City of San José Police and Fire Department Retirement Plan

June 30, 2013 Actuarial Valuation

Produced by Cheiron

January 7, 2014

CHEIRON Classic Values, Innovative Advice

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LETTER OF TRANSMITTAL

January 7, 2014

Board of Administration
City of San José Police and Fire Department Retirement Plan
1737 North 1st Street, Suite 580
San José, California 95112

Dear Members of the Board:

The purpose of this report is to present the June 30, 2013 actuarial valuation of the City of San José Police and Fire Department Retirement Plan ("Plan"). This report is for the use of the Board of Administration and its auditors in preparing financial reports in accordance with applicable laws and accounting requirements.

On June 5, 2012, voters approved Measure B which would make a number of changes to the Plan. As of this valuation, however, the only changes that have been implemented are the elimination of the Supplemental Retiree Benefit Reserve (SRBR) and the creation of a Tier 2 for Police members. The Police Tier 2 became effective after the valuation date, so no Tier 2 members are directly valued, but Tier 2 contribution rates are developed for the fiscal year ending June 30, 2015. No other provisions of Measure B have been reflected in this valuation.

The key results of the valuation are shown in the table on the following page.

Summary of Key Valuation Results

Valuation Date		**6/30/2013**		**6/30/2012**
Discount Rate		7.125%		7.25%
Actuarial Liability (AL)				
Police	$	2,219.7	$	2,111.2
Fire	$	1,358.3	$	1,286.6
Total	$	3,578.0	$	3,397.8
Actuarial Value of Assets (AVA)		2,771.9		2,703.5
Unfunded Actuarial Liability (UAL)		806.1		694.3
AVA Funded Ratio		77.5%		79.6%
Market Value of Assets (MVA)	$	2,789.5	$	2,578.9
UAL - MVA	$	788.5	$	818.9
MVA Funded Ratio		78.0%		75.9%
Fiscal Year Ending		**6/30/2015**		**6/30/2014**
Aggregate Contribution Rates				
Tier 1				
Member		11.4%		11.7%
City		72.7%		65.9%
Total		84.1%		77.6%
Projected Payroll	$	182.5	$	188.0
City Contribution Amounts				
- if paid at beginning of the year	$	128.2	$	119.6
- if paid throughout the year	$	132.7	$	123.8
Tier 2 (Police Only)				
Member		10.8%		11.0%
City		10.8%		11.0%
Total		21.6%		22.0%
Projected Payroll	$	5.8		N/A
City Contribution Amounts				
- if paid at beginning of the year	$	1.2		N/A
- if paid throughout the year	$	1.3		N/A

Dollar amounts in millions

At its November 2013 meeting, the Board adopted economic and demographic assumption changes based on the results of the experience study. The assumption changes increased the measure of actuarial liability by approximately $28 million and decreased the normal cost rate by approximately 0.8% of payroll. More details on the impact of the assumption changes and the experience during the year are found in the remainder of the report.

In preparing our report, we relied on information (some oral and some written) supplied by the City of San José Department of Retirement Services. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice #23.

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

This actuarial valuation report was prepared for the Board of Administration for the purposes described herein and for the use by the plan auditor in completing an audit related to the matters herein. This actuarial valuation report is not intended to benefit any third party, and Cheiron assumes no duty of liability to any such party.

Sincerely,
Cheiron

Gene Kalwarski, FSA, FCA, EA, MAAA
Principal Consulting Actuary

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

SECTION I
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 of San José Police and Fire Department Retirement Plan,
- Past and expected trends in the financial condition of the Plan,
- The Members' and City's contribution rates for the Fiscal Year Ending June 30, 2015, and
- Information required by the Governmental Accounting Standards Board (GASB).

The principal valuation results are summarized in this section, including a brief description of the basis upon which the contributions were determined and an examination of the current financial condition of the Plan. In addition, the key historical trends and projected financial outlook for the Plan are reviewed.

A. Valuation Basis

Tier 1 Member contribution rates are set equal to the sum of:

- A portion ($3/11^{th}$) of the Entry Age Normal Cost Rate (excluding reciprocity),
- A historical share of the assumed administrative expenses, and
- A portion of the UAL Rate attributable to certain benefit improvements.

The Plan's funding policy sets the City's Tier 1 contribution rates equal to the sum of:

- A portion ($8/11^{th}$) of the Entry Age Normal Cost Rate (excluding reciprocity),
- The Reciprocity Rate which is the prefunding of the liability for reciprocal benefits with certain other California public pension plans,
- A historical share of the assumed administrative expenses, and
- The remaining portion of the UAL Rate.

Beginning with the June 30, 2011 valuation, any changes in methods or assumptions are amortized over a closed 20-year period, and all other portions of the UAL are amortized over a closed 16-year period from the valuation in which they are first recognized. All amortization schedules are a level percent of expected payroll with payroll assumed to increase 3.5% each year.

For the Police Tier 2, members and the City share the total contribution rate equally.

B. Current Financial Condition

On the following pages, the key results of the June 30, 2013 valuation are summarized and compared to the results from the June 30, 2012 valuation.

1. Membership:

As shown in Table I-1 below, total active membership declined 0.6% from 2012 to 2013 with active Police membership decreasing 4.5% and active Fire membership increasing 5.8%. Total membership increased 2.7% reflecting the continued growth of inactive membership. There was also a reduction in total payroll caused by a decrease in both the number of overall active members and a decrease in average pay per member.

Table I-1
Total Membership

Item	June 30, 2013	June 30, 2012	% Change
Active Members			
Police	1,028	1,076	-4.5%
Fire	679	642	5.8%
Total Active Members	1,707	1,718	-0.6%
Terminated Vesteds	228	166	37.3%
Service Retirees	874	861	1.5%
Disabled Retirees	851	829	2.7%
Beneficiaries	269	252	6.7%
Total Members	3,929	3,826	2.7%
Active Member Payroll			
Police	$ 109.8	$ 116.5	-5.7%
Fire	74.9	71.5	4.7%
Total Payroll	$ 184.6	$ 188.0	-1.8%
Average Pay per Active Member			
Police	$ 106,793	$ 108,228	-1.3%
Fire	$ 110,253	$ 111,378	-1.0%
Total Average Pay	$ 108,169	$ 109,405	-1.1%

Total payroll amounts in millions

2. Assets and Liabilities:

Table I-2 on the following page compares the assets, liabilities, UAL, and funding ratios between June 30, 2013 and June 30, 2012. The total actuarial liability increased by 5.3% and the market value of assets increased by 8.2%, resulting in a decrease in the unfunded

actuarial liability of 3.7% to $788.5 million compared to the market value of assets. The Plan employs an asset smoothing method which dampens the impact of investment market volatility on contribution rates. For this year the smoothed value of assets (called the actuarial value of assets) increased by 2.5%. The ratio of the actuarial value of assets to the market value of assets decreased from 105% to 99%, indicating that the deferred gains are now slightly greater than the deferred losses. Based on the actuarial value of assets, the unfunded actuarial liability increased from $694.3 million to $806.1 million, resulting in a decrease in the funding ratio from 79.6% to 77.5%.

Table I-2
Assets and Liabilities

Item	June 30, 2013	June 30, 2012	% Change
Actuarial Liability			
Actives	$ 1,125.30	$ 1,087.50	3.5%
Terminated Vesteds	37.5	28.5	31.5%
In Pay Status	2,415.2	2,281.8	5.8%
Total Actuarial Liability	$ 3,578.03	$ 3,397.79	5.3%
Actuarial Value of Assets (AVA)	$ 2,771.92	$ 2,703.54	2.5%
Unfunded Actuarial Liability (UAL)	$ 806.11	$ 694.25	16.1%
AVA Funded Ratio	77.5%	79.6%	-2.6%
Market Value of Assets (MVA)	$ 2,789.52	$ 2,578.93	8.2%
UAL - MVA	$ 788.51	$ 818.86	-3.7%
MVA Funded Ratio	78.0%	75.9%	2.7%

Amounts in millions

3. Contributions:

Table I-3 shows sources for the change in the member and City contribution rates from the rates that were calculated in the prior report and the rates that were expected to be calculated in this report. Member contribution rates decreased primarily due to the assumption changes. The City's contribution was expected to increase to $132.7 million, but due to a combination of investment and demographic experience (including a reduction in payroll), the City's contribution only increased to $128.2 million.

SECTION I
BOARD SUMMARY

Table I-3
Reconciliation of Changes in Contribution Rates and Amounts

	Member Rate	City Normal Cost	City UAL Rate	City Total Rate	Projected Payroll	BOY City Contribution Amount
1. FYE 2014 Contribution	11.7%	31.6%	34.3%	65.9%	$ 188.0	$ 119.6
2. Expected FYE 2015 Contribution	11.7%	31.6%	39.0%	70.6%	$ 194.5	$ 132.7
3. Changes Due to Plan Experience						
a. Investment experience	0.0%	0.0%	-0.5%	-0.5%	$ 194.5	$ (0.9)
b. Demographic experience	0.0%	0.0%	-0.5%	-0.5%	$ 194.5	$ (0.9)
c. Payroll Change	0.0%	0.0%	1.4%	1.4%	$ 187.4	$ (2.1)
d. Assumption Change	-0.3%	-0.3%	1.9%	1.6%	$ 182.5	$ (0.5)
e. Subtotal	-0.2%	-0.2%	2.3%	2.1%	$ 182.5	$ (4.5)
4. FYE 2015 Contribution	11.4%	31.4%	41.3%	72.7%	$ 182.5	$ 128.2

Dollar amounts in millions, some figures may not add due to rounding.

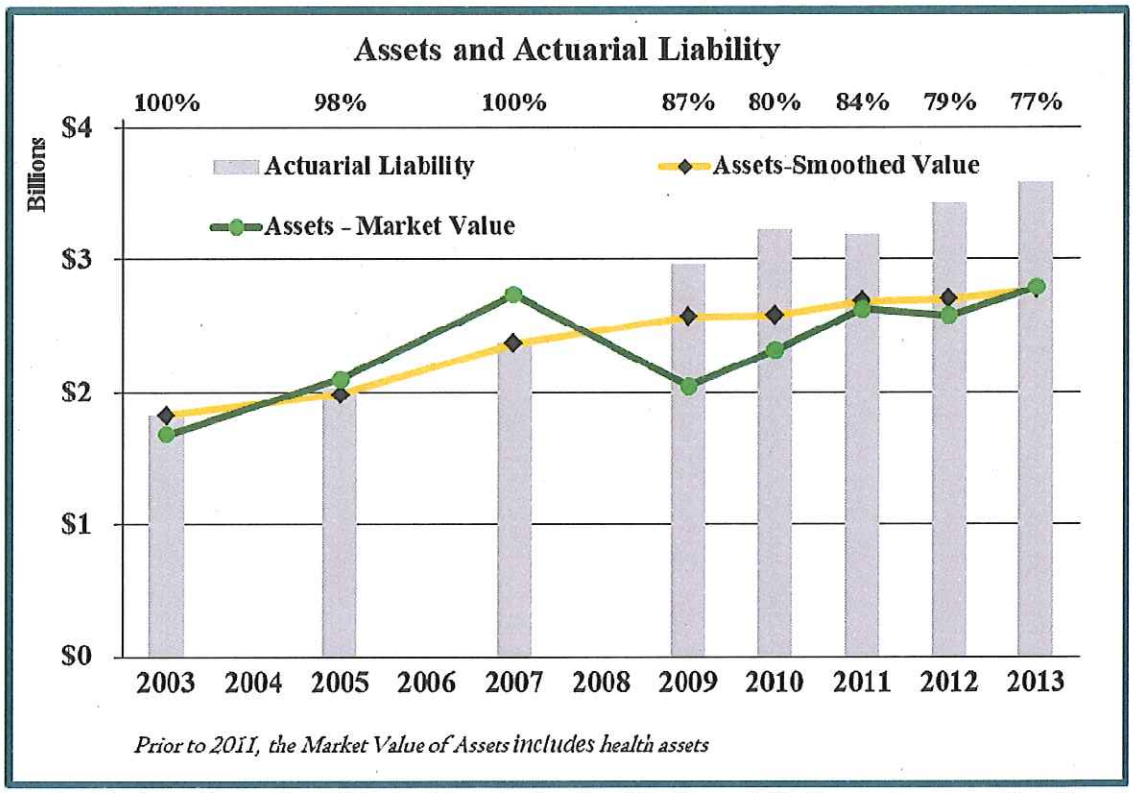
In Section III of this report, more detail is provided on both the plan experience during the year and the impact of the assumption changes. In Section IV of this report, more detail is provided on the development of the contribution rates.

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 contribution rates, 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.

The chart below shows the historical trends for assets (both market and smoothed) versus the actuarial liability, and also shows the progress of the funding ratios (based on the actuarial value of assets) since 2003. From 2003 to 2013, (with the exceptions of 2007 and 2011), the funding ratio has declined primarily because the plan has experienced lower than expected investment returns and has reduced its assumption of future investment returns.

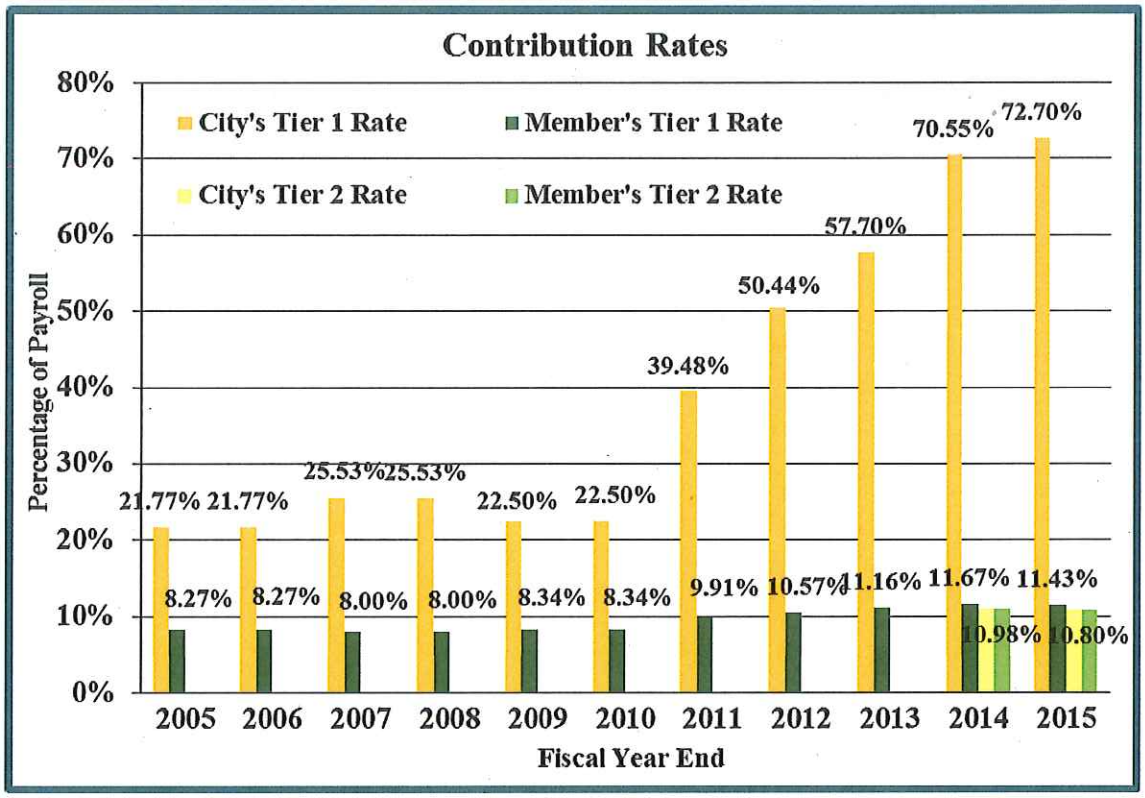
Assets and Actuarial Liability 2003-2013



The chart below shows the historical trends for the Plan's contribution rates since the Fiscal Year Ending June 30, 2005. All information shown prior to the Fiscal Year Ending June 30, 2011 was calculated by the prior actuary.

SECTION I
BOARD SUMMARY

Employer and Member Contribution Rates for FYE 2005 – 2015

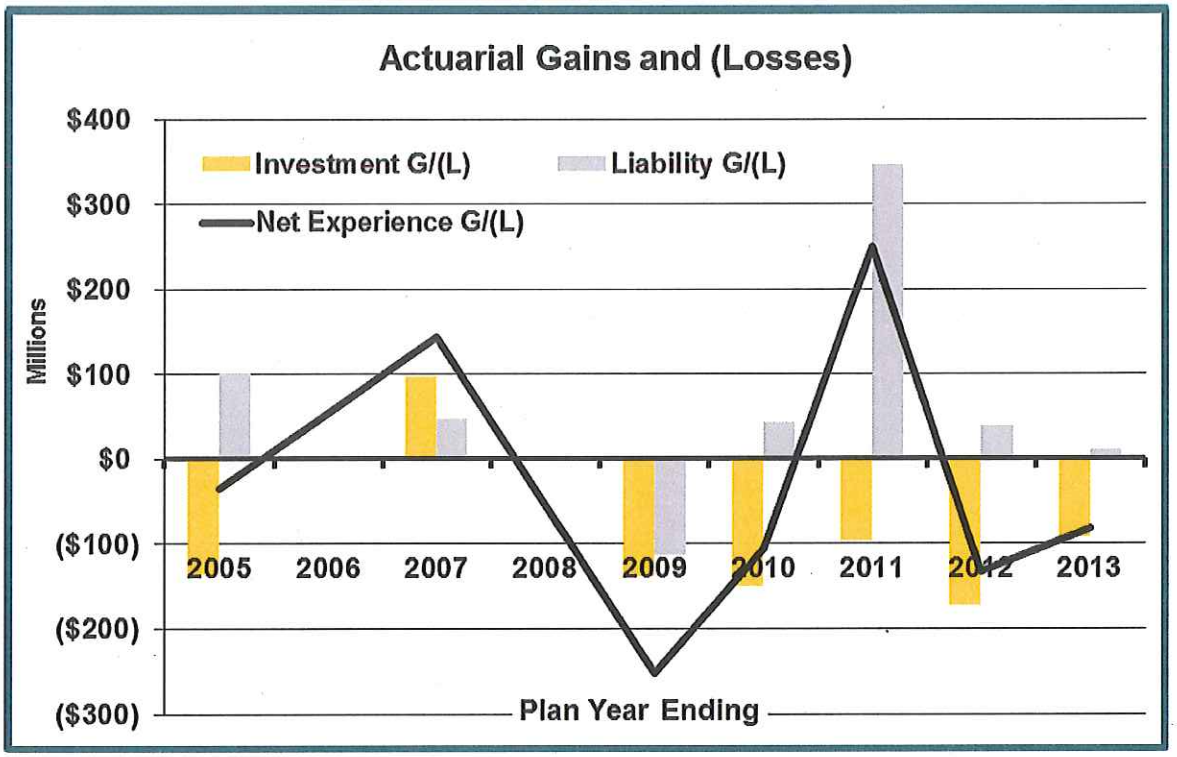


The large increases in the City's contribution rate since FYE 2010 are largely due to the poor investment earnings during 2008 and 2009, but lower discount rates were also adopted effective for contribution rates in FYE 2012, 2013, 2014, and 2015. In aggregate, the discount rate over this period has been reduced from 8.0% to 7.125%.

The chart on the following page represents the pattern of the Plan's actuarial gains and losses, broken into the investment and liability components. The chart does not include any changes attributable to changes in methods, procedures or assumptions.

SECTION I
BOARD SUMMARY

SJPF Historical Gain/(Loss) 2005-2012



The key insights from this chart are:

- Investment losses (gold bars) in 2005 are partially offset by investment gains from 2006 and 2007. From 2008 to 2013, there were additional investment losses based on the actuarial value of assets.

- On the liability side, six of the seven valuations showed actuarial gains with 2009 as the only exception. The actuarial gain in 2013 is primarily due to salary experience offset by retirement experience.

D. Projected Financial Trends

The analysis of projected financial trends is an important part of this valuation. In this Section, projections of the June 30, 2013 valuation results are used to illustrate the future outlook for the Plan in terms of benefit security (assets compared to liabilities) and the expected progression of contributions.

In the charts that follow, we project assets and liabilities, the pay down of UAL, and City contributions on two different bases:

1) Assuming no gains or losses compared to the assumptions (i.e., 7.125% return for 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 equal on average the assumed 7.125% return. We do this in order to illustrate the impact of volatility because the Plan's returns will never be level each and every year.

FYE	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Return	13.0%	6.3%	1.0%	19.0%	-3.0%	17.0%	15.0%	9.0%	-7.0%	16.0%

FYE	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Return	9.0%	-9.0%	7.1%	14.0%	16.0%	-8.0%	-14.0%	30.0%	25.0%	-1.0%

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 City contribution rates and amounts. 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.

Projection Set 1: Assets and Liabilities

The chart below shows asset measures (green and orange lines) compared to the actuarial liability (gray bars). At the top of each chart is the progression of funding ratios. The key insight from this chart is the steady projected improvement in funded ratios in the first chart, and how varying investment returns can impact the progression of funding ratios. In addition, even though the varying returns produce the same average return, the funded status at the end of the projection is only 89% compared to 100% with the 7.125% return each year.

Chart 1: Projection of Assets and Actuarial Liability, 7.125% return each year

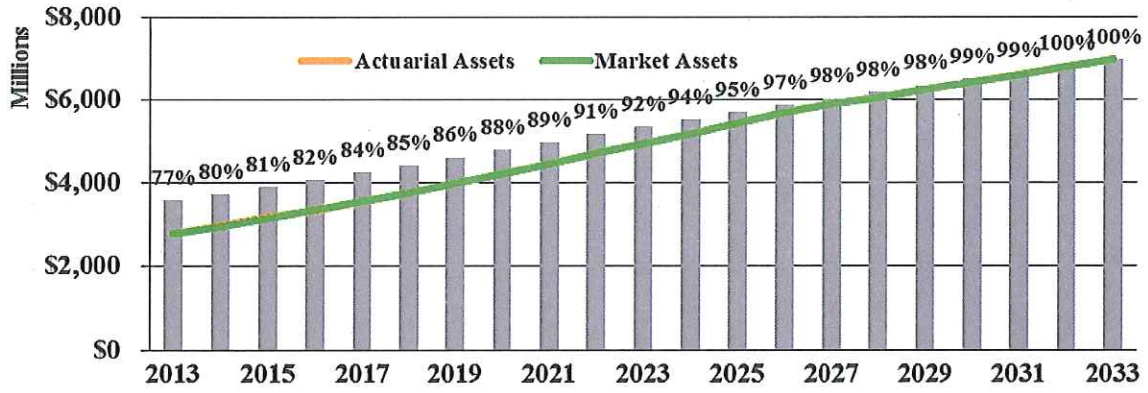
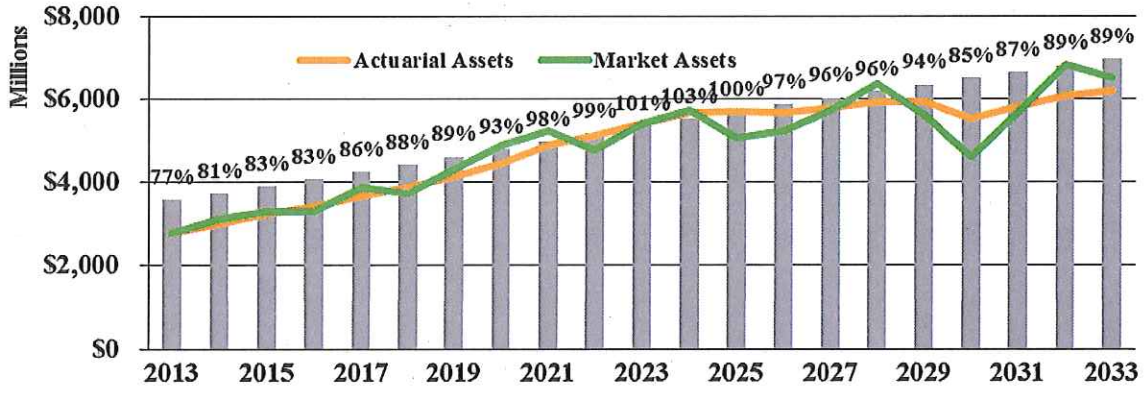


Chart 2: Projection of Assets and Liabilities, varying returns averaging 7.125% over time



Projection Set 2: Projected Employer Contribution Rate

The chart below shows projected member contribution rates (teal bars) and City contribution rates (gold bars) compared to the similar projection based on the 2012 valuation (red line). City contribution rates are expected to begin a gradual decline after FYE 2015 as all of the 2009 investment losses have been recognized and the lower normal cost rates of the Police Tier 2 members begin to have an impact. The significant decrease in contribution rates and amounts in 2027 and 2028 is due to the completion of the amortization of the actuarial losses and assumption changes recognized in the 2009 and 2010 actuarial valuations.

Chart 1: 7.125% return each year – percentage of pay

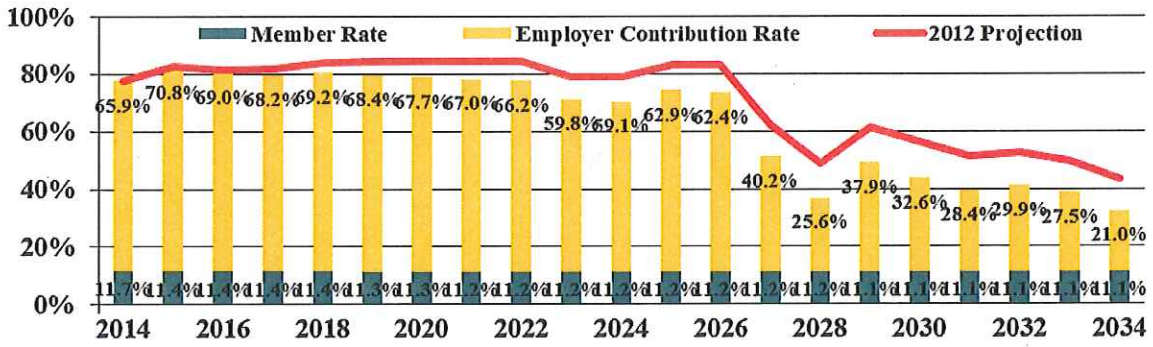
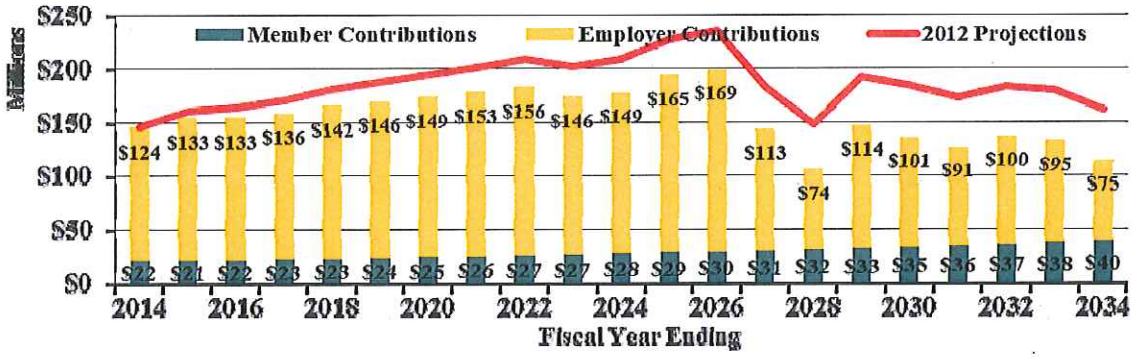


Chart 2: 7.125% return each year – dollar contribution amounts



SECTION I
BOARD SUMMARY

Chart 3: varying returns averaging 7.125% over time – percentage of pay

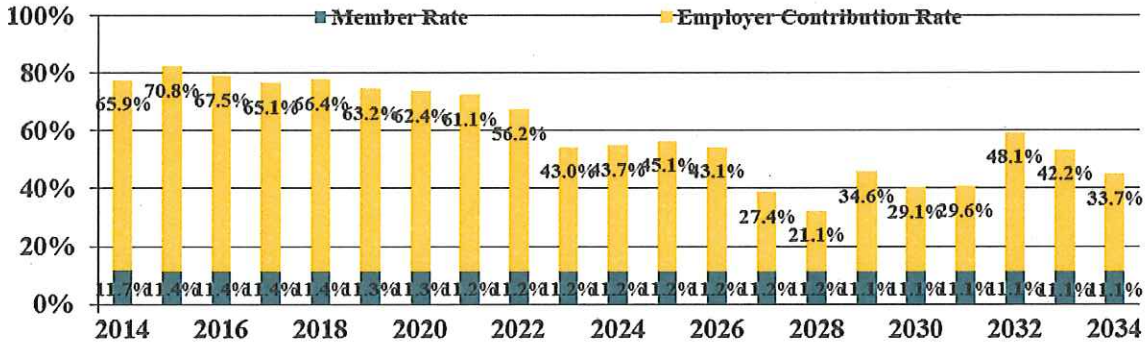
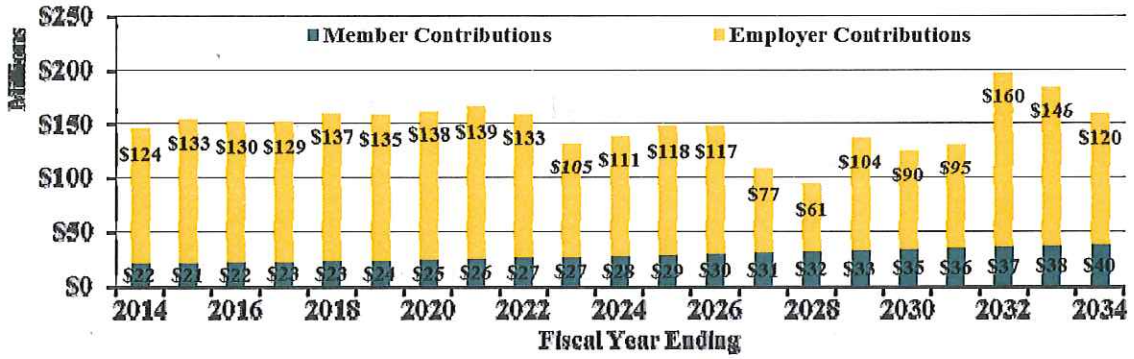


Chart 4: varying returns averaging 7.125% over time – dollar contribution amounts



Charts 3 and 4 illustrate the effect of varying investment returns on the projected contribution rates and amounts. The asset smoothing and amortization methods smooth much of the volatility, but significant contribution volatility remains.

SECTION II
ASSETS

The Plan 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 smoothes annual investment return performance over multiple years to reduce the impact of short-term investment volatility on City contribution rates.

On the following pages we present detailed information on the Plan's assets:

A. Statement of changes in the market value of assets during the year, and
B. Development of the actuarial value of assets.

A. Market Value of Assets

Table II-1 shows sources for the change in the market value of assets.

Table II-1

Change in Market Value of Assets

	June 30, 2013			June 30, 2012
	Retirement	COLA	Total	Total
Market Value, Beginning of Year	$ 1,705,136	$ 873,793	$ 2,578,929	$ 2,627,728
Contributions				
Member	$ 13,865	$ 6,362	$ 20,228	$ 19,345
City	59,020	46,214	105,234	121,008
Total	$ 72,886	$ 52,576	$ 125,462	$ 140,353
Net Investment Earnings[1]	$ 162,995	$ 85,263	$ 248,258	$ (33,877)
Benefit Payments	$ 120,619	$ 39,083	$ 159,702	$ 151,720
Administrative Expenses	$ 2,278	$ 1,144	$ 3,422	$ 3,556
Market Value, End of Year	$ 1,818,119	$ 971,405	$ 2,789,524	$ 2,578,929

Amounts in thousands

[1] Gross investment earnings less investment expenses.

The net investment earnings represent approximately a 9.5% return on the market value of assets compared to an assumed return of 7.25%.

SECTION II
ASSETS

B. Actuarial Value of Assets

To determine on-going contribution amounts, most pension funds use an actuarial value of assets that smoothes year-to-year market value returns in order to reduce the volatility of contribution rates.

The actuarial value of assets is calculated by recognizing the deviation of actual investment returns compared to the expected return (7.25% for 2012-13, 7.50% for 2011-12, 7.75% for 2010-11, 8.00% for prior years) over a five-year period. The dollar amount of the expected return on the market value of assets is determined using the actual contributions and benefit payments during the year. Any difference between this amount and the actual net investment earnings is considered a gain or loss. Table II-2 below shows the gains and losses for the last four years and the portion of each gain or loss that is not recognized in the current actuarial value of assets. These deferred amounts will be recognized in future years.

Table II-2

Development of Actuarial Value of Assets[1]

	June 30, 2013		
	Retirement	COLA	Total
Market Value of Assets	$1,818,118,994	$971,404,660	$2,789,523,654
Gains / (Losses)			
Current Year	$ 36,698,855	$ 18,624,246	$ 55,323,101
Prior Year	(158,481,339)	(80,101,035)	(238,582,375)
2nd Prior Year	146,320,079	69,514,959	215,835,038
3rd Prior Year	102,414,358	48,370,992	150,785,350
Deferred Gains / (Losses)			
Current Year (80% Deferred)	$ 29,359,084	$ 14,899,397	$ 44,258,481
Prior Year (60% Deferred)	(95,088,803)	(48,060,621)	(143,149,425)
2nd Prior Year (40% Deferred)	58,528,032	27,805,983	86,334,015
3rd Prior Year (20% Deferred)	20,482,872	9,674,198	30,157,070
Total	$ 13,281,184	$ 4,318,957	$ 17,600,141
Preliminary Actuarial Value of Assets	$1,804,837,810	$ 967,085,702	$2,771,923,512
Minimum Actuarial Value of Assets (80% of Market Value)	$1,454,495,195	$ 777,123,728	$2,231,618,923
Maximum Actuarial Value of Assets (120% of Market Value)	$2,181,742,793	$ 1,165,685,592	$3,347,428,384
Actuarial Value of Assets	$1,804,837,810	$ 967,085,702	$2,771,923,512

[1] Excludes health assets.

SECTION II
ASSETS

On the basis of the smoothed actuarial value of assets, the return for the year ending June 30, 2013 was approximately 3.9%, less than the 9.5% return on the market value of assets. This difference is largely due to the recognition of the deferred losses for 2009 and 2012.

SECTION III
LIABILITIES

This section presents detailed information on liabilities for the Plan, including:

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

A. Present Value of Future Benefits

The present value of future benefits represents the expected amount of money needed today to fully pay off all benefits both earned as of the valuation date and those to be earned in the future by current plan participants under the current plan provisions. Table III-1 below shows the present value of future benefits as of June 30, 2013 and June 30, 2012.

Table III-1

Present Value of Future Benefits

	June 30, 2013			June 30, 2012
	Retirement	COLA	Total	Total
Actives				
Retirement	$ 909,611	$ 382,170	$ 1,291,781	$ 1,242,615
Termination	49,711	19,908	69,619	38,437
Death	10,765	4,464	15,230	16,594
Disability	334,598	143,677	478,275	606,500
Total Actives	$ 1,304,686	$ 550,219	$ 1,854,905	$ 1,904,146
Service Retirees	813,058	555,921	1,368,980	1,319,339
Disabled Retirees	501,728	437,922	939,649	865,529
Beneficiaries	51,907	54,663	106,570	96,895
Deferred Vested	24,162	13,367	37,529	28,532
Total	$2,695,541	$1,612,092	$4,307,633	$ 4,214,441

Amounts in thousands

SECTION III
LIABILITIES

B. Normal Cost

Under the Entry Age (EA) actuarial cost method, the present value of future benefits for each individual is spread over the individual's expected working career under the Plan as a level percentage of the individual's expected pay. The normal cost rate is determined by taking the value, as of entry age into the Plan, of each member's projected future benefits 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. The normal cost of the Plan is the sum of the normal costs for each individual in the Plan. The normal cost represents the expected amount of money needed to fund the benefits attributed to the next year of service under the Entry Age actuarial funding method. In addition, administrative expenses are added to the EA normal cost rate to get the total normal cost rate. Table III-2 below shows the EA normal cost and Total normal cost rates as of June 30, 2013 and June 30, 2012 separately for Police and Fire.

Table III-2
Entry Age Normal Cost by Group

	Police			Fire		
	June 30, 2013	June 30, 2012	% Change	June 30, 2013	June 30, 2012	% Change
Entry Age Normal Cost for Current Active Members						
Retirement	25,489,320	29,606,559	-13.9%	16,652,078	13,786,695	20.8%
Termination	3,353,540	1,377,093	143.5%	1,181,188	854,995	38.2%
Death	633,799	692,887	-8.5%	474,329	461,958	2.7%
Disability	11,965,897	14,155,719	-15.5%	11,154,393	13,278,666	-16.0%
Reciprocity	591,274	280,270	111.0%	186,142	148,707	25.2%
Total Entry Age Normal Cost	42,033,830	46,112,528	-8.8%	29,648,130	28,531,021	3.9%
Expected payroll for current actives	104,080,171	111,204,844	-6.4%	71,328,985	68,304,306	4.4%
EA Normal Cost Rates	40.39%	41.47%	-1.08%	41.57%	41.77%	-0.21%
Administrative Expense Rate	1.80%	1.60%	0.20%	1.80%	1.60%	0.20%
Total Normal Cost Rate	42.19%	43.06%	-0.88%	43.37%	43.37%	0.00%

Table III-3 on the following page shows the impact of the assumption changes as of June 30, 2013 on the components of normal cost for Police and Fire members. For Police members, the demographic assumption changes reduced the normal cost rate by 1.8% of payroll, the wage inflation assumption change reduced the normal cost rate by 0.6% of payroll, the discount rate change increased the normal cost rate by 1.2% of payroll, and the administrative expense assumption change increased the normal cost rate by 0.2% of payroll. For Fire members, the demographic assumption changes reduced the normal cost rate by 1.0% of payroll, the wage inflation assumption change reduced the normal cost rate by 0.6% of payroll, the discount rate change increased the normal cost rate by 1.2% of payroll, and the administrative expense assumption change increased the normal cost rate by 0.2% of payroll.

SECTION III
LIABILITIES

Table III-3
Impact of Assumption Changes on Normal Cost

	Police			Fire		
	New	Old	% Change	New	Old	% Change
Entry Age Normal Cost for Current Active Members						
Retirement	25,489,320	27,957,926	-8.8%	16,652,078	14,390,148	15.7%
Termination	3,353,540	1,298,952	158.2%	1,181,188	896,579	31.7%
Death	633,799	651,781	-2.8%	474,329	483,476	-1.9%
Disability	11,965,897	13,277,217	-9.9%	11,154,393	14,009,478	-20.4%
Reciprocity	591,274	264,974	123.1%	186,142	154,786	20.3%
Total Entry Age Normal Cost	42,033,830	43,450,850	-3.3%	29,648,130	29,934,467	-1.0%
Expected payroll for current actives	104,080,171	104,574,596	-0.5%	71,328,985	71,475,433	-0.2%
EA Normal Cost Rates	40.39%	41.55%	-1.16%	41.57%	41.88%	-0.32%
Administrative Expense Rate	1.80%	1.57%	0.23%	1.80%	1.57%	0.23%
Total Normal Cost Rate	42.19%	43.12%	-0.93%	43.37%	43.45%	-0.09%

Table III-4 below shows the breakdown of the normal cost rate between the Retirement and COLA funds.

Table III-4
Normal Cost Rate Breakdown

	June 30, 2013		
	Retirement	COLA	Total
Police			
Normal cost for current actives	29,530,322	12,503,508	42,033,830
Expected payroll for current actives	104,080,171	104,080,171	104,080,171
Normal cost rate	28.37%	12.01%	40.39%
Administrative expense rate	1.26%	0.54%	1.80%
Total normal cost rate	29.64%	12.55%	42.19%
Fire			
Normal cost for current actives	20,933,496	8,714,634	29,648,130
Expected payroll for current actives	71,328,985	71,328,985	71,328,985
Normal cost rate	29.35%	12.22%	41.57%
Administrative expense rate	1.27%	0.53%	1.80%
Total normal cost rate	30.62%	12.75%	43.37%

C. Actuarial Liability

The actuarial liability represents the expected amount of money needed today to pay for benefits attributed to service prior to the valuation date under the EA method. It is the difference between the present value of future benefits and the present value of future normal costs. Table III-5 below shows the actuarial liability as of June 30, 2013 and June 30, 2012 separately for Police and Fire.

SECTION III
LIABILITIES

Table III-5
Actuarial Liability

	Police			Fire		
	June 30, 2013	June 30, 2012	% Change	June 30, 2013	June 30, 2012	% Change
Actives						
Retirement	567,989,100	540,911,601	5.0%	287,572,993	219,924,696	30.8%
Termination	13,411,956	6,092,613	120.1%	4,562,294	3,872,476	17.8%
Death	2,620,410	2,762,790	-5.2%	2,001,817	1,969,960	1.6%
Disability	123,947,302	160,723,385	-22.9%	123,196,859	151,239,148	-18.5%
Total Actives	707,968,768	710,490,389	-0.4%	417,333,963	377,006,280	10.7%
Service Retirees	988,629,363	929,886,875	6.3%	380,350,224	389,452,421	-2.3%
Beneficiaries	51,370,316	48,490,022	5.9%	55,199,828	48,404,818	14.0%
Disabled Retirees	439,313,770	398,369,857	10.3%	500,335,705	467,159,530	7.1%
Deferred Vested	32,428,376	23,928,403	35.5%	5,100,332	4,603,224	10.8%
Total Actuarial Liability	2,219,710,593	2,111,165,546	5.1%	1,358,320,052	1,286,626,273	5.6%

Table III-6 below shows the impact of the assumption changes on the actuarial liability as of June 30, 2013. For Police members, the demographic assumption changes reduced the actuarial liability by $7.9 million, the wage inflation assumption change reduced the actuarial liability by $14.8 million, and the discount rate change increased the actuarial liability by $36.6 million. For Fire members, the demographic assumption changes increased the actuarial liability by $1.5 million, the wage inflation assumption change reduced the actuarial liability by $8.2 million, and the discount rate change increased the actuarial liability by $21.0 million.

Table III-6
Impact of Assumption Changes on Actuarial Liability

	Police			Fire		
	New	Old	% Change	New	Old	% Change
Actives						
Retirement	567,989,100	546,461,752	3.9%	287,572,993	243,187,108	18.3%
Termination	13,411,956	5,542,930	142.0%	4,562,294	3,906,236	16.8%
Death	2,620,410	2,652,135	-1.2%	2,001,817	2,126,658	-5.9%
Disability	123,947,302	160,427,847	-22.7%	123,196,859	165,652,076	-25.6%
Total Actives	707,968,768	715,084,664	-1.0%	417,333,963	414,872,078	0.6%
Service Retirees	988,629,363	974,935,730	1.4%	380,350,224	375,198,966	1.4%
Beneficiaries	51,370,316	50,792,863	1.1%	55,199,828	54,595,582	1.1%
Disabled Retirees	439,313,770	433,428,286	1.4%	500,335,705	494,391,011	1.2%
Deferred Vested	32,428,376	31,546,530	2.8%	5,100,332	4,951,532	3.0%
Total Actuarial Liability	2,219,710,593	2,205,788,073	0.6%	1,358,320,052	1,344,009,169	1.1%

SECTION III
LIABILITIES

Table III-7 below shows the breakdown of the Actuarial Liability as of June 30, 2013 between the Retirement and COLA funds.

Table III-7
Actuarial Liability Breakdown

	June 30, 2013		
	Retirement	COLA	Total
Police			
Actives	495,093,536	212,875,232	707,968,768
Service Retirees	581,974,410	406,654,953	988,629,363
Beneficiaries	25,295,358	26,074,958	51,370,316
Disabled Retirees	231,438,875	207,874,895	439,313,770
Deferred Vested	21,060,436	11,367,940	32,428,376
Total	1,354,862,615	864,847,978	2,219,710,593
Fire			
Actives	295,434,254	121,899,709	417,333,963
Service Retirees	231,083,824	149,266,400	380,350,224
Beneficiaries	26,612,020	28,587,808	55,199,828
Disabled Retirees	270,288,784	230,046,921	500,335,705
Deferred Vested	3,101,346	1,998,986	5,100,332
Total	826,520,228	531,799,824	1,358,320,052
Total Actuarial Liability	2,181,382,843	1,396,647,802	3,578,030,645

SECTION III
LIABILITIES

D. Analysis of Change in Unfunded Actuarial Liability (UAL)

The UAL of any retirement plan is expected to change at each subsequent valuation for a variety of reasons. In each valuation, we 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. Table III-8 below develops the expected UAL and identifies the primary sources for changes in the UAL since the last valuation.

Table III-8
Development of Experience Gain / (Loss)

Item		Amount
1. Unfunded actuarial liability, BOY		$ 694,252,820
2. Interest		50,333,329
3. Expected unfunded actuarial liability payment w/int		(48,096,566)
4. Change in assumptions		28,233,404
5. Expected unfunded actuarial liability		$ 724,722,987
6. Actual unfunded actuarial liability		806,107,133
7. Difference		$ (81,384,145)
a. Portion due to investment experience	$ (92,499,295)	
b. Portion due to salary experience	22,315,921	
c. Portion due to retirement experience	(11,472,554)	
d. Portion due to other experience	271,783	
e. Total	$ (81,384,145)	

SECTION IV
CONTRIBUTIONS

Under the contribution allocation procedure employed by the Plan, there are two components to the total contribution: the normal cost and the unfunded actuarial liability contribution. The normal cost rate was developed in Section III. This section develops the UAL contribution rate and divides the contributions between the members and the City.

The UAL is composed of experience gains and losses, assumption changes and plan provision changes. Each component is amortized from the valuation date in which it was first recognized. Table IV-1 below shows the outstanding balance, remaining period and amortization payments for each component of the UAL as of June 30, 2013.

Table IV-1

UAL Amortization

Source	Date	Outstanding Balance Retirement	Outstanding Balance COLA	Remaining Period	Amortization Payment Retirement	Amortization Payment COLA
Ben Improvement (All Mbrs)	6/30/1996	$ (1,243,435)	$1,896,043	4.0	$ (350,395)	$ 534,297
UAAL	6/30/2003	4,189,112	(6,387,744)	4.0	1,180,475	(1,800,041)
Experience Loss	6/30/2005	(70,293,010)	107,185,925	8.0	(10,584,968)	16,140,433
Ben Improvement (Pol)	6/30/2005	21,784,516	8,434,850	8.0	3,280,389	1,270,149
Rate Increase Delay (Pol Mbrs)	12/17/2006	145,724	56,423	8.5	20,908	8,095
Ben Improvement (Fire)	6/30/2007	21,499,904	8,172,497	10.0	2,675,985	1,017,190
Experience Gain	6/30/2007	(85,476,735)	(38,367,403)	10.0	(10,638,859)	(4,775,398)
Assumption Change	6/30/2007	18,733,454	10,057,803	10.0	2,331,659	1,251,844
Experience Loss	6/30/2009	148,272,153	78,664,314	12.0	15,883,078	8,426,609
Assumption Change	6/30/2009	87,175,123	48,276,040	12.0	9,338,296	5,171,383
Experience Loss	6/30/2010	98,485,458	53,179,730	13.0	9,895,229	5,343,181
Assumption Change	6/30/2010	63,256,167	36,048,694	13.0	6,355,601	3,621,957
Experience Gain	6/30/2011	(148,177,537)	(93,743,180)	14.0	(14,045,906)	(8,886,016)
Assumption Change	6/30/2011	22,883,592	32,576,063	18.0	1,796,045	2,556,770
Experience Loss	6/30/2012	85,467,528	46,010,389	15.0	7,681,769	4,135,385
Amendment	6/30/2012	(32,064,654)	-	15.0	(2,881,951)	-
Experience Loss	6/30/2013	58,113,351	49,500,555	19.0	4,388,084	3,737,740
Experience Loss	6/30/2013	51,300,919	30,083,228	16.0	4,391,068	2,574,954
Assumption Change	6/30/2013	6,520,486	21,712,918	20.0	474,950	1,581,561
7/1 UAL Payment		25,972,916	36,204,956			
Total		$ 376,545,032	$ 429,562,101		$ 31,191,457	$ 41,910,093

SECTION IV
CONTRIBUTIONS

Table IV-2 below shows the division of the UAL payments between Police and Fire and between the members and the City.

Table IV-2

UAL Amortization Payments

Source	Police Member	Police City	Police Total	Fire Member	Fire City	Fire Total
1996 Ben Improvement (All Mbrs)	$ 106,971	$ 0	$ 106,971	$ 76,931	$ 0	$ 76,931
2003 UAAL	0	(360,386)	(360,386)	0	(259,180)	(259,180)
2005 Experience Loss	0	3,231,477	3,231,477	0	2,323,988	2,323,988
2005 Ben Improvement (Pol)	0	4,550,538	4,550,538	0	0	0
2006 Rate Increase Delay (Pol Mbrs)	29,003	0	29,003	0	0	0
2007 Ben Improvement (Fire)	0	0	0	0	3,693,175	3,693,175
2007 Experience Gain	0	(8,966,093)	(8,966,093)	0	(6,448,164)	(6,448,164)
2007 Assumption Change	0	2,084,435	2,084,435	0	1,499,068	1,499,068
2009 Experience Loss	0	14,140,345	14,140,345	0	10,169,342	10,169,342
2009 Assumption Change	0	8,439,922	8,439,922	0	6,069,757	6,069,757
2010 Experience Loss	0	8,863,807	8,863,807	0	6,374,603	6,374,603
2010 Assumption Change	0	5,803,699	5,803,699	0	4,173,859	4,173,859
2011 Experience Gain	0	(13,338,933)	(13,338,933)	0	(9,592,989)	(9,592,989)
2011 Assumption Change	0	2,531,925	2,531,925	0	1,820,890	1,820,890
2012 Experience Loss	0	6,873,747	6,873,747	0	4,943,407	4,943,407
2012 Amendment	0	(1,676,360)	(1,676,360)	0	(1,205,591)	(1,205,591)
2012 Assumption Change	0	4,726,591	4,726,591	0	3,399,233	3,399,233
2013 Experience Loss	0	4,051,963	4,051,963	0	2,914,059	2,914,059
2013 Assumption Change	0	1,196,222	1,196,222	0	860,289	860,289
Total	$ 138,573	$ 42,152,900	$ 42,288,874	$ 76,931	$ 30,735,745	$ 30,812,676

SECTION IV
CONTRIBUTIONS

In addition to the UAL payments shown above, members pay 3/11ths of the EA normal cost (excluding reciprocity normal cost) plus their historical share of administrative expenses. Table IV-3 below shows the contribution rates for the 2013-14 and 2014-15 fiscal years for members and the City split between Police and Fire groups.

Table IV-3
Contribution Rates

	Fiscal Year 2014-15			Fiscal Year 2013-14		
	Retirement	COLA	Total	Retirement	COLA	Total
Police Tier 1 - Member						
Normal Cost	7.82%	3.31%	11.14%	8.09%	3.43%	11.53%
UAL	-0.18%	0.31%	0.13%	-0.17%	0.29%	0.12%
Total	7.65%	3.62%	11.27%	7.92%	3.73%	11.65%
Police Tier 1 - City						
Normal Cost	21.81%	9.24%	31.05%	22.14%	9.40%	31.54%
UAL	17.69%	23.40%	41.09%	13.96%	19.82%	33.78%
Total	39.51%	32.63%	72.14%	36.10%	29.22%	65.31%
Police Tier 2 - Member						
Normal Cost	9.32%	1.48%	10.80%	9.57%	1.41%	10.98%
UAL	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	9.32%	1.48%	10.80%	9.57%	1.41%	10.98%
Police Tier 2 - City						
Normal Cost	9.32%	1.48%	10.80%	9.57%	1.41%	10.98%
UAL	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	9.32%	1.48%	10.80%	9.57%	1.41%	10.98%
Fire - Member						
Normal Cost	8.15%	3.39%	11.54%	8.23%	3.39%	11.62%
UAL	-0.20%	0.30%	0.10%	-0.19%	0.29%	0.10%
Total	7.95%	3.70%	11.65%	8.05%	3.67%	11.72%
Fire - City						
Normal Cost	22.47%	9.35%	31.82%	22.49%	9.25%	31.75%
UAL	18.12%	23.54%	41.66%	14.89%	20.16%	35.05%
Total	40.59%	32.89%	73.48%	37.38%	29.41%	66.79%

SECTION IV
CONTRIBUTIONS

Table IV-4 below shows the estimated dollar amounts of the City's contributions assuming contributions are made at the beginning of the fiscal year. To the extent the City's contributions are made after the beginning of the fiscal year, the amounts should be increased at the assumed valuation interest rate (7.25% for 2013-14 and 7.125% for 2014-15).

Table IV-4
Estimated City Contribution Amounts
Beginning of Year

	Fiscal Year 2014-15			Fiscal Year 2013-14		
	Retirement	COLA	Total	Retirement	COLA	Total
Police Tier 1						
Normal Cost	22,376,449	9,474,469	31,850,917	24,896,327	10,565,852	35,462,178
UAL	18,150,669	24,002,231	42,152,900	15,692,238	22,288,130	37,980,367
Total	40,527,117	33,476,700	74,003,817	40,588,564	32,853,981	73,442,546
Police Tier 2						
Normal Cost	522,290	83,175	605,465	N/A	N/A	N/A
UAL	-	-	-	N/A	N/A	N/A
Total	522,290	83,175	605,465	N/A	N/A	N/A
Fire						
Normal Cost	16,576,465	6,900,798	23,477,263	15,531,829	6,388,951	21,920,780
UAL	13,370,275	17,365,470	30,735,745	10,280,678	13,916,826	24,197,505
Total	29,946,741	24,266,268	54,213,009	25,812,508	20,305,777	46,118,285
Total						
Normal Cost	39,475,204	16,458,442	55,933,646	40,428,156	16,954,803	57,382,958
UAL	31,520,944	41,367,701	72,888,645	25,972,916	36,204,956	62,177,872
Total	70,996,148	57,826,143	128,822,291	66,401,072	53,159,759	119,560,830

SECTION V
ACCOUNTING STATEMENT INFORMATION

Statement No. 25 of the Governmental Accounting Standards Board (GASB) established standards for accounting and financial reporting of pension information by public employee retirement systems through the System's June 30, 2013 reporting date. That reporting was based on the June 30, 2012 actuarial valuation. Statement 67 has replaced Statement 25 effective beginning with the System's financial reporting date of June 30, 2014. Under Statement 67, the beginning of year amounts will be based on the June 30, 2013 valuation, but the disclosures as of June 30, 2014 will be based either on the June 30, 2014 valuation or on a projection of the Total Pension Liability from the 2013 valuation reflecting actual benefit payments and any significant events since June 30, 2013. Furthermore, some information reported in the System's Comprehensive Annual Financial Report is based on guidance from the Government Finance Officers' Association (GFOA) which has yet to update their guidance to reflect Statement 67. Consequently, the reporting under this valuation is in flux.

For this year, the report includes some exhibits that will be required by GASB 67 and some exhibits that may continue to be required by the GFOA. Additional information will be provided either in a supplemental report or in next year's valuation report.

Statement 67 requires disclosure of the Net Pension Liability in the Notes of the System's financial statement. Exhibit V-1 provides this information. Because the System's methods are identical to those required by Statement 67 and under the System's contribution policy the GASB discount rate equals the expected rate of return, the Total Pension Liability as of June 30, 2013 is the same as the Actuarial Liability shown earlier in this report. The Plan Fiduciary Net Position equals the market value of assets and the Net Pension Liability equals the Unfunded Actuarial Liability based on the market value of assets.

Table V-1

Net Pension Liability

	June 30, 2013	June 30, 2012	% Change
1. Total Pension Liability			
a. Members currently receiving payments	$ 2,415,199,206	$ 2,281,763,523	5.8%
b. Vested terminated and inactive members	37,528,708	28,531,627	31.5%
c. Active members	1,125,302,731	1,087,496,668	3.5%
d. Total pension liability	$ 3,578,030,645	$ 3,397,791,818	5.3%
2. Plan Fiduciary Net Position	$ 2,789,523,654	$ 2,578,928,608	8.2%
3. Net Pension Liability	$ 788,506,991	$ 818,863,210	-3.7%
4. Plan Fiduciary Net Position as a Percentage of the Total Pension Liability (2 ÷ 1.d)	77.96%	75.90%	2.7%

SECTION V
ACCOUNTING STATEMENT INFORMATION

Tables V-2 through V-5 are exhibits for use in the Plan's 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 Summarizes key actuarial assumptions and methods; Table V-3 shows the schedule of changes in Net Pension Liability required by GASB 67; Table V-4 presents the Solvency Test which shows the portion of actuarial liability covered by assets; and Table V-5 presents the Schedule of Funding Progress.

Table V-2
City of San José Police and Fire Department Retirement Plan
Notes to Required Supplementary Information

The information presented in these schedules was determined as part of the actuarial valuation based on the following methods and assumptions.

Valuation date	June 30, 2013
Actuarial funding method	Entry Age
Amortization method	Level percent of pay, closed, layered
Equivalent single amortization period	13.4 Years
Asset valuation method	5 year smoothing of return
Actuarial assumptions:	
Investment rate of return	7.125%
Wage inflation[1]	2.00% for two years and 3.50% thereafter
Cost-of-living adjustments[2]	3.0% per year, 1.5% per year for Police Tier 2

The actuarial assumptions used have been recommended by the actuary and adopted by the City of San José Police and Fire Department Plan Board based on the most recent review of plan experience completed in 2013.

[1] Excludes merit increases.
[2] Cost-of-living adjustments are fixed at 3.0% for benefits other than Police Tier 2 by the plan provision and do not fluctuate with actual inflation.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-3
Schedule of Changes in the Net Pension Liability and Related Ratios

	FYE 2013
Total Pension Liability	
Service cost	$ 78,156,926
Interest	243,435,611
Changes of benefit terms	-
Differences between expected and actual experience	(9,884,937)
Changes of assumptions	28,233,404
Benefit payments (including refunds)	(159,702,176)
Net change in total pension liability	$ 180,238,827
Total pension liability - beginning	3,397,791,818
Total pension liability - ending	$ 3,578,030,645
Plan Fiduciary Net Position	
Contributions - employer	$ 105,233,909
Contributions - member	20,227,805
Net investment income	248,257,895
Benefit payments (including refunds)	(159,702,176)
Administrative expense	(3,422,388)
Net change in plan fiduciary net position	$ 210,595,045
Plan fiduciary net position - beginning	2,578,928,608
Plan fiduciary net position - ending	$ 2,789,523,654
Net pension liability	$ 788,506,991
Plan fiduciary net position as a percentage of the total pension liability	77.96%
Covered-employee payroll	$ 184,645,250
Net pension liability as a percentage of covered-employee payroll	427.04%

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-4

Solvency Test[1]

Valuation Date June 30,	Active Member Contributions (A)	Actuarial Liability For Retirees, Beneficiaries and Other Inactives (B)	Actuarial Liability For Remaining Active Members' Liability (C)	Reported Assets	Portion of Actuarial Liability Covered by Reported Assets (A)	(B)	(C)
2013	$ 276,047	$ 2,452,728	$ 849,256	$ 2,771,924	100%	100%	5%
2012	276,047	2,310,295	811,450	2,703,539	100%	100%	14%
2011	260,172	2,174,044	761,791	2,685,721	100%	100%	33%
2010	246,356	1,907,931	1,076,169	2,576,705	100%	100%	39%
2009	243,302	1,630,914	1,089,266	2,569,569	100%	100%	64%
2007	227,191	1,240,126	905,069	2,365,790	100%	100%	99%
2005	194,008	1,062,247	771,177	1,983,090	100%	100%	94%

Amounts in thousands

[1] Amounts prior to June 30, 2011 calculated by prior actuary.

Table V-5[1]

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Liability (AL)	Unfunded AL	Funded Ratio	Covered Payroll	Unfunded AL as a % of Covered Payroll
6/30/2005	$ 1,983,090	$ 2,027,432	$ 44,342	97.8%	$ 210,018	21.1%
6/30/2007	2,365,790	2,372,386	6,596	99.7%	227,734	2.9%
6/30/2009	2,569,569	2,963,482	393,913	86.7%	255,223	154.3%
6/30/2010	2,576,705	3,230,456	653,751	79.8%	251,058	260.4%
6/30/2011	2,685,721	3,196,007	510,286	84.0%	190,726	267.5%
6/30/2012	2,703,539	3,397,792	694,253	79.6%	187,959	369.4%
6/30/2013	2,771,924	3,578,031	806,107	77.5%	184,645	436.6%

Amounts in thousands

[1] Amounts prior to June 30, 2011 calculated by prior actuary.

APPENDIX A
MEMBERSHIP INFORMATION

Table A-1
City of San Jose Police and Fire Department Retirement Plan
Active Member Data

	June 30, 2013	June 30, 2012	% Change
Total			
Count	1,707	1,718	-0.6%
Average Current Age	41.6	41.5	0.2%
Average Vesting Service	13.6	13.6	0.0%
Annual Expected Pensionable Earnings	$ 184,645,250	$ 187,958,524	-1.8%
Average Expected Pensionable Earnings	$ 108,169	$ 109,405	-1.1%

Table A-2
City of San Jose Police and Fire Department Retirement Plan
Non-Active Member Data

	Count			Average Age		
	June 30, 2013	June 30, 2012	%Change	June 30, 2013	June 30, 2012	%Change
Total						
Retired & Disabled	1,725	1,690	2.1%	64.8	64.6	0.3%
Beneficiaries	269	252	6.7%	64.6	64.5	0.2%
Payee Total	1,994	1,942	2.7%	64.8	64.6	0.3%
Inactives	229	166	38.0%	40.8	40.3	1.2%

Table A-3
City of San Jose Police and Fire Department Retirement Plan
Non-Active Member Data

	Total Annual Benefit*			Average Annual Benefit*		
	June 30, 2013	June 30, 2012	%Change	June 30, 2013	June 30, 2012	%Change
Total						
Retired & Disabled	$ 153,249,704	$ 145,746,196	5.1%	$ 88,840	$ 86,240	3.0%
Beneficiaries	9,466,184	8,635,092	9.6%	35,190	34,266	2.7%
Payee Total	$ 162,715,888	$ 154,381,289	5.4%	$ 81,603	$ 79,496	2.7%
Inactives**	$ 2,705,254	$ 2,062,960	31.1%	$ 11,813	$ 12,427	-4.9%

* Benefits provided in June 30 valuation data
** For Inactives, benefit is calculated based on the data assumptions and methods outlined in Appendix A.

APPENDIX A
MEMBERSHIP INFORMATION

Table A-4
City of San Jose Police and Fire Department Retirement Plan
Distribution of Active Members as of June 30, 2013

	Years of Benefit Service								
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 and Up	Total
Under 25	11	2	-	-	-	-	-	-	13
25 to 29	40	15	24	-	-	-	-	-	79
30 to 34	40	53	120	16	-	-	-	-	229
35 to 39	6	35	101	129	12	-	-	-	283
40 to 44	7	12	54	149	203	14	-	-	439
45 to 49	-	1	16	80	192	136	12	-	437
50 to 54	1	-	1	12	59	103	18	-	194
55 to 59	-	-	-	5	13	12	1	-	31
60 to 64	-	-	-	1	-	-	-	1	2
65 to 69	-	-	-	-	-	-	-	-	-
70 and up	-	-	-	-	-	-	-	-	-
Total Count	105	118	316	392	479	265	31	1	1,707

Table A-5
City of San Jose Police and Fire Department Retirement Plan
Distribution of Active Members as of June 30, 2013

	Average Expected Salary Years of Benefit Service								
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 and Up	Total
Under 25	$ 76,888	$ 83,140	$ -	$ -	$ -	$ -	$ -	$ -	$ 77,850
25 to 29	75,665	86,059	103,162	-	-	-	-	-	85,992
30 to 34	77,069	89,943	102,886	108,554	-	-	-	-	95,777
35 to 39	67,447	91,276	104,985	107,884	117,158	-	-	-	104,331
40 to 44	78,052	88,982	102,857	109,256	114,340	125,072	-	-	110,273
45 to 49	-	100,484	107,396	110,195	114,661	120,973	131,451	-	115,970
50 to 54	74,027	-	104,130	113,416	111,781	117,064	128,667	-	116,019
55 to 59	-	-	-	108,773	112,938	116,768	150,101	-	114,948
60 to 64	-	-	-	98,562	-	-	-	122,665	110,613
65 to 69	-	-	-	-	-	-	-	-	-
70 and up	-	-	-	-	-	-	-	-	-
Avg. Salary	$ 76,002	$ 89,721	$ 103,805	$ 109,061	$ 114,186	$ 119,480	$ 130,436	$ 122,665	$ 108,169

APPENDIX A
MEMBERSHIP INFORMATION

Table A-6
City of San Jose Police and Fire Department Retirement Plan
Retirees and Disabled by Attained Age and Benefit Effective Date
As of June 30, 2013

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-1993	-	1	5	7	30	38	82	56	28	6	253
PYE 1993	-	1	2	-	3	29	34	4	-	-	73
PYE 1994	-	2	-	2	1	27	12	2	-	-	46
PYE 1995	-	1	1	1	23	29	7	1	-	-	63
PYE 1996	-	2	-	1	13	23	4	-	-	-	43
PYE 1997	1	-	1	4	24	28	3	2	-	-	63
PYE 1998	-	1	1	5	41	19	4	-	-	-	71
PYE 1999	-	-	1	5	31	17	4	-	-	-	58
PYE 2000	-	1	-	9	22	15	2	-	-	-	49
PYE 2001	-	2	2	13	33	6	1	-	-	-	57
PYE 2002	-	3	1	14	28	5	-	-	-	-	51
PYE 2003	2	2	2	31	36	4	1	-	-	-	78
PYE 2004	-	-	5	25	15	2	-	-	-	-	47
PYE 2005	1	3	6	42	21	4	1	-	-	-	78
PYE 2006	-	-	9	11	16	1	-	-	-	-	37
PYE 2007	2	1	22	32	9	-	-	-	-	-	66
PYE 2008	4	-	27	25	6	-	-	-	-	-	62
PYE 2009	4	9	68	56	16	2	-	-	-	-	155
PYE 2010	2	31	72	30	2	-	-	-	-	-	137
PYE 2011	7	47	48	11	-	1	-	-	-	-	114
PYE 2012	9	36	20	4	1	-	-	-	-	-	70
PYE 2013	14	27	10	2	1	-	-	-	-	-	54
Total	46	170	303	330	372	250	155	65	28	6	1,725

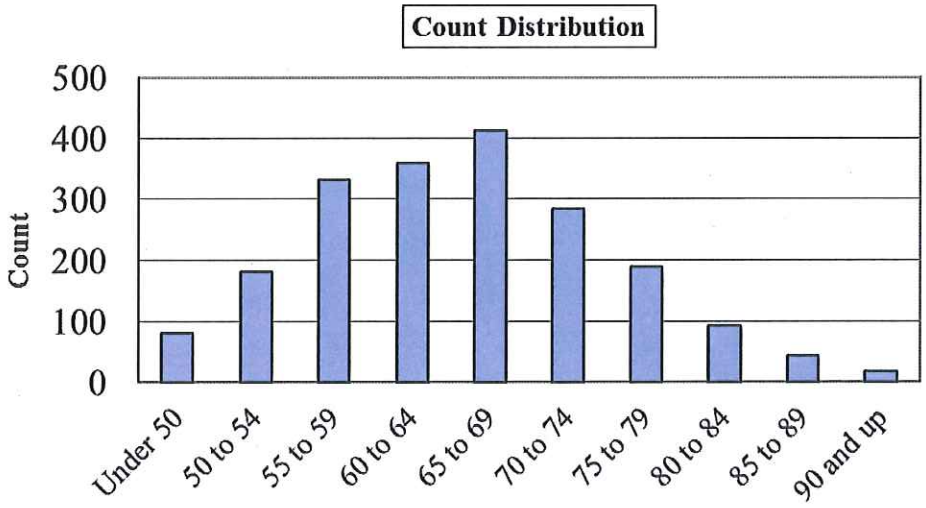
Average Age at Retirement/Disability	52.6
Average Current Age	64.8
Average Annual Pension	$ 88,840

APPENDIX A
MEMBERSHIP INFORMATION

Table A-7
City of San Jose Police and Fire Department Retirement Plan Distribution of Retirees, Disabled Members, and Beneficiaries as of June 30, 2013

Age	Count
Under 50	81
50 to 54	182
55 to 59	332
60 to 64	359
65 to 69	412
70 to 74	284
75 to 79	189
80 to 84	93
85 to 89	44
90 and up	18
Total	1,994

Chart A-1

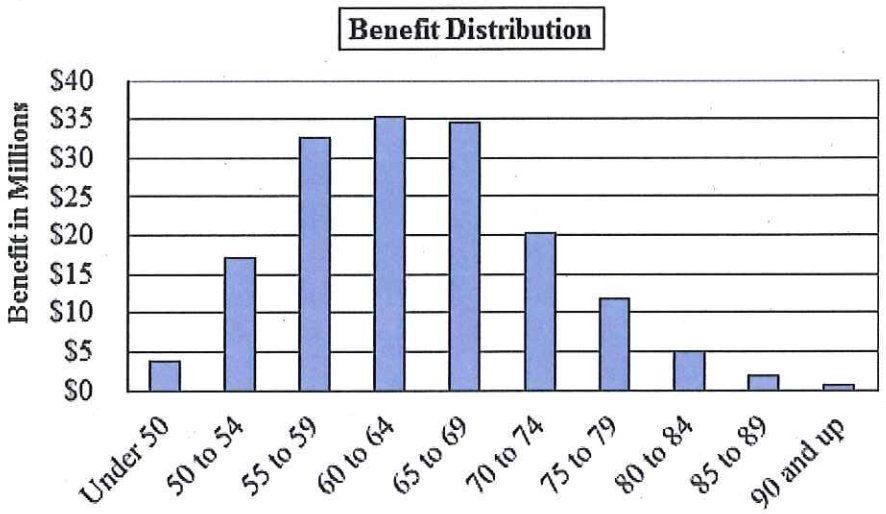


APPENDIX A
MEMBERSHIP INFORMATION

Table A-8
City of San Jose Police and Fire Department Retirement Plan
Distribution of Retirees, Disabled Members, and Beneficiaries as of June 30, 2013

Age	Annual Benefit
Under 50	$ 3,720,607
50 to 54	17,175,815
55 to 59	32,694,932
60 to 64	35,173,643
65 to 69	34,456,500
70 to 74	20,314,407
75 to 79	11,729,424
80 to 84	5,011,734
85 to 89	1,811,973
90 and up	626,852
Total	$ 162,715,888

Chart A-2



APPENDIX A
MEMBERSHIP INFORMATION

Table A-9
San Jose Police and Fire Department Retirement Plan
Change in Plan Membership

	Actives	Vested Terminations	Retirees	Disabilities	Beneficiaries	Total
June 30, 2012	**1,718**	**166**	**861**	**829**	**253**	**3,827**
New Entrants	103	15	0	0	0	118
Rehires	7	(2)	0	0	0	5
Vested Terminations	(59)	72	0	0	0	13
Return of Contributions	(6)	(6)	0	0	0	(12)
Disabilities	(24)	(1)	(20)	45	0	0
Retirements	(32)	(6)	38	0	0	0
Deaths	0	0	(5)	(23)	21	(7)
Beneficiary Deaths	0	0	0	0	(5)	(5)
Miscellaneous Adjustments	0	(9)	0	0	0	(9)
June 30, 2013	**1,707**	**229**	**874**	**851**	**269**	**3,930**

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

1. Investment Return Assumption

Assets are assumed to earn 7.125% net of investment expenses.

2. Salary Increase Rate

Wage inflation component is assumed to be 2.00% for FYE 2015-2016, and 3.50% thereafter.

In addition, the following merit component is added based on an individual member's years of service:

Table B-1
Salary Merit Increases

Years of Service	Merit/ Longevity
0	9.25%
1	7.55
2	6.75
3	5.75
4	5.00
5	4.25
6	3.75
7	3.25
8	2.75
9	2.25
10+	2.00

3. Family Composition

Percentage married is shown in the following Table B-2. Women are assumed to be three years younger than men.

Table B-2
Percentage Married

Gender	Percentage
Males	85%
Females	85%

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

4. Rates of Termination

Sample rates of termination are shown in the following Table B-3.

Table B-3
Rates of Termination

Service	Police	Fire
0	9.50%	9.50%
1	8.00	7.00
2	6.50	4.50
3	5.50	2.00
4	4.50	1.30
5	3.50	1.10
6	2.50	1.00
7	2.00	0.90
8	1.50	0.80
9	1.30	0.70
10	1.00	0.60
11+	1.00	0.50

* Termination rates do not apply once a member is eligible for retirement.

75% of terminating employees are assumed to subsequently work for a reciprocal employer and receive 3.5% pay increases per year.

5. Rates of Disability

Sample disability rates of active participants are provided in Table B-4.

Table B-4
Rates of Disability at Selected Ages

Age	Police	Fire
25	0.09%	0.09%
30	0.13	0.13
35	0.32	0.20
40	0.52	0.31
45	0.84	0.51
50	1.96	2.50
55	6.44	6.50
60	8.04	12.70
65	8.50	19.00

100% of disabilities are assumed to be duty related.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

6. Rates of Mortality for Healthy Lives

Mortality rates for actives, retirees, beneficiaries, terminated vested and reciprocals are based on the male and female RP-2000 combined employee and annuitant mortality tables. To reflect mortality improvements since the date of the table and to project future mortality improvements, the tables are projected to 2010 using scale AA and set back three years for males and no setback for females.

Table B-5
Rates of Mortality for Active and Retired Healthy Lives at Selected Ages

Age	Male	Female
25	0.0308%	0.0180%
30	0.0363	0.0239
35	0.0535	0.0425
40	0.0860	0.0607
45	0.1099	0.0957
50	0.1491	0.1412
55	0.2179	0.2507
60	0.3954	0.4808
65	0.7529	0.9231
70	1.4103	1.5923
75	2.3454	2.5937
80	4.1153	4.2767
85	7.4274	7.2923
90	12.8097	12.7784
95	21.0194	19.0654

It is assumed that 50% of active deaths are service related.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

7. Rates of Mortality for Retired Disabled Lives

Mortality rates for disabled retirees are based on the male RP-2000 combined employee and annuitant mortality table. To reflect mortality improvements since the date of the table and to project future mortality improvements, the tables are projected to 2010 using scale AA and set back two years.

Table B-6
Rates of Mortality for Disabled Lives at Selected Ages

Age	Mortality
50	0.1583%
55	0.2383
60	0.4488
65	0.8695
70	1.5521
75	2.6125
80	4.6195
85	8.2794
90	14.3228
95	22.6746

8. Rates of Retirement

Rates of retirement are based on age and service according to the following Table B-7.

Table B-7
Rates of Retirement by Age

	Police			
Age	Tier 1	Tier 2 <30 Years	Tier 2 30+ Years	Fire
50	45.00%	30.00%	50.00%	27.50%
51 – 54	35.00	30.00	50.00	22.50
55 - 59	35.00	30.00	50.00	22.50
60 - 61	50.00	50.00	100.00	22.50
62 - 69	100.00	50.00	100.00	100.00
70 & over	100.00	100.00	100.00	100.00

These retirement rates apply only to those eligible for unreduced benefits.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

9. Administrative Expenses

1.80% of valuation payroll added to normal cost. The administrative expenses are assumed to increase with wage inflation. Historically, the administrative expenses were assumed to reduce the investment return assumption by 10 basis points which resulted in a higher Normal Cost. To maintain the same historic division of member and City contributions for administrative expenses for this valuation, members were allocated a portion of the administrative expenses equal to 3/11ths of the difference in Normal Cost that a 10 basis point reduction in the investment return assumption would cause.

10. Changes Since Last Valuation

Assumptions were changed following an experience study, as adopted by the Board in December 2012. The investment return assumption was reduced from 7.25% to 7.125%, wage inflation was reduced from 3.50% to 2.00% for FYE 2014-2015, merit salary scale, retirement, termination and disability rates were changed, and the administrative expense assumption was changed from a dollar amount to 1.80% of valuation payroll.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

1. Actuarial Cost Method

The Entry Age actuarial cost method was used for active employees, whereby the normal cost is computed as the level annual percentage of pay required to fund the retirement benefits between each member's date of hire and assumed 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.

2. Asset Valuation Method

For the purposes of determining the employer's contribution, we use an actuarial value of assets. The asset smoothing 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 of assets is calculated by recognizing the deviation of actual investment returns compared to the expected return (7.25% for 2012-13, 7.50% for 2011-12, 7.75% for 2010-11, 8.00% for prior years) over a five-year period. The dollar amount of the expected return on the market value of assets is determined using the actual contributions and benefit payments during the year. Any difference between this amount and the actual net investment earnings is considered a gain or loss.

Finally, the actuarial value of assets is restricted to a corridor between 80 percent and 120 percent of the market value of assets.

3. Amortization Method

Actuarial gains and losses and plan changes are amortized as a level percentage of pay assuming 3.5% annual growth in payroll over a 16-year period beginning with the valuation date in which they first arise. Changes in methods and assumptions are amortized as a level percentage of pay assuming 3.5% annual growth in payroll over a 20-year period (16 years for changes prior to June 30, 2011) beginning with the valuation date on which they are effective.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

1. Membership Requirement

Participation in the plan is immediate upon the first day of employment with the City of San José as a police officer or fire fighter except for the following:

- Independent contractors,
- Person in City service principally for training or educational purposes,
- Auxiliary or voluntary police officers or fire fighters,
- Part-time or non-salaried employees, and
- Employees receiving credit in any other retirement or pension system.

2. Final Compensation

The highest twelve consecutive months of compensation in covered employment. However, in determining Final Compensation, no compensation in the last 12 months of employment that exceeds 108% of compensation during the 12 months immediately preceding the last 12 month shall be considered. Compensation excludes overtime pay and expense allowances.

3. Credited Service

Years of service in covered employment plus service purchased for military leave of absence, Federated service, and unpaid leaves of absence.

4. Contributions

a. Member:

The amount needed to fund 3/11 of normal cost calculated under the Entry Age actuarial cost method plus the amortization payment on the February 4, 1996 benefit improvement. For Police members, there is an additional amortization payment for member contributions not made for the last 6 months of 2006.

b. Employer:

The Employer contributes the remaining amounts necessary to fund the Plan in accordance with the Board's funding policy.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

5. Service Retirement

Eligibility

Age 55 with 20 years of service, age 50 with 25 years of service, age 70 with no service requirement, or any age with 30 years of service. Reduced benefits are also available at age 50 with 20 years of service.

Benefit

Police: 2.5% of Final Compensation for each year of credited service up to 20 years plus 4.0% of Final Compensation for each year of credited service in excess of 20, subject to a maximum of 90% of Final Compensation.

Fire: For members with less than 20 years of service, 2.5% of Final Compensation for each year of credited service. For members with 20 or more years of service, 3.0% of Final Compensation for each year of service, subject to a maximum of 90% of Final compensation.

6. Service Connected Disability Retirement

Eligibility

No age or service requirement.

Benefit

Police: 50% of Final Compensation plus 4.0% of Final Compensation for each year of credited service in excess of 20, subject to a maximum of 90% of Final Compensation.

Fire: For members with less than 20 years of service, 50% of Final Compensation. For members with 20 or more years of service, 3.0% of Final Compensation for each year of service, subject to a maximum of 90% of Final Compensation.

7. Non-Service Connected Disability Retirement

Eligibility

Two years of service.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

Benefit

For members with less than 20 years of service, 32% of Final Compensation plus 1% of Final Compensation for each year of service in excess of two. For members with 20 or more years of service, the benefit amount equals the amount that would be calculated under the service retirement formula.

8. Non-Service-Connected Death

Less than 2 Years of Service:
Lump sum benefit equal to the greater of accumulated employee contributions with interest or $1,000.

Disabled retirees or members ineligible for service retirement:
Spouse receives 24% of Final Compensation plus 0.75% of Final Compensation for each year of service in excess of two, subject to a maximum of 37.5% of Final Compensation. If a member has eligible dependent children, an additional benefit is payable as follows:

1 Child:	25% of Final Compensation
2 Children:	37.5% of Final Compensation
3+ Children:	50% of Final Compensation

The total benefit payable to a family is limited to 75% of Final Compensation.

If a member does not have a spouse or eligible dependent children, a lump sum benefit equal to the greater of accumulated employee contributions with interest or $1,000.

Service retirees or members eligible for service retirement:
Spouse receives the greater of 37.5% of Final Compensation or 50% of the member's service retirement benefit, subject to a maximum of 42.5% of Final Compensation for Police and 45% of Final Compensation for Fire. Eligible dependent children will receive the same benefit as defined under the non-service connected death for disabled retirees or members ineligible for service retirement. The total benefit payable to a family is limited to 75% of Final Compensation.

9. Service-Connected Death

Spouse receives the greater of 37.5% of Final Compensation or 50% of the member's service retirement benefit, subject to a maximum of 42.5% of Final Compensation for Police and 45% of Final Compensation for Fire. If a member has eligible dependent children, an additional benefit of 25% of Final Compensation is payable for each eligible dependent child. The total benefit payable to a family is limited to 75% of Final Compensation.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 1

10. Termination Benefits

Less than 10 Years of Service:
Lump sum benefit equal to the accumulated employee contributions with interest at 2% per annum.

10 or more years of credited service:
The amount of the service retirement benefit, payable at the later of age 55 or 20 years from date of membership.

11. Post-retirement Cost-of-Living Benefit

Benefits are increased every February 1 by 3.0%.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 2

1. Membership Requirement

Any person who is hired, rehired or reinstated by the City on or after August 4, 2013.

2. Final Compensation

The average annual compensation earnable during the highest three consecutive years of service. Final compensation only includes base pay, excluding premium pay and any other additional compensation.

3. Credited Service

One year of service credit is given for 2,080 or more hours of city service rendered in any calendar year. A partial year (fraction with the numerator equal to the hours worked, and the denominator equal to 2,080) is given for each calendar year with less than 2,080 hours worked.

4. Member Contributions

50% of total Tier 2 contributions to the pension plan, including, but not limited to administrative expenses, normal cost and unfunded actuarial liability.

5. Unreduced Service Retirement

Eligibility

Age 60 with ten years of service.

Benefit – Member

2.0% of Final Compensation for each year of credited service attributable to Tier 2 plus the applicable Tier 1 multiplier for each year of credited service attributable to Tier 1, subject to a maximum of 65% of Final Compensation.

Benefit - Survivor

Single life annuity.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 2

6. Early Service Retirement

Eligibility

Age 50 with ten years of service.

Benefit – Member

Reduced benefit actuarially equivalent to the unreduced service retirement benefits commencing at age 60. The early retirement reduction is applied to the benefit after the application of the maximum of 65% of final compensation.

7. Service-Connected Disability Retirement

Eligibility

No age or service requirement.

Benefit - Member

Monthly benefit equivalent to 50% of Final Compensation.

8. Non-Service Connected Disability Retirement

Eligibility

Five years of service.

Benefit - Member

2.0% of Final Compensation for each year of credited service attributable to Tier 2 plus the applicable Tier 1 multiplier for each year of credited service attributable to Tier 1, subject to a minimum of 20% of Final Compensation and a maximum of 50% of Final Compensation.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 2

9. Death Before Retirement

If death occurs before retirement eligibility is reached and after two years of service

Monthly benefit equal to the greater of:

- 10% of Final Compensation or
- 2% of Final Compensation for each year of service up to a maximum of 30% of Final Compensation

If death occurs after retirement eligibility is reached

Benefit equivalent to what the employee would have received if retired at the time of death.

Employees killed in the line of duty

Monthly benefit equal to the greater of:

- 50% of Final Compensation or
- Benefit equivalent to what the employee would have received if retired at the time of death.

10. Withdrawal Benefits

Less than ten Years of Service

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

Ten or more years of credited service

The amount of the service retirement benefit, actuarially reduced for early retirement, and payable when retirement eligibility is reached.

11. Benefit Forms

Annuity benefits are paid in the form of a life annuity or an actuarially equivalent annuity with 50%, 75% or 100% continuance to a survivor.

12. Post-retirement Cost-of-Living Benefit

Benefits are increased every April 1 by the change in the December CPI-U for San José-San Francisco-Oakland, subject to a cap of 1.5%. The first COLA after retirement shall be prorated based on the number of months retired.

APPENDIX C
SUMMARY OF PLAN PROVISIONS
TIER 2

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

APPENDIX D
GLOSSARY OF TERMS

1. Actuarial Liability

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

2. Actuarial Assumptions

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

3. Accrued Service

Service credited under the Plan 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 Plan benefit between future normal cost and actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

6. Actuarial Gain (Loss)

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

7. Actuarial Present Value

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

APPENDIX D
GLOSSARY OF TERMS

8. Amortization

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

9. 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 SJPF Employer computed contribution rate for FYE 2014 meets the parameters of GASB 25.

10. Normal Cost

The actuarial present value of retirement Plan 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 Plan 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 the actuarial value of assets. This value is sometimes referred to as "unfunded actuarial accrued liability."

Most retirement Plans 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 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).