

City and County of San Francisco
Employees' Retirement System
July 1, 2009
Actuarial Valuation

Produced by Cheiron

January 2010

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## LETTER OF TRANSMITTAL

January 4, 2010
Retirement Board of the City and County of San Francisco Employees' Retirement System c/o Mr. Gary A. Amelio, Executive Director 30 Van Ness Avenue, Suite 3000
San Francisco, CA 94102
Dear Members of the Board:
At your request, we performed the July 1, 2009 actuarial valuation of the City and County of San Francisco Employees' Retirement System(SFERS). The valuation results with respect to SFERS are contained in this report.

The table below presents the key results of the 2009 valuation for the SFERS.

| Table I-1 <br> City and County of San Francisco Employees' Retirement System |  |  |
| :---: | :---: | :---: |
| Valuation Date Fiscal Year | $\begin{gathered} \hline \text { July 1, } 2009 \\ 2010 / 2011 \end{gathered}$ | $\begin{gathered} \hline \text { July 1, } 2008 \\ \text { 2009/2010 } \end{gathered}$ |
| Unfunded Actuarial Liability/(Surplus) | \$ 493.9 mil. | \$ (582.6) mil. |
| Funding Ratio (actuarial value of assets) | 97.0\% | 103.8\% |
| Net Employer Contribution Rate | 13.56\% | 9.49\% |

- Unfunded Actuarial Liability (UAL)/Surplus: SFERS' surplus has decreased by $\$ 1,076.5$ million. The primary cause of this decrease is the investment experience during the 12 months ended June 30, 2009.
- Funding Ratio: The ratio of the actuarial value of assets to actuarial liabilities declined since the last valuation from $103.8 \%$ to $97.0 \%$. The actuarial value of assets is smoothed in order to mitigate the impact of investment performance volatility on employer contribution rates. Without the asset smoothing, the ratio of the market value of assets to actuarial liabilities declined from 103.1\% to 72.3\%.
- Net Employer Contribution Rate: Represents the recommended contribution rate to be made by the Employer as a percent of covered payroll. The increase of $4.07 \%$ is primarily attributable to the investment experience. Because assets are smoothed and the full investment losses from the last fiscal year have not been recognized yet, the contribution rate is expected to increase for the next four years assuming investment returns are $7.75 \%$ per year and all other actuarial assumptions are met.

More details on the plan experience for the past year, including the changes listed above and their impact on these July 1, 2009 valuation results can be found in our report which follows.

We certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board, and that as Members of the American Academy of Actuaries, we meet the Qualification Standards to render the opinion contained in this report. In preparing our report, we relied without audit, on information supplied by SFERS' staff. This information includes, but is not limited to, plan provisions, employee data, and financial information.

Finally, it’s important to note that this valuation, which was prepared using census data and financial information as of July 1, 2009, does not reflect any subsequent changes in the membership profile and the investment markets.

Sincerely, Cheiron

Gene Kalwarski, FSA, FCA, EA, MAAA William R. Hallmark, ASA, FCA, EA, MAAA Consulting Actuary Consulting Actuary

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM <br> JULY 1, 2009 ACTUARIAL VALUATION 

## SECTION I <br> BOARD SUMMARY

The primary purpose of this actuarial valuation is to report, as of the valuation date, on the following:

- The financial condition of the City and County of San Francisco Employees’ Retirement System (SFERS),
- Past and expected trends in the financial condition of SFERS,
- The Employer’s contribution rate for the Fiscal Year Ending June 30, 2011, and
- Information required by the Governmental Accounting Standards Board (GASB).

In this Section, we present a summary of the principal valuation results. This includes the basis upon which the July 1, 2009 valuation was completed and an examination of the current financial condition of SFERS. In addition, we present a review of the key historical trends followed by the projected financial outlook for SFERS.

## A. Valuation Basis

SFERS funding policy sets employer contributions equal to the sum of normal cost under the Entry Age Normal Cost Method, plus amortization of changes in the unfunded actuarial liabilities due to assumption changes and actuarial gains and losses over 15 year periods, plus amortization of Proposition costs over 20 year periods.

There have been no changes in the actuarial assumptions or methods since the last actuarial valuation report.

Certain airport police have transferred service from CalPERS to SFERS this year. While the service transferred has not been included in the data provided for this valuation, the associated asset transfer has been included in this valuation along with an additional liability equal to the assets transferred.

## SECTION I <br> BOARD SUMMARY

## B. Current Financial Condition of SFERS

On the following pages, we summarize the key results of the July 1, 2009 valuation and how they compare to the results from the July 1, 2008 valuation.

## 1. SFERS Membership:

As shown in Table I-2 below, total membership in SFERS remained relatively level from 2008 to 2009. Active membership decreased $2.4 \%$, terminated vested membership increased $5.1 \%$ and retiree membership increased $4.8 \%$. Total payroll increased by $3.6 \%$, and the average pay per active member increased by $5.9 \%$.

| Table I-2 <br> City and County of San Francisco Employees' Retirement System Membership Total |  |  |  |
| :---: | :---: | :---: | :---: |
| Item | July 1, 2009 | July 1, 2008 | \% Change |
| Actives | 29,919 | 30,650 | -2.4\% |
| Active DROP | 56 | - | N/A |
| Terminated Vested | 4,986 | 4,746 | 5.1\% |
| Disabled | 2,669 | 2,630 | 1.5\% |
| Retirees | 15,868 | 15,147 | 4.8\% |
| Beneficiaries | 3,757 | 3,737 | 0.5\% |
| Total SFERS Members | 57,255 | 56,910 | 0.6\% |
| Active Member and DROP Payroll | \$2,544,939,324 | \$ 2,457,196,188 | 3.6\% |
| Avg Pay per Active/DROP | 84.902 | 80,170 | 59\% |

## 2. SFERS Assets and Liabilities:

Table I-3 on the following page presents a comparison between the July 1, 2009 and July 1, 2008 SFERS assets, liabilities, UAL, and funding ratios.

The key results shown in Table I-3 indicate that the total actuarial liability increased 7.4\% and the market value of assets decreased by $24.7 \%$. SFERS employs an asset smoothing method which dampens investment market volatility. For this year the smoothed value of assets (called the actuarial value of assets) increased by $0.4 \%$. Finally, SFERS' overall funding (actuarial value of assets less actuarial liabilities) decreased from a surplus of $\$ 0.58$ billion to a deficit of $\$ 0.49$ billion, resulting in a decrease in the funding ratio from $103.8 \%$ to $97.0 \%$. Based on the market value of assets, the funding ratio decreased from $103.1 \%$ to 72.3\%.

## SECTION I <br> BOARD SUMMARY

| Table I-3City and County of San Francisco Employees' Retirement SystemAssets \& Liabilities(in millions) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Item | July 1, 2009 |  |  | July 1, 2008 | \% Change |
| Actives | \$ | 7,377.9 | \$ | 7,055.2 | 4.6\% |
| Active DROP |  | 93.0 |  | - | N/A |
| Terminated Vested |  | 307.7 |  | 290.1 | 6.1\% |
| Disabled |  | 1,624.4 |  | 1,493.6 | 8.8\% |
| Retirees |  | 6,256.4 |  | 5,740.1 | 9.0\% |
| Beneficiaries |  | 839.2 |  | 779.8 | 7.6\% |
| Total Actuarial Accrued Liability | \$ | 16,498.6 |  | 15,358.8 | 7.4\% |
| Market Value Assets* | \$ | 11,924.5 | \$ | 15,832.5 | -24.7\% |
| Actuarial Value Assets |  | 16,004.7 |  | 15,941.4 | 0.4\% |
| Unfunded Actuarial Liability | \$ | 493.9 |  | (582.6) | -184.8\% |
| Funding Ratio - Actuarial Value |  | 97.0\% |  | 103.8\% | -6.8\% |

* The Market Value as of July 1, 2008 differs slightly from last years report due to a change in administrative expenses reported in the final asset statements.

3. Components of Surplus Decrease between July 1, 2008 and July 1, 2009:

As mentioned earlier, the surplus of $\$ 582.6$ million became a deficit of $\$ 493.9$ million this year, representing a decrease this year of $\$ 1,076.5$ million. Table I-4 presents the specific components of this change in the Surplus.

## SECTION I <br> BOARD SUMMARY

The key findings in Table I-4 are that the investment experience reduced funding by $\$ 722.7$ million, and liability experience losses decreased funding an additional $\$ 235.8$ million.


## 4. SFERS Contributions:

Table I-5 shows that the SFERS contribution rate for FY 2011, measured as a percent of membership payroll, increased from $9.49 \%$ to $15.04 \%$.


## SECTION I <br> BOARD SUMMARY

Table I-6 shows sources for the change in the net employer contribution rate. The contribution rate increase is primarily attributable to the investment experience.

| Table I-6 <br> City and County of San Francisco Employees' Retirement System Contribution Reconciliation |  |  |  |
| :---: | :---: | :---: | :---: |
| Item | Total | Normal Cost | Amortization |
| 2008 Net Employer Contribution Rate* | 9.49\% | 11.11\% | -1.62\% |
| Change due to asset loss | 2.41\% | 0.00\% | 2.41\% |
| Change due to COLAs more than expected | 0.61\% | 0.00\% | 0.61\% |
| Change due to retirements | 0.42\% | 0.00\% | 0.42\% |
| Other | 0.63\% | 0.01\% | 0.62\% |
| 2009 Net Employer Contribution Rate* | 13.56\% | 11.12\% | 2.44\% |

*Includes expenses.
In Section IV of this report, we provide more detail on the development of this contribution rate.

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM <br> JULY 1, 2009 ACTUARIAL VALUATION 

## SECTION I <br> BOARD SUMMARY

## C. Historical Trends

Despite the fact that most of the attention given to the valuation is with respect to the most recently computed unfunded actuarial liability, funding ratio, and SFERS contribution rate, it is important to remember that each valuation is merely a snapshot of the long-term progress of a pension fund. It is more important to judge a current year's valuation result relative to historical trends, as well as trends expected into the future.

In the chart below, we present the historical trends for assets (both market and smoothed) versus actuarial liabilities, and also show the progress of SFERS' funding ratios since 1999.

## SFERS- Assets and Liabilities 1999-2009

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



The chart above indicates that from 1999 to 2000, SFERS maintained a strong and improving funding ratio. Then from 2000 to 2004, the funding ratio declined but remained in a surplus status with the low point being in 2004 at $103.8 \%$. From 2004 to 2007, the ratio improved, primarily due to strong asset performance. In 2008, the ratio declined slightly primarily due to Proposition B and assumption changes. In 2009, the ratio further declined due primarily to investment experience. Based on the current difference between the market value of assets and the actuarial value of assets, a further decline in the funded status is expected over the next few years.

## SECTION I <br> BOARD SUMMARY

In the chart below, we present the historical trends for SFERS' contribution rates since the Fiscal Year Ending June 30, 2001. All information shown prior to the Fiscal Year Ending June 30, 2010 was calculated by the prior actuary.

Employer and Member Contribution Rates 1999-2009

City and County of San Francisco Employees' Retirement System


The key information in this chart is the increase in the Employer contribution rate since 2004. The dramatic increase scheduled for the Fiscal Year Ending in 2010 is primarily due to benefit changes under Proposition B. The dramatic increase scheduled for the Fiscal Year Ending in 2011 is primarily due to recent investment experience. Significant employer contribution rate increases are expected for the next few years as the balance of the market value investment losses are recognized under the asset smoothing method.

## CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM JULY 1, 2009 ACTUARIAL VALUATION

## SECTION I BOARD SUMMARY

In the chart below, we show historical trends of SFERS' contribution rate components since the Fiscal Year Ending June 30, 2001, with a table below it showing the detail of the components of the contribution rates. All information shown prior to the Fiscal Year Ending June 30, 2010 was calculated by the prior actuary.

Citv and Countv of San Francisco Emmlovees' Retirement Svstem


| Fiscal Year End | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Normal Cost + Expenses | 13.45\% | 14.57\% | 14.01\% | 14.42\% | 15.64\% | 15.51\% | 17.01\% | 17.05\% | 16.64\% | 18.61\% | 18.63\% |
| Amortization of UAL | -13.07\% | -14.10\% | -11.21\% | -7.32\% | -3.63\% | -1.41\% | -3.25\% | -3.63\% | -4.13\% | -1.62\% | 2.44\% |
| Member Contributions | $\underline{-7.53 \%}$ | $\underline{-7.53 \%}$ | -7.53\% | $\underline{-7.52 \%}$ | -7.53\% | $\underline{-7.52 \%}$ | $\underline{-7.52 \%}$ | $\underline{-7.51 \%}$ | $\underline{-7.52 \%}$ | $\underline{-7.50 \%}$ | -7.51\% |
| Net Rate | -7.15\% | -7.06\% | -4.73\% | -0.42\% | 4.48\% | 6.58\% | 6.24\% | 5.91\% | 4.99\% | 9.49\% | 13.56\% |
| Adjusted Net Rate | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 4.48\% | 6.58\% | 6.24\% | 5.91\% | 4.99\% | 9.49\% | 13.56\% |

The key information above is that the amortization of the UAL has changed over the last decade from $-13.07 \%$ to $2.44 \%$ accounting for the majority of the increase in contribution rates. While some of the increase is due to plan changes, the primary cause of the increase is an average annual investment return on the market value of assets of approximately $3.5 \%$ compared to an expected return of $8.0 \% ~(7.75 \%$ after July 1, 2008) as well as changes in assumptions. The normal cost as a percent of payroll has also increased from the Fiscal Year Ending in 2001 to the Fiscal Year Ending in 2011, due to experience, plan changes and assumption changes.. The chart demonstrates how the total annual cost is offset by member contribution and amortization of surplus assets (prior to 2011).

## SECTION I <br> BOARD SUMMARY

The next chart below represents 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.

SFERS Historical Gain/(Loss) 1999-2009


Plan Year Ending
The key insights from this chart are:

- Investment gains (gold bars) from 1999 through 2001 were offset by investment losses from 2002 through 2005. From 2006 to 2008, there were additional investment gains, but these were offset by investment losses in 2009. Since the actuarial value of assets only recognizes a portion of the recent market losses, additional investment losses on the actuarial value of assets are expected over the next few years.
- On the liability side, there has been a pattern of liability losses, with the exception of gains in 2004, 2006 and 2008. Recent limits on salary increases may produce gains in the near future, but have not had a significant impact on pay through June 30, 2009. When we conduct a formal experience review on all the assumptions, which is scheduled to occur in 2010, we will be able to provide a more detailed explanation for the source of these liability losses.


# SECTION I <br> BOARD SUMMARY 

## D. Projected Financial Trends

Our analysis of SFERS projected financial trends is an important part of this valuation. In this Section, we present our assessment of the implications of the July 1, 2009 valuation results on the future outlook for SFERS in terms of benefit security (assets over liabilities) and the SFERS expected cost progression.

In the charts that follow, we project SFERS' assets and liabilities, the pay down of UAL, and the Employer contributions as a percent of payroll on two different bases:

1) Assuming $7.75 \%$ returns each and every year, and
2) Assuming returns shown in the table below. These are rates of return that vary each year but over the projection period equals on average the assumed $7.75 \%$ return. We do this because SFERS' returns will never be level each and every year.

| July 1, Return | $\begin{gathered} \underline{2009} \\ \mathbf{1 6 . 0 0 \%} \end{gathered}$ | $\begin{array}{r} \underline{2010} \\ \hline 1.00 \% \end{array}$ | $\begin{array}{r} \underline{2011} \\ 9.00 \% \end{array}$ | $\begin{gathered} \underline{2012} \\ -10.00 \% \end{gathered}$ | $\begin{array}{r} \underline{2013} \\ 9.00 \% \\ \hline \end{array}$ | $\begin{array}{r} \underline{2014} \\ 7.00 \% \end{array}$ | $\begin{gathered} \underline{2015} \\ 25.00 \% \end{gathered}$ | $\begin{gathered} \underline{2016} \\ \hline 1.00 \% \end{gathered}$ | $\begin{gathered} \underline{2017} \\ 15.00 \% \end{gathered}$ | $\begin{array}{r} \hline \underline{2018} \\ 8.00 \% \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | , |  |  |  |  |  |  |  |  |  |
| July 1, | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
| Return | -9.00\% | 6.00\% | 15.00\% | 4.00\% | 9.00\% | 10.00\% | 15.00\% | 24.00\% | 7.00\% | 0.00\% |

Please note that the investment returns shown 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.

# SECTION I <br> BOARD SUMMARY 

## Projection Set 1: Assets and Liabilities - SFERS

The two charts below show asset measures (green and gold lines) compared to liabilities (grey bars). At the top of each chart is the progression of SFERS funding ratios. The key insights from these two charts are the projected declines in funded ratios over the next several years, as recent market losses become fully recognized, and how varying investment returns can impact SFERS’ funding ratios.

Chart 1: Projection of Assets and Liabilities, 7.75\% return each year


Chart 2: Projection of Assets and Liabilities, varying returns averaging 7.75\% overtime


## SECTION I <br> BOARD SUMMARY

## Projection Set 2: Projected Employer Contribution Rate

As seen in the charts below, employer contribution rates are expected to increase significantly over the next several years. In addition, varying returns will also have a significant impact on the pattern and magnitude of actuarially computed employer contribution rates.

Chart 1: 7.75\% return each year


Chart 2: varying returns averaging $7.75 \%$ overtime


# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM JULY 1, 2009 ACTUARIAL VALUATION 

## SECTION II

## 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, as of the valuation date, the value of the assets if they were liquidated on that 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.

On the following pages we present detailed information on SFERS’ assets:
A. Statement of cash flows during the year by membership group,
B. Development of the actuarial value of assets,
C. Discussion of investment performance for the year.

## A. Cash Flows

| Table II-1 <br> SFERS - Change in Market Value of Assets July 1, 2008 through June 30, 2009 <br> (in thousands) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Item | Police | Fire | Miscellaneous | Total |
| 1. Market Value as of $7 / 1 / 200$ | \$3,244,907 | \$2,578,794 | \$10,008,820 | \$15,832,521 |
| 2. Additions |  |  |  |  |
| a. Employers' contributions for 2008-2009 | 12,240 | 8,535 | 98,305 | 119,080 |
| b. Members' contributions for 2008-2009 | 18,435 | 13,012 | 161,386 | 192,833 |
| c. Airport Police transfer | 7,152 |  |  | 7,152 |
| d. Total Additions: $(2 \mathrm{a}+2 \mathrm{~b}+2 \mathrm{c})$ | \$37,827 | \$21,547 | \$259,691 | \$319,065 |
| 3. Net Investment Income for 2008-2009 | $(711,895)$ | $(561,019)$ | $(2,202,185)$ | $(3,475,099)$ |
| 4. Benefits and Administrative Expenses | $(139,194)$ | $(143,283)$ | $(469,530)$ | $(752,007)$ |
| 5. Net Increase/(Decrease): $(2 \mathrm{~d}+3+4)$ | \$(813,262) | \$(682,755) | \$(2,412,024) | \$(3,908,042) |
| 6. Market Value as of 7/1/2009: $(1+5)$ | \$2,431,645 | \$1,896,039 | \$7,596,796 | \$11,924,479 |

* The Market Value as of July 1, 2008 differs slightly from last years report due to a change in administrative expenses reported in the final asset statements.


## B. Actuarial Value of Assets

To determine on-going funding requirements, most pension funds utilize an actuarial value of assets that differs from the market value of assets. The actuarial value of assets is based on averaging or smoothing year-to-year market value returns for purposes of reducing the resulting volatility on contributions.

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM JULY 1, 2009 ACTUARIAL VALUATION 

## SECTION II

ASSETS

The actuarial value is calculated by recognizing $20 \%$ of each of the prior four years of actual investment experience relative to the expected return on the actuarial asset value ( $7.75 \%$ for 2008-2009 and later years and $8.0 \%$ for prior years). The expected return on the actuarial value of assets is determined using the Fund's actual cash flows and the actuarial rate of interest. The balance of the actual investment experience is recognized in a similar fashion in future years. (See Appendix B on page 66 for further explanation of the asset valuation method).

|  | Table II-2 <br> SFERS - Development of Actuarial Value of Assets for 7/1/2009 <br> (in thousands) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Item | Police | Fire | Miscellaneous | Total |
| 1. | Actuarial Value as of 7/1/2008 | \$3,328,139 | \$2,625,783 | \$9,987,468 | \$15,941,390 |
| 2. | Non-Investment Cash Flow for 2008-2009 | $(101,368)$ | $(121,736)$ | $(209,838)$ | $(432,942)$ |
| 3. | Expected Return in 2008-2009 | 254,076 | $198,869$ | 766,049 | 1,218,994 |
| 4. | Expected Actuarial Value as of $7 / 1 / 2009$ : $(1+2+3)$ | $\$ 3,480,847$ | \$2,702,915 | \$10,543,680 | \$16,727,442 |
| 5. | Actual Return in 2008-2009 | $(711,895)$ | $(561,019)$ | $(2,202,185)$ | $(3,475,099)$ |
| 6. | Actual Return Above Expected in 2008-2009 | $(965,971)$ | $(759,888)$ | $(2,968,234)$ | $(4,694,094)$ |
| 7. | Recognition of Returns Above Expected <br> a. 2008-2009 | $(193,194)$ | $(151,978)$ | $(593,647)$ | $(938,819)$ |
|  | b. 2007-2008 | $(79,814)$ | $(63,574)$ | $(239,560)$ | $(382,947)$ |
|  | c. 2006-2007 | 72,455 | 58,212 | 213,821 | 344,487 |
|  | d. 2005-2006 | 28,694 | 23,339 | 83,642 | 135,676 |
|  | e. 2004-2005 | 25,243 | 20,874 | 72,774 | 118,891 |
|  | f. Total: $(7 \mathrm{a}+7 \mathrm{~b}+7 \mathrm{c}+7 \mathrm{~d}+7 \mathrm{e})$ | \$(146,617) | \$(113,126) | \$(462,969) | \$(722,712) |
| 8. | Actuarial Value as of 7/1/2009: $(4+7 f)$ | \$3,334,230 | \$2,589,790 | \$10,080,710 | \$16,004,730 |

## C. Investment Performance

The market value of assets internal rate of return, net of investment expenses, was $-22.26 \%$ for the year ending July 1,2009 . This is compared to an assumed return of $7.75 \%$.

On an actuarial value of assets basis, the return for the year ending July 1, 2009 was $3.16 \%$. The difference is largely due to the recognition of deferred gains from 2005, 2006, and 2007 while $80 \%$ of the loss for 2009 is deferred to future years. This return produced an overall SFERS investment loss of $\$ 722.7$ million for the year ending July 1, 2009.

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM <br> JULY 1, 2009 ACTUARIAL VALUATION 

## SECTION III

## LIABILITIES

In this section, we present detailed information on liabilities for SFERS, including:

- Disclosure of liabilities at July 1, 2008 and July 1, 2009, and
- Statement of changes in the unfunded actuarial liabilities during the year.


## A. Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the purpose for which the figures are ultimately used.

- Present Value of all Future Benefits: Used for measuring all future SFERS obligations, represents the amount of money needed today to fully pay off all benefits of SFERS both earned as of the valuation date and those to be earned in the future by current plan participants, under the current Plan provisions.
- Actuarial Liability-Entry Age Normal (EAN): Used for determining employer contributions and GASB accounting disclosures. This liability is calculated taking the present value of all future benefits and subtracting the present value of future member contributions and future employer normal costs as determined under the EAN actuarial funding method.
- Present Value of Accrued Benefits: Disclosed in Section V of this report for accounting statement purposes (FASB 35). This liability represents the present value of future benefits payable to all plan participants if the plan were terminated as of the valuation date, and future accruals and contributions stopped.

Table III-1 on the following page discloses the first two of these liabilities for the current and prior year valuations. By subtracting the actuarial value of assets from the actuarial liability the net surplus or an unfunded actuarial liability (UAL) is determined.

## CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM JULY 1, 2009 ACTUARIAL VALUATION

## SECTION III <br> LIABILITIES



Table III-2 shows actuarial liability as of July 1, 2009 for each of the Miscellaneous, Police, and Fire members of SFERS.

Table III-2
City and County of San Francisco Employees' Retirement System - Split by Group
(in thousands)

| Item | July 1, 2009 Police |  | July 1, 2009 <br> Fire |  | July 1, 2009 Miscellaneous |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Actives |  | 1,898,555 | \$ | 1,362,498 |  | 8,800,731 |
| Active DROP |  | 92,990 |  | - |  | - |
| Terminated Vested |  | 12,523 |  | 8,379 |  | 286,791 |
| Disabled |  | 484,352 |  | 814,185 |  | 325,902 |
| Retirees |  | 1,087,583 |  | 964,179 |  | 4,204,616 |
| Beneficiaries |  | 284,154 |  | 235,040 |  | 320,039 |
| Total SFERS | \$ | 3,860,157 | \$ | 3,384,281 | \$ | 13,938,079 |
| Actuarial Liability |  |  |  |  |  |  |
| Actives | \$ | 1,179,526 |  | \$ 828,138 |  | 5,370,252 |
| Active DROP |  | 92,990 |  | - |  | - |
| Terminated Vested |  | 12,523 |  | 8,379 |  | 286,791 |
| Disabled |  | 484,352 |  | 814,185 |  | 325,902 |
| Retirees |  | 1,087,583 |  | 964,179 |  | 4,204,616 |
| Beneficiaries |  | 284,154 |  | 235,040 |  | 320,039 |
| Total SFERS | \$ | 3,141,128 | \$ | 2,849,921 | \$ | 10,507,600 |

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM <br> JULY 1, 2009 ACTUARIAL VALUATION 

## SECTION III

## LIABILITIES

## B. Changes in Unfunded Actuarial Liabilities

The UAL of any retirement plan is expected to change at each subsequent valuation for a variety of reasons. In each valuation, we will report on those elements of change in the UAL that have particular significance or could potentially affect the long-term financial outlook of a retirement plan. Below we present key changes in liabilities since the last valuation.

| Table III-3 <br> SFERS - Development of 2008 Experience Gain/(Loss) (in millions) |  |
| :---: | :---: |
| Item | Cost |
| 1. Unfunded Actuarial Liability at July 1, 2008 | \$(582.6) |
| 2. Middle of year actuarial liability payment | 169.2 |
| 3. Interest to end of year on 1 and 2 | (38.7) |
| 4. Expected Unfunded Actuarial Liability at July 1, $2009(1+2+3)$ | \$(452.1) |
| 5. Actual Unfunded Liability at July 1, 2009 | \$493.9 |
| 6. Difference: $(4-5)$ | \$(946.0) |
| 7. Portion of difference (6) due to investment experienc | (722.7) |
| 8. Portion of difference (6) due to Old Safety COLAs | (181.7) |
| 9. Portion of difference (6) due to Retirements | (125.6) |
| 10. Portion of difference (6) due to Salaries | 126.2 |
| 11. Portion of difference (6) due to Contributions more than expected | 12.5 |
| 12. Portion of difference (6) due to Other Experience | (54.7) |

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM <br> JULY 1, 2009 ACTUARIAL VALUATION 

## SECTION IV CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions are needed to achieve and maintain an appropriate funded status of a plan. Typically, the actuarial process will use an actuarial funding method that will result in a pattern of contributions that are both stable and predictable.

The actuarial funding methodology employed is the Entry Age Normal actuarial funding method. Under this method, there are two components to the total contribution: the normal cost, and the unfunded actuarial liability contribution. The normal cost rate is determined by taking the value, as of entry age into the plan, of each member's projected future benefits. This value is then divided by the value, also at entry age, of the each member's expected future salary. The normal cost rate is multiplied by current salary to determine each member's normal cost. Finally, the normal cost is reduced by the member contribution to produce the employer normal cost. The difference between the EAN actuarial liability and the actuarial value of assets is the unfunded actuarial liability. The UAL is made up of unamortized prior Charter amendments, plus the impact of accumulated experience, assumption and method changes and Supplemental COLA costs.

Table IV-1 on the following page shows how the Employer's contribution rate for FY 2011 is developed. The methodology and assumptions used are in full compliance with the parameters set in GASB Statement No. 25 for purposes of determining the annual required contribution (ARC).

Table IV-2 provides the payment schedules to amortize the changes to the actuarial liability as a result of changes to the Charter over 20 years with the net unfunded liability representing the accumulated experience gains/losses, cost of Supplemental COLA or changes in the assumptions or methods over 15 years. All amortizations 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 of $4.5 \%$. The balance of the unfunded liability this year reflects the increase in actuarial liabilities due to the interest assumption change from $8.0 \%$ to $7.75 \%$. As partial offset the finance charge portion of the amortization payments has been reduced as a function of the interest assumption change

CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM JULY 1, 2009 ACTUARIAL VALUATION

## SECTION IV CONTRIBUTIONS

| Table IV-1City and County of San Francisco Employees' Retirement SystemDevelopment of the Net Employer Contribution Rate as of July 1, 2009 (FY 2010)(dollars in millions) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | July 1, 2009 |  |  |  | July 1, 2008 |
|  |  | Police | Fire | Miscellaneous | COMPOSITE | COMPOSITE |
| 1. | Total Normal Cost Rate | 24.20\% | 30.71\% | 16.40\% | 18.18\% | 18.16\% |
| 2. | Member Contribution Rate | 7.49\% | 7.49\% | 7.51\% | 7.51\% | 7.50\% |
| 3. | Employer Normal Cost Rate (1-2) | 16.71\% | 23.22\% | 8.89\% | 10.67\% | 10.66\% |
| 4. | a. UAL - Proposition balance as of 7/1/2009 | \$ 211.4 | \$ 204.7 | \$ 1,002,8 | \$ 1,418.9 | \$ 1,449.6 |
|  | b. Remaining balance of 7/1/2009 UAL | (404.5) | 55.4 | (575.9) | (925.0) | $(2,032.2)$ |
|  | c. Net UAL - as of 7/1/2009 | \$ (193.1) | \$ 260.1 | \$426.9 | \$ 493.9 | \$ (582.6) |
| 5. | a. Amortization of 4.a., Proposition UAL | 7.86\% | 11.57\% | 4.75\% | 5.53\% | 5.41\% |
|  | b. Amortization of 4.b., Remaining UAL | -13.16\% | $\underline{\text { 2.71\% }}$ | -2.32\% | -3.09\% | -7.03\% |
|  | c. Amortization of Net UAL (5a + 5b) | -5.30\% | 14.28\% | 2.43\% | 2.44\% | -1.62\% |
| 6. | Expense Load | 0.45\% | 0.45\% | 0.45\% | 0.45\% | 0.45\% |
| 7. | Net Employer Contribution Rate ( $3+5 \mathrm{c}+6$ ) | 11.86\% | 37.95\% | 11.77\% | 13.56\% | 9.49\% |

## SECTION IV CONTRIBUTIONS

|  |  |  | City and Co elopment of | unty of S <br> the Tota | Tab <br> an Franci <br> Proposit | le IV-2 <br> sco Employ <br> ions Rate | ees' Retir <br> s of July | $\begin{aligned} & \text { ement Sys } \\ & \text { 1, } 2009 \text { (FY } \end{aligned}$ | tem Y 2011) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Police |  |  | Fire |  |  | Miscellaneous |  |  | Total |
| Item | Remaining Period | Outstanding Balance | $\begin{gathered} \text { Total } \\ \text { Amortization } \\ \hline \end{gathered}$ | Total As a \% of Pay | Outstanding Balance | Total Amortization | Total As a \% of Pay | Outstanding Balance | Total Amortization | $\begin{aligned} & \hline \text { Total As a } \\ & \text { \% of Pay } \\ & \hline \end{aligned}$ | $\begin{gathered} \hline \text { Outstanding } \\ \text { Balance } \\ \hline \end{gathered}$ | Total Amortization |
| 1991 Prop A- Misc ERP Window | 2 | \$0 | \$0 | 0.00\% | \$0 | \$0 | 0.00\% | \$26,625 | \$14,030 | 0.67\% | \$26,625 | \$14,030 |
| 1992 Prop F - Retiree Bft Increase | 3 | 83 | 30 | 0.01\% | 48 | 17 | 0.01\% | 14,100 | 5,029 | 0.24\% | 14,231 | 5,076 |
| 1994 Prop H-Domestic Partners | 5 | 2,941 | 649 | 0.25\% | 3,281 | 723 | 0.42\% | 4,973 | 1,097 | 0.05\% | 11,195 | 2,469 |
| 1996 Prop C- Retiree Benefits | 7 | 165 | 27 | 0.01\% | 66 | 11 | 0.01\% | 30,109 | 4,885 | 0.23\% | 30,340 | 4,923 |
| 1996 Prop D- New Fire Ret Bfts | 7 | 0 | 0 | 0.00\% | 12,635 | 2,050 | 1.18\% | 0 | 0 | 0.00\% | 12,635 | 2,050 |
| 1998 Prop A- New Police Ret Bfts | 9 | 29,470 | 3,830 | 1.47\% | 0 | 0 | 0.00\% | 0 | 0 | 0.00\% | 29,470 | 3,830 |
| 1998 Prop C- Paramedics Bfts | 9 | 0 | 0 | 0.00\% | 6,108 | 794 | 0.46\% | 0 | 0 | 0.00\% | 6,108 | 794 |
| 2000 Prop C-New Misc Ret Bfts | 11 | 0 | 0 | 0.00\% | 0 | 0 | 0.00\% | 247,326 | 27,074 | 1.28\% | 247,326 | 27,074 |
| 6.25\% Credited Interest on EE ctrbs | 13 | 75 | 7 | 0.00\% | 18 | 2 | 0.00\% | 10,515 | 1,002 | 0.05\% | 10,609 | 1,011 |
| 2002 Prop H-Safety Ret Bfts | 13 | 133,730 | 12,748 | 4.88\% | 142,168 | 13,553 | 7.81\% | 0 | 0 | 0.00\% | 275,897 | 26,301 |
| 5.0\% Credited Interest on EE ctrbs | 15 | (508) | (43) | -0.02\% | (242) | (21) | -0.01\% | $(46,621)$ | $(3,963)$ | -0.19\% | $(47,371)$ | $(4,027)$ |
| 2004 Prop E- New Safety LOD Bfts | 16 | 5,963 | 482 | 0.19\% | 8,375 | 677 | 0.39\% | 0 | 0 | 0.00\% | 14,339 | 1,159 |
| 2003 Prop F-Misc 3+3 Early Ret Bfts | 16 | 0 | 0 | 0.00\% | 0 | 0 | 0.00\% | 18,039 | 1,458 | 0.07\% | 18,039 | 1,458 |
| Liability of 2003 Prop F (extended) Misc 3+3 Early Ret Bfts | 17 | 0 | 0 | 0.00\% | 0 | 0 | 0.00\% | 10,477 | 808 | 0.04\% | 10,477 | 808 |
| Liability of 2003 Prop F (extended) Misc 3+3 Early Ret Bfts | 18 | 0 | 0 | 0.00\% | 0 | 0 | 0.00\% | 4,716 | 348 | 0.02\% | 4,716 | 348 |
| 2008 Prop B - New Misc Ret Bfts and Compound COLA | 19 | $\underline{39,497}$ | $\underline{2,803}$ | 1.07\% | 32,230 | $\underline{2,287}$ | 1.32\% | 682,494 | 48,436 | 230\% | 754,222 | 53,527 |
| Total of Propositions |  | \$211,417 | \$20,532 | 7.86\% | \$204,687 | \$20,093 | 11.57\% | \$1,002,754 | \$100,206 | 4.75\% | \$1,418,858 | \$140,831 |

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM <br> JULY 1, 2009 ACTUARIAL VALUATION <br> <br> SECTION V <br> <br> SECTION V <br> ACCOUNTING STATEMENT INFORMATION 

Statement No. 35 of the Financial Accounting Standards Board (FASB) requires the disclosure of certain information regarding funding status. Statement No. 25 of the Governmental Accounting Standards Board (GASB) establishes standards for disclosure of pension information by public employee retirement systems and governmental employers in notes to financial statements and supplementary information.

The FASB No. 35 Basis disclosure provides a "snap shot" view of how system assets at market value compare to liabilities if contributions stopped and accrued benefit claims had to be satisfied.

The GASB No. 25 Basis disclosure presents the actuarial liability computed for funding purposes to the actuarial value of assets to determine a funded ratio (i.e. the EAN liability).

Both the present value of accrued benefits (FASB No. 35 Basis) and the actuarial liability (GASB No. 25 Basis) are determined assuming that participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities are discounted at the assumed valuation interest rate of $7.75 \%$ per annum.

FASB Statement No. 35 specifies that a comparison of the present value of accrued (accumulated) benefits to the market value of the assets as of the valuation date must be provided. GASB Statement No. 25 requires the actuarial liability be compared with the actuarial value of assets for funding purposes. The relevant amounts as of July 1, 2008 and July 1, 2009 are presented in Table V-1.

## SECTION V ACCOUNTING STATEMENT INFORMATION

| Table V-1 <br> San Francisco Employees' Retirement System <br> (in thousands) |  |  |  |
| :---: | :---: | :---: | :---: |
| Item | July 1, 2009 | July 1, 2008 | $\begin{gathered} \% \\ \text { Change } \end{gathered}$ |
| GASB No. 25 Basis |  |  |  |
| 1. Actuarial Liabilities <br> a. Members Currently Receiving Payments | \$ 8,720,050 | \$ 8,013,456 | 8.8\% |
| b. Active DROP Members | 92,990 | - | N/A |
| c Vested Terminated and Inactive Members | 307,693 | 290,154 | 6.0\% |
| d Active Members | 7,377,916 | 7,055,214 | 4.6\% |
| e Total Actuarial Liability | \$ 16,498,649 | \$ 15,358,824 | 7.4\% |
| 2. Actuarial Value of Assets | \$ 16,004,730 | \$ 15,941,390 | 0.4\% |
| 3. Unfunded Actuarial Liability | \$ 493,919 | \$ $(582,566)$ | -184.8\% |
| 4. Ratio of Actuarial Value of Assets to Actuarial Liability (2)/(1)(d) | 97.01\% | 103.79\% | -6.8\% |
| FASB No. 35 Basis |  |  |  |
| 1. Present Value of Benefits Accrued and Vested <br> a. Members Currently Receiving Payments | \$ 8,720,050 | 8,013,456 | 8.8\% |
| b. Active DROP Members | 92,990 |  | N/A |
| c. Vested Terminated and Inactive Members | 307,693 | 290,154 | 6.0\% |
| d. Active Members | 5,565,721 | 5,479,729 | 1.6\% |
| d. Total PVAB | \$ 14,686,454 | 13,783,339 | 6.6\% |
| 2. Assets at Market Value* | \$ 11,924,479 | \$ 15,832,521 | -24.7\% |
| 3. Unfunded Present Value of Accrued Benefits, But Not Less Than Zero | \$ 2,761,975 | - | N/A |
| 4. Ratio of Assets to Value of Benefits (2)/(1)(d) | 81.19\% | 114.87\% | -33.7\% |

* The Market Value as of July 1, 2008 differs slightly from last years report due to a change in administrative expenses reported in the final asset statements.


# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM JULY 1, 2009 ACTUARIAL VALUATION 

## SECTION V ACCOUNTING STATEMENT INFORMATION

Tables V-2 through V-4 are exhibits for use in SFERS’ Comprehensive Annual Financial Report (CAFR). The Government Finance Officers Association (GFOA) recommends showing at least 6 years of experience in each of these exhibits. Table V-2 shows the Notes to Required Supplementary Information. Table V-3 presents an analysis of financial experience for the valuation year, and Table V-4 presents the Solvency Test which shows the portion of actuarial liability covered by assets.

## Table V-2 <br> San Francisco Employees' Retirement System NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules to the Financial Section of the CAFR was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.

Valuation date
Actuarial funding method


July 1, 2009
Entry Age Normal
Amortization method
Equivalent single amortization period

9.2 Years

Asset valuation method
5 year smoothing of return over or under expected returns
Actuarial assumptions:
Investment rate of return
7.75\%

Projected salary increases due Old Plans - Police and Fire, post 7/1/75 DOR
Old Plans - Police and Fire, pre 7/1/75 DOR
Old Plans - Miscellaneous
New Plans - Police, Fire, and Miscellaneous 4.50\% to inflation ${ }^{1}$
Cost-of-living adjustments
4.5\% per year
3.0\% per year
2.0\% per year
2.0\% per year

The actuarial assumptions used have been recommended by the actuary and adopted by SFERS Board based on the most recent review of SFERS' experience, completed in 2009.

The rate of employer contributions to SFERS is composed of the normal cost and amortization of the unfunded actuarial liability. The normal cost is a level percent of payroll cost which, along with the member contributions, will pay for projected benefits at retirement for the average plan participant. The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial liability.

1 Additional merit salary increases of $0.70 \%$ to $21.00 \%$ based on a participant's years of service and membership group are also assumed. These increases are not used in the amortization of SFERS' UAL.

SECTION V
ACCOUNTING STATEMENT INFORMATION


| Valuation Date July 1, | Active <br> Member Contributions |  |  |  |  | Portion of Actuarial Liabilities Covered by Reported Assets |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| 2009 | \$ 2,528,667 | \$ 8,720,050 | \$ | 5,249,932 | \$ 16,004,730 | 100\% | 100\% | 91\% |
| $2008{ }^{2}$ | \$ 2,411,027 | \$ 8,013,456 | \$ | 4,934,341 | \$ 15,941,390 | 100\% | 100\% | 100\% |
| $2007{ }^{3}$ | \$ 2,251,564 | \$ 7,423,580 |  | 3,866,243 | \$ 14,929,287 | 100\% | 100\% | 100\% |

[^0]
## APPENDIX A <br> MEMBERSHIP INFORMATION

| Table A-1 <br> City and County of San Francisco Employees' Retirement System Active Member Data - Total System |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | July 1, 2009 |  | July 1, 2008 | \% Change |
| Total |  |  |  |  |
| Count |  | 29,919 | 30,650 | -2.4\% |
| Average Current Age |  | 47.7 | 47.4 | 0.6\% |
| Average Service |  | 12.2 | 11.9 | 2.5\% |
| Annual Expected Pensionable Earnings* | \$ | 2,537,784,683 | 2,457,196,188 | 3.3\% |
| Average Expected Pensionable Earnings | \$ | 84,822 | 80,170 | 5.8\% |

* Excludes Active DROP member earnings of \$7,154,641

| Table A-2 <br> City and County of San Francisco Employees' Retirement System <br> Active Member Data - Police Only <br> July 1, 2009 <br> July 1, 2008 <br> \% Change |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Total |  |  |  |  |
| Count | 2,255 |  | 2,243 | 0.5\% |
| Average Current Age | 42.6 |  | 43.1 | -1.2\% |
| Average Service | 14.5 |  | 15.1 | -4.0\% |
| Annual Expected Pensionable Earnings | 254,053,918 | \$ | 234,633,311 | 8.3\% |
| Average Expected Pensionable Earnings | 112,662 |  | 104,607 | 7.7\% |
| Old |  |  |  |  |
| Count | 15 |  | 37 | -59.5\% |
| Average Current Age | 61.5 |  | 60.3 | 2.0\% |
| Average Service | 39.0 |  | 37.2 | 4.8\% |
| Annual Expected Pensionable Earnings | 2,349,415 | \$ | 4,870,374 | -51.8\% |
| Average Expected Pensionable Earnings | 156,628 | \$ | 131,632 | 19.0\% |
| New |  |  |  |  |
| Count | 2,240 |  | 2,206 | 1.5\% |
| Average Current Age | 42.5 |  | 42.8 | -0.7\% |
| Average Service | 14.3 |  | 14.7 | -2.7\% |
| Annual Expected Pensionable Earnings | \$ 251,704,503 |  | 229,762,937 | 9.5\% |
| Average Expected Pensionable Earnings | 112,368 |  | 104,154 | 7.9\% |

## APPENDIX A <br> MEMBERSHIP INFORMATION

| Table A-3 <br> City and County of San Francisco Employees' Retirement System Active Member Data - Fire Only |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total |  |  |  |  |  |
| Count |  | 1,459 |  | 1,529 | -4.6\% |
| Average Current Age |  | 44.1 |  | 43.6 | 1.1\% |
| Average Service |  | 14.1 |  | 13.7 | 2.9\% |
| Annual Expected Pensionable Earnings | \$ | 173,616,189 | \$ | 162,975,058 | 6.5\% |
| Average Expected Pensionable Earnings | \$ | 118,997 | \$ | -106,589 | 11.6\% |
| Old |  |  |  |  |  |
| Count |  | 11 |  | 17 | -35.3\% |
| Average Current Age |  | 62.7 |  | 60.9 | 3.0\% |
| Average Service |  | 38.1 |  | 36.3 | 5.0\% |
| Annual Expected Pensionable Earnings | \$ | 1,859,686 | \$ | 2,532,164 | -26.6\% |
| Average Expected Pensionable Earnings | \$ | 169,062 | \$ | 148,951 | 13.5\% |
| New |  |  |  |  |  |
| Count |  | 1,448 |  | 1,512 | -4.2\% |
| Average Current Age |  | 44.0 |  | 43.4 | 1.4\% |
| Average Service |  | 13.9 |  | 13.4 | 3.7\% |
| Annual Expected Pensionable Earnings | \$ | 171,756,503 | \$ | 160,442,894 | 7.1\% |
| Average Expected Pensionable Earnings | \$ | 118,616 | \$ | 106,113 | 11.8\% |


| City and County o Active |  | -4 <br> Employees' R <br> Miscellaneous <br> ly 1, 2009 |  | ment System y <br> uly 1, 2008 | \% Change |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total |  | ,2 |  | 6,878 | -2.5\% |
| Average Current Age |  | 48.3 |  | 47.9 | 0.8\% |
| Average Service |  | 11.9 |  | 11.5 | 3.5\% |
| Annual Expected Pensionable Earnings | \$ | 2,110,114,576 | \$ | 2,059,587,819 | 2.5\% |
| Average Expected Pensionable Earnings | \$ | 80,523 | \$ | 76,627 | 5.1\% |
| Old |  |  |  |  |  |
| Count |  | 430 |  | 598 | -28.1\% |
| Average Current Age |  | 61.4 |  | 61.0 | 0.7\% |
| Average Service |  | 35.6 |  | 34.9 | 2.0\% |
| Annual Expected Pensionable Earnings | \$ | 39,983,340 | \$ | 55,268,515 | -27.7\% |
| Average Expected Pensionable Earnings | \$ | 92,985 | \$ | 92,422 | 0.6\% |
| New |  |  |  |  |  |
| Count |  | 25,775 |  | 26,280 | -1.9\% |
| Average Current Age |  | 48.1 |  | 47.6 | 1.1\% |
| Average Service |  | 11.5 |  | 11.0 | 4.5\% |
| Annual Expected Pensionable Earnings | \$ | 2,070,131,236 | \$ | 2,004,319,304 | 3.3\% |
| Average Expected Pensionable Earnings | \$ | 80,315 | \$ | 76,268 | 5.3\% |

## APPENDIX A <br> MEMBERSHIP INFORMATION

| Table A-5 <br> City and County of San Francisco Employees' Retirement System Non-Active Member Data - Total System |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | July 1, 2009 | Count July 1, 2008 | \%Change | July 1, 2009 | Average Age July 1, 2008 | \%Change |
| Total |  |  |  |  |  |  |
| Retired | 15,868 | 15,147 | 4.8\% | 70.0 | 70.0 | 0.0\% |
| Disabled | 2,669 | 2,630 | 1.5\% | 66.5 | 66.2 | 0.5\% |
| Beneficiaries | 3,757 | 3,737 | 0.5\% |  | 76.9 | 0.3\% |
| Payee Total | 22,294 | 21,514 | 3.6\% | 70.7 | 70.8 | -0.1\% |
| Inactives | 4,986 | 4,748 | 5.0\% | 47.4 | 47.9 | -1.0\% |



* Benefits provided in June 30 valuation data
** For Inactives, total contribution balance with interest is shown



## APPENDIX A <br> MEMBERSHIP INFORMATION




[^1]
## CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM JULY 1, 2009 ACTUARIAL VALUATION

## APPENDIX A <br> MEMBERSHIP INFORMATION




[^2][^3]
## CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM JULY 1, 2009 ACTUARIAL VALUATION

## APPENDIX A <br> MEMBERSHIP INFORMATION

| Table A-12 <br> City and County of San Francisco Employees' Retirement System Non-Active Member Data - MISCELLANEOUS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total |  |  |  |  |  |  |
| Retired | 13,971 | 13,312 | 5.0\% | 70.3 | 70.4 | -0.1\% |
| Disabled | 1,408 | 1,391 | 1.2\% | 65.1 | 64.8 | 0.5\% |
| Beneficiaries | 2,714 | 2,693 | 0.8\% | 77.1 | 76.9 | 0.3\% |
| Payee Total | 18,093 | 17,396 | 4.0\% | 70.9 | 71.0 | -0.1\% |
| Inactives | 4,807 | 4,563 | 5.3\% | 47.6 | 48.1 | -1.0\% |
| Old |  |  |  |  |  |  |
| Retired | 6,372 | 6,481 | -1.7\% | 74.9 | 74.7 | 0.3\% |
| Disabled | 633 | 660 | -4.1\% | 72.9 | 72.2 | 1.0\% |
| Beneficiaries | 2,173 | 2,198 | -1.1\% | $\begin{array}{r}79.2 \\ \hline\end{array}$ | 79.0 | 0.3\% |
| Payee Total | 9,178 | 9,339 | -1.7\% | 75.8 | 75.5 | 0.4\% |
| Inactives | 297 | 296 | 0.3\% | - 69.9 | 68.9 | 1.5\% |
| New |  |  |  |  |  |  |
| Retired | 7,599 | 6,831 | 11.2\% | 66.5 | 66.3 | 0.3\% |
| Disabled | 775 | 731 | 6.0\% | 58.8 | 58.1 | 1.2\% |
| Beneficiaries | 541 | 495 | 9.3\% | 68.5 | 67.7 | 1.2\% |
| Payee Total | 8,915 | 8,057 | 10.6\% | 65.9 | 65.7 | 0.3\% |
| Inactives | 4,510 | 4,267 | 5.7\% | 46.1 | 46.7 | -1.3\% |

Table A-13


[^4]
## APPENDIX A

## MEMBERSHIP INFORMATION



## APPENDIX A

## MEMBERSHIP INFORMATION



## APPENDIX A

## MEMBERSHIP INFORMATION



## APPENDIX A

## MEMBERSHIP INFORMATION



## APPENDIX A

## MEMBERSHIP INFORMATION

| Table A-22 <br> City and County of San Francisco Employees' Retirement System Distribution of Active Members as of July 1, 2009 Total 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 |  | $30 \text { to } 34$ |  | 35 to 39 |  | 40 and up |  |  |  |
| Under 25 |  | - |  | 2 |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | 2 |
| 25 to 29 |  | - |  | 41 |  | 17 |  | - |  | - |  |  |  | - |  | - |  | - |  | - |  | 58 |
| 30 to 34 |  | 1 |  | 41 |  | 48 |  | 16 |  | - |  | - |  | - |  | - |  | - |  | - |  | 106 |
| 35 to 39 |  | - |  | 41 |  | 100 |  | 93 |  | 12 |  | - |  | - |  |  |  | - |  | - |  | 246 |
| 40 to 44 |  | 1 |  | 31 |  | 93 |  | 119 |  | 104 |  | 11 |  | - |  | - |  | - |  | - |  | 359 |
| 45 to 49 |  | - |  | 9 |  | 52 |  | 74 |  | 133 |  | 35 |  | 4 |  | - |  | - |  | - |  | 307 |
| 50 to 54 |  | - |  | 5 |  | 22 |  | 26 |  | 69 |  | 40 |  | 45 |  | 18 |  | - |  | - |  | 225 |
| 55 to 59 |  | - |  | 2 |  | 2 |  | 3 |  | 21 |  | 23 |  | 49 |  | 24 |  | 5 |  | - |  | 129 |
| 60 to 64 |  | - |  | - |  | 1 |  | - |  | 6 |  | 1 |  | 4 |  | 6 |  | 2 |  | - |  | 20 |
| 65 to 69 |  | - |  | - |  | - |  | - |  | - |  | 1 |  | - |  | - |  | 2 |  | 1 |  | 4 |
| 70 and up |  | - |  | - |  | 1 |  | - |  | - |  | - |  | - |  | - |  | - |  | 2 |  | 3 |
| Total Count |  | 2 |  | 172 |  | 336 |  | 331 |  | 345 |  | 111 |  | 102 |  | 48 |  | 9 |  | 3 |  | 1,459 |
|  |  |  |  |  |  |  |  | nty of San bution of |  | Table Francisco ctive Me Total | A-2 <br> En <br> mb <br> Fir | mployees ers as of e |  | etiremen <br> ly 1, 200 | t | ystem |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | verage Exp Years of |  | ed Salary rvice |  |  |  |  |  |  |  |  |  |  |
| Age |  | 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 |  | Total |
| Under 25 | \$ | - | \$ | 74,783 | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 74,783 |
| 25 to 29 |  | - |  | 89,421 |  | 108,219 |  | - - |  |  |  | - |  | - |  | - |  | - |  | - |  | 94,931 |
| 30 to 34 |  | 56,475 |  | 98,519 |  | 109,444 |  | 107,371 |  | - |  | - |  | - |  | - |  | - |  | - |  | 104,406 |
| 35 to 39 |  | - |  | 102,736 |  | 111,281 |  | 115,483 |  | 126,603 |  | - |  | - |  | - |  | - |  | - |  | 112,193 |
| 40 to 44 |  | 56,475 |  | 103,932 |  | 109,816 |  | 117,417 |  | 125,822 |  | 127,697 |  | - |  | - |  | - |  | - |  | 116,864 |
| 45 to 49 |  | - |  | 98,267 |  | 114,032 |  | 116,187 |  | 124,208 |  | 129,022 |  | 121,375 |  | - |  | - |  | - |  | 120,303 |
| 50 to 54 |  | - |  | 136,965 |  | 113,124 |  | 116,605 |  | 123,133 |  | 135,775 |  | 140,611 |  | 149,969 |  | - |  | - |  | 129,597 |
| 55 to 59 |  | - |  | 54,241 |  | 109,924 |  | 128,424 |  | 118,415 |  | 130,364 |  | 134,071 |  | 157,504 |  | 147,220 |  | - |  | 133,987 |
| 60 to 64 |  | - |  | - |  | 112,081 |  | - |  | 122,137 |  | 149,090 |  | 129,922 |  | 152,336 |  | 159,165 |  | - |  | 137,301 |
| 65 to 69 |  | - |  | - |  |  |  | - |  | - |  | 124,391 |  | - |  | - |  | 173,231 |  | 184,087 |  | 163,735 |
| 70 and up |  | - |  | - |  | 147,005 |  | - |  | - |  | - |  | - |  | - |  | - |  | 207,757 |  | 187,507 |
| Avg. Salary | \$ | 56,475 | \$ | 98,645 | \$ | 111,105 | \$ | 116,149 | \$ | 124,174 | \$ | 131,741 | \$ | 136,296 | \$ | 154,032 | \$ | 155,655 | \$ | 199,867 | \$ | 118,997 |

## APPENDIX A

## MEMBERSHIP INFORMATION



## APPENDIX A

## MEMBERSHIP INFORMATION



## APPENDIX A

## MEMBERSHIP INFORMATION



## APPENDIX A

## MEMBERSHIP INFORMATION

| Table A-30City and County of San Francisco Employees' Retirement SystemDistribution of Active Members as of July 1, 2009Old Miscellaneous |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | Years of Service |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Total |  |
|  | Under 1 |  | 1 to 4 |  | 5 to 9 |  | 10 to 14 |  | 15 to 19 |  |  | $20 \text { to } 24$ |  | 25 to 29 | 30 to 34 |  | 35 to 39 |  | 40 and up |  |  |  |
| Under 25 |  |  |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| 25 to 29 |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| 30 to 34 |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| 35 to 39 |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| 40 to 44 |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| 45 to 49 |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  |  |  | - |  | - |  | - |
| 50 to 54 |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | 6 |  | - |  | - |  | 6 |
| 55 to 59 |  | - |  | - |  | - |  | - |  | - |  | - |  | 3 |  | 79 |  | 71 |  | 1 |  | 154 |
| 60 to 64 |  | - |  | - |  | - |  | - |  | - |  | - |  | 12 |  | 65 |  | 106 |  | 13 |  | 196 |
| 65 to 69 |  | - |  | - |  | - |  | - |  | - |  |  |  | - |  | 10 |  | 24 |  | 14 |  | 48 |
| 70 and up |  | - |  | - |  | - |  | - |  | - |  | - |  | 1 |  | 6 |  | 9 |  | 10 |  | 26 |
| Total Count |  | - |  | - |  | - |  | - |  | - |  | - |  | 16 |  | 166 |  | 210 |  | 38 |  | 430 |
|  |  |  |  |  | Cit |  |  | ty of Sa bution of |  | Table rancisco tive Men d Miscel |  | 31 <br> mployees ers as of neous |  | etiremen <br> y 1, 2009 |  | ystem |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | erage Exp <br> Years of | S | ted Salary <br> ervice |  |  |  |  |  |  |  |  |  |  |
| Age |  | 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 |  | Total |
| Under 25 | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| 25 to 29 |  | - |  | - |  |  |  | - - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| 30 to 34 |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| 35 to 39 |  | - |  | - |  | - |  | - | , | - - |  | - |  | - |  | - |  | - |  | - |  | - |
| 40 to 44 |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| 45 to 49 |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| 50 to 54 |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | 82,845 |  | - |  | - |  | 82,845 |
| 55 to 59 |  | - |  | - |  | - |  | - |  | - |  | - |  | 57,473 |  | 97,579 |  | 92,552 |  | 126,273 |  | 94,666 |
| 60 to 64 |  | - |  | - |  | - |  | - |  | - |  | - |  | 77,793 |  | 98,390 |  | 96,308 |  | 89,881 |  | 95,438 |
| 65 to 69 |  | - |  | - |  |  |  | - |  | - |  | - |  |  |  | 86,005 |  | 90,156 |  | 84,336 |  | 87,594 |
| 70 and up |  | - |  | - |  | - |  | - |  | - |  | - |  | 48,938 |  | 75,704 |  | 82,602 |  | 75,063 |  | 76,816 |
| Avg. Salary | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 72,180 | \$ | 95,876 | \$ | 93,747 | \$ | 84,896 | \$ | 92,985 |

## APPENDIX A

## MEMBERSHIP INFORMATION



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## MEMBERSHIP INFORMATION

|  |  | Retirees | and C isabled, | ty of San d Benefi | Table rancisco ries by Total S | 34 <br> mployees <br> ained Ag <br> m | Retirem nd Ben | System Effectiv | Date |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Benefit |  |  |  |  | Ag |  |  |  |  |  |  |
| Effective | Under 50 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 to 79 | 80 to 84 | 85 to 89 | 90 and up | Total |
| pre-1990 | 2 | 5 | 25 | 62 | 155 | 258 | 502 | 930 | 1,082 | 680 | 3,701 |
| 1990 | 1 | 3 | 2 | 15 | 17 | 83 | 104 | 162 | 61 | 18 | 466 |
| 1991 | 2 | 1 | 4 | 7 | 32 | 79 | 95 | 149 | 51 | 18 | 438 |
| 1992 | - | 2 | 6 | 11 | 157 | 358 | 530 | 324 | 100 | 20 | 1,508 |
| 1993 | - | 2 | 5 | 13 | 62 | 50 | 47 | 38 | 29 | 17 | 263 |
| 1994 | 1 | 7 | 10 | 20 | 87 | 69 | 79 | 61 | 27 | 14 | 375 |
| 1995 | 1 | 4 | 9 | 28 | 124 | 96 | 108 | 62 | 35 | 20 | 487 |
| 1996 | 5 | 5 | 14 | 80 | 92 | 130 | 138 | 75 | 28 | 18 | 585 |
| 1997 | 6 | 7 | 15 | 76 | 151 | 141 | 132 | 48 | 33 | 15 | 624 |
| 1998 | 5 | 17 | 27 | 123 | 171 | 222 | 145 | 47 | 37 | 21 | 815 |
| 1999 | 1 | 8 | 24 | 130 | 157 | 206 | 126 | 48 | 27 | 22 | 749 |
| 2000 | 5 | 14 | 48 | 182 | 171 | 204 | 138 | 50 | 21 | 13 | 846 |
| 2001 | 14 | 21 | 81 | 228 | 282 | 279 | 121 | 51 | 33 | 13 | 1,123 |
| 2002 | 12 | 18 | 101 | 190 | 299 | 223 | 78 | 44 | 33 | 17 | 1,015 |
| 2003 | 15 | 34 | 169 | 293 | 322 | 186 | 79 | 39 | 18 | 17 | 1,172 |
| 2004 | 20 | 28 | 210 | 302 | 323 | 179 | 63 | 50 | 43 | 10 | 1,228 |
| 2005 | 20 | 69 | 316 | 391 | 409 | 187 | 79 | 44 | 29 | 15 | 1,559 |
| 2006 | 23 | 131 | 286 | 358 | 288 | 117 | 46 | 43 | 33 | 12 | 1,337 |
| 2007 | 28 | 146 | 305 | 408 | 302 | 102 | 49 | 59 | 29 | 7 | 1,435 |
| 2008 | 24 | 172 | 247 | 328 | 155 | 62 | 39 | 42 | 40 | 13 | 1,122 |
| 2009 | 23 | 207 | 318 | 443 | 229 | 83 | 48 | 43 | 32 | 14 | 1,440 |
| Total | 208 | 901 | 2,222 | 3,688 | 3,985 | 3,314 | 2,746 | 2,409 | 1,821 | 994 | 22,288 |
|    <br> Average Age at Retirement/Disability  57.8 <br> Average Current Age  70.7 <br> Average Annual Pension $\$ \quad 33,870$  |  |  |  |  |  |  |  |  |  |  |  |

## APPENDIX A

## MEMBERSHIP INFORMATION

Table A-35
City and County of San Francisco Employees' Retirement System Retirees, Disabled, and Beneficiaries by Attained Age and Benefit Effective Date

Total Police

| Benefit Effective | Age |  |  |  |  |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under 50 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 to 79 | 80 to 84 | 85 to 89 | 90 and up |  |
| pre-1990 | 2 | 4 | 13 | 34 | 50 | 80 | 147 | 163 | 101 | 55 | 649 |
| 1990 | 1 | 2 | - | 4 | 1 | 18 | 11 | 4 | 4 | - | 45 |
| 1991 | - | 1 | 2 | 2 | 7 | 19 | 7 | 4 | 2 | 1 | 45 |
| 1992 | - | 1 | 1 | 1 | 14 | 12 | 7 | 3 | 1 | 1 | 41 |
| 1993 | - | - | 2 | 3 | 16 | 9 | 2 | 2 | 3 | 3 | 40 |
| 1994 | - | 2 | 1 | 2 | 18 | 11 | 9 | 4 | 2 | 1 | 50 |
| 1995 | - | - | 1 | 5 | 34 | 13 | 5 | 2 | 5 | 2 | 67 |
| 1996 | - | 1 | 1 | 18 | 15 | 5 | 4 | 7 | 5 | 2 | 58 |
| 1997 | - | 2 | 1 | 15 | 25 | 12 | 3 | 4 | 3 | 1 | 66 |
| 1998 | 1 | 3 | 5 | 15 | 9 | 14 | 8 | 2 | 1 | 3 | 61 |
| 1999 | 1 | 1 | 2 | 17 | 11 | 8 | 2 | 6 | 2 | 1 | 51 |
| 2000 | 1 | 5 | 10 | 37 | 18 | 8 | 4 | 8 | 6 | 1 | 98 |
| 2001 | 3 | 3 | 11 | 33 | 26 | 7 | 11 | 7 | 1 | - | 102 |
| 2002 | 3 | 2 | 11 | 31 | 12 | 7 | 4 | 4 | 4 | 2 | 80 |
| 2003 | - | 4 | 21 | 43 | 20 | 13 | 3 | 8 | - | 2 | 114 |
| 2004 | 3 | 5 | 27 | 37 | 15 | 5 | 3 | 6 | 5 | 1 | 107 |
| 2005 | 2 | 7 | 27 | 30 | 12 | 10 | 4 | 4 | 2 | 1 | 99 |
| 2006 | 7 | 10 | 32 | 20 | 6 | 5 | 6 | 3 | 6 | 2 | 97 |
| 2007 | 4 | 13 | 38 | 19 | 7 | 4 | 9 | 7 | 4 | 1 | 106 |
| 2008 | 7 | 19 | 38 | 20 | 4 | 5 | 4 | 2 | 2 | 3 | 104 |
| 2009 | 3 | 18 | 39 | 10 | 7 | 3 | - | 5 | 5 | - | 90 |
| Total | 38 | 103 | 283 | 396 | 327 | 268 | 253 | 255 | 164 | 83 | 2,170 |
| Average Age at Retirement/Disability Average Current Age Average Annual Pension |  |  |  | $\begin{array}{r}51.6 \\ 69.6 \\ 62,701 \\ \hline\end{array}$ |  |  |  |  |  |  |  |

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## MEMBERSHIP INFORMATION

Table A-36
City and County of San Francisco Employees' Retirement System Retirees, Disabled, and Beneficiaries by Attained Age and Benefit Effective Date

Old Police

| Benefit Effective | Age |  |  |  |  |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under 50 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 to 79 | 80 to 84 | 85 to 89 | 90 and up |  |
| pre-1990 | 2 | 1 | 8 | 31 | 47 | 76 | 140 | 163 | 101 | 55 | 624 |
| 1990 | - | - | - | 1 | 1 | 17 | 11 | 4 | 4 | - | 38 |
| 1991 | - | 1 | 1 | 2 | 6 | 19 | 7 | 4 | 2 | 1 | 43 |
| 1992 | - | - | - | 1 | 13 | 12 | 7 | 3 | 1 | 1 | 38 |
| 1993 | - | - | - | 1 | 13 | 9 | 2 | 2 | 3 | 3 | 33 |
| 1994 | - | - | - | 1 | 15 | 11 | 8 | 4 | 2 | 1 | 42 |
| 1995 | - |  | 1 | 4 | 29 | 11 | 5 | 2 | 5 | 2 | 59 |
| 1996 | - | - | 1 | 10 | 12 | 4 | 4 | 6 | 5 | 1 | 43 |
| 1997 | - | 1 | - | 11 | 23 | 11 | 3 | 4 | 3 | 1 | 57 |
| 1998 | - | 1 | 2 | 13 | 8 | 12 | 8 | 2 | 1 | 3 | 50 |
| 1999 | - | - | 2 | 16 | 8 | 7 | 2 | 6 | 2 | 1 | 44 |
| 2000 | - | 2 | 4 | 26 | 12 | 5 | 4 | 8 | 6 | 1 | 68 |
| 2001 | 1 | - | 8 | 27 | 21 | 5 | 11 | 7 | 1 | - | 81 |
| 2002 | 1 | - | 4 | 24 | 11 | 6 | 4 | 4 | 4 | 2 | 60 |
| 2003 | - | 3 | 9 | 35 | 17 | 12 | 3 | 8 | - | 2 | 89 |
| 2004 | - | 1 | 16 | 25 | 10 | 5 | 3 | 6 | 5 | 1 | 72 |
| 2005 | - | - | 12 | 13 | 9 | 10 | 4 | 4 | 2 | 1 | 55 |
| 2006 | - | - | 14 | 13 | 2 | 4 | 6 | 3 | 6 | 2 | 50 |
| 2007 | 1 | 2 | 14 | 11 | 4 | 4 | 9 | 7 | 4 | 1 | 57 |
| 2008 | - | 1 | 9 | 9 | 3 | 5 | 4 | 2 | 2 | 3 | 38 |
| 2009 | - | 1 | 4 | 3 | 7 | 3 | - | 5 | 5 | - | 28 |
| Total | 5 | 14 | 109 | 277 | 271 | 248 | 245 | 254 | 164 | 82 | 1,669 |
|  |  |  |  |  |  |  |  |  |  |  |  |

CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM JULY 1, 2009 ACTUARIAL VALUATION

APPENDIX A
MEMBERSHIP INFORMATION

Table A-37
City and County of San Francisco Employees' Retirement System Retirees, Disabled, and Beneficiaries by Attained Age and Benefit Effective Date

New Police


## APPENDIX A

## MEMBERSHIP INFORMATION

Table A-38
City and County of San Francisco Employees' Retirement System Retirees, Disabled, and Beneficiaries by Attained Age and Benefit Effective Date

Total Fire

| Benefit Effective | Age |  |  |  |  |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under 50 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 to 79 | 80 to 84 | 85 to 89 | 90 and up |  |
| pre-1990 | - | - | 3 | 6 | 25 | 31 | 72 | 131 | 132 | 73 | 473 |
| 1990 | - | - | - | 2 | 5 | 17 | 16 | 4 | 2 | 5 | 51 |
| 1991 | - | - | 1 | 2 | 9 | 10 | 8 | 6 | 3 | 5 | 44 |
| 1992 | - | - | - | 3 | 12 | 14 | 7 | 5 | 2 | 3 | 46 |
| 1993 | - | - | 1 | 2 | 14 | 10 | 10 | 4 | 5 | 3 | 49 |
| 1994 | - | 1 | 3 | 4 | 9 | 11 | 7 | 2 | 2 | 1 | 40 |
| 1995 | - | - | 1 | 3 | 22 | 17 | 4 | 2 | 5 | 1 | 55 |
| 1996 | - | 1 | 2 | 8 | 12 | 15 | 4 | 5 | 3 | 2 | 52 |
| 1997 | 2 | 1 | 1 | 4 | 21 | 10 | 3 | 6 | - | 3 | 51 |
| 1998 | 2 | 1 | 3 | 15 | 29 | 15 | 7 | 2 | 6 | 3 | 83 |
| 1999 | - | - | 4 | 13 | 24 | 13 | 1 | 2 | 4 | - | 61 |
| 2000 | - | 3 | 3 | 22 | 23 | 8 | 4 | 2 | 1 | 2 | 68 |
| 2001 | 4 | 4 | 3 | 40 | 31 | 15 | 2 | 2 | 4 | 3 | 108 |
| 2002 | 2 | 2 | 7 | 20 | 23 | 5 | 2 | 4 | 4 | 2 | 71 |
| 2003 | 7 | 7 | 13 | 70 | 42 | 2 | 4 | 4 | 2 | 3 | 154 |
| 2004 | 2 | 5 | 15 | 59 | 16 | 1 | - | 4 | 3 | 2 | 107 |
| 2005 | 5 | 6 | 25 | 36 | 12 | 2 | 5 | 6 | 1 | 2 | 100 |
| 2006 | 3 | 7 | 44 | 27 | 10 | 3 | 3 | 7 | 3 | 3 | 110 |
| 2007 | 8 | 10 | 58 | 31 | 2 | - | 2 | 10 | 3 | 1 | 125 |
| 2008 | 2 | 5 | 29 | 23 | 1 | 3 | 6 | 7 | 8 | 1 | 85 |
| 2009 | 3 | 15 | 45 | 12 | 3 | 4 | 4 | 8 | 1 | 3 | 98 |
| Total | 40 | 68 | 261 | 402 | 345 | 206 | 171 | 223 | 194 | 121 | 2,031 |
| Average Age at Retirement/Disability Average Current Age Average Annual Pension |  |  |  | 54.0 70.2 72,505 |  |  |  |  |  |  |  |

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## MEMBERSHIP INFORMATION

Table A-39
City and County of San Francisco Employees' Retirement System Retirees, Disabled, and Beneficiaries by Attained Age and Benefit Effective Date

## Old Fire



CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM JULY 1, 2009 ACTUARIAL VALUATION

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MEMBERSHIP INFORMATION

| Table A-40 <br> City and County of San Francisco Employees' Retirement System Retirees, Disabled, and Beneficiaries by Attained Age and Benefit Effective Date New Fire |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Benefit Effective | Age |  |  |  |  |  |  |  |  |  | Total |
|  | Under 50 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 to 79 | 80 to 84 | 85 to 89 | 90 and up |  |
| pre-1990 | - | - | 3 | - | 2 | 2 | 1 | - | - | - | 8 |
| 1990 | - | - | - | - | 2 | - | - | - | - | - | 2 |
| 1991 | - | - | - | - | 2 | 1 | - | 1 | - | 1 | 5 |
| 1992 | - | - | - | 1 | 1 | - | - | 1 | - | - | 3 |
| 1993 | - | - | - | 1 | - | - | - | - | - | - | 1 |
| 1994 | - | 1 | 2 | - | 1 | - | - | - | - | - | 4 |
| 1995 | - | - | - | 1 | - | 1 | - | - | - | - | 2 |
| 1996 | - | - | - | 1 | - | 2 | - | - | - | - | 3 |
| 1997 | 1 | 1 | - | 1 | - | 2 | - | - | - | - | 5 |
| 1998 | 1 | 1 | 2 | 1 | 5 | - | - | - | - | - | 10 |
| 1999 | - | - | - | 1 | - | 1 | - | - | - | - | 2 |
| 2000 | - | 2 | 1 | 4 | 6 | 2 | - | - | - | - | 15 |
| 2001 | 3 | 3 | 2 | 6 | 6 | 1 | - | - | - | - | 21 |
| 2002 | 2 | 2 | 1 | 5 | 5 | - | - | - | - | - | 15 |
| 2003 | 5 | 6 | 4 | 13 | 10 | 1 | - | - | - | - | 39 |
| 2004 | 2 | 5 | 8 | 12 | - | 1 | - | - | - | - | 28 |
| 2005 | 5 | 5 | 12 | 12 | 2 | - | - | - | - | - | 36 |
| 2006 | 2 | 7 | 14 | 13 | 4 | - | - | - | - | - | 40 |
| 2007 | 8 | 8 | 46 | 22 | - | - | - | - | - | - | 84 |
| 2008 | 2 | 5 | 24 | 16 | 1 | - | - | - | - | - | 48 |
| 2009 | 3 | 14 | 42 | 8 | - | - | - | - | - | - | 67 |
| Total | 34 | 60 | 161 | 118 | 47 | 14 | 1 | 2 | - | 1 | 438 |
| Average Age at Retirement/Disability   52.9 <br> Average Current Age  58.2  <br> Average Annual Pension $\$$ 71,853  |  |  |  |  |  |  |  |  |  |  |  |

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## MEMBERSHIP INFORMATION

Table A-41
City and County of San Francisco Employees' Retirement System Retirees, Disabled, and Beneficiaries by Attained Age and Benefit Effective Date

Total Miscellaneous

| Benefit Effective | Age |  |  |  |  |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under 50 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 to 79 | 80 to 84 | 85 to 89 | 90 and up |  |
| pre-1990 | - | 1 | 9 | 22 | 80 | 147 | 283 | 636 | 849 | 552 | 2,579 |
| 1990 | - | 1 | 2 | 9 | 11 | 48 | 77 | 154 | 55 | 13 | 370 |
| 1991 | 2 | - | 1 | 3 | 16 | 50 | 80 | 139 | 46 | 12 | 349 |
| 1992 | - | 1 | 5 | 7 | 131 | 332 | 516 | 316 | 97 | 16 | 1,421 |
| 1993 | - | 2 | 2 | 8 | 32 | 31 | 35 | 32 | 21 | 11 | 174 |
| 1994 | 1 | 4 | 6 | 14 | 60 | 47 | 63 | 55 | 23 | 12 | 285 |
| 1995 | 1 | 4 | 7 | 20 | 68 | 66 | 99 | 58 | 25 | 17 | 365 |
| 1996 | 5 | 3 | 11 | 54 | 65 | 110 | 130 | 63 | 20 | 14 | 475 |
| 1997 | 4 | 4 | 13 | 57 | 105 | 119 | 126 | 38 | 30 | 11 | 507 |
| 1998 | 2 | 13 | 19 | 93 | 133 | 193 | 130 | 43 | 30 | 15 | 671 |
| 1999 | - | 7 | 18 | 100 | 122 | 185 | 123 | 40 | 21 | 21 | 637 |
| 2000 | 4 | 6 | 35 | 123 | 130 | 188 | 130 | 40 | 14 | 10 | 680 |
| 2001 | 7 | 14 | 67 | 155 | 225 | 257 | 108 | 42 | 28 | 10 | 913 |
| 2002 | 7 | 14 | 83 | 139 | 264 | 211 | 72 | 36 | 25 | 13 | 864 |
| 2003 | 8 | 23 | 135 | 180 | 260 | 171 | 72 | 27 | 16 | 12 | 904 |
| 2004 | 15 | 18 | 168 | 206 | 292 | 173 | 60 | 40 | 35 | 7 | 1,014 |
| 2005 | 13 | 56 | 264 | 325 | 385 | 175 | 70 | 34 | 26 | 12 | 1,360 |
| 2006 | 13 | 114 | 210 | 311 | 272 | 109 | 37 | 33 | 24 | 7 | 1,130 |
| 2007 | 16 | 123 | 209 | 358 | 293 | 98 | 38 | 42 | 22 | 5 | 1,204 |
| 2008 | 15 | 148 | 180 | 285 | 150 | 54 | 29 | 33 | 30 | 9 | 933 |
| 2009 | 17 | 174 | 234 | 421 | 219 | 76 | 44 | 30 | 26 | 11 | 1,252 |
| Total | 130 | 730 | 1,678 | 2,890 | 3,313 | 2,840 | 2,322 | 1,931 | 1,463 | 790 | 18,087 |
| Average Age at Retirement/Disability Average Current Age Average Annual Pension |  |  |  | $\begin{array}{r} 58.9 \\ 70.9 \\ 26,073 \end{array}$ |  |  |  |  |  |  |  |

## APPENDIX A

## MEMBERSHIP INFORMATION

| Table A-42 <br> City and County of San Francisco Employees' Retirement System Retirees, Disabled, and Beneficiaries by Attained Age and Benefit Effective Date Old Miscellaneous |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Benefit Effective | Age |  |  |  |  |  |  |  |  |  | Total |
|  | Under 50 | 50 to 54 | 55 to 59 | 60 to 64 | 65 to 69 | 70 to 74 | 75 to 79 | 80 to 84 | 85 to 89 | 90 and up |  |
| pre-1990 | - | 1 | 9 | 16 | 77 | 133 | 272 | 602 | 799 | 543 | 2,452 |
| 1990 | - | 1 | 2 | 5 | 10 | 38 | 64 | 136 | 37 | 11 | 304 |
| 1991 | 2 | - | 1 | 2 | 10 | 33 | 69 | 110 | 33 | 11 | 271 |
| 1992 | - | 1 | 2 | 6 | 116 | 312 | 415 | 215 | 59 | 12 | 1,138 |
| 1993 | - | - | 1 | 3 | 21 | 18 | 25 | 20 | 19 | 9 | 116 |
| 1994 | 1 | 1 | 3 | 9 | 35 | 34 | 43 | 35 | 19 | 12 | 192 |
| 1995 | - | - | 3 | 7 | 40 | 49 | 63 | 23 | 20 | 16 | 221 |
| 1996 | 2 | 1 | - | 23 | 39 | 73 | 65 | 33 | 17 | 13 | 266 |
| 1997 | - | - | 1 | 19 | 59 | 79 | 48 | 19 | 22 | 11 | 258 |
| 1998 | 1 | 3 | 5 | 31 | 86 | 135 | 48 | 16 | 25 | 14 | 364 |
| 1999 | - | 2 | 9 | 32 | 67 | 97 | 45 | 26 | 14 | 17 | 309 |
| 2000 | 2 | - | 9 | 32 | 75 | 91 | 60 | 24 | 13 | 9 | 315 |
| 2001 | 2 | 4 | 10 | 52 | 125 | 106 | 30 | 24 | 21 | 10 | 384 |
| 2002 | 1 | 4 | 11 | 51 | 141 | 73 | 23 | 21 | 20 | 13 | 358 |
| 2003 | 3 | 4 | 24 | 70 | 118 | 50 | 31 | 17 | 12 | 12 | 341 |
| 2004 | - | 2 | 21 | 79 | 104 | 47 | 22 | 27 | 31 | 6 | 339 |
| 2005 | 1 | 3 | 34 | 101 | 140 | 42 | 24 | 19 | 23 | 12 | 399 |
| 2006 | 2 | 2 | 27 | 123 | 75 | 27 | 23 | 22 | 22 | 7 | 330 |
| 2007 | 3 | 4 | 33 | 108 | 67 | 31 | 25 | 31 | 19 | 5 | 326 |
| 2008 | 1 | 1 | 18 | 74 | 31 | 16 | 16 | 22 | 25 | 8 | 212 |
| 2009 | 7 | 1 | 28 | 108 | 49 | 18 | 23 | 16 | 24 | 9 | 283 |
| Total | 28 | 35 | 251 | 951 | 1,485 | 1,502 | 1,434 | 1,458 | 1,274 | 760 | 9,178 |
| Average Age at Retirement/Disability <br> Average Current Age <br> Average Annual Pension |  |  |  |  |  |  |  |  |  |  |  |

CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM JULY 1, 2009 ACTUARIAL VALUATION

## APPENDIX A

## MEMBERSHIP INFORMATION

Table A-43
City and County of San Francisco Employees' Retirement System Retirees, Disabled, and Beneficiaries by Attained Age and Benefit Effective Date

New Miscellaneous


| Table A-44 <br> City and County of SFERS <br> Distribution of Retirees, Disabled Members, and Beneficiaries as of July 1, 2009 <br> Count |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Age | Police | 40 | $131$ | 209 |
| 50 to 54 | 103 | 68 | 730 | 901 |
| 55 to 59 | 283 | 261 | 1,681 | 2,225 |
| 60 to 64 | 396 | 402 | 2,890 | 3,688 |
| 65 to 69 | 327 | 345 | 3,314 | 3,986 |
| 70 to 74 | 268 | 206 | 2,841 | 3,315 |
| 75 to 79 | 253 | 171 | 2,322 | 2,746 |
| 80 to 84 | 255 | 223 | 1,931 | 2,409 |
| 85 to 89 | 164 | 194 | 1,463 | 1,821 |
| 90 and up | 83 | 121 | 790 | 994 |
| Total | 2,170 | 2,031 | 18,093 | 22,294 |

## Chart A-1

Count Distribution


## APPENDIX A

MEMBERSHIP INFORMATION

| Table A-45 <br> City and County of SFERS <br> Distribution of Retirees, Disabled Members, and Beneficiaries as of July 1, 2009 <br> Annual Benefit |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Under 50 |  | 1,713,831 | \$ | 1,507,813 | \$ 2,477,067 | 5,698,712 |
| 50 to 54 |  | 5,269,084 |  | 3,771,642 | 12,432,430 | 21,473,156 |
| 55 to 59 |  | 20,848,621 |  | 23,104,636 | 31,954,811 | 75,908,068 |
| 60 to 64 |  | 28,932,411 |  | 33,503,828 | 90,665,043 | 153,101,282 |
| 65 to 69 |  | 22,081,558 |  | 26,759,865 | 106,732,154 | 155,573,578 |
| 70 to 74 |  | 16,609,969 |  | 14,399,238 | 84,163,395 | 115,172,602 |
| 75 to 79 |  | 14,528,343 |  | 12,510,540 | 60,279,335 | 87,318,217 |
| 80 to 84 |  | 14,370,898 |  | 14,764,073 | 43,026,794 | 72,161,765 |
| 85 to 89 |  | 8,271,113 |  | 10,962,412 | 28,787,315 | 48,020,840 |
| 90 and up |  | 3,436,268 |  | 5,973,982 | 11,190,610 | 20,600,861 |
| Total | \$ | 136,062,097 |  | 147,258,030 | \$471,708,954 | 755,029,081 |

## Chart A-2

## Benefit Distribution



# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM JULY 1, 2009 ACTUARIAL VALUATION 

## APPENDIX A MEMBERSHIP INFORMATION

## Data Assumptions and Methods

In preparing our data, we relied without audit 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 included in the "Yrs Svc" field. Service buyback that is under contract, but not paid in full, as of the valuation date will be assumed to be paid in full and this service will be reflected in the projected benefit. An adjusted date of hire is retroactively calculated from the valuation date.
- Valuation Salary will be "Covered Pay" for members hired before the beginning of the previous plan year and "Calculated Pay", which is an annualized pay rate, for new hires. A minimum of $\$ 45,000$ is used for all active members. Then an increase of $4.5 \%$ based on the wage increase assumption is applied.
- 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" which means active, no "Job End Date or the "Job End Date" is after 6/30/2008, and do not have a retiree record and their "Cvd Pay" is greater than $\$ 0$.
- 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 $6 / 30 / 2009$, or their "Cvd Pay" is $\$ 0$.
- Records on the "Retiree" file are considered in pay status if their benefit is not suspended or terminated.
- Members may retire and receive benefits from multiple Plans (e.g. - a police officer can have two benefits, one for the service during the academy training which is considered the Miscellaneous group and a second benefit for all other service as a police officer). We will value each member's blended benefit individually. This will result in the counts being slightly higher than actual counts due to people having more than one benefit payable from multiple plans.
- We assume any member found in last year's "Retiree" file and not in this year's file has deceased without a beneficiary and should be removed from the valuation data.
- We assume all deceased members with payments continuing to a beneficiary have already been accounted for in the "Retiree" file.


## APPENDIX B

## ACTUARIAL ASSUMPTIONS AND METHODS

## A. Actuarial Assumptions

## 1. Investment Return Assumption

SFERS' assets are assumed to earn 7.75\% net of investment expenses.

## 2. Inflation

Wage inflation: 4.50\% compounded annually
Consumer Price Inflation: 3.5\% compounded annually

## 3. Interest Credited to Member Contributions

$5.00 \%$, compounded annually.
4. Salary Increase Rate

Wage inflation component
4.50\%

The additional merit component:

|  | Table B-1 <br> Salary Merit Increases |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Years of |  |  |  |  |  |  |
| Service | Police | Fire | Muni Drivers | Craft | Misc. <br> Females | Misc. <br> Males |
| 1 | $13.50 \%$ | $21.00 \%$ | $13.00 \%$ | $5.00 \%$ | $5.00 \%$ | $5.25 \%$ |
| 2 | 5.00 | 5.00 | 8.00 | 2.00 | 4.00 | 4.25 |
| 3 | 5.00 | 5.00 | 1.00 | 2.00 | 4.00 | 3.50 |
| 4 | 1.00 | 1.00 | 0.00 | 2.00 | 3.50 | 3.50 |
| 5 | 1.00 | 1.00 | 0.00 | 1.50 | 2.50 | 3.25 |
| 6 | 1.00 | 1.00 | 0.00 | 1.00 | 2.25 | 2.75 |
| 7 | 1.00 | 1.00 | 0.00 | 1.00 | 2.25 | 2.50 |
| 8 | 1.00 | 1.00 | 0.00 | 0.80 | 2.00 | 2.25 |
| 9 | 1.00 | 1.00 | 0.00 | 0.70 | 1.75 | 2.25 |
| 10 | 1.00 | 1.00 | 0.00 | 0.70 | 1.50 | 2.25 |
| 11 | 1.00 | 1.00 | 0.00 | 0.70 | 1.00 | 2.25 |
| 12 | 1.00 | 1.00 | 0.00 | 0.70 | 1.00 | 1.75 |
| 13 | 1.00 | 1.00 | 0.00 | 0.70 | 1.00 | 1.75 |
| 14 | 1.00 | 1.00 | 0.00 | 0.70 | 1.00 | 1.75 |
| $15 \&$ over | 1.00 | 1.00 | 0.00 | 0.70 | 0.90 | 1.00 |

## APPENDIX B

ACTUARIAL ASSUMPTIONS AND METHODS

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

|  | Old Plan | New Plan |
| :--- | :---: | :---: |
| Craft Workers | $8.0 \%$ | $5.0 \%$ |
| Male Miscellaneous | $3.0 \%$ | $2.0 \%$ |

5. Administrative Expense Assumption

There is a $0.45 \%$ of Payroll assumption included in the normal costs rates for administrative expenses.
6. Cost-of-Living Increase in Benefits*

Old Plans - Police and Fire, post-7/1/75 DOR 4.50\% 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

* No supplemental COLA was adopted by the Board as of July 1, 2009.

7. Member Refunds

The rates of refund of contributions for terminated vested members are presented in Table B-2 below.

Table B-2
Rates of Contribution Refund after Withdrawal

| Age | Police \& Fire | Police \& Fire | Miscellaneous |
| :---: | :---: | :---: | :---: |
| Under 25 | $100 \%$ | $100 \%$ | $100 \%$ |
| 25 | 100 | 80 | 95 |
| 30 | 90 | 80 | 65 |
| 35 | 80 | 65 | 60 |
| 40 | 60 | 50 | 50 |
| 45 | 40 | 40 | 40 |
| 50 \& over | 0 | 0 | 0 |

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM <br> JULY 1, 2009 ACTUARIAL VALUATION 

## APPENDIX B

## ACTUARIAL ASSUMPTIONS AND METHODS

## 8. Family Composition

Percentage married (including assumption for Domestic Partners, 1994 Proposition H) is shown in the following Table B-3. Wives are assumed to be three years younger than husbands (and then the spouse is assumed to be an additional year younger in order to value continuance to children and dependent parents).

| Table B-3 <br> Percentage Married <br>  <br>  <br> Old Plan |  |  |
| :--- | :---: | :---: |
| New Plan |  |  |
| Police and Fire Males | $90 \%$ | $85 \%$ |
| Police and Fire Females | 48 | 42 |
| Miscellaneous Males | 80 | 80 |
| Miscellaneous Females | 48 | 48 |

## 9. Rates of Withdrawal/Termination

Sample rates of withdrawal/termination are show in the following Table B-4.

| Years of Service | Table B-4 ination by Service Years |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Police | Fire | Muni Drivers | Craft Workers |
| 0 | 0.1000 | 0.0400 | 0.1000 | 0.0700 |
| 1 | 0.0400 | 0.0150 | 0.0250 | 0.0300 |
| 2 | 0.0200 | 0.0100 | 0.0250 | 0.0300 |
| 3 | 0.0200 | 0.0100 | 0.0250 | 0.0300 |
| 4 | 0.0200 | 0.0100 | 0.0250 | 0.0300 |
| 5 | 0.0100 | 0.0100 | 0.0400 | 0.0300 |
|  | 0.0100 | 0.0300 | 0.0250 | 0.0300 |
| 7 | 0.0100 | 0.0250 | 0.0250 | 0.0250 |
| 8 | 0.0100 | 0.0100 | 0.0250 | 0.0250 |
| 9 | 0.0100 | 0.0100 | 0.0250 | 0.0200 |
| 10 | 0.0100 | 0.0100 | 0.0250 | 0.0200 |
| 11 | 0.0100 | 0.0050 | 0.0250 | 0.0150 |
| 12 | 0.0100 | 0.0050 | 0.0250 | 0.0150 |
| 13 | 0.0100 | 0.0050 | 0.0250 | 0.0100 |
| 14 | 0.0100 | 0.0050 | 0.0250 | 0.0100 |
| 15 | 0.0100 | 0.0050 | 0.0250 | 0.0100 |
| 16 | 0.0050 | 0.0050 | 0.0250 | 0.0100 |
| 17 | 0.0050 | 0.0050 | 0.0250 | 0.0100 |
| 18 | 0.0050 | 0.0020 | 0.0250 | 0.0100 |
| 19 | 0.0050 | 0.0010 | 0.0250 | 0.0100 |
| 20 | 0.0050 | 0.0005 | 0.0250 | 0.0100 |
| 21 | 0.0000 | 0.0000 | 0.0250 | 0.0100 |
| 22 | 0.0000 | 0.0000 | 0.0000 | 0.0100 |
| 23 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

## APPENDIX B

ACTUARIAL ASSUMPTIONS AND METHODS
Sample rates of withdrawal/termination by age and service for Miscellaneous members are shown in the following Table B-5.

| Table B-5 <br> Rates of Termination by Age and Service Years |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Service | 0 |  | 3 |  | 5+ |  |
| Age | Females | Males | Females | Males | Females | Males |
| 20 | 15.00\% | 15.00\% | 15.00\% | 10.00\% | 10.00\% | 10.00\% |
| 25 | 15.00 | 15.00 | 7.50 | 10.00 | 5.00 | 6.50 |
| 30 | 12.50 | 15.00 | 7.50 | 7.00 | 5.00 | 6.50 |
| 35 | 12.50 | 10.00 | 7.50 | 7.00 | 3.00 | 2.50 |
| 40 | 10.00 | 10.00 | 5.00 | 5.00 | 3.00 | 2.50 |
| 45 | 10.00 | 10.00 | 2.50 | 5.00 | 2.50 | 2.50 |
| 50 | 15.00 | 10.00 | 2.50 | 5.00 | 2.50 | 2.50 |
| 55 | 15.00 | 10.00 | 2.50 | 2.50 | 2.50 | 2.50 |
| 60 | 7.50 | 20.00 | 2.50 | 2.50 | 2.50 | 2.50 |
| 65 | 7.50 | 20.00 | 2.50 | 2.50 | 2.50 | 2.50 |
| 69 | 7.50 | 20.00 | 2.50 | 2.50 | 0.00 | 0.00 |

$30 \%$ of terminating employees are assumed to subsequently work for a reciprocal employer and receive 4.50\% pay increases per year.

## APPENDIX B

ACTUARIAL ASSUMPTIONS AND METHODS

## 10. Rates of Disability

Sample disability rates of active participants are provided in Table B-6.

| Age | Police | Table B-6 <br> Rates of Disability at Selected Ages |  |  |  | Misc. Males |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Fire | Muni <br> Drivers | Craft | Misc. <br> Females |  |
| 20 | 0.00\% | 0.01\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 25 | 0.02 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30 | 0.05 | 0.06 | 0.01 | 0.01 | 0.02 | 0.01 |
| 35 | 0.09 | 0.15 | 0.06 | 0.06 | 0.15 | 0.12 |
| 40 | 0.12 | 0.70 | 0.11 | 0.12 | 0.25 | 0.23 |
| 45 | 0.10 | 0.50 | 0.17 | 0.24 | 0.60 | 0.32 |
| 50 | 1.60 | 1.00 | 0.80 | 0.60 | 0.60 | 0.37 |
| 55 | 3.00 | 5.00 | 1.80 | 2.00 | 1.00 | 0.55 |
| 60 | 0.08 | 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Level of duty disability benefits (if projected to be disabled before service retirement eligibility)

| Police | $55 \%$ of pay |
| :--- | :--- |
| Fire | $60 \%$ of pay |

## APPENDIX B

ACTUARIAL ASSUMPTIONS AND METHODS

## 11. Rates of Mortality for Healthy Lives

Mortality rates for actives, retirees, beneficiaries, terminated vested and reciprocals are based on the sex distinct 1994 Group Annuity Mortality Tables with no set back. $25 \%$ of safety deaths are assumed to be service related. Table B-7 provides a sample of these rates.

| Table B-7 <br> Rates of Mortality for Active and Retired <br> Healthy Lives at Selected Ages |  |  |
| :---: | :---: | :---: |
| Age | Male |  |

## APPENDIX B

ACTUARIAL ASSUMPTIONS AND METHODS

## 12. Rates of Mortality for Retired Disabled Lives

For Safety, all disabilities are assumed due to line of duty and therefore all death benefits of disabled members are assumed to generate duty death benefits. Table B-8 provides a sample of the mortality rates for members with disability retirement.

| Table B-8 <br> Rates of Mortality for Disabled Lives at Selected Ages |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
|  | Police and Fire | All Miscellaneous |  |  |  |
| Age | Male | Female | Male | Female |  |
| 25 | $0.05 \%$ | $0.07 \%$ | $0.75 \%$ | $0.54 \%$ |  |
| 30 | 0.07 | 0.10 | 0.77 | 0.57 |  |
| 35 | 0.11 | 0.15 | 0.80 | 0.60 |  |
| 40 | 0.17 | 0.26 | 0.87 | 0.63 |  |
| 45 | 0.28 | 0.38 | 1.06 | 0.76 |  |
| 50 | 0.40 | 0.54 | 1.46 | 1.00 |  |
| 55 | 0.59 | 0.89 | 2.12 | 1.34 |  |
| 60 | 0.98 | 1.45 | 2.87 | 1.71 |  |
| 65 | 1.63 | 2.40 | 3.62 | 2.16 |  |
| 70 | 2.61 | 3.61 | 4.67 | 2.71 |  |
| 75 | 3.89 | 5.31 | 6.55 | 3.69 |  |
| 80 | 5.77 | 8.09 | 9.48 | 5.52 |  |

## APPENDIX B

ACTUARIAL ASSUMPTIONS AND METHODS

## 13. Rates of Retirement

Rates of retirement are based on age according to the following Table B-9. Old safety plan members are assumed to retire immediately.

| Age | New <br> Police | Rates of <br> New Fire | Table B-9 <br> Retiremen <br> Muni <br> Drivers* | by Age <br> Craft* | Misc. Females* | Misc. Males* |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 50 | 0.0300 | 0.0200 | 0.0700 | 0.0300 | 0.0300 | 0.0200 |
| 51 | 0.0300 | 0.0200 | 0.0250 | 0.0200 | 0.0200 | 0.0200 |
| 52 | 0.0300 | 0.0200 | 0.0250 | 0.0200 | 0.0200 | 0.0200 |
| 53 | 0.0300 | 0.0200 | 0.0250 | 0.0300 | 0.0200 | 0.0200 |
| 54 | 0.0300 | 0.0200 | 0.0250 | 0.0300 | 0.0300 | 0.0450 |
| 55 | 0.1000 | 0.1000 | 0.0600 | 0.0400 | 0.0300 | 0.0450 |
| 56 | 0.1000 | 0.1000 | 0.0250 | 0.0400 | 0.0500 | 0.0450 |
| 57 | 0.1200 | 0.2000 | 0.0250 | 0.0400 | 0.0600 | 0.0450 |
| 58 | 0.1200 | 0.2000 | 0.1000 | 0.0275 | 0.0300 | 0.0225 |
| 59 | 0.1200 | 0.2000 | 0.1500 | 0.0275 | 0.0300 | 0.0500 |
| 60 | 0.3500 | 0.2000 | 0.2000 | 0.1000 | 0.1100 | 0.0700 |
| 61 | 0.2500 | 0.4000 | 0.1000 | 0.1300 | 0.1100 | 0.0900 |
| 62 | 0.2500 | 0.3500 | 0.3500 | 0.2500 | 0.1500 | 0.2300 |
| 63 | 0.2500 | 0.3000 | 0.0750 | 0.1300 | 0.1300 | 0.1500 |
| 64 | 0.2500 | 0.3000 | 0.1500 | 0.1300 | 0.1500 | 0.1500 |
| 65 | 1.0000 | 1.0000 | 0.2500 | 0.1500 | 0.1500 | 0.1500 |
| 66 | 1.0000 | 1.0000 | 0.2500 | 0.1500 | 0.1500 | 0.1500 |
| 67 | 1.0000 | 1.0000 | 0.2500 | 0.1500 | 0.1500 | 0.1500 |
| 68 | 1.0000 | 1.0000 | 0.2500 | 0.1500 | 0.1500 | 0.1500 |
| 69 | 1.0000 | 1.0000 | 0.2500 | 0.1500 | 0.1500 | 0.1500 |
| 70 \& over | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

* Participants who reach age 65 and hit the maximum benefit percentage are assumed to retire immediately.


## APPENDIX B <br> ACTUARIAL ASSUMPTIONS AND METHODS

## 14. 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 and lack of experience data it is assumed for this valuation that the introduction of the DROP will have no impact on the retirement rates for this group of participants.

## 15. 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.

## 16. 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.

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.

# APPENDIX B <br> ACTUARIAL ASSUMPTIONS AND METHODS 

## B. Actuarial Methods

## 1. Actuarial Funding Method

The Entry Age Normal actuarial funding 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 retirement. The actuarial liability is the difference between the present value of future benefits and the present value of future normal cost. The unfunded actuarial liability is the difference between the actuarial liability and the actuarial value of assets.

The unfunded actuarial accrued liabilities due to net actuarial gains and losses, Supplemental COLAs and assumption changes are amortized as a level percentage of payroll over a 15-year period beginning with the valuation date. Additional liabilities generated by Charter amendments and Board-approved changes in the credited interest rate on member contribution accounts are amortized as a level percentage of payroll over a 20-year period beginning with the year the amendment is first reflected in the valuation.

## 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 prior four years of actual investment experience relative the expected return ( $7.75 \%$ for 2008-2009 and $8.0 \%$ for prior years) on the actuarial asset value. The expected return on market assets is determined using the Fund's actual cash flows and the actuarial rate of interest. 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.

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES RETIREMENT SYSTEM 

JULY 1, 2009 ACTUARIAL VALUATION

## APPENDIX B <br> ACTUARIAL ASSUMPTIONS AND METHODS

## 3. Changes Since Last Valuation

Certain airport police have transferred service from CalPERS to SFERS. While the service transferred has not been included in the data provided for this valuation, the associated asset transfer has been included in this valuation along with an additional liability equal to the assets transferred.

There have been no changes in actuarial assumptions or methods since the July 1, 2008 actuarial valuation.

## APPENDIX C

SUMMARY OF PLAN PROVISIONS

## I. 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 at $5.0 \%$ per year, compounded annually.
b. Employer:

The Employer contributes the remaining amounts necessary to maintain the soundness of the Retirement System.

## 5. Service Retirement

## Eligibility

Age 50 with 25 years of credited service.

# APPENDIX C <br> SUMMARY OF PLAN PROVISIONS 

## 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.

| Table C-1 <br> City and County of San Francisco Employees' Retirement System <br> Sections 8.595 (Police) and 8.596 (Fire) - Service Retirement Factors |  |
| :---: | :---: |
|  |  |
| Retirement Age |  | Retirement Factors

## Benefit - Survivor

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

## 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.

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES RETIREMENT SYSTEM <br> JULY 1, 2009 ACTUARIAL VALUATION 

## APPENDIX C <br> SUMMARY OF PLAN PROVISIONS

## 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.

## 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.

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES RETIREMENT SYSTEM <br> JULY 1, 2009 ACTUARIAL VALUATION 

## APPENDIX C <br> SUMMARY OF PLAN PROVISIONS

## 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.
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.

# APPENDIX C <br> SUMMARY OF PLAN PROVISIONS 

## 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 below) 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.

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

## Basic

Monthly benefits are adjusted by $50 \%$ of the actual dollar increase or decrease 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 1of each fiscal year, if 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 $3.5 \%$.

## II. Police and Fire Members - Charter Sections 8.586 and 8.597 (Police) and 8.588 and 8.598 (Fire)

## 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).

## 2. Final Compensation

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)

## 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:

$7.5 \%$ of salary, excluding overtime and most premium pay. These contributions are credited with interest at $5.0 \%$ per year, compounded annually.
b. Employer:

The Employer contributes the remaining amounts necessary to maintain the soundness of the Retirement System.

## APPENDIX C

SUMMARY OF PLAN PROVISIONS

## 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.

## Table C-2

City and County of San Francisco Employees' Retirement System Sections 8.586 (Police) and 8.588 (Fire) - Service Retirement Factors Retirement Age Retirement Factors
55

| 50 | $2.00 \%$ |
| :--- | :--- |
| 51 | $2.14 \%$ |
| 52 | $2.28 \%$ |
| 53 | $2.42 \%$ |
| 54 | $2.56 \%$ |
| or above | $2.70 \%$ |

## APPENDIX C

SUMMARY OF PLAN PROVISIONS
Charter Sections 8.597 and 8.598: 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.


## 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 $75 \%$ of Final Compensation for Charter Sections 8.586 and 8.588 or $90 \%$ of Final Compensation for Charter Sections 8.597 and 8.598.

## Benefit - Survivor

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

## 7. Industrial Disability

## Eligibility

No age or service requirement.

## Benefit - Member

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES RETIREMENT SYSTEM <br> JULY 1, 2009 ACTUARIAL VALUATION 

## APPENDIX C <br> SUMMARY OF PLAN PROVISIONS

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. 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 $50 \%$ of Final Compensation (not to exceed $90 \%$ of Final Compensation for Charter Sections 8.597 and 8.598).

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.
d. Age 50 with 25 Years of Credited Service - Monthly continuation allowance to a qualified surviyor 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.

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES RETIREMENT SYSTEM <br> JULY 1, 2009 ACTUARIAL VALUATION 

## APPENDIX C <br> SUMMARY OF PLAN PROVISIONS

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 and 8.598 , 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 and 8.598: A specified percent of Final Compensation at termination based on the member's age at retirement (factors shown in Table C-3 above) for each year of credited service, subject to a maximum of $90 \%$ of Final Compensation, payable at age 50.

## APPENDIX C <br> SUMMARY OF PLAN PROVISIONS

## 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 1of each fiscal year, if 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 $3.5 \%$.

# APPENDIX C <br> SUMMARY OF PLAN PROVISIONS 

## III. Deferred Retirement Option Program (DROP) - Charter Section A8.900

## 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 unless the Board of Supervisors votes to renew for up to three more years.

## 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 participant in DROP.
3. Length of DROP period

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

| Rank | Maximum DROP Period |
| :--- | :---: |
| 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.

# APPENDIX C <br> SUMMARY OF PLAN 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 specific 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 postretirement 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.

# APPENDIX C <br> SUMMARY OF PLAN PROVISIONS 

## IV. Miscellaneous Members - Charter Sections $\mathbf{8 . 5 0 9}$ \& 8.587

## 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.

## 2. Average Final Compensation

Average monthly compensation earned during any year of credited service which average compensation is the highest.

## 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
$7.5 \%$ of salary, excluding overtime and most premium pay.
Member contributions are credited with interest at $5.0 \%$ per year, compounded annually.

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).

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## APPENDIX C

SUMMARY OF PLAN PROVISIONS
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.

## 5. Service Retirement

## Eligibility

Age 50 with 20 years of credited service, or age 60 with 10 years of credited service.

## Benefit - Member

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-4 below) for each year of credited service, effective January 11, 2009.

## Table C-4

City and County of San Francisco Employees' Retirement System Section 8.509 Member Service Retirement Factors

| Retirement Age | Retirement <br> Factors | Retirement Age |  |
| :---: | :---: | :---: | :---: | | Retirement |
| :---: |
| Factors |$|$| 50 | $1.0 \%$ | 57 | $1.7 \%$ |
| :---: | :---: | :---: | :---: |
| 51 | $1.1 \%$ | 58 | $1.9 \%$ |
| 52 | $1.2 \%$ | 59 | $2.1 \%$ |
| 53 | $1.3 \%$ | 60 | $2.2 \%$ |
| 54 | $1.4 \%$ | 61 | $2.3 \%$ |
| 55 | $1.5 \%$ | 62 or above |  |
| 56 | $1.6 \%$ |  |  |

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

## Benefit - Survivor

# APPENDIX C <br> SUMMARY OF PLAN PROVISIONS 

$50 \%$ 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.

## 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 members with less than five years of credited service:

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

## APPENDIX C <br> SUMMARY OF PLAN PROVISIONS

Charter 8.509 members with ten or more years of credited service or accumulated contributions exceeding \$1,000 and Charter 8.587 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.

## 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 1of each fiscal year, if 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 $3.5 \%$.

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.

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM <br> JULY 1, 2009 ACTUARIAL VALUATION 

## 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 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. 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 Funding 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.

# CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM <br> JULY 1, 2009 ACTUARIAL VALUATION 

## APPENDIX D GLOSSARY OF TERMS

## 8. Amortization

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

## 9. Annual Required Contribution (ARC) under GASB 25

The Governmental Accounting Standards Board (GASB) Statement No. 25 defines the Plan Sponsor's "Annual Required Contribution" (ARC) that must be disclosed annually. The SFERS Employer computed contribution rate for FY 2010 meets the parameters of GASB 25.

## 10. Normal Cost

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

## 11. 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.

## 12. 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).


[^0]:    1 Actuarial Value of Assets
    2 Reflects revised economic assumptions and Prop B changes
    3 July 1, 2007 numbers calculated by prior actuary

[^1]:    * Benefits provided in June 30 valuation data
    ** For Inactives, total contribution balance with interest is shown

[^2]:    * Benefits provided in June 30 valuation data

[^3]:    ** For Inactives, total contribution balance with interest is shown

[^4]:    * Benefits provided in June 30 valuation data
    ** For Inactives, total contribution balance with interest is shown

