GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

ARIZONA PUBLIC SAFETY PERSONNEL RETIREMENT SYSTEM CONSOLIDATED REPORT

JUNE 30, 2009

GRS

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October 30, 2009

Fund Manager
Arizona Public Safety Personnel Retirement System
Phoenix, Arizona

Re: Arizona Public Safety Personnel Retirement System Actuarial Valuation as of June 30, 2009

Ladies and Gentlemen:

The results of the **June 30, 2009 annual actuarial valuations of members** covered by the Arizona Public Safety Personnel Retirement System (PSPRS) are presented in this report. The purpose of the valuations is to measure PSPRS' funding progress and to establish contribution rates for the 2010-2011 fiscal year.

The valuations are based upon current plan provisions of the Arizona Public Safety Personnel Retirement System. All promised benefits are included in the actuarially calculated contribution rates. These provisions are summarized in Section F.

In preparing this report we relied, without audit, on information (some oral and some written) supplied by the State Retirement System. This information includes, but is not limited to, statutory provisions, employee and retiree census, and financial information. In our examination of this data, we have found it to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

GRS's work product was prepared exclusively for the Arizona Public Safety Personnel Retirement System for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the System's operations, and uses System data, which GRS has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of GRS's work product who desires professional guidance should not rely upon GRS's work product, but should engage qualified professionals for advice appropriate to its own specific needs. Any distribution of this report must be provided in its entirety including this cover letter, unless prior written consent is obtained from GRS.

The valuations were completed by qualified actuaries in accordance with accepted actuarial procedures prescribed by the Actuarial Standards Board. All of the actuaries submitting this report are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of our knowledge, this report is complete and accurate and the actuarial methods and assumptions produced results that are reasonable.

Respectfully submitted,

Brian B. Murphy, FSA, EA, MAAA

Cathy Nagy, FSA, EA, MAAA

Mark Buis, FSA, EA, MAAA

BBM/CN/MB:mrb

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EXECUTIVE SUMMARY/BOARD SUMMARY

1. Required Employer Contributions to Support Retirement Benefits

The computed employer contribution and funded status for the fiscal year beginning July 1, 2010 is shown below.

	Contribution	Funded Status
Averages	20.89%	68.2%

2. Contribution Rate Comparison

The chart below compares the results of this valuation of the Retirement System with the results of the prior year's valuation:

Valuation Date	Contribution	Funded Status
6/30/2008	20.77%	66.5%
6/30/2009	20.89%	68.2%

The 2008 results were calculated by prior actuary.

3. Reasons for Change

There are three general reasons why contribution rates change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the plan. The second is a change in the valuation assumptions or methods used to predict future occurrences. The third is the difference during the year between the plan's actual experience and what the assumptions predicted.

There were no benefit changes reported to the actuary for the year ended June 30, 2009. In addition, there were no assumption changes. There was a change in actuary during the year which resulted in some technical adjustments to the actuarial methods that were applied.

EXECUTIVE SUMMARY/BOARD SUMMARY

4. Plan Experience

Experience during the year ended June 30, 2009 was overall unfavorable. During the year ended June 30, 2009, the return on fund assets was lower than expected. The market value smoothing techniques used in this valuation of the System recognize both past and present investment gains. While on a market value basis, the Systems return was -17.4%, the resulting actuarial asset yield for the year ended June 30, 2009 was 3.0%. The assets losses were partially offset by gains attributable to demographic experience. Detailed information related to System experience is shown on page B-2.

5. Looking Ahead

Recent market turmoil has resulted in significant declines since June 30, 2008. Due to the smoothing method, only a portion of the current year asset loss was recognized this year. If the Market Value of Assets were used as the basis of our calculations (instead of the smoothed value), the employer contribution would have been approximately 26% of payroll (instead of 20.89% of payroll) and the funded status would have been about 53% (instead of 68.2%). If equity markets do not improve significantly, the June 30, 2010 valuation will likely show an increase in the employer contribution amount (absent any liability gains).

6. Other Comments

The ratio of the Funding Value of Assets to Market Value of Assets as shown on page C-1 is 139.2%. The Actuarial Standards of Practice require that the Funding Value of Assets fall within a reasonable range around the Market Value. Although some actuarial judgment is used to determine what is deemed ‘reasonable’, a ratio approaching 140% is on the high end. We recommend that consideration be given to establishing an asset corridor for the June 30, 2010 actuarial valuation. An asset corridor, sometimes called a “Collar”, is a limitation on the amount by which the Funding Value is permitted to differ from Market Value. 20% is a common standard, although many systems have relaxed their standards in response to the extraordinary events of late 2008 and early 2009.

7. Conclusion

The retired lives are slightly more than fully funded on a funding value of assets basis, but are much less than fully funded based upon the market value of assets. It is most important that this plan receive contributions at least equal to the rates shown in this report.

SECTION A

INTRODUCTION

FUNDING OBJECTIVE

The purpose of the annual actuarial valuation of the Arizona Public Safety Personnel Retirement System as of June 30, 2009 is to:

- Compute the liabilities associated with benefits likely to be paid on behalf of current retired and active members. This information is contained in Section B.
- Compare accrued assets with accrued liabilities to assess the funded condition. This information is contained in Section B.
- Compute the employers' recommended contribution rates for the Fiscal Year beginning July 1, 2010. This information is contained in Sections A.

This objective is stated in Article 4, Chapter 5, Title 38, Sections 843B and 848N of the Arizona Revised Statutes.

CONTRIBUTION RATES

The Retirement System is supported by member contributions, employer contributions and investment income from Retirement System assets.

Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are sufficient to:

(1) Cover the actuarial present value of benefits allocated to the current year by the actuarial cost method described in Section E (the normal cost); and

(2) Finance over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (the unfunded actuarial accrued liability).

Computed contribution rates for the fiscal year beginning July 1, 2010 are shown on page A-2.

CONTRIBUTION REQUIREMENTS

Development of Employer Contributions for the Indicated Valuation Date

	June 30,	
	2008	**2009**
Contribution for Fiscal Year	2010	2011
Pension		
Normal cost requirement		
Service pensions	14.71%	15.95%
Disability pensions	2.44	1.76
Survivors of active members	0.97	0.86
Refunds of members' accumulated contributions	0.82	0.59
Total normal cost requirement	18.94%	19.16%
Less member contributions	7.65	7.65
Employer normal cost requirement	11.29%	11.51%
Amortization of unfunded liabilities	8.07%	8.09%
Total pension contribution requirement	19.36%	19.60%
Health		
Normal cost requirement	0.51%	0.57%
Amortization of unfunded liabilities	0.90%	0.72%
Total health contribution requirement	1.41%	1.29%
Total contribution requirement	**20.77%**	**20.89%**

Actuarial accrued liability, $7,989,450,816, exceeded the funding value of accrued assets, $5,445,497,208. The unfunded actuarial accrued liabilities were amortized as a level percent of payroll over a closed period of 27 years and added to the employer normal cost. The 27 year period is a one year decrease from last year. The results shown above are prior to the application of the statutory minimum of 8% of payroll (5% of payroll if the actual employer contribution rate is less than 5% for the 2006/2007 fiscal Year).

2008 results were calculated by prior actuary. Split amounts between pension and health were estimated.

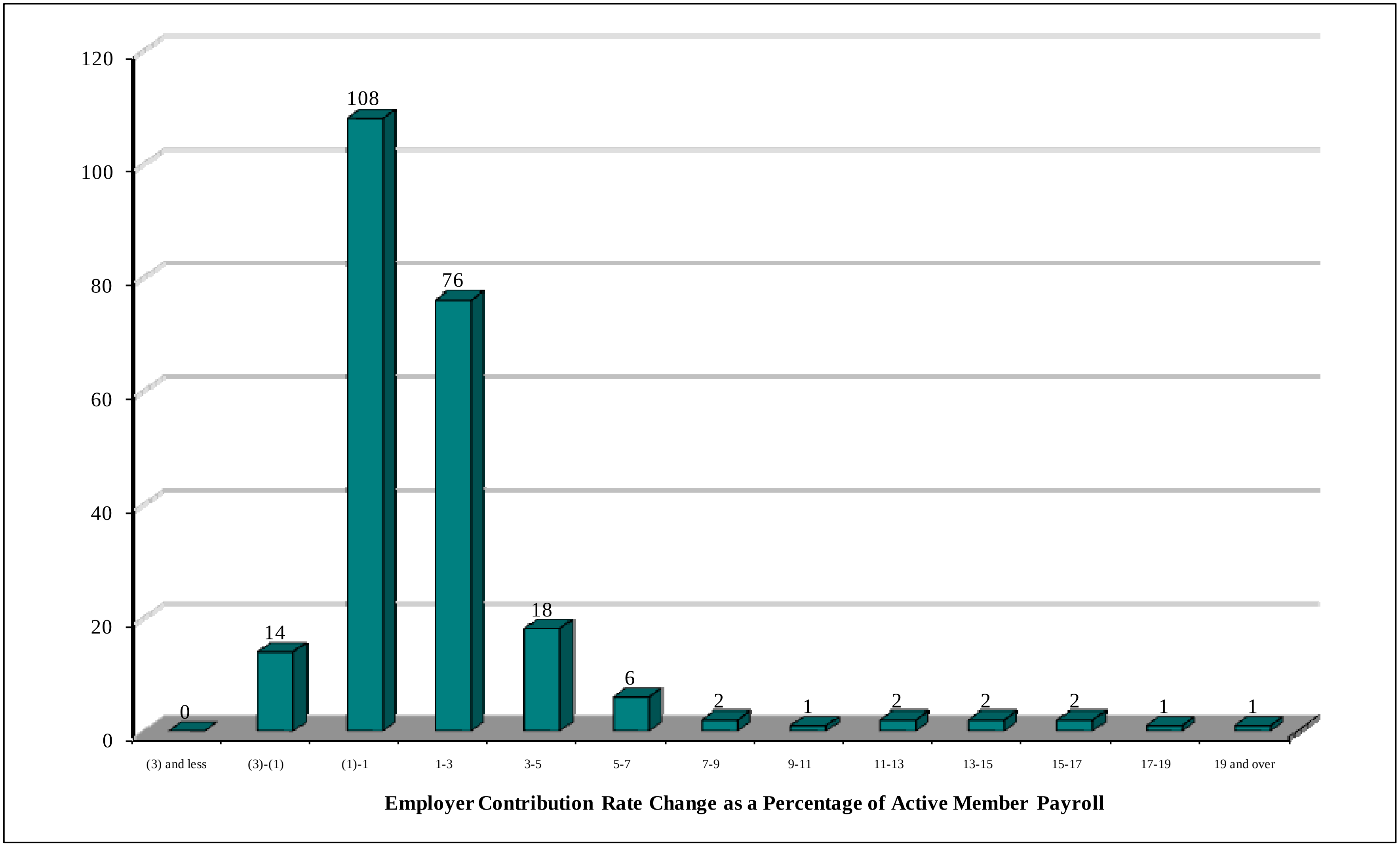
HISTORICAL SUMMARY OF EMPLOYER RATES

Valuation Date June 30	Fiscal Year	Normal Cost	Unfunded Actuarial Accrued Liability	Total
2000	2002	10.86%	(6.65)%	4.21%
2001	2003	11.21	(7.46)	3.75
2002	2004	11.61	(3.95)	7.66
2003	2005	10.32	(0.27)	10.05
2004	2006	10.29	2.51	12.80
2005	2007	10.71	6.38	17.09
2006	2008	10.08	6.44	16.52
2007	2009	12.33	9.38	21.71
2008	2010	11.80	8.97	20.77
2009	**2011**	**12.08**	**8.81**	**20.89**

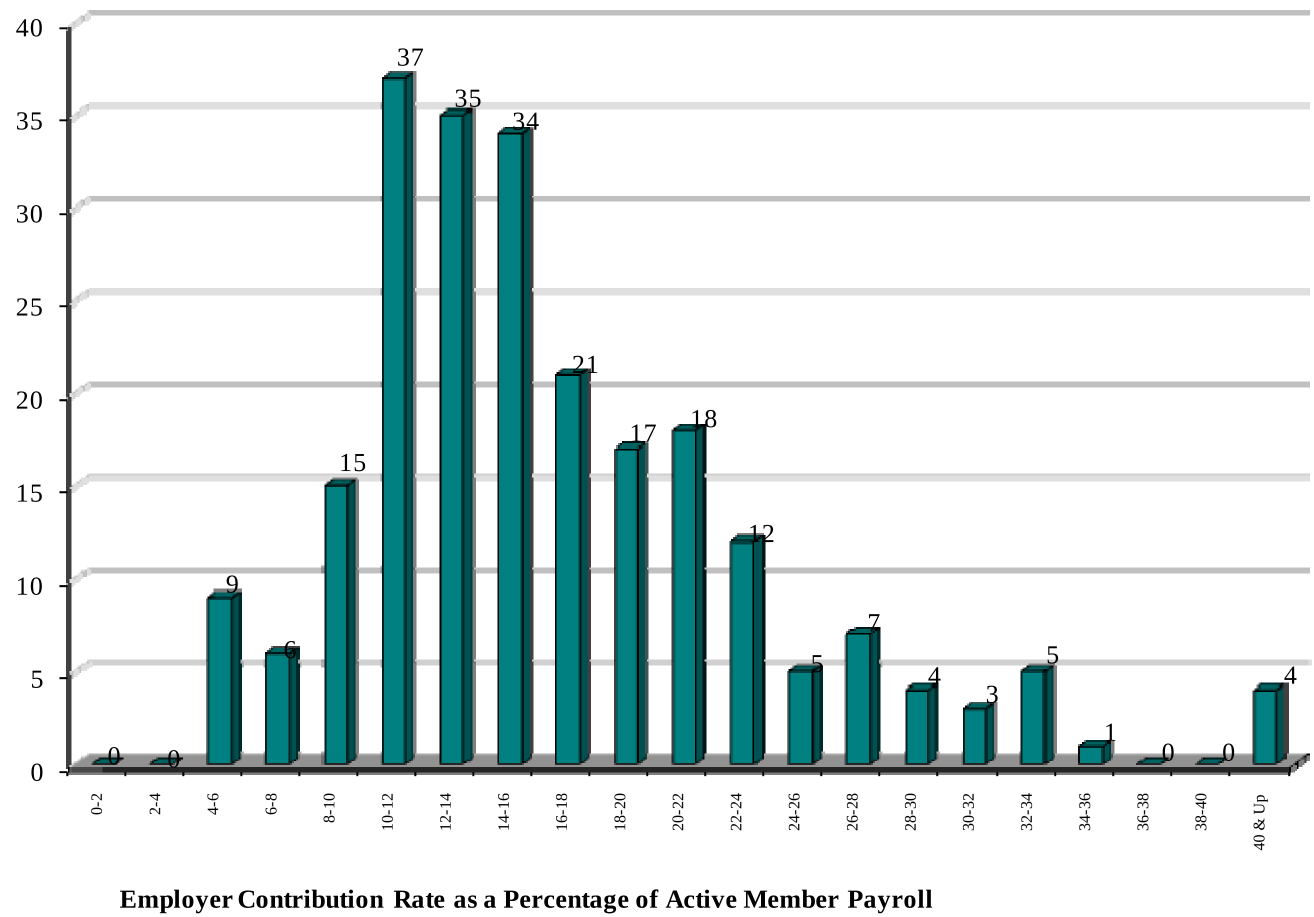
2005 results were revised pursuant to changes enacted by the 2006 Legislature and the PSPRS Fund Manager.

Results prior to 2009 were calculated by the prior actuary.

EMPLOYER CONTRIBUTION RATE CHANGES AT JUNE 30, 2009
ALL EMPLOYERS



EMPLOYER CONTRIBUTION RATES - ALL EMPLOYERS AT JUNE 30, 2009



SECTION B

FUNDING RESULTS

PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY

	June 30, 2008	June 30, 2009
A. Accrued Liability		
1. For retirees and beneficiaries	$ 3,418,835,285	$ 3,811,693,275
2. For DROP members	985,550,956	810,734,191
3. For vested terminated members	13,811,132	14,296,980
4. For present active members		
a. Value of expected future benefit payments	5,926,874,743	6,078,675,489
b. Value of future normal costs	2,682,293,475	2,725,949,119
c. Active member accrued liability: (a) - (b)	3,244,581,268	3,352,726,370
5. Total accrued liability	7,662,778,641	7,989,450,816
B. Present Assets (Funding Value)	5,095,645,042	5,445,497,208
C. Unfunded Accrued Liability: (A.5) - (B)	2,567,133,599	2,543,953,608
D. Stabilization Reserve	2,106,779	7,204,461
E. Net Unfunded Accrued Liability: (C) + (D)	2,569,240,378	2,551,158,069

2008 results were calculated by the prior actuary.

Present Assets exclude $285,613,717 in reserves held for future pension increases pursuant to state statute.

DERIVATION OF EXPERIENCE GAIN/(LOSS)

Actual experience will never (except by coincidence) exactly match assumed experience. Gains and losses often cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below, along with a year-by-year comparative schedule.

(Dollar amounts in $'000s)

	June 30,	
	2008	**2009**
(1) UAAL at start of year	$2,438,770	$2,567,134
(2) Normal cost from last valuation	245,345	275,342
(3) Actual Contributions	330,713	429,620
(4) Interest Accrual	203,667	211,650
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	2,557,069	2,624,506
(6) Changes from benefit increases	-	125,692
(7) Changes in actuarial methods	-	(121,887)
(8) Change in Reserve for future pension increases	-	(260,429)
(9) Expected UAAL after changes: (5) + (6) + (7) + (8)	2,557,069	2,367,882
(10) Actual UAAL at end of year	2,567,134	2,543,954
(11) Experience Gain/(Loss): (9) - (10)	(10,065)	(176,072)

2008 results were calculated by the prior actuary.

FY2009 Gains and Losses by Source

	Gain/(Loss)	% of Liability
Investment Return	$(307,647)	-4.0%
Salary Increases	104,852	1.4%
Retirement	9,527	0.1%
Turnover	(4,988)	-0.1%
Disability	9,081	0.1%
Death-in-service	5,219	0.1%
Retiree Mortality	(22,642)	-0.3%
Other	30,526	0.4%
Total	(176,072)	-2.3%

UNFUNDED ACTUARIAL ACCRUED LIABILITIES COMPARATIVE STATEMENT

(Dollar amounts in $'000s)

Valuation Date	(1) Actuarial Accrued Liabilities (AAL)	(2) Valuation Assets	(3) Unfunded AAL	(5) Funded Ratio (2)/(1)	(6) Financing Period
2000	$3,415,157	$4,260,168	$ 0	124.7%	20 yrs.
2001	3,674,758	4,661,941	0	126.9	20
2002	4,144,211	4,684,386	0	113.0	20
2003	4,739,613	4,781,377	0	100.9	20
2004	5,167,333	4,774,313	393,020	92.4	20
2005	5,951,937	4,886,963	1,064,974	82.1	20
2006	6,495,012	4,999,911	1,495,101	77.0	30
2007	7,268,291	4,829,521	2,438,770	66.4	29
2008	7,662,779	5,095,645	2,567,134	66.5	28
2009	**7,989,451**	**5,445,497**	**2,543,954**	**68.2**	**27**

2005 Results revised pursuant to changes in assumptions and methods enacted by the 2006 Legislature and the PSPRS Fund Manager. Results prior to 2009 were calculated by prior actuary.

SHORT CONDITION TEST

If the contributions to PSPRS are soundly executed, the System will ***pay all promised benefits when due -- the ultimate test of financial soundness***.

A short condition test is one means of checking a system's progress under its funding program. In a short condition test, the plan's present assets (cash and investments) are compared with:

1) Member contributions on deposit;
2) The liabilities for future benefits to present retired lives;
3) The liabilities for service already rendered by active and inactive members.

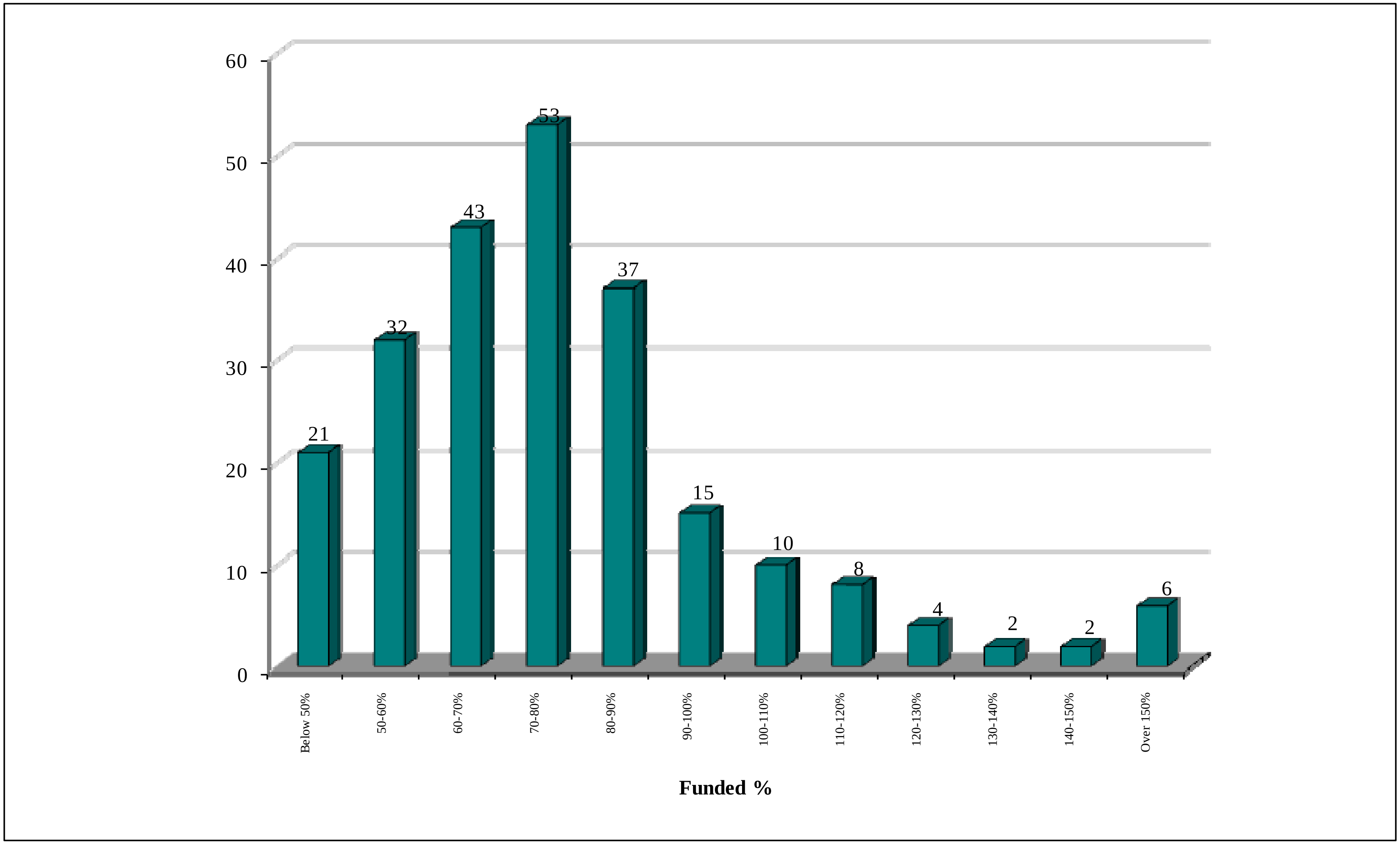
In a system that has been following the discipline of pre-funding, the liabilities for member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active and inactive members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the system.

Short Condition Test (Including Heath Insurance Subsidy)

(in $'000s)

	Aggregate Actuarial Liabilities For				Portion of Actuarial Liabilities covered by Assets		
Calendar Year	(1) Non-Retired Contributions	(2) Annuitants	(3) Non-Retired Members (Employer Financed Portion)	Actuarial Assets	(1)	(2)	(3)
2009	$737,839	$4,622,427	$2,629,185	$5,445,497	100%	100%	3.2%

FUNDED PERCENTS - ALL EMPLOYERS AT JUNE 30, 2009



SECTION C

FUND ASSETS

DEVELOPMENT OF FUNDING VALUE OF ASSETS (7-YEAR SMOOTHING)

Year Ended June 30:	2009	2010	2011	2012	2013	2014	2015
A. Funding Value Beginning of Year (Including Future Benefit Increases)	$ 5,595,596,315						
B. Market Value End of Year	4,115,701,122						
C. Market Value Beginning of Year	5,019,280,698						
D. Non Investment Net Cash Flow	(31,140,508)						
E. Investment Income							
E1. Total: B-C-D	(872,439,068)						
E2. Amount for Immediate Recognition (8.50%)	474,302,215						
E3. Amount for Phased in Recognition: E1-E2	(1,346,741,283)						
F. Phased in Recognition of Investment Income							
F1. Current Year: E3 / 7	$ (192,391,612)						
F2. First Prior Year	(124,481,914)	$ (192,391,612)					
F3. Second Prior Year	50,985,948	(124,481,914)	$ (192,391,612)				
F4. Third Prior Year	(11,159,896)	50,985,948	(124,481,914)	$(192,391,612)			
F5. Fourth Prior Year	(11,110,554)	(11,159,896)	50,985,948	(124,481,914)	$ (192,391,612)		
F6. Fifth Prior Year	13,011,804	(11,110,554)	(11,159,896)	50,985,948	(124,481,914)	$ (192,391,612)	
F7. Sixth Prior Year	(32,500,873)	13,011,801	(11,110,557)	(11,159,895)	50,985,946	(124,481,913)	$ (192,296,966)
F8. Total Recognized Investment Gain	$ (307,647,097)	$ (275,146,227)	$ (288,158,031)	$(277,047,473)	$ (265,887,580)	$ (316,873,525)	$ (192,296,966)
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D3+E2+F6)	5,731,110,925						
G2. Future Benefit Increases	285,613,717						
G3. End of Year: (G1-G2)	5,445,497,208						
H. Difference Between Market Value & Funding Value	(1,615,409,803)	(1,340,263,576)	(1,052,105,545)	(775,058,072)	(509,170,491)	(192,296,966)	0
I. Market Rate of Return	-17.4%						
J. Recognized Rate of Return	3.0%						
K. Ratio of Funding Value to Market Value	139.2%						

The funding value of assets recognizes assumed investment return (line E2) fully each year. Differences between actual and assumed investment return (line E3) are phased in over a closed 7-year period. During periods when investment performance exceeds the assumed rate, funding value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, funding value of assets will tend to be greater than market value. The funding value of assets is **unbiased** with respect to market value. At any time it may be either greater or less than market value. If actual and assumed rates of investment return are exactly equal for 7 consecutive years, the funding value will become equal to market value.

SECTION D

CENSUS DATA

JUNE 30, 2009 VALUATION DATA SUMMARY

For purposes of the June 30, 2009 valuation, information on 30,665 covered persons was furnished. These people may be briefly described as follows.

		Averages			
				Annual Pay or Retirement Allowance	
	No.	Age	Service	2009	2008
Actives	19,867	37.8	9.4	$71,256	$69,472
Retirees & Beneficiaries	8,609	61.7		44,024	41,602
DROP	1,044	53.1		54,092	52,109
Inactive Vested	1,145	38.4			
	30,665				

ACTIVE MEMBERS

Members in Active Service as of June 30, 2009
by Years of Service

Age	Years of Service							Total Count	Total Pay	Average Pay
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & Up			
Under 25	745	1						746	$ 37,317,059	$50,023
25 - 29	2,601	403	1					3,005	167,757,075	55,826
30 - 34	1,791	1,642	318	1				3,752	241,349,544	64,326
35 - 39	1,100	1,419	1,548	232	1			4,300	310,131,420	72,124
40 - 44	520	692	1,186	973	222	3		3,596	282,473,473	78,552
45 - 49	265	284	513	745	628	166	3	2,604	218,289,430	83,829
50 - 54	102	116	192	311	289	258	43	1,311	114,079,279	87,017
55 - 59	45	39	59	110	98	49	27	427	35,177,576	82,383
60 - 64	12	16	20	36	18	3	4	109	7,819,294	71,737
65 and over	2	2	4	7		2		17	1,248,359	73,433
Total	7,183	4,614	3,841	2,415	1,256	481	77	19,867	$ 1,415,642,509	$71,256

TERMINATED VESTED MEMBERS

Age	Years of Service					Total Count
	0 - 4	5 - 9	10 - 14	15 - 19	20 & Up	
Under 30	366	5				371
30 - 39	379	59	24	2		464
40 - 44	100	23	18	6	1	148
45 - 49	52	9	15	10		86
50 - 54	18	8	10	3	1	40
55 - 59	8	1	6	4		19
60 - 69	7	1	8	1		17
70 and over						
Total	930	106	81	26	2	1145

RETIREES AND BENEFICIARIES

Attained Ages	Males No.	Males Annual Benefits	Females No.	Females Annual Benefits	Total No.	Total Annual Benefits
Under 25	2	$ 38,823	3	$ 93,382	5	$ 132,205
25-29	3	51,420	4	114,892	7	166,312
30-34	16	729,791	27	887,718	43	1,617,509
35-39	58	1,836,133	34	1,155,191	92	2,991,324
40-44	148	5,320,168	69	2,433,336	217	7,753,504
45-49	485	19,730,236	126	4,662,696	611	24,392,932
50-54	971	42,637,072	189	7,525,431	1,160	50,162,503
55-59	1,532	74,230,539	184	7,401,122	1,716	81,631,661
60-64	1,697	81,865,177	182	7,243,280	1,879	89,108,457
65-69	1,013	48,120,958	174	6,347,726	1,187	54,468,684
70-74	585	25,865,792	146	4,903,784	731	30,769,576
75-79	402	16,357,957	140	4,740,882	542	21,098,839
80-84	166	6,445,969	92	2,984,192	258	9,430,161
85-89	49	1,736,090	68	2,142,094	117	3,878,184
90-94	13	433,945	22	689,044	35	1,122,989
95-99	4	128,291	4	124,738	8	253,029
100 and Over	0	0	1	30,049	1	30,049
Totals	**7,144**	**$325,528,361**	**1,465**	**$53,479,557**	**8,609**	**$379,007,918**

Pension Being Paid		**Number**	**Annual Pensions**	**Average Pensions**
Retired Members	Service Pensions	6,307	$295,861,340	$46,910
	Disability Pensions	1,211	44,445,247	36,701
Totals		7,518	340,306,587	45,266
Survivors of Members	Spouses	1,046	37,746,120	36,086
	Children with Guardians	45	955,211	21,227
Total		1,091	38,701,331	57,313
Total Pension being Paid		**8,609**	**$379,007,918**	**$44,025**

	Average Age	**Average Service**	**Average Age at Retirement**
Normal retired members	62.2	23.6	50.8
Disability retired members	55.4	14.2	43.5
Spouse beneficiaries	67.0	18.7	44.1

PENSIONS BEING PAID
HISTORICAL SCHEDULE

Valuation Date June 30	No.	Annual Pensions	% Incr. in Annual Pensions	Average Pension	Present Value of Pensions	
					Total	Average
2000	5,442	$ 152,227,372	15.0	$ 27,973	$ 1,478,844,686	$ 271,747
2001	5,782	170,281,580	11.9	29,450	1,722,264,280	297,867
2002	6,634	215,378,952	26.5	32,466	2,276,159,481	343,105
2003	7,195	256,503,012	19.1	35,650	2,794,848,306	388,443
2004	7,663	286,346,220	11.6	37,367	2,995,380,537	390,889
2005	8,160	317,771,553	11.0	38,943	3,607,372,524	442,080
2006	8,720	353,932,939	11.4	40,589	4,028,016,095	461,928
2007	8,958	375,472,203	6.1	41,915	4,266,600,730	476,289
2008	9,422	404,386,274	7.7	42,919	4,404,386,241	467,458
2009	**9,653**	**435,480,427**	**7.7**	**45,113**	**4,513,524,906**	**467,577**

Results prior to 2009 were calculated by the prior actuary.

SECTION E

METHODS AND ASSUMPTIONS

VALUATION METHODS

Actuarial Cost Method **-** Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using the Projected Unit Credit Cost Method having the following characteristics:

(i) The annual normal costs for each individual active member, payable from date of hire to date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement;

(ii) Each annual normal cost is the portion of the actuarial present value allocated to the current year. The normal cost is expected to increase as accrued service increases.

This method tends to be less stable than the Entry Age Normal Method particularly if the group size changes.

Actuarial Accrued Liability **-** The actuarial accrued liability is the portion of actuarial present value allocated to service rendered prior to the valuation date, including experience gains and losses. The actuarial accrued liability was computed using the assumptions summarized in this report.

Actuarial Value of System Assets **-** The actuarial value of assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased in over a closed seven year period. During periods when investment performance exceeds the assumed rate, actuarial value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, the actuarial value of assets will tend to be greater than market value.

Financing of Unfunded Actuarial Accrued Liabilities **–** The actuarial value of assets were subtracted from the computed actuarial accrued liability. Any unfunded amount would be amortized as level percent of payroll over a closed period of 27 years. If the actuarial value of assets exceeded the actuarial accrued liability, the excess was amortized over an open period of 20 years and applied as a credit to reduce the normal cost which otherwise would be payable.

Active member payroll was assumed to increase 5.5% annually for the purpose of computing the amortization payment (credit) as a level percent of payroll.

VALUATION ASSUMPTIONS

Beginning with the June 30, 2007 valuation and with each subsequent valuation, if the actuarial value of assets exceeds the actuarial accrued liabilities, one half of this excees in each year is allocated to a Stabilization Reserve. The Stabilization Reserve is excluded from the calculation of the employer contribution rates. The Stabilization Reserve continues to accumulate as long as the plan is over-funded. Once the plan becomes under-funded, the Stabilization Reserve will be used to dampen increases in the employer contribution rates.

The rate of investment return was 8.5% a year, compounded annually net of investment and administrative expenses.

The assumed real return is the rate of return in excess of wage growth. Considering other assumptions used in the valuation, the 8.5% nominal rate translates to a net real return over wage growth of 3.0% a year.

The rates of pay increase used for individual members are shown below. This assumption is used to project a member's current pay to the pay upon which System benefits will be based.

	Salary Increase Assumptions For an Individual Member		
Sample Ages	**Merit & Seniority**	**Base (Economy)**	**Increase Next Year**
20	3.0%	5.5%	8.5%
25	3.0%	5.5%	8.5%
30	2.6%	5.5%	8.1%
35	1.1%	5.5%	6.6%
40	0.2%	5.5%	5.7%
45	0.2%	5.5%	5.7%
50	0.2%	5.5%	5.7%
55	0.1%	5.5%	5.6%
60	0.0%	5.5%	5.5%
Ref:			319

Active Member Payroll is assumed to grow at 5.5% per year. There is no specific price inflation assumption used for this valuation since no benefits are linked to prices.

The healthy mortality table used in this valuation of the System was the RP 2000 Healthy Annuity Mortality table for males with no adjustment, and the female table with one year set forward. This assumption was first used for the June 30, 2007 valuation of the System. Sample rates of mortality and years of life expectancy are shown below:

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.53%	0.25%	30.07	32.35
55	0.59	0.39	25.86	27.79
60	0.82	0.69	21.64	23.42
65	1.34	1.14	17.62	19.33
70	2.22	1.86	13.92	15.54
75	3.78	3.10	10.61	12.13
80	6.44	5.08	7.79	9.16
Ref:	702 x 1.00 0 year set forward	703 x 1.00 1 year set forward		

This assumption is used to measure the probabilities of each benefit payment being made after retirement. For disabled members, non-disability rates with a five year set forward were used.

For actives, the sample rates of mortality and years of life expectancy are shown below, and were first used for the June 30, 2007 valuation of the System.

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.20%	0.20%	34.07	35.14
55	0.28	0.30	29.44	30.52
60	0.44	0.47	24.89	26.03
65	0.70	0.66	20.50	21.67
70	0.95	2.07	16.24	17.57
75	3.39	3.41	12.66	14.64
80	5.79	5.63	10.09	12.50
Ref:	663 x 1.00 1 year set back	664 x 1.00 2 year set forward		

VALUATION ASSUMPTIONS

The rates of regular retirement used to measure the probability of eligible members retiring during the next year are shown below. This assumption was first used for the June 30, 2007 valuation of the System.

Retirement/DROP Rates: Service-related rates based in the following schedule:

Service at Retirement	Rates			
	Police Large	Police Small	Fire Large	Fire Small
20	30%	45%	15%	20%
21	20%	35%	10%	20%
22	20%	25%	10%	10%
23	10%	15%	10%	10%
24	10%	10%	10%	10%
25	45%	40%	30%	20%
26	45%	40%	45%	30%
27	45%	30%	30%	30%
28	45%	30%	45%	30%
29	45%	30%	45%	30%
30	50%	30%	45%	45%
31	50%	30%	50%	45%
32	80%	65%	50%	45%
33	80%	65%	50%	45%
34	100%	100%	100%	100%
Ref.	1737	1738	1739	1740

Active members with at least 34 years of service are assumed to retire within the year. Members who do not acquie 20 years of service prior to age 62 are assumed to retire upon first eligibility following attainment of age 62.

VALUATION ASSUMPTIONS

Rates of separation from active membership used in the valuation are shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment. This assumption was first used for the June 30, 2007 valuation of the System.

Sample Ages	Years of Service	% of Active Members Separating Within Next Year			
		Police Large	Police Small	Fire Large	Fire Small
All	0	12.00%	15.00%	7.00%	7.50%
	1	4.50%	10.00%	1.50%	6.00%
	2	3.50%	9.00%	1.00%	5.00%
	3	3.00%	7.00%	1.00%	5.00%
	4	2.50%	6.00%	1.00%	5.00%
	5 - 10	2.40%	5.30%	1.00%	3.00%
	10 Plus	0.50%	1.80%	0.10%	1.00%
Ref.		602	603	604	605

Rates of disability among active members used in the valuation are shown below, and were first used for the June 30, 2007 valuation of the System.

Sample Ages	% of Active Members Becoming Disabled Within Next Year			
	Police Large	Police Small	Fire Large	Fire Small
20	0.10%	0.15%	0.03%	0.04%
25	0.10%	0.15%	0.03%	0.04%
30	0.21%	0.29%	0.05%	0.04%
35	0.27%	0.35%	0.11%	0.09%
40	0.45%	0.57%	0.20%	0.20%
45	0.64%	0.79%	0.20%	0.55%
50	0.98%	2.00%	0.50%	0.75%
55	1.27%	2.00%	1.16%	1.30%
Ref	588	589	590	591

SUMMARY OF ASSUMPTIONS USED
JUNE 30, 2009
MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption:	90% of males and females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and turnover decrements do not operate during retirement eligibility.
Service Credit Accruals:	It is assumed that members accrue one year of service credit per year.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Normal Form of Benefit:	A straight life payment is the assumed normal form of benefit for members who are not married, and the 75% Joint and Survivor form of payment with no reduction, for married members. 90% of members are assumed to be married at time of retirement.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Normal Cost Percentage:	For the purposes of calculating the Normal Cost as a percent of payroll under the Projected Unit Credit Cost Method, the Normal Cost was projected with interest to the applicable Fiscal Year and divided by the Payroll projected with wage base to the applicable Fiscal Year.
Health Care Utilization:	80% of future retirees are expected to utilize retiree health care. 90% of those are assumed to be married.

SECTION F

PLAN PROVISIONS

Summary of Plan Provisions Valued and/or Considered

Membership: Persons who are employed in an eligible group, prior to attaining age 50 years, for at least 40 hours a week for more than six months per year.

Average Monthly Compensation: One-thirty-sixth of total compensation paid to member during the three years, out of the last 20 years of credited service, in which the amount paid was highest. Compensation is the amount including base salary, overtime pay, shift differential pay and holiday pay, paid to an employee on a regular payroll basis and longevity pay paid at least every six months for which contributions are made to the System.

Normal Retirement: First day of month following completion of 20 years of service or following 62nd birthday and completion of 15 years of service.

The amount of monthly normal pension is based on credited service and average monthly compensation as follows:

- ***For retirement with 25 or more years of credited service,*** 50% of average monthly compensation for the first 20 years of credited service, plus 2-1/2% of average monthly compensation for each year of credited service above 20 years.

- ***For retirement with 20 years of credited service but less than 25 years of credited service,*** 50% of average monthly compensation for the first 20 years of credited service, plus 2% of average monthly compensation for each year of credited service between 20 and 25 years.

- ***For retirement with less than 20 years of credited service,*** the percent of average monthly compensation is reduced at a rate of 4% for each year less than 20 years.

The maximum amount payable as a normal retirement pension is 80% of the average monthly compensation.

Vested Termination (deferred retirement): Termination of covered position employment with 10 or more years of credited service. Pension is equal to twice the amount of pension based on the member's accumulated contributions with payments commencing at age 62. Benefit is forfeited if accumulated contributions are refunded. The following schedule shows additional money which would be payable to members who receive a refund of their accumulated member contributions.

Years of Credited Service	Additional Monies (% of Contributions)
0-4	0%
5-6	25-40
7-8	55-70
9-10	85-100

Ordinary Disability Retirement (not duty-related): Physical condition which totally and permanently prevents performance of a reasonable range of duties or a mental condition which totally and permanently prevents and substantial gainful employment. The amount of pension is percentage of normal pension, as follows:

Credited Service	Additional Monies (% of Contributions)
Less than 7 years	25%
7-13 years	50%
14-19 years	75%

Accidental Disability Retirement (duty-related): Total and presumably permanent disability, incurred in performance of duty, preventing performance of a reasonable range of duties within the employee's job classification. No credited service requirement. Pension is computed in the same manner as normal pension based on credited service and average monthly compensation at time of termination of employment. Pension is 50% of average monthly compensation, or normal pension amount, whichever is greater.

Offset of Ordinary Disability Retirement before the member's normal retirement date: The pension is reduced if the retiree engages in any employment and the income from this employment is greater than the retiree's pension. The reduction is equal to the difference between the retiree's income from employment and the retiree's pension.

Temporary Disability: Termination of employment prior to normal retirement eligibility by reason of temporary disability. Pension is 1/12 of 50% of compensation during the year preceding the date disability was incurred. Payments terminate after 12 months of prior recovery.

Catastrophic Disability: Pension is 90% of average monthly compensation. After 60 months, the pension is the greater of 62.5% of average monthly compensation or the member's accrued normal pension.

Survivor Pension: Death while a member employed by an employer of death after retirement. No credited service requirement.

Spouse Pension: 80% of pension deceased active member would have been paid for accidental disability retirement or, in the case of retired member, 80% of the retired member's pension. Requires two years of marriage. Terminates upon death. For member killed in line of duty, 100% of average compensation, reduced by child's pension.

Child's Pension: 1/9 of pension deceased active member would have been paid accidental disability retirement (equal shares of 3/9 if more than three children); or, in the case of a retired member's pension (pension shares of 3/9 if more than three children). Payable to a dependent child under age 18 (age 23 if a full-time student).

Guardian's Pension: Same amount as spouse's pension. Payable only during periods no spouse is being paid and there is at least one child under age 18 (age 23 if a full time student). Guaranteed return of accumulated contributions – if aggregate amount of pension payments to member and beneficiaries are less than member's accumulated contributions, difference is paid to designated contingent refund beneficiary, if living, otherwise to nearest kin as selected by board.

Other Termination of Employment: Member is paid his/her accumulated contributions.

Post-Retirement Adjustments: Effective July 1 of each year, each retired member or survivor of a retired member may be entitled to a permanent benefit increase in his base benefit. The maximum amount of the increase is four percent (4%) of the average normal PSPRS benefit being received on the preceding June 30 and is contingent upon sufficient excess investment earnings for the fund. To be eligible for the increase the member or survivor must be age 55 or older on July 1 of the current year and began receiving benefits on or before July 31 of the previous year. A member or survivor is also eligible if he began receiving benefits on or before July 31 of the two previous years regardless of age.

Post-Retirement Health Insurance Subsidy: Payable on behalf of retired members and survivors who elect coverage provided by the state or participating employer. The amounts cannot exceed:

Member Only		**With Dependents**		
Not Medicare Eligible	**Medicare Eligible**	**All Not Medicare Eligible**	**All Medicare Eligible**	**One With Medicare**
$150	$100	$260	$170	$215

Deferred Retirement Option Plan (DROP): A member with 20 or more years of credited service under the System may enter into the DROP program with his employer. Under the DROP program, the member must voluntarily and irrevocably elect to enter into the program with his employer for a period of up to 60 months. During the DROP period, the member remains in the employ of the employer as a full-time paid firefighter or full-time paid certified peace officer but no member or employer contributions are made to the System, therefore no additional years of credited service are accrued on the member's behalf. The member's monthly pension is calculated based upon the years of credited service and average monthly compensation at the beginning of the DROP period. This monthly pension amount is credited to a DROP participation account with interest at the rate of 8.5% annually, but credited monthly to the account. At the end of the DROP period or prior to that time if the member terminates employment, the monies in the DROP participation account will be either paid to the member in a lump-sum amount or paid in a lump-sum distribution to an eligible retirement plan or individual retirement account. The member will then begin receiving the monthly pension amount directly from the System in the same amount as was being credited to the DROP participation account.

Reverse DROP: A member with 20 or more years of credited service under the System, who has not elected to participate in the DROP, may elect to participate in the Reverse DROP. Under the Reverse DROP, the member must voluntarily and irrevocably elect to terminate employment and receive a normal retirement upon participation in the Reverse DROP. The member elects a "Reverse DROP Date" that is the first day of the month immediately following completion of 20 years of credited service or a date not more than 60 consecutive months before the date the member elects to participate in the Reverse DROP, whichever is later. The member's pension will be calculated using the factors of credited service and average monthly benefit compensation in effect on the Reverse DROP Date. In addition, a lump sum distribution reflecting an amount that is credited as though accrued monthly from the Reverse DROP Date to the date the member elected to participate in the Reverse DROP is paid out. This amount is credited with an interest rate of 3.5% annually, as opposed to the current DROP interest rate of 8.5%, and can either be paid to the member or paid to an eligible retirement plan or individual retirement account. Neither the member, nor the employer, is entitled to a refund of contributions made between the Reverse DROP Date and the date the member elects to participate in the Reverse DROP.

Member Contributions: Members contribute 7.65% of compensation.

Employer Contributions: Level Percent of payroll normal cost plus 30 year (27 years remaining as of June 30, 2009) amortization of unfunded actuarial accrued liability (20 year amortization for credit).

SECTION G

GLOSSARY

Actuarial Accrued Liability The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Accrued Service The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss) A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Reserve Account	An account used to indicate that funds have been set aside for a specific purpose and is not generally available for other uses.
Unfunded Actuarial Accrued Liability	The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."
Valuation Assets	The value of current plan assets recognized for valuation purposes. Generally based on market value plus a portion of unrealized appreciation or depreciation.

APPENDIX I

ACCOUNTING DISCLOSURES

This information is presented in draft form for review by the System's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the System's financial statements.

GASB STATEMENT NO. 25 SUPPLEMENTARY INFORMATION

SCHEDULE OF FUNDING PROGRESS
(EXCLUDING HEALTH INSURANCE SUBSIDY BEGINNING JUNE 30, 2008)
SCHEDULE OF FUNDING PROGRESS

Year Ended June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percent of Covered Payroll [(b)-(a)]/(c)
2000	$ 4,260,167,698	$ 3,415,157,151	$ (845,010,547)	124.7 %	$751,279,788	0.0 %
2001	4,661,941,486	3,674,758,173	(987,183,313)	126.9 %	826,739,742	0.0 %
2002	4,684,386,470	4,144,211,267	(540,175,203)	113.0 %	854,248,911	0.0 %
2003	4,781,376,659	4,739,612,765	(41,763,894)	100.9 %	881,284,717	0.0 %
2004	4,774,312,978	5,167,332,630	393,019,652	92.4 %	911,718,122	43.1 %
2005	4,886,962,635	5,951,937,046	1,064,974,411	82.1 %	974,862,717	109.2 %
2006	4,999,911,405	6,495,012,333	1,495,100,928	77.0 %	1,073,685,222	139.2 %
2007	4,829,521,186	7,268,291,485	2,438,770,299	66.4 %	1,228,037,467	198.6 %
2008	5,095,645,042	7,405,397,175	2,309,752,133	68.8 %	1,383,332,020	167.0 %
2009	**5,445,497,208**	**7,778,394,070**	**2,332,896,862**	**70.0 %**	**1,415,642,509**	**164.8 %**

Results prior to 2009 were calculated by prior actuary.

GASB STATEMENT NO. 25 SUPPLEMENTARY INFORMATION

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ended June 30	Annual Required Contribution
2000	$ 46,890,892
2001	51,391,526
2002	51,983,407
2003	50,800,669
2004	79,000,130
2005	104,497,150
2006	127,218,686
2007	177,587,507
2008	233,556,049
2009	320,216,514
2010	N/A
2011	308,826,519 (est.)

Fiscal Years prior to 2011 provided by the actuary.

Annual Required Contribution dollar amount will be based on the recommended contribution rate and the actual pensionable payroll for the period.

GASB STATEMENT NO. 25 SUPPLEMENTARY INFORMATION

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation date	June 30, 2009
Actuarial cost method	Projected Unit Credit
Amortization method	Level percent-of-pay closed
Remaining amortization period	27 years
Asset valuation method	7-year smoothed market
Actuarial assumptions:	
Investment rate of return	8.5%
Projected salary increases	5.5% - 8.5%
Payroll Growth	5.5%
Cost-of-living adjustments	None.

GASB STATEMENT NO. 45 SUPPLEMENTARY INFORMATION

The following information is presented concerning the post-retirement health insurance subsidy.

The liabilities and computed contribution for the post-retirement health insurance subsidy were based on the same assumptions and actuarial cost methods as indicated for GASB Statement No. 25.

SCHEDULE OF FUNDING PROGRESS

Valuation Date June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Annual Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
2006	$0	$232,878,379	$232,878,379	0.00%	$1,073,685,222	21.69%
2007	0	256,905,578	256,905,578	0.00	1,228,037,467	20.92%
2008	0	257,381,466	257,381,466	0.00	1,383,332,020	18.61%
2009	**0**	**211,056,746**	**211,056,746**	**0.00**	**1,415,642,509**	**14.91%**

ANNUAL REQUIRED CONTRIBUTION

Valuation Date June 30	Fiscal Year Ended June 30	Normal Cost (a)	Actuarial Accrued Liability (b)	Total (a+b)	Dollar Amount
2005	2007	0.53%	1.17%	1.70%	$ 21,797,745
2006	2008	0.51%	1.00%	1.51%	20,888,314
2007	2009	N/A	N/A	N/A	N/A
2008	2010	N/A	N/A	N/A	N/A
2009	**2011**	**0.57%**	**0.72%**	**1.29%**	**20,325,827**

Fiscal Years prior to 2011 provided by the prior actuary.

Health Insurance Subsidy Payment Reported for FY 2009: $12,214,037

Note: GASB Statement No. 45 Supplementary Information is shown individually in the separate reports for each participating unit.