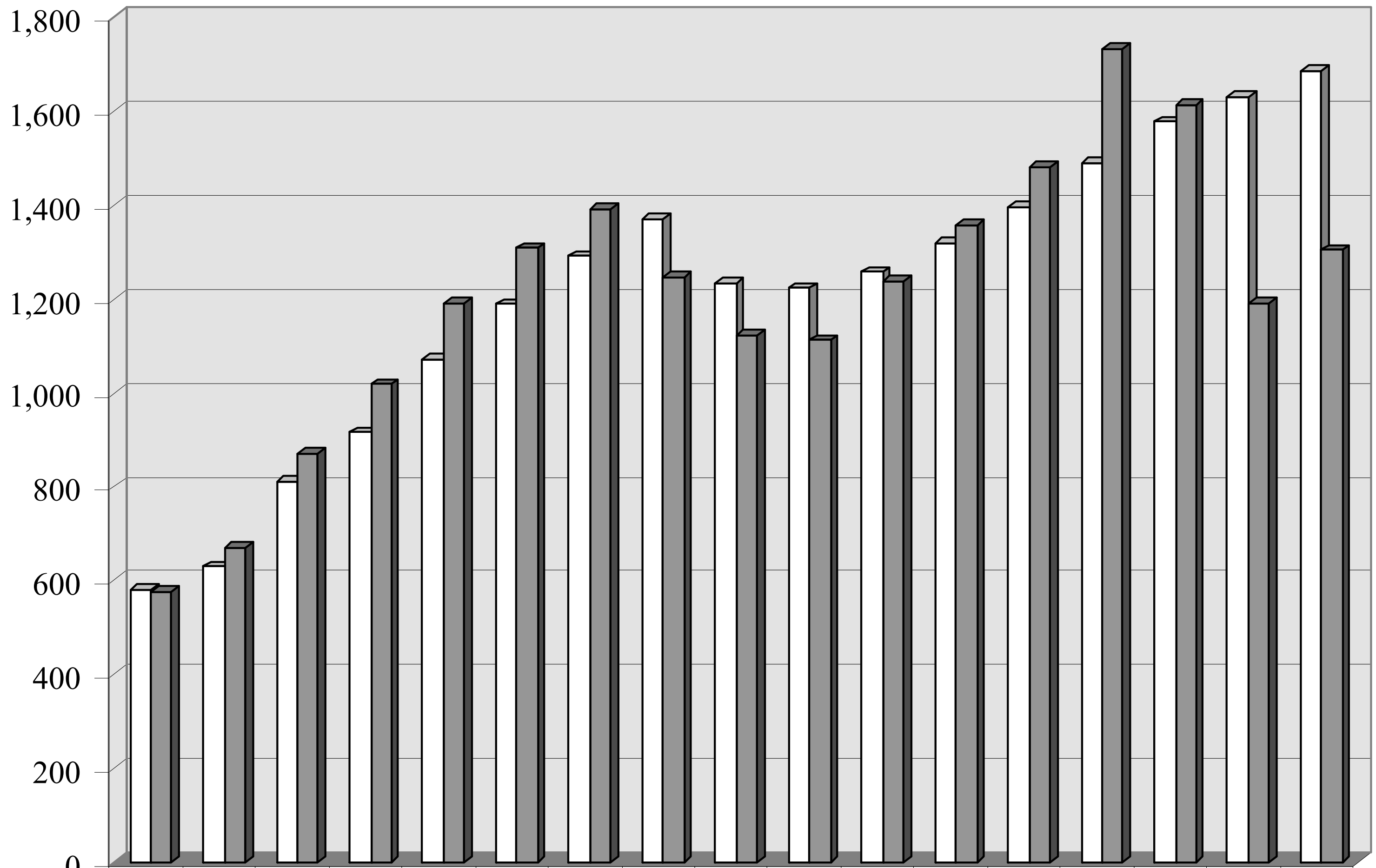
[1] As reported by CalPERS press release.
[2] CalPERS assumed 7.75%

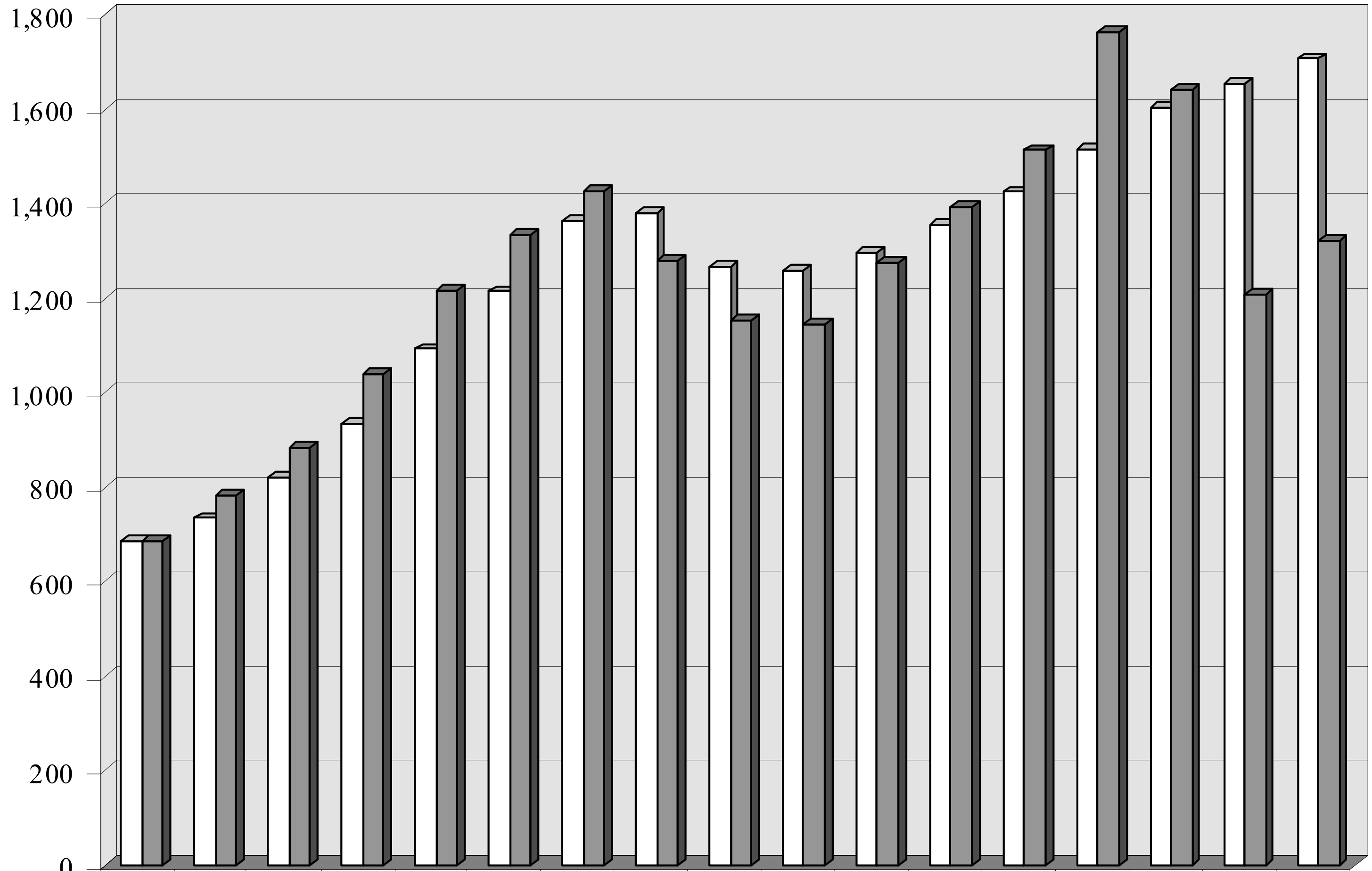
Asset Values (Millions)
Miscellaneous



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Actuarial	579	629	811	916	1,070	1,188	1,290	1,371	1,234	1,223	1,257	1,320	1,395	1,490	1,576	1,631	1,685
Market	577	669	871	1,017	1,189	1,308	1,391	1,246	1,121	1,112	1,236	1,357	1,480	1,732	1,613	1,191	1,303

6/30/10 asset values estimated.

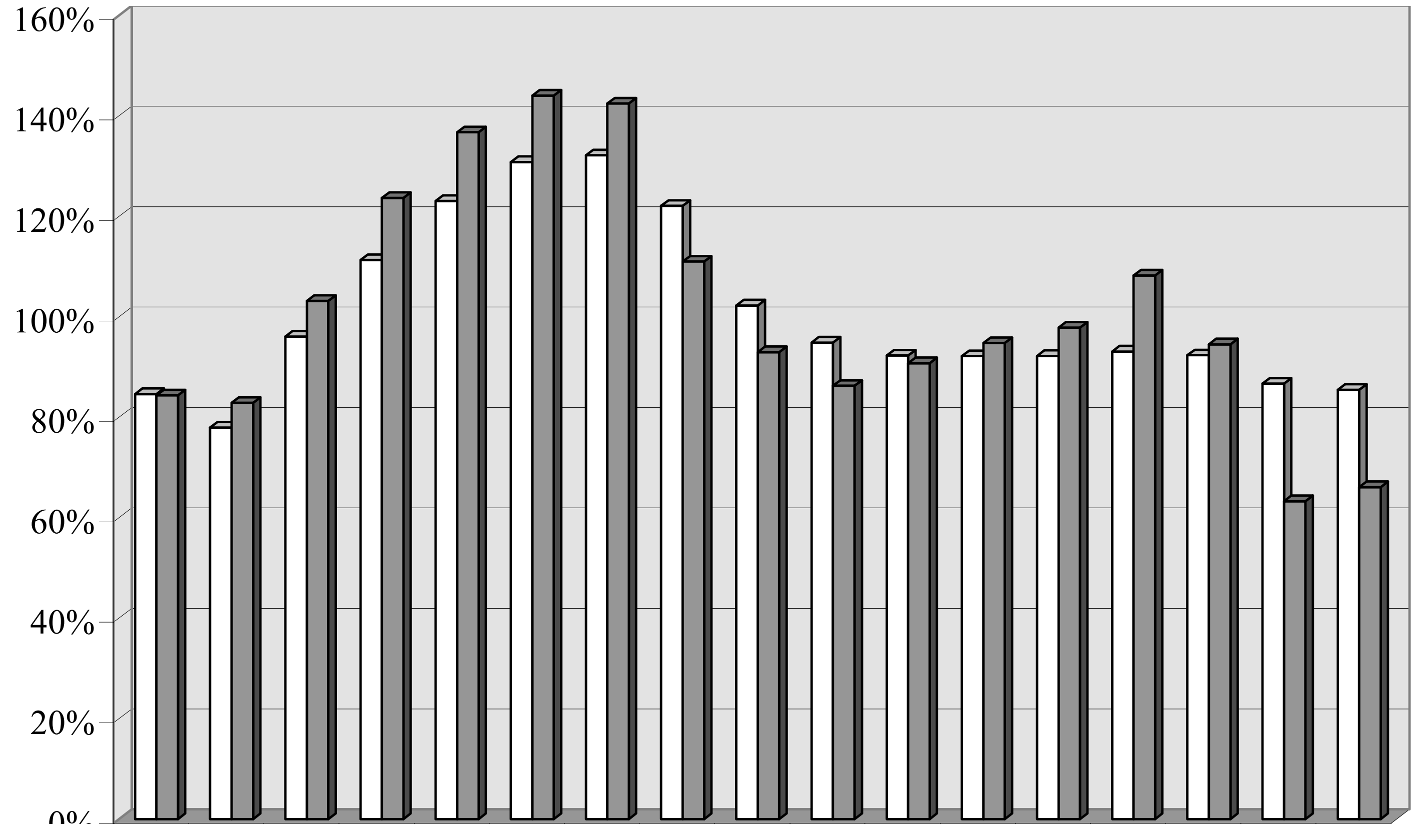
Asset Values (Millions)
Safety



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Actuarial	687	734	821	933	1,091	1,213	1,362	1,380	1,267	1,258	1,295	1,354	1,425	1,515	1,602	1,653	1,707
Market	684	783	883	1,040	1,215	1,334	1,425	1,279	1,152	1,143	1,274	1,393	1,512	1,762	1,642	1,208	1,321

6/30/10 asset values estimated

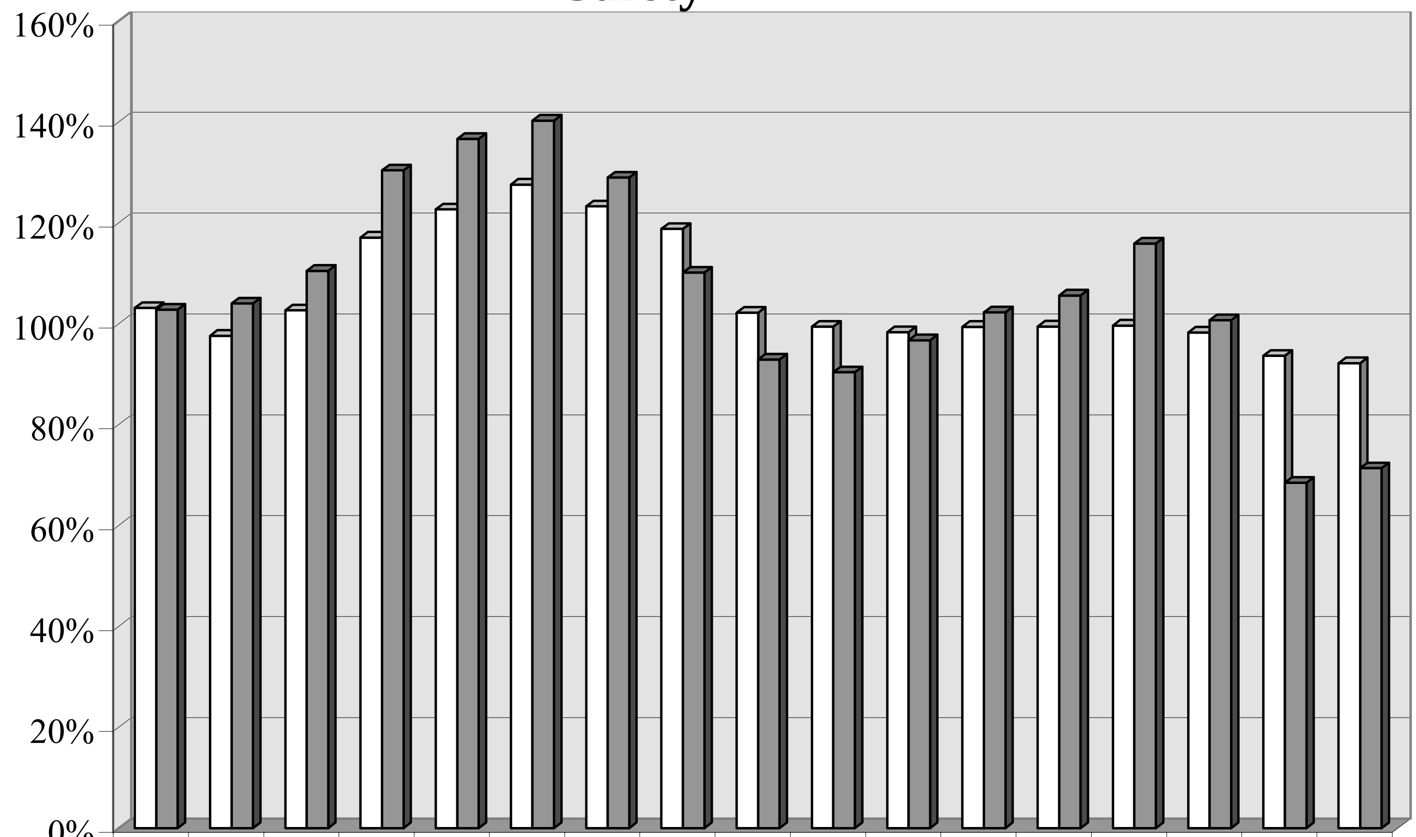
Funded Status – Including Pension Obligation Bonds
Miscellaneous



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Funded Ratio - AVA	85%	78%	96%	111%	123%	131%	132%	122%	102%	95%	92%	92%	92%	93%	92%	87%	85%
Funded Ratio - MVA	84%	83%	103%	124%	137%	144%	142%	111%	93%	86%	91%	95%	98%	108%	95%	63%	66%

- In 1995, the City issued a Pension Obligation Bond totaling $108.6 million. Approximately $55 million is attributed to the Miscellaneous Plan. An estimated $32 million balance remains allocated to the Miscellaneous Plan.
- 6/30/10 funded status estimated

Funded Status – Including Pension Obligation Bonds
Safety



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Funded Ratio - AVA	103%	98%	103%	117%	123%	128%	123%	119%	102%	99%	98%	99%	99%	100%	98%	94%	92%
Funded Ratio - MVA	103%	104%	110%	130%	137%	140%	129%	110%	93%	90%	97%	102%	106%	116%	101%	68%	71%

- In 1995, the City issued a Pension Obligation Bond totaling $108.6 million. Approximately $54 million is attributed to the Safety Plan. An estimated $31 million balance remains allocated to the Safety Plan.
- 6/30/10 funded status estimated

Unfunded Actuarial Liability
Miscellaneous & Safety

Miscellaneous

- Unfunded Actuarial Liability June 30, 2009:
  - Actuarial basis — $ 215 million
  - Market basis — 656 million
- Unfunded Actuarial Liability projected to June 30, 2041: — 651 million

Safety

- Unfunded Actuarial Liability June 30, 2009:
  - Actuarial basis — $ 78 million
  - Market basis — 521 million
- Unfunded Actuarial Liability projected to June 30, 2041: — 557 million

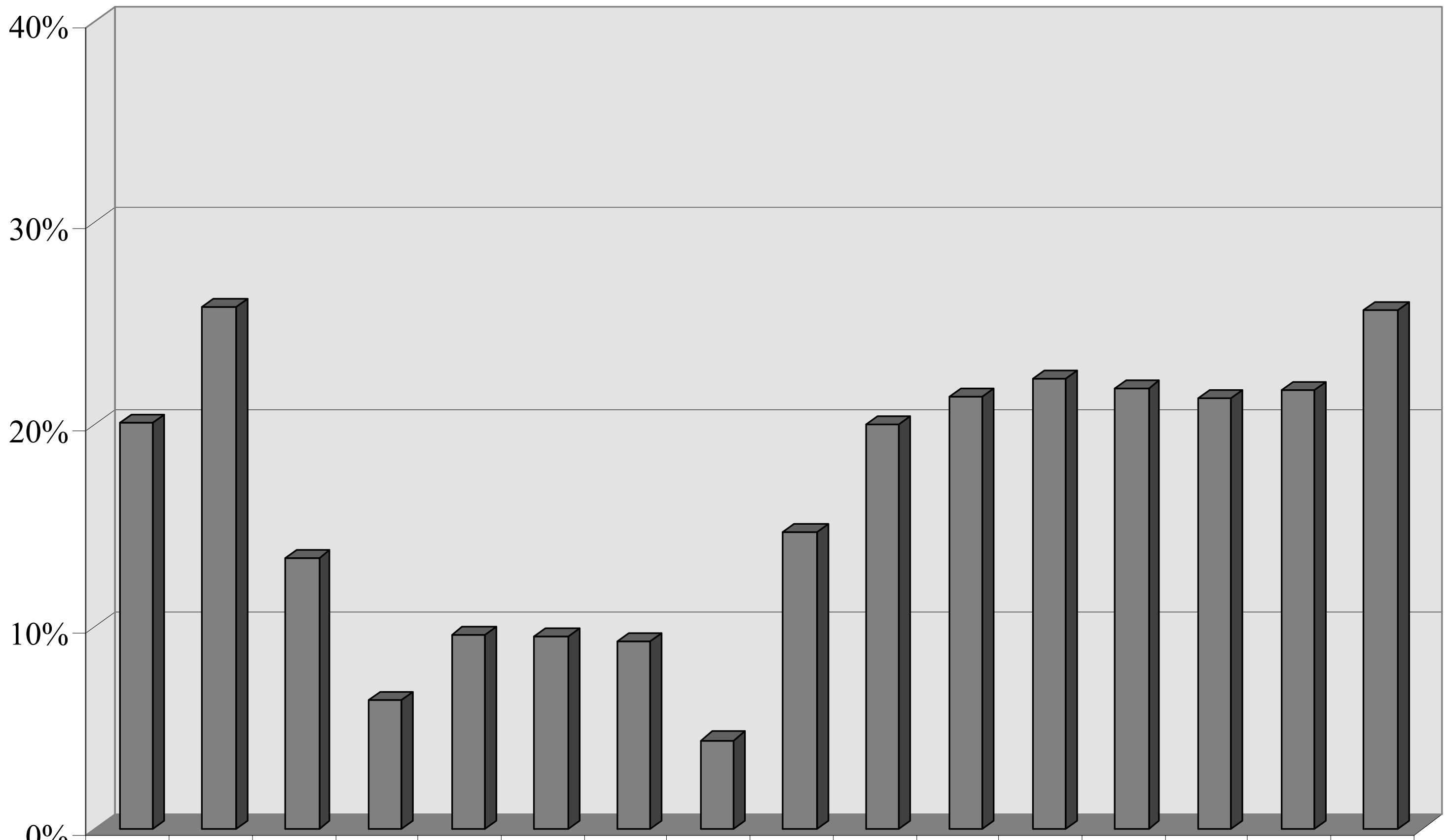
Unfundeded Actuarial Liability
Miscellaneous & Safety

Total

- Unfunded Actuarial Liability June 30, 2009:
  - Actuarial basis $ 293 million
  - Market basis 1,177 million
- Unfunded Actuarial Liability projected to June 30, 2041: 1,208 million

Historical City Contribution Rates as % of PERSable Wages Including POB Debt Service & City Paid Member Contribution Miscellaneous (All Funds)

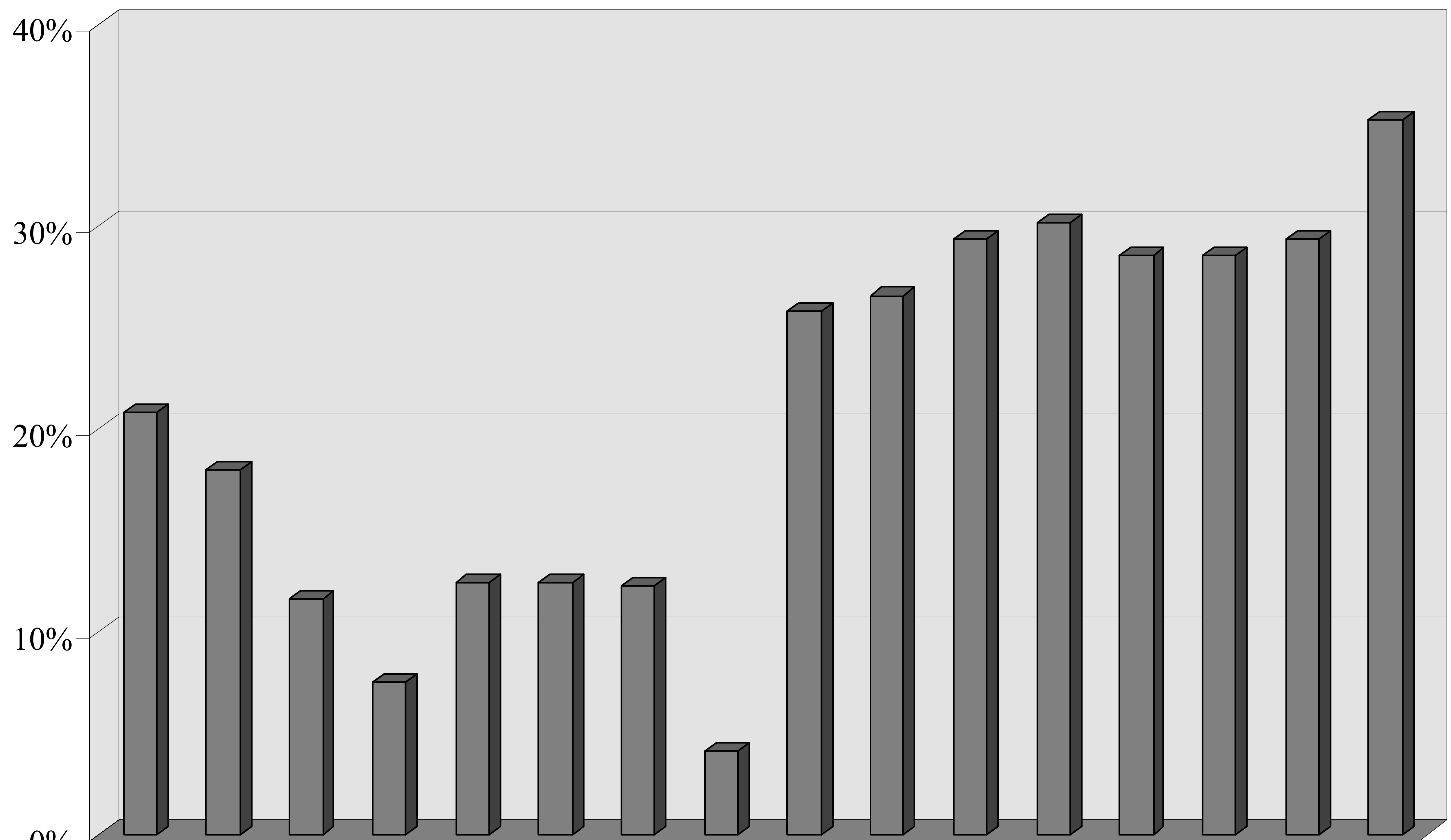
Total



	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	07/08	09/10	10/11	11/12
Total	20.1%	25.8%	13.4%	6.4%	9.6%	9.5%	9.3%	4.4%	14.7%	20.0%	21.4%	22.3%	21.8%	21.3%	21.7%	25.7%

Historical City Contribution Rates as % of PERSable Wages Including POB Debt Service & City Paid Member Contribution Safety (All Funds)

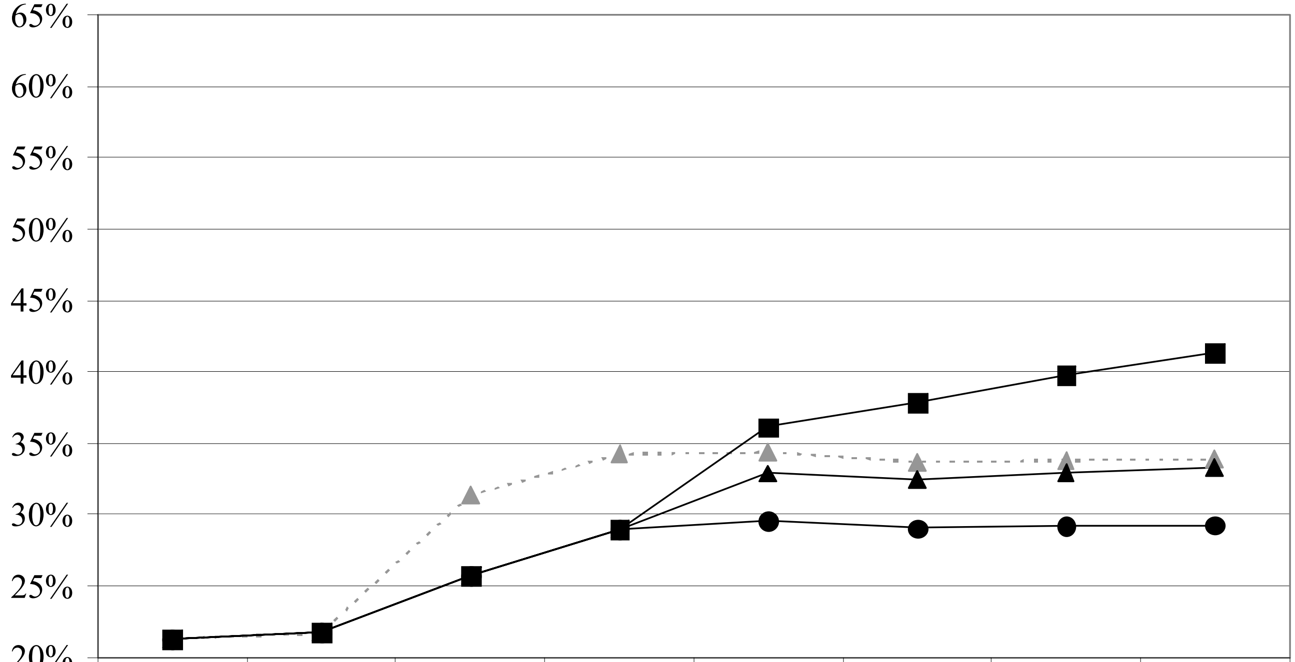
Total



	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	07/08	09/10	10/11	11/12
Total	20.8%	18.0%	11.6%	7.5%	12.4%	12.4%	12.3%	4.1%	25.8%	26.6%	29.4%	30.2%	28.6%	28.6%	29.4%	35.3%

Contribution Projections as % of PERSable Wages
Miscellaneous (all Funds)

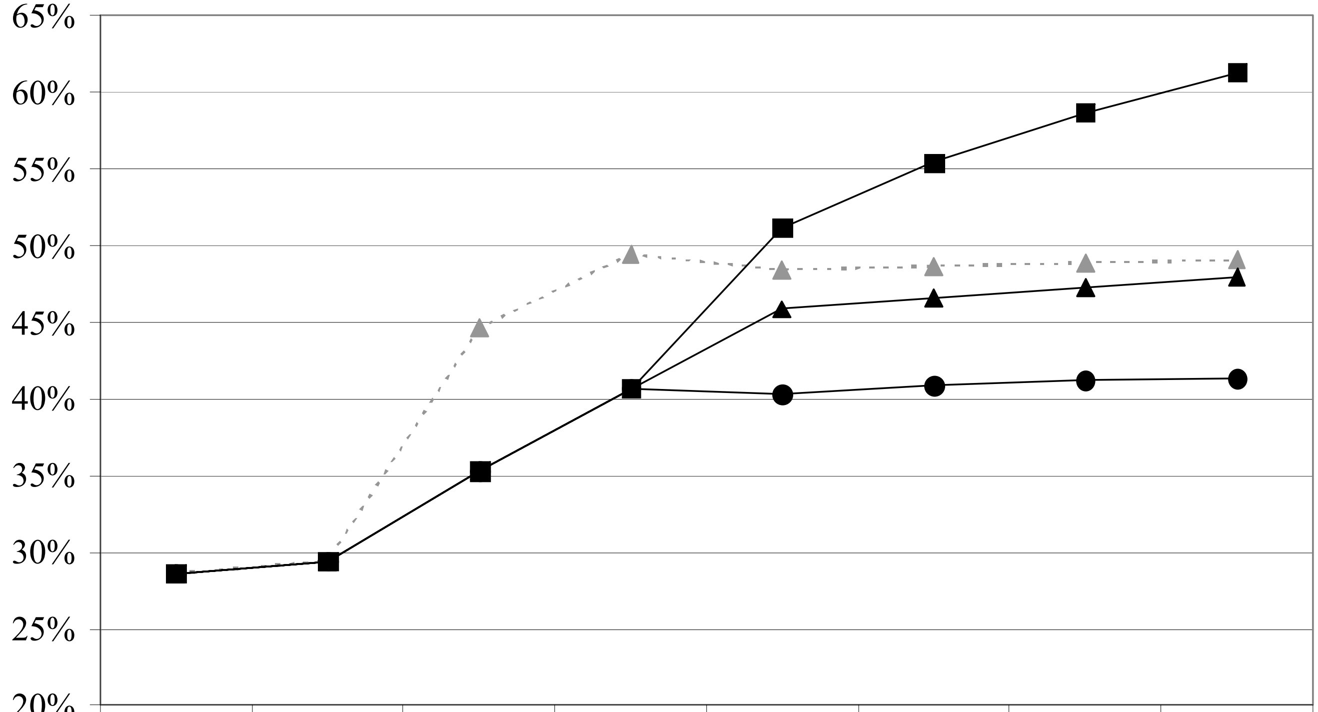
Investment Return Varies
Incl. POB Debt Service & City Paid Member Contribution



	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17
UnMod AVA, Exp IR	21.3%	21.7%	31.4%	34.2%	34.4%	33.7%	33.8%	33.9%
Mod AVA, Poor IR	21.3%	21.7%	25.7%	28.9%	36.1%	37.9%	39.8%	41.3%
Mod AVA, Exp IR	21.3%	21.7%	25.7%	28.9%	32.9%	32.5%	32.9%	33.3%
Mod AVA, Good IR	21.3%	21.7%	25.7%	28.9%	29.6%	29.1%	29.2%	29.2%

Contribution Projections as % of PERSable Wages
Safety (All Funds)

Investment Return Varies
Incl. POB Debt Service & City Paid Member Contribution



	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17
UnMod AVA, Exp IR	28.6%	29.4%	44.6%	49.4%	48.4%	48.7%	48.9%	49.1%
Mod AVA, Bad IR	28.6%	29.4%	35.3%	40.7%	51.2%	55.4%	58.7%	61.3%
Mod AVA, Exp IR	28.6%	29.4%	35.3%	40.7%	45.8%	46.6%	47.3%	48.0%
Mod AVA, Good IR	28.6%	29.4%	35.3%	40.7%	40.3%	40.9%	41.2%	41.3%

Contribution Projections
Incl. POB Debt Service & City Paid Member Contribution

Total All funds[3]

	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17
Mod AVA, Good IR					$ 135.3	$ 139.3	$ 144.8	$ 149.7
Mod AVA, Exp IR	$ 80.6	$ 86.6	$ 110.7	$ 130.1	$ 152.0	$ 157.2	$ 164.5	$ 172.1
Mod AVA, Bad IR					$ 168.3	$ 184.9	$ 201.5	$ 216.6
UnModAVA, Exp IR	$ 80.6	$ 86.6	$ 137.4	$ 155.9	$ 159.7	$ 163.5	$ 169.5	$ 175.6

2011/12 Contribution if no asset smoothing ≈ $158 million

3 FY 09/10 - actual contribution provided by the City. FY10/11 – budgeted contribution provided by the City. FY11/12 & thereafter – projected contribution based on adjusted CalPERS payroll

Contribution Projections
Incl. POB Debt Service & City Paid Member Contribution

General fund[3]

	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17
Mod AVA, Good IR					$ 72.6	$ 75.1	$ 78.1	$ 80.8
Mod AVA, Exp IR	$ 45.3	$ 47.5	$ 58.8	$ 69.6	$ 82.1	$ 85.1	$ 89.2	$ 93.4
Mod AVA, Bad IR					$ 91.2	$ 100.7	$ 110.0	$ 118.5
UnModAVA, Exp IR	$ 45.3	$ 47.5	$ 73.8	$ 84.1	$ 86.4	$ 88.7	$ 92.0	$ 95.4

2011/12 Contribution if no asset smoothing ≈ $84 million

Summary

- Asset losses are being gradually phased in
  - Contribution rates are less than what is needed to pay off losses
  - If future investment return is good, contribution rates will likely not drop
  - If future investment return is poor, contribution rates will steeply increase
- Pay more if additional revenue is available
- Next step - explore all pension reform options