

City of Fresno Employees Retirement System

Actuarial Valuation and Review
as of June 30, 2013



This report has been prepared at the request of the Board of Retirement to assist in administering the Fund. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Retirement and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.

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December 4, 2013

*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, 2013. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2014-2015 and analyzes the preceding year's experience.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the City of Fresno Employees Retirement System. The census information and financial information on which our calculations were based was prepared by the Retirement System. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law.

The actuarial calculations were directed under our supervision. We are Members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Retirement System.

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

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By:

*Paul Angelo, FSA, MAAA, FCA, EA
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JB/hy

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SECTION 1

VALUATION SUMMARY

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

SECTION 2

VALUATION RESULTS

A. Member Data	1
B. Financial Information.....	4
C. Actuarial Experience.....	8
D. Employer and Member Contributions	13
E. Information Required by GASB.....	18
F. Volatility Ratios	19

SECTION 3

SUPPLEMENTAL INFORMATION

EXHIBIT A Table of Plan Coverage	20
EXHIBIT B Members in Active Service and Projected Average Compensation as of June 30, 2013	21
EXHIBIT C Reconciliation of Member Data – June 30, 2012 to June 30, 2013	22
EXHIBIT D Summary Statement of Income and Expenses on an Actuarial Value Basis.....	23
EXHIBIT E Summary Statement of Assets	24
EXHIBIT F Actuarial Balance Sheet.....	25
EXHIBIT G Summary of Reported Asset Information as of June 30, 2013	26
EXHIBIT H Development of Unfunded/(Prefunded) Actuarial Accrued Liability as of June 30, 2013	27
EXHIBIT I Section 415 Limitations.....	28
EXHIBIT J Definitions of Pension Terms	29

SECTION 4

REPORTING INFORMATION

EXHIBIT I Summary of Actuarial Valuation Results	31
EXHIBIT II Supplementary Information Required by GASB – Schedule of Employer Contributions.....	33
EXHIBIT III Supplementary Information Required by GASB – Schedule of Funding Progress	34
EXHIBIT IV Supplementary Information Required by GASB	35
EXHIBIT V Actuarial Assumptions and Actuarial Cost Method	36
EXHIBIT VI Summary of Plan Provisions.....	48
Appendix A Member Contribution Rates.....	53
Appendix B Allocation of Actuarial Surplus	56
Appendix C UAAL Amortization Schedule as of June 30, 2013.....	59

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, 2013. 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, 2013, provided by the Retirement System;
- The assets of the System as of June 30, 2013, 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, 2013, there is an unfunded actuarial accrued liability as the System has valuation value of assets that is less than the actuarial accrued liability. In other words, there is no actuarial surplus available to reduce the City's and the members' COLA contributions and to fund new PRSB benefits. The determination of actuarial surplus as of June 30, 2012 and June 30, 2013 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.

The contribution requirements are determined as a percentage of payroll. The System's employer rates provide for both normal cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. In this valuation, we have applied the funding policy adopted by the Board on November 7, 2012 to amortize any change in the unfunded actuarial accrued liability (UAAL) that arises due to actuarial gains or losses or due to plan amendments at each valuation over its own declining 15-year period (with the exception of a change due to temporary retirement incentives which is amortized over its own declining period of up to 5 years). Any change in UAAL that arises from changes in actuarial assumptions or methods will be

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

amortized over its own declining 25-year period. Any actuarial surplus (when the funded ratio is over 110%) will be amortized over a non-declining 25-year period.

Please note that the Actuarial Standards Board has adopted 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.¹

The rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2014 through June 30, 2015.

Significant Issues in Valuation Year

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

Ref: Page 36

- The results in this valuation reflect changes in economic and non-economic assumptions adopted by the Board for the June 30, 2013 valuation. All of the actuarial assumptions recommended by Segal in the June 30, 2012 triennial Actuarial Experience Study and the June 30, 2013 Review of Economic Assumptions were adopted by the Board and have been applied in this valuation. The adopted changes are outlined in Section 4, Exhibit V of this report. There is a net increase in the employer's and employee's cost primarily due to the reduction in the investment return assumption from 8.00% to 7.50%.

At the May 2013 Board meeting, the Board adopted a three-year phase-in of the impact of the changes in assumptions on the employer contribution rate starting with fiscal year 2014/2015. The employer should be aware that their contributions for 2015/2016 and 2016/2017 (that will be established in the June 30, 2014 and June 30, 2015 valuations) will increase again due to the further recognition of the cost impact of these changes in assumptions, including the interest cost associated with the phase-in. The employer contribution rates in this report include the impact of the three-year phase in.

Ref: Page 34

- In the June 30, 2012 valuation, the ratio of the valuation value of assets to actuarial accrued liabilities was 102.2%. In this June 30, 2013 valuation, the funding ratio has decreased to 99.9%. The funding ratios as of June 30, 2012 and 2013 if measured using the market value of assets instead of the valuation value of assets are 99.1% and 101.8%, respectively.

¹ It should be noted that the funded ratio of the Retirement System is currently well below the 110% required before actuarial surplus can be distributed.

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

- Ref: Page 27
- The Retirement System's prefunded actuarial accrued liability (PAAL) as of June 30, 2012 was \$19.4 million. In this year's valuation, the System has an unfunded actuarial accrued liability (UAAL) of \$1.2 million on a valuation value of assets basis. The Plan had a net actuarial experience gain of about \$11.4 million offset by an increase in the actuarial accrued liabilities of about \$33.0 million as a result of the changes in actuarial assumptions. A reconciliation of the System's UAAL is provided in Section 3, Exhibit H.
- Ref: Page 15
- The aggregate employer rate calculated in this valuation has increased from 11.01% of payroll as of June 30, 2012 to 11.65% of payroll as of June 30, 2013. This is the net result of: (i) changes in actuarial assumptions, after phasing in the employer's contribution rate impact over three years, (ii) difference between the actual and the expected 2013/2014 plan year contribution², and (iii) changes in membership demographics. A reconciliation of the Retirement System's aggregate employer rate is provided in Section 2, Subsection D (see Chart 14). It should be noted the employer's rate determined in the 2013 valuation would have increased from 11.65% to 12.18% without the three-year phase-in.
- Ref: Page 16
- The aggregate member rate calculated in this valuation has increased from 8.46% of payroll to 8.91% of payroll. The change in the aggregate member rate is due to changes in actuarial assumptions. A reconciliation of the Retirement System's aggregate member rate is provided in Section 2, Subsection D (see Chart 15). After around February 2011, active members who signed up for the DROP on are required 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.
 - For the June 30, 2013 valuation, the Board adopted an adjustment to the asset smoothing method that combines the net deferred losses of \$27.5 million from the June 30, 2012 valuation into a single four-year smoothing "layer". Those net deferred losses are then recognized over the next four years from that date in four level amounts of approximately \$6.9 million each year. This reduces the volatility associated with the pattern of deferred loss recognition and results in both more stable projected funded ratios (on an actuarial value basis) and more level employer contribution rates.
- Ref: Page 6
- As indicated in Section 2, Subsection B (see Chart 7) of this report, the total unrecognized investment gain as of June 30, 2013 is \$17.6 million (as compared to an unrecognized loss of \$27.5 million in the June 30, 2012 valuation). This deferred investment gain will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years.

² Note that an adjustment for this difference has been carried over from the prior valuations when there were adjustments made for this difference and also for the difference between the actual and the expected surplus available to offset the employer's contributions for the fiscal year commencing immediately following the date of the valuation. While we have continued the prior practice with this valuation, we will discuss whether the Board may or may not want to continue with this adjustment in future valuations when we present the results for the 2013 valuation.

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

- The unrecognized investment gains of \$17.6 million represent 2% of the market value of assets. Unless offset by future investment losses or other unfavorable experience, the recognition of the \$17.6 million market gains 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 gains were recognized immediately in the valuation value of assets, the funded percentage would increase from 99.9% to 101.8%.
 - If the deferred gains were recognized immediately in the valuation value of assets, the aggregate employer contribution rate would decrease from 11.65% of payroll to 11.62% of payroll to reflect that the phased-in UAAL rate would be eliminated.
- The actuarial valuation report as of June 30, 2013 is based on financial information as of that date. Changes in the value of assets subsequent to that date 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.
- The Governmental Accounting Standards Board (GASB) approved two new Statements affecting the reporting of pension liabilities for accounting purposes. Statement 67 replaces Statement 25 and is for plan reporting. Statement 68 replaces Statement 27 and is for employer reporting. It is important to note that the new GASB rules only redefine pension expense for financial reporting purposes, and do not apply to contribution amounts for actual pension funding purposes. Employers and plans can still develop and adopt funding policies under current practices. Because these new Statements are not effective until the fiscal year ending June 30, 2014 for Plan reporting and the fiscal year ending June 30, 2015 for employer reporting, the financial reporting information in this report continues to be in accordance with Statements 25 and 27.
- It should be noted that the 11.65% recommended employer contribution rate developed after the three-year phase-in is less than the Annual Required Contributions (ARC) developed using the parameters required under the GASB Statements 25 and 27. Under those Statements, employer contributions that are less than the amounts required to pay the Normal Cost and to amortize the UAAL over a period of 30 years (i.e., a total of 12.09% for the Retirement System in the June 30, 2013 valuation) would have been required to accrue a Net Pension Obligation for the 2014/2015 fiscal year.

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

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, 2013		June 30, 2012	
Employer Contribution Rates:				
	Total Rate	Estimated Annual Amount ⁽¹⁾	Total Rate	Estimated Annual Amount ⁽¹⁾
Normal Cost Rate	12.03%	\$13,961	11.28%	\$13,090
UAAL Rate	0.07%	81	0.00%	0
Surplus Offset	0.00%	0	0.00%	0
Contribution Shortfall from Prior Fiscal Year	0.08%	97	-0.27%	-313
Adjustment for Phase-In of Assumption Changes	<u>-0.53%</u>	<u>-621</u>	<u>N/A</u>	<u>N/A</u>
Required Contributions	11.65% ⁽²⁾	13,518	11.01%	12,777
Average Member Contribution Rates:				
	Total Rate	Estimated Annual Amount ⁽³⁾	Total Rate	Estimated Annual Amount ⁽³⁾
All Members ⁽⁴⁾	8.91%	\$8,527	8.46%	\$8,096
Funded Status:				
Actuarial Accrued Liability	\$934,947		\$871,958	
Market Value of Assets (MVA) ⁽⁵⁾	\$951,313		\$863,878	
Valuation Value of Assets (VVA)	\$933,722		\$891,366	
Funded Percentage on VVA basis	99.9%		102.2%	
Prefunded/(Unfunded) Actuarial Accrued Liability on VVA basis	\$(1,225)		\$19,408	
Funded Percentage on MVA basis	101.8%		99.1%	
Prefunded/(Unfunded) Actuarial Accrued Liability on MVA basis	\$16,366		\$(8,080)	
Key Economic Assumptions:				
Interest Rate	7.50%		8.00%	
Inflation Rate	3.25%		3.50%	
Across-the-Board Salary Increase	0.50%		0.50%	

(1) Based on projected fiscal year 2014-2015 annual payroll for active non-DROP and DROP members of \$116,049.

(2) This is less than the old GASB 25/27 minimum ARC requirement that any UAAL be amortized over an amortization period of no less than 30 years. Note that GASB 25/27 will be replaced effective with the 2013/2014 fiscal year for the plan and the 2014/2015 fiscal year for the employer.

(3) Based on projected fiscal year 2014-2015 annual payroll for members not in the DROP of \$95,703.

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

(5) Excludes non-valuation reserves.

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

Summary of Key Valuation Demographic and Financial Data

	June 30, 2013	June 30, 2012	Percentage Change
Active Members:			
Non-DROP			
Number of members	1,528	1,620	-5.7%
Average age	48.0	47.7	N/A
Average service	11.7	11.5	N/A
Projected total compensation ⁽¹⁾	\$92,244,343	\$94,766,049	-2.7%
Average projected compensation	\$60,369	\$58,498	3.2%
DROP			
Number of members	311	280	11.1%
Average age	60.0	59.8	N/A
Average service	23.7	24.4	N/A
Projected total compensation ⁽¹⁾	\$19,610,437	\$17,540,903	11.8%
Average projected compensation	\$63,056	\$62,646	0.7%
Retired Member and Beneficiaries:			
Number of members:			
Service retired	1,206	1,172	2.9%
Disability retired	144	138	4.3%
Beneficiaries	360	362	-0.6%
Total	1,710	1,672	2.3%
Average age	70.3	70.2	N/A
Average monthly benefit ⁽²⁾	\$1,936	\$1,898	2.0%
Vested Terminated Members:			
Number of vested terminated members ⁽³⁾	233	221	5.4%
Average age	45.8	45.9	N/A
Summary of Financial Data (dollar amounts in thousands):			
Market value of assets ⁽⁴⁾	\$1,024,666	\$930,403	10.1%
Return on market value of assets	13.21%	-0.59%	N/A
Actuarial value of assets	\$1,007,075	\$957,891	5.1%
Return on actuarial value of assets	8.05%	0.74%	N/A
Valuation value of assets	\$933,722	\$891,366	4.8%
Return on valuation value of assets	7.01%	-0.07%	N/A

(1) June 30, 2012 payroll was projected payroll for plan year 2012-2013. June 30, 2013 payroll was projected payroll for plan year 2013-2014.

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

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

(4) Includes non-valuation reserves.

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 ten valuations can be seen in this chart.

CHART 1
Member Population: 2004 – 2013

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
2012	1,900	221	1,672	1.00
2013	1,839	233	1,710	1.06

⁽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 1,528 non-DROP active members with an average age of 48.0 years, average years of service of 11.7 and average compensation of \$60,369. The 1,620 non-DROP active members in the prior valuation had an average age of 47.7 years, average years of service of 11.5 and average compensation of \$58,498.

Inactive Members

In this year's valuation, there were 233 members with a vested right to a deferred or immediate vested benefit or entitled to a return of their member contributions versus 221 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, 2013

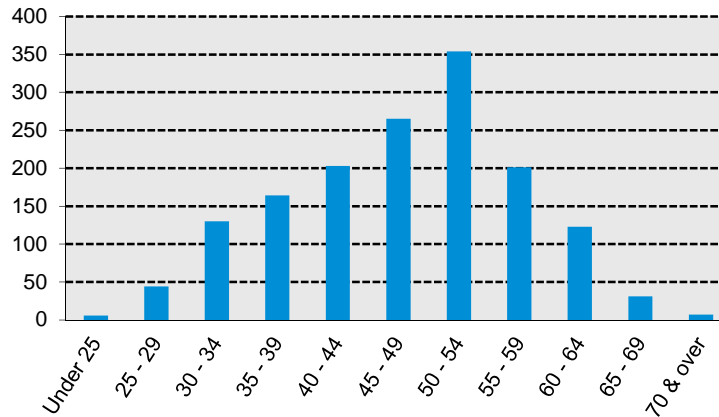
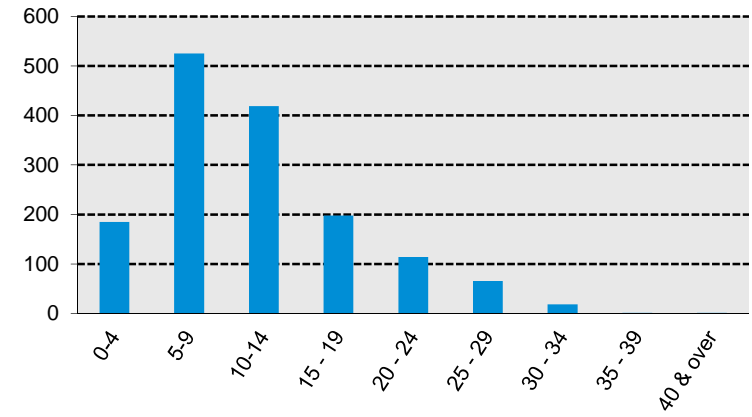


CHART 3
Distribution of Non-DROP Active Members by Years of Service as of June 30, 2013



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

DROP Active Members

In this year's valuation there were 311 DROP active members with an average age of 60.0 years, average years of service of 23.7, and average compensation of \$63,056. The 280 DROP active members in the prior valuation had an average age of 59.8 years, average years of service of 24.4, and average compensation of \$62,646.

Retired Members and Beneficiaries

As of June 30, 2013, 1,350 retired members and 360 beneficiaries were receiving total monthly benefits of \$3,310,947. For comparison, in the previous valuation, there were 1,310 retired members and 362 beneficiaries receiving monthly benefits of \$3,172,822.

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, 2013

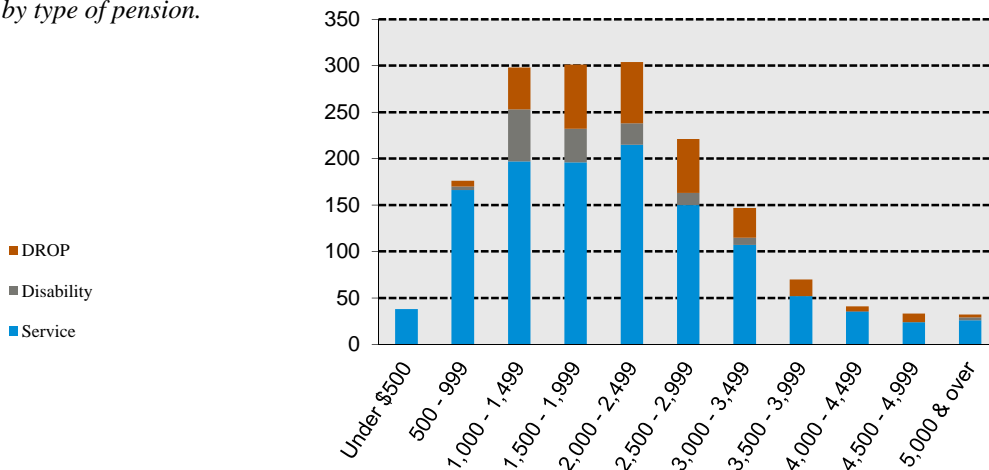
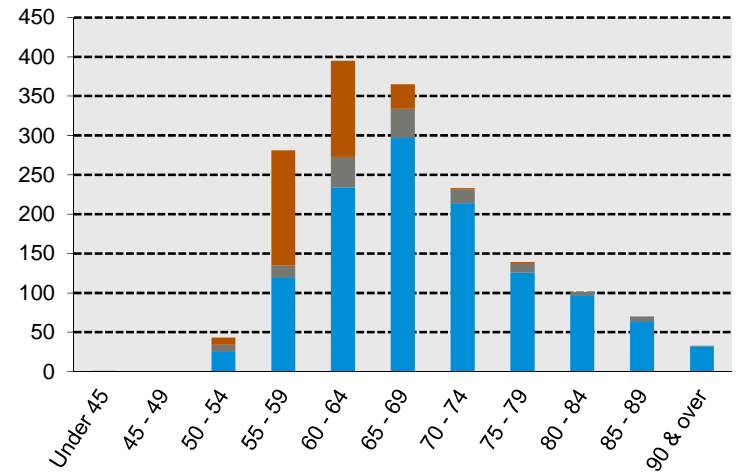


CHART 5

Distribution of Retired Members (Excl. Beneficiaries) by Type and by Age as of June 30, 2013



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

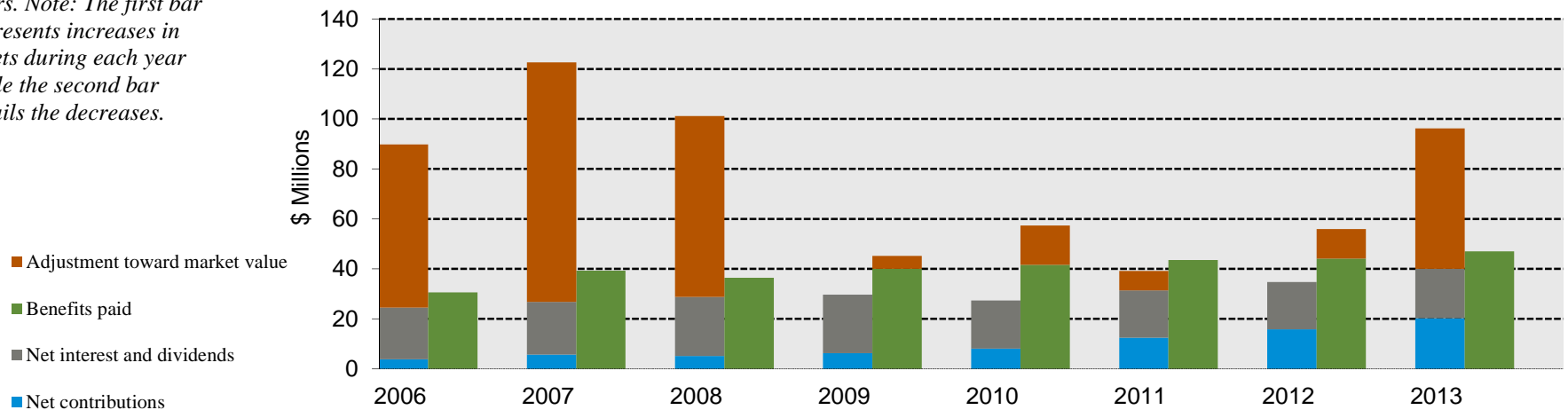
B. FINANCIAL INFORMATION

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 eight 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, 2006-2013



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, 2013

Plan Year Ending June 30	Total Actual Market Return	Expected Market Return	Investment Gain/(Loss)**	Deferred Factor	Deferred Return
2012*			\$(27,488,412)	0.75	\$(20,616,309)
2013	\$121,116,558	\$73,358,069	47,758,489	0.8	38,206,791
1. Total Deferred Return					\$17,590,482
2. Net Market Value of Assets					1,024,665,557
3. Actuarial Value of Assets (Item 2 – Item 1)					\$1,007,075,075
4. Ratio of Actuarial Value to Market Value					98.3%
5. Non-Valuation Reserves and Other Adjustments					
a. DROP Reserve					73,140,000
b. PRSB Reserve					9,000
c. City Surplus Reserve***					204,000
d. Total					73,353,000
6. Valuation Value of Assets (Item 3 – Item 5d)					\$933,722,075

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

* Based on action taken by the Board in 2013, the net deferred loss of \$27,488,412 as of June 30, 2012 was combined and will be recognized in four level amounts beginning with the June 30, 2013 valuation.

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

*** The City Surplus Reserve is treated as a liability; it represents the City's prior contribution surplus due to the difference between the actual versus the projected surplus prior to June 30, 2013. This difference is taken into account in developing the contribution rate requirement for 2014-2015. See Step (4) in Table 2 of Appendix B for details.

Deferred return as of June 30, 2013 recognized in each of the next four years:

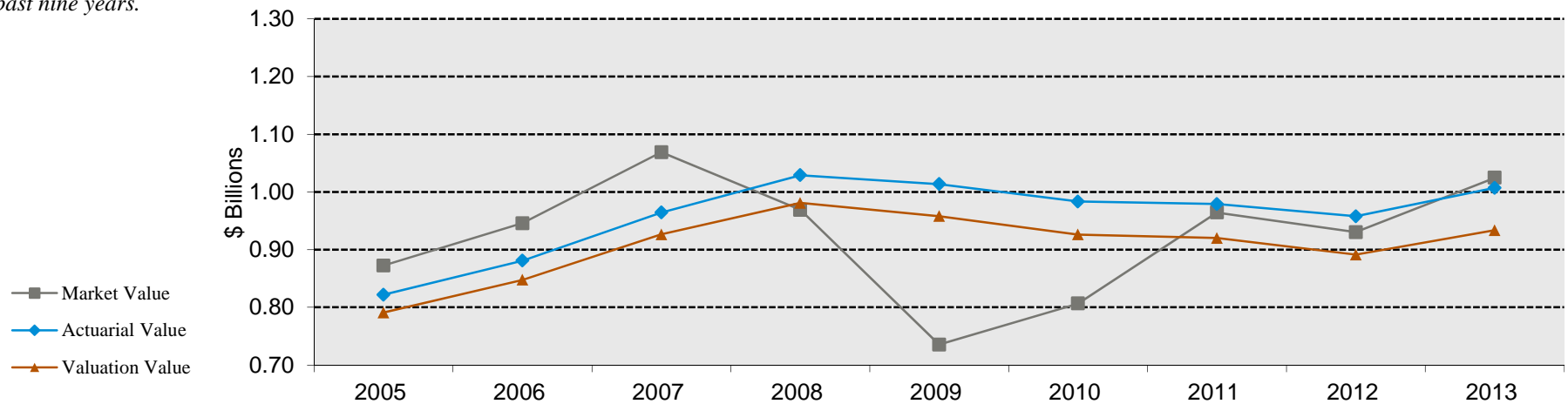
6/30/2014	\$2,679,595
6/30/2015	2,679,595
6/30/2016	2,679,595
6/30/2017	9,551,697
	<u>\$17,590,482</u>

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 unfunded 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 nine years.

CHART 8
Market Value, Actuarial Value and Valuation Value of Assets as of June 30, 2005–2013



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 gain was \$11.4 million, including a loss of \$8.7 million from investments (after smoothing) and a gain of \$20.1 million from all other sources. The net experience variation from individual sources other than investments was 2.1% 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, 2013

1. Net gain/(loss) from investments ⁽¹⁾	-\$8,700,000
2. Net gain/(loss) from other experience ⁽²⁾	<u>20,053,000</u>
3. Net experience gain/(loss): (1) + (2)	\$11,353,000

⁽¹⁾ Details in Chart 10.

⁽²⁾ See Section 3, Items (6b) through (6d) in Section 3, 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% (based on the June 30, 2012 valuation). The actual rate of return on a valuation basis for the 2012/2013 plan year was 7.01%.

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, 2013 with regard to its investments.

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

CHART 10

Investment Experience for Year Ended June 30, 2013 – Market Value, Actuarial Value and Valuation Value of Assets

	Market Value	Actuarial Value	Valuation Value
1. Actual return	\$121,116,558	\$76,037,664	\$61,830,441
2. Average value of assets	\$916,975,862	\$944,464,274	\$881,628,886
3. Actual rate of return: (1) ÷ (2)	13.21%	8.05%	7.01%
4. Assumed rate of return	8.00%	8.00%	8.00%
5. Expected return: (2) x (4)	\$73,358,069	\$75,557,142	\$70,530,311
6. Actuarial gain/(loss): (1) – (5)	<u>\$47,758,489</u>	<u>\$480,522</u>	<u>\$(8,699,870)</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 a market, actuarial and valuation basis for the last nine years.

CHART 11

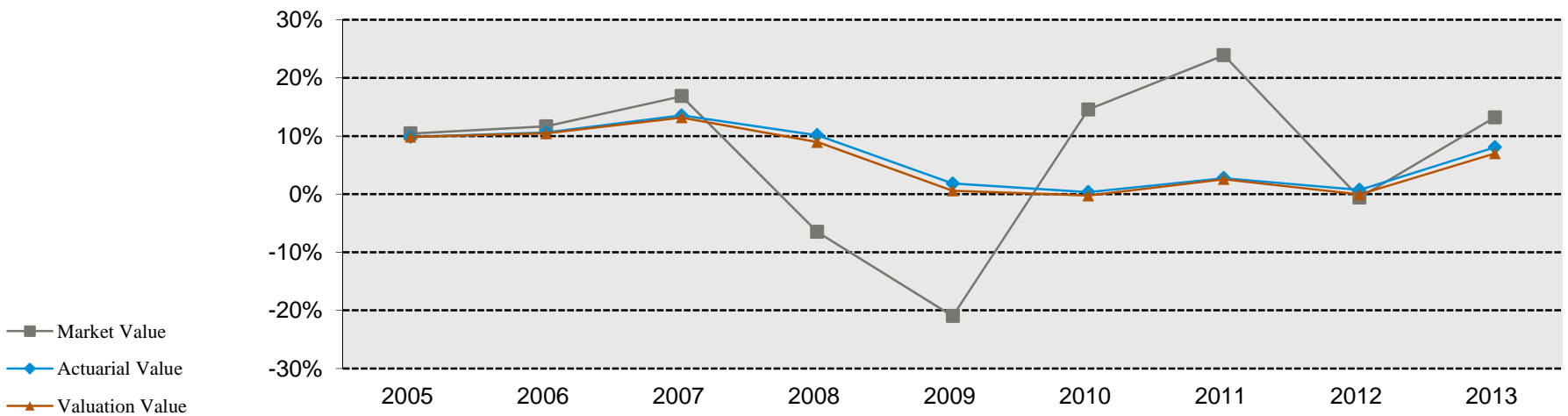
Investment Return – Market Value, Actuarial Value and Valuation Value: 2005 – 2013

Year Ended June 30	Market Value Investment Return		Actuarial Value Investment Return		Valuation Value Investment Return	
	Amount	Percent	Amount	Percent	Amount	Percent
2005	\$83,471,311	10.42%	N/A	N/A	\$67,602,316	9.84%
2006	100,177,718	11.66%	\$85,932,037	10.63%	81,292,494	10.44%
2007	156,545,863	16.85%	116,910,064	13.53%	109,598,151	13.17%
2008	(68,481,857)	(6.50%)	96,073,943	10.13%	81,711,433	8.95%
2009	(199,694,398)	(20.97%)	18,308,120	1.81%	5,743,642	0.59%
2010	104,511,346	14.54%	3,460,859	0.35%	(2,390,978)	(0.25%)
2011	188,925,406	23.88%	26,707,381	2.76%	23,379,931	2.56%
2012	(5,620,568)	(0.59%)	7,136,014	0.74%	(635,732)	(0.07%)
2013	121,116,558	13.21%	76,037,664	8.05%	61,830,441	7.01%
Annualized Average Return		6.07%	5.89%		5.69%	

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, Actuarial and Valuation Rates of Return for Years Ended June 30, 2005 - 2013



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, 2013 amounted to \$20.1 million which is 2.1% of the actuarial accrued liability. See Section 3, Exhibit H for a detailed development of the unfunded 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 3.75% (i.e., 3.25% inflation plus 0.50% real across-the-board salary increase). Effective with the June 30, 2013 valuation, any new UAAL established on each subsequent valuation as a result of actuarial gains or losses or plan amendments are amortized over separate 15-year declining periods (with the exception of temporary retirement incentives which are amortized over its own declining period of up to 5 years). Any new UAAL established as a result of changes in actuarial assumptions or methods at each valuation is amortized over separate 25-year declining periods. Any actuarial surplus (when the funded ratio is over 110%) will be amortized over a non-declining 25-year period.

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

The employer contribution rates as of June 30, 2013 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, 2012 to June 30, 2013 (Dollars in Thousands)

	Contribution Rate	Estimated Amount*
1. Recommended Contribution Rate as of June 30, 2012	11.01%	\$12,777
a. 2012/2013 plan year contribution shortfall included in the above rate (payable 2013/2014)	-0.27%	-\$313
b. Normal Cost Rate as of June 30, 2012	11.28%	\$13,090
2. Effect of actuarial experience during 2012/2013 on Normal Cost Rate		
a. Effect of changes in membership demographics and other actuarial (gains)/losses	0.02%	\$21
b. Effect of changes in actuarial assumptions	<u>0.73%</u>	<u>\$850</u>
c. Normal Cost Rate as of June 30, 2013	12.03%	\$13,961
3. Effect of changes in actuarial assumptions on UAAL rate**	0.07%	\$81
4. Effect of phasing in over three years the employer's contribution rate impact due to changes in actuarial assumptions	-0.53%	-\$621
5. Effect of the difference between the actual and the expected 2013/2014 plan year contribution	<u>0.08%</u>	<u>\$97</u>
6. Recommended Contribution Rate as of June 30, 2013	11.65%	\$13,518

* Based on projected fiscal year 2014 – 2015 annual payroll of \$116,049 for active non-DROP and DROP members.

** If the System had not had a PAAL prior to the changes in actuarial assumptions, the UAAL rate would have increased by 1.82% of payroll.

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

The member contribution rates as of June 30, 2013 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, 2012 to June 30, 2013 (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, 2012 ⁽²⁾	8.46%	\$8,096
1. Effect of changes in actuarial assumptions	0.45%	\$427
2. Effect of changes in membership demographics	<u>0.00%</u> ⁽³⁾	<u>\$4</u>
Average Contribution Rate as of June 30, 2013 ⁽²⁾	8.91%	\$8,527

⁽¹⁾ Based on projected fiscal year 2014 – 2015 annual payroll for members NOT in the DROP of \$95,703.

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

⁽³⁾ Actual rate impact is 0.004% before it is rounded to 0.00%.

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, 2013</u>
Service Retirement	15.35%
Vested Deferred Retirement and Contribution Refunds	2.72%
Death-In-Service	0.23%
Disability	<u>1.08%</u>
Total Normal Cost	19.38%
Less	
Employee Contributions*	<u>7.35%</u>
Equals	
Net Employer Normal Cost	12.03%

* The offset for employee contributions is less than the aggregate employee rate because it expresses the employee contribution dollar amount as a percent of projected fiscal year 2014-2015 annual payroll for all active members (non-DROP and DROP) of \$116,049 instead of annual payroll for only active non-DROP members of \$95,703.

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 II, III, and IV.

These graphs show key GASB factors.

CHART 17
Required Versus Actual Contributions

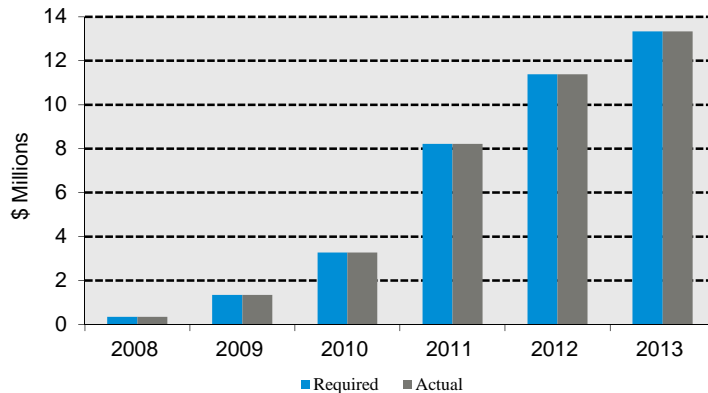
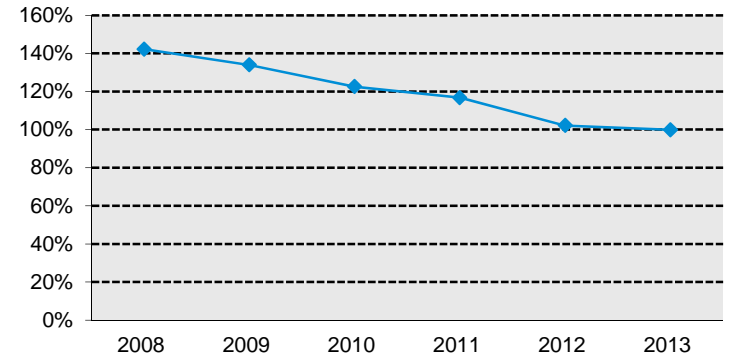


CHART 18
Funded Ratio



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

F. VOLATILITY RATIOS

Retirement plans are subject to volatility in the level of required contributions. This volatility tends to increase as retirement plans become more mature.

The Asset Volatility Ratio (AVR), which is equal to the market value of assets divided by total payroll, provides an indication of the potential contribution volatility for any given level of investment volatility. A higher AVR indicates that the plan is subject to a greater level of contribution volatility. This is a current measure since it is based on the current level of assets.

For the Retirement System, the current AVR is about 9.2. This means that a 1% asset gain/(loss) (relative to the assumed investment return) translates to about 9.2% of one-year's payroll. Since the Retirement System amortizes actuarial gains and losses over a period of 15 years, there would be a 0.8% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss) if the Retirement System has an unfunded actuarial accrued liability.

The Liability Volatility Ratio (LVR), which is equal to the Actuarial Accrued Liability divided by payroll, provides an indication of the longer-term potential for contribution volatility for any given level of investment volatility. This is because, over an extended period of time, the plan's assets should track the plan's liabilities. For example, if a plan is 50% funded on a market value basis, the liability volatility ratio would be double the asset volatility ratio and the plan sponsor should expect contribution volatility to increase over time as the plan becomes better funded.

The LVR also indicates how volatile contributions will be in response to changes in the Actuarial Accrued Liability due to actual experience or to changes in actuarial assumptions.

For the Retirement System, the current LVR is about 8.4. This is about 9% lower than the AVR. Therefore, we would expect that contribution volatility will decrease over the long term.

CHART 19
Volatility Ratios for Years Ended June 30, 2008 – 2013

Year Ended June 30	Asset Volatility Ratio	Liability Volatility Ratio
2008	7.3	5.2
2009	5.3	5.1
2010	6.1	5.8
2011	8.2	6.7
2012	8.3	7.8
2013	9.2	8.4

This chart shows how the asset and liability volatility ratios have varied over time.

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
	2013	2012	
Active members in valuation			
Non-DROP			
Number	1,528	1,620	-5.7%
Average age	48.0	47.7	N/A
Average service	11.7	11.5	N/A
Projected total compensation	\$92,244,343	\$94,766,049	-2.7%
Projected average compensation	\$60,369	\$58,498	3.2%
Member account balances	\$86,768,277	\$86,589,757	0.2%
Total active vested members	1,343	1,380	-2.7%
DROP			
Number	311	280	11.1%
Average age	60.0	59.8	N/A
Average service	23.7	24.4	N/A
Projected total compensation	\$19,610,437	\$17,540,903	11.8%
Projected average compensation	\$63,056	\$62,646	0.7%
Vested terminated members			
Number	233	221	5.4%
Average age	45.8	45.9	N/A
Retired members			
Number in pay status	1,206	1,172	2.9%
Average age	69.5	69.4	N/A
Average monthly benefit ⁽¹⁾	\$2,140	\$2,093	2.2%
Disabled members			
Number in pay status	144	138	4.3%
Average age	66.5	66.1	N/A
Average monthly benefit ⁽¹⁾	\$1,860	\$1,827	1.8%
Beneficiaries			
Number in pay status	360	362	-0.6%
Average age	74.2	74.3	N/A
Average monthly benefit ⁽¹⁾	\$1,285	\$1,292	-0.5%

⁽¹⁾ Excludes supplemental benefits (if any) 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, 2013 – 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	6	6	--	--	--	--	--	--	--	--
	\$43,700	\$43,700	--	--	--	--	--	--	--	--
25 - 29	44	22	22	--	--	--	--	--	--	--
	56,909	53,965	\$59,853	--	--	--	--	--	--	--
30 - 34	130	40	75	15	--	--	--	--	--	--
	58,466	57,894	58,426	\$60,193	--	--	--	--	--	--
35 - 39	164	26	84	46	8	--	--	--	--	--
	57,358	53,151	57,483	58,121	\$65,325	--	--	--	--	--
40 - 44	203	19	78	72	31	2	1	--	--	--
	57,417	51,440	57,174	59,282	57,462	\$52,903	\$63,329	--	--	--
45 - 49	265	22	76	84	39	31	13	--	--	--
	62,530	58,447	64,567	59,777	67,054	61,566	64,050	--	--	--
50 - 54	354	29	85	71	59	60	39	11	--	--
	62,274	57,675	62,519	59,080	62,944	61,452	69,075	\$69,891	--	--
55 - 59	201	11	52	79	27	16	9	7	--	--
	61,941	62,054	63,058	60,981	56,552	70,436	60,153	67,974	--	--
60 - 64	123	8	40	43	25	3	3	1	1	1
	61,844	76,063	64,621	58,003	59,531	57,529	69,367	50,415	\$89,949	\$77,907
65 - 69	31	1	12	7	7	2	--	--	--	--
	57,758	51,936	62,328	50,988	46,106	71,556	--	--	--	--
70 & over	7	1	1	2	2	--	1	--	--	--
	50,317	43,343	98,406	37,351	47,015	--	41,736	--	--	--
Total	1,528	185	525	419	198	114	66	19	1	1
	\$60,369	\$56,591	\$60,797	\$59,198	\$60,933	\$62,668	\$66,380	\$68,159	\$89,949	\$77,907

* Excludes 311 active members in DROP with projected average compensation of \$63,056.

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

EXHIBIT C

Reconciliation of Member Data – June 30, 2012 to June 30, 2013

	Non-DROP Active Members	DROP Members	Vested Terminated Members	Pensioners	Disableds	Beneficiaries	Total
Number as of June 30, 2012	1,620 ⁽¹⁾	280 ⁽¹⁾	221	1,172	138	362	3,793
New members	57	0	0	0	0	0	57
Terminations – with vested rights	-40	0	40	0	0	0	0
Contributions refunds	-24	0	-8	0	0	0	-32
DROP Entry	-64	64	0	0	0	0	0
Retirements	-25	-34	-16	75	0	0	0
New disabilities	-3	0	0	-6	9	0	0
Return to work	9	1	-7	-3	0	0	0
Died with or without beneficiary	-2	0	0	-35	-3	-2 ⁽³⁾	-42
Data adjustments	0	0	3	3	0	0	6
Number as of June 30, 2013	1,528 ⁽²⁾	311 ⁽²⁾	233	1,206	144	360	3,782

⁽¹⁾ *There was a total of 1,900 actives (including non-DROP and DROP members) at the beginning of the plan year.*

⁽²⁾ *There was a total of 1,839 actives (including non-DROP and DROP members) at the end of the plan year.*

⁽³⁾ *This is the net decrease in the number of beneficiaries after subtracting the number of beneficiaries who died during the year.*

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, 2013	Year Ended June 30, 2012
Contribution income:		
Employer contributions	\$13,329,655	\$11,373,870
Employee contributions	7,995,145	5,507,139
Less administrative expenses	<u>-1,138,182</u>	<u>-1,087,210</u>
Net contribution income	\$20,186,618	\$15,793,799
Investment income:		
Interest, dividends and other income	\$24,701,946	\$23,398,531
Adjustment toward market value	56,163,980	-11,821,705
Less investment fees	<u>-4,828,262</u>	<u>-4,440,812</u>
Net investment income	<u>76,037,664</u>	<u>7,136,014</u>
Total income available for benefits	\$96,224,282	\$22,929,813
Less benefit payments:		
Benefit payments	-\$45,806,771	-\$42,695,972
Post retirement supplemental benefits	-76,286	-137,746
Refunds of contributions	<u>-1,157,287</u>	<u>-1,313,292</u>
Net benefit payments	-\$47,040,344	-\$44,147,010
Change in reserve for future benefits	\$49,183,938	-\$21,217,197

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

EXHIBIT E

Summary Statement of Assets

	Year Ended June 30, 2013	Year Ended June 30, 2012
Cash equivalents	\$933,365	\$1,099,451
Accounts receivable:		
Receivables for investments sold	\$9,808,701	\$35,784,735
Interest and dividends	4,125,845	3,460,076
Other receivables	<u>7,806,925</u>	<u>2,137,640</u>
Total accounts receivable	21,741,471	41,382,451
Investments:		
Domestic and international equity	\$564,961,061	\$494,655,236
Government and corporate bonds	294,474,706	265,279,314
Real estate	115,099,623	102,835,465
Emerging market equity	36,004,600	34,756,051
Collateral held for securities lent	149,473,656	113,875,862
Other investments	<u>24,614,083</u>	<u>29,392,078</u>
Total investments at market value	<u>1,184,627,729</u>	<u>1,040,794,006</u>
Total assets	\$1,207,302,565	\$1,083,275,908
Less accounts payable:		
Collateral held for securities lent	-\$149,473,656	-\$113,875,862
Payable for investments and foreign currency purchased	-32,093,996	-37,977,600
Other liabilities	<u>-1,069,356</u>	<u>-1,019,721</u>
Total accounts payable	-\$182,637,008	-\$152,873,183
Net assets at market value	<u>\$1,024,665,557</u>	<u>\$930,402,725</u>
Net assets at actuarial value	<u>\$1,007,075,075</u>	<u>\$957,891,137</u>
Net assets at valuation value	<u>\$933,722,075</u>	<u>\$891,366,137</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	<u>Total</u>
1. Total valuation assets	\$933,722
2. Present value of future member normal cost	52,093
3. Present value of future employer normal cost	93,305
4. Unfunded/(prefunded) actuarial accrued liability	1,225
5. Total current and future assets	<u>\$1,080,345</u>
Liabilities	
6. Present value of benefits already granted, excludes current active DROP	\$481,462
7. Present value of benefits for current active DROP	145,627
8. Present value of benefits to be granted	453,256
9. Total liabilities	<u>\$1,080,345</u>

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

EXHIBIT G

Summary of Reported Asset Information as of June 30, 2013

	Reserves\$(000)
Employer Advance/Retired Reserves	\$851,764
Active Member Reserves	99,549
DROP Reserve ⁽¹⁾	73,140
Reserve for PRSB ⁽¹⁾	9
Reserve for City Surplus ^{(1),(2)}	204
Net Assets Held in Trust for Benefits	<u>\$1,024,666</u>

⁽¹⁾ *Non-valuation reserve*

⁽²⁾ *The City Surplus Reserve is treated as a liability; it represents the City's prior contribution surplus due to the difference between the actual versus the projected surplus prior to June 30, 2013. This difference is taken into account in developing the contribution rate requirement for 2014-2015.*

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, 2013

	(Dollar amounts in Thousands)
1 Unfunded/(Prefunded) actuarial accrued liability at beginning of year	-\$19,408
2 Gross Normal Cost at middle of year	21,858
3 Actual employer and member contributions	-21,325
4 Interest (whole year on (1) plus half year on (2) + (3))	<u>-1,531</u>
5 Expected unfunded/(prefunded) actuarial accrued liability at end of year	-\$20,406
6 Actuarial (gain)/loss due to all changes:	
<u>Experience (gain)/loss</u>	
a. Loss from investment	\$8,700
b. Lower than expected COLA benefit increases for continuing retirees and DROP participants	-9,437
c. Lower than expected salary increases	-2,449
d. Other experience (gain)/loss ⁽¹⁾	<u>-8,167</u>
e. Subtotal	-\$11,353
<u>Other changes</u>	
f. Changes in actuarial assumptions	<u>32,984</u>
g. Subtotal	\$32,984
7 Actual unfunded/(prefunded) actuarial accrued liability at end of year (5) + (6e) + (6g)	\$1,225

⁽¹⁾ *About half due to liability gains on pensioner mortality.*

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 \$205,000 for 2013 and \$210,000 for 2014. 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

Summary of Actuarial Valuation Results

The valuation was made with respect to the following data supplied to us:

1. Retired members as of the valuation date (including 360 beneficiaries in pay status)		1,710
2. Members inactive during year ended June 30, 2013 with vested rights		233
3. Members active during the year ended June 30, 2013		1,839
DROP members	311	
Fully vested non-DROP members	1,343	
Not vested	185	

The actuarial factors as of the valuation date are as follows (amounts in 000s):

Assets

1. Valuation value of assets (\$1,024,666 at market value ⁽¹⁾ as reported by the Retirement System and \$1,007,075 at actuarial value ⁽¹⁾)		\$933,722
2. Present value of future normal costs		
Employee	\$52,093	
Employer	<u>93,305</u>	
Total		\$145,398
3. Unfunded actuarial accrued liability		<u>1,225</u>
4. Present value of current and future assets		\$1,080,345

Liabilities

5. Present value of future benefits		
Retired members and beneficiaries	\$481,462	
Inactive members with vested rights	36,743	
DROP members	145,627	
Active non-DROP members	<u>416,513</u>	
Total		\$1,080,345

⁽¹⁾ Includes non-valuation reserves.

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

EXHIBIT I (continued)
Summary of Actuarial Valuation Results

	Dollar Amount	% of Payroll⁽¹⁾
The determination of the recommended contribution is as follows (amounts in 000s):		
1. Total normal cost	\$22,488	19.38%
2. Expected employee contributions	<u>-8,527</u>	<u>-7.35%</u>
3. Employer normal cost: (1) + (2)	\$13,961	12.03%
4. Amortization of unfunded actuarial accrued liability	81	0.07%
5. Adjustment for phase-in of assumption changes	-621	-0.53%
6. Contribution shortfall from prior year	<u>97</u>	<u>0.08%</u>
7. Total recommended employer contributions: (3) + (4) + (5) + (6)	\$13,518	11.65%
8. Projected payroll ⁽¹⁾	\$116,049	

⁽¹⁾ Based on projected fiscal year 2014 – 2015 annual payroll for active non-DROP and DROP members shown in (8).

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

EXHIBIT II

Supplementary Information Required by GASB – Schedule of Employer Contributions

Plan Year Ended June 30	Annual Required Contributions	Actual Contributions	Percentage Contributed
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%
2012	11,373,870	11,373,870	100.0%
2013	13,329,655	13,329,655	100.0%

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

EXHIBIT III

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/ (Unfunded) AAL/(UAAL) (a) – (b)	Funded Ratio (%) (a) / (b)	Covered Payroll (c)	Prefunded AAL/ (UAAL) as a Percentage of Covered Payroll (%) [(a) – (b)] / (c)
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	791,105	129,112	116.3	117,577	109.8
6/30/2012	891,366	871,958	19,408	102.2	112,307	17.3
6/30/2013	933,722	934,947	(1,225)	99.9	111,854	(1.1)

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

**EXHIBIT IV
Supplementary Information Required by GASB**

Valuation date	June 30, 2013
Actuarial cost method	Entry Age Actuarial Cost Method
Amortization method	Level percent of payroll for total Unfunded Actuarial Accrued Liability or Prefunded Actuarial Accrued Liability
Remaining amortization period	Effective with the June 30, 2013 valuation, any new UAAL established on each subsequent valuation as a result of actuarial gains or losses or plan amendments are amortized over separate 15-year declining periods (with the exception of temporary retirement incentives which are amortized over its own declining period of up to 5 years). Any new UAAL established as a result of changes in actuarial assumptions or methods at each valuation is amortized over separate 25-year declining periods. Any actuarial surplus (when the funded ratio is over 110%) will be amortized over a non-declining 25-year period.
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. Deferred gains and losses as of June 30, 2012 have been combined and will be recognized in four equal annual amounts over a period of four years from that date. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves (i.e., DROP Reserve, PRSB Reserve and City Surplus).
Actuarial assumptions:	
Investment rate of return	7.50%
Inflation rate	3.25%
Real across-the-board salary increase	0.50%
Projected salary increases*	4.25% to 11.75%
Cost of living adjustments	3.25% of retirement income
Plan membership:	
Retired members and beneficiaries receiving benefits	1,710
Terminated members entitled to, but not yet receiving benefits	233
DROP members	311
Active non-DROP members	<u>1,528</u>
Total	3,782

* Includes inflation at 3.25% plus real across-the-board salary increase of 0.50% plus merit and promotion increases. See Exhibit V for these increases.

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

EXHIBIT V

Actuarial Assumptions and Actuarial Cost Method

Post – Retirement Mortality Rates:

Healthy: RP-2000 Combined Healthy Mortality Table (separate tables for males and females) projected with scale AA to 2021 set back one year.

Disabled: RP-2000 Combined Healthy Mortality Table (separate tables for males and females) projected with scale AA to 2021 set forward three 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 projected with scale AA to 2021 set back one year weighted 65% male and 35% female.

For beneficiaries: RP-2000 Combined Healthy Mortality Table projected with scale AA to 2021 set back one year weighted 35% male and 65% female.

For disabled members: RP-2000 Combined Healthy Mortality Table projected with scale AA to 2021 set forward three years weighted 65% male and 35% female.

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

Termination Rates Before Retirement:

Rate (%)		
Mortality		
Age	Male	Female
25	0.03	0.01
30	0.04	0.02
35	0.06	0.04
40	0.09	0.05
45	0.11	0.07
50	0.14	0.11
55	0.21	0.20
60	0.42	0.40
65	0.84	0.78

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

Rate (%)	
Disability	
Age	All Members
20	0.00
25	0.00
30	0.01
35	0.06
40	0.16
45	0.32
50	0.49
55	0.67
60	1.20
65	1.50

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):

Total Termination (Less than 5 years of service)

<u>Service</u>	<u>Rate (%)</u>
0 – 1	12.00
1 – 2	8.00
2 – 3	6.00
3 – 4	5.00
4 – 5	3.50

100% of members are assumed to elect a withdrawal of contributions.
No termination is assumed after a member is assumed to retire.

Total Termination (5 or more years of service)

<u>Age</u>	<u>Rate (%)</u>
20	7.50
25	7.50
30	6.90
35	6.05
40	5.30
45	4.70
50	0.00

40% of members are assumed to elect a withdrawal of contributions.
The remaining members are assumed to elect a deferred vested benefit.
No vested termination is assumed after a member is assumed to retire.

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

Retirement Rates:

<u>Age</u>	<u>Rate (%)</u>
50	2.00
51	2.00
52	3.00
53	3.00
54	5.00
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	11.00
64	18.00
65	20.00
66	20.00
67	25.00
68	40.00
69	50.00
70	100.00

<u>DROP Assumptions:</u>	<u>Male and Female (after attaining age 55)</u>
First Year Eligible	30%
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 for 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; 55% of female members.

Age of Spouse:

Wives are 3 years younger than their husbands.

Net Investment Return:

7.50%, net of administration and investment expenses.

**Employee Contribution
Crediting Rate:**

7.50%, assumed in the valuation.

Consumer Price Index:

Increase of 3.25% per year, retiree COLA increases due to CPI are limited to maximum at 3.25% per year.

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

Salary Increases:

<u>Annual Rate of Compensation Increase</u>	
Inflation: 3.25% 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	8.00%
1	6.25%
2	4.75%
3	3.75%
4	3.15%
5	2.15%
6	1.20%
7	1.00%
8	0.90%
9+	0.50%

Actuarial Cost Method:	Entry Age Actuarial Cost Method. Entry age is the age at the member’s hire date. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are based on costs allocated as a level percentage of compensation, as if the current benefit formulas have always been in effect (i.e., “replacement life”).
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. Deferred gains and losses as of June 30, 2012 have been combined and will be recognized in four equal annual amounts over a period of four years from that date.
Valuation Value of Assets:	The Actuarial Value of Assets reduced by the value of the non-valuation reserves.

Change in Actuarial Assumptions:	Based on the Actuarial Experience Study and the Review of Economic Actuarial Assumptions, the following assumptions were changed. Previously, those assumptions were as follows:
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SECTION 4: Reporting Information for the City of Fresno Employees Retirement System

Changes in Actuarial Assumptions – Prior Assumptions:

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.

Termination Rates Before Retirement:

<u>Age</u>	<u>Rate (%)</u>	
	<u>Male</u>	<u>Female</u>
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

Changes in Actuarial Assumptions – Prior Assumptions (Continued):

Termination Rates Before Retirement (Continued):

Age	Rate (%)	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

Changes in Actuarial Assumptions – Prior Assumptions (Continued):

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

Changes in Actuarial Assumptions – Prior Assumptions (Continued):

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

Changes in Actuarial Assumptions – Prior Assumptions (Continued):

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 for 6 years

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

Changes in Actuarial Assumptions – Prior Assumptions (Continued):

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.

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%

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

EXHIBIT VI
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:	Effective with the June 30, 2013 valuation, any new UAAL established on each subsequent valuation as a result of actuarial gains or losses or plan amendments are amortized over separate 15-year declining periods (with the exception of temporary retirement incentives which are amortized over its own declining period of up to 5 years). Any new UAAL established as a result of changes in actuarial assumptions or methods at each valuation is amortized over separate 25-year declining periods.
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, 2013 and June 30, 2012 valuation:

	June 30, 2013 Actuarial Valuation								June 30, 2012 Actuarial Valuation							
	BASIC		COLA, Before Surplus Offset		Surplus Offset		TOTAL		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*	Rate	Estimated Annual Amt*
All Members	5.91%	\$5,656	3.00%	\$2,871	0.00%	\$0	8.91%	\$8,527	5.51%	\$5,273	2.95%	\$2,823	0.00%	\$0	8.46%	\$8,096

* Amounts are in thousands and are based on the following projected fiscal year 2014 – 2015 annual payroll for members NOT in the DROP (also in thousands):

Payroll (excluding DROP members) \$95,703

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, 2013
Actuarial Valuation as a percentage of payroll**

<u>Entry Age</u>	<u>Basic</u>	<u>COLA</u>	<u>Surplus Offset</u>	<u>Total</u>
16	3.35%	1.70%	0.00%	5.05%
17	3.45%	1.75%	0.00%	5.20%
18	3.55%	1.80%	0.00%	5.35%
19	3.66%	1.86%	0.00%	5.52%
20	3.77%	1.92%	0.00%	5.69%
21	3.89%	1.98%	0.00%	5.87%
22	4.02%	2.04%	0.00%	6.06%
23	4.15%	2.10%	0.00%	6.25%
24	4.28%	2.17%	0.00%	6.45%
25	4.43%	2.25%	0.00%	6.68%
26	4.58%	2.32%	0.00%	6.90%
27	4.74%	2.41%	0.00%	7.15%
28	4.91%	2.49%	0.00%	7.40%
29	5.10%	2.59%	0.00%	7.69%
30	5.29%	2.69%	0.00%	7.98%
31	5.39%	2.74%	0.00%	8.13%
32	5.49%	2.79%	0.00%	8.28%
33	5.59%	2.84%	0.00%	8.43%
34	5.70%	2.89%	0.00%	8.59%
35	5.80%	2.95%	0.00%	8.75%
36	5.91%	3.00%	0.00%	8.91%
37	6.02%	3.06%	0.00%	9.08%
38	6.14%	3.12%	0.00%	9.26%
39	6.26%	3.18%	0.00%	9.44%
40	6.38%	3.24%	0.00%	9.62%

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

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

Entry Age	Basic	COLA	Surplus Offset	Total
41	6.51%	3.30%	0.00%	9.81%
42	6.64%	3.37%	0.00%	10.01%
43	6.78%	3.44%	0.00%	10.22%
44	6.93%	3.52%	0.00%	10.45%
45	7.08%	3.60%	0.00%	10.68%
46	7.23%	3.67%	0.00%	10.90%
47	7.38%	3.75%	0.00%	11.13%
48	7.54%	3.83%	0.00%	11.37%
49	7.65%	3.88%	0.00%	11.53%
50	7.71%	3.92%	0.00%	11.63%
51	7.76%	3.94%	0.00%	11.70%
52	7.76%	3.94%	0.00%	11.70%
53	7.69%	3.90%	0.00%	11.59%
54	7.54%	3.83%	0.00%	11.37%

Interest: 7.50% per annum
Mortality: RP-2000 Combined Healthy Mortality Table projected with scale AA to 2021 set back one year weighted 65% male and 35% female
Salary Increase: See Exhibit V in Section 4
COLA: 3.25% per annum
Non-Refundability Factor: 96.26%

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

**Appendix B
Allocation of Actuarial Surplus**

	June 30	
	2013	2012
Table 1: Calculation of Actuarial Surplus		
(1) Valuation Value of Assets	\$933,722,075	\$891,366,137
(2) Actuarial Accrued Liability	934,947,000	871,958,000
(3) Surplus: (1) – (2), not less than zero	0	19,408,137
(4) Contingency Reserve: 10% of (2), not more than (3)	0	19,408,137
(5) Actuarial Surplus: (3) – (4)	0	0

There is no Actuarial Surplus available for distribution in the June 30, 2013 or June 30, 2012 valuations.

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

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

Table 2: City Contribution Requirements	Fiscal Year 2014-2015			Fiscal Year 2013-2014		
	Basic	COLA	Total	Basic	COLA	Total
(1) City Normal Cost Rate	9.02%	3.01%	12.03%	8.63%	2.65%	11.28%
(2) Projected Annual Payroll	\$116,049,000	\$116,049,000	\$116,049,000	\$111,854,000	\$111,854,000	\$111,854,000
(3) City Allocation of Fiscal Year Distributable Actuarial Surplus (Table 3)	0	0	0	0	0	0
(4) City Surplus Reserve Account (From Prior Years)	0	0	0	204,000	0	204,000
(5) ½ Year Interest on (4)	0	0	0	7,650	0	7,650
(6) Total Contribution Offsets Available (3) + (4) + (5)	0	0	0	211,650	0	211,650
(7) Total Contribution Required (1) x (2)	10,467,620	3,493,000	13,960,620	9,653,000	2,964,131	12,617,131
(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	10,467,620	3,493,000	13,960,620	9,441,350	2,964,131	12,405,481
(11) Contribution Rate Adopted by the City for FY 2013/2014						11.01%
(12) Projected City Contributions Based on Rate Adopted by the City (11) * (2)				9,350,994	2,964,131	12,315,125
(13) Net Additional City Contribution Before Application of Prepaid Employer Contribution Account (10) – (12)	10,467,620	3,493,000	13,960,620	90,356	0	90,356
(14) City’s Prepaid Employer Contribution Account Balance (Negative Account Balance Represents Contribution Shortfall)	-93,744	0	-93,744	0	0	0
(15) ½ Year Interest on (14)	-3,515	0	-3,515	0	0	0
(16) City’s Fiscal Year Contribution After Application of Prepaid Employer Contribution Account (13) – (14) – (15), not less than 0	10,564,879	3,493,000	14,057,879 ⁽¹⁾	90,356	0	90,356
(17) Projected Residual Prepaid Employer Contribution Account at Year End. (14) + (15) – (13), Adjusted with ½ Year Interest (Negative Account Balance Represents Contribution Shortfall)				-93,744	0	-93,744

Note: Results may not total properly due to rounding.

⁽¹⁾ \$14,057,879 is before including UAAL contributions of \$81,000 and before excluding \$621,000 for phasing in the assumptions changes.

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

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

	June 30	
	2013	2012
Table 3: Calculations for PRSB and PRSB Reserve Account:		
(1) PRSB Allocation of Distributable Actuarial Surplus	\$0	\$0
(2) PRSB Reserve Account (as of Valuation Date)	\$9,000	\$82,000
(3) Estimated July 1 to December 31 PRSB Payments	<u>\$9,000⁽¹⁾</u>	<u>\$69,495</u>
(4) Total amount available for PRSB (1) + (2) – (3)	\$0	\$12,505
(5) 95% x (4)	\$0	\$11,880
(6) Number of eligible participants (Retirees & Beneficiaries)	1,633	1,591
(7) Monthly PRSB Benefit for next calendar year (5) / (6) / 12	\$0.00	\$0.62
(8) Target Monthly Benefit	\$1,084.00	\$985.00
(9) Benefit Shortfall (8) – (7)	\$1,084.00	\$984.38
(10) Estimated PRSB Reserve Account as of end of next calendar year: (4) – (6) x (7) x 12	\$0	\$668

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.

⁽¹⁾ It is our understanding following discussions with the Retirement System that an adjustment will be made to the monthly benefit payable from the PRSB for the remainder of 2013 so that the PRSB Reserve Account will be exhausted at the end of 2013.

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

Appendix C

UAAL Amortization Schedule as of June 30, 2013 (Dollar Amounts in Thousands)

	Date Established	Source	Initial Amount	Outstanding Balance	Years Remaining	Annual Payment
Grand Total	June 30, 2013	Changes in actuarial assumptions	\$1,225	<u>\$1,225</u> <u>\$1,225</u>	25	<u>\$76</u> <u>\$76</u>

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