

City of Fresno Fire and Police Retirement System

***Actuarial Valuation and Review
as of June 30, 2011***

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December 7, 2011

*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, 2011. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal year 2012-2013 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, FCA, 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.

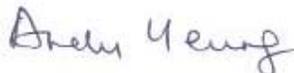
We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

THE SEGAL COMPANY

By: 

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



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

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SECTION 1

VALUATION SUMMARY

Purpose	i
Significant Issues in Valuation Year.....	ii
Summary of Key Valuation Results.....	vi
Summary of Key Valuation Demographic and Financial Data.....	vii

SECTION 2

VALUATION RESULTS

A. Member Data	1
B. Financial Information.....	4
C. Actuarial Experience.....	8
D. Employer and Member Contributions	13
E. Information Required by GASB.....	18

SECTION 3

SUPPLEMENTAL INFORMATION

EXHIBIT A Table of Plan Coverage	
i. Tier 1	19
ii. Tier 2	20
EXHIBIT B Members in Active Service and Projected Average Compensation as of June 30, 2011	
i. Tier 1	21
ii. Tier 2	22
EXHIBIT C Reconciliation of Member Data – June 30, 2010 to June 30, 2011	23
EXHIBIT D Summary Statement of Income and Expenses on an Actuarial Value Basis.....	24
EXHIBIT E Summary Statement of Assets	25
EXHIBIT F Actuarial Balance Sheet.....	26
EXHIBIT G Summary of Reported Asset Information as of June 30, 2011	27
EXHIBIT H Development of Unfunded/ (Prefunded) Actuarial Accrued Liability as of June 30, 2011	28
EXHIBIT I Section 415 Limitations.....	29
EXHIBIT J Definitions of Pension Terms	30

SECTION 4

REPORTING INFORMATION

EXHIBIT I Supplementary Information Required by GASB – Schedule of Employer Contributions.....	32
EXHIBIT II Supplementary Information Required by GASB – Schedule of Funding Progress	33
EXHIBIT III Supplementary Information Required by GASB	34
EXHIBIT IV Actuarial Assumptions and Actuarial Cost Method	35
EXHIBIT V Summary of Plan Provisions.....	44
Appendix A Member Contribution Rates.....	50
Appendix B Allocation of Actuarial Surplus	53

SECTION 1: Valuation Summary for the City of Fresno Fire and Police Retirement System

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, 2011. 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, 2011, provided by the Retirement System;
- The assets of the System as of June 30, 2011, 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, 2011, 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. However, when both the valuation value of assets and the actuarial accrued liabilities are projected from June 30, 2011 to June 30, 2012, the projected June 30, 2012 actuarial surplus in the Retirement System is no longer expected to be available to reduce the City's contributions. The allocation of surplus as of June 30, 2011 and June 30, 2012 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.

SECTION 1: Valuation Summary for the City of Fresno Fire and Police Retirement System

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 valuing pension liabilities. 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, 2012 through June 30, 2013.

Significant Issues in Valuation Year

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

- Ref: Page 33 ➤ In the June 30, 2010 valuation, the ratio of the valuation value of assets to actuarial accrued liabilities was 110.8%. In this June 30, 2011 valuation, the funding ratio has increased to 111.4%. The funding ratio as of June 30, 2011 if measured using the market value of assets instead of the valuation value of assets is 109.9%, which is an increase from the prior year's ratio of 89.2%.
- Ref: Page 28 ➤ The Retirement System's prefunded actuarial accrued liability (PAAL) as of June 30, 2010 was \$99.3 million. In this year's valuation, the PAAL has increased to \$105.1 million on a valuation value of assets basis. The Plan had a net actuarial experience loss of about \$16.5 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 decreased from 23.94% of payroll to 19.84% of payroll. The reasons for this change are: (i) difference between the actual and the estimated June 30, 2011 surplus allocated to the City in the June 30, 2010 valuation for offsetting the City's contributions for the 2011/2012 plan year, (ii) lower normal cost due to change in membership demographics, and (iii) lower normal cost due to change in the continuance benefit reflected in the valuation⁽¹⁾ for service-connected disabilities. A reconciliation of the Retirement System's aggregate employer rate is provided in Section 2, Subsection D (see Chart 14).

⁽¹⁾ As disclosed in the Summary of Plan Provisions (Exhibit V) of our prior valuation reports, we had assumed in the prior valuations that an eligible spouse/domestic partner of a member who retired with a line-of-duty disability would be eligible for a 100% continuance benefit upon the member's death. It has come to our attention that unless the death occurs while the member is still an active employee (in which case the continuance benefit is 100%), the continuance benefit is only 66-2/3%. This lower continuance benefit is reflected in this valuation. This change reduced the aggregate employer rate by 0.21% of payroll (see Chart 15) and reduced the actuarial accrued liability by \$16.6 million (see Exhibit H) which increased the funded ratio by 2.0%.

SECTION 1: Valuation Summary for the City of Fresno Fire and Police Retirement System

Ref: Page 16

- The aggregate member rate calculated in this valuation has decreased from at 8.82% of payroll to 8.81% of payroll. The change in the aggregate member rate is due to changes in demographics. A reconciliation of the Retirement System's aggregate member rate is provided in Section 2, Subsection D (see Chart 15). The City has recently made an amendment that requires all future DROP participants to continue their employee contributions; however, those contributions are deposited into the members' DROP accounts and therefore not available to fund the value of the retirement benefit earned up to the date of the DROP. Therefore, those contributions that will be deposited into the DROP accounts are disregarded 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, 2011 is \$14.1 million. This is a significant reduction from last year's amount of \$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, 2011. 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.
- The unrecognized investment losses of \$14.1 million represent 1% of the market value of assets. Unless offset by future investment gains or other favorable experience, the recognition of the \$14.1 million market losses is expected to have an 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 111.4% to 109.9%.
 - If the deferred losses were recognized immediately in the valuation value of assets, the aggregate employer contribution rate would increase from 19.84% of payroll to 20.67% of payroll.
- The footnote in Chart 7 shows that under the asset smoothing method the \$14.1 million in net deferred losses will be recognized in the next four years, but in a very non-level (uneven) pattern. In particular, there will be losses recognized in the next two years, followed by offsetting gains in the two years after that, so as to ultimately recognize all of the current total net deferred losses of \$14.1 million. This means that, absent any new gains or losses in the future, there will be two more years of increases in the average employer contribution rate followed by two years of decreases before the \$14.1 million in net deferred losses are fully recognized.

SECTION 1: Valuation Summary for the City of Fresno Fire and Police Retirement System

- In keeping with model actuarial practice for this situation, effective July 1, 2011 the asset smoothing method could be modified by combining the net deferred losses of \$14.1 million from the current valuation into a single four-year smoothing “layer” and thereby recognizing those net deferred losses over the next four years in four level amounts of approximately \$3.5 million. This would reduce the volatility associated with the current pattern of deferred gain/loss recognition and thereby result in both more stable funded ratios (on an actuarial value basis) and more level employer contribution rates. Please note that this change would have no impact on the current June 30, 2011 valuation results as the total amount of unrecognized losses as of June 30, 2011 remains unchanged. Also, note that we recommend using a four-year smoothing period for the combined deferred losses as that will complete the recognition of those net losses over the same time period as under the current separate smoothing layers. We will provide more discussion of this policy option during our presentation of the June 30, 2011 valuation.
- The actuarial surplus as of June 30, 2011 (see Appendix B) would be adjusted in future valuations to reflect the deferred investment losses mentioned above.

Ref: Page 53

In the June 30, 2010 valuation, there was a change in the formula used to project the actuarial surplus available to buydown the employer contribution rate in the actuarial valuation.

To review, in the June 30, 2009 valuation, the projected actuarial surplus expected to be available to buydown the contribution rate in the 2010/11 fiscal year was calculated by taking the Actuarial Surplus as of June 30, 2009 and adjusting that with the amount of surplus that was used during 2009/10 (through a 15-year amortization of the actuarial surplus as of June 30, 2009) and the difference was adjusted with interest at the assumed rate of investment return (i.e., 8.25%/year on or before June 30, 2009 and 8.00%/year thereafter). It is our understanding that this formula had been used to project the actuarial surplus available to buydown the upcoming fiscal year’s contribution rate since the inception of the surplus distribution process.

Because there were significant amounts of deferred investment losses that were not yet recognized in the valuation value of assets, the above formula that projected growth of the actuarial surplus at the assumed rate of investment return would tend to overstate the amount of actuarial surplus available in the next several years. To address this, the Retirement Board agreed to a recommendation made by Segal to project the actuarial surplus by using the projected rate of return on the valuation value of assets that takes into account deferred investment losses that will be recognized in the upcoming fiscal year.

SECTION 1: Valuation Summary for the City of Fresno Fire and Police Retirement System

In preparing the June 30, 2011 actuarial valuation, we observed that there is a more accurate formula that should be used to project the actuarial surplus for the 2012/13 fiscal year. As the actuarial surplus is calculated by taking the difference of the valuation value of assets and 110% of the actuarial accrued liability (the additional 10% of the actuarial accrued liability is set up as a Contingency Reserve), we will obtain a more reliable estimate of the surplus if we project the valuation value of assets and the actuarial accrued liability separately from June 30, 2011 to June 30, 2012, and then take the difference to determine the projected surplus. The difference between this and the current formula used by the System is that under the new approach the actuarial accrued liability is appropriately expected to increase with interest at the assumed rate of 8.00% whether or not the valuation value of assets are expected to earn the assumed rate of 8.00%.

As the actuarial surplus distribution process is winding down, the amount of projected surplus available from the distribution process will become more volatile and so less predictable. We recommend the above refinement as it will incorporate one aspect of future results that actually can be reasonably anticipated. The results in this report have been prepared to include this recommendation.

- As we have discussed with the Board during our surplus projection studies in 2010, consistent with Section 3-324 of the Fresno Municipal Code, any UAAL will be amortized over 30 years, when the funded percentage of the Plan falls below 100%. 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, 2011 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.

SECTION 1: Valuation Summary for the City of Fresno Fire and Police Retirement System

Summary of Key Valuation Results (Dollar amounts in thousands)

	June 30, 2011		June 30, 2010	
	Total Rate	Estimated Annual Amount ⁽¹⁾	Total Rate	Estimated Annual Amount ⁽¹⁾
Employer Contribution Rates:				
Tier 1 Normal Cost Rate	26.22%	\$4,071	26.57%	
Tier 2 Normal Cost Rate	19.56%	17,102	19.77%	
All Categories Combined	20.56%	21,173	20.98%	\$21,601
Surplus Offset	0.00%	0	-0.38%	-391
Contribution Shortfall from Prior Fiscal Year	-0.72%	-742	3.34%	3,439
Required Contributions	19.84%	20,431	23.94%	24,649
Average Member Contribution Rates:				
	Total Rate	Estimated Annual Amount ⁽²⁾	Total Rate	Estimated Annual Amount ⁽²⁾
Tier 1	5.13%	\$223	5.20%	\$227
Tier 2	9.00%	7,783	9.00%	7,783
All Categories Combined	8.81%	8,006	8.82%	8,010
Funded Status:				
Actuarial Accrued Liability	\$917,941		\$919,286	
Valuation Value of Assets	\$1,022,996		\$1,018,605	
Funded Percentage	111.4%		110.8%	
Prefunded Actuarial Accrued Liability	\$105,055		\$99,319	
Key Economic Assumptions:				
Interest Rate	8.00%		8.00%	
Inflation Rate	3.50%		3.50%	
Across-the-Board Salary Increase	0.50%		0.50%	

⁽¹⁾ Based on projected fiscal year 2012-2013 annual payroll for active non-DROP and DROP members of \$102,960.

⁽²⁾ Based on projected fiscal year 2012-2013 annual payroll for members not in the DROP of \$90,834.

SECTION 1: Valuation Summary for the City of Fresno Fire and Police Retirement System

Summary of Key Valuation Demographic and Financial Data

	June 30, 2011	June 30, 2010	Percentage Change
Active Members:			
Non-DROP			
Number of members	953	992	-3.9%
Average age	38.6	38.0	N/A
Average service	10.22	9.5	N/A
Projected total compensation ⁽¹⁾	\$87,339,861	\$89,718,011	-2.7%
Average projected compensation	\$91,647	\$90,442	1.3%
DROP			
Number of members	118	143	-17.5%
Average age	54.4	55.0	N/A
Average service	23.9	23.5	N/A
Projected total compensation ⁽¹⁾	\$11,659,869	\$12,968,418	-10.1%
Average projected compensation	\$98,812	\$90,688	9.0%
Retired Member and Beneficiaries:			
Number of members:			
Service retired	367	341	7.6%
Disability retired	340	325	4.6%
Beneficiaries	241	236	2.1%
Total	948	902	5.1%
Average age	66.2	66.3	N/A
Average monthly benefit ⁽²⁾	\$3,573	\$3,591	-0.5%
Vested Terminated Members:			
Number of vested terminated members ⁽³⁾	53	57	-7.0%
Average age	40.4	39.4	N/A
Summary of Financial Data (dollar amounts in thousands):			
Market value of assets	\$1,109,212	\$918,646	20.7%
Return on market value of assets	23.84%	14.45%	N/A
Actuarial value of assets	\$1,123,356	\$1,116,848	0.6%
Return on actuarial value of assets	2.89%	0.41%	N/A
Valuation value of assets	\$1,022,996	\$1,018,605	0.4%
Return on valuation value of assets	2.80%	0.16%	N/A

(1) June 30, 2010 payroll was projected payroll for plan year 2010-2011. June 30, 2011 payroll was projected payroll for plan year 2011-2012.

(2) Excludes supplemental benefits paid from PRSB and benefits derived from DROP account balances.

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

SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

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 eight valuations can be seen in this chart.

CHART 1
Member Population: 2004 – 2011

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
2011	1,071	53	948	0.93

⁽¹⁾ *Includes DROP members.*

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

SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

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 953 non-DROP active members with an average age of 38.6 years, average years of service of 10.2 and average compensation of \$91,647. The 992 non-DROP active members in the prior valuation had an average age of 38.0 years, average service of 9.5 and average compensation of \$90,442.

Inactive Members

In this year's valuation, there were 53 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 57 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, 2011

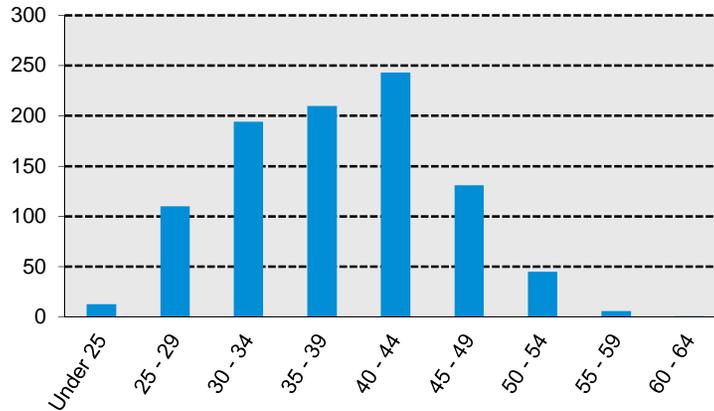
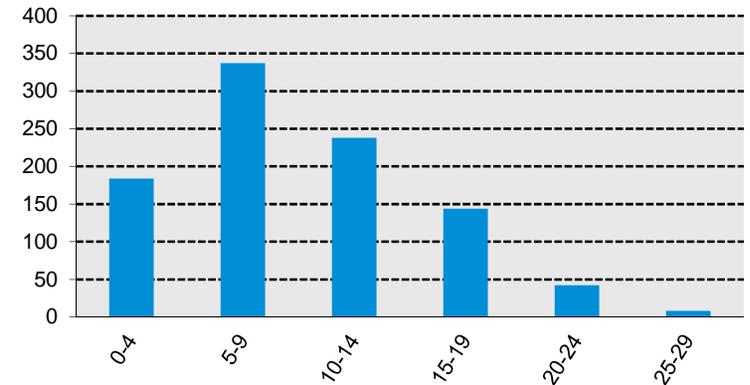


CHART 3
Distribution of Non-DROP Active Members by Years of Service as of June 30, 2011



SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

DROP Active Members

In this year's valuation, there were 118 DROP active members with an average age of 54.4 years, average years of service of 23.9 and average compensation of \$98,812. The 143 DROP active members in the prior valuation had an average age of 55.0 years, average years of service of 23.5 and average compensation of \$90,688.

Retired Members and Beneficiaries

As of June 30, 2011, 707 retired members and 241 beneficiaries were receiving total monthly benefits of \$3,386,977. For comparison, in the previous valuation, there were 666 retired members and 236 beneficiaries receiving monthly benefits of \$3,239,158.

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, 2011

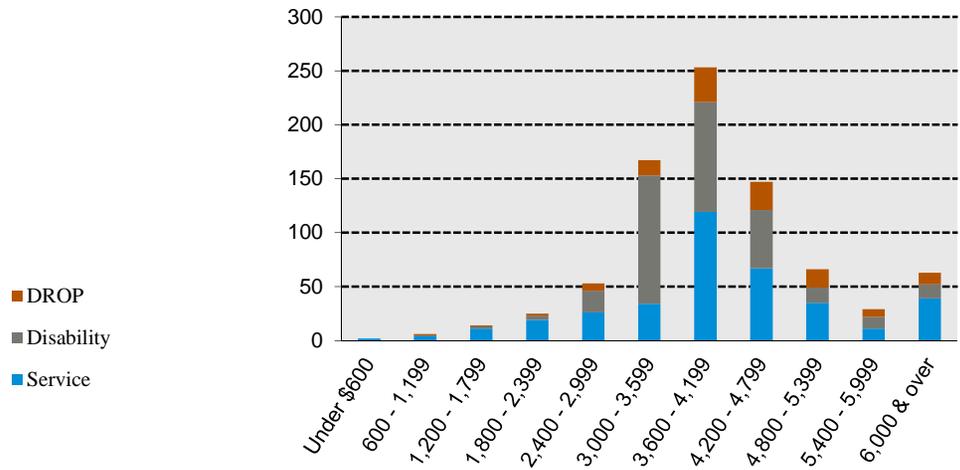
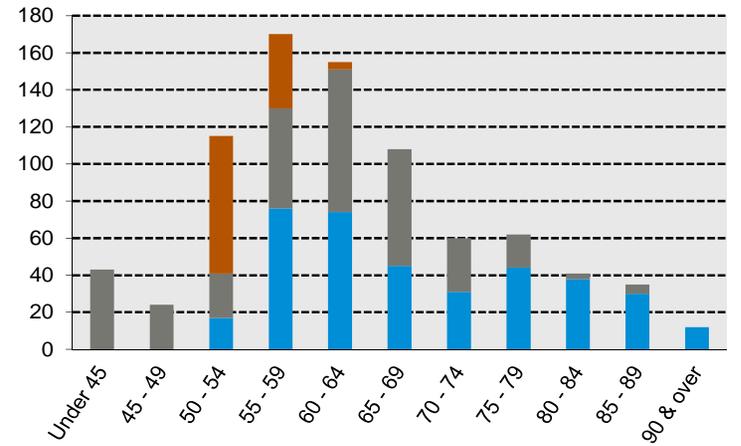


CHART 5
Distribution of Retired Members (Excl. Beneficiaries) by Type and by Age as of June 30, 2011



SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

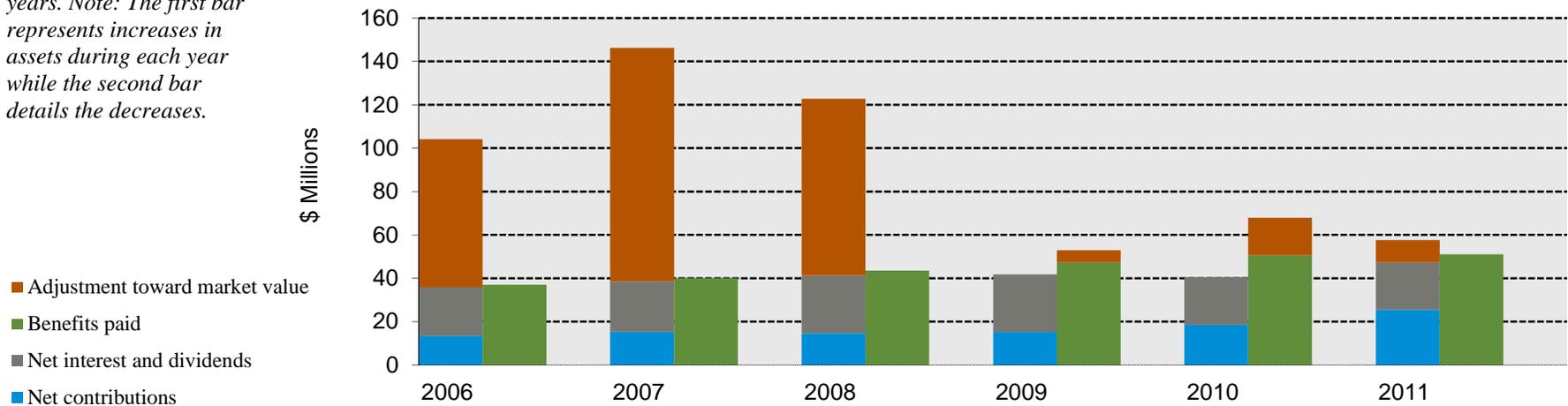
B. FINANCIAL INFORMATION

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 six 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, 2006-2011



SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

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.

SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

CHART 7

Determination of Actuarial and Valuation Value of Assets for Year Ended June 30, 2011

Plan Year Ending June 30	Total Actual Market Return	Expected Return	Investment Gain/(Loss)*	Deferred Factor	Deferred Return
2007	\$173,484,408	\$85,166,893	\$88,317,515	0.0	\$0
2008	(76,360,019)	97,259,541	(173,619,560)	0.2	(34,723,912)
2009	(223,116,857)	88,435,600	(311,552,457)	0.4	(124,620,933)
2010	118,017,947	67,375,933	50,642,014	0.6	30,385,208
2011	215,994,016	72,474,547	143,519,469	0.8	114,815,575
1. Total Deferred Return					\$(14,144,112)
2. Net Market Value					1,109,211,576
3. Actuarial Value of Assets (Item 2 – Item 1)					\$1,123,355,688
4. Ratio of Actuarial Value to Market Value					101.3%
5. Non-Valuation Reserves and Other Adjustments					
a. DROP Reserve					103,184,000
b. PRSB Reserve					269,000
c. City Surplus Reserve**					(3,093,000)
d. Total					100,360,000
6. Valuation Value of Assets (Item 3 – Item 5d)					\$1,022,995,688

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

* 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, 2011. This difference is taken into account in developing the contribution rate requirement for 2012-2013. See Step (4) in Table 4 of Appendix B for details.

Deferred return as of June 30, 2011 recognized in each of the next four years:

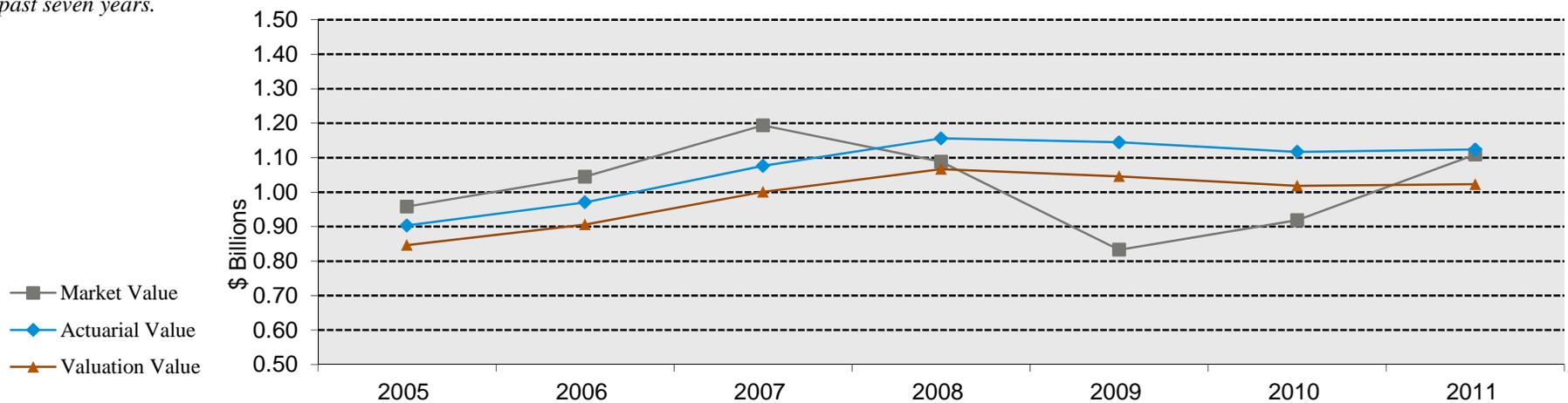
6/30/2012	\$(58,202,107)
6/30/2013	(23,478,195)
6/30/2014	38,832,297
6/30/2015	28,703,893
	<u>\$(14,144,112)</u>

SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

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 seven years.

CHART 8
Market Value, Actuarial Value and Valuation Value of Assets as of June 30, 2005-2011



SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

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 \$16.5 million, including a loss of \$52.4 million from investments and a gain of \$35.8 million from all other sources. The net experience variation from individual sources other than investments was 3.9% 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, 2011

1. Net gain/(loss) from investments ⁽¹⁾	-\$52,381,000
2. Net gain/(loss) from other experience ⁽²⁾	<u>35,849,000</u>
3. Net experience gain/(loss): (1) + (2)	-\$16,532,000

⁽¹⁾ Details in Chart 10.

⁽²⁾ See Section 3, Items (6b) through (6d) in Exhibit H.

SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

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 8.00%. The actual rate of return on a valuation basis for the 2010/2011 plan year was 2.80%.

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, 2011 with regard to its investments.

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

CHART 10

Investment Experience for Year Ended June 30, 2011 – Valuation Value, Actuarial Value and Market Value of Assets

	Valuation Value	Actuarial Value	Market Value
1. Actual return	\$28,156,867	\$31,935,944	\$215,994,016
2. Average value of assets	\$1,006,722,066	\$1,104,134,027	\$905,931,843
3. Actual rate of return: (1) ÷ (2)	2.80%	2.89%	23.84%
4. Assumed rate of return	8.00%	8.00%	8.00%
5. Expected return: (2) x (4)	\$80,537,765	\$88,330,722	\$72,474,547
6. Actuarial gain/(loss): (1) – (5)	<u>\$(52,380,898)</u>	<u>\$(56,394,778)</u>	<u>\$143,519,469</u>

SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

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 seven years.

In this valuation, we have continued to apply the 8.00% investment return assumption adopted by the Board for the last actuarial valuation.

CHART 11

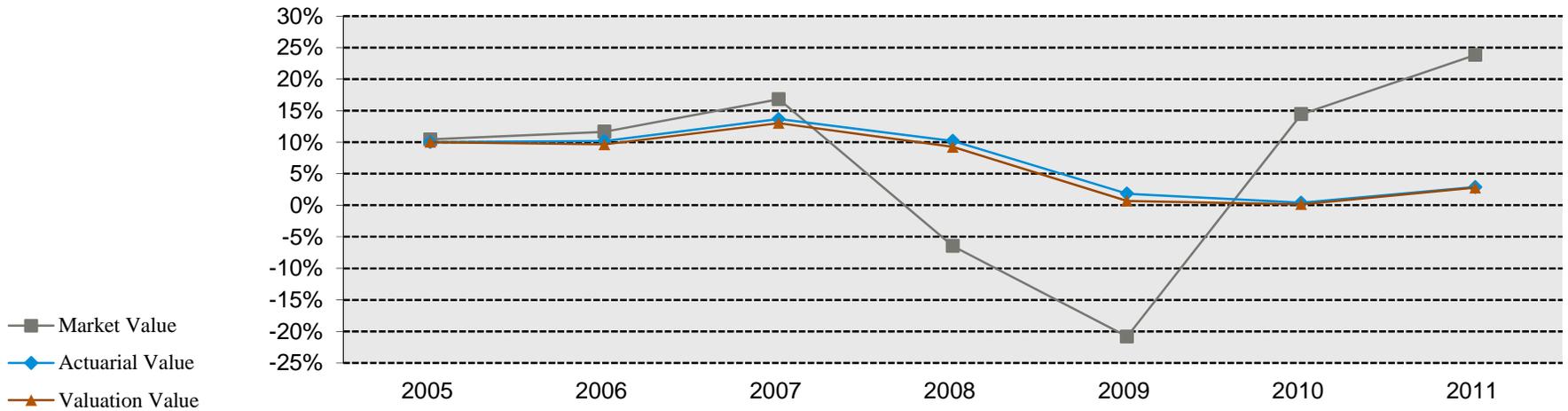
Investment Return – Actuarial Value, Valuation Value and Market Value: 2005 – 2011

Year Ended June 30	Valuation Value Investment Return		Actuarial Value Investment Return		Market Value Investment Return	
	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%
2011	28,156,867	2.80%	31,935,944	2.89%	215,994,016	23.84%
Annualized Average Return		6.40%			6.41%	6.09%

SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

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, 2011



SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

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, 2011 amounted to \$35.8 million which is 3.9% of the actuarial accrued liability. See Exhibit H for a detailed development of the prefunded actuarial accrued liability.

SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

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)

SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

CHART 13

Recommended Employer Contribution Rates (Dollar Amounts in Thousands)

	<u>June 30, 2011</u>		<u>June 30, 2010</u>	
	<u>Rate</u>	<u>Estimated Annual Amount*</u>	<u>Rate</u>	<u>Estimated Annual Amount*</u>
Tier 1 Members				
Normal Cost	26.22%	\$4,071	26.57%	
Tier 2 Members				
Normal Cost	19.56%	\$17,102	19.77%	
All Categories Combined				
Normal Cost	20.56%	\$21,173	20.98%	\$21,601
Surplus Offset	0.00%	0	-0.38%	-391
Contribution Shortfall from Prior Fiscal Year	<u>-0.72%</u>	<u>-742</u>	<u>3.34%</u>	<u>3,439</u>
Total Contribution	19.84%	\$20,431	23.94%	\$24,649

* Amounts are in thousands and are based on projected fiscal year 2012 – 2013 annual payroll for active non-DROP and DROP members (also in thousands).

Tier 1	\$15,526
Tier 2	<u>87,434</u>
Total	\$102,960

SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

The employer contribution rates as of June 30, 2011 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, 2010 to June 30, 2011 (Dollars in Thousands)

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

	Contribution Rate	Estimated Amount*
Recommended Contribution Rate as of June 30, 2010	23.94%	\$24,649
2010/2011 plan year contribution shortfall included in the above rate (payable 2011/2012)	3.34%	\$3,439
2010/2011 plan year surplus offset included in the above rate (payable 2011/2012)	-0.38%	-\$391
Normal Cost Rate as of June 30, 2010	20.98%	\$21,601
Effect of actuarial experience during 2010/2011:		
1. Effect of lower normal cost due to change in continuance benefit for service-connected disabilities	-0.21%	-\$214
2. Effect of lower normal cost due to change in membership demographics	-0.21%	-214
Subtotal	-0.42%	-\$428
Normal Cost Rate as of June 30, 2011	20.56%	\$21,173
3. Effect of difference between actual and estimated 6/30/2011 surplus allocated to the City in the 6/30/2010 valuation for offsetting the City's contributions for the 2011/2012 plan year	-0.72%	-\$742
Subtotal	-0.72%	-\$742
Recommended Contribution Rate as of June 30, 2011	19.84%	\$20,431

* Based on projected fiscal year 2012 – 2013 annual payroll of \$102,960 for active non-DROP and DROP members.

SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

The member contribution rates as of June 30, 2011 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.

CHART 15

Reconciliation of Recommended Member Contribution from June 30, 2010 to June 30, 2011 (Dollar Amounts in Thousands)

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

	Contribution Rate	Estimated Amount ⁽¹⁾
Average Contribution Rate as of June 30, 2010	8.82%	\$8,010
Effect of changes in demographics	-0.01%	-\$4
Average Contribution Rate as of June 30, 2011	8.81%	\$8,006

⁽¹⁾ Based on projected fiscal year 2012-2013 annual payroll for members NOT in the DROP of \$90,834.

SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

CHART 16
Breakdown of Normal Cost Rate

As requested by the Retirement System, we have provided a breakdown of the Normal Cost to fund each type of benefit.

	<u>June 30, 2011</u>	
	<u>Tier 1</u>	<u>Tier 2</u>
Service Retirement	19.33%	18.41%
Vested Deferred Retirement	1.54%	0.87%
Death-In-Service	0.62%	0.66%
Disability	5.85%	8.08%
Contribution Refunds	<u>0.32%</u>	<u>0.44%</u>
Total Normal Cost	27.66%	28.46%
Less		
Employee Contributions*	<u>1.44%</u>	<u>8.90%</u>
Equals		
Net Employer Normal Cost	26.22%	19.56%

* The offset for employee contributions is less than the aggregate employee rate because it expresses the employee contribution dollar amount as a percent of projected fiscal year 2012-2013 annual payroll for all active members (non-DROP and DROP) of \$102,960 instead of annual payroll for only active non-DROP members of \$90,834.

SECTION 2: Valuation Results for the City of Fresno Fire and Police Retirement System

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 17 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 17
Required Versus Actual Contributions

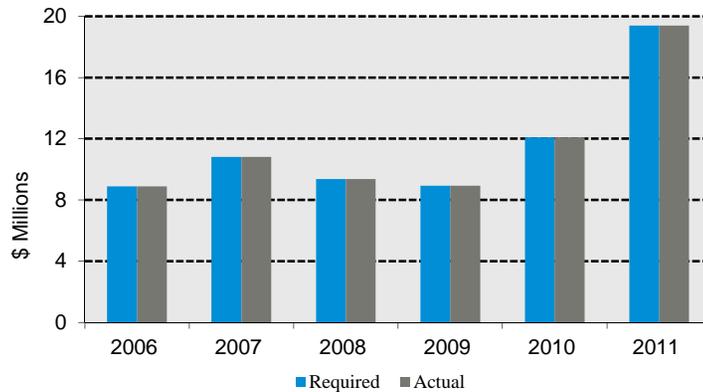
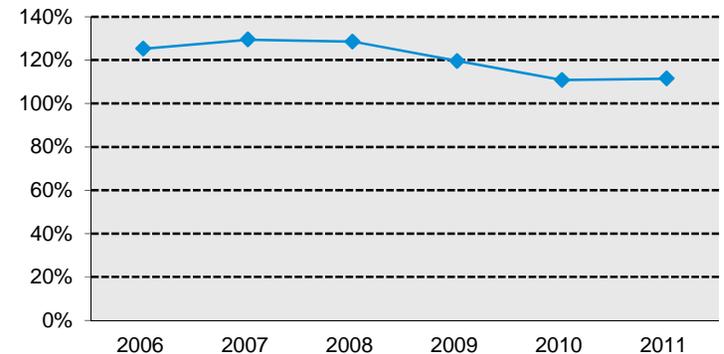


CHART 18
Funded Ratio



SECTION 3: Supplemental Information for the City of Fresno Fire and Police Retirement System

EXHIBIT A

Table of Plan Coverage

i. Tier 1

Category	Year Ended June 30		Change From Prior Year
	2011	2010	
Active members in valuation			
Non-DROP			
Number	37	56	-33.9%
Average age	47.7	47.8	N/A
Average service	23.3	23.2	N/A
Projected total compensation	\$4,188,009	\$6,246,687	-33.0%
Projected average compensation	\$113,189	\$111,548	1.5%
Member account balances	\$7,582,720	\$11,088,925	-31.6%
Total active vested members	37	56	-33.9%
DROP			
Number	108	132	-18.2%
Average age	54.1	54.7	N/A
Average service	24.8	24.4	N/A
Projected total compensation	\$10,740,616	\$12,007,417	-10.6%
Projected average compensation	\$99,450	\$90,965	9.3%
Vested terminated members			
Number	2	3	-33.3%
Average age	51.3	49.9	N/A
Retired members			
Number in pay status	356	334	6.6%
Average age	69.8	70.6	N/A
Average monthly benefit ⁽¹⁾	\$4,259	\$4,307	-1.1%
Disabled members			
Number in pay status	275	271	1.5%
Average age	64.1	63.5	N/A
Average monthly benefit ⁽¹⁾	\$4,082	\$4,081	0.0%
Beneficiaries			
Number in pay status	239	235	1.7%
Average age	70.0	69.3	N/A
Average monthly benefit ⁽¹⁾	\$2,169	\$2,176	-0.3%

⁽¹⁾ Excludes supplemental benefits paid from PRSB and benefits derived from DROP account balances.

SECTION 3: Supplemental Information for the City of Fresno Fire and Police Retirement System

EXHIBIT A

Table of Plan Coverage

ii. Tier 2

Category	Year Ended June 30		Change From Prior Year
	2011	2010	
Active members in valuation			
Non-DROP			
Number	916	936	-2.1%
Average age	38.3	37.4	N/A
Average service	9.7	8.7	N/A
Projected total compensation	\$83,151,852	\$83,471,324	-0.4%
Projected average compensation	\$90,777	\$89,179	1.8%
Member account balances	\$89,066,614	\$77,734,780	14.6%
Total active vested members	732	683	7.2%
DROP			
Number	10	11	-9.1%
Average age	57.9	58.2	N/A
Average service	13.8	11.9	N/A
Projected total compensation	\$919,253	\$961,001	-4.3%
Projected average compensation	\$91,925	\$87,364	5.2%
Vested terminated members			
Number	51	54	-5.6%
Average age	40.0	38.8	N/A
Retired members			
Number in pay status	11	7	57.1%
Average age	57.0	54.4	N/A
Average monthly benefit ⁽¹⁾	\$1,513	\$1,360	11.3%
Disabled members			
Number in pay status	65	54	20.4%
Average age	43.7	42.6	N/A
Average monthly benefit ⁽¹⁾	\$3,236	\$3,177	1.9%
Beneficiaries			
Number in pay status	2	1	100.0%
Average age	44.0	36.5	N/A
Average monthly benefit ⁽¹⁾	\$1,440	\$2,450	-41.2%

⁽¹⁾ Excludes supplemental benefits paid from PRSB and benefits derived from DROP account balances.

SECTION 3: Supplemental Information for the City of Fresno Fire and Police Retirement System

EXHIBIT B

**Members in Active Service and Projected Average Compensation
By Age, Years of Service as of June 30, 2011– Non-DROP Active Members Only***

i. Tier 1

Age	Total	Years of Service								
		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	5	--	--	--	--	5	--	--	--	--
	\$96,179	--	--	--	--	\$96,179	--	--	--	--
45 - 49	29	--	--	--	1	21	7	--	--	--
	114,469	--	--	--	\$108,332	113,017	\$119,701	--	--	--
50 - 54	3	--	--	--	--	2	1	--	--	--
	129,170	--	--	--	--	137,727	112,056	--	--	--
55 - 59	--	--	--	--	--	--	--	--	--	--
60 - 64	--	--	--	--	--	--	--	--	--	--
65 - 69	--	--	--	--	--	--	--	--	--	--
70 & over	--	--	--	--	--	--	--	--	--	--
Total	37	--	--	--	1	28	8	--	--	--
	\$113,189	--	--	--	\$108,332	\$111,775	\$118,746	--	--	--

* Excludes 108 active members in DROP with projected average compensation of \$99,450.

SECTION 3: Supplemental Information for the City of Fresno Fire and Police Retirement System

EXHIBIT B

**Members in Active Service and Projected Average Compensation
By Age, Years of Service as of June 30, 2011– Non-DROP Active Members Only***

ii. Tier 2

Age	Total	Years of Service							
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & over
Under 25	13	13	--	--	--	--	--	--	--
	\$67,448	\$67,448	--	--	--	--	--	--	--
25 - 29	110	66	44	--	--	--	--	--	--
	80,650	76,690	\$86,590	--	--	--	--	--	--
30 - 34	194	51	121	22	--	--	--	--	--
	86,945	79,373	88,553	\$95,656	--	--	--	--	--
35 - 39	210	28	91	76	15	--	--	--	--
	91,452	80,796	89,508	95,280	\$103,724	--	--	--	--
40 - 44	238	16	53	101	64	3	--	--	--
	95,250	91,042	89,359	94,425	102,286	\$97,075	--	--	--
45 - 49	102	5	20	31	40	6	--	--	--
	97,060	91,715	91,280	94,305	100,647	111,109	--	--	--
50 - 54	42	2	7	6	22	5	--	--	--
	97,390	88,686	89,492	98,739	100,558	96,374	--	--	--
55 - 59	6	2	1	2	1	--	--	--	--
	95,613	107,617	81,039	92,641	92,121	--	--	--	--
60 - 64	1	1	--	--	--	--	--	--	--
	97,690	97,690	--	--	--	--	--	--	--
65 - 69	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
70 & Over	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
Total	916	184	337	238	143	14	--	--	--
	\$90,777	\$79,643	\$88,840	\$94,891	\$101,641	\$102,839	--	--	--

* Excludes 10 active members in DROP with projected average compensation of \$91,925.

SECTION 3: Supplemental Information for the City of Fresno Fire and Police Retirement System

EXHIBIT C

Reconciliation of Member Data – June 30, 2010 to June 30, 2011

	Non-DROP Active Members	Vested Terminated Members	Pensioners/ DROP**	Disableds	Beneficiaries	Total
Number as of June 30, 2010	992	57	484	325	236	2,094
New members	1	0	0	0	0	1
Terminations – with vested rights	-2	2	0	0	0	0
Contributions Refunds	-6	-4	0	0	0	-10
Retirements/ DROP	-23	-1	24	0	0	0
New disabilities	-9	-1	-11	21	0	0
Return to work	0	0	0	0	0	0
Died with or without beneficiary	0	0	-12	-6	5*	-13
Data adjustments	0	0	0	0	0	0
Number as of June 30, 2011	953	53	485	340	241	2,072

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

** Includes 143 and 118 active members in DROP as of June 30, 2010 and June 30, 2011, respectively.

SECTION 3: Supplemental Information for the City of Fresno Fire and Police Retirement System

EXHIBIT D

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended June 30, 2011	Year Ended June 30, 2010
Contribution income:		
Employer contributions	\$19,397,178	\$12,094,355
Employee contributions	7,304,036	7,354,890
Less administrative expenses	<u>-1,079,951</u>	<u>-992,655</u>
Net contribution income	\$25,621,263	\$18,456,590
Investment income:		
Interest, dividends and other income	\$27,266,760	\$27,345,055
Adjustment toward market value	10,290,969	-17,389,613
Less investment fees	<u>-5,621,785</u>	<u>-5,312,622</u>
Net investment income	<u>31,935,944</u>	<u>4,642,820</u>
Total income available for benefits	\$57,557,207	\$23,099,410
Less benefit payments:		
Benefit payments	-\$48,894,173	-\$46,327,487
Post retirement supplemental benefits	-1,662,077	-3,311,087
Refunds of contributions	<u>-493,579</u>	<u>-917,610</u>
Net benefits payments	-\$51,049,829	-\$50,556,184
Change in reserve for future benefits	\$6,507,378	-\$27,456,774

SECTION 3: Supplemental Information for the City of Fresno Fire and Police Retirement System

EXHIBIT E

Summary Statement of Assets

	Year Ended June 30, 2011	Year Ended June 30, 2010
Cash equivalents	\$1,317,503	\$941,087
Accounts receivable:		
Receivables for investments sold	\$11,096,805	\$18,230,157
Interest and dividends	3,757,293	3,796,789
Others receivables	<u>4,550,765</u>	<u>1,686,162</u>
Total accounts receivable	19,404,863	23,713,108
Investments:		
Domestic and international equity	\$622,227,908	\$479,270,352
Government and corporate bonds	312,479,298	295,635,712
Real estate	105,837,124	84,463,534
Emerging market equity	48,997,718	43,644,354
Collateral held for securities lent	173,363,344	161,862,198
Other investments	<u>29,557,951</u>	<u>27,429,169</u>
Total investments at market value	<u>1,292,463,343</u>	<u>1,092,305,319</u>
Total assets	\$1,313,185,709	\$1,116,959,514
Less accounts payable:		
Collateral held for securities lent	-\$173,363,344	-\$161,862,198
Payable for investments and foreign currency purchased	-29,377,186	-35,404,511
Other liabilities	<u>-1,233,603</u>	<u>-1,046,679</u>
Total accounts payable	-\$203,974,133	-\$198,313,388
Net assets at market value	<u>\$1,109,211,576</u>	<u>\$918,646,126</u>
Net assets at actuarial value	<u>\$1,123,355,688</u>	<u>\$1,116,848,310</u>
Net assets at valuation value	<u>\$1,022,995,688</u>	<u>\$1,018,605,310</u>

Note: Results may not total properly due to rounding.

SECTION 3: Supplemental Information for the City of Fresno Fire and Police Retirement System

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	<u>Total</u>
1. Total valuation assets	\$1,022,996
2. Present value of future member normal cost	68,117
3. Present value of future employer normal cost	181,982
4. Unfunded/(prefunded) actuarial accrued liability	-105,055
5. Total current and future assets	<u>\$1,168,040</u>
Liabilities	
6. Present value of benefits already granted, excludes current active DROP	\$555,903
7. Present value of benefits for current active DROP	116,699
8. Present value of benefits to be granted	495,438
9. Total liabilities	<u>\$1,168,040</u>

SECTION 3: Supplemental Information for the City of Fresno Fire and Police Retirement System

EXHIBIT G

Summary of Reported Asset Information as of June 30, 2011

	Reserves \$(000)
Employer Advance/Retired Reserves	\$909,591
Active Member Reserves	99,261
DROP Reserve ⁽¹⁾	103,184
Reserve for PRSB ⁽¹⁾	269
Reserve for City Surplus ^{(1),(2)}	(3,093)
Net Assets Held in Trust for Benefits	<u>\$1,109,212</u>

⁽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, 2011. This difference is taken into account in developing the contribution rate requirement for 2012-2013.*

SECTION 3: Supplemental Information for the City of Fresno Fire and Police Retirement System

EXHIBIT H

Development of Unfunded/(Prefunded) Actuarial Accrued Liability as of June 30, 2011

	(Dollar amounts in Thousands)
1 Unfunded/(prefunded) actuarial accrued liability at beginning of year	-\$99,319
2 Gross Normal Cost at middle of year	28,859
3 Actual employer and member contributions	-26,701
4 Interest (whole year on (1) plus half year on (2) + (3))	<u>-7,859</u>
5 Expected unfunded/(prefunded) actuarial accrued liability at end of year	-\$105,020
6 Actuarial (gain)/loss due to all changes:	
<u>Experience (gain)/loss</u>	
a. Loss from investment	\$52,381
b. Lower than expected COLA benefit increases from continuing retirees and DROP participants	-25,594
c. Lower than expected salary increases	-9,294
d. Other experience (gain)/loss	<u>-961</u>
e. Subtotal	16,532
<u>Other changes</u>	
f. Effect of change in continuance benefit for service-connected disabilities	-16,567
7 Actual unfunded/(prefunded) actuarial accrued liability at end of year (5) + (6e) + (6f)	-\$105,055

SECTION 3: Supplemental Information for the City of Fresno Fire and Police Retirement System

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 2011 and \$200,000 for 2012. 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.

SECTION 3: Supplemental Information for the City of Fresno Fire and Police Retirement System

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.

SECTION 3: Supplemental Information for the City of Fresno Fire and Police Retirement System

**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.

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

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
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%
2011	19,397	19,397	100.0%

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

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)
6/30/2006	\$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
6/30/2011	1,022,996	917,941	105,055	111.4	99,000	106.1

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

EXHIBIT III

Supplementary Information Required by GASB

Valuation date	June 30, 2011
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	948
Terminated members entitled to, but not yet receiving benefits	53
DROP members	118
Active members	<u>953</u>
Total	2,072

* 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.

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

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.

The tables shown above were determined to contain sufficient provision appropriate to reasonably reflect future mortality, based on a review of mortality experience as of the measurement date.

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.

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

Termination Rates Before Retirement:

Rate (%)

Mortality

Tier 1 & Tier 2

<u>Age</u>	<u>Male</u>	<u>Female</u>
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.

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

Termination Rates Before Retirement (Continued):

Rate (%)

Disability

<u>Age</u>	<u>Tier 1</u>		<u>Tier 2</u>	
	<u>Duty</u>	<u>Non-Duty</u>	<u>Duty</u>	<u>Non-Duty</u>
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

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

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	
<u>Age</u>	<u>Tier1</u>	<u>Tier 2</u>	<u>Tier 1</u>	<u>Tier 2</u>								
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

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

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

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

Retirement Rates:

Age	Rate (%)	
	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

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

**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.

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

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:

<u>Service</u>	<u>Annual Increase</u>
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:

<u>Age</u>	<u>Annual Increase</u>
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.

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

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.

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 the actuarial assumptions since the previous actuarial valuation.
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SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

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.
<i>Tier 1</i>	Safety members hired before August 27, 1990.
<i>Tier 2</i>	Safety members hired on or after August 27, 1990.

Final Compensation (FAS) for Benefit Determination:

<i>Tier 1</i>	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).
<i>Tier 2</i>	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:

<i>Tier 1</i>	Age 50 with 10 years of service, or age 65 regardless of service (§3-332).
<i>Tier 2</i>	Age 50 with 5 years of service, or age 65 regardless of service (§3-410).

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

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

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

**Deferred Retirement
Option Program (DROP):**

<i>Eligibility</i>	Same as Service Retirement.
<i>Benefits Under DROP</i>	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><i>Tier 1</i></u>	
<i>Eligibility</i>	Ten years of service (§3-335).
<i>Benefit Formula</i>	Greater of 1.65% x FAS x Yrs, 36.67% of FAS or Service Retirement benefit (§3-336).
<u><i>Tier 2</i></u>	
<i>Eligibility</i>	Ten years of service (§3-412).
<i>Benefit Formula</i>	Greater of 1.5% x FAS x Yrs, 33.00% of FAS or Service Retirement benefit (§3-413).

Duty Disability:

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

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

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 eligible 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).

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

Death After Retirement:

All Members

Service or

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).

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).

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

Member Contributions:	Please refer to Appendix A for specific rates.
<i>Tier 1</i>	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.
<i>Tier 2</i>	9% pay (§3-405)
<i>Tier 1</i>	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.*

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

Appendix A
Member Contributions Rates

Comparison of member rates calculated in the June 30, 2010 and June 30, 2011 valuations:

	<u>June 30, 2011 Actuarial Valuation</u>		<u>June 30, 2010 Actuarial Valuation</u>	
	Rate	Estimated Annual Amount*	Rate	Estimated Annual Amount*
Tier 1 Members	5.13%	\$223	5.20%	\$227
Tier 2 Members	9.00%	\$7,783	9.00%	\$7,783
All Member Categories Combined	8.81%	\$8,006	8.82%	\$8,010

* Amounts are in thousands and are based on the following projected fiscal year 2012 – 2013 annual payroll for members NOT in the DROP (also in thousands):

	<u>Excludes DROP Members</u>
Tier 1	\$ 4,356
Tier 2	86,478
Total	\$90,834

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

Appendix A

Member Contribution Rates (Continued)

**Tier 1 Members' Contribution Rates based on the June 30, 2011
Actuarial Valuation as a percentage of payroll**

Entry Age	<u>Exact Age</u>		<u>¼ Age</u>		<u>½ Age</u>		<u>¾ Age</u>	
	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

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

**Appendix A
Member Contribution Rates (Continued)**

Entry Age	<u>Exact Age</u>		<u>¼ Age</u>		<u>½ Age</u>		<u>¾ Age</u>	
	Rate	Dependent Portion	Rate	Dependent Portion	Rate	Dependent Portion	Rate	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	9.11%	0.07911	9.11%	0.07911	9.11%	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

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

Appendix B

Allocation of Actuarial Surplus

	June 30	
	2011	2010
Surplus as of Date of Valuation (Table 1)	\$105,055,168	\$99,319,734
Actuarial Surplus (Table 1)	13,261,116	7,391,177
Distributable Actuarial Surplus as of date of valuation (Table 2)	1,184,521	660,201
Allocation of Distributable Surplus as of Date of Valuation:		
City Allocation (Table 3)	789,681	440,134
PRSB Allocation (Table 3)	<u>394,840</u>	<u>220,067</u>
Total	\$1,184,521	\$660,201
Allocation of Projected Distributable Surplus as of Date of Next Valuation:		
City Allocation (Table 3)	\$0	\$400,820

The Allocation of Distributable Actuarial Surplus is sufficient to:

- Provide a PRSB benefit of \$26.86 per month over the 2012 calendar year (Table 5) under the current policy of 80% distribution.

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

Appendix B (continued)

Allocation of Actuarial Surplus

	June 30	
	2011	2010
Table 1: Calculation of Actuarial Surplus		
(1) Valuation Value of Assets	\$1,022,995,688	\$1,018,605,310
(2) Actuarial Accrued Liability	917,940,520	919,285,576
(3) Surplus: (1) – (2)	105,055,168	99,319,734
(4) Contingency Reserve: 10% of (2)	91,794,052	91,928,558
(5) Actuarial Surplus: (3) – (4)	13,261,116	7,391,177
Table 2: Determination of Distributable Actuarial Surplus		
(1) Actuarial Surplus (Table 1)	\$13,261,116	\$7,391,177
(2) Amortization of Balance of Actuarial Surplus:		
a. Amortization Period	15	15
b. Amortization Factor	0.089323	0.089323
c. Amortization of Balance of Actuarial Surplus (1) x (2b)	\$1,184,521	\$660,201
(3) Projected Surplus for Next Year*	0	6,730,976
(4) Amortization of Balance of Projected Actuarial Surplus:		
a. Amortization Period	15	15
b. Amortization Factor	0.089323	0.089323
c. Amortization of Balance of Projected Actuarial Surplus (3) x (4b)	\$0	\$601,230

* In the June 30, 2010 valuation, the projected surplus was calculated by taking (1) and reducing that by the amount of amortized surplus that was expected to be utilized in 2010/2011 (i.e., (2c)) and adjusting both by the return on the valuation value of assets, taking into account the known deferred investment losses that had to be recognized during 2010/2011. As we have discussed in Section 1 of this report, the projected actuarial surplus in this year's valuation is calculated by first projecting the valuation value of assets and the actuarial accrued liability separately from June 30, 2011 to June 30, 2012, and then taking the difference between the two projected amounts. As the projected valuation value of assets is \$1,029,262,926 and the projected actuarial accrued liability is \$966,624,261 (before the adjustment for a 10% Contingency Reserve), there is no longer a projected surplus available for distribution at the next valuation as of June 30, 2012.

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

Appendix B (continued)

Allocation of Actuarial Surplus

	June 30	
	2011	2010
Table 3: Allocation of Distributable Actuarial Surplus:		
(1) Distributable Actuarial Surplus	\$1,184,521	\$660,201
(2) City Allocation: (1) x 2/3	789,681	440,134
(3) PRSB Allocation: (1) – (2)	394,840	220,067
<p>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.</p> <p>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.</p>		
(4) Next Year Projected Distributable Actuarial Surplus	0	601,230
(5) City Allocation (4) x 2/3	0	400,820
<p>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.</p> <p>The actual rather than the projected surplus will be used to determine the next calendar year’s PRSB benefit.</p>		

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

**Appendix B (continued)
Allocation of Actuarial Surplus**

	Fiscal Year 2012-2013			Fiscal Year 2011-2012		
	Tier 1	Tier 2	Total	Tier 1	Tier 2	Total
Table 4: City Contribution Requirements:						
(1) City Normal Cost Rate	26.22%	19.56%	20.56%	26.57%	19.77%	20.98%
(2) Projected Annual Payroll	\$15,525,761	\$87,434,103	\$102,959,864	\$14,928,616	\$84,071,253	\$98,999,869
(3) City Allocation of Distributable Actuarial Surplus	0	0	0	152,146	637,535	789,681
(4) City Surplus Reserve Account (From Prior Years)	0	0	0	-595,921	-2,497,079	-3,093,000
(5) ½ Year Interest on (4)	0	0	0	-23,837	-99,883	-123,720
(6) Total Contribution Offsets (3) + (4) + (5)	0	0	0	-467,612	-1,959,427	-2,427,039
(7) Total Contribution Requirement (1) * (2)	4,070,855	17,102,111	21,172,965	3,966,533	16,620,887	20,587,420
(8) City Contribution Requirement Prior To Application of Prepaid Employer Contribution Account (7) – (6), not less than 0	4,070,855	17,102,111	21,172,965	4,434,145	18,580,314	23,014,459
(9) Contribution Rate Adopted by the City for Fiscal Year 2011-2012						23.94%
(10) Projected City Contributions Based on Rate Adopted by the City (9) * (2)				\$3,573,911	\$20,126,658	\$23,700,569
(11) Net Additional City Contribution Before Application of Prepaid Employer Contribution Account (8) – (10)	4,070,855	17,102,111	21,172,965	860,235	-1,546,344	-686,110
(12) City’s Prepaid Employer Contribution Account Balance (Negative Account Balance Represents Contribution Shortfall)			713,554			0
(13) ½ Year Interest on (12)			28,542			0
(14) City’s Fiscal Year Contribution After Application of Prepaid Employer Contribution Account (11) – (12) – (13), not less than 0	3,928,174	16,502,695	20,430,869	0	0	0
(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			713,554

Note: Results may not total properly due to rounding.

SECTION 4: Reporting Information for the City of Fresno Fire and Police Retirement System

Appendix B (continued)

Allocation of Actuarial Surplus

	June 30	
	2011	2010
Table 5: Calculation of PRSB and PRSB Reserve Account:		
(1) PRSB Allocation of Distributable Actuarial Surplus	\$394,840	\$220,067
(2) Distribution percentage	80%	80%
(3) Preliminary PRSB distribution: (1) x (2)	\$315,872	\$176,054
(4) Number of eligible participants (Retirees, Beneficiaries & DROP Participants)	980	959
(5) Preliminary Monthly PRSB Benefit: (3) / (4) / 12	\$26.86	\$15.30
(6) Monthly Retiree Medical Trust Premium for the calendar year that commences 6 months following the date of valuation	\$985.00	\$911.00
(7) Benefit Shortfall: (6) – (5)	\$958.14	\$895.70
(8) PRSB Reserve Account	\$269,000	\$2,022,000
(9) Estimated July 1 to December 31 PRSB Payments*	\$273,538	\$1,662,733
(10) Net PRSB Reserve Account 6 months following the date of valuation	\$0	\$359,267
(11) Draw from PRSB Reserve Account (lesser of (10) / (4) / 12 or (7))	\$0.00	\$31.22
(12) Final monthly PRSB Benefit for next calendar year: (5) + (11)	\$26.86	\$46.52
(13) Estimated PRSB Reserve Account at the end of the next calendar year: (1) + (10) – [(12) * (4) * 12]	\$78,967	\$43,981

* Since the estimated payments exceed the PRSB reserve account, the PRSB benefit for the month of December 2012 will be adjusted so that the reserve account does not become negative.

Note: The actual, rather than projected June 30, 2012 surplus, will be used to determine the 2013 calendar year PRSB benefit.

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