City of Fresno Fire and Police Retirement System

Actuarial Valuation and Review
as of June 30, 2010

SEGAL

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November 29, 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, 2010. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal year 2011-2012 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 | Andy Yeung

Paul Angelo, FSA, MAAA, FCA, EA	*Andy Yeung, ASA, MAAA, EA*
Senior Vice President and Actuary	*Vice President and Associate Actuary*

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SECTION 1

VALUATION SUMMARY

SECTION 2

VALUATION RESULTS

SECTION 3

SUPPLEMENTAL INFORMATION

SECTION 4

REPORTING INFORMATION

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, 2010. 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, 2010, provided by the Retirement System;
- The assets of the System as of June 30, 2010, 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, 2010, 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 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, 2011 through June 30, 2012.

Significant Issues in Valuation Year

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

Ref: Page 34

- The results of this valuation reflect changes in economic and non-economic actuarial assumptions adopted by the Board for the June 30, 2010 valuation. All of the actuarial assumptions recommended by Segal in the June 30, 2009 triennial Actuarial Experience Study and June 30, 2010 Review of Economic Assumptions were adopted by the Board and have been applied in this valuation. The adopted changes were documented in our Actuarial Experience Study and Review of Economic Assumptions and are also outlined in Section 4, Exhibit IV of this report. There is a net increase in the cost of the plan primarily as a result of a decrease in the investment return assumption from 8.25% to 8.00% per year, offset somewhat by the change in the DROP assumption that predicts active employees would stay in the DROP for seven years (increased from four years) before retiring from the System.

Ref: Page 32

- In the June 30, 2009 valuation, the ratio of the valuation value of assets to actuarial accrued liabilities was 119.6%. In this June 30, 2010 valuation, the funding ratio has decreased to 110.8%. The funding ratio as of June 30, 2010 if measured using the market value of assets instead of the valuation value of assets is 89.2%, which is an increase from the prior year ratio of 84.0%.
- The Retirement System's prefunded actuarial accrued liability (PAAL) as of June 30, 2009 was $171.4 million. In this year's valuation, the PAAL has decreased to $99.3 million on a valuation value of assets basis.

Ref: Page 27

- The Plan had a net actuarial experience loss of about $40.9 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 19.85% of payroll to 23.94% of payroll. The reasons for this change are: (i) lower than expected return on the valuation value of assets, (ii) difference between the actual and the estimated June 30, 2010 surplus allocated to the City in the June 30, 2009 valuation for offsetting the City's contributions for the 2010/2011 plan year, (iii) changes in actuarial assumptions, (iv) introduction of holiday leave cashout assumptions, offset somewhat by (v) lower normal cost due to change in membership demographics, (vi) lower than expected COLA increases for retiree and DROP participants[1], (vii) lower than expected salary increases and (viii) other

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[1] This includes a less than expected COLA increase for both July 2010 and July 2009, as the actual increase for July 2009 was not available when we prepared the June 30, 2009 valuation.

experience gains. 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 methodology that caused the City's contribution shortfall as described in (ii) above, as part of their deliberation of the results in the June 30, 2009 valuation, the Retirement Board decided that effective with this valuation, the System will apply the projected actuarial rate of return (taking into account the known deferred investment losses that will have to be recognized during 2010/2011 at the time of the projection) in lieu of the 8.00% assumed rate of return in projecting the surplus available to offset the City's contributions. That projected rate of return is estimated as 0% and is used in the calculation of Step (3) in Table 2 found in Appendix B.

Ref: Page 16

- The aggregate member rate calculated in this valuation has increased from at 8.71% of payroll to 8.74% of payroll. The change in member rate is due to changes in actuarial assumptions. A reconciliation of the Retirement System's aggregate member rate is provided in Section 2, Subsection D (see Chart 15).

- It has recently been brought to our attention by the System that the salary information provided in the actuarial data includes only the ongoing cashout of up to 104 hours of holiday leave for Police members, and does not include the cashout of up to 312 hours of holiday leave for Fire members. To reflect the conversion of holiday leave for Fire members, we have increased the salary for all active Fire members by a factor of 3.6% provided by the System to approximate such cashouts.

  It is our understanding that the 104 and 312 hours of cashout for Police and Fire members, respectively, are before the agreements reached between the City and the membership groups to increase the number of hours of cashout for the Police Tier 2 and all the Fire members. The recent Police Tier 2 MOU would increase the maximum number of additional holiday leave hour cashout for non-management and management employees to 308 hours and 488 hours, respectively, in the year of retirement. To reflect the cashout of additional holiday leave balance, we have increased the normal cost and the actuarial accrued liability for all active Tier 2 Police management and non-management members by an assumption provided by the System of 7.8% and 5.0%, respectively. The System is in the process of developing a similar assumption for the recent MOU for the Fire members. That assumption will be used in increasing the normal cost and the actuarial accrued liability in a future valuation when it becomes available.

  There is an increase in the UAAL of about $5.8 million (see Exhibit H) and an increase in the employer's contribution rate by about 1.15% of payroll (see Chart 14) as a result of the cashout assumptions included in this valuation.

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, 2010 is $198.2 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, 2010. This implies that if the Retirement System earns the assumed net rate of investment return of 8.00% 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 8.00% rate and all other actuarial assumptions are met, the contribution requirements would increase in each of the next few years.

Ref: Page 60

- The actuarial surplus as of June 30, 2010 (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 $198.2 million represent 22% of the market value of assets. Unless offset by future investment gains or other favorable experience, the recognition of the $198.2 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 110.8% to 89.2%.
  - If the deferred losses were recognized immediately in the valuation value of assets, the aggregate employer contribution rate would increase from 23.94% of payroll to 29.81% of payroll, assuming a 30-year period for amortizing the Plan's Unfunded Actuarial Accrued Liability (UAAL).
- As we have discussed with the Board during our surplus projection studies in 2009, 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, 2010 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, 2010		June 30, 2009	
Employer Contribution Rates:	Total Rate	Estimated Annual Amount (1)	Total Rate	Estimated Annual Amount (1)
Tier 1 Normal Cost Rate	26.57%	$5,044	26.43%	
Tier 2 Normal Cost Rate	19.77%	17,360	18.60%	
All Categories Combined	20.98%	22,404	20.28%	$21,658
Surplus Offset	-0.38%	-401	-4.72%	-5,041
Contribution Shortfall from Prior Fiscal Year	3.34%	3,563	4.29%	4,581
Required Contributions	23.94%	25,566	19.85%	21,198
Average Member Contribution Rates:	Total Rate	Estimated Annual Amount (2)	Total Rate	Estimated Annual Amount (2)
Tier 1	5.20%	$338	4.87%	$316
Tier 2	9.00%	7,813	9.00%	7,813
All Categories Combined	8.74%	8,151	8.71%	8,129
Funded Status:				
Actuarial Accrued Liability	$919,286		$874,355	
Valuation Value of Assets	$1,018,605		$1,045,774	
Funded Percentage	110.8%		119.6%	
Prefunded Actuarial Accrued Liability	$99,319		$171,419	
Key Economic Assumptions:				
Interest Rate	8.00%		8.25%	
Inflation Rate	3.50%		3.75%	
Across-the-Board Salary Increase	0.50%		0.25%	

(1) *Based on projected fiscal year 2011-2012 annual payroll for active non-DROP and DROP members of $106,794.*

(2) *Based on projected fiscal year 2011-2012 annual payroll for members not in the DROP of $93,307.*

Summary of Key Valuation Demographic and Financial Data

	June 30, 2010	June 30, 2009	Percentage Change
Active Members:			
Non-DROP			
Number of members	992	997	-0.5%
Average age	38.0	37.7	N/A
Average service	9.5	9.1	N/A
Projected total compensation [1]	$89,718,011	$87,546,941	2.5%
Average projected compensation	$90,442	$87,810	3.0%
DROP			
Number of members	143	167	-14.4%
Average age	55.0	55.1	N/A
Average service	23.5	23.9	N/A
Projected total compensation [1]	$12,968,418	$14,807,704	-12.4%
Average projected compensation	$90,688	$88,669	2.3%
Retired Member and Beneficiaries:			
Number of members:			
Service retired	341	323	5.6%
Disability retired	325	307	5.9%
Beneficiaries	236	235	0.4%
Total	902	865	4.3%
Average age	66.3	66.4	N/A
Average monthly benefit [2]	$3,591	$3,618	-0.7%
Vested Terminated Members:			
Number of vested terminated members [3]	57	76	-25.0%
Average age	39.4	37.6	N/A
Summary of Financial Data (dollar amounts in thousands):			
Market value of assets	$918,646	$832,728	10.3%
Return on market value of assets	14.45%	-20.81%	N/A
Actuarial value of assets	$1,116,848	$1,144,305	-2.4%
Return on actuarial value of assets	0.41%	1.84%	N/A
Valuation value of assets	$1,018,605	$1,045,774	-2.6%
Return on valuation value of assets	0.16%	0.70%	N/A

(1) *June 30, 2009 payroll was projected payroll for plan year 2009-2010. June 30, 2010 payroll was projected payroll for plan year 2010-2011.*

(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 seven valuations can be seen in this chart.

CHART 1

Member Population: 2004 – 2010

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
2010	1,135	57	902	0.84

(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 992 non-DROP active members with an average age of 38.0 years, average years of service of 9.5 and average compensation of $90,442. The 997 non-DROP active members in the prior valuation had an average age of 37.7 years, average service of 9.1 and average compensation of $87,810.

Inactive Members

In this year's valuation, there were 57 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 76 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, 2010

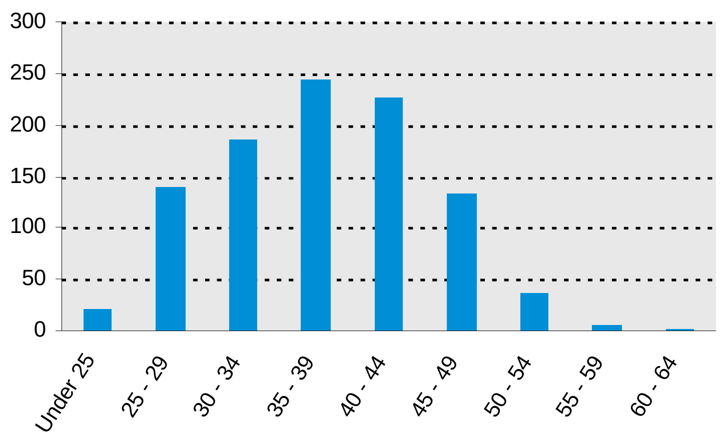
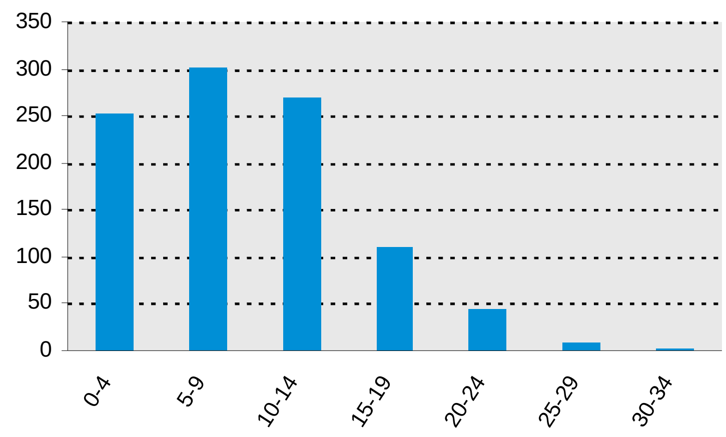


CHART 3

Distribution of Non-DROP Active Members by Years of Service as of June 30, 2010



DROP Active Members
In this year's valuation, there were 143 DROP active members with an average age of 55.0 years, average years of service of 23.5 and average compensation of $90,688. The 167 DROP active members in the prior valuation had an average age of 55.1 years, average years of service of 23.9 and average compensation of $88,669.

Retired Members and Beneficiaries
As of June 30, 2010, 666 retired members and 236 beneficiaries were receiving total monthly benefits of $3,239,158. For comparison, in the previous valuation, there were 630 retired members and 235 beneficiaries receiving monthly benefits of $3,129,432.

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, 2010

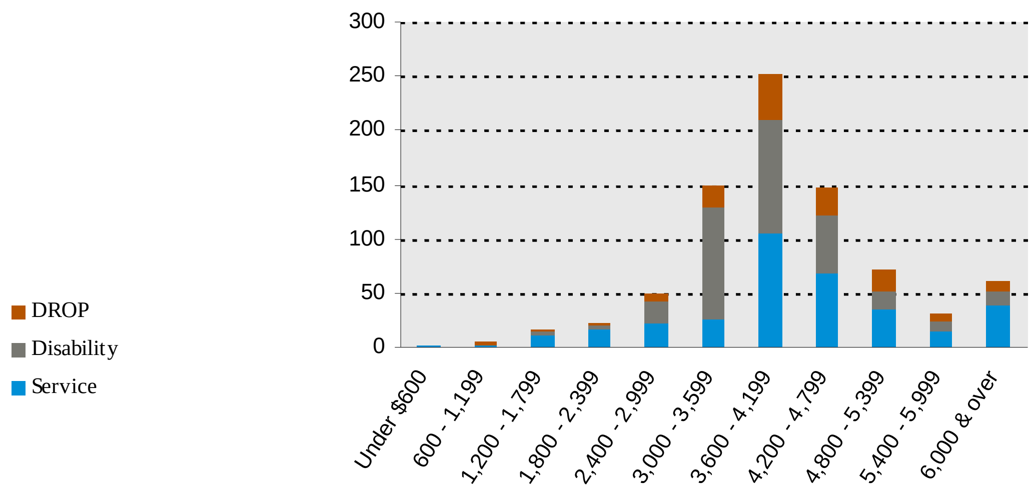
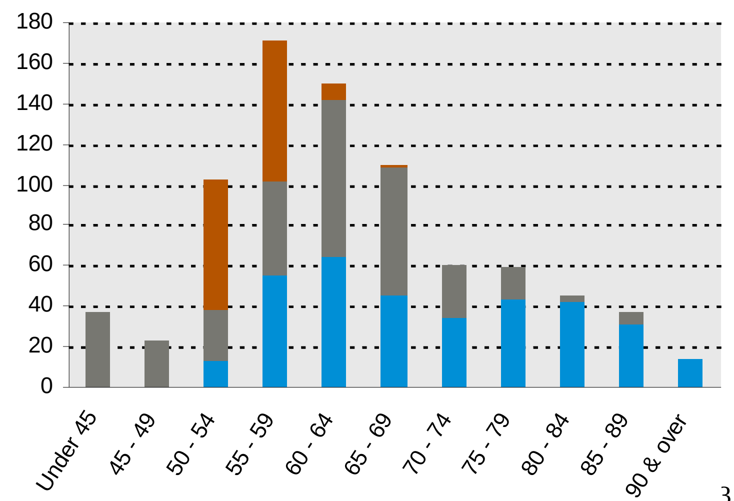


CHART 5

Distribution of Retired Members (Excl. Beneficiaries) by Type and by Age as of June 30, 2010



B. FINANCIAL INFORMATION

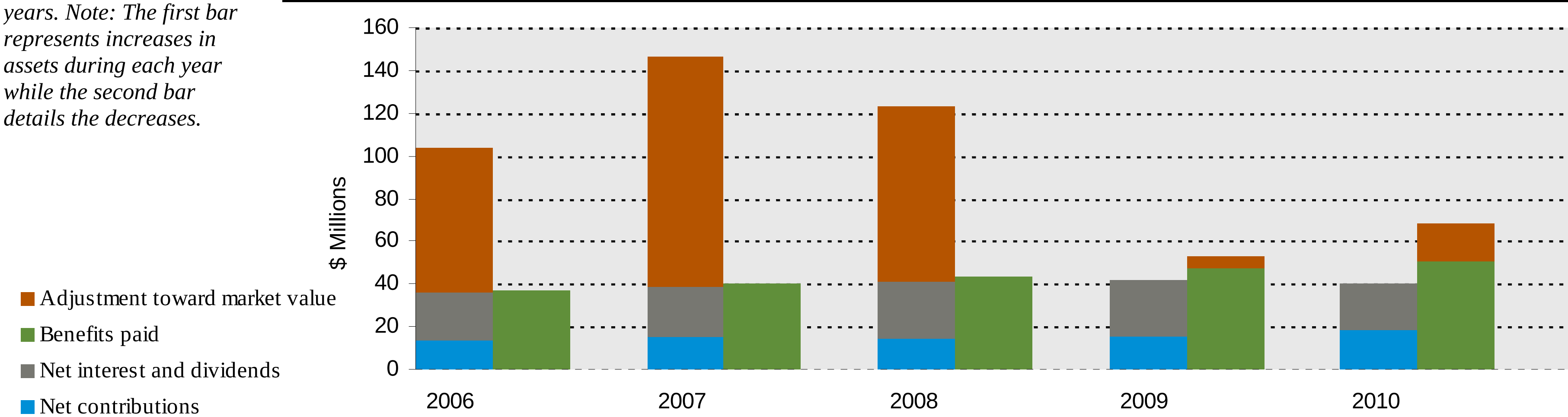
Retirement plan funding anticipates that, over the long term, both contributions and net investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments.

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 five 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, 2006-2010



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, 2010

Plan Year Ending June 30	Total Actual Market Return	Expected Return	Investment Gain/(Loss)*	Deferred Factor	Deferred Return
2006	$110,590,200	$78,043,274	$32,546,926	0.0	$0
2007	173,484,408	85,166,893	88,317,515	0.2	17,663,503
2008	(76,360,019)	97,259,541	(173,619,560)	0.4	(69,447,824)
2009	(223,116,857)	88,435,600	(311,552,457)	0.6	(186,931,474)
2010	118,017,947	67,375,933	50,642,014	0.8	40,513,611

1. Total Deferred Return	$(198,202,184)
2. Net Market Value	918,646,126
3. Actuarial Value of Assets (Item 2 – Item 1)	$1,116,848,310
4. Ratio of Actuarial Value to Market Value	121.6%
5. Non-Valuation Reserves and Other Adjustments	
a. DROP Reserve	99,664,000
b. PRSB Reserve	2,022,000
c. City Surplus Reserve**	(3,443,000)
d. Total	98,243,000
6. Valuation Value of Assets (Item 3 – Item 5d)	$1,018,605,310

* *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, 2010. This difference is taken into account in developing the contribution rate requirement for 2011-2012. See Step (4) in Table 4 of Appendix B for details.*

Deferred return as of June 30, 2010 recognized in each of the next four years:

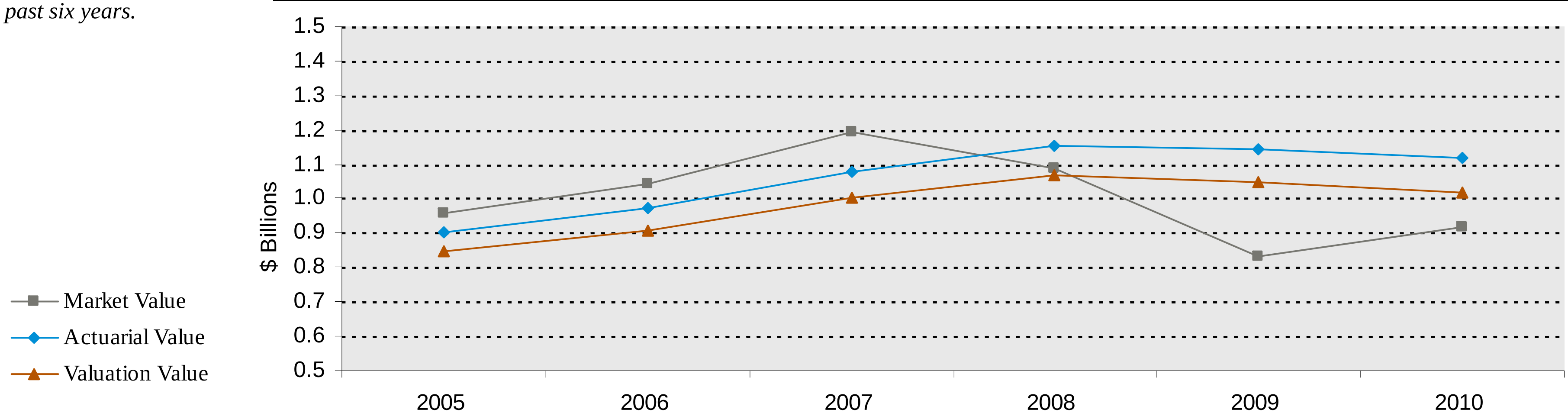
6/30/2011	$(69,242,498)
6/30/2012	(86,906,001)
6/30/2013	(52,182,088)
6/30/2014	10,128,403
	$(198,202,184)

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 six years.

CHART 8

Market Value, Actuarial Value and Valuation Value of Assets as of June 30, 2005-2010



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 $40.9 million, including a loss of $83.5 million from investments and a gain of $42.5 million from all other sources. The net experience variation from individual sources other than investments was 4.6% 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, 2010

1.	Net gain/(loss) from investments [(1)]	-$83,469,000
2.	Net gain/(loss) from other experience [(2)]	42,533,000
3.	Net experience gain/(loss): (1) + (2)	-$40,936,000

[(1)] *Details in Chart 10.*

[(2)] *See Section 3, Items (6b) through (6d) in 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, 2009 valuation). The actual rate of return on a valuation basis for the 2009/2010 plan year was 0.16%.

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, 2010 with regard to its investments.

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

CHART 10

Investment Experience for Year Ended June 30, 2010 – Valuation Value, Actuarial Value and Market Value of Assets

	Valuation Value	Actuarial Value	Market Value
1. Actual return	$1,619,733	$4,642,820	$118,017,947
2. Average value of assets	$1,031,379,831	$1,128,255,287	$816,677,976
3. Actual rate of return: (1) ÷ (2)	0.16%	0.41%	14.45%
4. Assumed rate of return	8.25%	8.25%	8.25%
5. Expected return: (2) x (4)	$85,088,836	$93,081,061	$67,375,933
6. Actuarial gain/(loss): (1) – (5)	$(83,469,103)	$(88,438,241)	$50,642,014

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 six years.

In this valuation, we have reduced the 8.25% investment return assumption to 8.00% as adopted by the Board for this actuarial valuation.

CHART 11

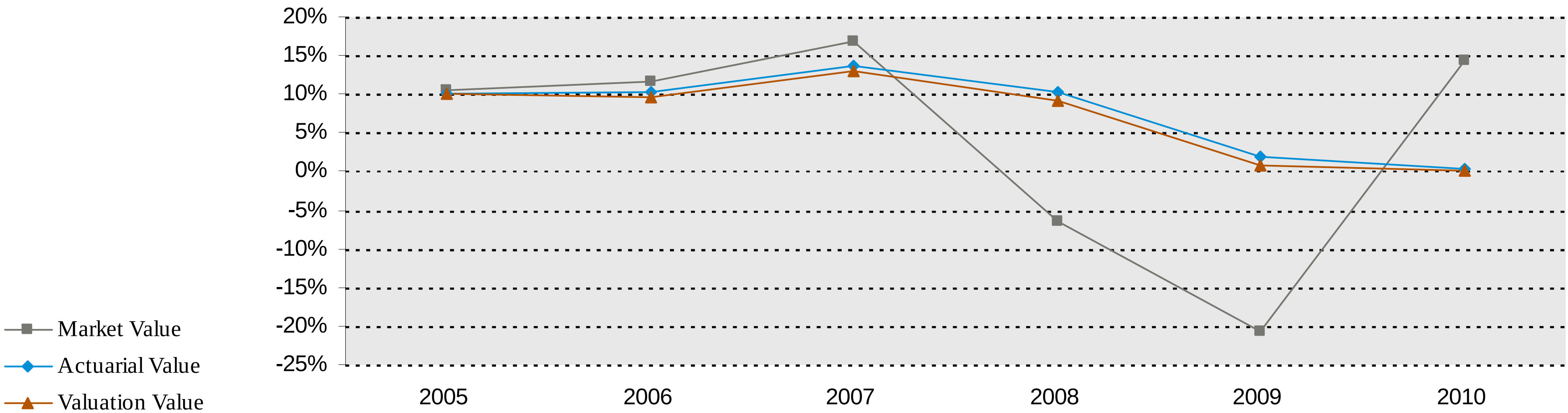
Investment Return – Actuarial Value, Valuation Value and Market Value: 2005 – 2010

	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%)
2010	1,619,733	0.16%	4,642,820	0.41%	118,017,947	14.45%
Annualized Average Return		7.02%		7.13%		3.39%

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, 2010



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, 2010 amounted to $42.5 million which is 4.6% 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., 3.50% inflation plus 0.50% 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, 2010		June 30, 2009	
Tier 1 Members	**Rate**	**Estimated Annual Amount***	**Rate**	**Estimated Annual Amount***
Normal Cost	26.57%	$5,044	26.43%	
Tier 2 Members				
Normal Cost	19.77%	$17,360	18.60%	
All Categories Combined				
Normal Cost	20.98%	$22,404	20.28%	$21,658
Surplus Offset	-0.38%	-401	-4.72%	-5,041
Contribution Shortfall from Prior Fiscal Year	3.34%	3,563	4.29%	4,581
Total Contribution	23.94%	$25,566	19.85%	$21,198

* *Amounts are in thousands and are based on projected fiscal year 2011 – 2012 annual payroll for active non-DROP and DROP members (also in thousands).*

Tier 1	$18,985
Tier 2	87,809
Total	$106,794

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

The employer contribution rates as of June 30, 2010 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.

CHART 14

Reconciliation of Recommended Employer Contribution from June 30, 2009 to June 30, 2010 (Dollars in Thousands)

	Contribution Rate	Estimated Amount*
Recommended Contribution Rate as of June 30, 2009	19.85%	$21,198
Effect of 2009/2010 plan year contribution shortfall included in the above rate (payable 2010/2011)	4.29%	$4,581
Recommended Contribution Rate as of June 30, 2009 excluding rate for 2009/2010 plan year contribution shortfall	15.56%	$16,617
Effect of actuarial experience during 2009/2010:		
1. Effect of investment loss	4.96%	$5,297
2. Effect of the difference between the actual and the estimated June 30, 2010 surplus allocated to the City in the June 30, 2009 valuation for offsetting the City's contributions for the 2010/2011 plan year	3.34%	3,563
3. Effect of lower normal cost due to change in membership demographics	-0.35%	-374
4. Effect of lower than expected COLA increases for retiree and DROP participants	-1.93%	-2,061
5. Effect of lower than expected salary increases	-0.38%	-406
6. Effect of other experience (gain)/loss	-0.67%	-712
7. Effect of changes in actuarial assumptions	2.26%	2,414
8. Effect of introduction of holiday leave cashout assumptions	1.15%	1,228
Subtotal	8.38%	$8,949
Recommended Contribution Rate as of June 30, 2010	23.94%	$25,566

* *Based on projected fiscal year 2011 – 2012 annual payroll of $106,794 for active non-DROP and DROP members.*

The member contribution rates as of June 30, 2010 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, 2009 to June 30, 2010 (Dollar Amounts in Thousands)

	Contribution Rate	Estimated Amount[1]
Average Contribution Rate as of June 30, 2009	8.71%	$8,129
Effect of changes in actuarial assumptions	0.03%	$22
Average Contribution Rate as of June 30, 2010	8.74%	$8,151

(1) *Based on projected fiscal year 2011-2012 annual payroll for members NOT in the DROP of $93,307.*

E. INFORMATION REQUIRED BY GASB

These graphs show key GASB factors.

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.

CHART 16

Required Versus Actual Contributions

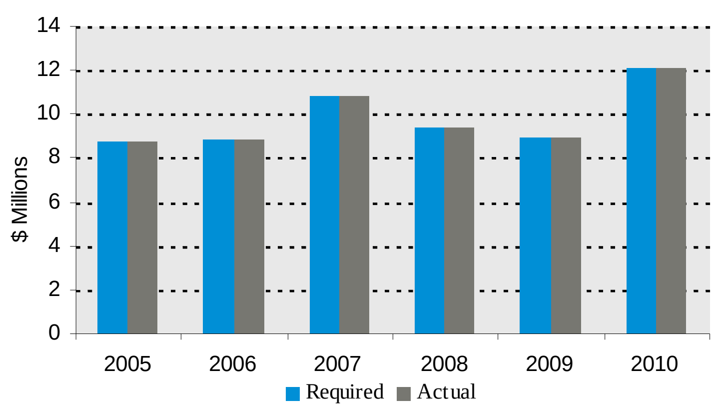


CHART 17

Funded Ratio

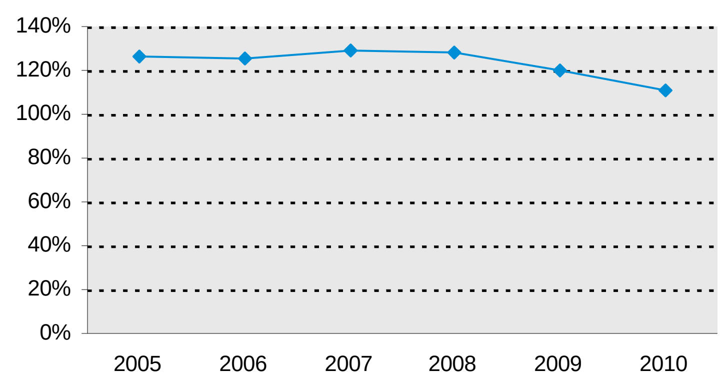


EXHIBIT A

Table of Plan Coverage

i. Tier 1

Category	Year Ended June 30 2010	Year Ended June 30 2009	Change From Prior Year
Active members in valuation			
Non-DROP			
Number	56	73	-23.3%
Average age	47.8	47.5	N/A
Average service	23.2	22.9	N/A
Projected total compensation	$6,246,687	$7,869,415	-20.6%
Projected average compensation	$111,548	$107,800	3.5%
Member account balances	$11,088,925	$13,441,893	-17.5%
Total active vested members	56	73	-23.3%
DROP			
Number	132	159	-17.0%
Average age	54.7	55.0	N/A
Average service	24.4	24.5	N/A
Projected total compensation	$12,007,417	$14,114,789	-14.9%
Projected average compensation	$90,965	$88,772	2.5%
Vested terminated members			
Number	3	5	-40.0%
Average age	49.9	49.2	N/A
Retired members			
Number in pay status	334	319	4.7%
Average age	70.6	71.4	N/A
Average monthly benefit(1)	$4,307	$4,366	-1.4%
Disabled members			
Number in pay status	271	259	4.6%
Average age	63.5	62.9	N/A
Average monthly benefit(1)	$4,081	$4,109	-0.7%
Beneficiaries			
Number in pay status	235	234	0.4%
Average age	69.3	68.9	N/A
Average monthly benefit(1)	$2,176	$2,219	-1.9%

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

EXHIBIT A

Table of Plan Coverage

ii. Tier 2

Category	Year Ended June 30 2010	Year Ended June 30 2009	Change From Prior Year
Active members in valuation			
Non-DROP			
Number	936	924	1.3%
Average age	37.4	36.9	N/A
Average service	8.7	8.0	N/A
Projected total compensation	$83,471,324	$79,677,527	4.8%
Projected average compensation	$89,179	$86,231	3.4%
Member account balances	$77,734,780	$66,453,739	17.0%
Total active vested members	683	614	11.2%
DROP			
Number	11	8	37.5%
Average age	58.2	57.0	N/A
Average service	11.9	12.1	N/A
Projected total compensation	$961,001	$692,915	38.7%
Projected average compensation	$87,364	$86,614	0.9%
Vested terminated members			
Number	54	71	-23.9%
Average age	38.8	36.8	N/A
Retired members			
Number in pay status	7	4	75.0%
Average age	54.4	54.9	N/A
Average monthly benefit[1]	$1,360	$1,174	15.8%
Disabled members			
Number in pay status	54	48	12.5%
Average age	42.6	41.7	N/A
Average monthly benefit[1]	$3,177	$3,042	4.4%
Beneficiaries			
Number in pay status	1	1	0.0%
Average age	36.5	35.5	N/A
Average monthly benefit[1]	$2,450	$2,381	2.9%

(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, 2010– 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	6	- -	- -	- -	- -	6	- -	- -	- -	- -
	$94,589	- -	- -	- -	- -	$94,589	- -	- -	- -	- -
45 - 49	46	- -	- -	- -	2	35	8	1	- -	- -
	114,340	- -	- -	- -	$101,394	111,179	$125,731	$159,773	- -	- -
50 - 54	4	- -	- -	- -	- -	1	1	2	- -	- -
	104,873	- -	- -	- -	- -	109,956	95,511	107,013	- -	- -
55 - 59	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
60 - 64	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
65 - 69	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
70 & over	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	56	- -	- -	- -	2	42	9	3	- -	- -
	$111,548	- -	- -	- -	$101,394	$108,780	$122,373	$124,599	- -	- -

** Excludes 132 active members in DROP with projected average compensation of $90,965.*

EXHIBIT B

Members in Active Service and Projected Average Compensation
By Age, Years of Service as of June 30, 2010– 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	22	22	- -	- -	- -	- -	- -	- -	- -
	$64,920	$64,920	- -	- -	- -	- -	- -	- -	- -
25 - 29	140	98	42	- -	- -	- -	- -	- -	- -
	78,762	75,170	$87,144	- -	- -	- -	- -	- -	- -
30 - 34	185	65	102	18	- -	- -	- -	- -	- -
	84,986	76,566	87,481	$101,254	- -	- -	- -	- -	- -
35 - 39	243	44	91	97	11	- -	- -	- -	- -
	91,015	80,582	89,542	95,690	$103,702	- -	- -	- -	- -
40 - 44	221	15	46	106	52	2	- -	- -	- -
	95,210	87,819	90,043	94,623	103,199	$92,821	- -	- -	- -
45 - 49	87	5	15	35	32	- -	- -	- -	- -
	96,580	85,595	90,353	95,905	101,953	- -	- -	- -	- -
50 - 54	32	2	5	11	14	- -	- -	- -	- -
	99,875	101,171	122,093	96,559	94,360	- -	- -	- -	- -
55 - 59	5	2	1	2	- -	- -	- -	- -	- -
	89,558	92,251	81,611	90,840	- -	- -	- -	- -	- -
60 - 64	1	- -	- -	1	- -	- -	- -	- -	- -
	89,785	- -	- -	89,785	- -	- -	- -	- -	- -
65 – 69	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
70 & Over	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	936	253	302	270	109	2	- -	- -	- -
	$89,179	$76,875	$89,142	$95,648	$101,749	$92,821	- -	- -	- -

** Excludes 11 active members in DROP with projected average compensation of $87,364.*

EXHIBIT C

Reconciliation of Member Data – June 30, 2009 to June 30, 2010

	Non-DROP Active Members	Vested Terminated Members	Pensioners/ DROP**	Disableds	Beneficiaries	Total
Number as of June 30, 2009	997	76	490	307	235	2,105
New members	25	0	0	0	0	25
Terminations – with vested rights	0	0	0	0	0	0
Contributions Refunds	-6	-13	0	0	0	-19
Retirements/ DROP	-22	-3	25	0	0	0
New disabilities	-6	0	-17	23	0	0
Return to work	4	-4	0	0	0	0
Died with or without beneficiary	0	0	-14	-5	1*	-18
Data adjustments	0	1	0	0	0	1
Number as of June 30, 2010	992	57	484	325	236	2,094

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

** *Includes 167 and 143 active members in DROP as of June 30, 2009 and June 30, 2010, respectively.*

EXHIBIT D

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended June 30, 2010		Year Ended June 30, 2009	
Contribution income:				
Employer contributions	$12,094,355		$8,938,488	
Employee contributions	7,354,890		7,172,358	
Less administrative expenses	-992,655		-952,104	
Net contribution income		$18,456,590		$15,158,742
Investment income:				
Interest, dividends and other income	$27,345,055		$31,637,317	
Adjustment toward market value	-17,389,613		-5,579,874	
Less investment fees	-5,312,622		-5,051,129	
Net investment income		4,642,820		21,006,314
Total income available for benefits		$23,099,410		$36,165,056
Less benefit payments:				
Benefit payments	-$46,327,487		-$43,177,071	
Post retirement supplemental benefits	-3,311,087		-3,847,601	
Refunds of contributions	-917,610		-338,145	
Net benefits payments		-$50,556,184		-$47,362,817
Change in reserve for future benefits		-$27,456,774		-$11,197,761

EXHIBIT E
Summary Statement of Assets

	Year Ended June 30, 2010		Year Ended June 30, 2009	
Cash equivalents		$941,087		$873,933
Accounts receivable:				
Receivables for investments sold	$18,230,157		$9,412,412	
Interest and dividends	3,796,789		3,920,569	
Others receivables	1,686,162		5,989,598	
Total accounts receivable		23,713,108		19,322,579
Investments:				
Domestic and international equity	$479,270,352		$425,443,903	
Government and corporate bonds	295,635,712		271,270,860	
Real estate	84,463,534		82,120,425	
Emerging market equity	43,644,354		39,477,963	
Collateral held for securities lent	161,862,198		121,162,658	
Other investments	27,429,169		18,452,730	
Total investments at market value		1,092,305,319		957,928,539
Total assets		$1,116,959,514		$978,125,051
Less accounts payable:				
Collateral held for securities lent	-$161,862,198		-$121,162,658	
Payable for investments and foreign currency purchased	-35,404,511		-21,113,266	
Other liabilities	-1,046,679		-3,121,354	
Total accounts payable		-$198,313,388		-$145,397,278
Net assets at market value		$918,646,126		$832,727,773
Net assets at actuarial value		$1,116,848,310		$1,144,305,084
Net assets at valuation value		$1,018,605,310		$1,045,774,084

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	$1,018,605
2. Present value of future member normal cost	71,578
3. Present value of future employer normal cost	193,929
4. Unfunded/(prefunded) actuarial accrued liability	-99,319
5. Total current and future assets	$1,184,793
Liabilities	
6. Present value of benefits already granted, excludes current active DROP	$543,933
7. Present value of benefits for current active DROP	133,301
8. Present value of benefits to be granted	507,559
9. Total liabilities	$1,184,793

EXHIBIT G

Summary of Reported Asset Information as of June 30, 2010

	Reserves$(000)
Employer Advance/Retired Reserves	$728,989
Active Member Reserves	91,414
DROP Reserve[(1)]	99,664
Reserve for PRSB[(1)]	2,022
Reserve for City Surplus[(1),(2)]	(3,443)
Net Assets Held in Trust for Benefits	$918,646

(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, 2010. This difference is taken into account in developing the contribution rate requirement for 2011-2012.*

EXHIBIT H

Development of Unfunded /(Prefunded) Actuarial Accrued Liability as of June 30, 2010

		(Dollar amounts in Thousands)
1	Unfunded/(prefunded) actuarial accrued liability at beginning of year	-$171,419
2	Gross Normal Cost at middle of year	28,219
3	Actual employer and member contributions	-19,449
4	Interest (whole year on (1) plus half year on (2) + (3))	-13,780
5	Expected unfunded/(prefunded) actuarial accrued liability at end of year	-$176,429
6	Actuarial (gain)/loss due to all changes:	
	Experience (gain)/loss	
	a. Loss from investment	$83,469
	b. Lower than expected COLA increases from continuing retirees and DROP participants	-29,463
	c. Lower than expected salary increases	-5,776
	d. Other experience (gain)/loss	-7,294
	e. Subtotal	$40,936
	Other changes	
	f. Change in actuarial assumptions	30,355
	g. Introduction of holiday leave cashout assumptions	5,819
	h. Subtotal	$36,174
7	Actual unfunded/(prefunded) actuarial accrued liability at end of year (5) + (6e) + (6h)	-$99,319

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 2010 and 2011. 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
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%
2010	12,094	12,094	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)
6/30/2005	$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
6/30/2010	1,018,605	919,286	99,319	110.8	102,686	96.7

EXHIBIT III

Supplementary Information Required by GASB

Valuation date	June 30, 2010
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	8.00%
Inflation rate	3.50%
Real across-the-board salary increase	0.50%
Projected salary increases*	4.00% to 12.00%
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	902
Terminated members entitled to, but not yet receiving benefits	57
DROP members	143
Active members	992
Total	2,094

* *Includes inflation at 3.50% plus real across-the-board salary increase of 0.50% plus merit and promotion increases. See Exhibit IV for these increases.*

EXHIBIT IV

Actuarial Assumptions and Actuarial Cost Method

Post – Retirement Mortality Rates:

Healthy:	RP-2000 Combined Healthy Mortality Table (separate tables for males and females) set back three years.
Disabled:	RP-2000 Combined Healthy Mortality Table (separate tables for males and females) set forward one year.
Employee Contribution Rates and Optional Benefits:	For healthy members: RP-2000 Combined Healthy Mortality Table set back three years weighted 90% male and 10% female. For beneficiaries: RP-2000 Combined Healthy Mortality Table set back three years weighted 10% male and 90% female. For disabled members: RP-2000 Combined Healthy Mortality Table set forward one year weighted 90% male and 10% female.

Termination Rates Before Retirement:

Rate (%)

Mortality

	Tier 1 & Tier 2	
Age	**Male**	**Female**
25	0.04	0.02
30	0.04	0.02
35	0.06	0.04
40	0.09	0.06
45	0.12	0.09
50	0.17	0.13
55	0.27	0.20
60	0.47	0.35
65	0.88	0.67

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	0.02	0.00	0.14	0.00
25	0.14	0.01	0.29	0.01
30	0.26	0.01	0.50	0.01
35	0.39	0.03	0.72	0.03
40	0.60	0.12	0.98	0.12
45	0.88	0.25	1.22	0.25
50	2.80	0.20	1.48	0.20
55	8.20	0.00	1.78	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	9.00	4.47	3.50	4.47	2.50	4.47	2.00	2.87	2.00	2.87	2.00
25	4.47	9.00	4.47	3.50	4.47	2.50	4.47	2.00	2.87	2.00	2.87	2.00
30	4.47	9.00	4.47	3.50	4.47	2.50	4.47	2.00	1.95	1.40	1.77	1.40
35	4.47	9.00	4.47	3.50	4.47	2.50	4.47	2.00	0.83	0.82	0.58	0.82
40	4.47	9.00	4.47	3.50	4.47	2.50	4.47	2.00	0.38	0.46	0.20	0.46
45	4.47	9.00	4.47	3.50	4.47	2.50	4.47	2.00	0.20	0.18	0.03	0.18
50	4.47	9.00	4.47	3.50	4.47	2.50	4.47	2.00	0.00	0.00	0.00	0.00
55	4.47	9.00	4.47	3.50	4.47	2.50	4.47	2.00	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	1.60
25	0.70	1.35
30	0.70	1.10
35	0.70	0.88
40	0.70	0.68
45	0.60	0.42
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 7 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 4.30% 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:	8.00%, net of administration and investment expenses.
Employee Contribution Crediting Rate:	8.00%, 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: 3.50% per year plus 0.50% 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	8.00%
1-2	7.00%
2-3	5.50%
3-4	5.00%
4-5	4.25%

More than 5 years of service:

Age	Annual Increase
25-29	1.60%
30-34	1.20%
35-39	1.00%
40-44	0.60%
45-49	0.50%
50-54	0.30%
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.

	To reflect the cashout of holiday leave to increase salary on an ongoing basis for Fire members, we have increased the salary for all active Fire members by 3.6%. Since the salary data provided by the System already reflects the ongoing cashout of holiday leave for Police members, no assumption for Police members is necessary. To reflect the cashout of additional holiday leave balance to increase final average salary at retirement for Tier 2 Police members, we have increased the normal cost and actuarial accrued liability for all active Tier 2 Police management and non-management members by 7.8% and 5.0%, respectively. The System will provide additional holiday leave cashout information for Fire members. Once that information is available, we will include an assumption for additional holiday leave balance cashout for Fire members.
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:	Based on our Experience Study and Review of Economic Assumptions, the following assumptions have been changed. Previously, those assumptions were as follows:
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.

Changes in Actuarial Assumptions (Continued):

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.

Changes in Actuarial Assumptions (Continued):

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

Changes in Actuarial Assumptions (Continued):

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

Changes in Actuarial Assumptions (Continued):

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

Changes in Actuarial Assumptions (Continued):

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

Changes in Actuarial Assumptions (Continued):

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.
Net Investment Return:	8.25%, net of administration and investment expenses.
Employee Contribution Crediting Rate:	8.25%, assumed in the valuation.

Changes in Actuarial Assumptions (Continued):

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.

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:	
<u>*Tier 1*</u>	
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).
<u>*Tier 2*</u>	
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:	
<u>*Tier 1*</u>	
Eligibility	No age or service requirements (§3-335).
Benefit Formula	55% of FAS or Service Retirement benefit, if greater (§3-336).
<u>*Tier 2*</u>	
Eligibility	No age or service requirements (§3-412)
Benefit Formula	50% of FAS or Service Retirement benefit, if greater (§3-413).

Pre-Retirement Death:

All Members

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

Vested Members

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:	
<u>*All Members*</u>	
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, 2009 and June 30, 2010 valuations:

	June 30, 2010 Actuarial Valuation		June 30, 2009 Actuarial Valuation	
	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*
Tier 1 Members	5.20%	$338	4.87%	$316
Tier 2 Members	9.00%	$7,813	9.00%	$7,813
All Member Categories Combined	8.74%	$8,151	8.71%	$8,129

** Amounts are in thousands and are based on the following projected fiscal year 2011 – 2012 annual payroll for members NOT in the DROP (also in thousands):*

	Excludes DROP Members
Tier 1	$ 6,497
Tier 2	86,810
Total	$93,307

Appendix A
Member Contribution Rates (Continued)

Tier 1 Members' Contribution Rates based on the June 30, 2010 Actuarial Valuation as a percentage of payroll

	Exact Age		¼ Age		½ Age		¾ Age	
Entry Age	Rate	Dependent Portion	Rate	Dependent Portion	Rate	Dependent Portion	Rate	Dependent Portion
20	4.05%	0.04342	4.10%	0.04342	4.15%	0.04342	4.20%	0.04342
21	4.25%	0.04342	4.31%	0.04342	4.36%	0.04342	4.42%	0.04342
22	4.47%	0.04342	4.53%	0.04342	4.59%	0.04342	4.65%	0.04342
23	4.71%	0.04342	4.77%	0.04342	4.83%	0.04342	4.90%	0.04342
24	4.96%	0.04342	5.03%	0.04342	5.10%	0.04342	5.17%	0.04342
25	5.24%	0.04342	5.31%	0.04342	5.39%	0.04342	5.47%	0.04342
26	5.54%	0.04342	5.63%	0.04342	5.71%	0.04342	5.79%	0.04342
27	5.88%	0.04342	5.97%	0.04342	6.06%	0.04342	6.15%	0.04342
28	6.24%	0.04342	6.35%	0.04342	6.45%	0.04342	6.55%	0.04342
29	6.65%	0.04342	6.76%	0.04342	6.88%	0.04342	6.99%	0.04342
30	7.10%	0.04342	7.09%	0.04409	7.07%	0.04476	7.06%	0.04543
31	7.04%	0.04610	7.03%	0.04681	7.01%	0.04753	7.00%	0.04824
32	6.98%	0.04896	6.97%	0.04972	6.95%	0.05049	6.93%	0.05125
33	6.92%	0.05202	6.90%	0.05283	6.88%	0.05365	6.87%	0.05447
34	6.85%	0.05529	6.83%	0.05615	6.81%	0.05700	6.80%	0.05785
35	6.78%	0.05871	6.76%	0.05962	6.75%	0.06053	6.73%	0.06144
36	6.72%	0.06235	6.70%	0.06332	6.68%	0.06428	6.66%	0.06525
37	6.65%	0.06622	6.63%	0.06725	6.61%	0.06828	6.59%	0.06931
38	6.57%	0.07034	6.55%	0.07142	6.53%	0.07249	6.51%	0.07357
39	6.48%	0.07465	6.46%	0.07577	6.44%	0.07688	6.42%	0.07799
40	6.40%	0.07911	6.43%	0.07911	6.46%	0.07911	6.50%	0.07911
41	6.53%	0.07911	6.56%	0.07911	6.60%	0.07911	6.63%	0.07911
42	6.66%	0.07911	6.70%	0.07911	6.73%	0.07911	6.76%	0.07911
43	6.80%	0.07911	6.83%	0.07911	6.87%	0.07911	6.91%	0.07911
44	6.94%	0.07911	6.98%	0.07911	7.01%	0.07911	7.05%	0.07911

Appendix A
Member Contribution Rates (Continued)

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
45	7.09%	0.07911	7.13%	0.07911	7.17%	0.07911	7.21%	0.07911
46	7.25%	0.07911	7.29%	0.07911	7.33%	0.07911	7.37%	0.07911
47	7.41%	0.07911	7.45%	0.07911	7.50%	0.07911	7.54%	0.07911
48	7.58%	0.07911	7.63%	0.07911	7.67%	0.07911	7.72%	0.07911
49	7.76%	0.07911	7.81%	0.07911	7.86%	0.07911	7.91%	0.07911
50	7.96%	0.07911	8.01%	0.07911	8.07%	0.07911	8.12%	0.07911
51	8.18%	0.07911	8.24%	0.07911	8.30%	0.07911	8.36%	0.07911
52	8.42%	0.07911	8.47%	0.07911	8.51%	0.07911	8.55%	0.07911
53	8.59%	0.07911	8.61%	0.07911	8.63%	0.07911	8.65%	0.07911
54	8.67%	0.07911	8.66%	0.07911	8.66%	0.07911	8.65%	0.07911
55	8.65%	0.07911	8.63%	0.07911	8.62%	0.07911	8.60%	0.07911
56	8.58%	0.07911	8.55%	0.07911	8.52%	0.07911	8.49%	0.07911
57	8.46%	0.07911	8.54%	0.07911	8.62%	0.07911	8.70%	0.07911
58	8.78%	0.07911	8.86%	0.07911	8.94%	0.07911	9.02%	0.07911
59	9.11%	0.07911	6.83%	0.07911	4.55%	0.07911	2.28%	0.07911

Interest:	8.00% per annum
Mortality:	RP-2000 Combined Healthy Mortality Table set back three years weighted 90% male and 10% female for member RP-2000 Combined Healthy Mortality Table set back three years weighted 10% male and 90% female for beneficiary
Salary Increase:	See Exhibit IV in Section 4

Appendix B
Allocation of Actuarial Surplus

	June 30	
	2010	**2009**
Surplus as of Date of Valuation (Table 1)	$99,319,734	$171,418,655
Actuarial Surplus (Table 1)	7,391,177	83,983,112
Distributable Actuarial Surplus as of date of valuation (Table 2)	660,201	7,620,778
Allocation of Distributable Surplus as of Date of Valuation:		
City Allocation (Table 3)	440,134	5,080,519
PRSB Allocation (Table 3)	220,067	2,540,259
Total	$660,201	$7,620,778
Allocation of Projected Distributable Surplus as of Date of Next Valuation:		
City Allocation (Table 3)	$400,820	$5,019,629

The Allocation of Distributable Actuarial Surplus is sufficient to:

- Only partially offset the City’s contribution requirement for the 2011-2012 fiscal year from $22,404,101 to a net amount of $22,003,281 (see Table 4); and
- Provide a PRSB benefit of $46.52 per month over the 2011 calendar year (Table 5) under the current policy of 80% distribution.

Appendix B (continued)
Allocation of Actuarial Surplus

	June 30	
	2010	**2009**
Table 1: Calculation of Actuarial Surplus		
(1) Valuation Value of Assets	$1,018,605,310	$1,045,774,084
(2) Actuarial Accrued Liability	919,285,576	874,355,429
(3) Surplus: (1) – (2)	99,319,734	171,418,655
(4) Contingency Reserve: 10% of (2)	91,928,558	87,435,543
(5) Actuarial Surplus: (3) – (4)	7,391,177	83,983,112
Table 2: Determination of Distributable Actuarial Surplus		
(1) Actuarial Surplus (Table 1)	$7,391,177	$83,983,112
(2) Amortization of Balance of Actuarial Surplus:		
a. Amortization Period	15	15
b. Amortization Factor	0.089323	0.090742
c. Amortization of Balance of Actuarial Surplus (1) x (2b)	$660,201	$7,620,778
(3) Projected Surplus for Next Year[1] (1 + i) x (1) – (1 + i/2) x (2c)	6,730,976	82,976,583
(4) Amortization of Balance of Projected Actuarial Surplus:		
a. Amortization Period	15	15
b. Amortization Factor	0.089323	0.090742
c. Amortization of Balance of Projected Actuarial Surplus (3) x (4b)	$601,230	$7,529,444

(1) *For the June 30, 2010 valuation, the projected actuarial rate of return has been calculated taking into account the known deferred investment losses that will have to be recognized during 2010/2011. That return is 0%.*

Appendix B (continued)

Allocation of Actuarial Surplus

	June 30	
	2010	**2009**
Table 3: Allocation of Distributable Actuarial Surplus:		
(1) Distributable Actuarial Surplus	$660,201	$7,620,778
(2) City Allocation: (1) x 2/3	440,134	5,080,519
(3) PRSB Allocation: (1) – (2)	220,067	2,540,259
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	601,230	7,529,444
(5) City Allocation (4) x 2/3	400,820	5,019,629
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 2011-2012			Fiscal Year 2010-2011		
	Tier 1	Tier 2	Total	Tier 1	Tier 2	Total
Table 4: City Contribution Requirements:						
(1) City Normal Cost Rate	26.57%	19.77%	20.98%	26.43%	18.60%	20.28%
(2) Projected Annual Payroll	$18,984,593	$87,809,281	$106,793,874	$18,254,417	$84,432,001	$102,686,418
(3) City Allocation of Distributable Actuarial Surplus	90,243	310,577	400,820	103,439	336,695	440,134
(4) City Surplus Reserve Account (From Prior Years)	0	0	0	-809,160	-2,633,840	-3,443,000
(5) ½ Year Interest on (4)	0	0	0	-33,378	-108,646	-142,024
(6) Total Contribution Offsets (3) + (4) + (5)	90,243	310,577	400,820	-739,099	-2,405,790	-3,144,890
(7) Total Contribution Requirement (1) * (2)	5,044,206	17,359,895	22,404,101	4,824,642	15,704,352	20,528,995
(8) City Contribution Requirement Prior To Application of Prepaid Employer Contribution Account (7) – (6), not less than 0	4,953,963	17,049,318	22,003,281	5,563,742	18,110,143	23,673,884
(9) Contribution Rate Adopted by the City for Fiscal Year 2010-2011						19.85%
(10) Projected City Contributions Based on Rate Adopted by the City (9) * (2)				$3,623,502	$16,759,752	$20,383,254
(11) Net Additional City Contribution Before Application of Prepaid Employer Contribution Account (8) – (10)	4,953,963	17,049,318	22,003,281	1,940,240	1,350,390	3,290,630
(12) City's Prepaid Employer Contribution Account Balance (Negative Account Balance Represents Contribution Shortfall)			-3,426,369[1]			0
(13) ½ Year Interest on (12)			-137,055			0
(14) City's Fiscal Year Contribution After Application of Prepaid Employer Contribution Account (11) – (12) – (13), not less than 0	5,756,256	19,810,449	25,566,705	1,940,240	1,350,390	3,290,630
(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			-3,426,369[1]

[1] *Projected contribution shortfall for fiscal year 2010-2011 is due to the difference between the actual and the estimated June 30, 2010 surplus allocated to the City in the June 30, 2009 valuation for offsetting the City's contributions for the 2010/2011 plan year.*

Note: Results may not total properly due to rounding.

Appendix B (continued)
Allocation of Actuarial Surplus

	June 30	
	2010	**2009**
Table 5: Calculation of PRSB and PRSB Reserve Account:		
(1) PRSB Allocation of Distributable Actuarial Surplus	$220,067	$2,540,259
(2) Distribution percentage	80%	80%
(3) Preliminary PRSB distribution: (1) x (2)	$176,054	$2,032,208
(4) Number of eligible participants (Retirees, Beneficiaries & DROP Participants)	959	951
(5) Preliminary Monthly PRSB Benefit: (3) / (4) / 12	$15.30	$178.08
(6) Monthly Retiree Medical Trust Premium for the calendar year that commences 6 months following the date of valuation	$911.00	$729.00
(7) Benefit Shortfall: (6) – (5)	$895.70	$550.92
(8) PRSB Reserve Account	$2,022,000	$3,572,000
(9) Estimated July 1 to December 31 PRSB Payments	$1,662,733	$2,306,479
(10) Net PRSB Reserve Account 6 months following the date of valuation	$359,267	$1,265,521
(11) Draw from PRSB Reserve Account (lesser of (10) / (4) /12 or (7))	$31.22	$110.89
(12) Final monthly PRSB Benefit for next calendar year: (5) + (11)	$46.52	$288.97
(13) Estimated PRSB Reserve Account at the end of the next calendar year: (1) + (10) – [(12) * (4) * 12]	$43,981	$508,054

Note: The actual, rather than projected June 30, 2011 surplus, will be used to determine the 2012 calendar year PRSB benefit.

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