

City of Fresno Employees Retirement System

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

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December 7, 2011

*Board of Retirement
City of Fresno Employees Retirement System
2828 Fresno Street, Suite 201
Fresno, California 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 2012-2013 and analyzes the preceding year's experience.

The census and financial information were prepared by the City of Fresno Employees 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.

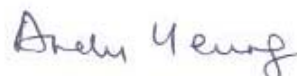
We look forward to reviewing this report at your next meeting and to answering any questions.

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..... | vii |
| Summary of Key Valuation Demographic and Financial Data..... | viii |

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

SECTION 4

REPORTING INFORMATION

| | |
|---|----|
| EXHIBIT I Supplementary Information Required by GASB – Schedule of Employer Contributions..... | 30 |
| EXHIBIT II Supplementary Information Required by GASB – Schedule of Funding Progress | 31 |
| EXHIBIT III Supplementary Information Required by GASB | 32 |
| EXHIBIT IV Actuarial Assumptions and Actuarial Cost Method | 33 |
| EXHIBIT V Summary of Plan Provisions..... | 41 |
| Appendix A Member Contribution Rates..... | 46 |
| Appendix B Allocation of Actuarial Surplus | 49 |

SECTION 1: Valuation Summary for the City of Fresno Employees Retirement System

Purpose

This report has been prepared by The Segal Company to present a valuation of the City of Fresno Employees 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, there will only be a small projected June 30, 2012 actuarial surplus in the Retirement System that can be used to reduce the City's and the members' COLA 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 Employees 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 31 > In the June 30, 2010 valuation, the ratio of the valuation value of assets to actuarial accrued liabilities was 122.5%. In this June 30, 2011 valuation, the funding ratio has decreased to 116.8%. The funding ratio as of June 30, 2011 if measured using the market value of assets instead of the valuation value of assets is 114.9%, which is an increase from the prior year ratio of 99.1%.
- Ref: Page 26 > The Retirement System's prefunded actuarial accrued liability (PAAL) as of June 30, 2010 was \$170.1 million. In this year's valuation, the PAAL has decreased to \$132.1 million, on a valuation value of assets basis. The Plan had a net actuarial experience loss of about \$42.6 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 10.21% of payroll as of June 30, 2010 to 12.36% of payroll as of June 30, 2011. This is the net result of: (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) higher normal cost due to increase in attained age for active members, and (iii) a reduction in the surplus available to offset the City's COLA contributions for the 2012/2013 plan year. A reconciliation of the Retirement System's aggregate employer rate is provided in Section 2, Subsection D (see Chart 14).

SECTION 1: Valuation Summary for the City of Fresno Employees Retirement System

Ref: Page 16

- The aggregate member rate calculated in this valuation has increased from 5.53% of payroll to 8.37% of payroll. The change in member rate is due to a reduction in the surplus available to pay employee COLA contributions and changes in membership 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 \$14.7 million. This is a significant reduction from last year's amount of \$177.0 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 \$14.7 million represent 2% of the market value of assets. Unless offset by future investment gains or other favorable experience, the recognition of the \$14.7 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 116.8% to 114.9%.
 - If the deferred losses were recognized immediately in the valuation value of assets, the aggregate employer contribution rate would increase from 12.36% of payroll to 12.94% of payroll.
- The footnote in Chart 7 shows that under the asset smoothing method the \$14.7 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 \$14.7 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 \$14.7 million in net deferred losses are fully recognized.

SECTION 1: Valuation Summary for the City of Fresno Employees 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 \$14.7 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 \$3.7 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. 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.

Ref: Page 49

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 Employees 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.

- As we have identified in Appendix B, the projected actuarial surplus in the System as of June 30, 2012 is not expected to be sufficient to pay down the entire amount required to fund the Normal Cost for the COLA benefits for the employer and the employee.

Ref: Page 46

It is our understanding that this may be the first time since the DROP and the surplus allocation provisions were adopted by the City that the System is not able to fully offset the cost of the COLA benefits with the amount allocated from actuarial surplus. As the funding requirement in the Municipal Code for the COLA benefit is to determine the cost "...to be shared **equally** (emphasis added) between the City and the contributing members...", we have two recommendations as to how that cost should be calculated in the actuarial valuation and the results in this report have been prepared to include these recommendations:

- a) As COLA contributions made by the employees can be refunded to the members who terminate before retirement, there is an additional refund-of-contributions liability that needs to be taken into account. We would propose that the cost of refunding the employee contributions be split equally between the employer and the employee, rather than treated as an upward adjustment to be included in the employee rates only.
- b) Currently, active members who sign up for the DROP continue to be treated by the City as active employees. The City continues to pay Normal Cost contributions (both basic and COLA) based on the payroll for all active employees, including those in the DROP, to the extent that the contributions are not offset by the distribution of actuarial surplus.

On the other hand, employee Normal cost contributions (both basic and COLA) are no longer required once a member signs up for the DROP. Again, as previously stated, 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.

SECTION 1: Valuation Summary for the City of Fresno Employees Retirement System

Based on the above discussion, the funding horizon or period is different between the City and the employees after the introduction of the DROP. However, that has not presented an issue for the funding of the COLA Normal Cost that is shared equally between the City and the members, only because the total COLA Normal Cost has been paid for by actuarial surplus. Now that it is anticipated that the surplus is no longer going to be sufficient to pay for the total COLA Normal Cost in the June 30, 2011 valuation for the 2012/13 fiscal year, the different funding periods need to be addressed.

For the June 30, 2011 valuation, we would recommend that the same COLA Normal Cost contribution rate expressed as a percent of the payroll for all active members (including the payroll for those in the DROP) be calculated as in the past. That COLA rate is then “grossed” up for the employees by the ratio of the payroll for all active members (including the payroll for those in the DROP) to the payroll for all active non-DROP members. This insures that the members in total pay their entire one-half share of the COLA Normal cost, even though that cost is paid only by members not in the DROP.

- As we have discussed with the Board during our surplus projection studies in 2010, consistent with Section 3-530 of the Fresno Municipal Code, any UAAL will be amortized over the remaining future working lifetimes of the active members, which is approximately 10 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.
- 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 Employees Retirement System

Summary of Key Valuation Results (Dollar amounts in thousands)

| | June 30, 2011 | | June 30, 2010 | |
|---|----------------------|--|----------------------|--|
| Employer Contribution Rates: | | | | |
| | Total Rate | Estimated Annual Amount ⁽¹⁾ | Total Rate | Estimated Annual Amount ⁽¹⁾ |
| Normal cost rate | 11.37% | \$13,904 | 10.70% | \$13,084 |
| Surplus offset | -0.14% | -177 | -2.91% | -3,558 |
| Prepaid contributions | 0.00% | 0 | 0.00% | 0 |
| Contribution shortfall from prior fiscal year | 1.13% | 1,382 | 2.42% | 2,959 |
| Required contributions | 12.36% | 15,109 | 10.21% | 12,485 |
| Average Member Contribution Rates: | | | | |
| | Total Rate | Estimated Annual Amount ⁽²⁾ | Total Rate | Estimated Annual Amount ⁽²⁾ |
| All members ⁽³⁾ | 8.37% | \$8,849 | 5.53% | \$5,843 |
| Funded Status: | | | | |
| Actuarial accrued liability | \$788,110 | | \$756,258 | |
| Valuation value of assets | 920,217 | | 926,370 | |
| Funded percentage | 116.8% | | 122.5% | |
| Prefunded Actuarial Accrued Liability | \$132,107 | | \$170,112 | |
| 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 \$122,280.

(2) Based on projected fiscal year 2012-2013 annual payroll for members not in the DROP of \$105,661.

(3) These are the average rates after applying the surplus to offset the COLA rates. See Section 4, Appendix A for the basic and COLA rates before the surplus offset.

SECTION 1: Valuation Summary for the City of Fresno Employees 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 | 1,739 | 2,040 | -14.8% |
| Average age | 47.2 | 46.6 | N/A |
| Average service | 11.1 | 10.3 | N/A |
| Projected total compensation ⁽¹⁾ | \$101,597,247 | \$116,427,736 | -12.7% |
| Average projected compensation | \$58,423 | \$57,072 | 2.4% |
| DROP | | | |
| Number of members | 254 | 243 | 4.5% |
| Average age | 59.8 | 60.2 | N/A |
| Average service | 24.5 | 24.4 | N/A |
| Projected total compensation ⁽¹⁾ | \$15,980,093 | \$14,796,085 | 8.0% |
| Average projected compensation | \$62,914 | \$60,889 | 3.3% |
| Retired Member and Beneficiaries: | | | |
| Number of members: | | | |
| Service retired | 1,123 | 1,019 | 10.2% |
| Disability retired | 140 | 135 | 3.7% |
| Beneficiaries | 359 | 349 | 2.9% |
| Total | 1,622 | 1,503 | 7.9% |
| Average age | 70.3 | 70.4 | N/A |
| Average monthly benefit ⁽²⁾ | \$1,861 | \$1,848 | 0.7% |
| Vested Terminated Members: | | | |
| Number of vested terminated members ⁽³⁾ | 212 | 184 | 15.2% |
| Average age | 46.3 | 46.6 | N/A |
| Summary of Financial Data (dollar amounts in thousands): | | | |
| Market value of assets | \$964,377 | \$806,571 | 19.6% |
| Return on market value of assets | 23.88% | 14.54% | N/A |
| Actuarial value of assets | \$979,108 | \$983,521 | -0.4% |
| Return on actuarial value of assets | 2.76% | 0.35% | N/A |
| Valuation value of assets | \$920,217 | \$926,370 | -0.7% |
| Return on valuation value of assets | 2.56% | -0.25% | 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 Employees 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 | 2,260 | 113 | 1,161 | 0.56 |
| 2005 | 2,286 | 127 | 1,202 | 0.58 |
| 2006 | 2,319 | 172 | 1,256 | 0.62 |
| 2007 | 2,422 | 190 | 1,306 | 0.62 |
| 2008 | 2,509 | 195 | 1,358 | 0.62 |
| 2009 | 2,490 | 188 | 1,400 | 0.64 |
| 2010 | 2,283 | 184 | 1,503 | 0.74 |
| 2011 | 1,993 | 212 | 1,622 | 0.92 |

⁽¹⁾ Includes DROP members.

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

SECTION 2: Valuation Results for the City of Fresno Employees 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 1,739 non-DROP active members with an average age of 47.2 years, average years of service of 11.1 and average compensation of \$58,423. The 2,040 non-DROP active members in the prior valuation had an average age of 46.6 years, average service of 10.3 and average compensation of \$57,072.

Inactive Members

In this year's valuation, there were 212 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 184 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

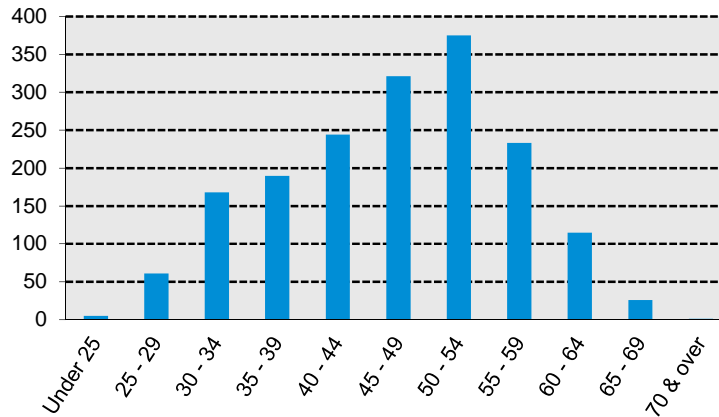
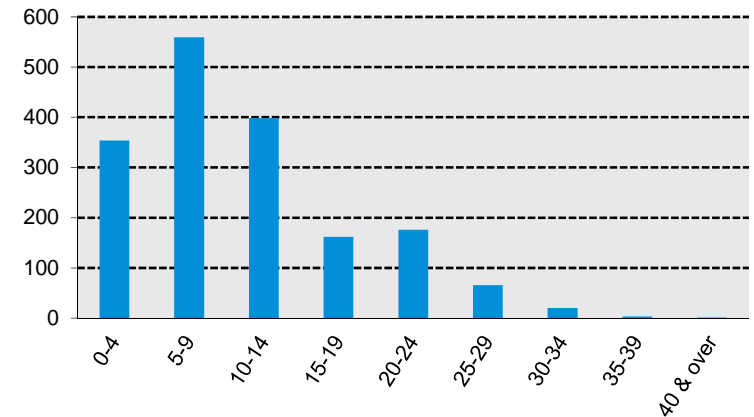


CHART 3
Distribution of Non-DROP Active Members by Years of Service as of June 30, 2011



SECTION 2: Valuation Results for the City of Fresno Employees Retirement System

DROP Active Members

In this year's valuation there were 254 DROP active members with an average age of 59.8 years, average years of service of 24.5, and average compensation of \$62,914. The 243 DROP active members in the prior valuation had an average age of 60.2 years, average years of service of 24.4, and average compensation of \$60,889.

Retired Members and Beneficiaries

As of June 30, 2011, 1,263 retired members and 359 beneficiaries were receiving total monthly benefits of \$3,017,800. For comparison, in the previous valuation, there were 1,154 retired members and 349 beneficiaries receiving monthly benefits of \$2,777,444.

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

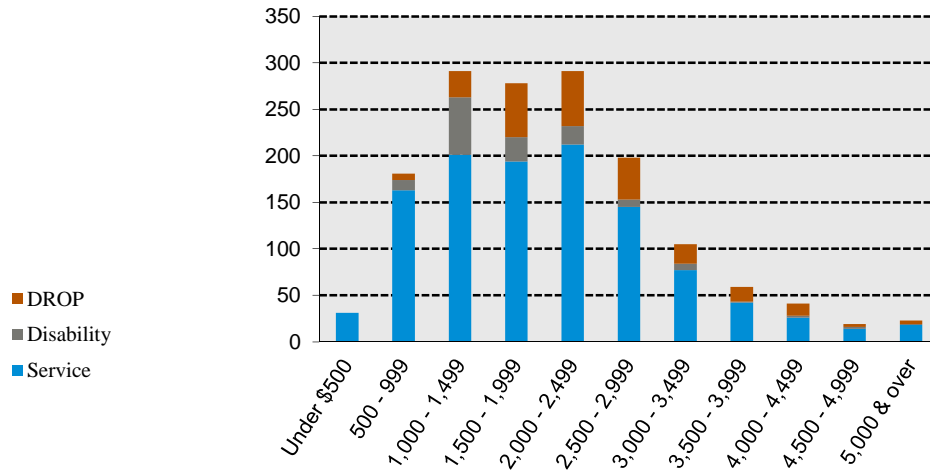
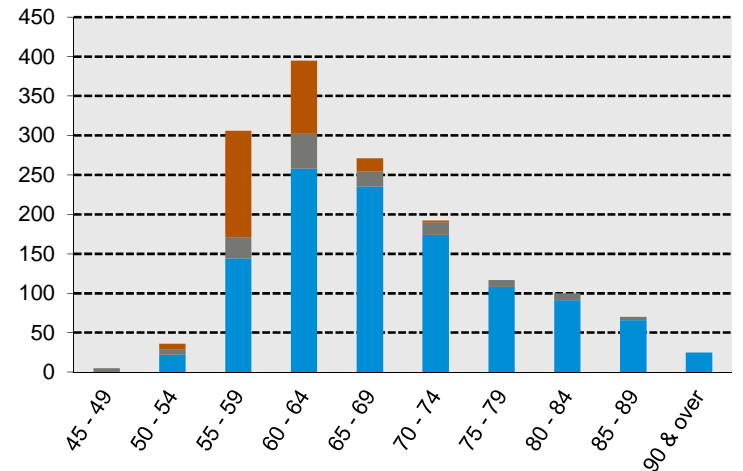


CHART 5
Distribution of Retired Members (Excl. Beneficiaries) by Type and by Age as of June 30, 2011



SECTION 2: Valuation Results for the City of Fresno Employees Retirement System

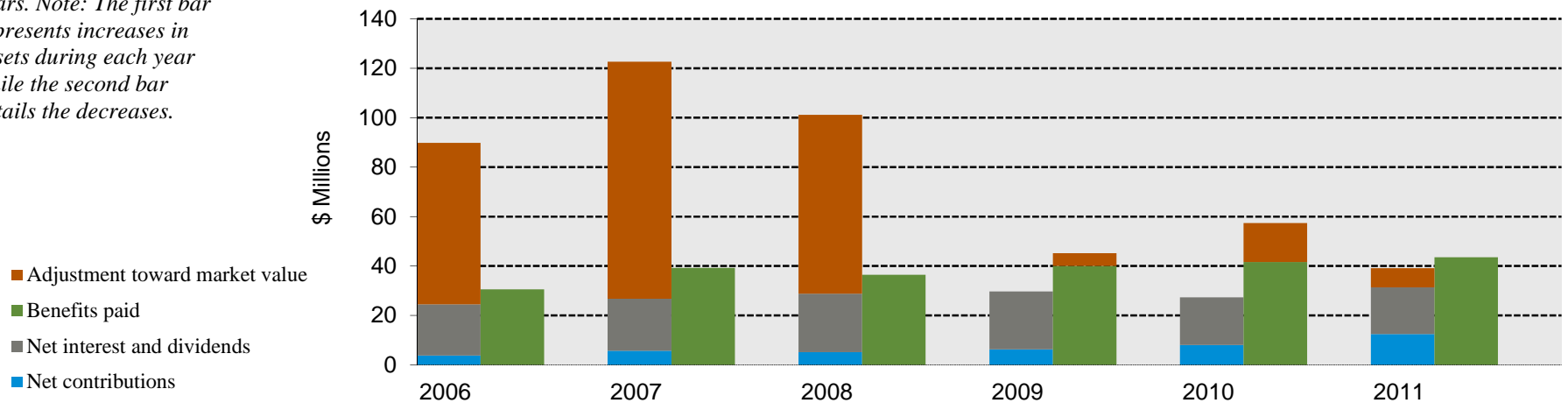
B. FINANCIAL INFORMATION

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 Employees 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 Employees 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 Market Return | Investment Gain/(Loss)* | Deferred Factor | Deferred Return |
|-----------------------------|-------------------------------|---------------------------|----------------------------|--------------------|--------------------|
| 2007 | \$156,545,863 | \$76,650,021 | \$79,895,842 | 0.0 | \$0 |
| 2008 | (68,481,857) | 86,887,836 | (155,369,693) | 0.2 | (31,073,939) |
| 2009 | (199,694,398) | 78,552,531 | (278,246,929) | 0.4 | (111,298,772) |
| 2010 | 104,511,346 | 59,302,581 | 45,208,765 | 0.6 | 27,125,259 |
| 2011 | 188,925,406 | 63,280,879 | 125,644,527 | 0.8 | 100,515,622 |

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

| | |
|---|----------------------|
| 1. Total Deferred Return | \$(14,731,830) |
| 2. Net Market Value of Assets | 964,376,504 |
| 3. Actuarial Value of Assets (Item 2 – Item 1) | <u>\$979,108,334</u> |
| 4. Ratio of Actuarial Value to Market Value | 101.5% |
| 5. Non-Valuation Reserves and Other Adjustments | |
| a. DROP Reserve | 61,642,000 |
| b. PRSB Reserve | 212,000 |
| c. City Surplus Reserve** | <u>(2,963,000)</u> |
| d. Total | <u>58,891,000</u> |
| 6. Valuation Value of Assets (Item 3 – Item 5d) | 920,217,334 |

* 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 | \$(52,552,666) |
| 6/30/2013 | (21,478,727) |
| 6/30/2014 | 34,170,658 |
| 6/30/2015 | <u>25,128,905</u> |
| | \$(14,731,830) |

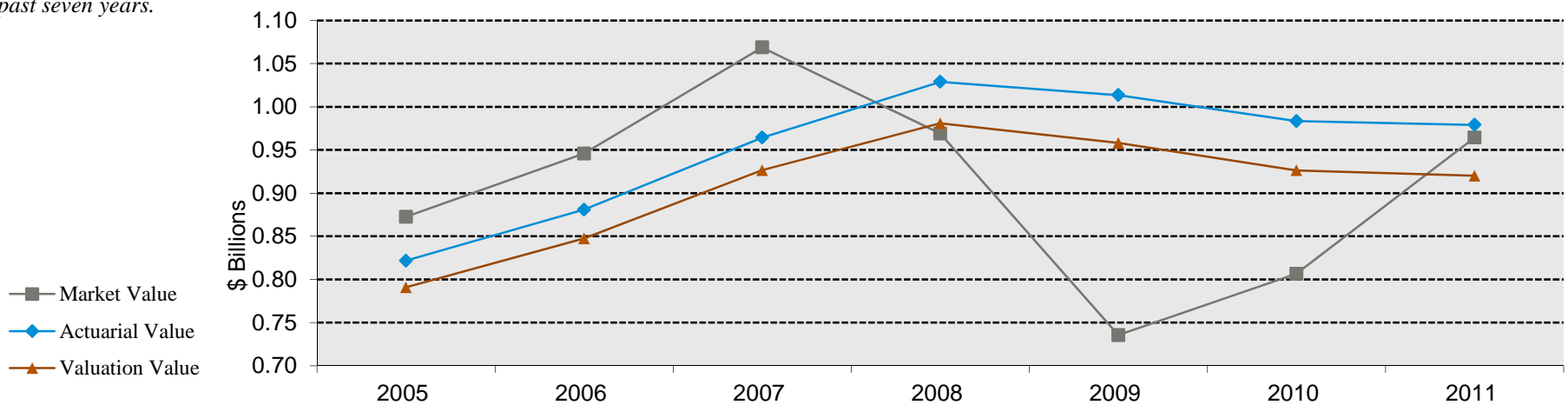
SECTION 2: Valuation Results for the City of Fresno Employees Retirement System

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 Employees 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 \$42.6 million, including a loss of \$49.5 million from investments and a gain of \$7.0 million from all other sources. The net experience variation from individual sources other than investments was 0.9% 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⁾ | -\$49,548,000 |
| 2. Net gain/(loss) from other experience ⁽²⁾ | <u>6,959,000</u> |
| 3. Net experience gain/(loss): (1) + (2) | -\$42,589,000 |

⁽¹⁾ Details in Chart 10.

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

SECTION 2: Valuation Results for the City of Fresno Employees 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 2.56%.

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 | \$23,379,931 | \$26,707,381 | \$188,925,406 |
| 2. Average value of assets | \$911,603,564 | \$967,960,839 | \$791,010,985 |
| 3. Actual rate of return: (1) ÷ (2) | 2.56% | 2.76% | 23.88% |
| 4. Assumed rate of return | 8.00% | 8.00% | 8.00% |
| 5. Expected return: (2) x (4) | \$72,928,285 | \$77,436,867 | \$63,280,879 |
| 6. Actuarial gain/(loss): (1) – (5) | <u>\$(49,548,354)</u> | <u>\$(50,729,486)</u> | <u>\$125,644,527</u> |

SECTION 2: Valuation Results for the City of Fresno Employees 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

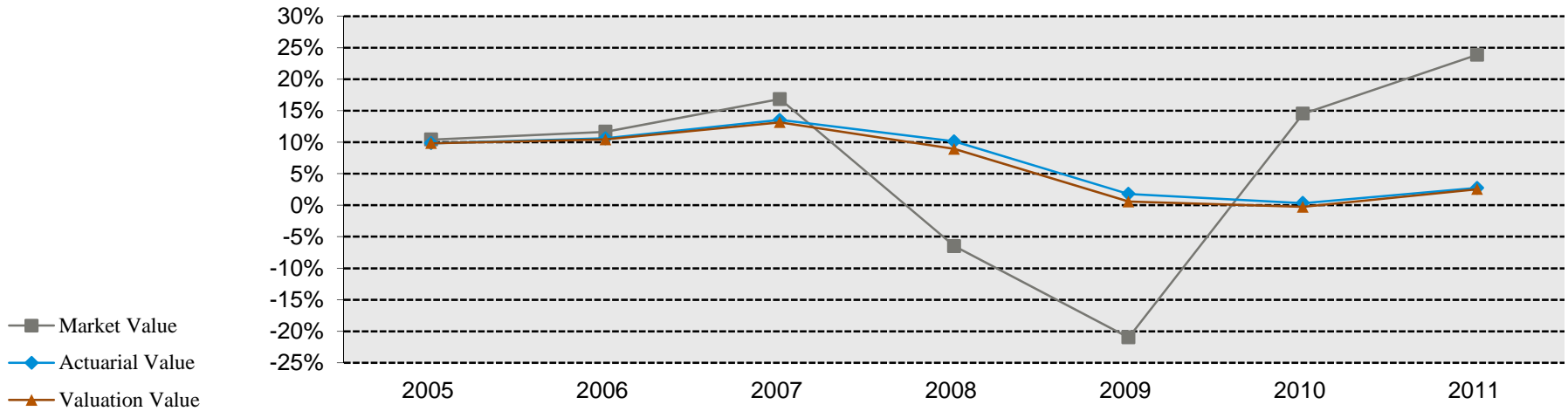
Investment Return – Actuarial Value, Valuation Value and Market Value: 2005 – 2011

| Year Ended June 30 | Valuation Value Investment Return | | Actuarial Value Investment Return | | Market Value Investment Return | |
|----------------------------------|-----------------------------------|---------|-----------------------------------|---------|--------------------------------|----------|
| | Amount | Percent | Amount | Percent | Amount | Percent |
| 2005 | \$67,602,316 | 9.84% | N/A | N/A | \$83,471,311 | 10.42% |
| 2006 | 81,292,494 | 10.44% | \$85,932,037 | 10.63% | 100,177,718 | 11.66% |
| 2007 | 109,598,151 | 13.17% | 116,910,064 | 13.53% | 156,545,863 | 16.85% |
| 2008 | 81,711,433 | 8.95% | 96,073,943 | 10.13% | (68,481,857) | (6.50%) |
| 2009 | 5,743,642 | 0.59% | 18,308,120 | 1.81% | (199,694,398) | (20.97%) |
| 2010 | (2,390,978) | (0.25%) | 3,460,859 | 0.35% | 104,511,346 | 14.54% |
| 2011 | 23,379,931 | 2.56% | 26,707,381 | 2.76% | 188,925,406 | 23.88% |
| Annualized Average Return | | 6.35% | | 6.42% | | 6.07% |

SECTION 2: Valuation Results for the City of Fresno Employees 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 Employees 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 increases different than assumed.

The net gain from this other experience for the year ended June 30, 2011 amounted to \$7.0 million which is 0.9% 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 Employees 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

Provide for an average annuity at age 55 equal to 1/150 of FAS for each of the first 25 years of service and 1/300 for each year in excess of 25 (§3-523).

SECTION 2: Valuation Results for the City of Fresno Employees 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> |
| All Categories Combined | | | | |
| Normal Cost | 11.37% | \$13,904 | 10.70% | \$13,084 |
| Surplus Offset | -0.14% | -177 | -2.91% | -3,558 |
| Prepaid Contribution | 0.00% | 0 | 0.00% | 0 |
| Contribution Shortfall from prior fiscal year | <u>1.13%</u> | <u>1,382</u> | <u>2.42%</u> | <u>2,959</u> |
| Total Contribution | 12.36% | \$15,109 | 10.21% | \$12,485 |

* 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).

Payroll \$ 122,280

SECTION 2: Valuation Results for the City of Fresno Employees 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.

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

CHART 14

Reconciliation of Recommended Employer Contribution from June 30, 2010 to June 30, 2011 (Dollars in Thousands)

| | Contribution Rate | Estimated Amount* |
|---|-------------------|-------------------|
| Recommended Contribution Rate as of June 30, 2010 | 10.21% | \$12,485 |
| 2010/2011 plan year contribution shortfall included in the above rate (payable 2011/2012) | 2.42% | \$2,959 |
| 2010/2011 plan year surplus offset included in the above rate (payable 2011/2012) | -2.91% | -\$3,558 |
| Normal Cost Rate as of June 30, 2010 | 10.70% | \$13,084 |
| Effect of actuarial experience during 2010/2011: | | |
| 1. Effect of higher normal cost due to increase in attained age for active members | 0.67% | \$820 |
| Subtotal | 0.67% | \$820 |
| Normal Cost Rate as of June 30, 2011 | 11.37% | \$13,904 |
| 2. Effect of the 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 | 1.13% | \$1,382 |
| 3. Effect of surplus available to offset the City's COLA contributions for the 2012/2013 plan year | -0.14% | -\$177 |
| Subtotal | 0.99% | \$1,205 |
| Recommended Contribution Rate as of June 30, 2011 | 12.36% | \$15,109 |

* Based on projected fiscal year 2012-2013 annual payroll of \$122,280 for active non-DROP and DROP members.

SECTION 2: Valuation Results for the City of Fresno Employees 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 ⁽²⁾ | 5.53% | \$5,843 |
| 1. Effect of a reduction in the surplus available to pay employee COLA contributions | 2.86% | \$3,027 |
| 2. Effect of change in membership demographic | -0.02% | -21 |
| Subtotal | 2.84% | \$3,006 |
| Average Contribution Rate as of June 30, 2011 ⁽²⁾ | 8.37% | \$8,849 |

⁽¹⁾ Based on projected fiscal year 2012-2013 annual payroll for members NOT in the DROP of \$105,661.

⁽²⁾ These are the average rates after applying the surplus to offset the COLA rates. See Section 4, Appendix A for the basic and COLA rates before the surplus offset.

SECTION 2: Valuation Results for the City of Fresno Employees 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> |
|---------------------------------|----------------------|
| Service Retirement | 16.57% |
| Vested Deferred Retirement | 0.87% |
| Death-In-Service | 0.24% |
| Disability | 0.32% |
| Contribution Refunds | <u>0.40%</u> |
| Total Normal Cost | 18.40% |
| Less | |
| Employee Contributions* | <u>7.03%</u> |
| Equals | |
| Net Employer Normal Cost | 11.37% |

* The offset for employee contributions is less than the aggregate employee rate primarily 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 \$122,280 instead of annual payroll for only active non-DROP members of \$105,661.

SECTION 2: Valuation Results for the City of Fresno Employees 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

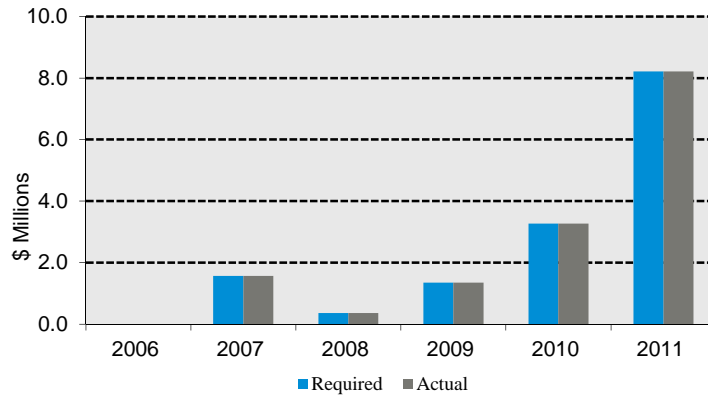
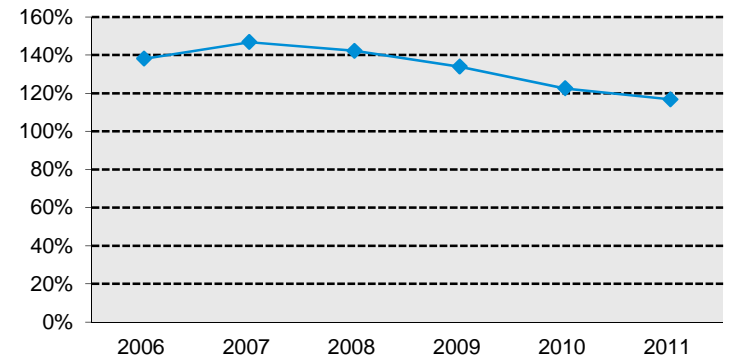


CHART 18
Funded Ratio



SECTION 3: Supplemental Information for the City of Fresno Employees Retirement System

EXHIBIT A

Table of Plan Coverage

| Category | Year Ended June 30 | | Change From Prior Year |
|--|---------------------------|---------------|-------------------------------|
| | 2011 | 2010 | |
| Active members in valuation | | | |
| Non-DROP | | | |
| Number | 1,739 | 2,040 | -14.8% |
| Average age | 47.2 | 46.6 | N/A |
| Average service | 11.1 | 10.3 | N/A |
| Projected total compensation | \$101,597,247 | \$116,427,736 | -12.7% |
| Projected average compensation | \$58,423 | \$57,072 | 2.4% |
| Member account balances | \$87,567,702 | \$94,746,305 | -7.6% |
| Total active vested members | 1,385 | 1,413 | -2.0% |
| DROP | | | |
| Number | 254 | 243 | 4.5% |
| Average age | 59.8 | 60.2 | N/A |
| Average service | 24.5 | 24.4 | N/A |
| Projected total compensation | \$15,980,093 | \$14,796,085 | 8.0% |
| Projected average compensation | \$62,914 | \$60,889 | 3.3% |
| Vested terminated members | | | |
| Number | 212 | 184 | 15.2% |
| Average age | 46.3 | 46.6 | N/A |
| Retired members | | | |
| Number in pay status | 1,123 | 1,019 | 10.2% |
| Average age | 69.6 | 69.8 | N/A |
| Average monthly benefit ⁽¹⁾ | \$2,060 | \$2,060 | 0.0% |
| Disabled members | | | |
| Number in pay status | 140 | 135 | 3.7% |
| Average age | 65.4 | 65.3 | N/A |
| Average monthly benefit ⁽¹⁾ | \$1,805 | \$1,821 | -0.9% |
| Beneficiaries | | | |
| Number in pay status | 359 | 349 | 2.9% |
| Average age | 74.3 | 73.8 | N/A |
| Average monthly benefit ⁽¹⁾ | \$1,257 | \$1,239 | 1.5% |

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

SECTION 3: Supplemental Information for the City of Fresno Employees 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***

| Age | Years of Service | | | | | | | | | |
|----------------------|------------------|----------|----------|----------|-----------|----------|----------|----------|-----------|-----------|
| | Total | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 & over |
| Under 25 | 5 | 5 | -- | -- | -- | -- | -- | -- | -- | -- |
| | \$46,100 | \$46,100 | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 - 29 | 61 | 42 | 19 | -- | -- | -- | -- | -- | -- | -- |
| | 55,754 | 56,418 | \$54,284 | -- | -- | -- | -- | -- | -- | -- |
| 30 - 34 | 168 | 67 | 84 | 16 | 1 | -- | -- | -- | -- | -- |
| | 55,323 | 52,791 | 57,458 | \$51,821 | \$101,742 | -- | -- | -- | -- | -- |
| 35 - 39 | 191 | 57 | 79 | 45 | 10 | -- | -- | -- | -- | -- |
| | 54,472 | 52,340 | 53,678 | 58,936 | 52,805 | -- | -- | -- | -- | -- |
| 40 - 44 | 243 | 45 | 103 | 64 | 23 | 8 | -- | -- | -- | -- |
| | 56,608 | 57,977 | 56,758 | 55,012 | 60,408 | \$48,813 | -- | -- | -- | -- |
| 45 - 49 | 321 | 58 | 92 | 76 | 32 | 54 | 9 | -- | -- | -- |
| | 60,385 | 56,998 | 61,322 | 60,524 | 58,468 | 62,076 | \$68,128 | -- | -- | -- |
| 50 - 54 | 375 | 40 | 84 | 72 | 40 | 78 | 47 | 14 | -- | -- |
| | 60,075 | 60,326 | 59,720 | 57,846 | 56,927 | 62,896 | 60,294 | \$65,500 | -- | -- |
| 55 - 59 | 233 | 20 | 55 | 84 | 33 | 24 | 10 | 5 | 2 | -- |
| | 60,632 | 54,174 | 65,805 | 56,094 | 61,779 | 64,470 | 55,473 | 64,385 | \$124,959 | -- |
| 60 - 64 | 115 | 16 | 39 | 33 | 14 | 10 | -- | 1 | 1 | 1 |
| | 60,579 | 88,591 | 58,531 | 54,152 | 51,630 | 54,544 | -- | 48,732 | 87,146 | \$75,305 |
| 65 - 69 | 26 | 4 | 4 | 8 | 8 | 2 | -- | -- | -- | -- |
| | 55,667 | 70,291 | 78,043 | 46,989 | 48,776 | 43,944 | -- | -- | -- | -- |
| 70 & over | 1 | -- | -- | -- | 1 | -- | -- | -- | -- | -- |
| | 58,609 | -- | -- | -- | 58,609 | -- | -- | -- | -- | -- |
| Total | 1,739 | 354 | 559 | 398 | 162 | 176 | 66 | 20 | 3 | 1 |
| | \$58,423 | \$57,148 | \$58,706 | \$56,888 | \$57,886 | \$61,529 | \$60,632 | \$64,383 | \$112,354 | \$75,305 |

* Excludes 254 active members in DROP with projected average compensation of \$62,914.

SECTION 3: Supplemental Information for the City of Fresno Employees 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 | 2,040 | 184 | 1,262 | 135 | 349 | 3,970 |
| New members | 27 | 0 | 0 | 0 | 0 | 27 |
| Terminations – with vested rights | -48 | 48 | 0 | 0 | 0 | 0 |
| Contributions refunds | -148 | -5 | 0 | 0 | 0 | -153 |
| Retirements/DROP | -127 | -18 | 145 | 0 | 0 | 0 |
| New disabilities | -5 | 0 | -4 | 9 | 0 | 0 |
| Return to work | 1 | -1 | 0 | 0 | 0 | 0 |
| Died with or without beneficiary | -1 | 0 | -26 | -4 | 10* | -21 |
| Data adjustments | 0 | 4 | 0 | 0 | 0 | 4 |
| Number as of June 30, 2011 | 1,739 | 212 | 1,377 | 140 | 359 | 3,827 |

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

** Includes 243 and 254 active members in DROP as of June 30, 2010 and June 30, 2011, respectively.

SECTION 3: Supplemental Information for the City of Fresno Employees 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 | \$8,214,569 | \$3,267,115 |
| Employee contributions | 5,275,219 | 5,740,404 |
| Less administrative expenses | <u>-1,029,440</u> | <u>-929,184</u> |
| Net contribution income | \$12,460,348 | \$8,078,335 |
| Investment income: | | |
| Interest, dividends and other income | \$23,804,668 | \$24,143,469 |
| Adjustment toward market value | 7,800,553 | -15,809,414 |
| Less investment fees | <u>-4,897,840</u> | <u>-4,873,196</u> |
| Net investment income | <u>26,707,381</u> | <u>3,460,859</u> |
| Total income available for benefits | \$39,167,729 | \$11,539,194 |
| Less benefit payments: | | |
| Benefit payments | -\$39,900,410 | -\$35,698,609 |
| Post retirement supplemental benefits | -1,587,450 | -4,247,837 |
| Refunds of contributions | <u>-2,092,260</u> | <u>-1,651,169</u> |
| Net benefit payments | -\$43,580,120 | -\$41,597,615 |
| Change in reserve for future benefits | -\$4,412,391 | -\$30,058,421 |

SECTION 3: Supplemental Information for the City of Fresno Employees Retirement System

EXHIBIT E

Summary Statement of Assets

| | Year Ended June 30, 2011 | Year Ended June 30, 2010 |
|--|---------------------------------|---------------------------------|
| Cash equivalents | \$1,303,391 | \$764,796 |
| Accounts receivable: | | |
| Receivables for investments sold | \$9,180,107 | \$15,220,906 |
| Interest and dividends | 3,324,085 | 3,393,367 |
| Other receivables | <u>3,900,469</u> | <u>1,428,256</u> |
| Total accounts receivable | 16,404,661 | 20,042,529 |
| Investments: | | |
| Domestic and international equity | \$540,932,903 | \$421,095,947 |
| Government and corporate bonds | 271,713,812 | 259,749,662 |
| Real estate | 92,317,681 | 74,491,333 |
| Emerging market equity | 42,596,639 | 38,344,041 |
| Collateral held for securities lent | 150,723,905 | 142,214,353 |
| Other investments | <u>25,718,034</u> | <u>24,117,595</u> |
| Total investments at market value | <u>1,124,002,974</u> | <u>960,012,931</u> |
| Total assets | \$1,141,711,026 | \$980,820,256 |
| Less accounts payable: | | |
| Collateral held for securities lent | -\$150,723,905 | -\$142,214,353 |
| Payable for investments and foreign currency purchased | -25,540,568 | -31,106,596 |
| Other liabilities | <u>-1,070,049</u> | <u>-928,437</u> |
| Total accounts payable | -\$177,334,522 | -\$174,249,386 |
| Net assets at market value | <u>\$964,376,504</u> | <u>\$806,570,870</u> |
| Net assets at actuarial value | <u>\$979,108,334</u> | <u>\$983,520,725</u> |
| Net assets at valuation value | <u>\$920,217,334</u> | <u>\$926,369,725</u> |

SECTION 3: Supplemental Information for the City of Fresno Employees 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 System, 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 | \$920,217 |
| 2. Present value of future member normal cost | 55,811 |
| 3. Present value of future employer normal cost | 146,466 |
| 4. Unfunded/(prefunded) actuarial accrued liability | <u>-132,107</u> |
| 5. Total current and future assets | \$990,387 |
| Liabilities | |
| 6. Present value of benefits already granted, excludes current active DROP | \$422,777 |
| 7. Present value of benefits for current active DROP | 118,090 |
| 8. Present value of benefits to be granted | <u>449,520</u> |
| 9. Total liabilities | \$990,387 |

SECTION 3: Supplemental Information for the City of Fresno Employees Retirement System

EXHIBIT G

Summary of Reported Asset Information as of June 30, 2011

| | Reserves\$(000) |
|---|------------------------|
| Employer Advance/Retired Reserves | \$805,667 |
| Active Member Reserves | 99,819 |
| DROP Reserve ⁽¹⁾ | 61,642 |
| Reserve for PRSB ⁽¹⁾ | 212 |
| Reserve for City Surplus ^{(1),(2)} | (2,963) |
| Net Assets Held in Trust for Benefits | <u>\$964,377</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 Employees 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 | -\$170,112 |
| 2 Gross Normal Cost at middle of year | 22,168 |
| 3 Actual employer and member contributions | -13,490 |
| 4 Interest (whole year on (1) plus half year on (2) + (3)) | <u>-13,262</u> |
| 5 Expected unfunded/(prefunded) actuarial accrued liability at end of year | -\$174,696 |
| 6 Actuarial (gain)/loss due to all changes: | |
| <u>Experience (gain)/loss</u> | |
| a. Loss from investment | \$49,548 |
| b. Lower than expected COLA benefit increases for continuing retirees and DROP participants | -8,787 |
| c. Lower than expected salary increases | -6,083 |
| d. Earlier than expected retirements and DROP participation | 7,980 |
| e. Other experience (gain)/loss | <u>-69</u> |
| f. Subtotal | \$42,589 |
| 7 Actual unfunded/(prefunded) actuarial accrued liability at end of year (5) + (6f) | -\$132,107 |

SECTION 3: Supplemental Information for the City of Fresno Employees 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 Employees 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 Employees 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 Employees Retirement System

EXHIBIT I

Supplementary Information Required by GASB – Schedule of Employer Contributions

| Plan Year Ended June 30 | Annual Required Contributions | Actual Contributions | Percentage Contributed |
|------------------------------------|--|---------------------------------|-----------------------------------|
| 2006 | \$0 | \$0 | 100.0% |
| 2007 | 1,566,215 | 1,566,215 | 100.0% |
| 2008 | 354,894 | 354,894 | 100.0% |
| 2009 | 1,345,274 | 1,345,274 | 100.0% |
| 2010 | 3,267,115 | 3,267,115 | 100.0% |
| 2011 | 8,214,569 | 8,214,569 | 100.0% |

SECTION 4: Reporting Information for the City of Fresno Employees 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 | \$847,516 | \$613,913 | \$233,603 | 138.1 | \$111,379 | 209.7 |
| 6/30/2007 | 926,525 | 631,305 | 295,220 | 146.8 | 122,232 | 241.5 |
| 6/30/2008 | 980,961 | 689,833 | 291,128 | 142.2 | 133,110 | 218.7 |
| 6/30/2009 | 958,032 | 715,250 | 242,782 | 133.9 | 139,274 | 174.3 |
| 6/30/2010 | 926,370 | 756,258 | 170,112 | 122.5 | 131,224 | 129.6 |
| 6/30/2011 | 920,217 | 788,110 | 132,107 | 116.8 | 117,577 | 112.4 |

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

EXHIBIT III

Supplementary Information Required by GASB

| | |
|--------------------------------------|--|
| Valuation date | June 30, 2011 |
| Actuarial cost method | Projected Unit Credit Cost Method |
| Amortization method | Level percent of payroll for total Unfunded Actuarial Accrued Liability or Prefunded Actuarial Accrued Liability |
| Remaining amortization period | 15 years (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 and PRSB Reserve). |

Actuarial assumptions:

| | |
|---------------------------------------|----------------------------|
| Investment rate of return | 8.00% |
| Inflation rate | 3.50% |
| Real across-the-board salary increase | 0.50% |
| Projected salary increases* | 4.60% to 12.50% |
| Cost of living adjustments | 3.50% of retirement income |

Plan membership:

| | |
|--|--------------|
| Retired members and beneficiaries receiving benefits | 1,622 |
| Terminated members entitled to, but not yet receiving benefits | 212 |
| DROP members | 254 |
| Active members | <u>1,739</u> |
| Total | 3,827 |

* 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 Employees 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 two years.

Disabled: RP-2000 Combined Health Mortality Table (separate tables for males and females) set forward four years.

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 two years weighted 65% male and 35% female.

For beneficiaries: RP-2000 Combined Healthy Mortality Table set back two years weighted 35% male and 65% female.

For disabled members: RP-2000 Combined Healthy Mortality Table set forward four years weighted 65% male and 35% female.

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Termination Rates Before Retirement:

| Age | Rate (%) | |
|------------|------------------|---------------|
| | Mortality | |
| | Male | Female |
| 25 | 0.04 | 0.02 |
| 30 | 0.04 | 0.02 |
| 35 | 0.06 | 0.04 |
| 40 | 0.10 | 0.06 |
| 45 | 0.13 | 0.09 |
| 50 | 0.19 | 0.14 |
| 55 | 0.29 | 0.22 |
| 60 | 0.53 | 0.39 |
| 65 | 1.00 | 0.76 |

All pre-retirement deaths are assumed to be non-service connected.

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Termination Rates Before Retirement (Continued):

| Rate (%) | |
|-----------------|-------------------|
| Age | Disability |
| 20 | 0.00 |
| 25 | 0.00 |
| 30 | 0.01 |
| 35 | 0.06 |
| 40 | 0.22 |
| 45 | 0.42 |
| 50 | 0.59 |
| 55 | 0.77 |
| 60 | 0.94 |

All disabilities are assumed to be non-service connected.

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Termination Rates Before Retirement (Continued):

| Age | Rate (%) | | | | | | |
|-----|--------------------------------------|----------------|----------------|----------------|----------------|----------------|-----------|
| | Withdrawal (Refund of Contributions) | | | | | | |
| | 0 – 1 Years | 1 – 2 Years | 2 – 3 Years | 3 – 4 Years | 4 – 5 Years | 5 – 9 Years | 10+ Years |
| 20 | 12.00 | 8.00 | 6.00 | 5.00 | 3.50 | 4.50 | 3.00 |
| 25 | 12.00 | 8.00 | 6.00 | 5.00 | 3.50 | 4.50 | 3.00 |
| 30 | 12.00 | 8.00 | 6.00 | 5.00 | 3.50 | 3.90 | 3.00 |
| 35 | 12.00 | 8.00 | 6.00 | 5.00 | 3.50 | 3.20 | 2.70 |
| 40 | 12.00 | 8.00 | 6.00 | 5.00 | 3.50 | 2.70 | 1.90 |
| 45 | 12.00 | 8.00 | 6.00 | 5.00 | 3.50 | 2.20 | 1.35 |
| 50 | 12.00 | 8.00 | 6.00 | 5.00 | 3.50 | 1.70 | 0.95 |
| 55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Termination Rates Before Retirement (Continued):

Vested Termination (Deferred Vested Benefit)

| <u>Age</u> | <u>Rate (%)</u> |
|------------|-----------------|
| 20 | 2.00 |
| 25 | 2.00 |
| 30 | 2.00 |
| 35 | 2.00 |
| 40 | 2.00 |
| 45 | 2.00 |
| 50 | 2.00 |
| 55 | 0.00 |
| 60 | 0.00 |

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Retirement Rates:

| <u>Age</u> | <u>Rate (%)</u> |
|------------|-----------------|
| 50 | 1.00 |
| 51 | 1.00 |
| 52 | 1.00 |
| 53 | 1.00 |
| 54 | 2.00 |
| 55 | 6.00 |
| 56 | 6.00 |
| 57 | 6.00 |
| 58 | 6.00 |
| 59 | 6.00 |
| 60 | 8.00 |
| 61 | 10.00 |
| 62 | 10.00 |
| 63 | 10.00 |
| 64 | 15.00 |
| 65 | 20.00 |
| 66 | 20.00 |
| 67 | 20.00 |
| 68 | 40.00 |
| 69 | 50.00 |
| 70 | 100.00 |

| <u>DROP Assumptions:</u> | <u>Male and Female</u> |
|--------------------------|------------------------|
| First Year Eligible | 35% |
| Second Year Eligible | 15% |
| Third Year Eligible | 10% |
| Fourth Year Eligible | 10% |
| Fifth Year Eligible | 10% |
| Thereafter | 0% |

Members are assumed to remain in DROP 6 years

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

**Retirement Age and Benefit for
Deferred Vested Members**

For current deferred vested members, the retirement assumption is age 56.
We assume that no future deferred vested members will continue to work for a reciprocal employer.

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:

80% of male members; 60% of female members.

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 3.50% per year, retiree COLA increases due to CPI are limited to maximum at 3.50% per year.

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Salary Increases:

| <u>Annual Rate of Compensation Increase</u> | |
|---|------------------------|
| Inflation: 3.50% per year; plus 0.50% across-the-board salary increase; plus the following Merit and Promotion increases based on completed years of service. | |
| <u>Years of Service</u> | <u>Annual Increase</u> |
| 0 | 8.50% |
| 1 | 6.50% |
| 2 | 5.00% |
| 3 | 4.00% |
| 4 | 3.25% |
| 5 | 2.25% |
| 6 | 1.25% |
| 7 | 1.00% |
| 8 | 0.90% |
| 9+ | 0.60% |

| | |
|--|--|
| Actuarial Value of Assets: | The Actuarial Value of Assets is determined by phasing in any difference between actual market return and expected return on market value over 5 years. |
| Valuation Value of Assets: | The Actuarial Value of Assets reduced by the value of the non-valuation reserves. |
| Actuarial Cost Method: | Projected Unit Credit Actuarial Cost Method. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by service. |
| Changes in Actuarial Assumptions: | There have been no changes in actuarial assumptions since the previous actuarial valuation. |

SECTION 4: Reporting Information for the City of Fresno Employees 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: | Permanent full-time employees except sworn Fire and Police personnel. |
| Final Compensation for Benefit Determination: | Highest average consecutive thirty-six months of compensation earnable calculated using the rate of pay in effect at the time of the retirement (§3-501). |
| Service: | Years of service (Yrs). |
| Service Retirement Eligibility: | Age 50 with 5 years of service (§3-540). |

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Service Retirement (Continued):

Benefit Formula Per Year of Service

2% times each of first 25 years of service plus 1% for any years of service in excess of 25, multiplied by the following factor at retirement age (§3-541):

| <u>Age</u> | <u>Factor</u> | <u>Age</u> | <u>Factor</u> |
|------------|---------------|------------|--|
| 55 | 1.00 | 61 | 1.14 |
| 56 | 1.02 | 62 | 1.18 |
| 57 | 1.04 | 63 | 1.22 |
| 58 | 1.06 | 64 | 1.26 |
| 59 | 1.08 | 65 | 1.30 |
| 60 | 1.10 | 65+ | Add 0.01 each quarter year after age 65 |

Effective January 28, 2008, members may retire at age 50 with a reduced early retirement benefit. The reduced early retirement benefit is calculated to be actuarially equivalent to the service retirement benefit payable at age 55.

**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 (§3-566).

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Ordinary or Service Connected Disability:

| | |
|------------------------|---|
| <i>Eligibility</i> | Ten years of service (§3-546). |
| <i>Benefit Formula</i> | Greater of 1.8% * FAS * Yrs, 33.33% of FAS, or Service Retirement benefit (§3-547). |

Pre-Retirement Death:

All Members

| | |
|--------------------|---|
| <i>Eligibility</i> | None. |
| <i>Benefit</i> | Refund of employee contributions with interest, plus one month of final compensation for each year of service, to a maximum of six month's compensation (§3-537). |

Vested Members

| | |
|------------------------|---|
| <i>A1. Eligibility</i> | At least five years of service but ineligible for Service Retirement at death (§3-552). |
| <i>B1. Benefit</i> | 50% of Service Retirement Benefit as if the member were age 55 based on years of service at death (§3-552). |
| | OR |
| <i>A2. Eligibility</i> | Eligible for Service Retirement. |
| <i>B2. Benefit</i> | 50% of Service Retirement Benefit based on benefit due on member's date of death (§3-552). |

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Death After Retirement:

All Members

Service or

Disability Retirement

50% of member's unmodified allowance continued to eligible spouse/domestic partner (§3-550).

Withdrawal Benefits:

Less than Five Years of Service

Refund of accumulated employee contributions with interest.

Five or More Years of Service

If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire (§3-535).

Post-retirement

Cost-of-Living Benefits:

Future changes based on Consumer Price Index to a maximum of 5% per year (§3-553).

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Member Contributions: Please refer to Appendix A for specific rates.
Provide for an average annuity at age 55 equal to 1/150 of FAS for each of the first 25 years of service and 1/300 for each year in excess of 25 (§3-523).

City Contributions: The amortization period for Prefunded Actuarial Accrued Liability is an open non-declining 15-year period.

Post Retirement Supplemental Benefits (PRSB): PRSB may be paid to retired DROP participants, eligible retirees, and beneficiaries (§3-567). 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 Employees Retirement System

**Appendix A
Member Contribution Rates**

Breakdown of member rate between basic and COLA calculated in the June 30, 2011 and June 30, 2010 valuation:

| | June 30, 2011 Actuarial Valuation | | | | | | June 30, 2010 Actuarial Valuation | | | | | | | | | | | |
|----------------|-----------------------------------|-----------------------------|---------------------------------------|------------------------------|--------|--|-----------------------------------|-----------------------------|--------------------------------|------------------------------|-------|------------------------------|-------|-----------------------------|--------|----------|-------|---------|
| | BASIC | | (1) COLA, Before Surplus Offset | (2) Surplus Offset | | [(1) + (2)] Adj. by Ratio of Payroll Incl. DROP to Payroll Excl. DROP | BASIC | | COLA, Before Surplus Offset | Surplus Offset | | TOTAL | | | | | | |
| | Rate | Estimated Annual Amt* | Rate | Estimated Annual Amt** | Rate | Estimated Annual Amt** | Rate | Estimated Annual Amt* | Rate | Estimated Annual Amt** | Rate | Estimated Annual Amt** | Rate | Estimated Annual Amt* | | | | |
| All Members | 5.51% | \$5,822 | 2.62% | \$3,204 | -0.14% | -\$177 | 2.86% | \$3,027 | 8.37% | \$8,849 | 5.53% | \$5,843 | 2.50% | \$3,057 | -2.50% | -\$3,057 | 5.53% | \$5,843 |

* 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):

Payroll (excluding DROP members) \$105,661

** Partially offset by actuarial surplus (see Appendix B). Amounts are in thousands and are based on the following projected fiscal year 2012 – 2013 annual payroll for active non-DROP and DROP members (also in thousands):

Payroll (including DROP members) \$122,280

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Appendix A

Member Contribution Rates (Continued)

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

| Entry Age | Basic | (1) COLA | (2) Surplus Offset* | (1) + (2) Adj. by Ratio of Payroll Incl. DROD to Payroll Excl. DROD** | Total |
|-----------|-------|-------------|---------------------------|--|-------|
| 16 | 3.07% | 1.46% | -0.08% | 1.60% | 4.67% |
| 17 | 3.17% | 1.50% | -0.08% | 1.64% | 4.81% |
| 18 | 3.26% | 1.55% | -0.08% | 1.70% | 4.96% |
| 19 | 3.36% | 1.60% | -0.09% | 1.75% | 5.11% |
| 20 | 3.47% | 1.65% | -0.09% | 1.81% | 5.28% |
| 21 | 3.58% | 1.70% | -0.09% | 1.86% | 5.44% |
| 22 | 3.70% | 1.76% | -0.09% | 1.93% | 5.63% |
| 23 | 3.82% | 1.82% | -0.10% | 1.99% | 5.81% |
| 24 | 3.95% | 1.88% | -0.10% | 2.06% | 6.01% |
| 25 | 4.09% | 1.94% | -0.10% | 2.13% | 6.22% |
| 26 | 4.23% | 2.01% | -0.11% | 2.20% | 6.43% |
| 27 | 4.39% | 2.08% | -0.11% | 2.28% | 6.67% |
| 28 | 4.55% | 2.16% | -0.12% | 2.36% | 6.91% |
| 29 | 4.72% | 2.24% | -0.12% | 2.45% | 7.17% |
| 30 | 4.91% | 2.33% | -0.12% | 2.56% | 7.47% |
| 31 | 5.00% | 2.38% | -0.13% | 2.60% | 7.60% |
| 32 | 5.10% | 2.42% | -0.13% | 2.65% | 7.75% |
| 33 | 5.20% | 2.47% | -0.13% | 2.71% | 7.91% |
| 34 | 5.30% | 2.52% | -0.13% | 2.77% | 8.07% |
| 35 | 5.40% | 2.57% | -0.14% | 2.81% | 8.21% |
| 36 | 5.51% | 2.62% | -0.14% | 2.87% | 8.38% |
| 37 | 5.62% | 2.67% | -0.14% | 2.93% | 8.55% |
| 38 | 5.73% | 2.72% | -0.15% | 2.97% | 8.70% |
| 39 | 5.84% | 2.78% | -0.15% | 3.04% | 8.88% |
| 40 | 5.96% | 2.83% | -0.15% | 3.10% | 9.06% |

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Appendix A

Member Contribution Rates (Continued)

| Entry Age | Basic | (1) COLA | (2) Surplus Offset* | (1) + (2) Adj. by Ratio of Payroll Incl. DROD to Payroll Excl. DROD** | Total |
|-----------|-------|-------------|---------------------------|--|--------|
| 41 | 6.08% | 2.89% | -0.15% | 3.17% | 9.25% |
| 42 | 6.21% | 2.95% | -0.16% | 3.23% | 9.44% |
| 43 | 6.35% | 3.02% | -0.16% | 3.31% | 9.66% |
| 44 | 6.49% | 3.08% | -0.16% | 3.38% | 9.87% |
| 45 | 6.64% | 3.16% | -0.17% | 3.46% | 10.10% |
| 46 | 6.79% | 3.23% | -0.17% | 3.54% | 10.33% |
| 47 | 6.94% | 3.30% | -0.18% | 3.61% | 10.55% |
| 48 | 7.10% | 3.37% | -0.18% | 3.69% | 10.79% |
| 49 | 7.21% | 3.43% | -0.18% | 3.76% | 10.97% |
| 50 | 7.28% | 3.46% | -0.18% | 3.80% | 11.08% |
| 51 | 7.32% | 3.48% | -0.19% | 3.81% | 11.13% |
| 52 | 7.32% | 3.48% | -0.19% | 3.81% | 11.13% |
| 53 | 7.26% | 3.45% | -0.18% | 3.78% | 11.04% |
| 54 | 7.12% | 3.38% | -0.18% | 3.70% | 10.82% |

Interest: 8.00% per annum
Mortality: RP-2000 Combined Healthy Mortality Table set back two years weighted
65% male and 35% female
Salary Increase: See Exhibit IV in Section 4
COLA: 3.50% per annum
Non-Refundability Factor: 96.49%

* Expressed as percent of payrolls for all active members INCLUDING members in DROD.

** Expressed as percent of payrolls for all active members EXCLUDING members in DROD.

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Appendix B

Allocation of Actuarial Surplus

| | June 30 | |
|--|---------------|----------------|
| | 2011 | 2010 |
| Surplus as of Date of Valuation (Table 1) | \$132,107,334 | \$170,112,187 |
| Actuarial Surplus (Table 1) | 53,296,334 | 94,486,433 |
| Distributable Actuarial Surplus as of date of valuation (Table 2) | 4,760,581 | 8,439,798 |
| Allocation of Distributable Surplus as of Date of Valuation: | | |
| Member COLA Contribution Offset (Table 3) | 2,380,290 | 3,780,000 |
| City COLA Contribution Offset (Table 3) | 2,380,290 | 3,780,000 |
| Additional City Allocation (Table 3) | 0 | 586,532 |
| PRSB Allocation (Table 3) | <u>0</u> | <u>293,266</u> |
| Total | \$4,760,581 | \$8,439,798 |
| Allocation of Distributable Surplus as of Date of Next Valuation: | | |
| Member COLA Contribution Offset (Table 3) | 177,026 | 3,412,000 |
| City COLA Contribution Offset (Table 3) | 177,026 | 3,412,000 |
| Additional City Allocation (Table 3) | 0 | 558,495 |

The Allocation of Distributable Actuarial Surplus is sufficient to:

- Provide for a portion of the member and City COLA contribution requirements for the 2012-2013 fiscal year;
- Provide for a portion of the City's contribution requirement for the 2012-2013 fiscal year (Table 4) and;
- Provide a PRSB benefit of \$7.28 per month over the 2012 calendar year (Table 5).

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Appendix B (continued)

Allocation of Actuarial Surplus

| | June 30 | |
|--|---------------|---------------|
| | 2011 | 2010 |
| Table 1: Calculation of Actuarial Surplus | | |
| (1) Valuation Value of Assets | \$920,217,334 | \$926,369,725 |
| (2) Actuarial Accrued Liability | 788,110,000 | 756,257,538 |
| (3) Surplus: (1) – (2) | 132,107,334 | 170,112,187 |
| (4) Contingency Reserve: 10% x (2) | 78,811,000 | 75,625,754 |
| (5) Actuarial Surplus: (3) – (4) | 53,296,334 | 94,486,433 |
| Table 2: Determination of Distributable Actuarial Surplus | | |
| (1) Actuarial Surplus (Table 1) | \$53,296,334 | \$94,486,433 |
| (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) | \$4,760,581 | \$8,439,798 |
| (3) Projected Surplus for Next Year* | \$3,963,726 | \$85,775,836 |
| (4) Amortization of Balance of Projected Actuarial Surplus: | | |
| a. Amortization Period | 15 | 15 |
| b. Amortization Factor | 0.089323 | 0.089323 |
| Amortization of Balance of Actuarial Surplus (3) x (4b) | \$354,052 | \$7,661,742 |

* 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 \$914,428,992 and the projected actuarial accrued liability is \$827,695,696 (before the adjustment for a 10% Contingency Reserve), the projected surplus is only sufficient to pay for part of the COLA contributions in the next valuation as of June 30, 2012.

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Appendix B (continued)

Allocation of Actuarial Surplus

| | June 30 | |
|---|------------------|------------------|
| | 2011 | 2010 |
| Table 3: Allocation of Distributable Actuarial Surplus: | | |
| (1) Distributable Actuarial Surplus (Table 2) | \$4,760,581 | \$8,439,798 |
| (2) Expected COLA Contributions for Next Following Fiscal Year (from Prior Year's Actuarial Report)* | | |
| a. City | 2,380,290 | 3,780,000 |
| b. Members | <u>2,380,290</u> | <u>3,780,000</u> |
| c. Total | \$4,760,581 | \$7,560,000 |
| (3) Net Distributable Actuarial Surplus as of Date of Valuation: (1) – (2c) | 0 | 879,798 |
| (4) Additional City Allocation: (3) x $\frac{2}{3}$ | 0 | 586,532 |
| (5) PRSB Allocation: (3) – (4) | 0 | 293,266 |
| (6) Next Year Projected Distributable Actuarial Surplus (Table 2) | 354,052 | 7,661,742 |
| (7) Expected COLA Contributions for Second Following Fiscal Year (from Current Year's Actuarial Report) | | |
| a. City | 3,204,000 | 3,412,000 |
| b. Members | <u>3,204,000</u> | <u>3,412,000</u> |
| c. Total | \$6,408,000 | \$6,824,000 |
| (8) Actual Amount Allocated to buydown COLA Contributions for Second Following Fiscal Year | | |
| a. City | 177,026 | 3,412,000 |
| b. Members | <u>177,026</u> | <u>3,412,000</u> |
| c. Total | \$354,052 | \$6,824,000 |
| (9) Net Projected Distributable Actuarial Surplus as of Date of Next Valuation: (6) – (8c) | 0 | 837,742 |
| (10) Additional City Allocation: (9) x $\frac{2}{3}$ | 0 | 558,495 |

The June 30, 2011 PRSB Allocation (along with the PRSB Reserve Account) is available to provide retirees and beneficiaries as of June 30, 2011 a monthly PRSB benefit as derived in Table 5.

The City Allocation (projected Item 8a as of the date of the last valuation [but limited to Item 2a as of the date of the current valuation, if smaller] and actual Item 4 as of the beginning of the fiscal year) along with any City Surplus Reserve 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 Member Allocation (Item 8b) is available to reduce members' COLA contributions and is currently sufficient to only provide for a portion of member COLA contributions for the fiscal year that commences 12 months following the date of the valuation.

** Limited to the actual surplus available for distribution in the current valuation*

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Appendix B (continued)

Allocation of Actuarial Surplus

| Table 4: City Contribution Requirements | Fiscal Year 2012-2013 | | | Fiscal Year 2011-2012 | | |
|--|---------------------------|---------------|---------------------------|---------------------------|---------------|---------------------------|
| | Basic | COLA | Total | Basic | COLA | Total |
| (1) City Normal Cost Rate | 8.75% | 2.62% | 11.37% | 8.20% | 2.50% | 10.70% |
| (2) Projected Annual Payroll | \$122,280,000 | \$122,280,000 | \$122,280,000 | \$117,577,000 | \$117,577,000 | \$117,577,000 |
| (3) City Allocation of Fiscal Year Distributable Actuarial Surplus (Table 3) | 0 | 177,026 | 177,026 | 0 | 2,380,290 | 2,380,290 |
| (4) City Surplus Reserve Account (From Prior Years) | 0 | 0 | 0 | -2,963,000 | 0 | -2,963,000 |
| (5) ½ Year Interest on (4) | 0 | 0 | 0 | -118,520 | 0 | -118,520 |
| (6) Total Contribution Offsets Available (3) + (4) + (5) | 0 | 177,026 | 177,026 | -3,081,520 | 2,380,290 | -701,230 |
| (7) Total Contribution Required (1) x (2) | 10,699,500 | 3,204,000 | 13,903,500 | 9,641,314 | 2,939,425 | 12,580,739 |
| (8) Unused Offset (6) – (7), not less than 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (9) Offset Adjustments | 0 | 0 | 0 | 0 | 0 | 0 |
| (10) Additional Offset Required (7) – (6) – (9), not less than 0, from Prepaid Contribution Account | 10,699,500 | 3,026,974 | 13,726,474 | 12,722,834 | 559,135 | 13,281,969 |
| (11) Contribution Rate Adopted by the City for FY 2011/2012 | | | | | | 10.21% |
| (12) Projected City Contributions Based on Rate Adopted by the City (11) * (2) | | | | 11,445,477 | 559,135 | 12,004,612 |
| (13) Net Additional City Contribution Before Application of Prepaid Employer Contribution Account (10) – (12) | 10,699,500 | 3,026,974 | 13,726,474 | 1,277,357 | 0 | 1,277,357 |
| (14) City’s Prepaid Employer Contribution Account Balance (Negative Account Balance Represents Contribution Shortfall) | -1,328,451 ⁽¹⁾ | 0 | -1,328,451 ⁽¹⁾ | 0 | 0 | 0 |
| (15) ½ Year Interest on (14) | -53,138 | 0 | -53,138 | 0 | 0 | 0 |
| (16) City’s Fiscal Year Contribution After Application of Prepaid Employer Contribution Account (13) – (14) – (15), not less than 0 | 12,081,089 | 3,026,974 | 15,108,063 | 1,277,357 | 0 | 1,277,357 |
| (17) Projected Residual Prepaid Employer Contribution Account at Year End. (14) + (15) – (13), Adjusted with ½ Year Interest, not less than 0 (Negative Account Balance Represents Contribution Shortfall) | 0 | 0 | 0 | -1,328,451 ⁽¹⁾ | 0 | -1,328,451 ⁽¹⁾ |

⁽¹⁾ Projected contribution shortfall for fiscal year 2011-2012 is due to the 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.

Note: Results may not total properly due to rounding.

SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Appendix B (continued)
Allocation of Actuarial Surplus

| | June 30 | |
|---|-----------------|--------------------|
| | 2011 | 2010 |
| Table 5: Calculations for PRSB and PRSB Reserve Account: | | |
| (1) PRSB Allocation of Distributable Actuarial Surplus (Table 3) | \$0 | \$293,266 |
| (2) PRSB Reserve Account (as of Valuation Date) | \$212,000 | \$1,531,000 |
| (3) Estimated July 1 to December 31 PRSB Payment | <u>\$68,851</u> | <u>\$1,689,827</u> |
| (4) Total amount available for PRSB (1) + (2) – (3) | \$143,149 | \$134,439 |
| (5) 95% x (4) | \$135,992 | \$127,717 |
| (6) Number of eligible participants (Retirees & Beneficiaries) | 1,557 | 1,444 |
| (7) Monthly PRSB Benefit for next calendar year (5) / (6) / 12 | \$7.28 | \$7.37 |
| (8) Target Monthly Benefit | \$985.00 | \$911.00 |
| (9) Benefit Shortfall (8) – (7) | \$977.72 | \$903.63 |
| (10) Estimated PRSB Reserve Account as of end of next calendar year: (4) – (6) x (7) x 12 | \$7,130 | \$6,732 |

Under section 3-567(f)(4)(iii)(2) of the Municipal Code, we understand that the PRSB reserve shall be used to increase the PRSB benefit to the extent necessary to pay the monthly health insurance premium.

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

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