

**City and County of San Francisco  
Employees' Retirement System**

**July 1, 2014  
Actuarial Valuation**

**Produced by [Cheiron](#)**

**March 4, 2015**

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## LETTER OF TRANSMITTAL

March 4, 2015

Retirement Board of the City and County of  
San Francisco Employees' Retirement System  
C/o Mr. Jay Huish, Executive Director  
1145 Market Street, 6<sup>th</sup> Floor  
San Francisco, CA 94103

Dear Members of the Board:

The purpose of this report is to present the results of the July 1, 2014 actuarial valuation of the City and County of San Francisco Employees' Retirement System (SFERS or the System). The report includes:

- Summary of the key findings,
- Measures of funded status,
- Analysis of changes since the prior valuation,
- Development of employer and member contribution rates for the fiscal year ending (FYE) June 30, 2016, and
- Historical and projected trends.

This report is for the use of the Retirement Board of San Francisco and its auditors in preparing financial reports in accordance with applicable law and annual report requirements.

If you have any questions about the report or would like additional information, please let us know.

Sincerely,  
Cheiron



William R. Hallmark, ASA, FCA, EA, MAAA  
Consulting Actuary



Anne D. Harper, ASA, EA, MAAA  
Consulting Actuary



Janet Cranna, FSA, FCA, EA, MAAA  
Principal Consulting Actuary



**SECTION I**  
**BOARD SUMMARY**

**Key Findings of the July 1, 2014 Valuation**

The key results of the July 1, 2014 actuarial valuation are as follows:

- The employer contribution rate decreased from 26.76% to 22.80% before any cost-sharing adjustments. After the cost-sharing adjustments, the estimated employer contribution rate decreased from 23.18% to 19.24%. The actual aggregate employer contribution rates after cost-sharing adjustments will depend upon the proportion of the actual payroll for each employee group defined in the Charter. See Table V-2 for more details.
- The employer contribution rate decreased primarily due to favorable investment returns of 18.8% on a market value of assets and the recognition of deferred investment gains from previous years.
- There is no change in the employee contribution rates after the cost-sharing adjustment from the 2013 actuarial valuation.
- The funded ratio based on both the market value of assets and actuarial value of asset improved due to favorable investment returns. On a market value basis, the funded ratio increased from 84.1% to 94.3%. On an actuarial value basis, the funded ratio increased from 80.6% to 85.3%.
- The new amortization policy, adopted by the Board at the August 13, 2014 Retirement Board meeting, was incorporated into the July 1, 2014 actuarial valuation. A description of the amortization policy changes can be found in Appendix B – Actuarial Assumptions and Method of this report. The employer contribution rate decreased by 0.89% for FYE 2016 as a result of this change.
- The following changes in the economic assumptions were adopted by the Board at the January 14, 2015 Retirement Board meeting. As of July 1, 2014, the investment return assumption changed from 7.58% to 7.50%; the wage inflation assumption changed from 3.83% to 3.75%; and, the consumer price inflation changed from 3.33% to 3.25%. These changes increased the employer contribution rate by 0.62% and increased the Unfunded Actuarial Liability by \$153.1 million.

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**Funded Status**

This report measures assets and liabilities for funding purposes. Table I-1 below summarizes the actuarial liability, assets, and related ratios as of July 1, 2014 compared to July 1, 2013.

<b>Table I-1</b>				
<b>City and County of San Francisco Employees' Retirement System</b>				
<b>Summary of Key Valuation Results</b>				
(in millions)				
<b>Valuation Date</b>	<b>July 1, 2014</b>	<b>July 1, 2013</b>	<b>% Change</b>	
Actuarial Liability	\$ 21,122.6	\$ 20,224.8	4.4%	
Actuarial Value of Assets	\$ 18,012.1	\$ 16,303.4	10.5%	
Unfunded Actuarial Liability (actuarial value)	3,110.5	3,921.4	-20.7%	
Funding Ratio (actuarial value)	85.3%	80.6%	4.7%	
Market Value of Assets	\$ 19,920.6	\$ 17,011.5	17.1%	
Unfunded Liability (market value)	1,202.0	3,213.3	-62.6%	
Funding Ratio (market value)	94.3%	84.1%	10.2%	
Expected Payroll	\$ 2,640.2	\$ 2,536.0	4.1%	
Asset Leverage Ratio	7.5	6.7	12.5%	
Actuarial Liability Leverage Ratio	8.0	8.0	0.3%	
Interest on UAL (MVA basis)	\$ 90.2	\$ 243.6	-63.0%	
Interest Cost as Percent of Payroll	3.5%	10.0%	-6.4%	

The actuarial liability increased by approximately \$900 million reflecting interest and the accrual of benefits offset by benefits paid during the year. The actuarial value of assets, which is used as the basis to set contribution rates, increased by approximately \$1,700 million reflecting smoothed investment returns and contributions offset by benefits and expenses paid during the year. As a result, SFERS' Unfunded Actuarial Liability (UAL) decreased by approximately \$800 million based on the actuarial value of assets, and the funding ratio based on the actuarial value of assets increased from 80.6% to 85.3%.

The market value of assets increased by approximately \$2,900 million, reflecting the full investment returns during the year. As a result, SFERS' UAL based on the market value of assets decreased by approximately \$2,000 million, and the funding ratio based on the market value of assets increased from 84.1% to 94.3%.

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The interest cost on the UAL based on the market value of assets decreased from approximately \$244 million to approximately \$90 million. As a result, approximately 3.5% of payroll must be contributed to pay the interest on the UAL, down from 10.0% of payroll in the prior year.

One of the most important measures of a plan's sensitivity to investment risk is the ratio of the market value of assets to payroll, or the asset leverage ratio, which has increased from 6.7 to 7.5 in the last year. If the System were 100% funded, the ratio would be 8.0. The higher this ratio, the more sensitive contribution rates are to investment returns.

For example, assume SFERS assets earn 10% less than the 7.50% assumption (-2.50%), which has to be made up by contributions unless the System experiences an offsetting investment gain. Based on the current ratio of assets to payroll (7.5), the loss in assets is 75% of active payroll (7.5 times the 10% loss). Ignoring the five-year smoothing of assets, this loss would require a contribution of approximately 5.75% of payroll for 20 years. If the System had an asset to payroll ratio of 4.0 instead, the same 10% investment loss (40% of payroll) would only require a contribution of approximately 3.0% of payroll for 20 years. The Board cannot take action to reduce this ratio, but should be aware of the increased sensitivity of contribution rates to variability in investment returns as the System matures and consider if any changes in the level of investment risk taken by the System are appropriate.

**Contributions**

SFERS funding policy sets employer contributions equal to the sum of:

- The normal cost under the Entry Age Normal Cost Method,
- The expected administrative expenses, and
- Amortization of the unfunded actuarial liability.

The Board adopted a new amortization policy at the August 13, 2014 meeting. Under the new policy, any changes in active member benefits are amortized over a closed 15-year period, and any changes in inactive or retired member benefits, including Supplemental COLAs, are amortized over a closed 5-year period. In addition, any new sources of UAL due to actuarial gains and losses, assumption changes, or method changes are amortized over a closed 20-year period. No changes were made to the amortization of prior benefit changes (Propositions), but the portion of the UAL as of July 1, 2013 not attributable to Propositions was re-amortized over a closed 19-year period as of July 1, 2014.

The Charter (as amended by Proposition C effective July 1, 2012) requires employees to pay a portion of the net employer contribution rate. The portion each employee pays depends on the net employer contribution rate, the employee group, and the level of pay received by the employee. Unless explicitly identified, the figures shown in this report are before applying the floating contribution rate provisions. Table I-2 below summarizes the employer and member contribution rates both before and after the cost-sharing adjustments.

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<b>Table I-2 Summary Of Contributions</b> (in millions)			
	<b>FYE 2016</b>	<b>FYE 2015</b>	<b>Absolute Change</b>
<u>Contribution Rates Before Adjustments</u>			
Net Employer Contribution Rate	22.80%	26.76%	-3.96%
Est. Aggregate Employee Contribution Rate	<u>7.54%</u>	<u>7.54%</u>	0.00%
Total Contribution Rate	30.34%	34.30%	-3.96%
Estimated Net Employer Contributions	\$ 624.5	\$ 704.6	\$ (80.1)
<u>Contribution Rates After Adjustments</u>			
Net Employer Contribution Rate	19.24%	23.18%	-3.94%
Est. Aggregate Employee Contribution Rate	<u>11.10%</u>	<u>11.12%</u>	-0.02%
Total Contribution Rate	30.34%	34.30%	-3.96%
Estimated Net Employer Contributions	\$ 527.0	\$ 610.5	\$ (83.5)
<u>Total Contribution Rate</u>			
Normal Cost Rate	18.38%	18.26%	0.12%
Administrative Expense Rate	0.45%	0.45%	0.00%
UAL Rate			
Interest on Market Value UAL	3.54%	9.96%	-6.42%
Principal on Market Value UAL	<u>7.97%</u>	<u>5.63%</u>	2.34%
Total UAL Rate	11.51%	15.59%	-4.08%
Total Contribution Rate	30.34%	34.30%	-3.96%

The net employer contribution rate before applying the cost-sharing adjustments for the fiscal year ending June 30, 2016 decreased by 3.96% of payroll from 26.76% to 22.80%. The cost-sharing adjustment is estimated to decrease the employer contribution and increase the aggregate employee contributions by 3.56% of payroll. Thus, the employer contribution rate after cost sharing decreased to 19.24% for FYE 2016. The cost-sharing adjustments are the same as those calculated for FYE 2015 and will remain the same as long as the employer contribution rate before adjustment is between 22.51% and 27.50%.

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**SFERS Membership**

As shown in Table I-3 below, membership in SFERS increased in total by 3.3%. Active membership increased 2.8%, active DROP membership decreased 86.1%, terminated vested membership increased 7.8%, and members receiving benefits increased by 3.1%. Total payroll increased by 4.4% for active members and decreased 97.2% for DROP members. The average pay per active and DROP member increased by 1.5%. The significant decrease in DROP participation is due to the closure of the DROP effective June 30, 2011, and DROP members retiring.

<b>Table I-3</b>			
<b>Membership Total</b>			
<b>Item</b>	<b>July 1, 2014</b>	<b>July 1, 2013</b>	<b>% Change</b>
Actives	29,516	28,717	2.8%
Active DROP	10	72	-86.1%
Terminated Vested	6,441	5,973	7.8%
Members Receiving Benefits	26,852	26,034	3.1%
<b>Total SFERS Members</b>	<b>62,819</b>	<b>60,796</b>	<b>3.3%</b>
Active Member Payroll (FYE 2015/2014)*	\$ 2,639,910,000	\$ 2,527,450,000	4.4%
DROP Member Payroll (FYE 2015/2014)*	\$ 240,000	\$ 8,510,000	-97.2%
Average Pay per Active (including DROP)	\$ 89,400	\$ 88,100	1.5%

*\* Based on valuation data projected for the next fiscal year using a full year of salary increases.*

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**Changes in the UAL**

The UAL based on the actuarial value of assets decreased \$810.9 million to \$3,110.5 million this year. Table I-4 presents the components of this change in the UAL used to set contribution rates.

1. Unfunded Actuarial Liability as of 7/1/2013	\$ 3,921.4
2. Expected change in unfunded actuarial liability	\$ (98.5)
3. Increase due to change in economic assumptions	153.1
4. Decrease due to investment gains and expenses	(745.1)
5. Decrease due to liability gain	(158.0)
6. Increase due to contributions less than expected	37.6
7. Total change in unfunded actuarial liability	\$ (810.9)
8. Unfunded Actuarial Liability as of 7/1/2014	\$ 3,110.5

Investment gains and expenses accounted for \$745.1 million of the decrease in the UAL. The decrease in the investment return and inflation assumptions increased the UAL by \$153.1 million which was offset by the liability gain of \$158.0 million. Lower than expected salary increase for active members and the absence of any cost of living adjustment for retired members under the Old Safety Charters were the primary reason for the liability gains.

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**Contribution Reconciliation**

The SFERS contribution rate for FYE 2016 before adjustment for the floating employee contribution rates, measured as a percent of membership payroll, decreased from 26.76% to 22.80%. Table I-5 shows sources for the change in the net employer contribution rate. The contribution rate decrease is primarily attributable to the asset gains.

<b>Table I-5</b>			
<b>Net Employer Contribution Rate Reconciliation</b>			
<b>Item</b>	<b>Total</b>	<b>Normal Cost*</b>	<b>Amortization</b>
FYE 2015 Net Employer Contribution Rate	26.76%	11.17%	15.59%
1994 Proposition fully amortized	-0.12%	0.00%	-0.12%
Rolling 15-year amortization	<u>-0.49%</u>	<u>0.00%</u>	<u>-0.49%</u>
<b>Expected FYE 2016 Net Employer Contribution Rate</b>	<b>26.15%</b>	<b>11.17%</b>	<b>14.98%</b>
Change due to asset gain	-2.43%	0.00%	-2.43%
Change due to liability gain	-0.61%	-0.07%	-0.54%
Change due to new funding policy	-0.89%	0.00%	-0.89%
Change due to change in economic assumptions	0.62%	0.19%	0.43%
Other	<u>-0.04%</u>	<u>0.00%</u>	<u>-0.04%</u>
FYE 2016 Net Employer Contribution Rate	22.80%	11.29%	11.51%

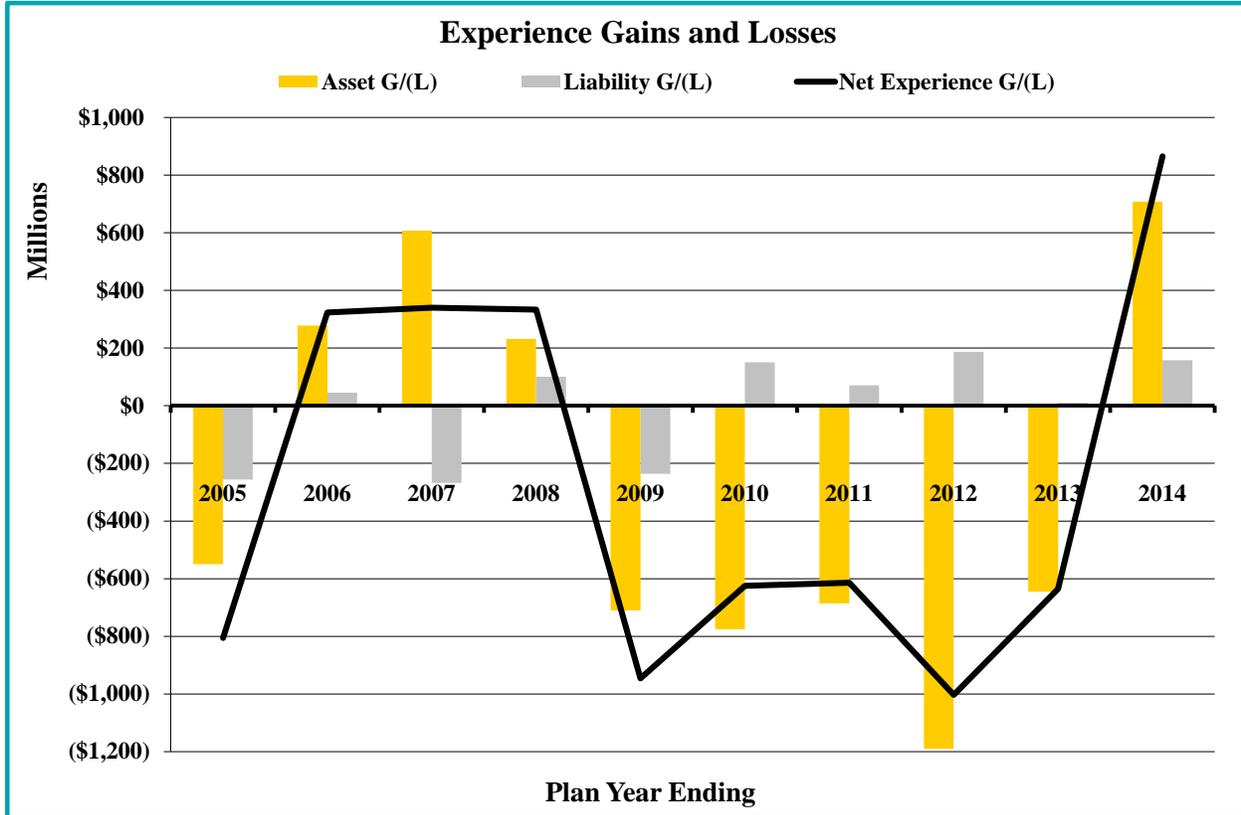
\* Includes administrative expenses and is net of employee contributions

The new funding policy resulted in a 0.89% decrease in the contribution rate for FYE 2016. The decrease is a result of the 2013 remaining non-Proposition UAL begin amortized over a longer period, 19-years instead of 15-years. However, the previous funding method used an open or rolling amortization where the period was re-set every year to 15 and thus would never fully be paid. Effective with this valuation, any new sources of UAL due to actuarial gains and losses, assumption changes, or method changes are amortized over a closed 20-year period. As stated above, the UAL as of July 1, 2013, which is not attributable to Propositions was re-amortized over a closed 19-year period as of July 1, 2014. All amortization schedules are determined on a level percent of pay basis which means that for the duration of the amortization schedule, the payment amount increases each year at the assumed wage inflation rate. In Section V of this report, more detail is provided on the development of this contribution rate.

The chart below illustrates the pattern of SFERS annual gains and losses, broken into the investment and liability components. The chart does not include any changes in the System's assets and liabilities attributable to changes to methods, procedures or assumptions.

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SFERS Historical Gain/(Loss) 2005-2014



On a smoothed asset basis, the investment gains and losses (gold bars) from 2009 to 2013 reflect material net investment losses driven by the market decline of 2008 and 2009 which was spread over the five successive years. Those losses have been fully recognized in the actuarial value of assets, but recent gains totaling approximately \$2 billion have not been recognized yet. Consequently, additional investment gains on the actuarial value of assets are expected over the next few years.

On the liability side, gains and losses have been offsetting from 2005 to 2014 and have been small relative to the investment experience. The liability gains in the last five years are due mostly to less than expected salary increases and Old Safety Charter COLAs. In 2014, net liability gains were \$158 million and are shown in detail in Table III-3.

**Historical and Projected Trends**

Each valuation is a snapshot of the long-term progress of a pension fund. It is important to judge a current year's valuation result relative to historical trends, as well as trends expected into the future. All information for valuation years prior to 2008 were calculated by the prior actuary.

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The top chart on the following page shows asset measures (both market and actuarial) compared to the actuarial liability for the historical period from 2004 to 2014 and the projected period from 2015 to 2034 assuming all assumptions are met. The purple bars represent the historical actuarial liability while the gray bars represent the projected actuarial liability. The black bars represent the projected actuarial liability but indicate years when a Supplemental COLA is projected to be paid. At the top of each bar is the progression of SFERS funding ratios based on the market value of assets.

The System maintained a surplus reaching a peak of 125% funded as of July 1, 2007. The funding ratio declined precipitously over the next two years to 72% primarily due to investment experience as well as Proposition B. Since then, investment returns and contribution increases offset by some assumption changes have led to increased funding ratios reaching 94% as of July 1, 2014.

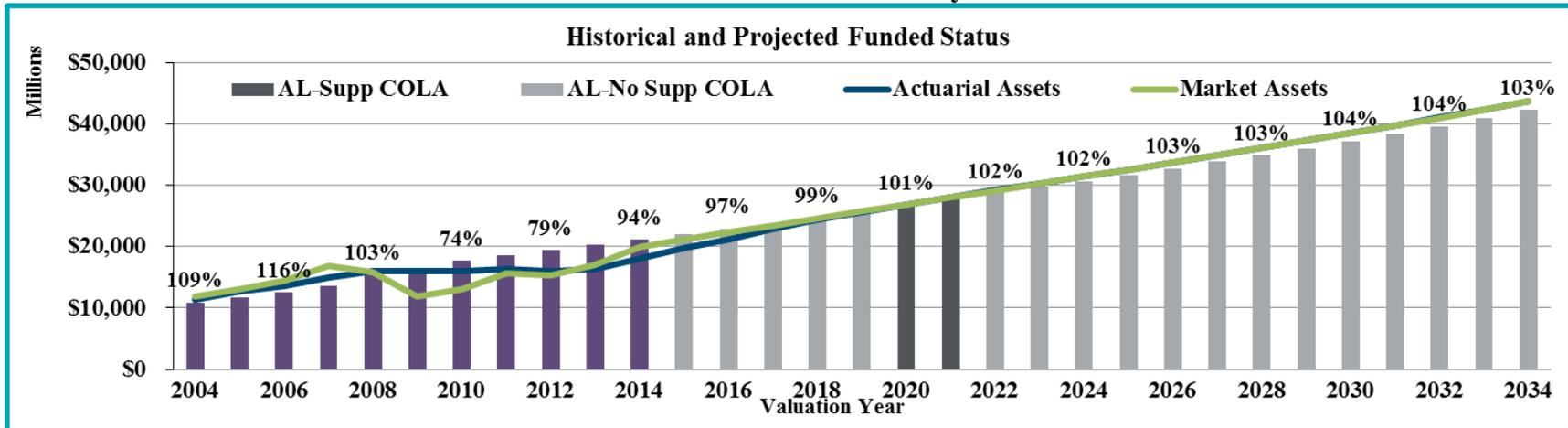
The bottom chart on the following page shows historical and projected contribution rates for the fiscal years ending 2005 through 2035. The purple bars represent member contribution rates, and the gold bars represent employer contribution rates. Historical or calculated rates are shown in a darker shade than projected rates. All rates are shown prior to cost-sharing adjustments. The dashed line represents the total normal cost. When the contribution rate is below the total normal cost rate, the City is required to contribute the difference to the Retiree Health Care Trust.

The employer contribution rate increased significantly from 2009 through FYE 2015. The increases were primarily due to benefit changes under Proposition B, investment losses, and assumption changes. The employer contribution rate calculated in this valuation is the first year since FYE 2009 that the rate has decreased. The employer contribution rate is expected to continue to decrease over the next decade primarily due to approximately \$2 billion in deferred investment gains that have not been recognized in the actuarial value of assets, but will be recognized over the next five years. In addition, when the amortization of a Proposition is complete (e.g., FYE 2021, 2023, 2029), there is an additional decline in the contribution rate.

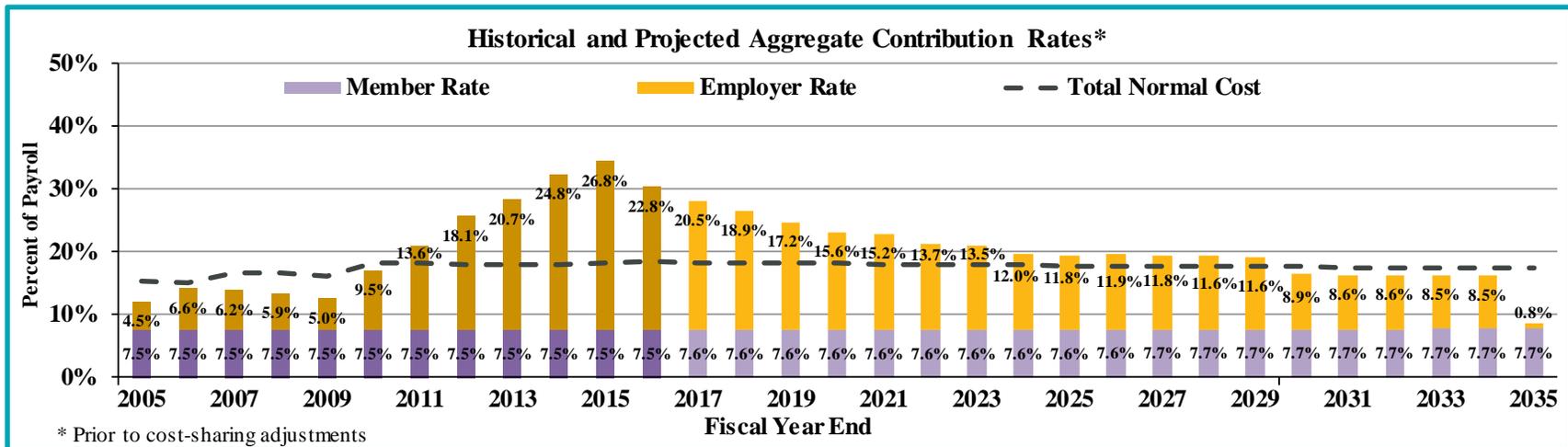
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SFERS - Assets and Actuarial Liability 2004-2034



Employer and Member Contribution Rates for Fiscal Years Ending 2005-2035 Prior to Cost-Sharing Adjustments



The darker gold and purple bars represent historical and actual contribution rates while the lighter gold and purple bars represent projected rates.

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**Stress Testing**

The projections shown above assume all assumptions are met each and every year in the future. We know that will not be the case. We developed six hypothetical scenarios to illustrate the impact actual investment returns may have on future funded status and contribution rates. The scenarios are balanced between positive and negative scenarios and are based on the distribution of one and five year expected returns shown in the table below using the capital market assumptions from the 2014 ALM study for the current asset allocation.

<b>Distribution of Expected Average Annual Returns</b>		
<b>Percentile</b>	<b>1 Year</b>	<b>5 Year</b>
5%	-11.3%	-1.0%
25%	-0.4%	3.8%
50%	7.3%	7.3%
75%	14.9%	10.7%
95%	25.8%	15.5%

The scenarios include a one-year shock using the 5<sup>th</sup> and 95<sup>th</sup> percentile returns for one year, a 5-year moderate scenario using the 25<sup>th</sup> and 75<sup>th</sup> percentile returns for five years and a 5-year significant scenario using the 5<sup>th</sup> and 95<sup>th</sup> percentile returns for five years. The table below summarizes the theoretical scenarios.

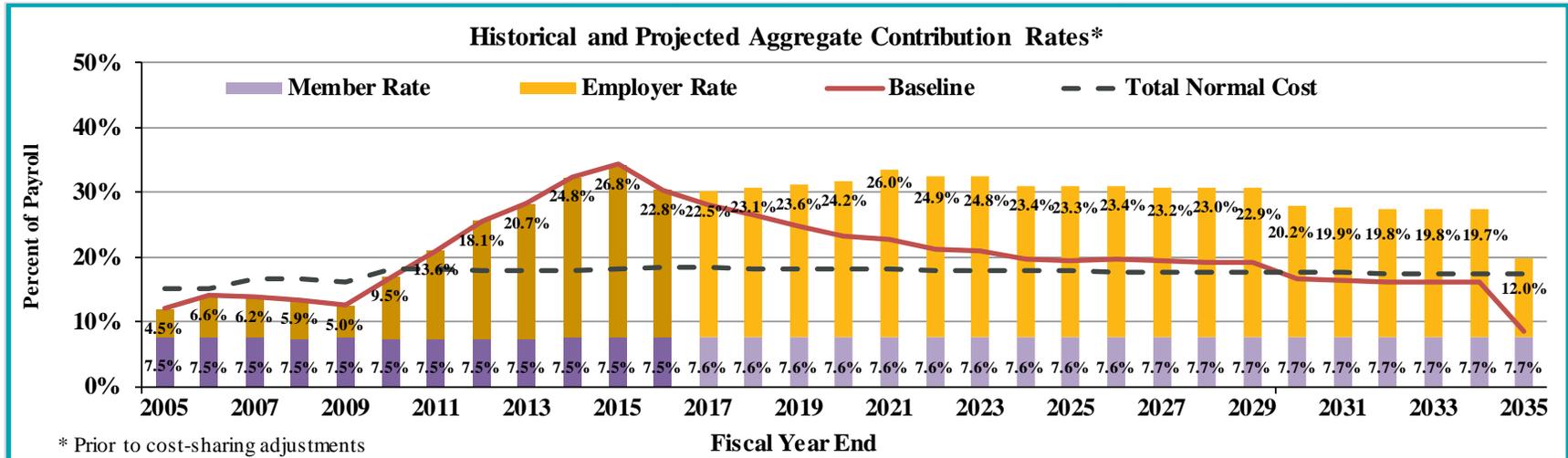
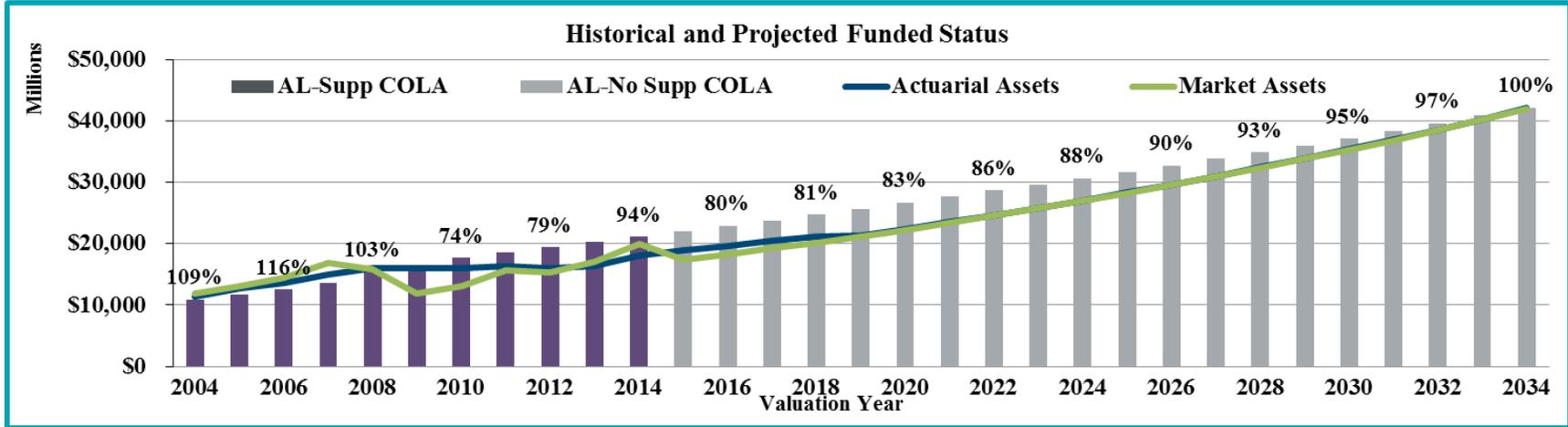
<b>Theoretical Scenarios</b>						
<b>FYE</b>	<b>1-Yr Shock</b>		<b>5-Yr Moderate</b>		<b>5-Yr Significant</b>	
	<b>Neg</b>	<b>Pos</b>	<b>Neg</b>	<b>Pos</b>	<b>Neg</b>	<b>Pos</b>
2015	-11.30%	25.80%	3.80%	10.70%	-1.00%	15.50%
2016	7.50%	7.50%	3.80%	10.70%	-1.00%	15.50%
2017	7.50%	7.50%	3.80%	10.70%	-1.00%	15.50%
2018	7.50%	7.50%	3.80%	10.70%	-1.00%	15.50%
2019	7.50%	7.50%	3.80%	10.70%	-1.00%	15.50%
2020+	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%

The charts on the following pages show the projections under each of these theoretical scenarios. The contribution charts include a red line representing the baseline projections shown above to facilitate the comparison between the particular scenario and the projections assuming all assumptions are met.

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**One-Year Negative Shock Scenario: -11.30% return FYE2015, 7.5% after**



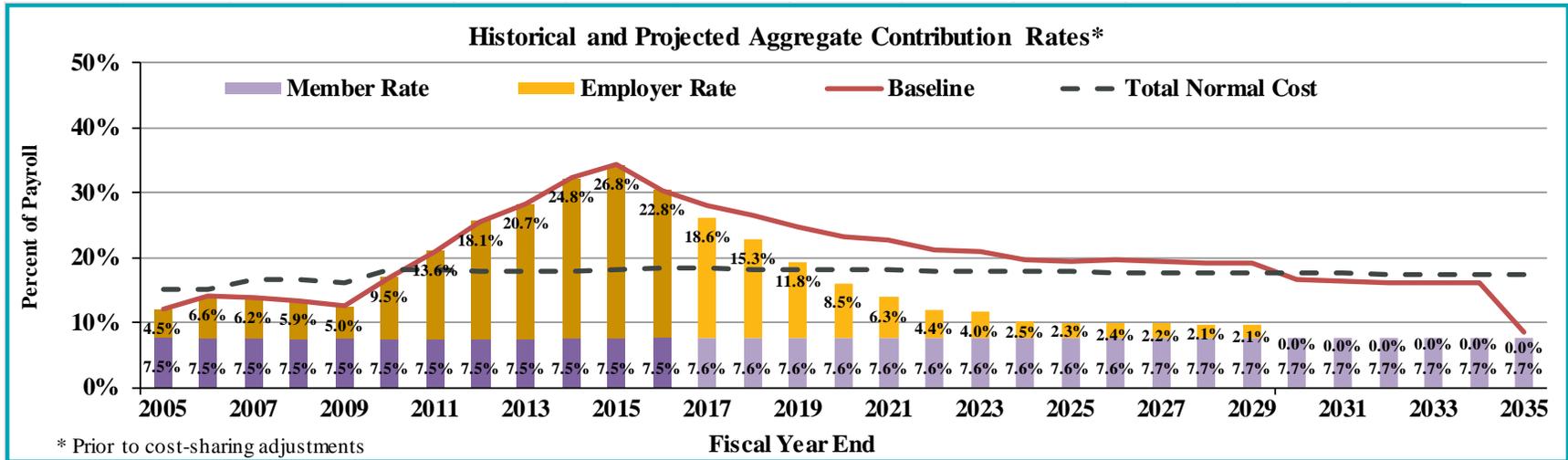
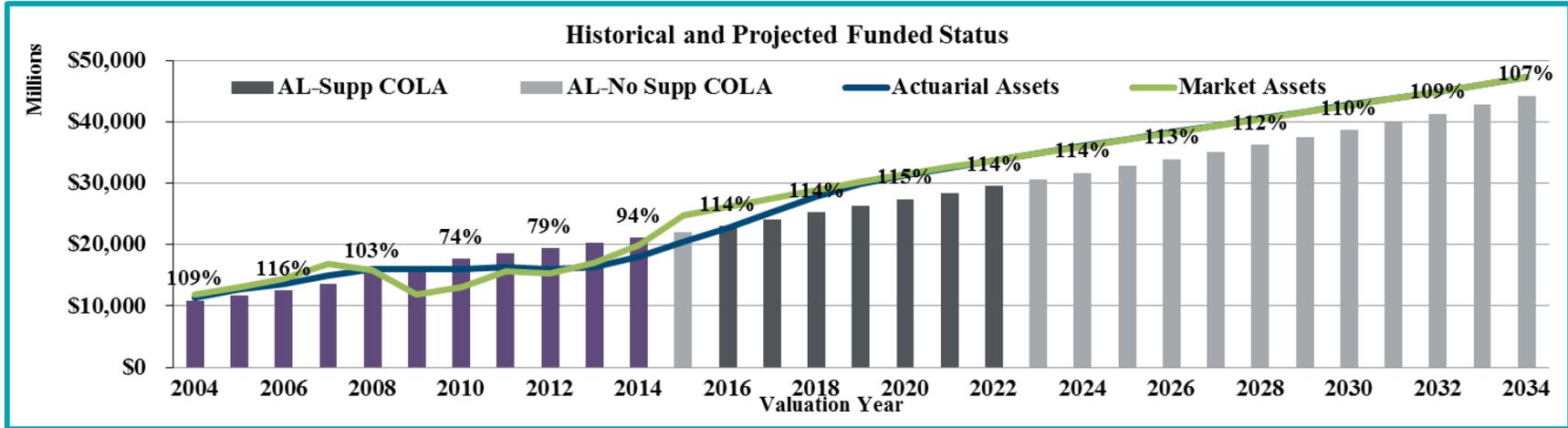
\* Prior to cost-sharing adjustments

The darker gold and purple bars represent historical and actual contribution rates while the lighter gold and purple bars represent projected rates.

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**One-Year Positive Shock Scenario: 25.8% return FYE2015, 7.5% after**



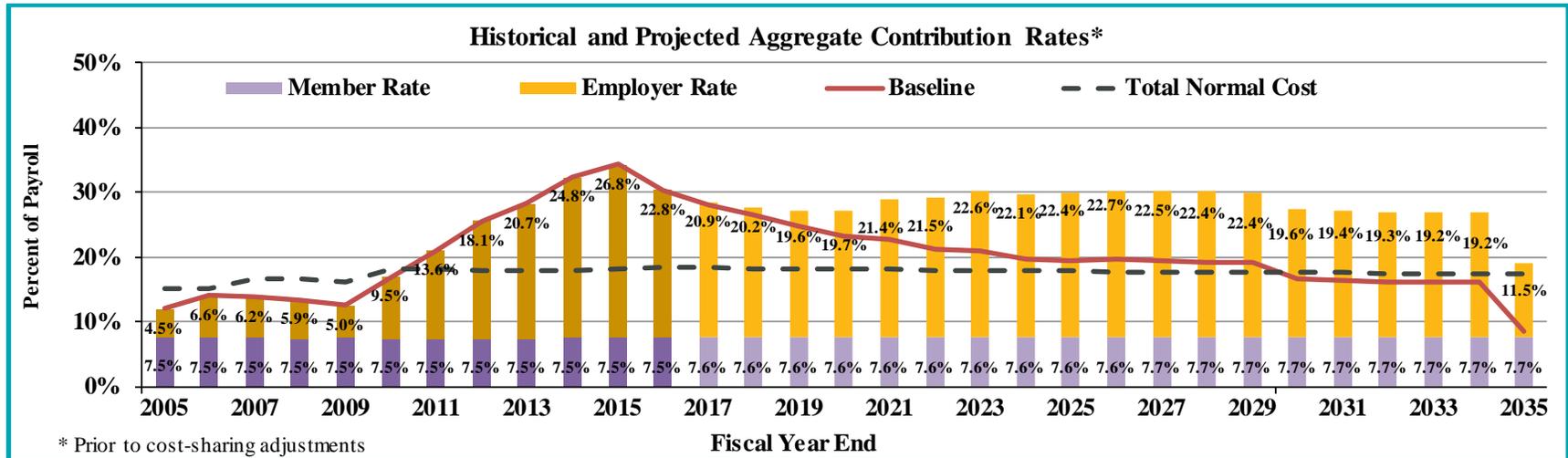
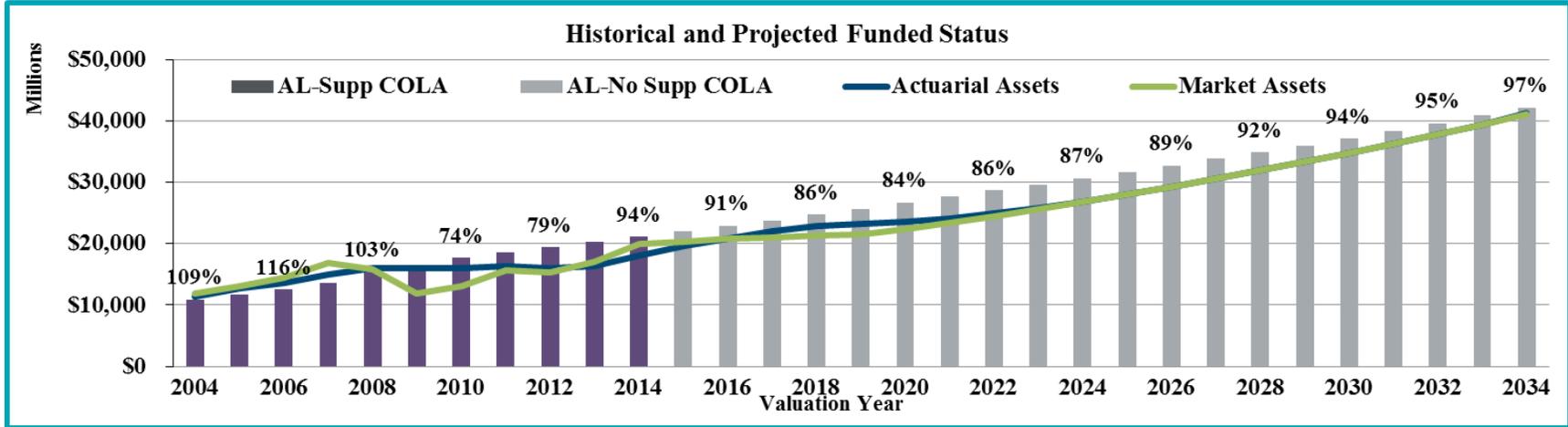
\* Prior to cost-sharing adjustments

The darker gold and purple bars represent historical and actual contribution rates while the lighter gold and purple bars represent projected rates.

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**Five-Year Moderate Negative Scenario: 3.8% return FYE 2015-2019, 7.5% after**



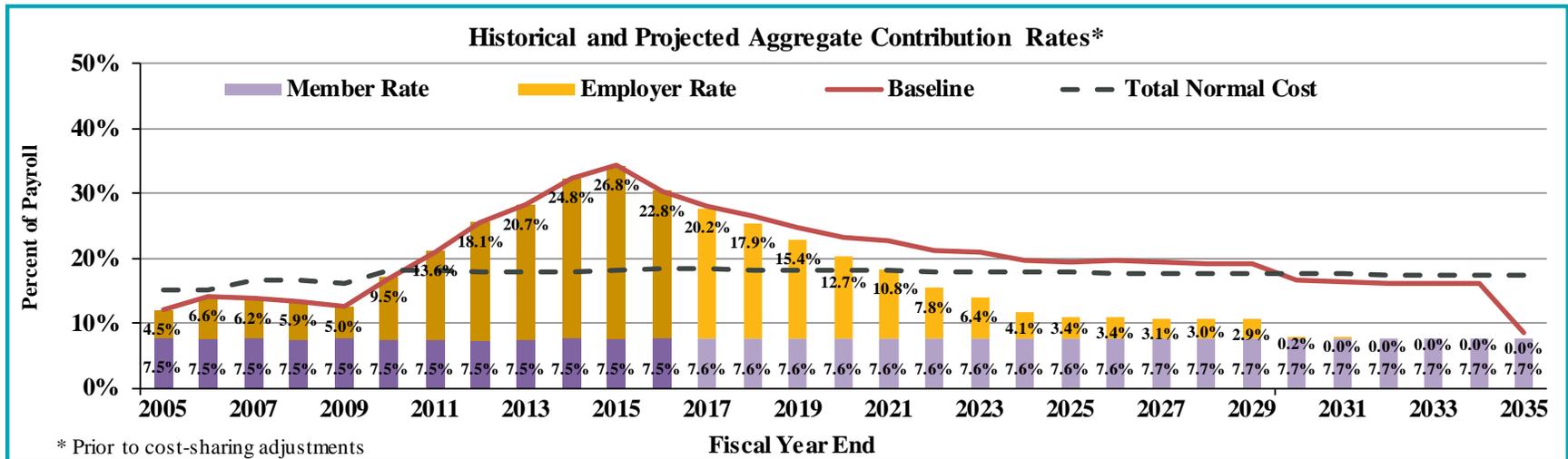
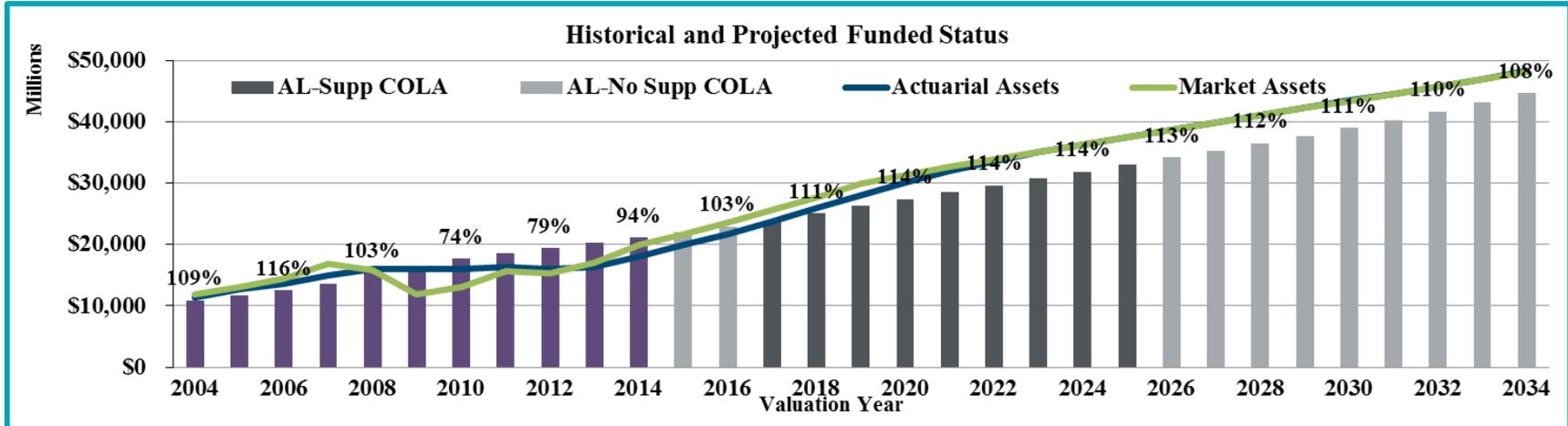
\* Prior to cost-sharing adjustments

The darker gold and purple bars represent historical and actual contribution rates while the lighter gold and purple bars represent projected rates.

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**Five-Year Moderate Positive Scenario: 10.7% return FYE 2015-2019, 7.5% after**



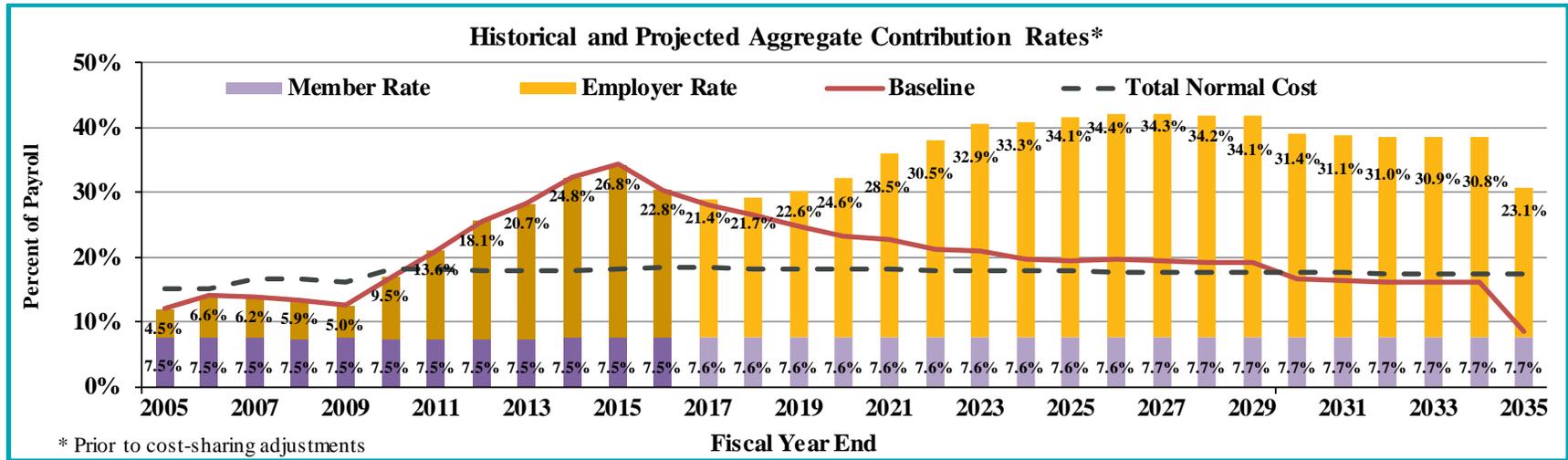
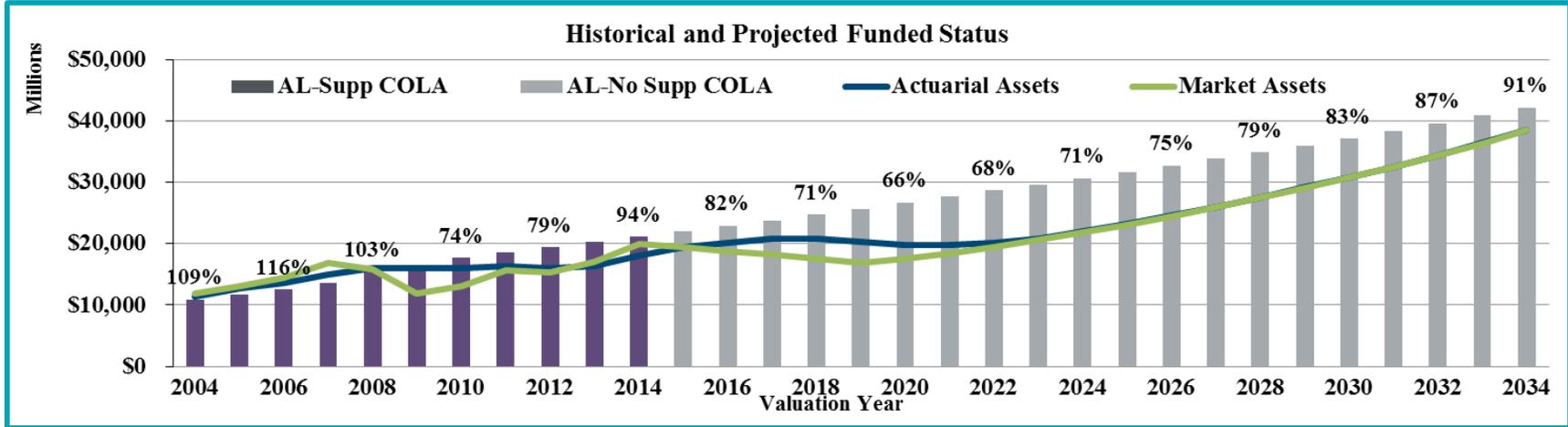
\* Prior to cost-sharing adjustments

The darker gold and purple bars represent historical and actual contribution rates while the lighter gold and purple bars represent projected rates.

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**Five-Year Significant Negative Scenario: -1.0% return FYE 2015–2019, 7.5% after**



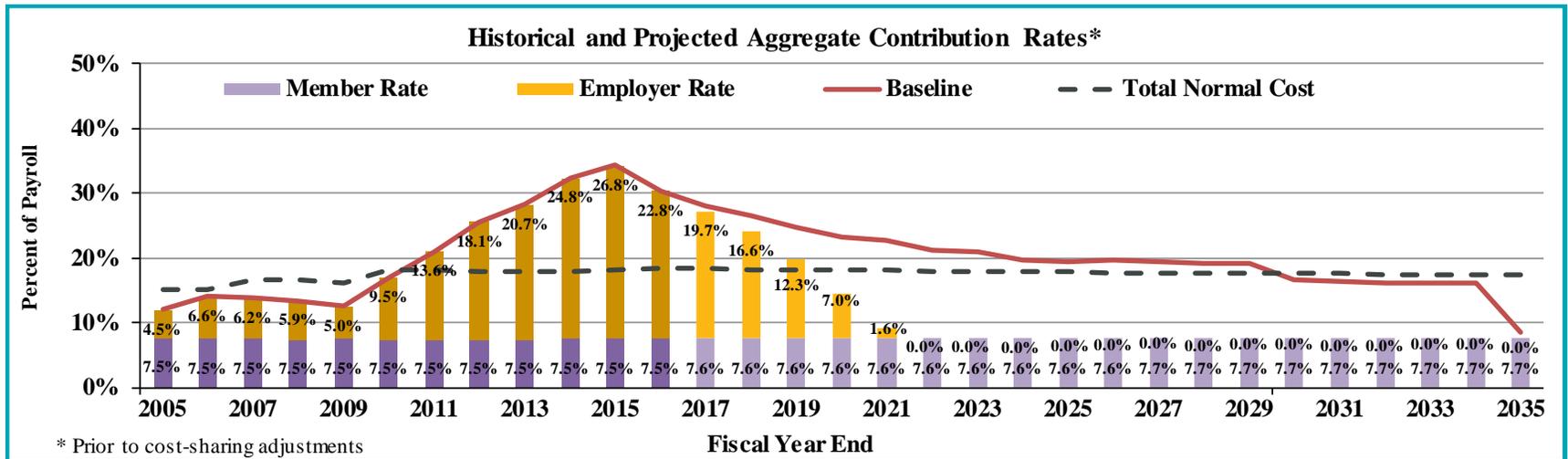
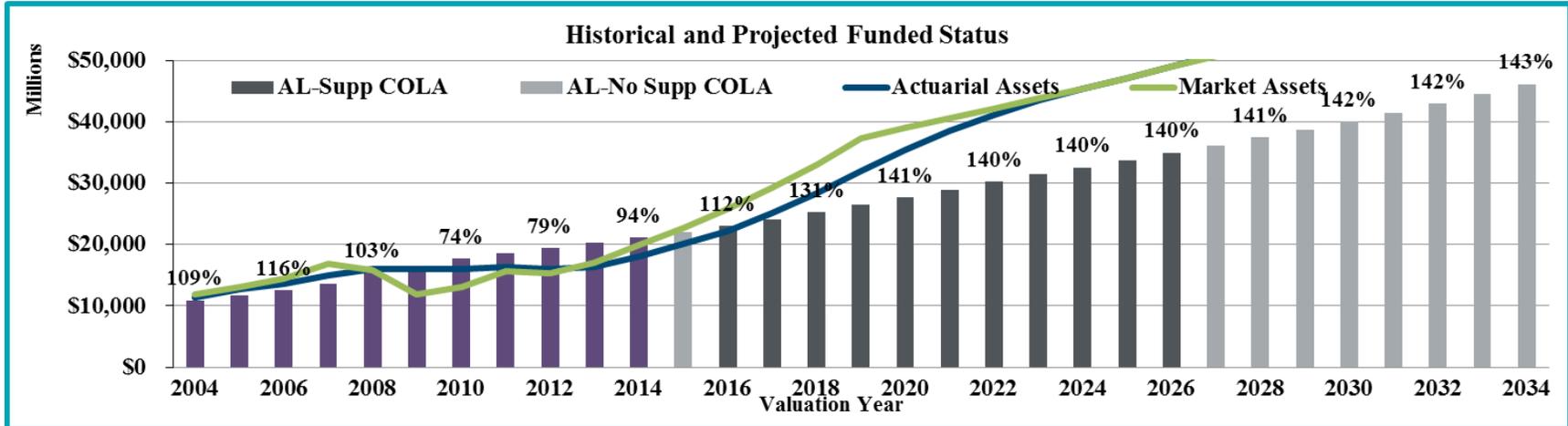
\* Prior to cost-sharing adjustments

The darker gold and purple bars represent historical and actual contribution rates while the lighter gold and purple bars represent projected rates.

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**Five-Year Significant Positive Scenario: 15.5% return FYE 2015-2019, 7.5% after**



\* Prior to cost-sharing adjustments

The darker gold and purple bars represent historical and actual contribution rates while the lighter gold and purple bars represent projected rates.

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SECTION I  
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The scenarios show that actual future investment returns have a significant impact on future contribution rates. It is worth noting that in the positive scenarios contribution rates decline more rapidly than projected in the baseline, but in the negative scenarios contribution rates still decline in the short term albeit more slowly. Only in the five-year significant negative scenario do contribution rates ultimately increase to a level greater than the FYE 2015 contribution rate. This bias towards lower contribution rates in the future is due to the approximately \$2 billion in investment gains that have not yet been recognized in the actuarial value of assets.

**The investment returns used in the projections above were selected solely to illustrate the impact of investment volatility on the pattern of funded status and employer contribution rates. They are not intended to be predictive of actual future contribution rates or funded status or even to represent a realistic pattern of investment returns.**

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**SECTION II  
CERTIFICATION**

The purpose of this report is to present the July 1, 2014 actuarial valuation of the City and County of San Francisco Employees' Retirement System (SFERS or the System). This report is for the use of the System and its auditors in preparing financial reports in accordance with applicable law and annual report requirements.

In preparing our report, we relied on information, some oral and some written, supplied by the System. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with the Actuarial Standard of Practice No. 23.

The price inflation, wage inflation, and discount rate assumptions in this report were adopted by the Retirement Board with our input at the January 14, 2015 Board meeting. All other assumptions were adopted at the November 2010 Board meeting based on recommendations from our experience study covering plan experience during the period from July 1, 2004 through June 30, 2009.

The funding ratios in this report are for the purpose of establishing contribution rates. These measures are not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

Future actuarial measurements may differ significantly from the current measurements 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; and, changes in plan provisions or applicable law.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. The schedules provided for financial reporting purposes have been prepared in accordance with our understanding of generally accepted accounting principles as promulgated by the GASB. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

This report was prepared for the System for the purposes described herein. This report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

William R. Hallmark, ASA, FCA, EA, MAAA  
Consulting Actuary

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Principal Consulting Actuary

**SECTION III  
ASSETS**

SFERS uses and discloses two different asset measurements which are presented in this section of the report: market value and actuarial value of assets. The market value represents the value of the assets if they were liquidated on the valuation date. The actuarial value of assets is a value that attempts to smooth annual investment return performance over multiple years to reduce the impact of investment volatility on SFERS contribution rates.

This section includes the following information on SFERS assets:

- Statement of changes in the market value of assets during the year,
- Development of the actuarial value of assets, and
- Discussion of investment performance for the year.

**Changes in the Market Value of Assets**

<b>Table III-1</b>		
<b>Change in Market Value of Assets</b>		
(in thousands)		
<b>Item</b>	<b>FYE 2014</b>	<b>FYE 2013</b>
1. Market Value, Beginning of Year	\$ 17,011,545	\$ 15,293,724
2. Additions		
a. Employer Contributions	532,882	442,870
b. Member Contributions	<u>289,020</u>	<u>258,726</u>
c. Total Additions: (2a + 2b)	\$ 821,902	\$ 701,596
3. Net Investment Income	3,175,431	2,064,550
4. Benefits and Administrative Expenses	<u>(1,088,271)</u>	<u>(1,048,325)</u>
5. Net Increase/(Decrease): (2c + 3 + 4)	\$ 2,909,062	\$ 1,717,821
6. <b>Market Value, End of Year</b>	<b>\$ 19,920,607</b>	<b>\$ 17,011,545</b>
7. Estimated Rate of Return on Market Value	18.8%	13.7%

**Actuarial Value of Assets**

To determine on-going contribution requirements, most pension funds utilize an actuarial value of assets that differs from the market value of assets. The actuarial value of assets is intended to smooth year-to-year investment returns to reduce the volatility of contribution rates.

The actuarial value is calculated by recognizing 20% of the variance of each of the prior five years of actual investment returns compared to the expected return on the actuarial value of assets. The expected return on the actuarial value of assets is determined using SFERS actual cash flows and the assumed rate of return (7.58% for the years ending 2013 and 2014, 7.66% for the year ending 2012, 7.75% for the years ending 2009 and 2010). (See Appendix B for further explanation of the asset valuation method).

CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION

**SECTION III  
ASSETS**

<b>Table III-2</b>		
<b>Development of Actuarial Value of Assets for 7/1/2014</b>		
(in thousands)		
<b>Item</b>	<b>Total</b>	
1. Actuarial Value as of 7/1/2013	\$	16,303,397
2. Non-Investment Cash Flow for 2013-2014		(266,369)
3. Expected Return in 2013-2014		<u>1,225,886</u>
4. Expected Actuarial Value as of 7/1/2014: (1 + 2 + 3)	\$	17,262,914
5. Actual Return in 2013-2014		3,175,431
6. Actual Return Above Expected in 2013-2014: (5 - 3)		1,949,545
7. Recognition of Returns Above Expected		
a. 2013-2014 (20% of 6.)		389,909
b. 2012-2013		172,511
c. 2011-2012		(230,938)
d. 2010-2011		331,681
e. 2009-2010		<u>86,011</u>
f. Total: (7a + 7b + 7c + 7d + 7e)	\$	749,174
8. <b>Actuarial Value as of 7/1/2014: (4 + 7f)</b>	<b>\$</b>	<b>18,012,088</b>
9. Ratio of Actuarial Value to Market Value		90.4%
10. Estimated Rate of Return on Actuarial Value		12.2%

**Investment Performance**

The market value of assets internal rate of return, net of investment expenses, was 18.81% for the year ending June 30, 2014. This compares to an assumed rate of return of 7.58% and resulted in actual returns exceeding the expected return on the actuarial value of assets by approximately \$1.9 billion.

On an actuarial value of assets basis, the return for the year ending June 30, 2014 was 12.21% compared to the assumed return of 7.58%. This return produced an overall SFERS investment gain on the actuarial value of assets of \$749.2 million for the year ending June 30, 2014.

CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION

**SECTION IV  
MEASURES OF LIABILITY**

This section presents detailed information on liability measures for SFERS for funding purposes, including:

- Present value of all future benefits,
- Normal cost,
- Actuarial liability, and
- Analysis of changes in the unfunded actuarial liability during the year.

**Present Value of all Future Benefits**

The present value of all future benefits represents the expected amount of money needed today to fully pay for all benefits of SFERS both earned as of the valuation date and those to be earned in the future by current plan members, under the current Plan provisions. Table IV-1 below shows the present value of all future benefits as of July 1, 2014 and July 1, 2013.

<b>Table IV-1</b>			
<b>Present Value of Future Benefits</b>			
(in thousands)			
<b>Item</b>	<b>July 1, 2014</b>	<b>July 1, 2013</b>	<b>% Change</b>
<b>Present Value of Future Benefits (PVFB)</b>			
Actives	\$ 12,587,660	\$ 12,056,802	4.4%
Active DROP	14,968	102,851	-85.4%
Terminated Vested	395,671	378,502	4.5%
Members Receiving Benefits	<u>12,505,691</u>	<u>11,878,160</u>	5.3%
<b>Total SFERS PVFB</b>	<b>\$ 25,503,990</b>	<b>\$ 24,416,315</b>	<b>4.5%</b>

**Normal Cost**

Under the Entry Age actuarial cost method, the present value of future benefits for each individual is spread over the individual's expected working career as a level percentage of the individual's expected pay. The normal cost is the amount attributed to the next year of service. Table IV-2 below shows the normal cost as of the valuation date separately for each tier of benefits for Police, Fire and Miscellaneous employees.

<b>Table IV-2</b>				
<b>Normal Cost by Group as of July 1, 2014</b>				
(in thousands)				
	<b>Police</b>	<b>Fire</b>	<b>Miscellaneous</b>	<b>Total</b>
<b>Normal Cost by Benefit Tier</b>				
Old	\$ 0	\$ 50	\$ 527	\$ 577
New	63,272	52,502	290,379	406,153
Prop D	934	2,102	23,202	26,238
Prop C	<u>7,916</u>	<u>3,927</u>	<u>43,063</u>	<u>54,906</u>
<b>Total Normal Cost \$</b>	<b>\$ 72,122</b>	<b>\$ 58,581</b>	<b>\$ 357,171</b>	<b>\$ 487,874</b>

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**SECTION IV  
MEASURES OF LIABILITY**

**Actuarial Liability**

The actuarial liability is calculated by taking the present value of all future benefits and subtracting the present value of future normal costs as determined under the Entry Age actuarial cost method. The actuarial liability represents the expected amount of money needed today to pay for benefits attributed to service prior to the valuation date. Table IV-3 below shows the actuarial liability as of the valuation date separately for Police, Fire and Miscellaneous employees.

<b>Table IV-3</b>				
<b>Actuarial Liability by Group as of July 1, 2014</b>				
(in thousands)				
	<b>Police</b>	<b>Fire</b>	<b>Miscellaneous</b>	<b>Total</b>
<b>Actuarial Liability (AL)</b>				
Actives	\$ 1,181,637	\$ 1,030,177	\$ 5,994,423	\$ 8,206,237
Active DROP	14,968	0	0	14,968
Terminated Vested	20,076	13,602	361,993	395,671
<b>Members Receiving Benefits</b>				
Retirees	1,850,565	1,146,566	6,611,132	9,608,263
Disabled	568,822	938,551	390,535	1,897,908
Beneficiaries	315,482	253,915	430,123	999,520
Total Members Receiving Benefits	2,734,869	2,339,032	7,431,790	12,505,691
<b>Total SFERS AL</b>	<b>\$ 3,951,550</b>	<b>\$ 3,382,811</b>	<b>\$ 13,788,206</b>	<b>\$ 21,122,567</b>

**Changes in Unfunded Actuarial Liability**

The Unfunded Actuarial Liability (UAL) is the difference between the Actuarial Liability and the Actuarial Value of Assets. The UAL of any retirement plan is expected to change at each subsequent valuation for a variety of reasons. Table IV-4 below presents key changes in the UAL since the last valuation.

CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
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**SECTION IV  
MEASURES OF LIABILITY**

<b>Table IV-4</b>	
<b>Development of 2014 Experience Gain/(Loss)</b>	
(in millions)	
<b>Item</b>	<b>Cost</b>
1. Unfunded Actuarial Liability at July 1, 2013	\$ 3,921.4
2. Middle of year actuarial liability payment	(381.6)
3. Interest to end of year on 1. and 2.	283.0
4. Increase in UAL due to change in economic assumptions	<u>153.1</u>
5. Expected Unfunded Actuarial Liability at July 1, 2014 (1+2+3)	\$ 3,975.9
6. Actual Unfunded Liability at July 1, 2014	<u>3,110.5</u>
7. Difference: (4 - 5)	\$ 865.4
8. Portion of difference due to:	
a. Investment experience on actuarial value	\$ 749.2
b. Old safety COLAs	125.4
c. Salaries less than expected	214.6
d. Contributions (rate delay and payroll changes)	(37.6)
e. Retirements, terminations, and disabilities	(56.9)
f. Mortality	(43.4)
g. New entrant loss	(43.5)
h. Other experience	<u>(42.4)</u>
i. Total	\$ 865.4

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**SECTION V  
CONTRIBUTIONS**

The contribution allocation procedure employed by SFERS has three components to the total contribution: the normal cost determined under the Entry Age actuarial cost method, administrative expenses and the unfunded actuarial liability contribution.

The normal cost shown in the prior section is divided by the projected payroll for the year for each benefit tier to determine the normal cost rate for that tier. The aggregate normal cost rate is the weighted average of the normal cost rate for each tier based on the expected payroll for that tier for the fiscal year to which the contribution rate applies. Finally, the normal cost rate is reduced by the member contribution rate to produce the employer normal cost rate.

Assumed administrative expenses of 0.45% of payroll are added to the contribution rate.

The difference between the actuarial liability determined under the Entry Age actuarial cost method and the actuarial value of assets is the unfunded actuarial liability (UAL). The UAL is made up of unamortized prior Charter amendments, plus the impact of accumulated experience, assumption changes, and method changes.

Table V-1 below develops the employer's contribution rate for FY 2015-2016 prior to any cost-sharing adjustments. The employer pays the composite contribution rate on the payroll for all employees. The contribution rates shown for Police, Fire, and Miscellaneous are for illustrative purposes only.

<b>Table V-1</b>					
<b>Development of the Net Employer Contribution Rate as of July 1, 2014 for FYE 2016</b>					
(dollars in millions)					
	July 1, 2014				July 1, 2013
	Police	Fire	Miscellaneous	COMPOSITE	COMPOSITE
1. Total Normal Cost Rate	28.27%	31.78%	16.10%	<b>18.38%</b>	<b>18.26%</b>
2. Member Contribution Rate	<u>7.75%</u>	<u>7.74%</u>	<u>7.50%</u>	<u>7.54%</u>	<u>7.54%</u>
3. Employer Normal Cost Rate (1-2)	20.52%	24.04%	8.60%	<b>10.84%</b>	<b>10.72%</b>
4. a. UAL - Proposition balance as of 7/1/2014	\$169.4	\$162.5	\$849.8	<b>\$1,181.7</b>	<b>\$1,239.9</b>
b. Other UAL as of 7/1/2014	<u>187.1</u>	<u>134.9</u>	<u>1,606.8</u>	<u>1,928.8</u>	<u>2,681.5</u>
c. Net UAL - as of 7/1/2014 (4a + 4b)	\$356.5	\$297.4	\$2,456.6	<b>\$3,110.5</b>	<b>\$3,921.4</b>
5. a. Amortization of 4.a., Proposition UAL	10.02%	13.54%	4.73%	<b>5.86%</b>	<b>5.99%</b>
b. Amortization of 4.b., Other UAL	<u>5.65%</u>	<u>5.65%</u>	<u>5.65%</u>	<u>5.65%</u>	<u>9.60%</u>
c. Amortization of Net UAL (5a + 5b)	15.67%	19.19%	10.38%	<b>11.51%</b>	<b>15.59%</b>
6. Administrative Expenses	<u>0.45%</u>	<u>0.45%</u>	<u>0.45%</u>	<u>0.45%</u>	<u>0.45%</u>
7. Net Employer Contribution Rate (3+5c+6)	36.64%	43.68%	19.43%	<b>22.80%</b>	<b>26.76%</b>

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**SECTION V  
CONTRIBUTIONS**

Table V-2 shows the estimated member and employer contributions adjusted for the cost-sharing provisions under Proposition C. The adjustments are based on the applicable table in the Charter for an employer contribution rate of 22.80% and the hourly pay rates shown in the table below.

Table V-2 Employee and Employer Contribution Rates By Employee Group for FYE 2016							
Hire Date	Hourly Pay	Estimated Payroll FYE 2016	Base Rates		Adjusted Rates		Cost Sharing Adjustment
			Employee	Employer	Employee	Employer	
<b>Police and Fire</b>							
< 11/2/1976	All	\$ 74.4	7.0%	22.80%	11.5%	18.30%	4.50%
11/2/1976 - 6/30/2010	All	382,079.0	7.5%	22.80%	12.0%	18.30%	4.50%
> 6/30/2010	< \$52	69,774.1	9.0%	22.80%	12.5%	19.30%	3.50%
> 6/30/2010	>= \$52	5,256.8	9.0%	22.80%	13.0%	18.80%	4.00%
<b>Miscellaneous</b>							
< 11/2/1976	< \$26	\$ 113.5	8.0%	22.80%	8.0%	22.80%	0.00%
< 11/2/1976	\$26 - \$52	1,917.1	8.0%	22.80%	11.5%	19.30%	3.50%
< 11/2/1976	>= \$52	947.0	8.0%	22.80%	12.0%	18.80%	4.00%
>= 11/2/1976	< \$26	177,759.8	7.5%	22.80%	7.5%	22.80%	0.00%
>= 11/2/1976	\$26 - \$52	1,326,368.2	7.5%	22.80%	11.0%	19.30%	3.50%
>= 11/2/1976	>= \$52	774,868.9	7.5%	22.80%	11.5%	18.80%	4.00%
<b>Estimated Total Plan</b>		<b>\$ 2,739,158.8</b>	<b>7.54%</b>	<b>22.80%</b>	<b>11.10%</b>	<b>19.24%</b>	<b>3.56%</b>
<b>Estimated \$ Contributions</b>			<b>\$ 206,533</b>	<b>\$ 624,528</b>	<b>\$ 304,047</b>	<b>\$ 527,014</b>	<b>\$ 97,514</b>

*Dollar Amounts in Thousands*

Table V-3 on the following page provides the payment schedules to amortize the changes to the actuarial liability as a result of changes to the Charter. Each Charter change is amortized over 20 years from the date it is first recognized in the valuation. Effective with this valuation, any new changes to active member benefits are amortized over a closed 15-year period, and any new changes to inactive or retired member benefits, including Supplemental COLAs, are amortized over a closed 5-year period. All amortization schedules are determined on a level percent of pay basis which means that for the duration of the amortization schedule, the payment amount increases each year at the assumed wage inflation rate.

CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION

**SECTION V  
CONTRIBUTIONS**

**Table V-3  
Development of the Proposition Amortization Rate as of July 1, 2014 (FYE 2016)**  
(dollars in thousands)

Item	Remaining Period	Police			Fire			Miscellaneous			Total		
		Outstanding Balance	Amortization Payment	Payment as a % of Pay	Outstanding Balance	Amortization Payment	Payment as a % of Pay	Outstanding Balance	Amortization Payment	Payment as a % of Pay	Outstanding Balance	Amortization Payment	Payment as a % of Pay
1996 Prop C - Retiree Benefits	2	63	35	0.01%	25	14	0.01%	11,392	6,461	0.28%	11,479	6,511	0.24%
1996 Prop D - New Fire Ret Bfts	2	0	0	0.00%	4,780	2,711	1.42%	0	0	0.00%	4,780	2,711	0.10%
1998 Prop A - New Police Ret Bfts	4	17,327	5,088	1.92%	0	0	0.00%	0	0	0.00%	17,327	5,088	0.19%
1998 Prop C - Paramedics Bfts	4	0	0	0.00%	3,591	1,055	0.55%	0	0	0.00%	3,591	1,055	0.04%
2000 Prop C - New Misc Ret Bfts	6	0	0	0.00%	0	0	0.00%	178,288	36,127	1.58%	178,288	36,127	1.32%
6.25% Credited Interest on EE ctrbs	8	61	10	0.00%	15	2	0.00%	8,543	1,343	0.06%	8,619	1,355	0.05%
2002 Prop H - Safety Ret Bfts	8	108,652	17,084	6.43%	115,508	18,162	9.48%	0	0	0.00%	224,160	35,246	1.29%
5.0% Credited Interest on EE ctrbs	10	(447)	(58)	-0.02%	(212)	(28)	-0.01%	(40,994)	(5,333)	-0.23%	(41,654)	(5,419)	-0.20%
2004 Prop E - New Safety LOD Bfts	11	5,405	650	0.24%	7,591	913	0.48%	0	0	0.00%	12,996	1,563	0.06%
2003 Prop F - Misc 3+3 Early Ret Bfts	11	0	0	0.00%	0	0	0.00%	16,350	1,966	0.09%	16,350	1,966	0.07%
Liability of 2003 Prop F (extended) - Misc 3+3 Early Ret Bfts	12	0	0	0.00%	0	0	0.00%	9,745	1,092	0.05%	9,745	1,092	0.04%
Liability of 2003 Prop F (extended) - Misc 3+3 Early Ret Bfts	13	0	0	0.00%	0	0	0.00%	4,486	472	0.02%	4,486	472	0.02%
2008 Prop B - New Misc Ret Bfts and Compound COLA	14	<u>38,311</u>	<u>3,803</u>	<u>1.43%</u>	<u>31,262</u>	<u>3,103</u>	<u>1.62%</u>	<u>661,995</u>	<u>65,710</u>	<u>2.88%</u>	<u>731,568</u>	<u>72,616</u>	<u>2.65%</u>
<b>Total of Propositions</b>		<b>\$169,371</b>	<b>\$ 26,612</b>	<b>10.02%</b>	<b>\$162,560</b>	<b>\$ 25,933</b>	<b>13.54%</b>	<b>\$849,804</b>	<b>\$107,839</b>	<b>4.73%</b>	<b>\$1,181,735</b>	<b>\$160,384</b>	<b>5.86%</b>

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
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**SECTION V  
CONTRIBUTIONS**

In prior valuations, the portion of the UAL not attributable to Propositions were amortized over a rolling 15-year period. Effective with this valuation, any new sources of UAL due to actuarial gains and losses, assumption changes, or method changes are amortized over a closed 20-year period. In addition, the UAL as of July 1, 2013, not attributable to Propositions was re-amortized over a closed 19-year period as of July 1, 2014. Table V-4 shows all the Non-Proposition amortizations under the new amortization policy. All amortization schedules are determined on a level percent of pay basis which means that for the duration of the amortization schedule, the payment amount increases each year at the assumed wage inflation rate.

<b>Table V-4</b>				
<b>Development of the Non-Proposition Amortization Rate as of July 1, 2014 (FYE 2016)</b>				
(dollars in thousands)				
<b>Item</b>	<b>Remaining Period</b>	<b>Outstanding Balance</b>	<b>Amortization Payment</b>	<b>Payment as a % of Pay</b>
2013 Non-Proposition UAL	19	\$ 2,641,123	\$ 209,290	7.64%
2014 Actuarial Gain	20	(865,478)	(66,186)	-2.42%
2014 Assumption Change	20	<u>153,100</u>	<u>11,708</u>	<u>0.43%</u>
<b>Total Non-Proposition UAL</b>		<b>\$ 1,928,745</b>	<b>\$ 154,812</b>	<b>5.65%</b>

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
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**SECTION VI  
COMPREHENSIVE ANNUAL FINANCIAL REPORTING INFORMATION**

The Government Finance Officers Association (GFOA) maintains a checklist of items to be included in a System's Comprehensive Annual Financial Report (CAFR) in order to receive recognition for excellence in financial reporting. The following Tables V-1 through V-3 are listed by the GFOA for inclusion in the Actuarial Section of the System's CAFR. The GFOA recommends showing 10 years of experience in each of these exhibits. Table VI-1 presents an Analysis of Financial Experience for the valuation year, Table VI-2 presents the Solvency Test, and Table VI-3 shows the Schedule of Funding Progress.

<b>Gain or (Loss) for Year Ending</b>	<b>Investment Income and Expenses</b>	<b>Contribution Income<sup>1</sup></b>	<b>Combined Liability Experience</b>	<b>Gain or (Loss) From Experience</b>	<b>Non-Recurring Items</b>	<b>Composite Gain or (Loss) During Year</b>
July 1, 2014	\$ 745,132	\$ (37,585)	\$ 157,931	\$ 865,478	\$ (153,100)	\$ 712,378
July 1, 2013	(584,049)	(61,143)	9,873	(635,319)	0	(635,319)
July 1, 2012	(1,139,038)	(51,415)	187,116	(1,003,336)	(135,527)	(1,138,863)
July 1, 2011	(563,305)	(122,074)	70,969	(614,410)	(148,758)	(763,168)
July 1, 2010	(755,593)		150,330	(605,263)	(373,175)	(978,438)
July 1, 2009	(722,712)		(235,783)	(958,495)	12,527	(945,968)
July 1, 2008	216,709		122,569	339,278	(1,155,958)	(816,680)

<sup>1</sup> Due to Payroll Changes and One-Year Lag (Not determined separately prior to the July 1, 2011 valuation)

<b>Valuation Date July 1,</b>	<b>(A) Active Member Contributions</b>	<b>(B) Retirees And Beneficiaries</b>	<b>(C) Remaining Active Members' Liabilities</b>	<b>Reported Assets<sup>1</sup></b>	<b>Portion of Actuarial Liabilities Covered by Reported Assets</b>		
					<b>(A)</b>	<b>(B)</b>	<b>(C)</b>
2014 <sup>2</sup>	\$ 3,007,666	\$ 12,505,691	\$ 5,609,210	\$ 18,012,088	100%	100%	45%
2013	2,828,233	11,878,160	5,518,383	16,303,397	100%	100%	29%
2012 <sup>2</sup>	2,687,347	11,261,886	5,444,621	16,027,683	100%	100%	38%
2011 <sup>2</sup>	2,663,625	10,615,852	5,319,251	16,313,120	100%	100%	57%
2010 <sup>3</sup>	2,593,076	9,761,070	5,289,247	16,069,058	100%	100%	70%
2009	2,528,667	8,720,050	5,249,932	16,004,730	100%	100%	91%
2008 <sup>4</sup>	2,411,027	8,013,456	4,934,341	15,941,390	100%	100%	100%
2007 <sup>5</sup>	2,251,564	7,423,580	3,866,243	14,929,287	100%	100%	100%

<sup>1</sup> Actuarial Value of Assets

<sup>2</sup> Reflects revised discount rate and wage inflation

<sup>3</sup> Reflects revised economic and demographic assumptions

<sup>4</sup> Reflects revised economic assumptions and Prop B changes

<sup>5</sup> July 1, 2007 numbers calculated by the prior actuary

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**SECTION VI  
COMPREHENSIVE ANNUAL FINANCIAL REPORTING INFORMATION**

<b>Table VI-3</b>						
<b>Schedule of Funding Progress</b>						
(dollars in thousands)						
<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets</b>	<b>Actuarial Liability (AL)</b>	<b>Unfunded AL</b>	<b>Funded Ratio</b>	<b>Covered Payroll</b>	<b>Unfunded AL as a % of Covered Payroll</b>
July 1, 2014	\$18,012,088	\$21,122,567	\$ 3,110,479	85%	\$2,640,153	118%
July 1, 2013	16,303,397	20,224,776	3,921,379	81%	2,535,963	155%
July 1, 2012	16,027,683	19,393,854	3,366,171	83%	2,393,842	141%
July 1, 2011	16,313,120	18,598,728	2,285,608	88%	2,360,413	97%
July 1, 2010	16,069,058	17,643,394	1,574,336	91%	2,398,823	66%
July 1, 2009	16,004,730	16,498,649	493,919	97%	2,544,939	19%
July 1, 2008	15,941,390	15,358,823	(582,567)	104%	2,457,196	-24%
July 1, 2007*	14,929,287	13,541,388	(1,387,899)	110%	2,376,221	-58%
July 1, 2006*	13,597,646	12,515,463	(1,082,183)	109%	2,161,261	-50%
July 1, 2005*	12,659,698	11,765,737	(893,961)	108%	2,052,862	-44%

\* Amounts for July 1, 2007 and earlier were calculated by the prior actuary

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

<b>ACTIVE MEMBER DATA</b>			
	<b>July 1, 2014</b>	<b>July 1, 2013</b>	<b>% Change</b>
<b>Total</b>			
Count	29,516	28,717	2.8%
Average Current Age	47.7	47.9	-0.2
Average Service	12.0	12.2	-0.2
Annual Pensionable Earnings*	\$ 2,538,718,769	\$ 2,449,531,019	3.6%
Average Pensionable Earnings	\$ 86,012	\$ 85,299	0.8%
<b>Police</b>			
Count	2,048	1,967	4.1%
Average Current Age	42.1	42.3	-0.2
Average Service	13.4	13.8	-0.4
Annual Pensionable Earnings*	\$ 248,894,514	\$ 241,398,947	3.1%
Average Pensionable Earnings	\$ 121,531	\$ 122,724	-1.0%
<b>Fire</b>			
Count	1,415	1,358	4.2%
Average Current Age	45.2	45.2	0.0
Average Service	14.7	14.8	-0.1
Annual Pensionable Earnings*	\$ 180,724,242	\$ 176,144,261	2.6%
Average Pensionable Earnings	\$ 127,720	\$ 129,709	-1.5%
<b>Miscellaneous</b>			
Count	26,053	25,392	2.6%
Average Current Age	48.3	48.4	-0.1
Average Service	11.8	11.9	-0.1
Annual Pensionable Earnings*	\$ 2,109,100,013	\$ 2,031,987,811	3.8%
Average Pensionable Earnings	\$ 80,954	\$ 80,025	1.2%

\* Fiscal Year ending June 30, 2014 and June 30, 2013, excludes DROP members

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

<b>Active Member Data - BY CHARTER</b>		
<b>July 1, 2014</b>		
	<b>Counts</b>	<b>Annual Pensionable Earnings*</b>
<b>Total</b>		
Old	71	\$ 6,367,491
New	23,420	2,088,250,766
Prop D	1,852	138,030,253
Prop C	4,173	306,070,259
<b>Total</b>	<b>29,516</b>	<b>\$ 2,538,718,769</b>
<b>Police</b>		
Old	0	\$ 0
New	1,726	219,701,556
Prop D	25	2,812,303
Prop C**	297	26,380,655
<b>Total</b>	<b>2,048</b>	<b>\$ 248,894,514</b>
<b>Fire</b>		
Old	3	\$ 542,703
New	1,207	163,108,190
Prop D	54	5,720,633
Prop C	151	11,352,716
<b>Total</b>	<b>1,415</b>	<b>\$ 180,724,242</b>
<b>Miscellaneous</b>		
Old	68	\$ 5,824,788
New	20,487	1,705,441,020
Prop D	1,773	129,497,317
Prop C	3,725	268,336,888
<b>Total</b>	<b>26,053</b>	<b>\$ 2,109,100,013</b>

\* Fiscal Year ending June 30, 2014 excludes DROP members

\*\* Includes 11 member in the Sheriffs Plan (Charter A8.608) and 41 members in the Miscellaneous Safety Plan(Charter A8.610)

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

<b>Active DROP Member Data - TOTAL SYSTEM</b>			
	<b>July 1, 2014</b>	<b>July 1, 2013</b>	<b>%Change</b>
<b>Total Active DROP</b>			
Count	10	72	-86.1%
Average Current Age	57.7	57.3	0.4
Total Annual Benefit*	\$ 1,071,691	\$ 7,760,263	-86.2%
Average Annual Benefit	\$ 107,169	\$ 107,781	-0.6%
Total DROP Account Balance	\$ 2,775,810	\$ 15,879,699	-82.5%

\* Benefits provided in June 30, valuation data.

<b>Non-Active Member Data - TOTAL SYSTEM</b>			
	<b>July 1, 2014</b>	<b>July 1, 2013</b>	<b>Change</b>
<b>Retired</b>			
Count	20,408	19,525	4.5%
Average Age	70.0	69.8	0.2
Total Annual Benefit*	\$ 847,676,865	\$ 795,092,010	6.6%
Average Annual Benefit	\$ 41,536	\$ 40,722	2.0%
<b>Disabled</b>			
Count	2,611	2,672	-2.3%
Average Age	67.8	67.5	0.3
Total Annual Benefit*	\$ 143,550,974	\$ 140,408,629	2.2%
Average Annual Benefit	\$ 54,979	\$ 52,548	4.6%
<b>Beneficiaries</b>			
Count	3,833	3,837	-0.1%
Average Age	77.4	77.2	0.2
Total Annual Benefit*	\$ 112,731,965	\$ 110,047,161	2.4%
Average Annual Benefit	\$ 29,411	\$ 28,681	2.5%
<b>Payee Total</b>			
Count	26,852	26,034	3.1%
Average Age	70.8	70.7	0.1
Total Annual Benefit*	\$ 1,103,959,803	\$ 1,045,547,799	5.6%
Average Annual Benefit	\$ 41,113	\$ 40,161	2.4%
<b>Inactives</b>			
Count	6,441	5,973	7.8%
Average Age	48.2	47.8	0.4
Total Contribution Balance with Interest	\$ 180,445,160	\$ 176,568,594	2.2%
Average Contribution Balance with Interest	\$ 28,015	\$ 29,561	-5.2%

\* Benefits provided in June 30, valuation data

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

<b>Non-Active Member Data - Old Safety - Prop H</b>			
<b>Pre 7/1/1975 Retirements</b>			
	<b>July 1, 2014</b>	<b>July 1, 2013</b>	<b>Change</b>
<b>Retired</b>			
Count	12	12	0.0%
Average Age	88.5	92.6	-4.1
Total Annual Benefit*	\$ 329,899	\$ 371,730	-11.3%
Average Annual Benefit	\$ 27,492	\$ 30,977	-11.3%
<b>Disabled</b>			
Count	76	84	-9.5%
Average Age	82.2	81.6	0.6
Total Annual Benefit*	\$ 2,801,376	\$ 3,010,188	-6.9%
Average Annual Benefit	\$ 36,860	\$ 35,836	2.9%
<b>Beneficiaries</b>			
Count	183	212	-13.7%
Average Age	84.0	84.0	0.0
Total Annual Benefit*	\$ 5,671,202	\$ 6,461,436	-12.2%
Average Annual Benefit	\$ 30,990	\$ 30,478	1.7%
<b>Payee Total</b>			
Count	271	308	-12.0%
Average Age	83.7	83.7	0.0
Total Annual Benefit*	\$ 8,802,477	\$ 9,843,353	-10.6%
Average Annual Benefit	\$ 32,481	\$ 31,959	1.6%
<b>Inactives</b>			
Count	N/A	N/A	
Average Age	N/A	N/A	
Total Contribution Balance with Interest	N/A	N/A	
Average Contribution Balance with Interest	N/A	N/A	

\* Benefits provided in June 30, valuation data

CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION

**APPENDIX A  
MEMBERSHIP INFORMATION**

<b>Non-Active Member Data - Old Safety - Prop M Charters A8.559, A8.585, A8.595, and A8.596</b>			
	<b>July 1, 2014</b>	<b>July 1, 2013</b>	<b>Change</b>
<b>Retired</b>			
Count	1,163	1,165	-0.2%
Average Age	73.4	72.9	0.5
Total Annual Benefit*	\$ 106,402,779	\$ 108,564,090	-2.0%
Average Annual Benefit	\$ 91,490	\$ 93,188	-1.8%
<b>Disabled</b>			
Count	703	754	-6.8%
Average Age	73.7	72.8	0.9
Total Annual Benefit*	\$ 63,919,036	\$ 65,950,004	-3.1%
Average Annual Benefit	\$ 90,923	\$ 87,467	4.0%
<b>Beneficiaries</b>			
Count	693	702	-1.3%
Average Age	78.9	78.3	0.6
Total Annual Benefit*	\$ 50,860,055	\$ 50,854,285	0.0%
Average Annual Benefit	\$ 73,391	\$ 72,442	1.3%
<b>Payee Total</b>			
Count	2,559	2,621	-2.4%
Average Age	75.0	74.3	0.7
Total Annual Benefit*	\$ 221,181,869	\$ 225,368,378	-1.9%
Average Annual Benefit	\$ 86,433	\$ 85,986	0.5%
<b>Inactives</b>			
Count	2	2	0.0%
Average Age	68.5	67.0	1.5
Total Contribution Balance with Interest	\$ 2,215	\$ 2,129	4.0%
Average Contribution Balance with Interest	\$ 1,107	\$ 1,065	4.0%

\* Benefits provided in June 30, valuation data

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

<b>Non-Active Member Data - New Safety</b>			
	<b>July 1, 2014</b>	<b>July 1, 2013</b>	<b>Change</b>
<b>Retired</b>			
Count	1,247	1,101	13.3%
Average Age	61.0	60.6	0.4
Total Annual Benefit*	\$ 119,751,033	\$ 104,011,489	15.1%
Average Annual Benefit	\$ 96,031	\$ 94,470	1.7%
<b>Disabled</b>			
Count	458	441	3.9%
Average Age	60.5	59.9	0.6
Total Annual Benefit*	\$ 40,257,154	\$ 35,960,422	11.9%
Average Annual Benefit	\$ 87,898	\$ 81,543	7.8%
<b>Beneficiaries</b>			
Count	93	93	0.0%
Average Age	59.3	58.1	1.2
Total Annual Benefit*	\$ 4,634,727	\$ 4,015,299	15.4%
Average Annual Benefit	\$ 49,836	\$ 43,175	15.4%
<b>Payee Total</b>			
Count	1,798	1,635	10.0%
Average Age	60.8	60.2	0.6
Total Annual Benefit*	\$ 164,642,913	\$ 143,987,209	14.3%
Average Annual Benefit	\$ 91,570	\$ 88,066	4.0%
<b>Inactives</b>			
Count	202	193	4.7%
Average Age	46.3	45.4	0.9
Total Contribution Balance with Interest	\$ 11,565,338	\$ 9,919,357	16.6%
Average Contribution Balance with Interest	\$ 57,254	\$ 51,396	11.4%

\* Benefits provided in June 30, valuation data

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

<b>Non-Active Member Data - Miscellaneous</b>			
	<b>July 1, 2014</b>	<b>July 1, 2013</b>	<b>Change</b>
<b>Retired</b>			
Count	17,986	17,247	4.3%
Average Age	70.4	70.2	0.2
Total Annual Benefit*	\$ 621,193,154	\$ 582,144,701	6.7%
Average Annual Benefit	\$ 34,538	\$ 33,753	2.3%
<b>Disabled</b>			
Count	1,374	1,393	-1.4%
Average Age	66.5	66.2	0.3
Total Annual Benefit*	\$ 36,573,408	\$ 35,488,016	3.1%
Average Annual Benefit	\$ 26,618	\$ 25,476	4.5%
<b>Beneficiaries</b>			
Count	2,864	2,830	1.2%
Average Age	77.2	77.0	0.2
Total Annual Benefit*	\$ 51,565,982	\$ 48,716,142	5.8%
Average Annual Benefit	\$ 18,005	\$ 17,214	4.6%
<b>Payee Total</b>			
Count	22,224	21,470	3.5%
Average Age	71.0	70.8	0.2
Total Annual Benefit*	\$ 709,332,544	\$ 666,348,858	6.5%
Average Annual Benefit	\$ 31,917	\$ 31,036	2.8%
<b>Inactives</b>			
Count	6,237	5,778	7.9%
Average Age	48.3	47.9	0.4
Total Contribution Balance with Interest	\$ 168,877,608	\$ 166,647,107	1.3%
Average Contribution Balance with Interest	\$ 27,077	\$ 28,842	-6.1%

\* Benefits provided in June 30, valuation data

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

**Distribution of Active Members as of July 1, 2014  
Total System**

Age	Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	120	68	0	0	0	0	0	0	0	0	188
25 to 29	454	790	147	0	0	0	0	0	0	0	1,391
30 to 34	413	1,227	856	89	3	0	0	0	0	0	2,588
35 to 39	297	1,005	1,098	550	101	1	0	0	0	0	3,052
40 to 44	247	782	1,093	986	631	62	0	0	0	0	3,801
45 to 49	202	668	912	1,085	1,001	523	93	1	0	0	4,485
50 to 54	186	562	845	1,055	1,009	797	462	193	1	0	5,110
55 to 59	127	435	653	882	830	683	671	444	54	5	4,784
60 to 64	38	206	410	572	547	378	474	280	61	14	2,980
65 to 69	15	62	122	181	176	110	104	65	31	21	887
70 and up	5	9	42	57	43	37	20	19	9	9	250
<b>Total Count</b>	<b>2,104</b>	<b>5,814</b>	<b>6,178</b>	<b>5,457</b>	<b>4,341</b>	<b>2,591</b>	<b>1,824</b>	<b>1,002</b>	<b>156</b>	<b>49</b>	<b>29,516</b>

**Distribution of Active Members as of July 1, 2014  
Total System**

Age	Average Salary Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	\$ 56,530	\$ 59,512	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 57,609
25 to 29	64,748	69,416	82,246	0	0	0	0	0	0	0	69,248
30 to 34	69,146	75,335	89,313	95,824	95,781	0	0	0	0	0	79,699
35 to 39	73,632	75,907	88,010	96,292	94,552	69,405	0	0	0	0	84,328
40 to 44	68,775	75,074	89,521	95,119	106,624	110,424	0	0	0	0	89,833
45 to 49	69,668	72,534	84,834	89,679	100,614	113,227	103,807	94,981	0	0	90,719
50 to 54	68,986	73,854	81,939	84,227	94,035	106,098	102,149	94,656	169,077	0	89,532
55 to 59	69,477	75,300	80,827	79,913	84,913	94,508	98,476	99,937	87,542	119,096	86,882
60 to 64	65,185	69,348	78,287	79,513	84,105	92,354	93,527	93,244	95,363	86,002	84,805
65 to 69	70,917	84,003	77,678	80,893	81,506	87,441	87,986	89,993	81,633	83,957	83,030
70 and up	60,031	57,491	74,265	80,774	82,455	77,507	93,264	85,272	78,907	104,280	80,353
<b>Avg. Salary</b>	<b>\$ 68,042</b>	<b>\$ 73,795</b>	<b>\$ 85,319</b>	<b>\$ 87,346</b>	<b>\$ 93,777</b>	<b>\$101,366</b>	<b>\$ 97,737</b>	<b>\$ 96,122</b>	<b>\$ 89,451</b>	<b>\$ 91,860</b>	<b>\$ 86,012</b>

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

**Distribution of Active Members as of July 1, 2014  
Police**

Age	Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	4	9	0	0	0	0	0	0	0	0	13
25 to 29	25	109	44	0	0	0	0	0	0	0	178
30 to 34	8	96	208	13	0	0	0	0	0	0	325
35 to 39	4	32	129	110	14	0	0	0	0	0	289
40 to 44	6	19	77	110	149	12	0	0	0	0	373
45 to 49	2	6	32	79	137	127	10	0	0	0	393
50 to 54	6	10	7	27	82	91	68	29	0	0	320
55 to 59	0	3	5	10	20	36	29	24	0	0	127
60 to 64	0	0	2	1	8	5	5	0	0	0	21
65 to 69	1	0	1	0	5	0	0	0	0	0	7
70 and up	0	0	0	0	1	1	0	0	0	0	2
<b>Total Count</b>	56	284	505	350	416	272	112	53	0	0	2,048

**Distribution of Active Members as of July 1, 2014  
Police**

Age	Average Salary Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	\$ 80,884	\$ 89,867	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 87,103
25 to 29	79,126	90,235	115,232	0	0	0	0	0	0	0	94,853
30 to 34	86,430	92,230	118,399	124,250	0	0	0	0	0	0	110,116
35 to 39	85,093	96,420	118,917	122,723	129,557	0	0	0	0	0	117,922
40 to 44	78,787	98,243	118,857	122,489	131,444	146,910	0	0	0	0	124,164
45 to 49	85,412	100,351	119,413	120,675	130,286	137,874	130,444	0	0	0	129,239
50 to 54	95,191	101,167	120,525	130,181	127,177	135,923	139,621	150,620	0	0	133,128
55 to 59	0	88,283	120,202	125,474	122,407	137,692	137,910	163,524	0	0	137,399
60 to 64	0	0	120,784	127,360	125,945	128,373	130,222	0	0	0	127,117
65 to 69	197,758	0	120,178	0	123,937	0	0	0	0	0	133,946
70 and up	0	0	0	0	121,360	127,600	0	0	0	0	124,480
<b>Avg. Salary</b>	\$ 84,749	\$ 92,708	\$ 118,450	\$ 122,911	\$ 129,503	\$ 137,383	\$ 137,939	\$ 156,463	\$ 0	\$ 0	\$ 121,531

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

**Distribution of Active Members as of July 1, 2014**

**Fire**

Age	Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up		
Under 25	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	9	24	5	0	0	0	0	0	0	0	0	38
30 to 34	16	58	42	17	0	0	0	0	0	0	0	133
35 to 39	10	43	45	51	17	0	0	0	0	0	0	166
40 to 44	3	23	41	100	93	11	0	0	0	0	0	271
45 to 49	1	8	31	89	120	103	11	0	0	0	0	363
50 to 54	0	6	9	51	62	123	29	3	1	0	0	284
55 to 59	0	0	4	18	18	52	26	6	1	0	0	125
60 to 64	0	2	0	1	2	11	8	3	3	0	0	30
65 to 69	0	0	0	0	0	1	1	0	1	0	0	3
70 and up	0	0	0	1	0	0	0	0	0	1	0	2
<b>Total Count</b>	39	164	177	328	312	301	75	12	6	1	0	1,415

**Distribution of Active Members as of July 1, 2014**

**Fire**

Age	Average Salary Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up		
Under 25	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
25 to 29	61,058	79,282	84,365	0	0	0	0	0	0	0	0	75,635
30 to 34	59,917	85,617	106,981	132,146	0	0	0	0	0	0	0	95,219
35 to 39	59,917	89,040	114,211	131,799	130,173	0	0	0	0	0	0	111,458
40 to 44	59,917	93,692	117,412	128,273	134,952	155,491	0	0	0	0	0	126,335
45 to 49	59,917	93,468	119,415	129,786	138,585	148,506	147,387	0	0	0	0	136,661
50 to 54	0	107,865	116,332	130,167	137,238	143,013	156,681	130,546	169,077	0	0	139,213
55 to 59	0	0	147,074	132,698	126,679	143,138	165,409	183,935	149,217	0	0	146,030
60 to 64	0	52,977	0	124,267	130,455	142,692	155,034	147,563	156,132	0	0	140,403
65 to 69	0	0	0	0	0	120,366	169,810	0	150,037	0	0	146,738
70 and up	0	0	0	168,223	0	0	0	0	0	0	228,181	198,202
<b>Avg. Salary</b>	\$ 60,181	\$ 87,519	\$ 114,156	\$ 130,079	\$ 136,037	\$ 145,283	\$ 158,343	\$ 161,495	\$ 156,121	\$ 228,181	\$ 228,181	\$ 127,720

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**Distribution of Active Members as of July 1, 2014**

**Miscellaneous**

Age	Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	116	59	0	0	0	0	0	0	0	0	175
25 to 29	420	657	98	0	0	0	0	0	0	0	1,175
30 to 34	389	1,073	606	59	3	0	0	0	0	0	2,130
35 to 39	283	930	924	389	70	1	0	0	0	0	2,597
40 to 44	238	740	975	776	389	39	0	0	0	0	3,157
45 to 49	199	654	849	917	744	293	72	1	0	0	3,729
50 to 54	180	546	829	977	865	583	365	161	0	0	4,506
55 to 59	127	432	644	854	792	595	616	414	53	5	4,532
60 to 64	38	204	408	570	537	362	461	277	58	14	2,929
65 to 69	14	62	121	181	171	109	103	65	30	21	877
70 and up	5	9	42	56	42	36	20	19	9	8	246
<b>Total Count</b>	<b>2,009</b>	<b>5,366</b>	<b>5,496</b>	<b>4,779</b>	<b>3,613</b>	<b>2,018</b>	<b>1,637</b>	<b>937</b>	<b>150</b>	<b>48</b>	<b>26,053</b>

**Distribution of Active Members as of July 1, 2014**

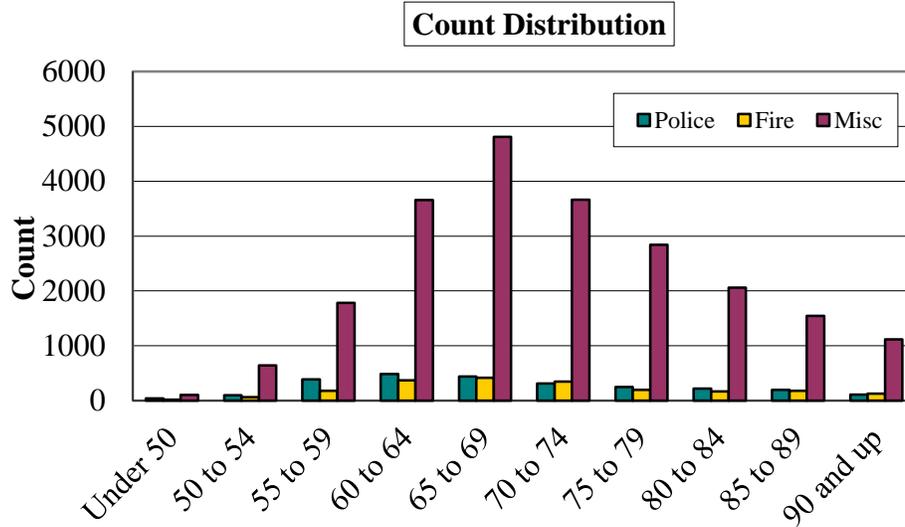
**Miscellaneous**

Age	Average Salary Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	\$ 55,691	\$ 54,882	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 55,418
25 to 29	63,971	65,601	67,328	0	0	0	0	0	0	0	65,163
30 to 34	69,170	73,267	78,104	79,095	95,781	0	0	0	0	0	74,088
35 to 39	73,955	74,594	82,419	84,162	78,900	69,405	0	0	0	0	78,856
40 to 44	68,634	73,900	86,031	86,966	90,345	86,486	0	0	0	0	82,643
45 to 49	69,559	72,022	82,268	83,116	89,026	90,142	93,449	94,981	0	0	82,188
50 to 54	68,112	72,980	81,240	80,559	87,796	93,655	90,835	83,907	0	0	83,304
55 to 59	69,477	75,210	80,110	78,267	83,017	87,645	93,795	95,034	86,379	119,096	83,835
60 to 64	65,185	69,509	78,079	79,350	83,309	90,327	92,062	92,655	92,220	86,002	83,932
65 to 69	61,856	84,003	77,327	80,893	80,265	87,139	87,192	89,993	79,353	83,957	82,406
70 and up	60,031	57,491	74,265	79,213	81,529	76,115	93,264	85,272	78,907	88,792	79,036
<b>Avg. Salary</b>	<b>\$ 67,729</b>	<b>\$ 72,374</b>	<b>\$ 81,347</b>	<b>\$ 81,808</b>	<b>\$ 86,014</b>	<b>\$ 89,960</b>	<b>\$ 92,210</b>	<b>\$ 91,871</b>	<b>\$ 86,784</b>	<b>\$ 89,020</b>	<b>\$ 80,954</b>

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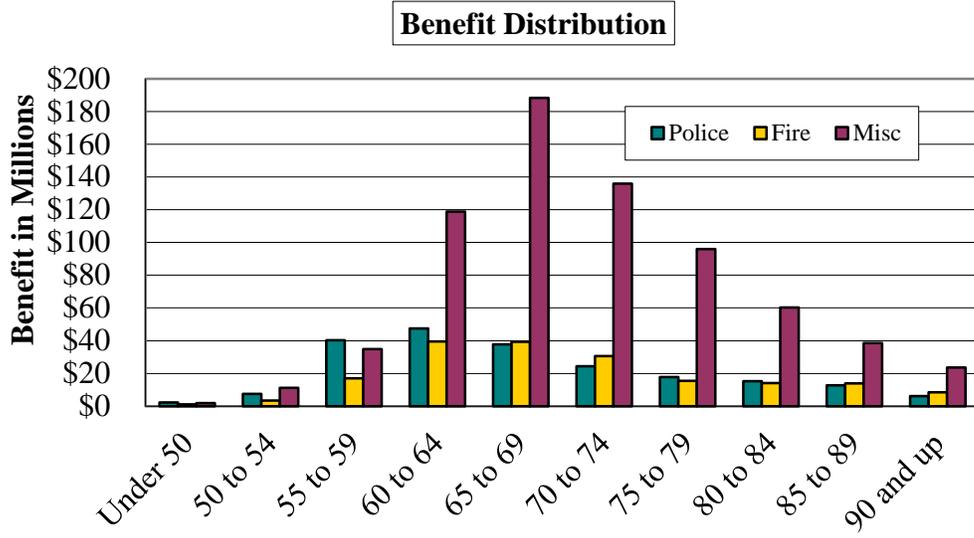
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<b>Distribution of Retirees, Disabled Members, and Beneficiaries as of July 1, 2014</b>				
<b>Age</b>	<b>Count</b>			<b>Total</b>
	<b>Police</b>	<b>Fire</b>	<b>Misc</b>	
Under 50	41	21	105	167
50 to 54	98	65	644	807
55 to 59	387	181	1,784	2,352
60 to 64	487	369	3,657	4,513
65 to 69	441	417	4,809	5,667
70 to 74	316	347	3,660	4,323
75 to 79	253	196	2,843	3,292
80 to 84	223	170	2,063	2,456
85 to 89	197	180	1,543	1,920
90 and up	109	130	1,116	1,355
<b>Total</b>	<b>2,552</b>	<b>2,076</b>	<b>22,224</b>	<b>26,852</b>



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Summary and Reconciliation of Participant Data Total System									
	Active	Vested Terminated	Reciprocal	Non-Vested Terminated	Disabled	Retired	Beneficiaries	DROP	Totals
<b>Participants as of 7/1/2013</b>	<b>28,717</b>	<b>1,996</b>	<b>1,040</b>	<b>2,937</b>	<b>2,672</b>	<b>19,525</b>	<b>3,837</b>	<b>72</b>	<b>60,796</b>
New Entrants	2,306	0	0	557	0	0	0	0	2,863
Returned to Work	327	(216)	(3)	(108)	0	0	0	0	0
Vested Terminations	(269)	269	0	0	0	0	0	0	0
Reciprocals	(2)	(2)	12	(8)	0	0	0	0	0
Non Vested Terminations	(349)	0	0	349	0	0	0	0	0
Refund/Withdrawal	(250)	(27)	(4)	(210)	0	0	0	0	(491)
Retirements	(937)	(111)	(13)	(8)	0	1,131	0	(62)	0
Disabilities	(15)	(10)	0	0	89	(64)	0	0	0
Benefit Ceased *	(9)	(2)	0	0	(80)	(436)	(205)	0	(732)
New Continuants	0	0	0	0	0	0	248	0	248
New Dissolutions	0	0	0	0	(71)	113	(5)	0	37
Duplicate Adjustments	0	0	0	0	0	135	1	0	136
Miscellaneous Adjustments	(3)	(9)	0	12	1	4	(43)	0	(38)
<b>Participants as of 7/1/2014</b>	<b>29,516</b>	<b>1,888</b>	<b>1,032</b>	<b>3,521</b>	<b>2,611</b>	<b>20,408</b>	<b>3,833</b>	<b>10</b>	<b>62,819</b>

\* Includes deaths and benefits that were terminated or suspended

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Summary and Reconciliation of Participant Data									
Police									
	Active	Vested Terminated	Reciprocal	Non-Vested Terminated	Disabled	Retired	Beneficiaries	DROP	Totals
<b>Participants as of 7/1/2013</b>	<b>1,967</b>	<b>47</b>	<b>17</b>	<b>64</b>	<b>529</b>	<b>1,380</b>	<b>572</b>	<b>72</b>	<b>4,648</b>
New Entrants	63	0	0	1	0	0	0	0	64
Returned to Work	4	(4)	0	0	0	0	0	0	0
Vested Terminations	(8)	8	0	0	0	0	0	0	0
Non Vested Terminations	(6)	0	0	6	0	0	0	0	0
Reciprocals	0	0	0	0	0	0	0	0	0
Refund/Withdrawal	(6)	0	0	(5)	0	0	0	0	(11)
Retirements	(60)	0	(1)	0	0	123	0	(62)	0
Disabilities	(3)	(1)	0	0	20	(16)	0	0	0
Benefit Ceased *	(2)	0	0	0	(12)	(28)	(41)	0	(83)
New Continuants	0	0	0	0	0	0	23	0	23
New Dissolutions	0	0	0	0	(19)	28	(2)	0	7
Transferred In (From Fire)	0	0	0	0	0	0	0	0	0
Transferred In (From Misc)	100	0	0	3	0	0	0	0	103
Transferred Out (To Fire)	0	0	0	0	0	0	0	0	0
Transferred Out (To Misc)	(1)	0	0	0	0	0	0	0	(1)
Duplicate Adjustments	0	0	0	0	0	2	0	0	2
Miscellaneous Adjustments	0	1	0	0	1	0	(8)	0	(6)
<b>Participants as of 7/1/2014</b>	<b>2,048</b>	<b>51</b>	<b>16</b>	<b>69</b>	<b>519</b>	<b>1,489</b>	<b>544</b>	<b>10</b>	<b>4,746</b>

\* Includes deaths and benefits that were terminated or suspended

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Summary and Reconciliation of Participant Data								
Fire								
	Active	Vested Terminated	Reciprocal	Non-Vested Terminated	Disabled	Retired	Beneficiaries	Totals
<b>Participants as of 7/1/2013</b>	<b>1,358</b>	<b>35</b>	<b>22</b>	<b>10</b>	<b>750</b>	<b>898</b>	<b>435</b>	<b>3,508</b>
New Entrants	80	0	0	0	0	0	0	80
Returned to Work	0	0	0	0	0	0	0	0
Vested Terminations	(4)	4	0	0	0	0	0	0
Reciprocals	0	0	0	0	0	0	0	0
Non Vested Terminations	0	0	0	0	0	0	0	0
Refund/Withdrawal	(1)	0	0	0	0	0	0	(1)
Retirements	(34)	(2)	0	0	0	36	0	0
Disabilities	(1)	(2)	0	0	14	(11)	0	0
Benefit Ceased *	(1)	0	0	0	(14)	(25)	(28)	(68)
New Continuants	0	0	0	0	0	0	27	27
New Dissolutions	0	0	0	0	(32)	34	0	2
Transferred In (From Misc)	18	1	0	0	0	0	0	19
Transferred In (From Police)	0	0	0	0	0	0	0	0
Transferred Out (To Misc)	0	0	0	0	0	0	0	0
Transferred Out (To Police)	0	0	0	0	0	0	0	0
Duplicate Adjustments	0	0	0	0	0	0	0	0
Miscellaneous Adjustments	0	0	0	0	0	1	(9)	(8)
<b>Participants as of 7/1/2014</b>	<b>1,415</b>	<b>36</b>	<b>22</b>	<b>10</b>	<b>718</b>	<b>933</b>	<b>425</b>	<b>3,559</b>

\* Includes deaths and benefits that were terminated or suspended

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<b>Summary and Reconciliation of Participant Data</b>								
	<b>Miscellaneous</b>							
	<b>Active</b>	<b>Vested Terminated</b>	<b>Reciprocal</b>	<b>Non-Vested Terminated</b>	<b>Disabled</b>	<b>Retired</b>	<b>Beneficiaries</b>	<b>Totals</b>
<b>Participants as of 7/1/2013</b>	<b>25,392</b>	<b>1,914</b>	<b>1,001</b>	<b>2,863</b>	<b>1,393</b>	<b>17,247</b>	<b>2,830</b>	<b>52,640</b>
New Entrants	2,163	0	0	556	0	0	0	2,719
Returned to Work	323	(212)	(3)	(108)	0	0	0	0
Vested Terminations	(257)	257	0	0	0	0	0	0
Reciprocal	(2)	(2)	12	(8)	0	0	0	0
Non Vested Terminations	(343)	0	0	343	0	0	0	0
Refund/Withdrawal	(243)	(27)	(4)	(205)	0	0	0	(479)
Retirements	(843)	(109)	(12)	(8)	0	972	0	0
Disabilities	(11)	(7)	0	0	55	(37)	0	0
Benefit Ceased *	(6)	(2)	0	0	(54)	(383)	(136)	(581)
New Continuants	0	0	0	0	0	0	198	198
New Dissolutions	0	0	0	0	(20)	51	(3)	28
Transferred In (From Fire)	0	0	0	0	0	0	0	0
Transferred In (From Police)	1	0	0	0	0	0	0	1
Transferred Out (To Fire)	(18)	(1)	0	0	0	0	0	(19)
Transferred Out (To Police)	(100)	0	0	(3)	0	0	0	(103)
Duplicate Adjustments	0	0	0	0	0	133	1	134
Miscellaneous Adjustments	(3)	(10)	0	12	0	3	(26)	(24)
<b>Participants as of 7/1/2014</b>	<b>26,053</b>	<b>1,801</b>	<b>994</b>	<b>3,442</b>	<b>1,374</b>	<b>17,986</b>	<b>2,864</b>	<b>54,514</b>

\* Includes deaths and benefits that were terminated or suspended

**APPENDIX A**  
**MEMBERSHIP INFORMATION**

**Data Assumptions and Methods**

In preparing our valuation results, we relied on information supplied by the SFERS staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. Our methodology for obtaining the data used for the valuation is based upon the following assumptions and practices:

- Service for members on the “Active” data file was calculated using the field “Yrs Svc.” Service buyback that has been paid for is added to the “Yrs Svc” field. Service buyback that is under contract, but not paid in full, as of the valuation date is assumed to be paid in full per the contract and this service is reflected in the projected benefit. An adjusted date of hire is retroactively calculated from the valuation date.
- Valuation Salary for the fiscal year ending 6/30/2014 is equal to “Covered Pay” reported for members hired before the beginning of the previous plan year, and the maximum of “Covered Pay” and “Calculated Pay,” which is an annualized pay rate, reported for new hires. A minimum of \$45,000 annual pay is used for all active members. Valuation Salary for the fiscal year ending 6/30/2015 is equal to Valuation Salary for the prior fiscal year increased for merit according to our assumptions and for wage inflation in accordance with the latest Memorandum Of Understanding (MOUS)s. The wage inflation by group is:
  - 0.00% for Fire and Police
  - 2.20% for all Miscellaneous members
- Benefits in the valuation data for members in pay status for the Miscellaneous and New Safety Charters include the Basic COLA effective July 1, 2014.
- Based on the latest MOUs and data provided by SFERS, it was assumed that there will be no Basic COLA granted as of July 1, 2014 for Old Safety Charter members in pay status.
- No Supplemental COLA benefits were granted as of July 1, 2014. Thus, there were no adjustments to the benefits provided in the valuation data for a Supplemental COLA.
- For accounts having duplicate records based on Social Security Number in the “Active” data file, the records are added together for fields “Cvd Pay”, “Contribs”, “Interest”, “Shortage”, “Short Int”, and “Yrs Svc”. The other data in the record is determined by the record which is considered open (“Plan Stat” = “O”) with the most recent “Membership Date”.
- Records on the “Active” data file are considered to be Active if they have a status of “AM” or “RT” which mean active, no “Job End Date” or the “Job End Date” is after 6/30/2014, and do not have a retiree record and their “Cvd Pay” is greater than \$0.

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- Records on the “Active” data file are considered to be Inactive if they have a status of “VM,” which means vested or they have a status of “AM” but their “Job End Date” is prior to 6/30/2014, or their “Cvd Pay” is \$0. If these inactive members have less than 5 years of service (non-vested), they are assumed to receive a lump sum distribution on the valuation date. If these inactive members have 5 or more years of service (vested), they are assumed to have elected a deferred benefit and to retire at age 55.
- For Safety members, Final Average Compensation is determined using the greater of data fields “Cvd Pay” or “Calc Pay”. If both these fields are \$0, then the pay “Rate” field is used and annualized based on the compensation frequency “Cmp Frq.”
- For Safety members, the deferred benefit is estimated using Final Average Compensation multiplied by years of service (including service purchased) multiplied by the appropriate age factor. For Miscellaneous members, the deferred benefit at retirement is 200% of the member’s contribution account balance with interest as of the valuation date projected with the assumed interest crediting rate to age 55 and then divided by the appropriate annuity factor from Table 12 of the Operating Tables. When there are deferred vested Miscellaneous Prop C members, their deferred benefit will be calculated the same except 200% will be replaced by 150%.
- Members on the “Inactive” data file are assumed to have elected a refund and receive a lump sum distribution on the valuation date if their “Withdrawal Date” is on or after the valuation date. If their “Withdrawal Date” is before the valuation date, they are assumed to have taken a full refund prior to the valuation date.
- Records on the “Retiree” file are considered in pay status if their benefit is not suspended or terminated.
- Members may retire and receive benefits under multiple Charter sections (e.g. - a police officer can have two benefits, one for the service during the academy training which is considered Miscellaneous service and a second benefit for all other service as a police officer). We value each component of a member’s benefit separately under the applicable Charter section. Consequently, the member counts reported in this valuation are slightly higher than the actual number of members due to some individual members being reported under multiple groups.
- We assume any member reported in last year’s “Retiree” file and not in this year’s file is deceased without a beneficiary and is removed from the valuation data.
- We assume all deceased members with payments continuing to a beneficiary have been reported in the “Retiree” file.

**APPENDIX B  
ACTUARIAL ASSUMPTIONS AND METHODS**

**A. Actuarial Assumptions**

The discount rate, wage inflation, and price inflation assumptions were adopted by the Retirement Board with our input at the January 14, 2015 Board meeting. All other assumptions were adopted at the November 2010 Board meeting based on recommendations from our experience study covering plan experience during the period from July 1, 2004 through June 30, 2009.

**1. Discount Rate**

SFERS assets are assumed to earn 7.50% net of investment expenses.

**2. Inflation**

Wage inflation: 3.75% compounded annually  
Consumer Price Inflation: 3.25% compounded annually

**3. Interest Credited to Member Contributions**

4.50%, compounded annually.

**4. 401(a)(17) Maximum Compensation Limit**

The compensation limit in Section 401(a)(17) of the Internal Revenue Code is assumed to increase with price inflation. In the valuation, compensation limits are only applied to members of new plans created by Proposition C for whom compensation is limited to a percentage of the 401(a)(17) compensation limit.

**5. Salary Increase Rate**

Wage inflation component: 3.75%

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The additional merit component:

Years of Service	Salary Merit Increases				
	Police	Fire	Muni Drivers	Craft	Misc.
1	11.00%	15.00%	15.00%	4.50%	7.00%
2	8.50	8.00	10.00	3.25	5.25
3	6.50	6.00	2.00	2.50	4.00
4	4.50	4.25	1.00	2.00	3.00
5	3.25	3.00	0.00	1.50	2.50
6	2.30	2.30	0.00	1.25	2.00
7	1.95	1.95	0.00	1.00	1.75
8	1.70	1.70	0.00	0.90	1.65
9	1.50	1.50	0.00	0.85	1.45
10	1.50	1.50	0.00	0.85	1.30
11	1.50	1.50	0.00	0.85	1.20
12	1.50	1.50	0.00	0.85	1.15
13	1.50	1.50	0.00	0.85	1.10
14	1.50	1.50	0.00	0.85	1.05
15 & over	1.50	1.50	0.00	0.85	1.00

Extra covered wages in the last year before service retirement are assumed to be as follows:

Safety	3.0%
Muni Drivers	6.0%
Craft Workers	4.0%
Miscellaneous	1.5%

**6. Administrative Expense Assumption**

There is a 0.45% of Payroll assumption included in the normal cost rates for administrative expenses.

**7. Timing of Contributions**

Employer and employee contributions are made throughout the year.

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**8. Cost-of-Living Increase in Benefits**

Old Plans - Police and Fire, Charters 8.559 and 8.585	5.00% per year
Old Plans - Police and Fire, Charters 8.595 and 8.596	4.00% per year
Old Plans - Police and Fire, pre-7/1/75 DOR	3.00% per year
Old Plans - Miscellaneous	2.00% per year
New Plans - Police, Fire, and Miscellaneous	2.00% per year

**9. Rates of Termination of Employment**

Sample rates of termination by age and service for Miscellaneous members are shown below.

<b>Misc. Rates of Termination by Age and Service Years</b>			
<b>Age</b>	<b>Service</b>		
	<b>0</b>	<b>3</b>	<b>5+</b>
20	37.50%	12.00%	6.50%
25	27.50	9.00	6.50
30	24.00	9.00	5.50
35	20.00	7.00	4.25
40	17.50	6.00	3.00
45	15.00	4.50	2.50
50	15.00	4.50	2.60
55	15.00	4.50	3.15
60	15.00	4.50	4.00
65	15.00	4.50	4.00

Sample rates of termination by service for Police, Fire, Muni Drivers, and Craft members are shown below.

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<b>Rates of Termination</b>				
<b>Service</b>	<b>Police</b>	<b>Fire</b>	<b>Muni Drivers</b>	<b>Craft</b>
0	10.00%	4.00%	12.00%	8.00%
1	4.00	1.50	6.00	7.00
2	2.00	1.50	5.00	6.00
3	2.00	1.50	4.00	5.00
4	2.00	1.50	3.50	4.00
5	1.00	1.50	3.25	3.25
6	1.00	1.00	3.00	2.75
7	1.00	1.00	3.00	2.50
8	1.00	1.00	3.00	2.25
9	1.00	1.00	3.00	2.00
10	1.00	1.00	3.00	1.75
11	1.00	0.50	3.00	1.75
12	1.00	0.50	3.00	1.75
13	1.00	0.50	3.00	1.75
14	1.00	0.50	3.00	1.75
15	1.00	0.50	3.00	1.75
16	0.50	0.50	3.00	1.75
17	0.50	0.50	3.00	1.75
18	0.50	0.20	3.00	1.75
19	0.50	0.10	3.00	1.75
20	0.50	0.05	3.00	1.75
21	0.00	0.00	3.00	1.75
22	0.00	0.00	0.00	1.75
23	0.00	0.00	0.00	0.00

30% of terminating employees are assumed to subsequently work for a reciprocal employer and receive pay increases equal to the wage inflation assumption.

In estimating termination benefits for Miscellaneous members, it is assumed that employee contribution rates are, on average, not changed by the floating contribution rate provisions of Proposition C.

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**10. Member Refunds**

Non-vested terminated members are assumed to receive a refund of their contributions with interest. The rates of refund for terminated vested members are shown below.

Vested Terminated Rates of Refund		
Age	Police & Fire	Miscellaneous
Under 25	100%	70%
25	75	55
30	50	40
35	30	35
40	20	30
45	10	20
50 & over	0	0

In estimating refund amounts, it is assumed that employee contribution rates are, on average, not changed by the floating contribution rate provisions of Proposition C.

**11. Rates of Disability**

Sample disability rates of active participants are provided below. 100% of safety and 0% of miscellaneous disabilities are assumed to be duty related.

Rates of Disability at Selected Ages						
Age	Police	Fire	Muni		Misc. Females	Misc. Males
			Drivers	Craft		
30	0.05%	0.06%	0.01%	0.01%	0.01%	0.01%
35	0.09	0.15	0.06	0.06	0.05	0.04
40	0.16	0.38	0.11	0.12	0.10	0.08
45	0.37	0.60	0.17	0.24	0.28	0.11
50	0.79	1.20	0.75	0.44	0.55	0.30
55	3.00	5.00	1.20	0.64	0.60	0.42
60	6.10	12.75	0.00	0.00	0.00	0.00
65	7.50	15.00	0.00	0.00	0.00	0.00

Level of duty disability benefits (if projected to be disabled before service retirement eligibility)	
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Police	55% of pay
Fire	60% of pay

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**12. Rates of Mortality for Healthy Lives**

Mortality rates for actives, retirees, beneficiaries, terminated vested, and reciprocals are based on the sex distinct RP 2000 Mortality Tables. The Employee table is used for active employees and the Annuitant table is used for those receiving benefits. To reflect mortality improvements since the date of the table and to project future mortality improvements, the tables have been projected using scale AA to future years as follows:

Active Females: 2030  
Active Males: 2005  
Annuitant Females: 2020  
Annuitant Males: 2020

The table below provides a sample of these rates.

<b>Rates of Mortality for Actives and Annuitants</b>					
<b>Healthy Lives at Selected Ages</b>					
<b>Age</b>	<b>Actives</b>		<b>Age</b>	<b>Annuitants</b>	
	<b>Male</b>	<b>Female</b>		<b>Male</b>	<b>Female</b>
25	0.036%	0.014%	50	0.372%	0.166%
30	0.043	0.020	55	0.402	0.301
35	0.075	0.034	60	0.594	0.561
40	0.104	0.045	65	1.012	0.938
45	0.141	0.069	70	1.641	1.515
50	0.195	0.100	75	2.854	2.394
55	0.275	0.199	80	5.265	3.987
60	0.450	0.338	85	9.624	6.866
65	0.706	0.501	90	16.928	12.400
70	0.920	0.655	95	25.699	18.688
			100	33.773	23.276

For active members, 25% of Safety deaths and 0% of Miscellaneous deaths are assumed to be duty related.

**13. Rates of Mortality for Retired Disabled Lives**

For Safety, all disabilities are assumed to be duty related and therefore all death benefits of disabled members are assumed to generate duty death benefits. The table below provides a sample of the mortality rates for members with disability retirement.

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<b>Rates of Mortality for Disabled Lives at Selected Ages</b>				
<b>Age</b>	<b>Police and Fire</b>		<b>All Miscellaneous</b>	
	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>
50	0.40%	0.33%	1.63%	1.11%
55	0.53	0.50	1.94	1.56
60	0.74	0.74	2.29	1.61
65	1.26	1.09	3.17	1.80
70	2.04	1.59	3.87	2.84
75	3.18	2.47	6.00	3.65
80	6.09	4.08	8.39	5.23
85	10.80	7.16	14.04	8.42
90	15.09	12.35	21.55	14.14
95	23.77	21.24	31.03	20.92
100	37.44	32.55	45.91	34.18

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**14. Rates of Retirement**

Rates of retirement are based on age and service according to the following tables below.

<b>Rates of Retirement by Age and Service 29 Years of Service or less (24 or less for Safety)</b>						
<b>Age</b>	<b>Police</b>	<b>Fire</b>	<b>Muni Drivers</b>	<b>Craft</b>	<b>Misc. Females</b>	<b>Misc. Males</b>
50	0.0150	0.0200	0.0700	0.0300	0.0300	0.0300
51	0.0150	0.0100	0.0250	0.0250	0.0250	0.0250
52	0.0150	0.0100	0.0250	0.0250	0.0250	0.0250
53	0.0300	0.0100	0.0500	0.0400	0.0400	0.0400
54	0.0300	0.0100	0.0500	0.0400	0.0400	0.0400
55	0.1000	0.0300	0.0600	0.0500	0.0400	0.0400
56	0.1000	0.0300	0.0600	0.0500	0.0450	0.0450
57	0.1000	0.0300	0.1000	0.0500	0.0500	0.0500
58	0.1000	0.0500	0.1000	0.0500	0.0600	0.0600
59	0.1000	0.1000	0.1000	0.0750	0.0750	0.0750
60	0.1000	0.2500	0.1000	0.1000	0.1100	0.1100
61	0.1000	0.2500	0.1250	0.1300	0.1400	0.1400
62	0.3000	0.2500	0.2500	0.2250	0.2250	0.2250
63	0.1000	0.2500	0.2000	0.1750	0.1750	0.1750
64	0.1000	0.2500	0.2000	0.1750	0.1750	0.1750
65	1.0000	1.0000	0.2500	0.2750	0.2250	0.2250
66	1.0000	1.0000	0.2500	0.2750	0.2250	0.2250
67	1.0000	1.0000	0.2500	0.1750	0.2000	0.2000
68	1.0000	1.0000	0.2500	0.1750	0.2000	0.2000
69	1.0000	1.0000	0.2500	0.1750	0.2000	0.2000
70 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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<b>Rates of Retirement by Age and Service                      30 Years of Service or more (25 or more for Safety)</b>						
<b>Age</b>	<b>Police</b>	<b>Fire</b>	<b>Muni Drivers</b>	<b>Craft</b>	<b>Misc. Females</b>	<b>Misc. Males</b>
50	0.0300	0.0200	0.0300	0.0300	0.0300	0.0300
51	0.0300	0.0200	0.0300	0.0300	0.0300	0.0300
52	0.0400	0.0200	0.0300	0.0300	0.0300	0.0300
53	0.0700	0.1000	0.0300	0.0300	0.0300	0.0300
54	0.1000	0.2000	0.0300	0.0300	0.0750	0.0300
55	0.1200	0.2250	0.3000	0.0750	0.0750	0.0750
56	0.1400	0.2250	0.3000	0.0750	0.0750	0.0750
57	0.1600	0.2250	0.3000	0.0750	0.0750	0.0750
58	0.1800	0.2500	0.3000	0.1500	0.1250	0.1200
59	0.2000	0.3000	0.3000	0.3000	0.1750	0.1500
60	0.2200	0.3500	0.3000	0.3000	0.2500	0.3000
61	0.2500	0.4000	0.3000	0.3000	0.2500	0.3000
62	0.2500	0.4000	0.3500	0.3500	0.3750	0.3500
63	0.2500	0.3000	0.3000	0.3000	0.2500	0.2500
64	0.2500	0.3000	0.3000	0.3000	0.2500	0.2500
65	1.0000	1.0000	0.4500	0.3000	0.3750	0.2500
66	1.0000	1.0000	0.4500	0.3000	0.3750	0.2500
67	1.0000	1.0000	0.4500	0.3000	0.3750	0.2500
68	1.0000	1.0000	0.4500	0.3000	0.3750	0.2500
69	1.0000	1.0000	0.4500	0.3000	0.3750	0.2500
70 & over	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Safety and Miscellaneous inactive terminated vested members and actives who are expected to terminate are assumed to retire at age 55.

**15. Family Composition**

The percentage assumed to be married (including assumption for Domestic Partners, 1994 Proposition H) is shown below. Spouses of male members are assumed to be three years younger than the member and spouses of female members are assumed to be three years older than the member. And, then the spouse is assumed to be an additional year younger in order to value continuance to children and dependent parents.

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**ACTUARIAL ASSUMPTIONS AND METHODS**

<b>Percentage Married</b>	
Safety Males	85%
Safety Females	48
Miscellaneous Males	75
Miscellaneous Females	48

**16. Deferred Retirement Option Program (DROP)**

Effective July 1, 2008, new police plan members may be eligible to enter a DROP. Based on the current plan design, limited experience data, and the sunset of the program in 2011, no adjustment to the retirement rates have been made for DROP in this valuation. Because contributions continue to be made by Members in DROP and employers on the payroll of Members in DROP, the payroll for Members in DROP is used as active payroll in the development of contribution rates.

**17. Deferred Member Benefit**

The benefit was estimated based on information provided by SFERS staff. The data used to value the estimated deferred benefit were date of birth, date of hire, date of termination, and last pay. Based on the data provided, service credit, highest average salary, and deferred retirement age were estimated. The estimates were used to compute the retirement benefit, upon which the liabilities are based. For those members without sufficient data or service, accumulated member contribution balances, with interest, were used as the actuarial accrued liability.

**18. Supplemental COLA**

There is currently no explicit assumption to value the Supplemental COLA. Charter Section A8.526-3 was amended by Proposition C stating that beginning on July 1, 2012, no Supplemental COLA is payable unless the System is fully funded based on the market value of assets for the previous year. Based on our projections, no Supplemental COLA is expected to be paid in the near future, although better than expected investment performance or actuarial gains could result in a Supplemental COLA sooner than otherwise expected.

**19. Other**

The contribution requirements and benefit values of a plan are calculated by applying actuarial assumptions to the benefit provisions and member information, using the actuarial funding methods described in the following section.

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Actual experience of SFERS will not coincide exactly with assumed experiences, regardless of the choice of the assumptions, the skill of the actuary or the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments to the computed contribution rate. From time to time, it becomes appropriate to modify one or more of the assumptions, to reflect experience trends, but not random year-to-year fluctuations.

**20. Changes Since Last Valuation**

- The investment return assumption changed from 7.58% as of July 1, 2013 to 7.50% as of July 1, 2014.
- Wage inflation assumption changed from 3.83% compounded annually as of July 1, 2013 to 3.75% compounded annually as of July 1, 2014.
- Consumer price inflation assumption changed from 3.33% compounded annually as of July 1, 2013 to 3.25% compounded annually as of July 1, 2014.

**APPENDIX B  
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**B. Contribution Allocation Procedure**

The contribution allocation procedure primarily consists of an actuarial cost method, an asset smoothing method, and an amortization method as described below. All components of the contribution allocation procedure were established prior to the July 1, 2008 actuarial valuation except the amortization method, which was adopted by the Board at their August 13, 2014 meeting.

**1. Actuarial Cost Method**

The Entry Age actuarial cost method was used for active employees, whereby the normal cost is computed as the level annual percentage of pay required to fund the retirement benefits between each member's date of hire and assumed termination of employment. The normal costs calculated relate only to current member payroll. The actuarial liability is the difference between the present value of future benefits and the present value of future normal cost.

**2. Asset Valuation Method**

For the purposes of determining the Employer's contribution to SFERS, we use an actuarial value of assets. The asset adjustment method dampens the volatility in asset values that could occur because of the fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process. Assets are assumed to be used exclusively for the provision of retirement benefits and expenses.

The actuarial value is calculated by recognizing 20% of each of the past five years of actual investment returns compared to the expected return (7.58% for the years ending 2013 and 2014, 7.66% for the year ending 2012, 7.75% for the years ending 2008-2011 and 8.0% for prior years) on the actuarial asset value. The expected return on actuarial value of assets is determined using SFERS actual cash flows and the assumed return. The balance of the actual investment experience is recognized in a similar fashion in future years.

This asset smoothing method started with the market value as of July 1, 2004.

**3. Amortization Method**

Each Charter change prior to this valuation has been amortized over 20 years from the date it was first recognized in the valuation. Effective with this valuation, any new changes to active member benefits are amortized over a closed 15-year period, and any new changes to inactive or retired member benefits, including Supplemental COLAs, are amortized over a closed 5-year period.

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In prior valuations, the portion of the UAL not attributable to Charter changes was amortized over a rolling 15-year period. Effective with this valuation, any new sources of UAL due to actuarial gains and losses, assumption changes, or method changes are amortized over a closed 20-year period. In addition, the UAL as of July 1, 2013, not attributable to Propositions was re-amortized over a closed 19-year period as of July 1, 2014.

All amortization schedules are determined on a level percent of pay basis which means that for the duration of the amortization schedule, the payment amount increases each year at the assumed wage inflation rate.

**4. Changes Since Last Valuation**

The amortization methods were changed as described above.

APPENDIX C  
SUMMARY OF PLAN PROVISIONS  
OLD POLICE AND FIRE

**I. Old Police and Fire Members – Charter Sections 8.559 and 8.595 (Police) and 8.585 and 8.596 (Fire)**

**1. Membership Requirement**

*Charter Sections 8.559 and 8.585*

Police Officers and Firefighters who became members before November 2, 1976 and retired on or before December 31, 2002 without electing membership in another Section.

*Charter Sections 8.595 and 8.596*

Active members on November 5, 2002 in Section 8.559 (Police) or Section 8.585 (Fire) who elected to switch to Section 8.595 (Police) or Section 8.596 (Fire) by December 31, 2002.

**2. Final Compensation**

Monthly salary earnable at the final rank held at termination date, or monthly salary at next lower rank if final rank held for less than one year.

**3. Credited Service**

One year of service credit is given for each fiscal year with 10 or more full months worked. A partial year (fraction with the numerator equal to months including partial months, and the denominator equal to 10) is given for each fiscal year with less than 10 full months worked.

**4. Member Contributions**

a. Member:

7.0% of salary, excluding overtime and most premium pay. These contributions are credited with interest annually as determined by the Board.

*Charter 8.585, 8.595, and 8.596*

Depending on the employer contribution rate, the member contribution rate can increase or decrease by up to 6% of pay.

b. Employer:

The Employer contributes the remaining amounts necessary to maintain the soundness of the Retirement System. Any decrease in the member contribution rate is paid by the City.

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SUMMARY OF PLAN PROVISIONS  
OLD POLICE AND FIRE

5. Service Retirement

**Eligibility**

Age 50 with 25 years of Credited Service.

**Benefit - Member**

***Charter Sections 8.559 and 8.585***

55% of Final Compensation plus an additional 4% of Final Compensation for each year of credited service in excess of 25 years, subject to a maximum of 75% of Final Compensation.

***Charter Sections 8.595 and 8.596***

A specified percent of Final Compensation based on the member's age at retirement (factors shown in Table C-1 below) for each year of Credited Service, subject to a maximum of 90% of Final Compensation.

<b>Table C-1</b>	
<b>City and County of San Francisco Employees' Retirement System</b>	
<b>Sections 8.595 (Police) and 8.596 (Fire) – Service Retirement Factors</b>	
<b>Retirement Age</b>	<b>Retirement Factors</b>
50	2.40%
51	2.52%
52	2.64%
53	2.76%
54	2.88%
55 or above	3.00%

**Benefit - Survivor**

75% of the service retirement benefit paid to a qualified survivor.

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SUMMARY OF PLAN PROVISIONS  
OLD POLICE AND FIRE

**6. Non-Industrial Disability**

**Eligibility**

10 years of Credited Service.

**Benefit - Member**

*At least 10 but less than 25 years of Credited Service:*

1.5% of Final Compensation for each year of Credited Service between 10 and 25 years, subject to a minimum of 33.3% and a maximum of 75% of Final Compensation for Charter Sections 8.559 and 8.585 or 90% of Final Compensation for Charter Sections 8.595 and 8.596.

*At least 25 years of Credited Service:*

Service retirement benefit determined at date of disability.

**Benefit - Survivor**

75% of the disability retirement benefit paid to a qualified survivor.

**7. Industrial Disability**

**Eligibility**

No age or service requirement.

**Benefit - Member**

*If Not Eligible for Service Retirement:*

Final Compensation times a percentage of disability, subject to a minimum of 50% and a maximum of 90%, as determined by the Workers' Compensation Appeals Board. Once the member becomes eligible for service retirement, assuming that member earned service and salary increases during the period of disability, the benefit is recalculated using the service and salary rate for the current rank held. The recalculated benefit is based on a minimum of 55% of Final Compensation.

*If Eligible for Service Retirement:*

Service retirement benefit determined at date of disability, but not less than 55% of Final Compensation.

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OLD POLICE AND FIRE

**Benefit - Survivor**

*If Not Eligible for Service Retirement:*

100% of the disability retirement benefit paid to a qualified survivor. Once the member would have become eligible for service retirement, assuming that member earned service and salary increases from the date of disability to the eligible service retirement date, the benefit is recalculated at 100% of the service retirement benefit, using the service and salary at the eligible service retirement date, not less than 55% of Final Compensation.

*If Eligible for Service Retirement:*

100% of the disability retirement benefit paid to a qualified survivor, not less than 55% of Final Compensation.

**8. Death while an Active Employee**

*If Death is due to a Non-Work-Related Cause:*

- a. Less than 10 Years of Credited Service, or No Qualified Survivor – Lump sum benefit equal to the accumulated refund of all employee contributions with interest, plus six months' salary to a designated beneficiary.
- b. At least 10 but less than 25 years of Credited Service – Monthly continuation allowance to a qualified survivor equal to the non-industrial disability benefit the member would have been entitled to on the date of death, subject to a minimum of 33.3% of compensation at the time of death.
- c. At Least 25 Years of Credited Service but Less than Age 50 – Monthly continuation allowance to a qualified survivor equal to 75% of the monthly service retirement benefit the member would have received had the member been age 50 and retired on the date of death.
- d. Eligible for Service Retirement – Monthly continuation allowance to a qualified survivor equal to 75% of the monthly service retirement benefit the member would have received had the member been retired on the date of death.

*If Death is due to a Work-Related Cause:*

- a. No Qualified Survivor – Lump sum benefit equal to the accumulated refund of all employee contributions with interest, plus six months' salary to a designated beneficiary. If the death is of a violent nature, an additional lump sum equivalent benefit equal to 12 months' salary is payable.

APPENDIX C  
SUMMARY OF PLAN PROVISIONS  
OLD POLICE AND FIRE

- b. Qualified Survivor and Not Eligible for Service Retirement – Monthly continuation allowance to a qualified survivor equal to the salary at the date of death. Once the member would have become eligible for service retirement, assuming that member earned service and salary increases from the date of death to the eligible service retirement date, the benefit is recalculated at 100% of the service retirement benefit, using the service and salary at the eligible service retirement date, such allowance shall not be less than 55% of Final Compensation.
- c. Qualified Survivor and Eligible for Service Retirement – Monthly continuation allowance to a qualified survivor equal to 100% of the monthly service retirement benefit the member would have received had the member been retired on the date of death, but such allowance shall not be less than 55% of Final Compensation.

**9. Withdrawal Benefits**

*Less than five years of Credited Service:*

Lump sum benefit equal to the accumulated employee contributions with interest.

*Five or more years of Credited Service:*

The member may choose one of the following:

- a. Lump sum benefit equal to the accumulated employee contributions with interest.
- b. **Charter Sections 8.559 and 8.585:** Retirement benefit first payable at age 50 equal to 55% of Final Compensation at termination, multiplied by a service fraction, the numerator being the Credited Service of the member at termination, and a denominator of 25.

**Charter Sections 8.595 and 8.596:** A specified percent of Final Compensation based on the member's age at retirement (factors shown in Table C-1 above) for each year of Credited Service, subject to a maximum of 90% of Final Compensation.

Cost-of-living adjustments are prorated if the member's accrued service is less than 25 years. COLA will be multiplied by a fraction where the denominator is 25 and the numerator is equal to service at date of termination.

**10. Additional Post-retirement Death Benefit**

A death benefit payable as a lump sum equal to \$100 for each full year of Credited Service, subject to a maximum of \$3,000, will be paid to a qualified survivor upon the member's death.

APPENDIX C  
SUMMARY OF PLAN PROVISIONS  
OLD POLICE AND FIRE

**11. Post-retirement Cost-of-Living Benefit**

*Basic*

Monthly benefits are adjusted by 50% of the actual dollar increase or decrease (50% of the percentage increase or decrease for members under Proposition H) in the salary rank or position the member's Final Compensation used to calculate the monthly benefit was based on. A member's monthly benefit will never decrease below its original amount.

*Supplemental*

Effective July 1 of each fiscal year, if the Retirement System was fully funded based on the market value of assets for the previous year and there are sufficient "excess" investment earnings on the Retirement fund for the previous fiscal year-end, the adjustment could be increased to 3.5% of that member's current monthly benefit less the amount of the Basic COLA above. If "excess" earnings are insufficient to fund a 3.5% increase, then to the extent of "excess" earnings, benefits are increased in increments of 0.5% up to a maximum of 3.5%.

**12. Changes in this Valuation**

None.

APPENDIX C  
SUMMARY OF PLAN PROVISIONS  
NEW POLICE AND FIRE

**II. New Police and Fire Members – Charter Sections (Police) 8.586, 8.597, 8.602, and 8.605; (Fire) 8.588, 8.598, 8.601, and 8.604; (Sheriff's Department) 8.608; (Miscellaneous Safety) 8.610**

**1. Membership Requirement**

***Charter Sections 8.586 and 8.588***

Police Officers and Firefighters who became members on or after November 2, 1976.

***Charter Sections 8.597 and 8.598***

Active members on January 1, 2003 in Section 8.586 (Police) or Section 8.588 (Fire) who had elected to switch to Section 8.597 (Police) or Section 8.598 (Fire) by December 31, 2002; or, new members becoming active on or after January 1, 2003 in Section 8.597 (Police) or Section 8.598 (Fire).

***Charter Sections 8.601 and 8.602***

Persons who become members of the fire or police department on or after July 1, 2010 and prior to January 7, 2012.

***Charter Sections 8.604 and 8.605***

Persons who become members of the fire or police department on or after January 7, 2012.

***Charter Section 8.608***

Sheriff, undersheriffs and all deputized personnel of the sheriff's department hired on or after January 7, 2012.

***Charter Section 8.610***

Miscellaneous Safety members hired on or after January 7, 2012.

**2. Final Compensation**

***Charter Sections 8.586, 8.588, 8.597, and 8.598***

Average monthly total compensation earnable during any 12 months of Credited Service which average compensation is the highest.

***(Pre 1998 – 3 year average of monthly compensation)***

***Charter Sections 8.601 and 8.602***

Average monthly total compensation earnable during the higher of any two consecutive fiscal years of earnings or the twenty-four months of earnings immediately prior to retirement.

**APPENDIX C**  
**SUMMARY OF PLAN PROVISIONS**  
**NEW POLICE AND FIRE**

***Charter Sections 8.604, 8.605, 8.608, and 8.610***

Average monthly total compensation earnable during the higher of any three consecutive fiscal years of earnings or the thirty-six months of earnings immediately prior to retirement. Compensation for any fiscal year shall not include remuneration that exceeds 75% of the IRC 401(a)(17) compensation limit.

**3. Credited Service**

One year of service credit is given for each fiscal year with 10 or more full months worked. A partial year (fraction with the numerator equal to months including partial months, and the denominator equal to 10) is given for each fiscal year with less than 10 full months worked.

**4. Member Contributions**

a. Member:

***Charter Sections 8.586, 8.588, 8.597, and 8.598***

7.5% of salary, excluding overtime and most premium pay. These contributions are credited with interest annually as determined by the Board.

Depending on the employer contribution rate, the member contribution rate can increase or decrease by up to 6% of pay.

***Charter Sections 8.601, 8.602, 8.604, 8.605, 8.608, and 8.610***

9.0% of salary, excluding overtime and most premium pay. These contributions are credited with interest annually as determined by the Board.

Depending on the employer contribution rate, the member contribution rate can increase or decrease by up to 4% of pay if the base pay rate is less than \$48 per hour or up to 5% of pay if the base pay rate is at or greater than \$48 per hour.

b. Employer:

The Employer contributes the remaining amounts necessary to maintain the soundness of the Retirement System. Any decrease in the member contribution rate is paid by the City.

APPENDIX C  
SUMMARY OF PLAN PROVISIONS  
NEW POLICE AND FIRE

5. Service Retirement

**Eligibility**

Age 50 with 5 years of Credited Service. (*Pre 1998 – 50 with 25 years of Credited Service*)

**Benefit – Member**

***Charter Sections 8.586 and 8.588***

The monthly service retirement benefit is the greater of i) and ii) below, subject to a maximum of 75% of Final Compensation (*Pre 1998 – 70%*)

- i) 2% of Final Compensation for each of the first 25 years of service plus an additional 3% of Average Compensation for each year of Credited Service in excess of 25 years; (*Pre 1998 – benefit is calculated under i) only*);
- ii) A specified percent of Final Compensation based on the member's age at retirement (factors shown in Table C-2 below) for each year of Credited Service.

<b>Table C-2</b>	
<b>City and County of San Francisco Employees' Retirement System</b>	
<b>Sections 8.586 (Police) and 8.588 (Fire) – Service Retirement Factors</b>	
<b>Retirement Age</b>	<b>Retirement Factors</b>
50	2.00%
51	2.14%
52	2.28%
53	2.42%
54	2.56%
55 or above	2.70%

CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM  
JULY 1, 2014 ACTUARIAL VALUATION

**APPENDIX C  
SUMMARY OF PLAN PROVISIONS  
NEW POLICE AND FIRE**

***Charter Sections 8.597, 8.598, 8.601, and 8.602***

A specified percent of Final Compensation based on the member's age at retirement (factors shown in Table C-3 below) for each year of Credited Service, subject to a maximum of 90% of Final Compensation.

<b>Table C-3</b>	
<b>City and County of San Francisco Employees' Retirement System Sections 8.597 and 8.601 (Police), 8.598 and 8.602 (Fire)</b>	
<b>Service Retirement Factors</b>	
<b>Retirement Age</b>	<b>Retirement Factors</b>
50	2.40%
51	2.52%
52	2.64%
53	2.76%
54	2.88%
55 or above	3.00%

***Charter Sections 8.604, 8.605, and 8.608***

A specified percent of Final Compensation based on the member's age at retirement (factors shown in Table C-4 below) for each year of Credited Service, subject to a maximum of 90% of Final Compensation.

<b>Table C-4</b>	
<b>City and County of San Francisco Employees' Retirement System Sections 8.605 (Police), 8.604 (Fire) and 8.608 (Sheriff's Department) –</b>	
<b>Service Retirement Factors</b>	
<b>Retirement Age</b>	<b>Retirement Factors</b>
50	2.20%
51	2.30%
52	2.40%
53	2.50%
54	2.60%
55	2.70%
56	2.80%
57	2.90%
58 and above	3.00%

APPENDIX C  
 SUMMARY OF PLAN PROVISIONS  
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**Charter Sections 8.610**

A specified percent of Final Compensation based on the member's age at retirement (factors shown in Table C-6 below) for each year of Credited Service, subject to a maximum of 90% of Final Compensation.

Table C-5 City and County of San Francisco Employees' Retirement System Section 8.610 (Miscellaneous Safety) – Service Retirement Factors	
Retirement Age	Retirement Factors
50	1.800%
51	1.912%
52	2.020%
53	2.132%
54	2.244%
55	2.356%
56	2.468%
57	2.590%
58 or above	2.700%

**Benefit - Survivor**

50% of the service retirement benefit paid to a qualified survivor.

**6. Non-Industrial Disability**

**Eligibility**

10 years of Credited Service.

**Benefit – Member**

1.5% of Average Compensation for each year of Credited Service, subject to a minimum of 33.3% of Final Compensation, subject to a maximum of 75% of Final Compensation for Charter Sections 8.586 and 8.588 or 90% of Final Compensation for all other Charter Sections.

**Benefit - Survivor**

50% of the disability retirement benefit paid to a qualified survivor.

APPENDIX C  
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NEW POLICE AND FIRE

**7. Industrial Disability**

**Eligibility**

No age or service requirement.

**Benefit – Member**

*Less than age 50 with 25 Years of Service:*

Final Compensation times a percentage of disability, subject to a minimum of 50% and a maximum of 90%, as determined by the Workers' Compensation Appeals Board. If the member is age 50 with 5 years of service, the disability benefit is the service retirement allowance, but not less than 50% of Final Compensation. Once the member becomes eligible for qualified service retirement, assuming that member earned service and salary increases during the period of disability, the benefit is recalculated using the service and salary rate for the rank held at retirement. The recalculated benefit is based on a minimum of 50% of Final Compensation (not to exceed 90% of Final Compensation for Charter Sections 8.597, 8.598, 8.601, 8.602, 8.608, and 8.610).

*Age 50 with 25 Years of Service:*

The service retirement allowance, but not less than 50% of Final Compensation.

**Benefit - Survivor**

75% of the disability retirement benefit paid to a qualified survivor.

**8. Death while an Active Employee**

*If Death is Due to a Non-Work-Related Cause:*

- a. Less than 10 Years of Credited Service, or No Qualified Survivor – Lump sum benefit equal to the accumulated refund of all employee contributions with interest, plus six months' salary to a designated beneficiary.
- b. At least 10 but less than 25 years of Credited Service – Monthly continuation allowance to a qualified survivor equal to the non-industrial disability benefit the member would have been entitled to on the date of death, subject to a minimum of 33.3% of Average Compensation at the time of death.
- c. At Least 25 Years of Credited Service but Less than Age 50 – Monthly continuation allowance to a qualified survivor equal to 50% of the monthly service retirement benefit the member would have received had the member been age 50 and retired on the date of death.

APPENDIX C  
SUMMARY OF PLAN PROVISIONS  
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- d. Age 50 with 25 Years of Credited Service – Monthly continuation allowance to a qualified survivor equal to 50% of the monthly service retirement benefit the member would have received had the member been retired on the date of death.

*If Death is Due to a Work-Related Cause:*

- a. No Qualified Survivor – Lump sum benefit equal to the accumulated refund of all employee contributions with interest, plus six months' salary to a designated beneficiary. For Charter Sections 8.586 and 8.588, if the death is of a violent nature, an additional lump sum equivalent benefit equal to 12 months' salary is payable.
- b. Qualified Survivor and Less than Age 50 with 25 Years of Service – Monthly continuation allowance to a qualified survivor equal to 100% (*Pre 1998 – 75%*) of Final Compensation at the date of death. Once the member would have completed 25 years of service and attained age 50, assuming that member earned service and salary increases from the date of death to the eligible service retirement date, the benefit is recalculated at 100% of the service retirement benefit, using the service and salary at the eligible service retirement date. Such allowance shall not be less than 50% of Final Compensation (For Chapter Sections 8.597, 8.598, 8.601, 8.602, 8.608, and 8.610 not to exceed 90% of Final Compensation).
- c. Qualified Survivor and Age 50 with 25 Years of Service – Monthly continuation allowance to a qualified survivor equal to 100% (*Pre 1998 – 75%*) of the monthly service retirement benefit the member would have received had the member been retired on the date of death, not less than 50% of Final Compensation.

**9. Withdrawal Benefits**

*Less than five years of Credited Service:*

Lump sum benefit equal to the accumulated employee contributions with interest.

*Five or more years of Credited Service:*

The member may choose one of the following:

- a. Lump sum benefit equal to the accumulated refund all of employee contributions with interest.
- b. **Charter Sections 8.586 and 8.588:** Retirement benefit first payable at age 50 equal to 2% of Final Compensation at termination for each year of credited service of the member at the date of termination.

**Charter Sections 8.597, 8.598, 8.601, 8.602, 8.604, 8.605, 8.608, and 8.610:** A specified percent of Final Compensation at termination based on the member's age at retirement (factors shown in Table C-3, C-4 and C-5 above) for each year of Credited Service, subject to a maximum of 90% of Final Compensation, payable at age 50.

APPENDIX C  
SUMMARY OF PLAN PROVISIONS  
NEW POLICE AND FIRE

**10. Additional Post-retirement Death Benefit**

A death benefit payable as a lump sum equal to \$100 for each full year of Credited Service, subject to a maximum of \$3,000, will be paid to a qualified survivor upon the member's death.

**11. Post-retirement Cost-of-Living Benefit**

*Basic*

Monthly benefits are increased or decreased each July 1 by a maximum of 2% per year of the initial monthly benefit. A member's monthly benefit will never decrease below its original amount. Effective July 1, 2009, monthly benefits are increased or decreased by a maximum of 2% of the prior year's monthly benefit.

*Supplemental*

Effective July 1 of each fiscal year, if the Retirement System was fully funded based on the market value of assets for the previous year and there are sufficient "excess" investment earnings on the Retirement fund for the previous fiscal year-end, the adjustment could be increased to 3.5% of that member's current monthly benefit less the amount of the Basic COLA above. If "excess" earnings are insufficient to fund a 3.5% increase, then to the extent of "excess" earnings, benefits are increased in increments of .5% up to a maximum of 3.5%.

**12. Changes in this Valuation**

None.

**APPENDIX C**  
**SUMMARY OF PLAN PROVISIONS**  
**DROP PROVISIONS**

**III. Deferred Retirement Option Program (DROP) – Charter Section 8.900**

**Effective Date – July 1, 2008 through June 30, 2011**

Section 8.900 – effective July 1, 2008 through June 30, 2011. DROP sunsets on June 30, 2011. The Board of Supervisors voted not to renew DROP.

**1. Membership Requirement**

Active, full duty sworn officers occupying one of the eligible ranks: Police Officer, Sergeant, Inspector, Lieutenant, or Captain.

**2. Eligibility**

Age 50 with 25 years of Credited Service as a sworn member, including any service as a member of the San Francisco Airport Police. To participate, the member must agree to terminate employment through retirement at the end of their participation in DROP. No member shall be eligible for a promotion during their participation in DROP.

**3. Length of DROP period**

Once a member enters DROP, participation continues until either termination of employment or the maximum DROP participation period has been reached.

<b>Rank</b>	<b>Maximum DROP Period</b>
Police Officer	36 months
Sergeant/Inspector	24 months
Lieutenant/Captain	12 months

**4. DROP Benefit**

***DROP Account Balance***

The service pension, which is calculated based on age, compensation, and length of service as of their date of entry into the Program, is credited monthly into a DROP Account including any Basic or Supplemental Cost of Living Adjustments. The DROP Account is also credited on a monthly basis with interest at an annual effective rate of 4% throughout the member's DROP period.

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**SUMMARY OF PLAN PROVISIONS**  
**DROP PROVISIONS**

***Retirement Benefit***

At the end of the DROP period, a lump sum distribution of the DROP Account Balance will be made and monthly retirement benefits will commence based on the initial DROP benefit calculated based on age, compensation, and service at the date of entry into DROP including any cost of living adjustments to which the member would otherwise be entitled.

**5. Employee Contributions while in DROP**

The member still makes employee contributions into the retirement system which are deemed contributions to the general assets of SFERS, and shall not be part of the member's DROP Account.

**6. Effect of Disability on DROP participation**

***Duty Related Disability***

The Member will receive an industrial disability benefit as though the participant was never enrolled in DROP. Service, compensation, and age at the time of disability will be used to calculate the disability benefit. The DROP Account will be waived.

***Non-Duty Related Disability***

Member will terminate participation in DROP and is paid the balance in their DROP Account. They will begin receiving a monthly payment equal to the service retirement benefit determined as of the DROP entry date including any cost of living adjustments to which the member would otherwise be entitled.

**7. Effect of Member Death on DROP participation**

***Duty Related Death***

The member's qualified surviving spouse, domestic partner or other qualified dependent will receive a death allowance as though the participant was never enrolled in DROP. Service, compensation, and age at the time of death will be used to calculate the benefit. The DROP Account will be waived. The qualified spouse, domestic partner or qualified dependent may elect to receive a non-work related death benefit specified below instead.

***Non-Duty Related Death***

Participation in DROP is terminated and the balance in the Member's DROP Account is paid to the Member's beneficiary. In addition, any qualified survivor will begin receiving a post-retirement continuation allowance determined on the basis of beneficiary elections made by the member at the time of entry into DROP including any cost of living adjustments to which the Member would otherwise be entitled.

**8. Changes in this Valuation – None.**

**APPENDIX C**  
**SUMMARY OF PLAN PROVISIONS**  
**MISCELLANEOUS**

**IV. Miscellaneous Members – Charter Sections 8.509, 8.587, 8.600, and 8.603**

**1. Membership Requirement**

***Charter Section 8.509***

Employees and Officers, other than Police Officers or Firefighters, who became members before November 2, 1976 and continued as a member without interruption.

***Charter Section 8.587***

Active Employees and Officers, other than Police Officers or Firefighters, who were members under Section A8.584, and members under A8.587, whose accumulated contributions were in the retirement fund on November 7, 2000, and were not retired. After November 7, 2000, all full time employees, certified Civil Service employees, or temporary employees who work more than 1,040 hours in any 12-month period; excluding all Police Officers and Firefighters.

***Charter Section 8.600***

Employees and Officers, other than Police Officers or Firefighters, who become employed on or after July 1, 2010, and prior to January 7, 2012

***Charter Section 8.603***

Employees and Officers, other than Police Officers or Firefighters, who become employed on or after January 7, 2012.

**2. Average Final Compensation**

***Charter Sections 8.509 and 8.587***

Average monthly compensation earned during any year of Credited Service which average compensation is the highest.

***Charter Section 8.600***

Average monthly compensation earned during the higher of any two consecutive fiscal years of earnings or the twenty-four months of earnings immediately prior to retirement.

***Charter Section 8.603***

Average monthly compensation earned during the higher of any three consecutive fiscal years of earnings or the thirty-six consecutive months of earnings immediately prior to retirement. Compensation for any fiscal year shall not include remuneration that exceeds 85% of the IRC 401(a)(17) compensation limit.

**APPENDIX C**  
**SUMMARY OF PLAN PROVISIONS**  
**MISCELLANEOUS**

**3. Credited Service**

One year of service credit is given for each fiscal year with 10 or more full months worked. A partial year (fraction with the numerator equal to months including partial months, and the denominator equal to 10) is given for each fiscal year with less than 10 full months worked. (Exception: for Charter 8.509 members, in the year of retirement, the denominator in the fraction is equal to 12).

**4. Member Contributions**

a. Member:

***Charter 8.509***  
8.0% of salary.

***Charter 8.587, 8.600, and 8.603***  
7.5% of salary, excluding overtime and most premium pay.

Depending on the employer contribution rate and the base rate of pay of the member beginning on July 1, 2012, the member contribution rate can increase or decrease by up to maximum percentage of pay shown in the following table:

<b>Hourly Rate of Pay*</b>	<b>Maximum Increase / Decrease in Contribution Rate</b>
< \$24	0%
\$24 - \$48	4%
>= \$48	5%

*\*Adjusted each fiscal year by the percentage increase in the cost of living during the previous calendar year, based on the San Francisco-Oakland-San Jose CPI-U Index, but not to exceed 3.5%.*

These contributions are credited with interest annually as determined by the Board.

If the member elects Social Security, the contributions to the System may be reduced by the amount contributed to Social Security (excluding the Medicare portion). Retirement benefits are actuarially reduced by the shortage, which is the difference between contributions paid at the 8%/7.5% rate and contributions actually paid, plus plan interest.

b. Employer:

The Employer contributes the remaining amounts necessary to maintain the soundness of the Retirement System. Any decrease in the member contribution rate is paid by the City.

**APPENDIX C  
 SUMMARY OF PLAN PROVISIONS  
 MISCELLANEOUS**

**5. Service Retirement**

**Eligibility**

***Charter Section 8.509, 8.587, and 8.600***

Age 50 with 20 years of Credited Service, or age 60 with 10 years of Credited Service.

***Charter Section 8.603***

Age 53 with 20 years of Credited Service, age 60 with 10 years of Credited Service, or age 65

**Benefit - Member**

***Charter Section 8.509, 8.587, and 8.600***

The monthly service retirement benefit is the greater of i) and ii) below, subject to a maximum of 75% of Average Final Compensation.

- i) A specified percent of Average Final Compensation based on the member's age at retirement (factors shown in Table C-6 below) for each year of Credited Service, effective January 11, 2009.

<b>Table C-6</b>			
<b>City and County of San Francisco Employees' Retirement System</b>			
<b>Section 8.509, 8.587 and 8.600 Member Service Retirement Factors</b>			
<b>Retirement Age</b>	<b>Retirement Factors</b>	<b>Retirement Age</b>	<b>Retirement Factors</b>
50	1.0%	57	1.7%
51	1.1%	58	1.8%
52	1.2%	59	1.9%
53	1.3%	60	2.1%
54	1.4%	61	2.2%
55	1.5%	62 or above	2.3%
56	1.6%		

- ii) The actuarial equivalent of twice the member's accumulated contributions with interest.

**APPENDIX C  
 SUMMARY OF PLAN PROVISIONS  
 MISCELLANEOUS**

***Charter Section 8.603***

The monthly service retirement benefit is a specified percent of Average Final Compensation based on the member's age at retirement subject to a maximum of 75% of Average Final Compensation (factors shown in Table C-7 below).

<b>Retirement Age</b>	<b>Retirement Factors</b>	<b>Retirement Age</b>	<b>Retirement Factors</b>
53	1.000%	60	1.756%
54	1.108%	61	1.864%
55	1.216%	62	1.972%
56	1.324%	63	2.080%
57	1.432%	64	2.188%
58	1.540%	65 or above	2.300%
59	1.648%		

**Benefit - Survivor**

50% of the service retirement benefit paid to a qualified survivor.

**6. Disability**

**Eligibility**

10 years of Credited Service.

**Benefit - Member**

1.8% of Average Final Compensation for each year of Credited Service, maximum of 75% of Average Final Compensation. If the benefit is less than 40% of Average Final Compensation, additional Credited Service had the member worked to age 60 can be added to the current Credited Service, in order to adjust the benefit to 40% of Average Final Compensation.

**Benefit - Survivor**

50% of the disability retirement benefit paid to a qualified survivor.

**APPENDIX C**  
**SUMMARY OF PLAN PROVISIONS**  
**MISCELLANEOUS**

**7. Death while an Active Employee**

*If Not Eligible for Service Retirement:*

Lump sum benefit equal to the accumulated refund of all employee contributions with interest, plus six months' salary to a designated beneficiary. If the death is of a violent nature and job-related, an additional lump sum equivalent benefit equal to 12 months' salary is payable.

*If Eligible for Service Retirement:*

A qualified spouse may elect i) or ii) below:

- i) Lump sum benefit equal to the accumulated refund of all employee contributions with interest, plus six months' salary to a designated beneficiary.
- ii) A benefit equal to 50% of the service retirement benefit the member would have received had the member retired for service on the date of death.

**8. Withdrawal Benefits**

*Charter 8.509 members with less than ten years of Credited Service or less than \$1,000 in accumulated contributions and Charter 8.587, 8.600, and 8.603 members with less than five years of Credited Service:*

Lump sum benefit equal to the accumulated employee contributions with interest.

*Charter 8.509 members with ten or more years of Credited Service or accumulated contributions exceeding \$1,000 and Charter 8.587 and 8.600 members with five or more years of Credited Service:*

The member may choose one of the following:

- i) Lump sum benefit equal to the accumulated refund all of employee contributions with interest.
- ii) A deferred retirement benefit payable on or after age 50 equal to the actuarial equivalent of twice the member's accumulated contributions with interest as of the retirement date.

*Charter 8.603 members with five or more years of Credited Service:*

The member may choose one of the following:

- i) Lump sum benefit equal to the accumulated refund all of employee contributions with interest.
- ii) A deferred retirement benefit payable on or after age 53 equal to the actuarial equivalent of 150% of the member's accumulated contributions with interest as of the retirement date.

**APPENDIX C**  
**SUMMARY OF PLAN PROVISIONS**  
**MISCELLANEOUS**

**9. Additional Post-retirement Death Benefit**

A death benefit payable as a lump sum equal to \$100 for each full year of Credited Service, subject to a maximum of \$3,000, will be paid to a qualified survivor upon the member's death.

**10. Post-retirement Cost-of-Living Benefit**

*Basic*

Monthly benefits are adjusted each July 1 by the accumulated change in the Consumer Price Index to the nearest 1%, with a maximum increase or decrease of 2% per year of the prior year's monthly benefit. A member's monthly benefit will never decrease below its original amount.

*Supplemental*

Effective July 1 of each fiscal year, if the Retirement System was fully funded based on the market value of assets for the previous year and there are sufficient "excess" investment earnings on the Retirement fund for the previous fiscal year-end, the adjustment could be increased to 3.5% of that member's current monthly benefit less the amount of the Basic COLA above. If "excess" earnings are insufficient to fund a 3.5% increase, then to the extent of "excess" earnings, benefits are increased in increments of .5% up to a maximum of 3.5%.

**11. Changes in this Valuation**

None.

**APPENDIX C**  
**SUMMARY OF PLAN PROVISIONS**  
**FLOATING EMPLOYEE CONTRIBUTION RATES**

**V. Floating Employee Contribution Rates**

The table below shows the adjustment to the employee contribution rate based on the calculated net employer contribution rate. There are three different adjustment schedules which apply to different groups of employees.

Net Employer Contribution Rate	Adjustment to Employee Contribution Rate		
	Group 1	Group 2	Group 3
0.00% - 0.00%	-4.00%	-5.00%	-6.00%
0.01% - 1.00%	-4.00%	-4.50%	-5.00%
1.01% - 2.50%	-3.75%	-4.25%	-4.75%
2.51% - 4.00%	-3.50%	-4.00%	-4.50%
4.01% - 5.50%	-2.50%	-3.00%	-3.50%
5.51% - 7.00%	-2.00%	-2.50%	-3.00%
7.01% - 8.50%	-1.50%	-2.00%	-2.00%
8.51% - 10.00%	-1.00%	-1.50%	-1.50%
10.01% - 11.00%	-0.50%	-0.50%	-0.50%
11.01% - 12.00%	0.00%	0.00%	0.00%
12.01% - 13.00%	0.50%	0.50%	0.50%
13.01% - 15.00%	1.00%	1.50%	1.50%
15.01% - 17.50%	1.50%	2.00%	2.00%
17.51% - 20.00%	2.00%	2.50%	3.00%
20.01% - 22.50%	2.50%	3.00%	3.50%
22.51% - 25.00%	3.50%	4.00%	4.50%
25.01% - 27.50%	3.50%	4.00%	4.50%
27.51% - 30.00%	3.75%	4.25%	4.75%
30.01% - 32.50%	3.75%	4.25%	4.75%
32.51% - 35.00%	4.00%	4.50%	5.00%
35.01% +	4.00%	5.00%	6.00%

**Group 1:** Miscellaneous members earning between \$24 per hour and \$48 per hour, and Police or Fire members hired after June 30, 2010 earning less than \$48 per hour.

**Group 2:** Miscellaneous members earning \$48 per hour or more, and Police or Fire members hired after June 30, 2010 earning \$48 per hour or more.

There is no adjustment for Miscellaneous members earning less than \$24 per hour.

The hourly rates shown above are for the fiscal year ending 2013. Each fiscal year these hourly rates are adjusted by the percentage increase, not to exceed 3.5%, in the cost of living during the previous calendar year determined by the CPI-U for San Francisco-Oakland-San Jose.

**Group 3:** Police and Fire members hired before July 1, 2010.

**APPENDIX C**  
**SUMMARY OF PLAN PROVISIONS**  
**FLOATING EMPLOYEE CONTRIBUTION RATES**

**Note:** The summary of major plan provisions is designed to outline principal plan benefits. If the SFERS staff should find the plan summary not in accordance with the actual provisions, the actuary should immediately be alerted so the proper provisions are valued.

**APPENDIX D  
GLOSSARY OF TERMS**

**1. Actuarial Liability**

The Actuarial Liability is the difference between the present value of all future system benefits and the present value of total future normal costs. This is also referred to by some actuaries as the “accrued liability” or “actuarial accrued liability.”

**2. Actuarial Assumptions**

Estimates of future experience with respect to rates of mortality, disability, turnover, retirement rate or rates of investment income, and salary increases. Demographic actuarial assumptions (rates of mortality, disability, turnover, and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

**3. Accrued Service**

Service credited under the System which was rendered before the date of the actuarial valuation.

**4. Actuarial Equivalent**

A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.

**5. Actuarial Cost Method**

A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of a retirement system benefit between future normal cost and actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

**6. Actuarial Gain (Loss)**

The difference between actual experience and actuarial assumption anticipated experience during the period between two actuarial valuation dates.

**7. Actuarial Present Value**

The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment.

**APPENDIX D  
GLOSSARY OF TERMS**

**8. Amortization**

Paying off an interest-discounted amount with periodic payments of interest and principal - as opposed to paying off with a lump sum payment.

**9. Normal Cost**

The actuarial present value of retirement system benefits allocated to the current year by the actuarial funding method.

**10. Set back/Set forward**

Set back is a period of years that a standard published table (i.e. mortality) is referenced backwards in age. For instance, if the set back period is 2 years and the participant's age is currently 40, then the table value for age 38 is used from the standard published table. It is the opposite for set forward. A system would use set backs or set forwards to compensate for mortality experience in their work force.

**11. Unfunded Actuarial Liability (UAL)**

The unfunded actuarial liability represents the difference between actuarial liability and valuation assets. This value is sometimes referred to as "unfunded actuarial accrued liability."

Most retirement systems have unfunded actuarial liabilities. They typically arise each time new benefits are added and each time experience losses are realized.

The existence of unfunded actuarial accrued liability is not in itself an indicator of poor funding. Also, unfunded actuarial liabilities do not represent a debt that is payable today. What is important is the ability of the plan sponsor to amortize the unfunded actuarial liability and the trend in its amount (after due allowance for devaluation of the dollar).