City of Fresno Fire and Police Retirement System

Actuarial Valuation and Review
as of June 30, 2009

SEGAL

The Segal Company
120 Montgomery Street, Suite 500 San Francisco, CA 94104
T 415.263.8200 F 415.263.8290 www.segalco.com

January 5, 2010

Board of Retirement
City of Fresno Fire and Police Retirement System
2828 Fresno Street, Room 201
Fresno, CA 93721-1327

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of June 30, 2009. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2010-2011 and analyzes the preceding year's experience.

The census and financial information were prepared by the City of Fresno Fire and Police Retirement System. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, Enrolled Actuary.

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. In our opinion, the combined operation of the assumptions and the methods applied in this valuation fairly represent past and anticipated future experience of the Retirement System and it is our understanding that they meet the parameters required by GASB Statement 25. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. The undersigned are Members of the American Academy of Actuaries and meet the qualification requirements to render the actuarial opinion contained herein.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

THE SEGAL COMPANY

By:

Paul Angelo, FSA, MAAA, FCA, EA
Senior Vice President and Actuary

Andy Yeung, ASA, MAAA, EA
Vice President and Associate Actuary

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SECTION 1

VALUATION SUMMARY

SECTION 2

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SECTION 3

SUPPLEMENTAL INFORMATION

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Purpose

This report has been prepared by The Segal Company to present a valuation of the City of Fresno Fire and Police Retirement System as of June 30, 2009. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of the Retirement System, as administered by the Board of Retirement;
- The characteristics of covered active members, DROP participants, inactive vested members, and retired members and beneficiaries as of June 30, 2009, provided by the Retirement System;
- The assets of the System as of June 30, 2009, provided by the Retirement System;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

One of the general goals of an actuarial valuation is to establish contributions which fully fund the Retirement System's liabilities, and which, as a percentage of payroll, remain as level as possible for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

As of June 30, 2009, there is an actuarial surplus (or prefunded actuarial accrued liability) as the System has valuation value of assets that are in excess of the actuarial accrued liability. The actuarial surplus in the Retirement System is used to reduce the City's contribution and to provide a Post Retirement Supplemental Benefit (PRSB). The allocation of surplus is provided in Appendix B of this report.

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to evaluate the Retirement System's assets, liabilities and future contribution requirements. Our calculations are based upon member data and financial information provided to us by the Retirement System's staff. This information has not been audited by us, but it has been reviewed and found to be consistent, both internally and with prior year's information.

Please note that the Actuarial Standards Board has recently adopted a revised Actuarial Standard of Practice (ASOP) No. 4 that provides guidelines that actuaries have to follow when selecting actuarial assumptions. For a plan such as that offered by the Retirement System that utilizes the actuarial surplus to provide contribution rate offsets and a PRSB benefit, we are required to indicate in the valuation report that the impact of the application of the actuarial surplus on the future financial condition of the plan has not been explicitly measured in the valuation.

The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2010 through June 30, 2011.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

Ref: Page 32

- In the June 30, 2008 valuation, the ratio of the valuation value of assets to actuarial accrued liabilities was 128.5%. In this June 30, 2009 valuation, the funding ratio has decreased to 119.6%. The funding ratio as of June 30, 2009 if measured using the market value of assets instead of the valuation value of assets is 84.0%.
- The Retirement System's prefunded actuarial accrued liability (PAAL) as of June 30, 2008 was $236.7 million. In this year's valuation, the PAAL has decreased to $171.4 million.

Ref: Page 27

- The Plan had a net actuarial experience loss of about $72.7 million. A reconciliation of the System's PAAL is provided in Section 3, Exhibit H.

Ref: Page 15

- The aggregate employer rate calculated in this valuation has increased from 11.74% of payroll to 19.85% of payroll. The reasons for this change are: (i) lower than expected return on investments, (ii) difference between the actual and the estimated June 30, 2009 surplus allocated to the City in the June 30, 2008 valuation for offsetting the City's contributions for the 2009/2010 plan year, offset somewhat by (iii) lower than expected retiree COLA increases, and (iv) other experience gains or losses. A reconciliation of the Retirement System's aggregate employer rate is provided in Section 2, Subsection D (see Chart 14).

  Please note that pertaining to the current methodology that caused the City's contribution shortfall as described in (ii) above, the Retirement Board has decided that effective with the next valuation as of June 30, 2010, the System will apply the projected actuarial rate of return (taking into account the known deferred investment losses at the time of the projection) in lieu of the 8.25% assumed rate of return in projecting the surplus available to offset the City's contributions.

Ref: Page 16

- The aggregate member rate calculated in this valuation has remained at 8.63% of payroll. A reconciliation of the Retirement System's aggregate member rate is provided in Section 2, Subsection D (see Chart 15).

Ref: Page 34

- There are no changes in actuarial assumptions in the June 30, 2009 valuation. A description of these assumptions can be found in Section 4 Exhibit IV of this report.

Ref: Page 6

- As indicated in Section 2, Subsection B (see Chart 7) of this report, the total unrecognized investment loss as of June 30, 2009 is $311.6 million. These investment losses will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, and will offset any investment gains that may occur after June 30, 2009. This implies that if the Retirement System earns the assumed net rate of investment return of 8.25% per year on a **market value** basis, it will result in investment losses on the actuarial value of assets in the next few years. So, if the actual market return is equal to the assumed 8.25% rate and all other actuarial assumptions are met, the contribution requirements would increase in each of the next few years.

- The actuarial surplus as of June 30, 2009 (see Appendix B) would be adjusted in future valuations to reflect the deferred investment losses mentioned above. If all the deferred investment losses were to be recognized immediately, the actuarial surplus would be depleted in this valuation.

- The unrecognized investment losses of $311.6 million represent 37% of the market value of assets. Unless offset by future investment gains or other favorable experience, the recognition of the $311.6 million market losses is expected to have a significant impact on the System's future funded ratio and the aggregate employer contributions. This potential impact may be illustrated as follows:

  - If the deferred losses were recognized immediately in the valuation value of assets, the funded percentage would decrease from 119.6% to 84.0%.

  - If the deferred losses were recognized immediately in the valuation value of assets, the aggregate employer contribution rate would increase from 19.85% of payroll to 27.57% of payroll, assuming a 30-year period for amortizing the Plan's Unfunded Actuarial Accrued Liability (UAAL).

  - For more details on the impact of the deferred losses, please refer to our surplus projection report dated December 2, 2009.

- As we have discussed with the Board during our surplus projection studies, consistent with Section 3-324 of the Fresno Municipal Code, any UAAL will be amortized over 30 years. However, the System has not had any UAAL for many years and the Board may want to review the above Section of the Code and the Board's policy to determine if they remain appropriate in setting the City's rate when there is an UAAL. In particular, there will be "negative amortization" of the UAAL for several years as a result of using a 30-year amortization period because the contribution payment will be less than the interest accruing on the UAAL.

- The actuarial valuation report as of June 30, 2009 is based on financial information as of that date. Changes in the value of assets subsequent to that date, to the extent that they exist, are not reflected. Declines in asset values will increase the actuarial cost of the Plan, while increases will decrease the actuarial cost of the Plan.

Impact of Future Experience on Contribution Rates

Future contribution requirements may differ from those determined in the valuation because of:

1) difference between actual experience and anticipated experience;
2) changes in actuarial assumptions or methods;
3) changes in statutory provisions; and
4) difference between the contribution rates determined by the valuation and those adopted by the Board.

Summary of Key Valuation Results (Dollar amounts in thousands)

	June 30, 2009		June 30, 2008	
Employer Contribution Rates:	Total Rate	Estimated Annual Amount [1]	Total Rate	Estimated Annual Amount [1]
Tier 1 Normal Cost Rate	26.43%	$6,043	26.38%	
Tier 2 Normal Cost Rate	18.60%	15,547	18.49%	
All Categories Combined	20.28%	21,590	20.28%	21,588
Surplus Offset	-4.72%	-5,020	-8.93%	-9,506
Contribution Shortfall from Prior Fiscal Year	4.29%	4,561	0.39%	415
Required Contributions	19.85%	21,131	11.74%	12,497
Average Member Contribution Rates:	Total Rate	Estimated Annual Amount [2]	Total Rate	Estimated Annual Amount [2]
Tier 1	4.87%	$399	4.89%	$399
Tier 2	9.00%	7,458	9.00%	7,458
All Categories Combined	8.63%	7,857	8.63%	7,857
Funded Status:				
Actuarial Accrued Liability	$874,355		$830,036	
Valuation Value of Assets	$1,045,774		$1,066,778	
Funded Percentage	119.6%		128.5%	
Prefunded Actuarial Accrued Liability	$171,419		$236,742	
Key Economic Assumptions:				
Interest Rate	8.25%		8.25%	
Inflation Rate	3.75%		3.75%	
Across-the-Board Salary Increase	0.25%		0.25%	

(1) *Based on projected fiscal year 2010-2011 annual payroll for active non-DROP and DROP members of $106,449.*

(2) *Based on projected fiscal year 2010-2011 annual payroll for members not in the DROP of $91,049.*

Summary of Key Valuation Demographic and Financial Data

	June 30, 2009	June 30, 2008	Percentage Change
Active Members:			
Non-DROP			
Number of members	997	1,017	-2.0%
Average age	37.7	37.0	N/A
Average service	9.1	8.4	N/A
Projected total compensation (1)	$87,546,941	$84,977,945	3.0%
Average projected compensation	$87,810	$83,557	5.1%
DROP			
Number of members	167	165	1.2%
Average age	55.1	54.8	N/A
Average service	23.9	23.8	N/A
Projected total compensation (1)	$14,807,704	$13,934,644	6.3%
Average projected compensation	$88,669	$84,452	5.0%
Retired Member and Beneficiaries:			
Number of members:			
Service retired	323	332	-2.7%
Disability retired	307	295	4.1%
Beneficiaries	235	229	2.6%
Total	865	856	1.1%
Average age	66.4	66.3	N/A
Average monthly benefit (2)	$3,618	$3,533	2.4%
Vested Terminated Members:			
Number of vested terminated members (3)	76	73	4.1%
Average age	37.6	36.8	N/A
Summary of Financial Data (dollar amounts in thousands):			
Market value of assets	$832,728	$1,088,049	-23.5%
Return on market value of assets	-20.81%	-6.48%	N/A
Actuarial value of assets	$1,144,305	$1,155,503	-1.0%
Return on actuarial value of assets	1.84%	10.19%	N/A
Valuation value of assets	$1,045,774	$1,066,778	-2.0%
Return on valuation value of assets	0.70%	9.24%	N/A

(1) *June 30, 2008 payroll was projected payroll for plan year 2008-2009. June 30, 2009 payroll was projected payroll for plan year 2009-2010.*

(2) *Excludes supplemental benefits paid from PRSB.*

(3) *Includes terminated members due a refund of member contributions.*

A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, vested terminated members, retired members and beneficiaries.

This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, and C.

A historical perspective of how the member population has changed over the past six valuations can be seen in this chart.

CHART 1

Member Population: 2004 – 2009

Year Ended June 30	Active Members(1)	Vested Terminated Members(2)	Retired Members and Beneficiaries	Ratio of Non-Actives to Actives
2004	1,017	21	771	0.78
2005	1,065	31	797	0.78
2006	1,097	44	819	0.79
2007	1,130	69	847	0.81
2008	1,182	73	856	0.79
2009	1,164	76	865	0.81

(1) *Includes DROP members.*

(2)) *Includes terminated members due a refund of member contributions.*

Non-DROP Active Members

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 997 non-DROP active members with an average age of 37.7 years, average years of service of 9.1 and average compensation of $87,810. The 1,017 non-DROP active members in the prior valuation had an average age of 37.0 years, average service of 8.4 and average compensation of $83,557.

Inactive Members

In this year's valuation, there were 76 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 73 in the prior valuation

These graphs show a distribution of non-DROP active members by age and by years of service.

CHART 2

Distribution of Non-DROP Active Members by Age as of June 30, 2009

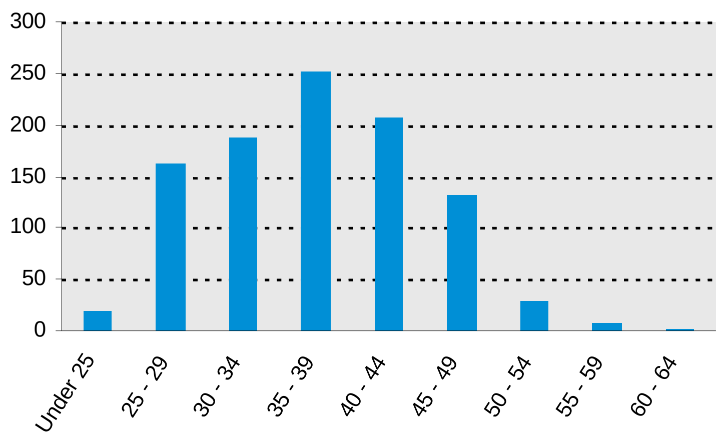
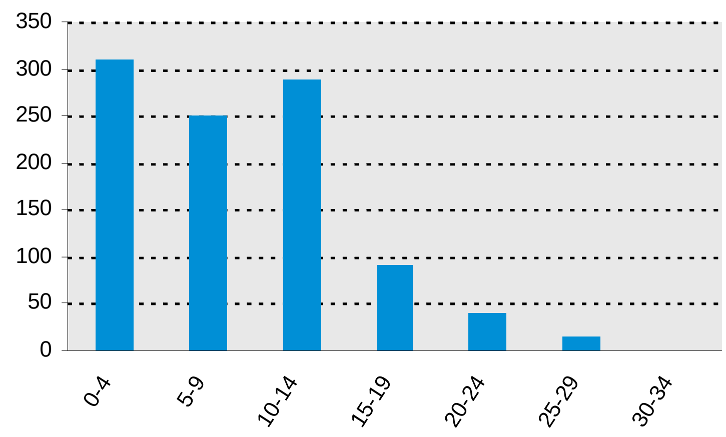


CHART 3

Distribution of Non-DROP Active Members by Years of Service as of June 30, 2009



DROP Active Members
In this year's valuation, there were 167 DROP active members with an average age of 55.1 years, average years of service of 23.9 and average compensation of $88,669. The 165 DROP active members in the prior valuation had an average age of 54.8 years, average years of service of 23.8 and average compensation of $84,452.

Retired Members and Beneficiaries
As of June 30, 2009, 630 retired members and 235 beneficiaries were receiving total monthly benefits of $3,129,432. For comparison, in the previous valuation, there were 627 retired members and 229 beneficiaries receiving monthly benefits of $3,024,165.

These graphs show a distribution of the current retired members based on their monthly amount and age, by type of pension.

CHART 4

Distribution of Retired Members (Excl. Beneficiaries) by Type and by Monthly Amount as of June 30, 2009

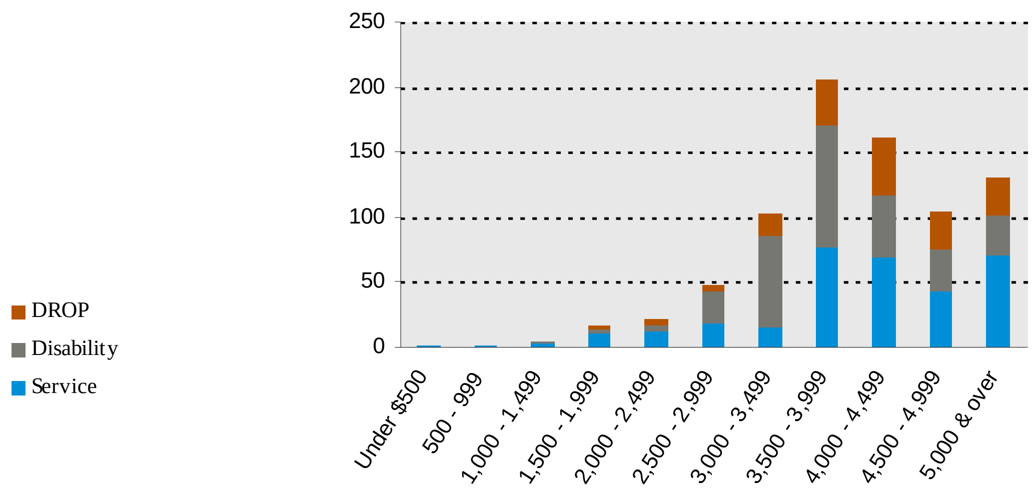
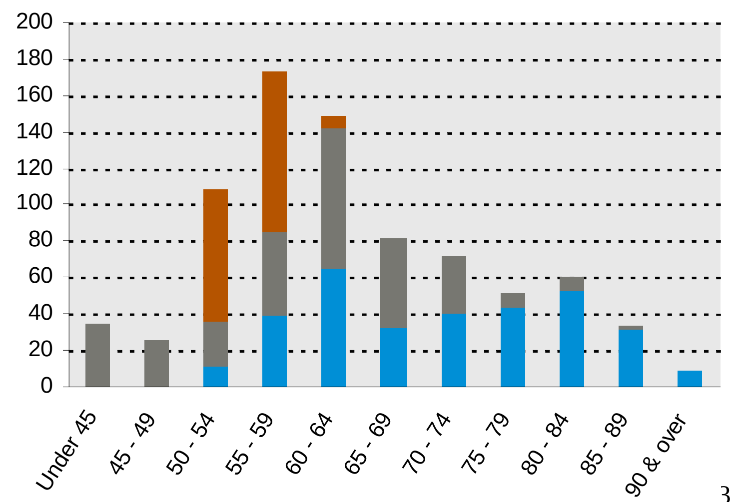


CHART 5

Distribution of Retired Members (Excl. Beneficiaries) by Type and by Age as of June 30, 2009



B. FINANCIAL INFORMATION

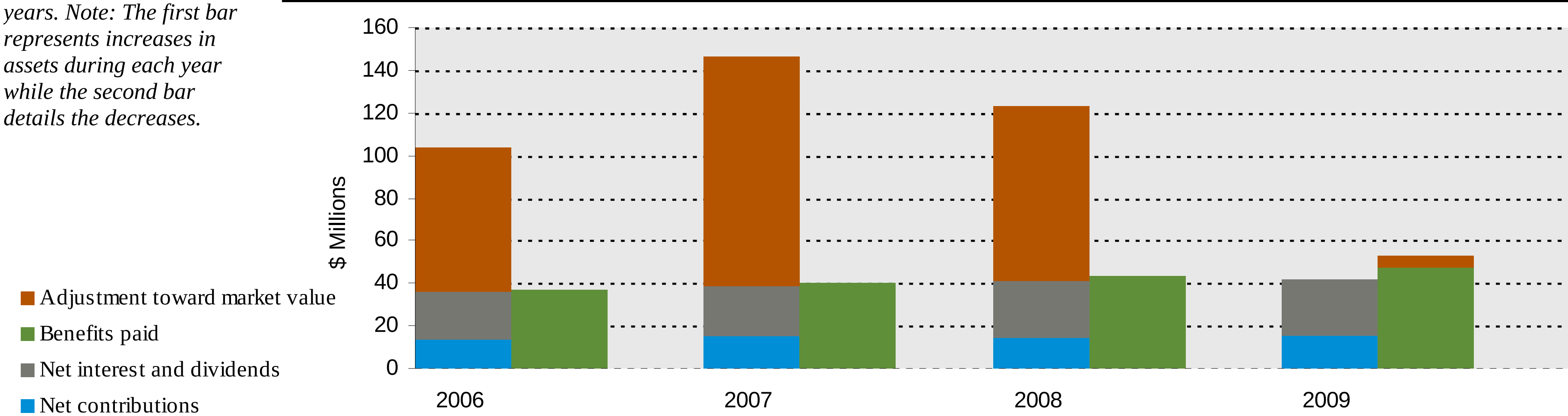
Retirement plan funding anticipates that, over the long term, both contributions and net investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. The adjustment toward market value shown in the chart is the "non-cash" earnings on investments implicitly included in the actuarial value of assets. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits D and E.

The chart depicts the components of changes in the actuarial value of assets over the last four years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

CHART 6

Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended June 30, 2006-2009



It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board of Retirement has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value of assets.

The determination of the Actuarial Value of Assets is provided on the following page.

The chart shows the determination of the actuarial value of assets as of the valuation date.

CHART 7

Determination of Actuarial and Valuation Value of Assets for Year Ended June 30, 2009

Plan Year Ending June 30	Total Actual Market Return	Expected Return	Investment Gain/(Loss)*	Deferred Factor	Deferred Return
2005	$91,761,097	$64,599,953	$27,161,144	0.0	$0
2006	110,590,200	78,043,274	32,546,926	0.2	6,509,385
2007	173,484,408	85,166,893	88,317,515	0.4	35,327,006
2008	(76,360,019)	97,259,541	(173,619,560)	0.6	(104,171,736)
2009	(223,116,857)	88,435,600	(311,552,457)	0.8	(249,241,966)

1. Total Deferred Return	$(311,577,311)
2. Net Market Value	832,727,773
3. Actuarial Value of Assets (Item 2 – Item 1)	$1,144,305,084
4. Ratio of Actuarial Value to Market Value	137.4%
5. Non-Valuation Reserves and Other Adjustments	
a. DROP Reserve	95,577,000
b. PRSB Reserve	3,572,000
c. City Surplus Reserve**	(618,000)
d. Total	98,531,000
6. Valuation Value of Assets (Item 3 – Item 5d)	$1,045,774,084

* *Administrative expenses are treated as benefit payments and are excluded from the calculation of actual versus expected income.*

** *The negative City Surplus Reserve is treated as an asset; it represents the City's prior contribution shortfall due to the difference between the actual versus the projected surplus prior to June 30, 2009. This difference is taken into account in developing the contribution rate requirement for 2010-2011. See page 55 for details.*

Deferred return as of June 30, 2009 recognized in each of the next four years:

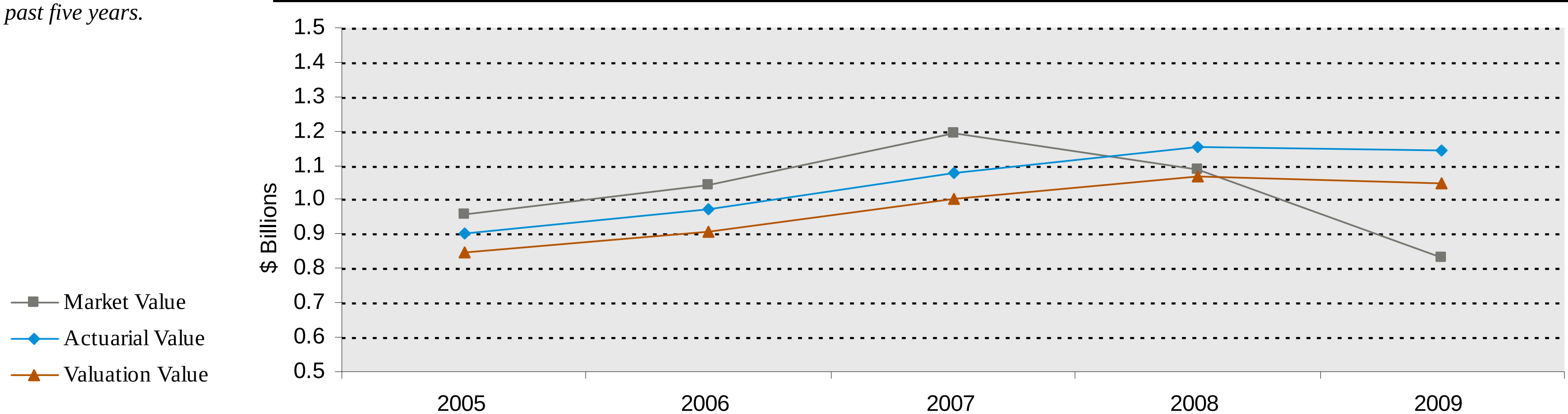
6/30/2010	$(72,861,515)
6/30/2011	(79,370,901)
6/30/2012	(97,034,404)
6/30/2013	(62,310,491)
	$(311,577,311)

The market value, actuarial value, and valuation value of assets are representations of the Retirement System's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets, but with less volatility. The valuation value of assets is the actuarial value, excluding any non-valuation reserves. The valuation value of assets is significant because the Retirement System's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the prefunded actuarial accrued liability is an important element in determining the contribution requirement.

This chart shows the change in market value, actuarial value and valuation value over the past five years.

CHART 8

Market Value, Actuarial Value and Valuation Value of Assets as of June 30, 2005-2009



C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total experience loss was $72.7 million, including a loss of $79.5 million from investments and a gain of $6.8 million from all other sources. The net experience variation from individual sources other than investments was 0.8% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience during the past year.

CHART 9

Actuarial Experience for Year Ended June 30, 2009

1. Net gain/(loss) from investments [1]	-$79,487,000
2. Net gain/(loss) from other experience [2]	6,810,000
3. Net experience gain/(loss): (1) + (2)	-$72,677,000

[1] *Details in Chart 10.*

[2] *See Section 3, Exhibit H.*

Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Retirement System's investment policy. For valuation purposes, the assumed rate of return on the valuation value of assets was 8.25% (based on June 30, 2008 valuation). The actual rate of return on a valuation basis for the 2008/2009 plan year was 0.70%.

Since the actual return for the year was less than the assumed return, the Retirement System experienced an actuarial loss during the year ended June 30, 2009 with regard to its investments.

This chart shows the gain/(loss) due to investment experience.

CHART 10

Investment Experience for Year Ended June 30, 2009 – Valuation Value, Actuarial Value and Market Value of Assets

	Valuation Value	Actuarial Value	Market Value
1. Actual return	$7,352,713	$21,006,314	$(223,116,857)
2. Average value of assets	$1,052,599,608	$1,139,400,808	$1,071,946,668
3. Actual rate of return: (1) ÷ (2)	0.70%	1.84%	-20.81%
4. Assumed rate of return	8.25%	8.25%	8.25%
5. Expected return: (2) x (4)	$86,839,468	$94,000,567	$88,435,600
6. Actuarial gain/(loss): (1) – (5)	$(79,486,755)	$(72,994,253)	$(311,552,457)

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial, valuation, and market basis for the last five years.

In this valuation, we have continued to apply the 8.25% investment return assumption adopted by the Board for the last actuarial valuation.

CHART 11

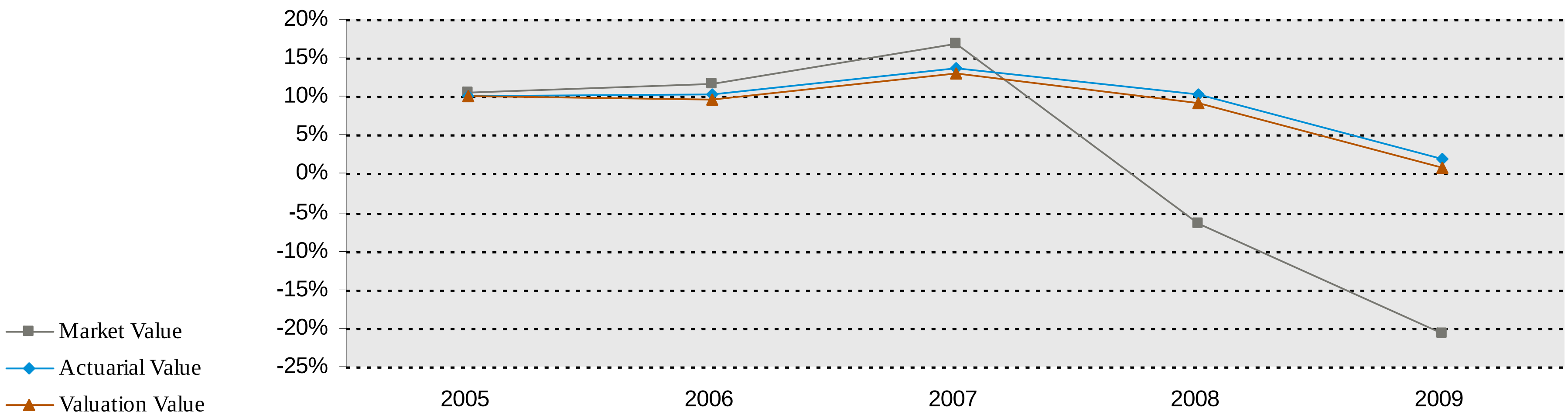
Investment Return – Actuarial Value, Valuation Value and Market Value: 2005 - 2009

	Valuation Value Investment Return		Actuarial Value Investment Return		Market Value Investment Return	
Year Ended June 30	**Amount**	**Percent**	**Amount**	**Percent**	**Amount**	**Percent**
2005	$73,717,200	10.02%	N/A	N/A	$91,761,097	10.45%
2006	80,618,910	9.64%	$90,688,128	10.17%	110,590,200	11.69%
2007	116,690,509	13.03%	130,869,517	13.66%	173,484,408	16.81%
2008	91,350,305	9.24%	108,238,256	10.19%	(76,360,019)	(6.48%)
2009	7,352,713	0.70%	21,006,314	1.84%	(223,116,857)	(20.81%)
Annualized Average Return		8.44%		8.88%		1.31%

Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

CHART 12

Market and Valuation Rates of Return for Years Ended June 30, 2005 – June 30, 2009



Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- actual turnover among the participants,
- retirement experience (earlier or later than expected),
- mortality (more or fewer deaths than expected),
- the number of disability retirements,
- salary increases different than assumed,
- DROP experience different than assumed, and
- COLA increase different than assumed.

The net gain from this other experience for the year ended June 30, 2009 amounted to $6.8 million which is 0.8% of the actuarial accrued liability. See Exhibit H for a detailed development of the prefunded actuarial accrued liability.

D. EMPLOYER AND MEMBER CONTRIBUTIONS

Employer contributions consist of two components:

Normal Cost	The annual contribution rate that, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution rate is expressed as a level percentage of the member's compensation.
Contribution to the Unfunded Actuarial Accrued Liability (UAAL)	The annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution (or rate credit in the case of a prefunded actuarial accrued liability) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the Retirement System) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (credits) are scheduled to increase at the annual rate of 4.00% (i.e., 3.75% inflation plus 0.25% real across-the-board salary increase). The recommended employer contributions are provided on Chart 13.

Member Contributions

Tier 1	Provide 1/3 of the funding required to pay a benefit equal to 50% of FAS at age 50 (or when a member has 20 years of service if later but not later than age 60) to a member with 66 2/3% automatic continuance payable to his/her eligible spouse/domestic partner (§3-319). The contribution will be prorated if the member has less than 20 years of service at age 60.
Tier 2	9% pay (§3-405)

CHART 13

Recommended Employer Contribution Rates (Dollar Amounts in Thousands)

	June 30, 2009		June 30, 2008	
Tier 1 Members	**Rate**	**Estimated Annual Amount***	**Rate**	**Estimated Annual Amount***
Normal Cost	26.43%	$6,043	26.38%	
Tier 2 Members				
Normal Cost	18.60%	$15,547	18.49%	
All Categories Combined				
Normal Cost	20.28%	$21,590	20.28%	$21,588
Surplus Offset	-4.72%	-5,020	-8.93%	-9,506
Contribution Shortfall from Prior Fiscal Year	4.29%	4,561	0.39%	415
Total Contribution	19.85%	$21,131	11.74%	$12,497

* *Amounts are in thousands and are based on projected fiscal year 2010 – 2011 annual payroll for active non-DROP and DROP members (also in thousands).*

Tier 1	$22,863
Tier 2	83,586
Total	$106,449

The employer contribution rates as of June 30, 2009 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

Reconciliation of Recommended Employer Contribution

The chart below details the changes in the recommended employer contribution from the prior valuation to the current year's valuation.

The chart reconciles the employer contribution from the prior valuation to the amount determined in this valuation.

CHART 14

Reconciliation of Recommended Employer Contribution from June 30, 2008 to June 30, 2009 (Dollars in Thousands)

	Contribution Rate	Estimated Amount*
Recommended Contribution Rate as of June 30, 2008	11.74%	$12,497
Effect of actuarial experience during 2008:		
1. Effect of investment loss	4.70%	$5,003
2. Effect of the difference between the actual and the estimated June 30, 2009 surplus allocated to the City in the June 30, 2008 valuation for offsetting the City's contributions for the 2009/2010 plan year	3.88%	4,125
3. Effect of lower than expected retiree COLA increases	-0.07%	-75
4. Effect of other experience (gains)/losses	-0.40%	-419
Subtotal	8.11%	$8,634
Recommended Contribution Rate as of June 30, 2009	19.85%	$21,131

* *Based on projected fiscal year 2010 – 2011 annual payroll of $106,449 for active non-DROP and DROP members.*

The member contribution rates as of June 30, 2009 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

Reconciliation of Recommended Member Contribution
The chart below details the changes in the recommended member contribution rate from the prior valuation to the current year's valuation.

The chart reconciles the member contribution from the prior valuation to the amount determined in this valuation.

CHART 15

Reconciliation of Recommended Member Contribution from June 30, 2008 to June 30, 2009 (Dollar Amounts in Thousands)

	Contribution Rate	Estimated Amount[1]
Average Contribution Rate as of June 30, 2008	8.63%	$7,857
1. Effect of change in membership demographics	0.00%	$0
Average Contribution Rate as of June 30, 2009	8.63%	$7,857

[1] *Based on projected fiscal year 2010-2011 annual payroll for members NOT in the DROP of $91,049.*

E. INFORMATION REQUIRED BY GASB

Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

Critical information to GASB is the historical comparison of the GASB required contributions to the actual contributions. This comparison demonstrates whether a plan is being funded on an actuarially sound basis and in accordance with the GASB funding requirements. Chart 16 below presents a graphical representation of this information for the Plan.

The other critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the valuation value of assets to the actuarial accrued liabilities of the plan as calculated under GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other changes.

The details regarding the calculations of these values and other GASB numbers may be found in Section 4, Exhibits I, II, and III.

These graphs show key GASB factors.

CHART 16

Required Versus Actual Contributions

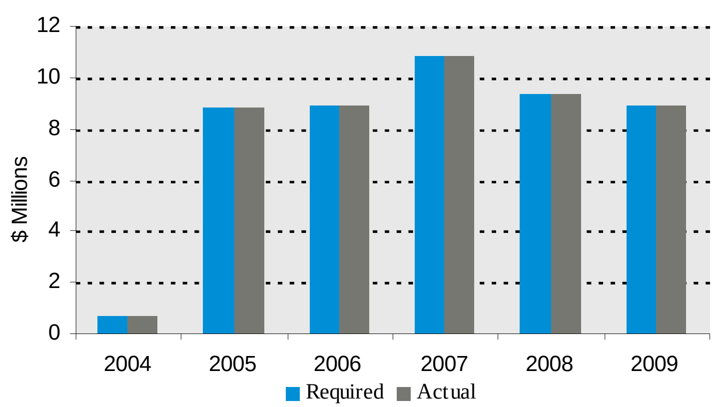


CHART 17

Funded Ratio

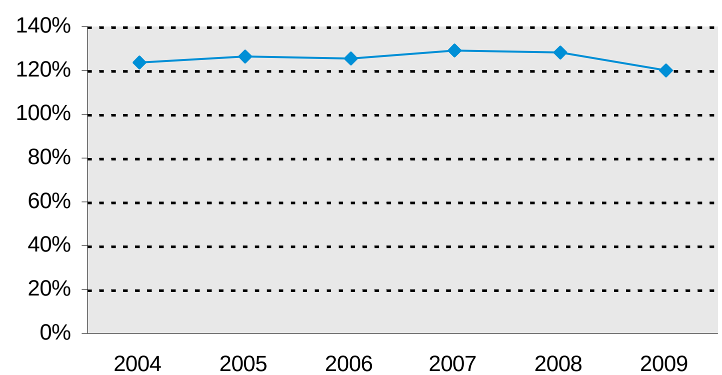


EXHIBIT A

Table of Plan Coverage

i. Tier 1

Category	Year Ended June 30 2009	Year Ended June 30 2008	Change From Prior Year
Active members in valuation			
Non-DROP			
Number	73	89	-18.0%
Average age	47.5	47.1	N/A
Average service	22.9	22.4	N/A
Projected total compensation	$7,869,415	$9,020,962	-12.8%
Projected average compensation	$107,800	$101,359	6.4%
Member account balances	$13,441,893	$15,359,889	-12.5%
Total active vested members	73	89	-18.0%
DROP			
Number	159	159	0.0%
Average age	55.0	54.7	N/A
Average service	24.5	24.3	N/A
Projected total compensation	$14,114,789	$13,441,921	5.0%
Projected average compensation	$88,772	$84,540	5.0%
Vested terminated members			
Number	5	6	-16.7%
Average age	49.2	48.3	N/A
Retired members			
Number in pay status	319	328	-2.7%
Average age	71.4	71.4	N/A
Average monthly benefit(1)	$4,366	$4,228	3.3%
Disabled members			
Number in pay status	259	251	3.2%
Average age	62.9	62.3	N/A
Average monthly benefit(1)	$4,109	$3,995	2.9%
Beneficiaries			
Number in pay status	234	228	2.6%
Average age	68.9	68.7	N/A
Average monthly benefit(1)	$2,219	$2,163	2.6%

(1) *Excludes supplemental benefits paid from PRSB.*

EXHIBIT A

Table of Plan Coverage

ii. Tier 2

Category	Year Ended June 30: 2009	Year Ended June 30: 2008	Change From Prior Year
Active members in valuation			
Non-DROP			
Number	924	928	-0.4%
Average age	36.9	36.0	N/A
Average service	8.0	7.0	N/A
Projected total compensation	$79,677,527	$75,956,983	-4.9%
Projected average compensation	$86,231	$81,850	5.4%
Member account balances	$66,453,739	$55,638,156	19.4%
Total active vested members	614	529	16.1%
DROP			
Number	8	6	33.3%
Average age	57.0	56.7	N/A
Average service	12.1	10.7	N/A
Projected total compensation	$692,915	$492,723	40.6%
Projected average compensation	$86,614	$82,120	5.5%
Vested terminated members			
Number	71	67	6.0%
Average age	36.8	35.7	N/A
Retired members			
Number in pay status	4	4	0.0%
Average age	54.9	53.9	N/A
Average monthly benefit(1)	$1,174	$1,167	0.6%
Disabled members			
Number in pay status	48	44	9.1%
Average age	41.7	41.2	N/A
Average monthly benefit(1)	$3,042	$3,054	-0.4%
Beneficiaries			
Number in pay status	1	1	0.0%
Average age	35.5	34.5	N/A
Average monthly benefit(1)	$2,381	$2,369	0.5%

(1) *Excludes supplemental benefits paid from PRSB.*

EXHIBIT B

Members in Active Service and Projected Average Compensation
By Age, Years of Service as of June 30, 2009– Non-DROP Active Members Only*

i. Tier 1

		Years of Service								
Age	**Total**	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35-39**	**40 & over**
Under 25	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
25 - 29	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
30 - 34	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
35 - 39	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
40 - 44	10	- -	- -	- -	6	4	- -	- -	- -	- -
	$107,375	- -	- -	- -	$90,765	$132,292	- -	- -	- -	- -
45 - 49	59	- -	- -	- -	11	35	13	- -	- -	- -
	107,942	- -	- -	- -	96,820	108,942	$114,660	- -	- -	- -
50 - 54	4	- -	- -	- -	1	- -	2	1	- -	- -
	106,772	- -	- -	- -	123,384	- -	106,940	$89,823	- -	- -
55 - 59	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
60 - 64	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
65 - 69	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
70 & over	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	73	- -	- -	- -	18	39	15	1	- -	- -
	$107,800	- -	- -	- -	$96,277	$111,337	$113,631	$89,823	- -	- -

** Excludes 159 active members in DROP with projected average compensation of $88,772.*

EXHIBIT B

Members in Active Service and Projected Average Compensation By Age, Years of Service as of June 30, 2009– Non-DROP Active Members Only*

ii. Tier 2

		Years of Service							
Age	**Total**	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35 & over**
Under 25	19	19	- -	- -	- -	- -	- -	- -	- -
	$67,593	$67,593	- -	- -	- -	- -	- -	- -	- -
25 - 29	162	129	33	- -	- -	- -	- -	- -	- -
	76,220	73,296	$87,649	- -	- -	- -	- -	- -	- -
30 - 34	187	78	81	28	- -	- -	- -	- -	- -
	83,041	74,709	87,567	$93,160	- -	- -	- -	- -	- -
35 - 39	252	52	79	109	12	- -	- -	- -	- -
	88,482	75,537	88,047	93,223	$104,371	- -	- -	- -	- -
40 - 44	198	21	38	106	32	1	- -	- -	- -
	91,997	82,262	87,298	92,660	101,724	$93,522	- -	- -	- -
45 - 49	72	4	15	32	21	- -	- -	- -	- -
	93,880	82,109	88,353	93,640	100,436	- -	- -	- -	- -
50 - 54	25	2	4	12	7	- -	- -	- -	- -
	93,539	94,365	105,681	91,473	89,905	- -	- -	- -	- -
55 - 59	7	4	1	1	1	- -	- -	- -	- -
	87,830	89,577	79,304	87,425	89,772	- -	- -	- -	- -
60 - 64	2	1	- -	1	- -	- -	- -	- -	- -
	145,764	201,893	- -	89,635	- -	- -	- -	- -	- -
65 – 69	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
70 & Over	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	924	310	251	289	73	1	- -	- -	- -
	$86,231	$75,160	$87,991	$92,951	$100,492	$93,522	- -	- -	- -

** Excludes 8 active members in DROP with projected average compensation of $86,614.*

EXHIBIT C

Reconciliation of Member Data – June 30, 2008 to June 30, 2009

	Non-DROP Active Members	Vested Terminated Members	Pensioners/ DROP**	Disableds	Beneficiaries	Total
Number as of June 30, 2008	1,017	73	497	295	229	2,111
New members	19	0	0	0	0	19
Terminations – with vested rights	-3	3	0	0	0	0
Contributions Refunds	-15	0	0	0	0	-15
Retirements/ DROP	-18	-1	19	0	0	0
New disabilities	-4	0	-11	15	0	0
Return to work	1	-1	0	0	0	0
Died with or without beneficiary	0	0	-15	-3	6*	-12
Data adjustments	0	2	0	0	0	2
Number as of June 30, 2009	997	76	490	307	235	2,105

* *This is the net* increase *in the number of beneficiaries after subtracting the number of beneficiaries who died during the year.*

** *Includes 165 and 167 active members in DROP as of June 30, 2008 and June 30, 2009, respectively.*

EXHIBIT D

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended June 30, 2009		Year Ended June 30, 2008	
Contribution income:				
Employer contributions	$8,938,488		$9,363,476	
Employee contributions	7,172,358		6,187,642	
Less administrative expenses	-952,104		-944,599	
Net contribution income		$15,158,742		$14,606,519
Investment income:				
Interest, dividends and other income	$31,637,317		$33,111,774	
Adjustment toward market value	-5,579,874		81,599,655	
Less investment fees	-5,051,129		-6,473,173	
Net investment income		21,006,314		108,238,256
Total income available for benefits		$36,165,056		$122,844,775
Less benefit payments:				
Benefit payments	-$43,177,071		-$39,493,929	
Post retirement supplemental benefits	-3,847,601		-3,455,951	
Refunds of contributions	-338,145		-646,248	
Net benefits payments		-$47,362,817		-$43,596,128
Change in reserve for future benefits		-$11,197,761		$79,248,647

EXHIBIT E

Summary Statement of Assets

	Year Ended June 30, 2009		Year Ended June 30, 2008	
Cash equivalents		$873,933		$2,728,472
Accounts receivable:				
Receivables for investments sold	$9,412,412		$8,959,897	
Interest and dividends	3,920,569		4,120,809	
Others receivables	5,989,598		1,859,150	
Total accounts receivable		19,322,579		14,939,856
Investments:				
Domestic and international equity	$425,443,903		$602,025,099	
Government and corporate bonds	271,270,860		320,440,791	
Real estate	82,120,425		117,380,747	
Emerging market equity	39,477,963		31,124,104	
Collateral held for securities lent	121,162,658		177,979,889	
Other investments	18,452,730		17,364,513	
Total investments at market value		957,928,539		1,266,315,143
Total assets		$978,125,051		$1,283,983,471
Less accounts payable:				
Collateral held for securities lent	-$121,162,658		-$177,979,889	
Payable for investments and foreign currency purchased	-21,113,266		-14,423,316	
Prepaid employer contributions	0		-1,936,883	
Other liabilities	-3,121,354		-1,594,678	
Total accounts payable		-$145,397,278		-$195,934,766
Net assets at market value		$832,727,773		$1,088,048,705
Net assets at actuarial value		$1,144,305,084		$1,155,502,845
Net assets at valuation value		$1,045,774,084		$1,066,777,845

Note: Results may not total properly due to rounding.

EXHIBIT F

Actuarial Balance Sheet

An overview of the System's funding is given by an Actuarial Balance Sheet. In this approach, we first determine the amount and timing of all future payments that will be made by the System for current participants. We then discount these payments at the valuation interest rate to the date of the valuation, thereby determining their present value. We refer to this present value as the "liability" of the Plan.

Second, we determine how this liability will be met. These actuarial "assets" include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments.

Actuarial Balance Sheet (Dollar Amounts in Thousands)

Assets	**Total**
1. Total valuation assets	$1,045,774
2. Present value of future member normal cost	$69,035
3. Present value of future employer normal cost	$161,831
4. Unfunded/(prefunded) actuarial accrued liability	-$171,419
5. Total current and future assets	$1,105,221
Liabilities	
6. Present value of benefits already granted, excludes current active DROP	$499,021
7. Present value of benefits for current active DROP	$148,678
8. Present value of benefits to be granted	$457,522
9. Total liabilities	$1,105,221

EXHIBIT G

Summary of Reported Asset Information as of June 30, 2009

	Reserves$(000)
Employer Advance/Retired Reserves	$808,590
Reserve for Market Stabilization	(65,329)
Active Member Reserves	83,324
Other Reserve	(92,388)
DROP Reserve[1]	95,577
Reserve for PRSB[1]	3,572
Reserve for City Surplus[1],[2]	(618)
Net Assets Held in Trust for Benefits	$832,728

(1) *Non-valuation reserve*

(2) *The negative City Surplus Reserve is treated as an asset; it represents the City's prior contribution shortfall due to the difference between the actual versus the projected surplus prior to June 30, 2009. This difference is taken into account in developing the contribution rate requirement for 2010-2011.*

EXHIBIT H

Development of Unfunded /(Prefunded) Actuarial Accrued Liability as of June 30, 2009

		(Dollar amounts in Thousands)
1	Unfunded/(prefunded) actuarial accrued liability at beginning of year	-$236,742
2	Gross Normal Cost at middle of year	27,806
3	Actual employer and member contributions	-16,111
4	Interest (whole year on (1) plus half year on (2) + (3))	-19,049
5	Expected unfunded/(prefunded) actuarial accrued liability at end of year	-$244,096
6	Actuarial (gain)/loss due to all changes:	
	Experience (gain)/loss	
	a. Loss from investment	$79,487
	b. Lower than expected COLA increases from continuing retirees	-1,210
	c. Other experience (gain)/loss	-5,600
	d. Subtotal	$72,677
7	Actual unfunded/(prefunded) actuarial accrued liability at end of year	-$171,419

EXHIBIT I

Section 415 Limitations

Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for non-compliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit indexed for inflation. That limit is $195,000 for 2009 and 2010. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must generally be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions.

Benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.

Contributions rates determined in this valuation have not been reduced for the Section 415 limitations. Actual limitations will result in gains as they occur.

EXHIBIT J

Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or Actuarial Assumptions: The estimates on which the cost of the Plan is calculated including:

(a) Investment return — the rate of investment yield that the Plan will earn over the long-term future net, in this case, of investment and administrative expenses.

(b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;

(c) Retirement rates — the rate or probability of retirement at a given age; and

(d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Normal Cost: The amount of contributions required to fund the level cost allocated to the current year of service.

Actuarial Accrued Liability For Actives: The equivalent of the accumulated normal costs allocated to the years before the valuation date.

Actuarial Accrued Liability For Pensioners: The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

Unfunded (Prefunded) Actuarial Accrued Liability: The extent to which the actuarial accrued liability of the Plan exceeds (or is exceeded by) the assets of the Plan. There are many approaches to paying off the unfunded or prefunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Amortization of the Unfunded (Prefunded) Actuarial Accrued Liability:	Payments made over a period of years equal in value to the Plan's unfunded or prefunded actuarial accrued liability.
Investment Return:	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the actual market rate of return to avoid significant swings in the value of assets from one year to the next.

EXHIBIT I

Supplementary Information Required by GASB – Schedule of Employer Contributions (Dollar Amounts in Thousands)

Plan Year Ended June 30	Annual Required Contributions	Actual Contributions	Percentage Contributed
2004	$728	$728	100.0%
2005	8,806	8,806	100.0%
2006	8,886	8,886	100.0%
2007	10,807	10,807	100.0%
2008	9,363	9,363	100.0%
2009	8,938	8,938	100.0%

EXHIBIT II

Supplementary Information Required by GASB – Schedule of Funding Progress (Dollar Amounts in Thousands)

Actuarial Valuation Date	Valuation Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Prefunded AAL (a) - (b)	Funded Ratio (%) (a) / (b)	Covered Payroll (c)	Prefunded AAL as a Percentage of Covered Payroll (%) [(a) - (b)] / (c)
6/30/2004	$793,059	$642,194	$150,865	123.5	$68,483	220.3
6/30/2005	846,718	670,101	176,617	126.4	73,422	240.6
6/30/2006	906,223	722,722	183,501	125.4	82,493	222.4
6/30/2007	1,000,961	773,236	227,725	129.5	89,516	254.4
6/30/2008	1,066,778	830,036	236,742	128.5	98,913	239.3
6/30/2009	1,045,774	874,355	171,419	119.6	102,355	167.5

EXHIBIT III

Supplementary Information Required by GASB

Valuation date	June 30, 2009
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Level percent of payroll for total Unfunded Actuarial Accrued Liability or Prefunded Actuarial Accrued Liability
Remaining amortization period	15 years open (non-declining) for all Prefunded Actuarial Accrued Liability
Asset valuation method	The Actuarial Value of Assets is determined by phasing in any difference between actual and expected return on market value of assets over 5 years. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves (i.e. DROP Reserve, PRSB Reserve and City Surplus).
Actuarial assumptions:	
Investment rate of return	8.25%
Inflation rate	3.75%
Real across-the-board salary increase	0.25%
Projected salary increases*	4.00% to 10.00%
Cost of living adjustments	4.00% of Tier 1 retirement income and 3.00% of Tier 2 retirement income
Plan membership:	
Retired members and beneficiaries receiving benefits	865
Terminated members entitled to, but not yet receiving benefits	76
DROP members	167
Active members	997
Total	2,105

* *Includes inflation at 3.75% plus real across-the-board salary increase of 0.25% plus merit and promotion increases. See Exhibit IV for these increases.*

EXHIBIT IV
Actuarial Assumptions and Actuarial Cost Method

Post – Retirement Mortality Rates:

Healthy:	1994 Group Annuity Mortality Table (separate tables for males and females) set back one year.
Disabled:	1981 Safety Disability Mortality Table set back five years.
Employee Contribution Rates and Optional Benefits:	For members, 1994 Group Annuity Mortality Table set back one year weighted 90% male and 10% female. For beneficiaries, 1994 Group Annuity Mortality Table set back one year weighted 10% male and 90% female. Please note that in determining optional benefits for disabled members, the 1981 Safety Disabled Mortality Table set back five years is used instead.

Termination Rates Before Retirement:

Rate (%)

Mortality

	Tier 1 & Tier 2	
Age	**Male**	**Female**
25	0.06	0.03
30	0.08	0.03
35	0.08	0.04
40	0.10	0.07
45	0.15	0.09
50	0.23	0.13
55	0.40	0.21
60	0.71	0.39
65	1.29	0.76

All pre-retirement deaths are assumed to be duty.

Termination Rates Before Retirement (Continued):

Rate (%)

Disability

	Tier 1		Tier 2	
Age	**Duty**	**Non-Duty**	**Duty**	**Non-Duty**
20	0.09	0.00	0.30	0.00
25	0.28	0.01	0.42	0.01
30	0.31	0.01	0.60	0.01
35	0.70	0.03	0.84	0.03
40	0.95	0.12	1.22	0.12
45	1.25	0.25	1.76	0.25
50	2.50	0.20	1.71	0.20
55	7.00	0.00	2.53	0.00
60	0.00	0.00	0.00	0.00

Termination Rates Before Retirement (Continued):

Rate (%)

Withdrawal (Refund of Contributions)

	0-1 Yrs		1-2 Yrs		2-3 Yrs		3-4 Yrs		4-10 Yrs		10+ Yrs	
Age	**Tier1**	**Tier 2**	**Tier 1**	**Tier 2**	**Tier 1**	**Tier 2**	**Tier 1**	**Tier 2**	**Tier 1**	**Tier 2**	**Tier 1**	**Tier 2**
20	4.47	8.94	4.47	4.47	4.47	3.00	4.47	2.50	2.87	2.50	2.87	2.50
25	4.47	8.94	4.47	4.47	4.47	3.00	4.47	2.50	2.87	2.50	2.87	2.50
30	4.47	8.94	4.47	4.47	4.47	3.00	4.47	2.50	1.95	1.95	1.77	1.77
35	4.47	8.94	4.47	4.47	4.47	3.00	4.47	2.50	0.83	0.83	0.58	0.58
40	4.47	8.94	4.47	4.47	4.47	3.00	4.47	2.50	0.38	0.38	0.20	0.20
45	4.47	8.94	4.47	4.47	4.47	3.00	4.47	2.50	0.20	0.20	0.03	0.03
50	4.47	8.94	4.47	4.47	4.47	3.00	4.47	2.50	0.00	0.00	0.00	0.00
55	4.47	8.94	4.47	4.47	4.47	3.00	4.47	2.50	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Termination Rates Before Retirement (Continued):

Rate (%)

Vested Termination (Deferred Vested Benefit)		
Age	**Tier 1**	**Tier 2**
20	0.70	0.70
25	0.70	0.70
30	0.70	0.70
35	0.70	0.70
40	0.70	0.60
45	0.60	0.35
50	0.00	0.00
55	0.00	0.00
60	0.00	0.00

Retirement Rates:

	Rate (%)	
Age	**Tier 1**	**Tier 2**
50	12.72	5.31
51	7.63	4.12
52	7.63	4.64
53	5.09	14.28
54	5.09	16.74
55	10.60	19.46
56	13.77	11.72
57	14.03	7.82
58	16.66	9.69
59	29.67	9.17
60	100.00	100.00

DROP Assumptions:	**Tier 1**	**Tier 2**
First Year Eligible	100%	50%
Second Year Eligible	0%	25%
Third Year Eligible	0%	10%
Thereafter	0%	0%

Members are assumed to remain in DROP for 4 years

Retirement Age and Benefit for Deferred Vested Members	For current deferred vested members, the retirement assumption is age 50. It is assumed that 50% of future deferred vested members will continue to work for a reciprocal employer. For those that continue to work for a reciprocal employer, a 4.20% compensation increase per annum is assumed.
Future Benefit Accruals:	1.0 year of service per year.
Unknown Data for Members:	Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.
Inclusion of Deferred Vested Members:	All deferred vested members are included in the valuation.
Percent Married:	85%
Age of Spouse:	Wives are 4 years younger than their husbands.
Net Investment Return:	8.25%, net of administration and investment expenses.
Employee Contribution Crediting Rate:	8.25%, assumed in the valuation.
Consumer Price Index:	Increase of 4.00% per year, retiree COLA increases due to CPI are limited to maximum at 4.00% per year for Tier 1 and 3.00% for Tier 2.

Salary Increases:

Annual Rate of Compensation Increase

Inflation: 3.75% per year plus 0.25% real across-the-board salary increase; plus the following Merit and Promotion increases based on completed years of service and age.

5 or less years of service:

Service	Annual Increase
0-1	6.00%
1-2	5.75%
2-3	5.50%
3-4	5.25%
4-5	5.25%

More than 5 years of service:

Age	Annual Increase
25-29	1.70%
30-34	1.30%
35-39	1.10%
40-44	0.50%
45-49	0.25%
50-54	0.15%
55+	0.00%

There is an additional 0.75% increase at the time of service retirement to reflect the average leave time cash outs for management employees.

To reflect the conversion of sick leave to increase final average salary at retirement for non-management Fire and Police members, we have increased the normal cost and actuarial accrued liability for all active members by 7.0% to anticipate the conversion.

Actuarial Value of Assets:	The Actuarial Value of Assets is determined by phasing in any difference between actual and expected return on market value of assets over 5 years.
Valuation Value of Assets:	The Actuarial Value of Assets reduced by the value of the non-valuation reserves.
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Normal Cost and Actuarial Accrued Liability is calculated on an individual basis and is based on costs allocated as a level percentage of compensation. The Normal cost is calculated on an aggregate basis by taking the present value of Future Normal Costs divided by the Present Value of Future Salaries to obtain a Normal Cost Rate. This Normal Cost rate is then multiplied by the total current salaries.
Changes in Actuarial Assumptions:	There have been no changes in actuarial assumptions since the previous actuarial valuation.

EXHIBIT V
Summary of Plan Provisions

This exhibit summarizes the major provisions of the Retirement System included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Membership Eligibility:	
	All sworn Fire, Police, and Airport Public Safety personnel are eligible.
Tier 1	Safety members hired before August 27, 1990.
Tier 2	Safety members hired on or after August 27, 1990.
Final Compensation (FAS) for Benefit Determination:	
Tier 1	Final highest consecutive thirty-six months of compensation earnable calculated using the rate of pay actually earned by the member in effect at the time of retirement. Some members are also entitled to final compensation determined based on a rank average (§3-301 and §3-302).
Tier 2	Highest consecutive thirty-six months of compensation earnable calculated using the rate of pay actually earned by the member in effect at the time of retirement (§3-401).
Service:	Years of service (Yrs).
Service Retirement Eligibility:	
Tier 1	Age 50 with 10 years of service, or age 65 regardless of service (§3-332).
Tier 2	Age 50 with 5 years of service, or age 65 regardless of service (§3-410).

Benefit Formula:

Tier 1 (§3-333)	If a member has at least 20 years of service at age 50: Yrs before 50 (limited to 20) * 2.75% * FAS + Yrs after 50 (limited to 10) * 2.00% * FAS If a member has less than 20 years of service at age 50: Yrs (limited to 20) * 2.75% * FAS + Yrs of service in excess of 20 (limited to 10) * 2.00% * FAS

Tier 2 (§3-411)

Retirement Age	Benefit Formula
50	2.00% x FAS x Yrs
51	2.14% x FAS x Yrs
52	2.28% x FAS x Yrs
53	2.42% x FAS x Yrs
54	2.56% x FAS x Yrs
55+	2.70% x FAS x Yrs

Maximum Benefit
(§3-333 and §3-411)**:** 75% of FAS

Deferred Retirement Option Program (DROP):	
Eligibility	Same as Service Retirement.
Benefits Under DROP	DROP benefits (calculated using age, service and salary at the commencement date of participation in DROP) will be credited to a DROP account with interest at rates determined by the Board. Members will no longer be required to make member contributions. Members may participate in DROP for up to ten years (§3-353 and §3-424).
Ordinary Disability:	
Tier 1	
Eligibility	Ten years of service (§3-335).
Benefit Formula	Greater of 1.65% x FAS x Yrs, 36.67% of FAS or Service Retirement benefit (§3-336).
Tier 2	
Eligibility	Ten years of service (§3-412).
Benefit Formula	Greater of 1.5% x FAS x Yrs, 33.00% of FAS or Service Retirement benefit (§3-413).
Duty Disability:	
Tier 1	
Eligibility	No age or service requirements (§3-335).
Benefit Formula	55% of FAS or Service Retirement benefit, if greater (§3-336).
Tier 2	
Eligibility	No age or service requirements (§3-412)
Benefit Formula	50% of FAS or Service Retirement benefit, if greater (§3-413).

Pre-Retirement Death:

<u>*All Members*</u>	
Eligibility	None.
Basic Lump Sum Benefit	Refund of employee contributions with interest, plus one month's compensation for each year of service, to a maximum of six month's compensation (§3-330 and §3-408 for Tier 1 and Tier 2, respectively).
Death in Line of Duty	55% (50% for Tier 2) of FAS or Service Retirement benefit, if greater and, payable to spouse/domestic partner or minor children (§3-330 and 3-408 for Tier 1 and Tier 2, respectively).
	OR
<u>*Vested Members*</u>	
Eligibility	Ten (five for Tier 2) years of service.
Basic Benefit	*66-2/3% of member's unmodified allowance continued to eligible Spouse/Domestic Partner (*§3-338 and §3-415 for Tier 1 and Tier 2, respectively).

Death After Retirement:	
All Members	
Service or Ordinary Disability Retirement	66-2/3 % of member's unmodified allowance continued to eligible spouse/domestic partner (§3-338 and §3-415 for Tier 1 and Tier 2, respectively).
Line-of-Duty Disability	100% of member's allowance continued to eligible spouse/domestic partner (§3-338 and §3-415 for Tier 1 and Tier 2, respectively).
Withdrawal Benefits:	
Less than Five Years of Service (Ten Years for Tier 1)	Refund of accumulated employee contributions with interest.
Five or More Years of Service (Ten Years for Tier 1)	If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire (§3-344 and §3-420 for Tier 1 and Tier 2, respectively).
Post-retirement Cost-of-Living Benefits:	
Tier 1	Future changes based on Consumer Price Index to a maximum of 5% per year. Some members are entitled to a cost-of-living benefit based on a rank average (§3-301).
Tier 2	Future changes based on Consumer Price Index to a maximum of 3% per year (§3-411).

Member Contributions:	Please refer to Appendix A for specific rates.
Tier 1	Provide 1/3 of the funding required to pay a benefit equal to 50% of FAS at age 50 (or when a member has 20 years of service if later but not later than age 60) to a member with 66-2/3% automatic continuance payable to his/her eligible spouse/domestic partner (§3-319). The contribution will be prorated if the member has less than 20 years of service at age 60.
Tier 2	9% pay (§3-405)
Tier 1	*Refund of contribution paid for 66 2/3% automatic continuance. Provide a refund of contributions at service or disability retirement for those members without an eligible spouse/domestic partner (§3-319).*
City Contributions:	The amortization period for Prefunded Actuarial Accrued Liability is amortized over an open non-declining 15-year period.
Post Retirement Supplemental Benefits (PRSB):	PSRB may be paid to active and retired DROP participants and eligible retirees and beneficiaries (§3-354). This benefit has been excluded from this valuation.

NOTE: *The summary of major plan provisions is designed to outline principal plan benefits as interpreted for purposes of the actuarial valuation. If the Retirement System should find the plan summary not in accordance with the actual provisions, the Retirement System should alert the actuary so they can both be sure the proper provisions are valued.*

Appendix A
Member Contributions Rates

Comparison of member rates calculated in the June 30, 2008 and June 30, 2009 valuations:

	June 30, 2009 Actuarial Valuation		June 30, 2008 Actuarial Valuation	
	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*
Tier 1 Members	4.87%	$399	4.89%	$399
Tier 2 Members	9.00%	$7,458	9.00%	$7,458
All Member Categories Combined	8.63%	$7,857	8.63%	$7,857

** Amounts are in thousands and are based on the following projected fiscal year 2010 – 2011 annual payroll for members NOT in the DROP (also in thousands):*

	Excludes DROP Members
Tier 1	$ 8,184
Tier 2	82,865
Total	$91,049

Appendix A
Member Contribution Rates (Continued)

Tier 1 Members' Contribution Rates based on the June 30, 2009 Actuarial Valuation as a percentage of payroll

Entry Age	Exact Age Rate	Exact Age Dependent Portion	¼ Age Rate	¼ Age Dependent Portion	½ Age Rate	½ Age Dependent Portion	¾ Age Rate	¾ Age Dependent Portion
20	3.76%	0.05261	3.81%	0.05261	3.85%	0.05261	3.90%	0.05261
21	3.95%	0.05261	4.00%	0.05261	4.05%	0.05261	4.10%	0.05261
22	4.15%	0.05261	4.21%	0.05261	4.26%	0.05261	4.32%	0.05261
23	4.37%	0.05261	4.43%	0.05261	4.49%	0.05261	4.55%	0.05261
24	4.61%	0.05261	4.68%	0.05261	4.75%	0.05261	4.81%	0.05261
25	4.88%	0.05261	4.95%	0.05261	5.02%	0.05261	5.09%	0.05261
26	5.17%	0.05261	5.25%	0.05261	5.33%	0.05261	5.41%	0.05261
27	5.49%	0.05261	5.57%	0.05261	5.66%	0.05261	5.75%	0.05261
28	5.83%	0.05261	5.93%	0.05261	6.03%	0.05261	6.12%	0.05261
29	6.22%	0.05261	6.33%	0.05261	6.43%	0.05261	6.54%	0.05261
30	6.65%	0.05261	6.63%	0.05343	6.61%	0.05426	6.59%	0.05508
31	6.58%	0.05591	6.56%	0.05678	6.54%	0.05765	6.52%	0.05852
32	6.51%	0.05940	6.49%	0.06031	6.47%	0.06123	6.45%	0.06215
33	6.43%	0.06307	6.42%	0.06403	6.40%	0.06499	6.38%	0.06595
34	6.36%	0.06691	6.34%	0.06792	6.33%	0.06893	6.31%	0.06994
35	6.29%	0.07095	6.27%	0.07202	6.26%	0.07308	6.24%	0.07414
36	6.23%	0.07520	6.21%	0.07632	6.20%	0.07743	6.18%	0.07855
37	6.16%	0.07966	6.15%	0.08083	6.13%	0.08199	6.11%	0.08316
38	6.09%	0.08432	6.07%	0.08553	6.06%	0.08674	6.04%	0.08795
39	6.02%	0.08916	6.00%	0.09041	5.98%	0.09165	5.96%	0.09290
40	5.94%	0.09415	5.98%	0.09415	6.01%	0.09415	6.05%	0.09415
41	6.08%	0.09415	6.12%	0.09415	6.15%	0.09415	6.19%	0.09415
42	6.22%	0.09415	6.26%	0.09415	6.30%	0.09415	6.33%	0.09415
43	6.37%	0.09415	6.41%	0.09415	6.44%	0.09415	6.48%	0.09415
44	6.52%	0.09415	6.56%	0.09415	6.60%	0.09415	6.64%	0.09415

Appendix A
Member Contribution Rates (Continued)

	Exact Age		¼ Age		½ Age		¾ Age	
Entry Age	Rate	Dependent Portion	Rate	Dependent Portion	Rate	Dependent Portion	Rate	Dependent Portion
45	6.67%	0.09415	6.72%	0.09415	6.76%	0.09415	6.80%	0.09415
46	6.84%	0.09415	6.88%	0.09415	6.92%	0.09415	6.97%	0.09415
47	7.01%	0.09415	7.05%	0.09415	7.10%	0.09415	7.14%	0.09415
48	7.19%	0.09415	7.24%	0.09415	7.28%	0.09415	7.33%	0.09415
49	7.38%	0.09415	7.43%	0.09415	7.48%	0.09415	7.53%	0.09415
50	7.58%	0.09415	7.63%	0.09415	7.69%	0.09415	7.75%	0.09415
51	7.80%	0.09415	7.86%	0.09415	7.92%	0.09415	7.99%	0.09415
52	8.05%	0.09415	8.08%	0.09415	8.12%	0.09415	8.16%	0.09415
53	8.19%	0.09415	8.21%	0.09415	8.22%	0.09415	8.23%	0.09415
54	8.25%	0.09415	8.24%	0.09415	8.23%	0.09415	8.22%	0.09415
55	8.21%	0.09415	8.20%	0.09415	8.19%	0.09415	8.18%	0.09415
56	8.17%	0.09415	8.15%	0.09415	8.14%	0.09415	8.12%	0.09415
57	8.11%	0.09415	8.19%	0.09415	8.26%	0.09415	8.34%	0.09415
58	8.42%	0.09415	8.50%	0.09415	8.59%	0.09415	8.67%	0.09415
59	8.75%	0.09415	8.75%	0.09415	8.75%	0.09415	8.75%	0.09415

Interest:	8.25% per annum
Mortality:	GAM 94 set back one year weighted 90% male and 10% female for member GAM 94 set back one year weighted 10% male and 90% female for beneficiary
Salary Increase:	See Exhibit IV in Section 4

Appendix B
Allocation of Actuarial Surplus

	June 30	
	2009	**2008**
Surplus as of Date of Valuation (Table 1)	$171,418,655	$236,742,025
Actuarial Surplus (Table 1)	83,983,112	153,738,443
Distributable Actuarial Surplus as of date of valuation (Table 2)	7,620,778	13,950,502
Allocation of Distributable Surplus as of Date of Valuation:		
City Allocation (Table 3)	5,080,519	9,300,335
PRSB Allocation (Table 3)	2,540,259	4,650,167
Total	$7,620,778	$13,950,502
Allocation of Projected Distributable Surplus as of Date of Next Valuation:		
City Allocation (Table 3)	$5,019,629	$9,188,871

The Allocation of Distributable Actuarial Surplus is sufficient to:

- Offset the City's contribution shortfall from the prior fiscal year and slightly decrease the City's contribution requirement for the 2010-2011 fiscal year from $21,589,678 to a net amount of $21,130,674 (see Table 4); and
- Provide a PRSB benefit of $288.97 per month over the 2010 calendar year (Table 5) under the current policy of 80% distribution.

Appendix B (continued)

Allocation of Actuarial Surplus

	June 30 2009	June 30 2008
Table 1: Calculation of Actuarial Surplus		
(1) Valuation Value of Assets	$1,045,774,084	$1,066,777,845
(2) Actuarial Accrued Liability	874,355,429	830,035,820
(3) Surplus: (1) – (2)	171,418,655	236,742,025
(4) Contingency Reserve: 10% of (2)	87,435,543	83,003,582
(5) Actuarial Surplus: (3) – (4)	83,983,112	153,738,443
Table 2: Determination of Distributable Actuarial Surplus		
(1) Actuarial Surplus (Table 1)	$83,983,112	$153,738,443
(2) Amortization of Balance of Actuarial Surplus:		
a. Amortization Period	15	15
b. Amortization Factor	0.090742	0.090742
c. Amortization of Balance of Actuarial Surplus (1) x (2b)	$7,620,778	$13,950,502
(3) Projected Surplus for Next Year 1.0825 x (1) – 1.04125 x (2c)	82,976,583	151,895,904
(4) Amortization of Balance of Projected Actuarial Surplus:		
a. Amortization Period	15	15
b. Amortization Factor	0.090742	0.090742
c. Amortization of Balance of Projected Actuarial Surplus (3) x (4b)	$7,529,444	$13,783,307

Appendix B (continued)

Allocation of Actuarial Surplus

	June 30	
	2009	**2008**
Table 3: Allocation of Distributable Actuarial Surplus:		
(1) Distributable Actuarial Surplus	$7,620,778	$13,950,502
(2) City Allocation: (1) x 2/3	5,080,519	9,300,335
(3) PRSB Allocation: (1) – (2)	2,540,259	4,650,167
The City Allocation (2) (along with any City Surplus Reserve and City Prepaid Contribution Accounts) is available to reduce the City's contributions for the fiscal year that commences immediately following the date of the valuation.		
The PRSB Allocations (along with the PRSB Reserve Account) is available to provide retirees, beneficiaries and DROP participants a monthly PRSB benefit during the calendar year that commences 6 months following the date of the valuation. The benefit is derived in Table 5.		
(4) Next Year Projected Distributable Actuarial Surplus	7,529,444	13,783,307
(5) City Allocation (4) x 2/3	5,019,629	9,188,871
The City allocation (5) (along with any City Surplus Reserve and City Prepaid Contribution Accounts) is available to reduce City contributions for the fiscal year that commences 12 months following the date of the valuation. Table 4 provides the projected City contribution requirements.		
The actual rather than the projected surplus will be used to determine the next calendar year's PRSB benefit.		

Appendix B (continued)

Allocation of Actuarial Surplus

	Fiscal Year 2010-2011			Fiscal Year 2009-2010		
	Tier 1	**Tier 2**	**Total**	**Tier 1**	**Tier 2**	**Total**
Table 4: City Contribution Requirements:						
(1) City Normal Cost Rate	26.43%	18.60%	20.28%	26.38%	18.49%	20.28%
(2) Projected Annual Payroll	$22,863,141	$83,585,751	$106,448,892	$21,983,789	$80,370,915	$102,354,704
(3) City Allocation of Distributable Actuarial Surplus	1,404,942	3,614,687	5,019,629	1,426,123	3,654,396	5,080,519
(4) City Surplus Reserve Account (From Prior Years)	0	0	0	-173,475	-444,525	-618,000
(5) ½ Year Interest on (4)	0	0	0	-7,156	-18,337	-25,493
(6) Total Contribution Offsets (3) + (4) + (5)	1,404,942	3,614,687	5,019,629	1,245,492	3,191,534	4,437,026
(7) Total Contribution Requirement (1) * (2)	6,042,728	15,546,950	21,589,678	5,799,323	14,860,582	20,659,905
(8) City Contribution Requirement Prior To Application of Prepaid Employer Contribution Account (7) – (6), not less than 0	4,637,786	11,932,263	16,570,049	4,553,831	11,669,048	16,222,879
(9) Contribution Rate Adopted by the City for Fiscal Year 2009-2010						11.74%
(10) Projected City Contributions Based on Rate Adopted by the City (9) * (2)				$2,580,897	$9,435,545	$12,016,442
(11) Net Additional City Contribution Before Application of Prepaid Employer Contribution Account (8) – (10)	4,637,786	11,932,263	16,570,049	1,972,934	2,233,503	4,206,437
(12) City's Prepaid Employer Contribution Account Balance (Negative Account Balance Represents Contribution Shortfall)			-4,379,953[1]			0
(13) ½ Year Interest on (12)			-180,672			0
(14) City's Fiscal Year Contribution After Application of Prepaid Employer Contribution Account (11) – (12) – (13), not less than 0	5,914,258	15,216,416	21,130,674	1,972,934	2,233,503	4,206,437
(15) Projected City Surplus Reserve Account for Future Years			0			0
(16) Projected Residual Prepaid Employer Contribution Account at Year End. (12) + (13) – (11) Adjusted with ½ Year Interest (Negative Account Balance Represents Contribution Shortfall)			0			-4,379,953[1]

[1] *Projected contribution shortfall for fiscal year 2009-2010 is due to the difference between the actual and the estimated June 30, 2009 surplus allocated to the City in the June 30, 2008 valuation for offsetting the City's contributions for the 2009/2010 plan year.*

Appendix B (continued)

Allocation of Actuarial Surplus

	June 30	
	2009	**2008**
Table 5: Calculation of PRSB and PRSB Reserve Account:		
(1) PRSB Allocation of Distributable Actuarial Surplus	$2,540,259	$4,650,167
(2) Distribution percentage	80%	80%
(3) Preliminary PRSB distribution: (1) x (2)	$2,032,208	$3,720,134
(4) Number of eligible participants (Retirees, Beneficiaries & DROP Participants)	951	938
(5) Preliminary Monthly PRSB Benefit: (3) / (4) / 12	$178.08	$330.50
(6) Monthly Retiree Medical Trust Premium for the calendar year that commences 6 months following the date of valuation	$729.00	$824.00
(7) Benefit Shortfall: (6) – (5)	$550.92	$493,50
(8) PRSB Reserve Account	$3,572,000	$3,196,000
(9) Estimated July 1 to December 31 PRSB Payments	$2,306,479	$2,366,180
(10) Net PRSB Reserve Account 6 months following the date of valuation	$1,265,521	$829,820
(11) Draw from PRSB Reserve Account (lesser of (10) / (4) /12 or (7))	$110.89	$73.72
(12) Final monthly PRSB Benefit for next calendar year: (5) + (11)	$288.97	$404.22
(13) Estimated PRSB Reserve Account at the end of the next calendar year: (1) + (10) – [(12) * (4) * 12]	$508,054	$930,087

Note: The actual, rather than projected June 30, 2010 surplus, will be used to determine the 2011 calendar year PRSB benefit.

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