

ACTUARIAL VALUATION REPORT

City of San José Police and Fire Department Retirement Plan

Actuarial Valuation Report as of June 30, 1997

Prepared by: William M. Mercer
February 1998

CITY OF SAN JOSE
POLICE AND FIRE DEPARTMENT RETIREMENT PLAN
ACTUARIAL VALUATION REPORT

As of June 30, 1997

Prepared by
William M. Mercer, Incorporated

February 1998

February 24, 1998

Board of Retirement
City of San Jose
Police and Fire Department Retirement Plan
777 North First Street, Suite 750
San Jose, CA 95112-6311

Dear Members of the Board:

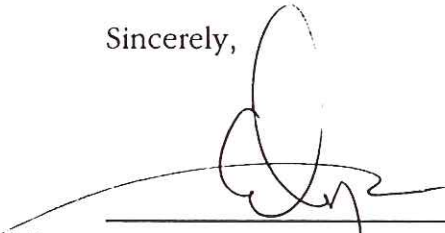
We are pleased to present the actuarial valuation for the City of San Jose Police and Fire Department Retirement Plan prepared as of June 30, 1997 by William M. Mercer, Incorporated. The report includes:

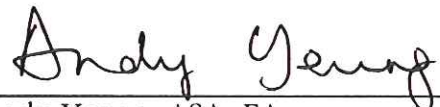
- (1) a determination of the city contribution rates under the current and recommended actuarial methods and assumptions;
- (2) a determination of the employee contribution rates under the current and recommended actuarial methods and assumptions.

This report conforms with the requirements of the governing state and local statutes, accounting rules, and generally accepted actuarial principles and practices.

We look forward to presenting this report to the Board at your earliest convenience.

Sincerely,



Drew James, FSA, MAAA

Andy Yeung, ASA, EA

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**BOARD MEMBER SUMMARY OF
VALUATION RESULTS**

SUMMARY OF RECOMMENDATIONS

City Contribution Rates*	June 30, 1997	June 30, 1995	Increase/Decrease
Normal Cost Rate:	22.17%	21.35%	0.82%
Rate of Contribution to Unfunded Actuarial Accrued Liability:	-6.56%	-1.43%	-5.13%
Medical Insurance:	1.25%	1.24%	0.01%
Dental Insurance:	<u>0.42%</u>	<u>0.45%</u>	<u>-0.03%</u>
Total City Rate:	17.28%	21.61%	-4.33%
Estimated Annual Amount:	\$22,438,000	\$28,060,000	\$(5,622,000)

Employee Contribution Rates*	June 30, 1997	June 30, 1995	Increase/Decrease
Normal Cost Rate:	8.31%	8.01%	0.30%
Rate of Contribution to Unfunded Actuarial Accrued Liability:	0.00%	0.00%	0.00%
Medical Insurance:	1.25%	1.24%	0.01%
Dental Insurance:	<u>0.14%</u>	<u>0.15%</u>	<u>-0.01%</u>
Total City Rate:	9.70%	9.40%	0.30%
Estimated Annual Amount:	\$12,596,000	\$12,206,000	\$390,000

* Annual amounts based on total annual salaries as of June 30, 1997 of \$129,850,000.

SUMMARY OF RECOMMENDATIONS (CONT'D)

Actuarial Assumptions	June 30, 1997	June 30, 1995	Increase/Decrease
Annual Inflation Rate:	4.75%	5.00%	-0.25%
Annual Investment Return:	8.00%	8.00%	0.00%
Annual Salary Increases:			
First 5 years of service	10.75%	11.00%	-0.25%
After 5 years of service			
Age 25-29	10.45%	9.50%	0.95%
Age 30-34	8.55%	8.00%	0.55%
Age 35-39	6.65%	6.50%	0.15%
Age 40-44	5.95%	6.10%	-0.15%
Age 45-49	5.55%	5.90%	-0.35%
Age 50-54	5.25%	5.70%	-0.45%
Age 55-59	5.25%	5.50%	-0.25%
Age 60 and over	4.85%	5.10%	-0.25%

Other assumptions are based upon the June 30, 1997 experience analysis.

Summary of Significant Actuarial Statistics and Measures

System Membership	June 30, 1997	June 30, 1995	Increase
<i>Active Members</i>			
1. Number of Members	1,954	1,812	7.8%
2. Total Active Payroll	\$ 129,850,000	\$ 109,196,000	18.9%
3. Average Monthly Salary	\$ 5,538	\$ 5,022	10.3%
<i>Retired Members</i>			
1. Number of Members			
Service Retirement	210	159	32.1%
Disability Retirement	570	514	10.9%
Beneficiaries	160	151	6.0%
2. Total Retired Payroll	\$ 31,990,000	\$ 25,582,000	25.0%
3. Average Monthly Pension	\$ 2,836	\$ 2,587	9.6%
<i>Inactive Vested Members</i>			
1. Number of Members	32	29	10.3%
Asset Values (Net)			
Market Value *	\$ 1,252,614,000	\$ 949,453,000	31.9%
Return on Market Value **	14.26%	8.32%	
Actuarial Value *	\$ 1,139,401,000	\$ 864,823,000	31.7%
Return on Actuarial Value **	11.00%	8.30%	
Liability Values			
Actuarial Accrued Liability	\$ 1,011,753,000	\$ 839,148,000	20.6%
Unfunded Actuarial Accrued Liability (UAAL)	\$ (127,648,000)	\$ (25,675,000)	-397.2%
Pension Benefit Obligation	\$ 998,165,000	\$ 853,397,000	17.0%
Unfunded Pension Benefit Obligation	\$ (254,449,000)	\$ (13,429,000)	-1794.8%
Funding Ratios			
GASB No. 5	125.5%	101.6%	23.9%
GASB No. 25	112.8%	103.1%	9.7%

* Includes Value of Health Insurance Reserve.

** Annualized Rate of Return.

EXPLANATION OF CHANGES IN ACTUARIAL VALUES

City Contribution Rates

The components of the change in City and employee contribution rates are approximately as follows:

Retirement Plan	City Contribution		Employee Contribution	
	% of Payroll	Dollar Impact	% of Payroll	Dollar Impact
June 30, 1995 Rate	19.92%	\$ 25,866,000	8.01%	\$ 10,401,000
<u>Before Assumption Change</u>				
Investment return greater than expected	-2.91%	\$ (3,779,000)	0.00%	\$ -
Salary increase more than expected	0.29%	\$ 374,000	0.00%	\$ -
Withdrawals more than expected	-0.03%	\$ (43,000)	0.00%	\$ -
Miscellaneous (gains)/ losses	0.20%	\$ 254,000	0.01%	\$ 13,000
Subtotal	-2.46%	\$ (3,194,000)	0.01%	\$ 13,000
<u>After Assumption Change</u>				
Change in Actuarial Assumptions	1.26%	\$ 1,636,000	0.29%	\$ 377,000
Change in Asset Valuation Method	-3.11%	\$ (4,038,000)	0.00%	\$ -
Subtotal	-1.85%	\$ (2,402,000)	0.29%	\$ 377,000
June 30, 1997 Rate	15.61%	\$ 20,270,000	8.31%	\$ 10,791,000
Medical and Dental Plan	City Contribution		Employee Contribution	
	% of Payroll	Dollar Impact	% of Payroll	Dollar Impact
June 30, 1995 Rate	1.69%	\$ 2,194,000	1.39%	\$ 1,805,000
<u>Before Assumption Change</u>				
Miscellaneous (gains)/ losses	-0.12%	\$ (156,000)	-0.08%	\$ (104,000)
<u>After Assumption Change</u>				
Change in Actuarial Assumptions	0.10%	\$ 130,000	0.08%	\$ 104,000
June 30, 1997 Rate	1.67%	\$ 2,168,000	1.39%	\$ 1,805,000

Explanation of Gain/Loss Items

Investment return greater than expected - The System's actuarial valuation assets earned 3.00% in excess of the 8% return assumption.

Salary increase more than expected - The average salary increase was 5.55% versus the assumed 5.00%.

Withdrawals higher than expected - The liability release from withdrawals was approximately \$650,000 more than expected.

Miscellaneous (gains)/losses - Other causes of rate change of untraced source.

Assumption Change

Changes were made to most of the assumptions. Following were the most significant:

- Inflation — A reduction in the annual inflation assumption from 5.00% to 4.75%.
- Withdrawal — Withdrawal rates were increased for early years and later years of service.
- Disability — Duty disability rates were decreased somewhat.
- Reciprocity — It is assumed that 75% of members who terminate with a vested benefit will become covered by a reciprocal public retirement system.
- Salary Increase — Changes were made to the merit and longevity salary increase assumptions to reflect salary increases over the last two years.
- Pre-Retirement Mortality — Rates of pre-retirement death were decreased.
- Post-Retirement Mortality — The Board has adopted an updated mortality table (1994 Group Annuity Mortality Table) to reflect mortality improvements since the current table (1983 Group Annuity Mortality Table) was developed.
- Medical and Dental Premium Increases — Short term increases were reduced to reflect recent experience; however, long term increases are higher.

Asset Valuation Method

A new smoothing method was adopted by the Retirement Board to calculate the actuarial value of assets. Rather than smoothing all returns other than interest, dividends and other income items, it smoothes the portion of the return which deviates from the actuarial investment return assumption.

ACTUARIAL ASSUMPTIONS

ECONOMIC ACTUARIAL ASSUMPTIONS

Introduction

Economic actuarial assumptions are of three types:

1. *Inflation.* Results in increases in future prices of goods and services. Inflationary increases are closely tied to employee salary increases, retiree cost-of-living increases and the returns that investors demand from securities markets and other investments. For those reasons the inflation assumption underlies all economic actuarial assumptions. This assumption also determines the rate at which payments to the Unfunded Actuarial Accrued Liability increase each year.
2. *Investment Return.* Has a powerful influence on a retirement system's cost to employers and members. The more money earned from investments, the less needs to be contributed. Assuming a typical new member's pension is funded over a 25 year career and that employee receives pension checks for 20 years after retirement, a 1% higher rate of investment return will reduce required contributions by about 20% (all else remaining equal). For this reason, setting the investment return assumption is an important decision.
3. *Salary Increases.* Have a significant impact on determining the benefit that members will receive at retirement. This assumption contains two components -- cost-of-living (inflation) plus pay raises that members receive as a result of promotions and step increases.

Setting Economic Assumptions

The Actuarial Standards Board recently issued an Actuarial Standard of Practice (No. 27) entitled "Selection of Economic Assumptions for Measuring Pension Obligations". This Actuarial Standard of Practice (SOP) is designed to provide pension actuaries guidance in their setting of economic assumptions. Section 3.4 of the SOP provides the following general steps for selecting economic assumptions for a specific measurement:

1. Identify components, if any, of each assumption and evaluate relevant data;
2. Develop a best-estimate range for each economic assumption required for the measurement, reflecting appropriate measurement-specific factors; and
3. Further evaluate measurement-specific factors and select a specific point within the best-estimate range.

After completing these steps for each assumption, the actuary should review the set of economic assumptions for reasonableness and consistency and make any needed changes.

The relevant data referred to in step 1 should consist of appropriate historical and current economic data. In Section 3.3, the SOP recommends that the actuary consider recent economic data, "however, the actuary should not give undue weight to recent past experience."

The remainder of this Section provides the analytical development of each of the three economic assumptions.

Inflation

Recommendation

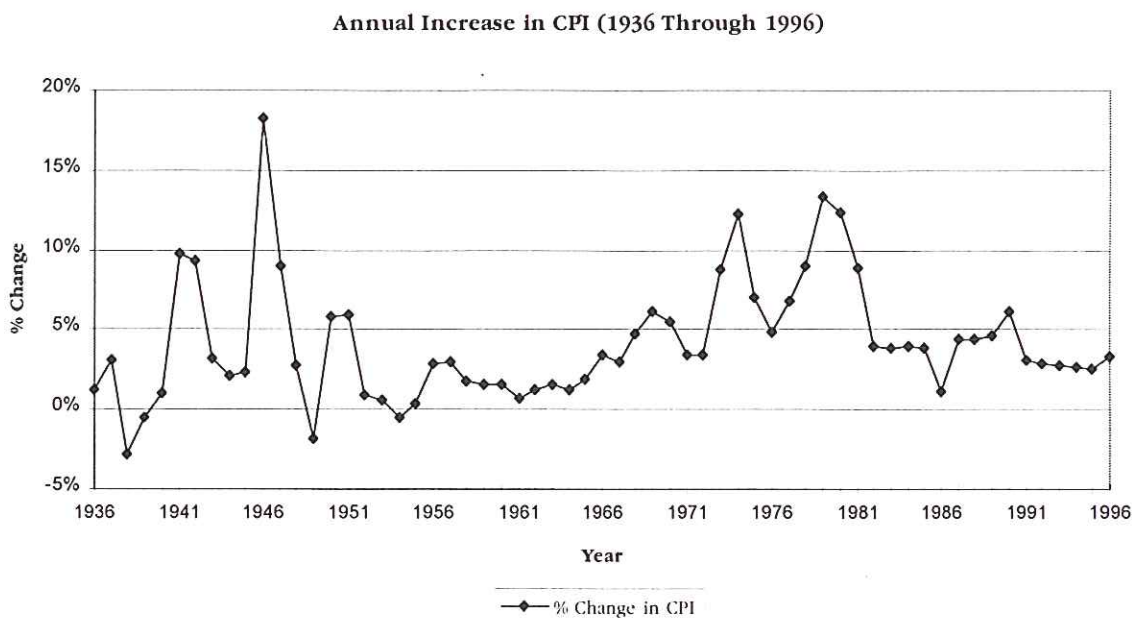
The Board has adopted our recommended inflation assumption of 4.75%:

The analysis supporting our recommendation follows.

Setting the Assumption

The rate of inflation has varied significantly over time. The following chart shows the annual increases in the Consumer Price Index over the last 60 years:

Chart 1



Inflation is difficult to predict, even in the short-term. To accurately pinpoint this or any other assumption is impossible. In general, the lower the inflation assumption (with certain limits) the more conservative the resulting set of economic assumptions will be, all else remaining equal.

The actuarial SOP specifies the following data to be considered in setting the inflation assumption (Section 3.5.1):

- Consumer Price Indices (CPI)
- The Gross Domestic Product Implicit Price Deflators (IPD)
- Forecasts of inflation
- Yields on government securities of various maturities

Because the CPI and IPD have not differed significantly over the last 50 years, we focused our analysis on the CPI.

CPI

Table 1 provides the annualized increases in the Consumer Price Index for consecutive ten year periods over the last 60 years.

Table 1
History of CPI Increases
Ten Year Annualized Averages (1)

Ten Years Ending:	CPI
12/31/46	4.40%
12/31/56	2.54%
12/31/66	1.78%
12/31/76	5.86%
12/31/86	6.63%
12/31/96	3.67%

(1) CPI data is based upon US All City Average, CPI-U for years after 1979.

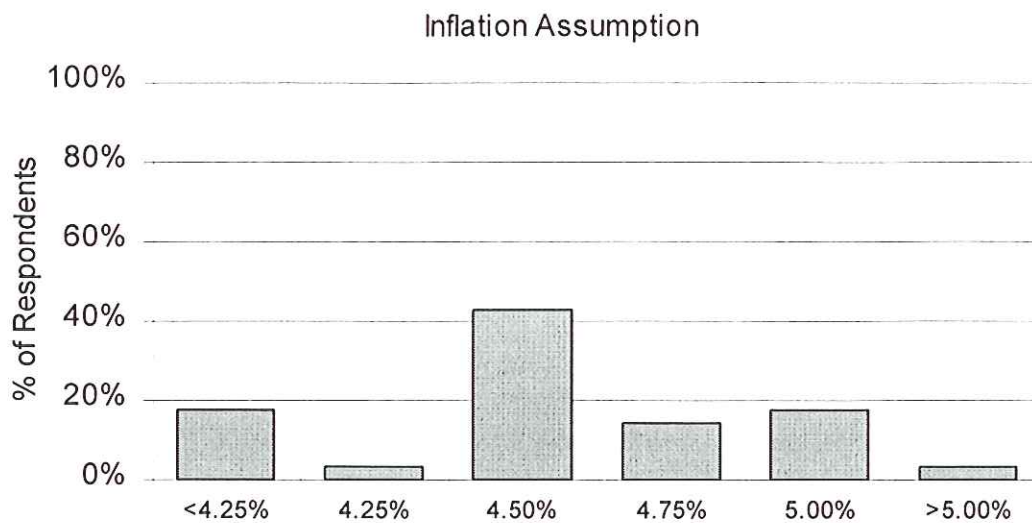
CPI increases over the last 60 years have produced an average annual inflation rate of 4.1%. Over the most recent 30 years, the average annual rate is 5.4%. Examining the data behind Table 1 indicates that, with the exception of the ten years ending December 31, 1981, inflation has typically ranged between about 3.0% and 4.5%. The last ten years has produced an inflation rate in this range. Therefore, we conclude that after considering both long-term historical economic data (last 60 years) and recent trends (last 30 years and recent 10-year increases), an appropriate inflation rate range is 4% to 5%.

Forecasts of Inflation

Inflation assumptions used by similarly situated public retirement systems provide a proxy for inflation forecasts. Charts 2 and 3 provide the inflation assumptions used by the 28 California public retirement systems who responded to Mercer's 1996 survey of economic actuarial assumptions, and the 8 chartered city respondents, respectively.

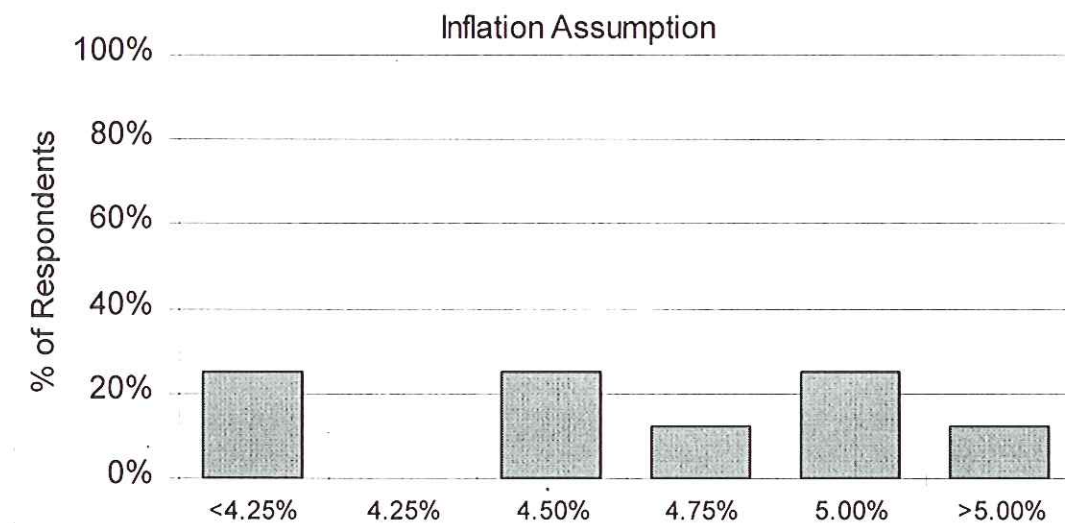
The average inflation rates from the survey for both of these groups is about 4.5%. Inflation rate assumptions used by California public retirement systems have generally been dropping over the last several years. We have also surveyed inflation assumptions used by 6 large California city police and fire retirement systems, which indicated an average assumption of 4.75%.

**Chart 2 - Comparisons of Economic Actuarial Assumptions
All Respondents
(based on 28 responses)**



Average	4.47%
25th Percentile	4.50%
50th Percentile	4.50%
75th Percentile	4.75%

**Chart 3 - Comparison of Economic Actuarial Assumptions
8 Chartered City Systems
(based on 8 responses)**



Average	4.53%
25 th Percentile	4.38%
50 th Percentile	4.63%
75 th Percentile	5.00%

Treasury Yield Curves

Inflation expectations implicit in Treasury yield curves can vary widely over a relatively short period of time. For example, compare the following yield curve data as of December 31, 1993, December 27, 1994, December 29, 1995, and December 31, 1996:

Table 2
Treasury Yield Curve

<u>Maturity</u>	<u>12/31/93</u>	<u>12/27/94</u>	<u>12/29/95</u>	<u>12/31/96</u>
90 days	3.01%	5.58%	5.10%	4.92%
1 year	3.63%	7.23%	5.18%	5.46%
5 years	5.21%	7.77%	5.38%	6.06%
10 years	5.83%	7.89%	5.58%	6.33%
20 years	6.48%	7.87%	6.01%	6.68%
30 years	6.35%	7.75%	5.96%	6.58%

Considering that ten- to twenty-year Treasury bonds historically have generated 90 to 110 basis points above inflation and that the duration of liabilities under a typical retirement system is 10 to 20 years, we can conclude that annualized inflation expectations over the duration of the systems liabilities has increased from a range of 4.75% to 5.5% in December 1993 to about 6.9% in December 1994 and then back down to a range of 4.5% to 5.1% in December 1995 and 5.25% to 5.75% in December 1996. This demonstrates that relying too heavily upon such volatile data for setting inflation assumptions for retirement systems can create instability. One might average Treasury yield data over some period of time, however, we question whether utilizing inflation expectations implicit in two- to three-year-old Treasury yields would be meaningful. Also, the usefulness of this data is hampered by the Federal Reserve's use of interest rates as a means of controlling the economy.

Summary

We conclude from our analysis that:

1. Historical inflation data can generally support an assumption in the range of 4% to 5%;
2. Inflation forecasts inherent in 1996 inflation assumptions adopted by similarly situated retirement systems range from 4.50% to 4.75% and are generally dropping; and
3. Future inflation expectations in recent Treasury yield curves have been fluctuating significantly over the last 36 months.

We believe the 4.75% recommended inflation assumption is consistent with these conclusions.

Investment Return

Recommendation

The Board has adopted our recommendation to continue to use an investment return assumption of 8%.

Setting the Assumption

The actuarial SOP specifies that in addition to historical plan performance, the following data may be considered in setting the investment return assumption (Section 3.6.1):

- Forecasts of inflation
- Historical risk-free returns
- Real return or risk premium for each asset class
- Yields to maturity on fixed income government securities and corporate bonds

The first item has already been addressed in the previous section. The second item is the historical return on short term Treasury bills, such as 30 days, and is used to develop risk premiums for other asset classes. Our analysis will focus on the third item with some consideration of the fourth. Table 2 (in the preceding section) allows us to gauge the reasonableness of our recommendation in consideration of the fourth item.

Section 3.6.3 of the actuarial SOP sets forth the following as some of the measurement-specific factors that should be considered in selecting the investment return assumption:

- Investment policy or asset allocation
- Expenses
- Investment manager performance

Each of these items will be addressed in the context of our analysis.

Real Rate of Return on Investments

The real rate of return on investments is a function of:

- The real rates of return on individual classes of assets within the investment portfolio;
- The relative proportion of the fund's total investments held in each class of securities (the "Asset Allocation");
- Expenses to be paid from earnings; and
- Reasonable risk (variability) adjustments.

Each of these four components are addressed separately.

Real Returns on Classes of Securities

Empirical studies of total real rates of return are available on most classes of securities in which the Association invests. These studies are used as a resource upon which to develop historical average real rates of return. These historical averages are adjusted considering any fundamental changes in the economy, changes in government regulation, and any other factors which might affect the continued applicability of the historical averages.

Many empirical studies have been carried out to measure historical real rates of return on various types of investment. One most frequently referenced is that by Roger Ibbotson and Rex A. Sinquefeld, titled, *Stocks, Bonds and Inflation: Simulations of the Future*. Table 3 provides the Ibbotson-Sinquefeld measure of the real rates of return between 1926 and 1996. Investment consulting firms utilize this and other studies to derive expected long-term real rates of return for use in asset allocation models. These models serve as an aid to retirement plan fiduciaries in determining what proportion of the plans' investment portfolio to place in various classes of securities.

Table 3	
Ibbotson - Sinquefeld	
Real Rates of Return of Investments	
(Geometric Mean)	
	<u>(1926 - 1996)</u>
Common Stocks	7.4%
Small Stocks.....	9.2%
Long-term government bonds.....	1.9%
Long-term corporate bonds.....	2.4%
Intermediate government bonds.....	2.0%
Treasury bills	0.6%

Because this data does not cover some types of investments common in the San Jose Police and Fire Retirement Plan portfolio, Mercer has developed the following more detailed real rate of return assumptions by asset class:

Table 4
Expected Asset Class Returns Net of Inflation (Real)

<u>Asset Class</u>	<u>Total Real Return</u>
Large Stocks (LS) ¹	6.53%
Small Stocks (SS) ²	8.88
Int'l Stocks (IS) ³	6.85
Long Bonds (LTB) ⁴	2.31
Intermediate Bonds (ITB) ⁵	2.19
Real Estate (RE) ⁶	4.82
Money Market (MM) ⁷	0.94

¹ Large Stocks — S&P 500.

² Small Stocks — 1926-1981 fifth capitalization quintile of the NYSE; 1981-1991 DF Small Company Fund.

³ International Stocks — Morgan Stanley Capital International Europe, Australia & Far East Index (EAFE).

⁴ Long Bonds — a one-government bond portfolio with a maturity near twenty years.

⁵ Intermediate Bonds — a one-government bond portfolio with a maturity near five years.

⁶ Real Estate — Study assumption by Mercer Investment Consulting, Inc.

⁷ Money Market — rolling 30-Day U.S. Treasury Bill.

Asset Allocation

The Plan employs a third-party investment consultant to assist in establishing its target asset allocation and investment policy. The target asset allocation reflects the consultant's professional opinion on expected returns, the Plan's risk profile, prudent diversification, asset/liability matching, cash flow needs and other investment considerations. This target allocation is designed as a guidepost for balancing investments among asset classes. As such, it is the best indicator for the Plan's actual long-term asset allocation. The target asset allocation will be combined with the real rates of return on classes of securities to develop the expected gross real rate of return assumption for the fund's portfolio.

The current and target asset allocations utilized by the Plan are shown in Table 5.

Table 5
Plan Asset Allocation as of 6/30/97
At Market Value

	<u>Current</u>	<u>Target</u>
Domestic Stocks	39%	35%
International Stocks	11%	10%
Bonds and Fixed Income*	46%	45%
Real Estate	4%	10%
Cash Equivalents and Short-Term	0%	0%

* Includes both U.S. and global fixed income.

Applying the target asset allocation (Table 5) to the information in Table 4 (considering 5% of the target is in small cap domestic stocks) results in a real return of approximately 4.60%. There are a number of additional factors which must be considered before arriving at an appropriate level for actuarial valuation purposes. These are discussed below.

Expenses to be Paid from Earnings

The expected gross real rate of return must be reduced to reflect expenses to be charged against investment earnings. To the extent such charges are expected to be made in the future, the expense margin will be sufficient to cover:

- a) Administrative expenses
- b) The cost of actuarial valuations
- c) The cost of bank custodial services
- d) Fees related to investment in deeds of trust or mortgages
- e) Investment expenses; and
- f) The cost of legal counsel

The Plan's actual expenses over the last 3 years will be used to develop the expected expense charge. This expected charge will be applied against the expected gross real rate of return to produce a net real rate of return assumption.

Table 6 provides the expenses of the fund as a percentage of assets for the 3 years ending June 30, 1997.

Table 6	
Administrative and Investment Expenses as a Percentage of	
Average Assets at Actuarial Value	
Fiscal Year End	
1995	0.44%
1996	0.49%
1997	<u>0.46%</u>
Average	0.46%

A percentage of 0.45% was used as an estimate of future expenses.

Risk Adjustment

The net real rate of return assumption should reflect the risk associated with not achieving expectations. This is developed by considering:

- The probability that actual future returns within asset classes will deviate statistically from historical averages;
- The effect that asset diversification will have on dampening statistical fluctuations of future returns; and
- The expectation that fund managers will underperform or outperform the general market indices upon which the real rates of return on individual classes of securities are measured.

Annual real rates of return have varied substantially over the years. For example, even if we expect the averages displayed in Table 4 to be a reasonable estimate of real returns in the future, we know there is some likelihood that future real rates will be more or less than historical averages. The risk lies in setting too high an investment earnings assumption, which leads to future losses and higher employer contributions. The risk adjustment helps protect against such an occurrence.

As an aid in setting an appropriate risk adjustment, Chart 4 presents a distribution diagram developed from Mercer's 1996 survey of economic assumptions of 28 California public retirement systems. From this survey we are able to identify the risk adjustment implicit within each system's investment return assumption versus the system's risk level as measured by the standard deviation of their current asset allocation. The diagram in Chart 4 provides that relationship. The chart also includes a regression line which, given a system's risk level, can be used to identify a risk adjustment consistent with the survey data.

As you can see from the chart, the Plan's risk adjustment so calculated would be 1.0%, based on a target asset allocation standard deviation of 8.8%.

Investment Manager Performance

Section 3.6.3.e. of the actuarial SOP states that:

Anticipating superior (or inferior) investment manager performance may be unduly optimistic (or pessimistic). Few investment managers consistently achieve significant above-market returns net of expenses over long periods. The plan sponsor may replace managers who consistently underperform market indices.

We concur with this statement, thus do not make any provision within our investment return assumption for superior or inferior performance relative to the market.

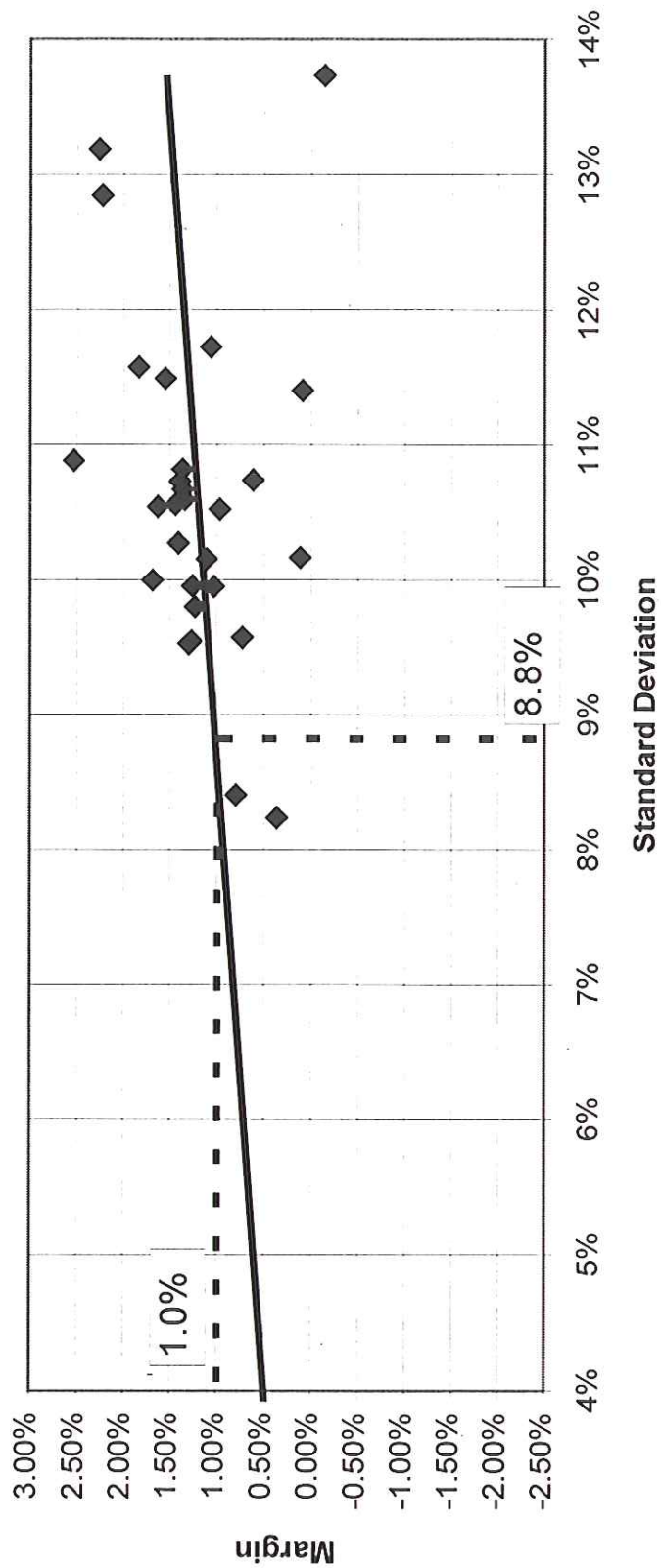
Comparison with Similarly Situated Associations

Charts 5 and 6 provide the investment return assumptions used by the 28 California public retirement systems who responded to Mercer's 1996 survey of the economic actuarial assumptions, and the 8 chartered city respondents, respectively. The results indicate an average investment return assumption of about 8.1%. This is very close to the 1995 survey results.

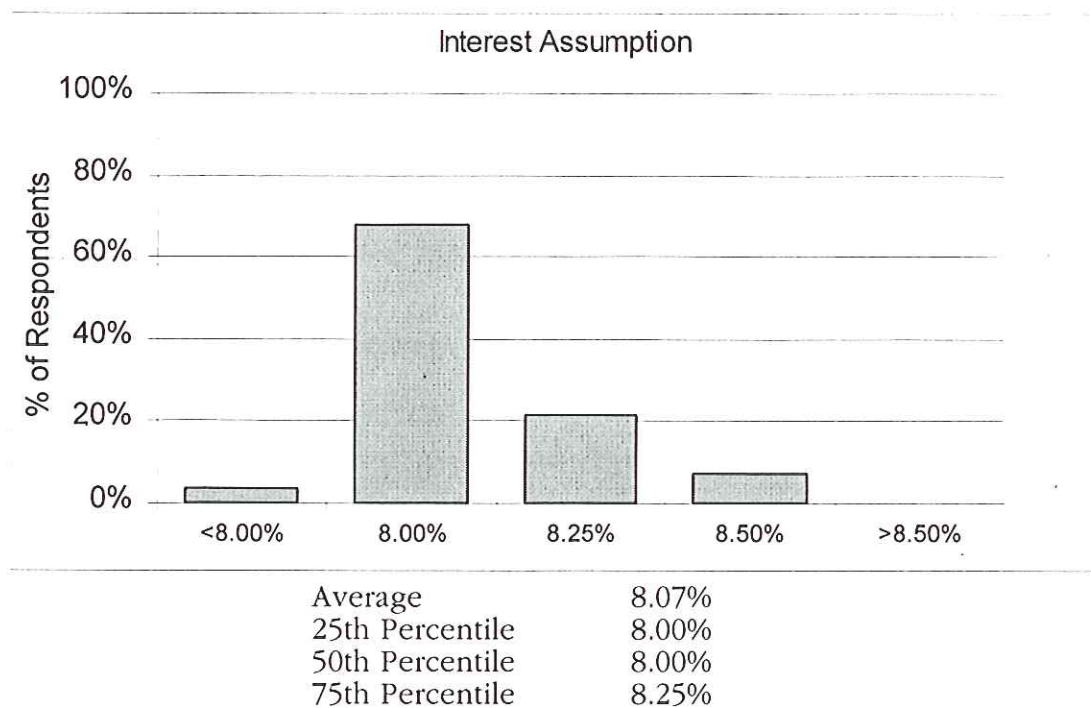
Mercer's survey of 6 large city police and fire retirement systems resulted in an average investment return assumption of 8.25%.

Chart 4

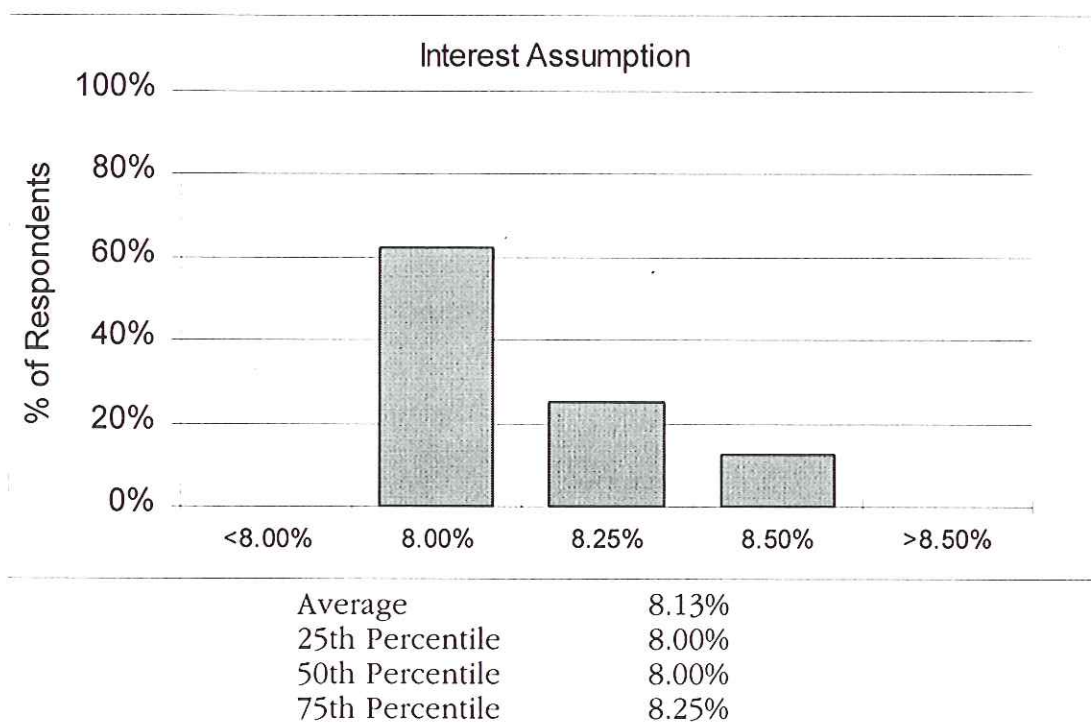
Correlation Chart - Assumed Investment Return Margin vs
Standard Deviation of Target Asset Allocation (1996 Survey)



**Chart 5 - Comparison of Economic Actuarial Assumptions
28 California Public Retirement Systems**



**Chart 6 - Comparison of Economic Actuarial Assumptions
8 Chartered City Systems**



Development of Recommendation

Based on the above analysis, we arrive at a real rate of return assumption of 3.15% (average net real rate of return of 4.15% minus risk adjustment of 1.0%). Combining this rate and the inflation assumption of 4.75% results in an expected return of 7.90%. Considering this analysis in the context of the average inflation (4.75%) and investment return (8.25%) assumptions used by other California police and fire systems results in our recommended investment return assumption of 8.0%.

Salary Increase Assumptions

Recommendations

Salary Increase Assumptions

The Plan's salary increase assumptions are comprised of two components:

- Inflation Rate
- Salary Scale

Salary increases are provided to employees in the form of cost-of-living adjustments to offset the debasement of pay levels caused by inflation. In addition to inflationary increases, active members will receive "real" salary increases (i.e., over inflation) as they advance through salary grades and receive promotions over their career.

As part of our analysis we have reviewed real salary increases received by members over the two years ending June 30, 1997. Members were grouped by service and age to determine how salary increases vary across these groups. We also reviewed the merit and longevity assumptions for other similarly situated public retirement systems as a scale of reasonableness for the new assumptions. The Board has adopted our recommended changes to the annual real salary increase assumptions. They are as follows:

Real Salary Increase Assumptions

First 5 years of service	6.0%
After 5 years of service	
Age 25-29	5.7%
Age 30-34	3.8%
Age 35-39	1.9%
Age 40-44	1.2%
Age 45-49	0.8%
Age 50-54	0.5%
Age 55-59	0.5%
Age 60 and Over	0.1%

Setting the Assumption

The Actuarial Standards Board has issued a proposed Standard of Practice (SOP) for setting economic assumptions in valuations of pension benefits. The proposed actuarial SOP specifies the following data be considered in setting the salary increase assumption (Section 5.7):

- Employer's current compensation practice and any anticipated changes in this practice;
- Current compensation distributions by service or age;
- Historical compensation increases of employer and other employers in the same industry or geographic area; and
- Historical national wage and productivity increases.

In addition, the proposed SOP states that the actuary should consider employer-specific compensation data, but the actuary must carefully weigh the credibility of this data when selecting the salary increase assumption.

The methodology used to construct the assumption is to utilize the inflation assumption as a base salary increase assumption. There is a sound economic reason for doing this. This is a long term assumption and represents the expected annual increases in the cost of goods and services. In order for a member to maintain the same standard of living in the future as he or she does today, wages must at least keep up with inflation. If they do not, members will suffer a continuously eroding standard of living, which in turn will increase member turnover as workers seek jobs elsewhere that offer more competitive salaries. This creates obvious instability, which may occur for a short while, but eventually will have to return to equilibrium if the County and special districts are to continue as ongoing operating entities.

Once the inflation component of the salary increase assumption is set, the process turns to the selection of the real (inflation-free) salary increase assumption component.

Real Salary Increases

In addition to inflation, member salaries are expected to increase due to:

- General increases which exceeded inflation ("Real Across-the-Board Salary Increases"); and
- Merit and longevity increases.

Real Across-the-Board Salary Increases

There are generally categorized as productivity increases because, in theory, they are generated from any activity that allows workers to produce goods and services more efficiently, thus cheaper. If these efficiencies result in increased revenues to the employer and are passed along as salary increases, Real Across-the-Board Salary Increases will result.

Because of the general nature of governmental employment and the foreseeable budgetary outlook for California governmental employers, there is currently no Real Across-the-Board Salary Increase assumption for the Plan.

Merit and Longevity Salary Increases

Merit and longevity increases reflect the promotional grade increase an individual member is expected to receive over his or her career. This assumption is based on observed experience of real salary increases by category of member by age and/or service group. This assumption is reviewed at the time of the experience investigation.

Following are the average nominal (inflation plus real) annual salary increases received by members over the two years ending June 30, 1997.

Members with less than 5 years of service: 11.88%

Members with 5 or more years of service:

<u>Age Bracket</u>	<u>Annual Increase</u>
25-29	12.81%
30-34	10.37%
35-39	7.87%
40-44	6.89%
45-49	6.34%
50-54	5.92%
55-59	6.01%
60-64	5.35%

The average annual salary increase for active members over this two year period was 5.55%. This was derived from the bargained increases granted over that time (there were three (6/30/95, 6/30/96, and 6/30/97). Netting this from the above nominal increases (geometrically) yields the following real wage increases:

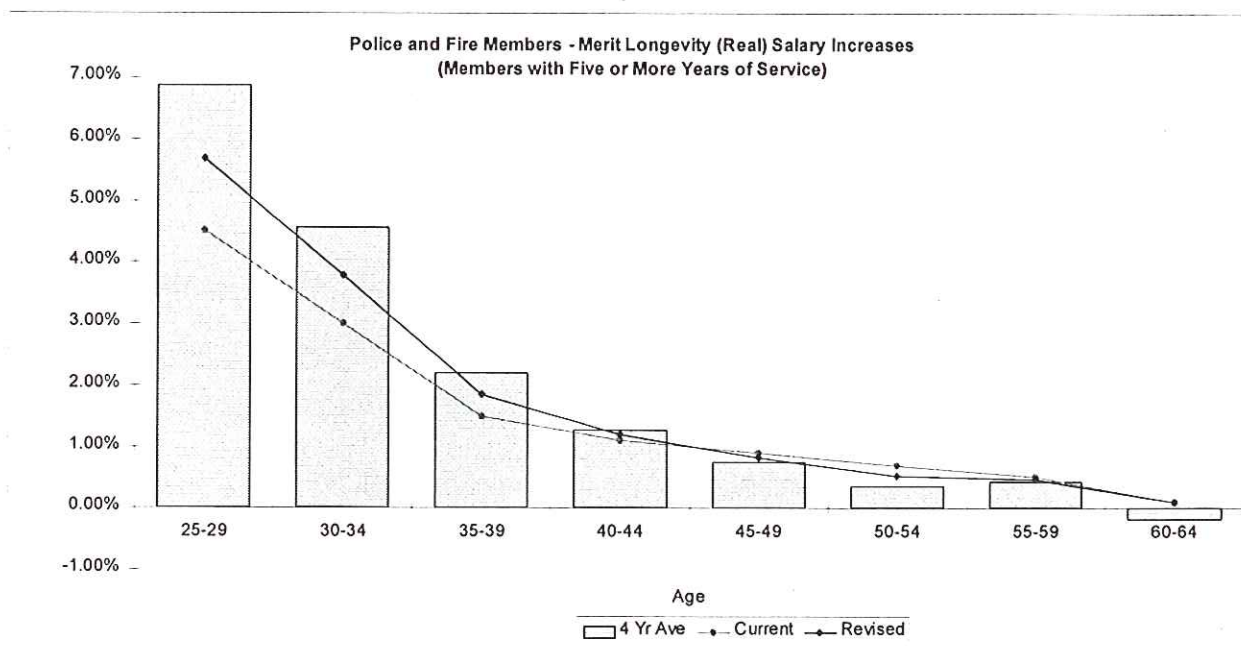
Members with less than 5 years of service: 6.00%

Members with 5 or more years of service:

<u>Age Bracket</u>	<u>Annual Increase</u>
25-29	6.88%
30-34	4.57%
35-39	2.20%
40-44	1.27%
45-49	0.75%
50-54	0.36%
55-59	0.44%
60-64	(0.19%)

In light of this experience, the merit and longevity assumption was modified using the detailed methodology at the beginning of this section. The following graphs summarize the current, actual (over the two year study period) and recommended total salary increase assumptions.

Chart 7



Total Salary Increase Assumption Recommendations

Members with less than 5 years of service: 10.75%

Members with 5 or more years of service:

Ages 25-29	10.45%
Ages 30-34	8.55%
Ages 35-39	6.65%
Ages 40-44	5.95%
Ages 45-49	5.55%
Ages 50-54	5.25%
Ages 55-59	5.25%
Ages 60 and over	4.85%

Medial and Dental Premium Increases

Coverage

After retirement, members receive both medical and dental coverage through the following plans:

Medical Plan Choices

- Kaiser
- Lifeguard
- City of San Jose Plan

Dental Plan

- Delta Dental
- Dental Benefit Providers

Payment for this coverage is made from the Police and Fire Retirement Fund. The responsibility for funding the medical benefit is equally shared by the City and the members. For dental, the City contributes 75% of the cost and the member contributes 25%.

Premium Increase Assumptions

Contribution rates are calculated to provide prefunding for the next 10 years expected premium requirements. This requires a projection of the expected premium increases over the next 10 years.

Setting premium increase assumptions is difficult due to the complexities of the U.S. health care economy and the rapid change being experienced in the health care industry. However, guidelines for the establishment of future health care cost trends have evolved primarily from the application of Financial Accounting Standard No. 106. Although this standard does not apply to public entities, some of its principles are directly applicable to prefunding arrangements like the Police and Fire's.

The following assumptions have been developed in consultation with Mercer's retiree health care actuarial practice. They are consistent with the 4.75% general inflation assumption recommendation:

<u>Fiscal Year</u>	<u>Medical</u>	<u>Dental</u>
1998-1999	8.00%	7.50%
1999-2000	8.00%	7.50%
2000-2001	8.00%	7.50%
2001-2002	7.75%	7.25%
2002-2003	7.25%	6.75%
2003-2004	7.00%	6.50%
2004-2005	6.75%	6.25%
2005-2006	6.50%	6.00%
2006-2007 and later	6.25%	5.75%

ACTUARIAL VALUATION METHODS

ACTUARIAL FUNDING METHOD

Responsibility of the Actuary

A retirement system is a long term proposition. It contains benefit promises that extend many decades into the future. The fiduciaries responsible for funding the System cannot wait until these promises become due before seeking out the money needed to pay for them. The actuary's primary responsibility is to assist the Board to structure a financial plan to advance fund the benefit promises of the System and to monitor its performance. This financial plan is more commonly referred to as an actuarial funding method.

City Contributions

City contributions consist of two components:

1. *Normal Cost* - That annual contribution rate which, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earnings rate. The contribution rate is expressed as a percentage of the member's compensation.
2. *Contribution to the Unfunded Actuarial Accrued Liability (UAAL)* - That annual contribution rate which, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earnings rate. The contribution is calculated to remain as a level percentage of future active member payroll (including payroll of new members as they enter the System) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments are scheduled to increase at the annual inflation rate of along with expected payroll. The UAAL is being funded over the 40-year period beginning in 1977, with 20 years remaining from the June 30, 1997 valuation date.

A more complete definition of the Unfunded Actuarial Accrued Liability and other actuarial terms is provided in the Glossary of Actuarial Terms which can be found in Appendix E.

The actuarial funding method, which has been adopted by the Board, is called the Entry Age normal Funding Method.

Employee Contributions

The members' contribution rates are recalculated on an actuarial basis at each actuarial study. The members presently contribute at the rate of 9.40% of pay.

ACTUARIAL VALUE OF ASSETS

Actuarial Standards

In 1993 the Actuarial Standards Board issued Standard of Practice (SOP) No. 4 entitled Measuring Pension Obligations. Section 5.2.6 of SOP No. 4 states, in part, that the Actuarial Value of Assets should generally reflect some function of market value; however, it may be appropriate to use methods which smooth out the effects of short-term volatility in market value.

In Mercer's opinion, the use of smoothing methods are especially important for City with limited budgetary flexibility, such as governmental entities.

Determination of Actuarial Value of Assets

Before the June 30, 1997 valuation, the Retirement Board used a modified method of valuing the Plan's assets for purposes of calculating the required contribution rates. Under this approach, only 20% of the realized and unrealized gains and losses were recognized in any one year.

The method defers the recognition of all realized and unrealized gains and losses based on five year smoothing. We have two concerns about the continued use of this method.

1. It creates a significant lag behind market value due to the deferring of a large portion of the Plan's total return;
2. It requires smoothing even if the actual return on market is 8%.

The Board has adopted our recommendation to smooth only the deviation of total market return from the 8% return target has been adopted. This method will continue to use a 5 year smoothing process, thus has the exact same level of "smoothness" as the current method without the drawbacks identified above.

Following is a calculation of the Actuarial Value of Assets under the two methods.

A. Previous Methodology

12 Months Ending:	Total Contributions	Total Benefits	Market Value	Realized Plus		Deferred Factor	Deferred Return
				Unrealized Gain (Loss)			
6/30/92			\$ 679,920,000				
6/30/93	\$ 32,820,000	\$ 19,827,000	\$ 792,811,000	\$ 54,350,000	0.000	\$ -	
6/30/94	\$ 32,182,000	\$ 23,998,000	\$ 799,701,000	\$ (35,548,000)	0.200	\$ (7,109,600)	
6/30/95	\$ 35,987,000	\$ 26,626,000	\$ 941,786,000	\$ 95,736,000	0.400	\$ 38,294,400	
6/30/96	\$ 36,393,000	\$ 30,031,000	\$ 1,079,090,000	\$ 88,854,000	0.600	\$ 53,312,400	
6/30/97	\$ 38,490,000	\$ 33,572,000	\$ 1,252,614,000	\$ 112,429,000	0.800	\$ 89,943,200	
1. Total deferred return							\$ 174,440,400
2. Market Value							1,252,614,000
3. Smoothed Market Value (Item 2 - Item 1)							1,078,173,600
4. Corridor Limit							
a. 80% of Net Market Value							1,002,091,200
b. 120% of Net Market Value							1,503,136,800
5. Total Actuarial Value (item 3 after corridor applied)							1,078,173,600
6. Ratio of Actuarial to Market Value (Item 5 / Item 2)						0.860739	
7. Market Value of Defined Benefit Assets							1,236,006,000
8. Actuarial Value of Defined Benefit Assets (Item 7 X Item 6)						\$ 1,063,878,448	
9. Market Value of Postemployment Healthcare Plan Assets						16,608,000	
10. Actuarial Value of Postemployment Healthcare Plan Assets (Item 9 X Item 6)						\$ 14,295,152	
11. Percentage Medical						88.21%	
12. Actuarial Value of Medical Assets (Item 11 X Item 10)						\$ 12,609,753	
13. Percentage Dental						11.79%	
14. Actuarial Value of Dental Assets (Item 13 X Item 10)						\$ 1,685,398	

B. Revised Methodology

12 Months Ending:	Total Contributions	Total Benefits	Market Value	Average Value	(1) Total Market Return (Net)	(2) Expected Market Return (Net)	(1-2) Investment Gain (Loss)	Deferred Factor	Deferred Return
6/30/92			\$ 679,920,000						
6/30/93	\$ 32,820,000	\$ 19,827,000	\$ 792,811,000	\$ 686,416,500	99,898,000	\$ 54,913,320	\$ 44,984,680	0.000	\$ -
6/30/94	\$ 32,182,000	\$ 23,998,000	\$ 799,701,000	\$ 796,903,000	(1,294,000)	\$ 63,752,240	\$ (65,046,240)	0.200	\$ (13,009,248)
6/30/95	\$ 35,987,000	\$ 26,626,000	\$ 941,786,000	\$ 804,381,500	132,724,000	\$ 64,350,520	\$ 68,373,480	0.400	\$ 27,349,392
6/30/96	\$ 36,393,000	\$ 30,031,000	\$ 1,079,090,000	\$ 944,967,000	130,942,000	\$ 75,597,360	\$ 55,344,640	0.600	\$ 33,206,784
6/30/97	\$ 38,490,000	\$ 33,572,000	\$ 1,252,614,000	\$ 1,081,549,000	168,606,000	\$ 86,523,920	\$ 82,082,080	0.800	\$ 65,665,664
1. Total deferred return									\$ 113,212,592
2. Market Value									1,252,614,000
3. Smoothed Market Value (Item 2 - Item 1)									1,139,401,408
4. Corridor Limit									
a. 80% of Net Market Value									1,002,091,200
b. 120% of Net Market Value									1,503,136,800
5. Total Actuarial Value (item 3 after corridor applied)									1,139,401,408
6. Ratio of Actuarial to Market Value (Item 5 / Item 2)									0.909619
7. Market Value of Defined Benefit Assets									1,236,006,000
8. Actuarial Value of Defined Benefit Assets (Item 7 X Item 6)									\$ 1,124,294,457
9. Market Value of Postemployment Healthcare Plan Assets									16,608,000
10. Actuarial Value of Postemployment Healthcare Plan Assets (Item 9 X Item 6)									\$ 15,106,951
11. Percentage Medical									88.21%
12. Actuarial Value of Medical Assets (Item 11 X Item 10)									\$ 13,325,842
13. Percentage Dental									11.79%
14. Actuarial Value of Dental Assets (Item 13 X Item 10)									\$ 1,781,110

ACTUARIAL VALUATION RESULTS

CITY AND EMPLOYEE CONTRIBUTION RATES

The following Table 7 provides a comparison of the City and Employee contribution rates and estimated annual contribution amounts under the recommended actuarial assumptions. The estimated annual contribution amounts are based upon the annual payroll as of June 30, 1997.

Table 7
Contribution Rates and Estimated Annual Contributions

Valuation Basis (Inflation/Investment Return)	<u>City Contributions</u>		<u>Employee Contributions</u>	
	<u>Rate</u>	<u>Annual Amount*</u>	<u>Rate</u>	<u>Annual Amount*</u>
Current Rates (5%/8.0%)	21.61%	\$ 28,060,000	9.40%	\$ 12,206,000
Recommended Rates (4.75%/8.0%)	17.28%	\$ 22,438,000	9.70%	\$ 12,596,000

* Annual amounts based on total annual salaries as of June 30, 1997 of \$129,850,000.

The component parts of the above city and employee contribution rates broken down among the various benefit categories can be found in Table 8 and Table 9.

Details supporting the medical and dental rate calculations can be found on Table 10 and 11.

Explanation of Contribution Rate Changes

City Contribution Rates

The components of the change in City and employee contribution rates are approximately as follows:

Retirement Plan	City Contribution		Employee Contribution	
	% of Payroll	Dollar Impact	% of Payroll	Dollar Impact
June 30, 1995 Rate	19.92%	\$ 25,866,000	8.01%	\$ 10,401,000
<u>Before Assumption Change</u>				
Investment return greater than expected	-2.91%	\$ (3,779,000)	0.00%	\$ -
Salary increase more than expected	0.29%	\$ 374,000	0.00%	\$ -
Withdrawals more than expected	-0.03%	\$ (43,000)	0.00%	\$ -
Miscellaneous (gains)/ losses	0.20%	\$ 254,000	0.01%	\$ 13,000
Subtotal	-2.46%	\$ (3,194,000)	0.01%	\$ 13,000
<u>After Assumption Change</u>				
Change in Actuarial Assumptions	1.26%	\$ 1,636,000	0.29%	\$ 377,000
Change in Asset Valuation Method	-3.11%	\$ (4,038,000)	0.00%	\$ -
Subtotal	-1.85%	\$ (2,402,000)	0.29%	\$ 377,000
June 30, 1997 Rate	15.61%	\$ 20,270,000	8.31%	\$ 10,791,000
Medical and Dental Plan	City Contribution		Employee Contribution	
	% of Payroll	Dollar Impact	% of Payroll	Dollar Impact
June 30, 1995 Rate	1.69%	\$ 2,194,000	1.39%	\$ 1,805,000
<u>Before Assumption Change</u>				
Miscellaneous (gains)/ losses	-0.12%	\$ (156,000)	-0.08%	\$ (104,000)
<u>After Assumption Change</u>				
Change in Actuarial Assumptions	0.10%	\$ 130,000	0.08%	\$ 104,000
June 30, 1997 Rate	1.67%	\$ 2,168,000	1.39%	\$ 1,805,000

Explanation of Gain/Loss Items

Investment return greater than expected - The System's actuarial valuation assets earned 3.00% in excess of the 8% return assumption.

Salary increase more than expected - The average salary increase was 5.55% versus the assumed 5.00%.

Withdrawals higher than expected - The liability release from withdrawals was approximately \$650,000 more than expected.

Miscellaneous (gains)/losses - Other causes of rate change of untraced source.

Assumption Change

Changes were made to most of the assumptions. Following were the most significant:

- Inflation — A reduction in the annual inflation assumption from 5.00% to 4.75%.
- Withdrawal — Withdrawal rates were increased for early years and later years of service.
- Disability — Duty disability rates were decreased somewhat.
- Reciprocity — It is assumed that 75% of members who terminate with a vested benefit will become covered by a reciprocal public retirement system.
- Salary Increase — Changes were made to the merit and longevity salary increase assumptions to reflect salary increases over the last two years.
- Pre-Retirement Mortality — Rates of pre-retirement death were decreased.
- Post-Retirement Mortality — The Board has adopted an updated mortality table (1994 Group Annuity Mortality Table) to reflect mortality improvements since the current table (1983 Group Annuity Mortality Table) was developed.
- Medical and Dental Premium Increases — short term increases were reduced to reflect recent experience; however, long term increases are higher.

Asset Valuation Method

A new smoothing method was adopted by the Retirement Board to calculate the actuarial value of assets. Rather than smoothing all returns other than interest, dividends and other income items, it smoothes the portion of the return which deviates from the actuarial investment return assumption.

Table 8
Employee Contribution Rate Detail
Total Employee Contribution Rates

	New (8% Interest, 4.75% Inflation)		Current (8% Interest, 5% Inflation)	
	<u>% of Payroll</u>	<u>Annual Amount*</u>	<u>% of Payroll</u>	<u>Annual Amount*</u>
a. Basic				
Normal Cost	6.02%	\$7,817,000	5.86%	\$7,609,000
UAAL	0.00%	\$0	0.00%	\$0
b. COL				
Normal Cost	2.29%	\$2,974,000	2.15%	\$2,792,000
UAAL	0.00%	\$0	0.00%	\$0
c. Medical Insurance	1.25%	\$1,623,000	1.24%	\$1,610,000
d. Dental Insurance	<u>0.14%</u>	<u>\$182,000</u>	<u>0.15%</u>	<u>\$195,000</u>
e. Total	9.70%	\$12,596,000	9.40%	\$12,206,000

* Annual amounts based on total annual salaries as of June 30, 1997 of \$129,850,000.

Table 9
City Contribution Rate Detail
Total City Contribution Rates

	New (8% Interest, 4.75% Inflation)		Current (8% Interest, 5% Inflation)	
	<u>% of Payroll</u>	<u>Annual Amount*</u>	<u>% of Payroll</u>	<u>Annual Amount*</u>
a. Basic				
Normal Cost	16.06%	\$20,854,000	15.63%	\$20,296,000
UAAL	-7.84%	(\$10,174,000)	-2.72%	(\$3,532,000)
b. COL				
Normal Cost	6.11%	\$7,934,000	5.72%	\$7,427,000
UAAL	1.28%	\$1,656,000	1.29%	\$1,675,000
c. Medical Insurance	1.25%	\$1,623,000	1.24%	\$1,610,000
d. Dental Insurance	<u>0.42%</u>	<u>\$545,000</u>	<u>0.45%</u>	<u>\$584,000</u>
e. Total	17.28%	\$22,438,000	21.61%	\$28,060,000

* Annual amounts based on total annual salaries as of June 30, 1997 of \$129,850,000.

TABLE 10
RETIREE HEALTH INSURANCE 10-YEAR COST PROJECTION
MEDICAL BENEFITS

(1)	(2)	(3)	(4)	(5)	(6)	
Year	Annual Cost Per Retiree	Number of Insured Retirees	Annual Cost (1) x (2)	Cost as a Percentage of Payroll		
				Total Covered Payroll	Actual Percentage (3) / (4)	Level Percentage [(7) - (8)]/(9)
7/1/97	3,641	858	3,124,000	129,850,000	2.41%	2.50%
7/1/98	3,932	918	3,610,000	136,018,000	2.65%	2.50%
7/1/99	4,247	982	4,172,000	142,479,000	2.93%	2.50%
7/1/00	4,587	1,051	4,821,000	149,247,000	3.23%	2.50%
7/1/01	4,942	1,125	5,558,000	156,336,000	3.56%	2.50%
7/1/02	5,300	1,203	6,378,000	163,762,000	3.89%	2.50%
7/1/03	5,671	1,288	7,302,000	171,541,000	4.26%	2.50%
7/1/04	6,054	1,378	8,341,000	179,689,000	4.64%	2.50%
7/1/05	6,448	1,474	9,506,000	188,224,000	5.05%	2.50%
7/1/06	6,851	1,577	10,807,000	197,165,000	5.48%	2.50%

(7) Present Value of Future Benefits: 40,710,000

(8) Estimated Reserve of Assets

Available for Medical Premiums: 13,325,842

(9) Present Value of Future Salaries: 1,093,172,000

Actuarial assumptions:

Investment Yield: 8.00%

Growth in Covered Payroll: 4.75%

Growth in Retiree Rolls: 7.00%

Funding: 10 year

TABLE 11
RETIREE HEALTH INSURANCE 10-YEAR COST PROJECTION
DENTAL BENEFITS

(1)	(2)	(3)	(4)	(5)	(6)
Year	Annual Cost Per Retiree	Number of Insured Retirees	Annual Cost (1) x (2)	Total Covered Payroll	Cost as a Percentage of Payroll Actual Percentage (3) / (4) Level Percentage [(7) - (8)]/(9)
7/1/97	708	880	623,000	129,850,000	0.48%
7/1/98	761	942	717,000	136,018,000	0.53%
7/1/99	818	1,008	824,000	142,479,000	0.58%
7/1/00	879	1,078	948,000	149,247,000	0.64%
7/1/01	943	1,154	1,088,000	156,336,000	0.70%
7/1/02	1,007	1,234	1,243,000	163,762,000	0.76%
7/1/03	1,072	1,321	1,416,000	171,541,000	0.83%
7/1/04	1,139	1,413	1,610,000	179,689,000	0.90%
7/1/05	1,207	1,512	1,825,000	188,224,000	0.97%
7/1/06	1,276	1,618	2,064,000	197,165,000	1.05%

(7) Present Value of Future Benefits:

(8) Estimated Reserve of Assets

Available for Medical Premiums:

(9) Present Value of Future Salaries:

Actuarial assumptions:

Investment Yield:

Growth in Covered Payroll

Growth in Retiree Rolls:

Funding:

8.00%
4.75%
7.00%
10 year

7,932,000

1,781,110

1,093,172,000

FUNDING STATUS

EVALUATION OF FUNDING STATUS

Background

The evaluation of the System's funding status is simply the comparison of its actual value of assets to a target value of assets. There are two funding status measures calculated for the System:

<u>Funding Status Measure:</u>	<u>Target Assets</u>	<u>Actual Assets</u>	<u>Purpose</u>
GASB No. 5	Accrued benefits with projected salary	Accounting value	Ongoing comparative funding measure
Funding Method Progress	Actuarial Accrued Liability	Actuarial Value of Assets	Progress toward funding UAAL

This section of the report provides the System's funding status under each of these measures, followed by an exhibit which summarizes the System's funding history.

GASB No. 5 - "Ongoing Plan" Assumption With Future Salary Increases

Financial reporting requirements promulgated by the Governmental Accounting Standards Board (GASB) under Statement No. 5 are in effect for plan fiscal years starting after December 15, 1986. The GASB No. 5 liabilities assume an ongoing plan, that is, they include future withdrawals, deaths and disability retirements. In addition, *future projected salary increases* are included in these figures. The Pension Benefit Obligation includes all liabilities of the System for benefits granted to members and beneficiaries already on the pension roll, including future cost of living increases. All basic and cost of living liabilities of active and vested inactive members are included for every year of service already earned at the valuation date, whether vested or not vested.

The GASB Statement No. 5 liabilities based on the 8% interest rate and graded salary scale assumptions calculated as of June 30, 1995 and 1997 based on their respective interest rate and salary scale assumptions are as follows:

	8% Interest, 4.75% Inflation June 30, 1997	8% Interest, 5% Inflation June 30, 1995
(1) Pension Benefit Obligation		
a. Current Retirees and Beneficiaries	\$ 427,558,000	\$ 345,293,000
b. Terminated Vested Members	6,734,000	6,034,000
c. Active Members' Accumulated Contributions	115,995,000	100,010,000
d. Active Members' Employer Financed Portion:		
Vested	384,207,000	318,789,000
Non-Vested	63,671,000	72,862,000
e. Medical and Dental Reserve ⁽ⁱ⁾	16,608,000	10,409,000
e. Total Pension Benefit Obligation	\$ 998,165,000	\$ 853,397,000
(2) Accounting Value of Assets ⁽ⁱⁱ⁾	\$ 1,252,614,000	\$ 866,826,000
(3) Funding Ratio (2) / (1)	125.5%	101.6%

(i) Reserve valued at Market Value and Actuarial Value on June 30, 1997 and June 30, 1995, respectively.

(ii) Market Value and Book Value used on June 30, 1997 and June 30, 1995, respectively.

Funding Method Progress

The GASB has issued two pension accounting statements; Accounting for Pensions by State and Local Government Employers (GASB Statement No. 27); and Financial Reporting for Defined Benefit and Note Disclosures for Defined Contribution Plans (GASB Statement No. 25). These statements, effective in the 1997 and 1996 fiscal years, respectively, require funding status to be measured based upon the actuarial funding method adopted by the Board of Retirement, i.e., the Entry Age Normal Funding Method. Thus, the target value of assets is equal to the Actuarial Accrued Liability (AAL) and the actual value of assets is the Actuarial Value of Assets developed earlier in this report. These new GASB standards will supersede GASB No. 5 in its entirety.

Under these GASB pension statements, assets and associated liabilities for medical benefits should not be taken into account in developing the funding ratios. The funding ratios for the medical and dental plan should be reported under GASB Statement No. 26.

The funding ratios for June 30, 1993, 1995 and 1997 are as follows:

Actuarial Valuation Date	Actuarial Assets (a)	Entry Age Actuarial Value of Accrued Liability (AAL) (ii) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
6/30/93	\$714,592,000	\$716,123,000	\$1,531,000	99.8%	\$98,831,000	2%
6/30/95	\$854,414,000	\$828,739,000	(\$25,675,000)	103.1%	\$109,196,000	-24%
6/30/97	\$1,124,294,000	\$996,646,000	(\$127,648,000)	112.8%	\$129,850,000	-98%

⁽ⁱ⁾ Excludes accounts payable and postemployment healthcare plan assets.

⁽ⁱⁱ⁾ Excludes postemployment healthcare liability.

This ratio is expected to reach 100% on or before the end of the amortization period over which the UAAL is being funded.

ACTUARIAL BALANCE SHEET

ACTUARIAL BALANCE SHEET

The purpose of the Actuarial Balance Sheet is to compare assets with liabilities in order to define the portion of the liabilities which need to be funded by the City and Employee in the future.

System liabilities equal the present value of all future benefits expected to be paid to current and future pensioners and beneficiaries of the System.

System assets are equal to the sum of:

- the assets currently available to pay benefits,
- the present value of future contributions expected to be made by current active members, and
- the present value of future contributions expected to be made by the city.

The last item, the present value of future city contributions, is made up of two parts:

1. The Present Value of Future City Normal Costs: Using the Entry Age Normal Cost Method, the City budgets a certain percentage of payroll which will be sufficient to fund benefits for members from their entry into the Plan. The Normal Cost is the level percentage of salary each year that is necessary to fund Members' benefits under the current benefit provisions. Normal Cost is funded from a Member's date of employment to the expected retirement date. An adjustment is made for the deductions which will be made from the future salaries of Plan members. For this valuation, the Normal Cost percentage is 22.17%.
2. The Unfunded Actuarial Accrued Liability: The portion of the present value of future city contributions which will not be funded by the future Entry Age Normal Cost contributions is the (Prefunded)/Unfunded Actuarial Accrued Liability (UAAL). The UAAL arises from prior contributions that were less than the current Normal Cost. This usually results from benefits and assumption changes and the net effect of prior gains and losses. If the city had always contributed the current Normal Cost, if there were no prior benefit or assumption changes and if actual experience exactly matched the actuarial assumptions, the Normal Cost would be sufficient to fund all benefits and there would be no UAAL. The UAAL percentage is (6.56%).

Actuarial Balance Sheet
As of June 30, 1997

Assets

	<u>BASIC</u>	<u>COL</u>	<u>TOTAL</u>
1. Total Actuarial Value of Assets	\$998,624,401	\$275,622,008	\$1,274,246,409
2. Present Value of Future Contributions by Members			
a. Retirement	\$84,457,645	\$32,155,661	\$116,613,306
b. Medical and Dental	\$22,338,000	\$0	\$22,338,000
2. Present Value of Future Contributions by the City:			
a. Normal Cost	\$225,220,387	\$85,748,429	\$310,968,816
b. Unfunded Actuarial Accrued Liability	(\$152,444,225)	\$24,796,114	(\$127,648,111)
c. Medical and Dental	\$11,197,048	\$0	\$11,197,048
4. Total Actuarial Assets	<u>\$1,189,393,256</u>	<u>\$418,322,212</u>	<u>\$1,607,715,468</u>

Liabilities

5. Present Value of Retirement Allowances			
Payable to Present Retired Members	\$284,171,348	\$146,644,199	\$430,815,547
6. Present Value of Retirement Allowances to be Granted:			
a. Service Retirement	\$337,333,149	\$127,385,344	\$464,718,493
b. Disability Retirement	\$377,950,569	\$142,113,912	\$520,064,481
7. Present Value of Death Benefits to be Granted	\$4,366,619	\$1,847,706	\$6,214,325
8. Present Value of Members' Contributions			
to be Returned upon Withdrawal before Retirement	\$2,084,571	\$331,051	\$2,415,622
9. Present Value of Medical and Dental Benefits	\$48,642,000	\$0	\$48,642,000
10. Accounts Payable	\$134,845,000	\$0	\$134,845,000
11. Total Actuarial Liabilities	<u>\$1,189,393,256</u>	<u>\$418,322,212</u>	<u>\$1,607,715,468</u>

SYSTEM ASSETS

SYSTEM ASSETS

The following asset information was provided to us by the System's staff. We have not audited or verified these figures. These assets are at market value and actuarial value.

	June 30, 1997⁽¹⁾	June 30, 1995	Percent Change
Actuarial Value	\$1,078,174,000	\$864,821,000	24.7%
Market Value	\$1,252,614,000	\$949,453,000	31.9%

⁽¹⁾ June 30, 1997 Actuarial Value is calculated using the old asset valuation method.

The approximate rates of return on plan assets are shown below, based on the following analysis.

	Market Value	Actuarial Value
Value of Assets at 6/30/95	\$949,453,000	\$864,821,000
Contributions:		
Employer	52,382,000	52,382,000
Members	22,501,000	22,501,000
Benefits Paid to Participants	63,603,000	63,603,000
Expenses Paid	9,275,000	9,275,000
Investment Earnings	301,156,000	211,348,000
Value of Assets at 6/30/97	\$1,252,614,000	\$1,078,174,000
ANNUALIZED NET RATE OF RETURN (Net of Expenses) ⁽²⁾	14.26%	11.00%

⁽²⁾ Rate of return on Actuarial Values is calculated using the old asset valuation method. The annualized rate of return including the additional value added by the new asset valuation method is 14.13%.

The 11.00% average rate of return on the actuarial value of assets over the two years ending June 30, 1997 is more than the 8% rate assumed in the June 30, 1995 actuarial valuation. This resulted in an actuarial gain which reduced the budgeted contribution for the City.

FUNDING STATUS

**SYSTEM ACCOUNTING ASSETS,
RESERVES AND OTHER LIABILITIES**
Investment of retirement and postemployment healthcare plans

	Retirement <u>Fund</u>	Cost-of-Living <u>Fund</u>	<u>Total</u>
ASSETS			
Securities	\$956,809,229	\$308,757,607	\$1,265,566,836
Securities Lending Collateral	73,333,224	29,394,515	102,727,739
Receivable from City of San Jose			
Employee Contributions	381,748	113,143	494,891
Employer Contributions	763,459	366,561	1,130,020
Accrued Investment Income	6,863,170	2,926,061	9,789,231
Due from Brokers	5,375,677	2,337,565	7,713,242
Other	32,002	5,234	37,236
Subtotal	<u>\$1,043,558,509</u>	<u>\$343,900,686</u>	<u>\$1,387,459,195</u>

LIABILITIES			
Refunds Payable to Terminated Employees	\$31,559	\$8,980	\$40,539
Due to Brokers	17,957,878	5,711,804	23,669,682
Securities Lending Collateral	73,333,224	29,394,515	102,727,739
Advances, Deposit and Reimbursable Credits	170,792	42,698	213,490
Other Liabilities	6,530,826	1,663,033	8,193,859
Subtotal	<u>\$98,024,279</u>	<u>\$36,821,030</u>	<u>\$134,845,309</u>
Net Assets Available for Benefits	<u>\$945,534,230</u>	<u>\$307,079,656</u>	<u>\$1,252,613,886</u>

FUND BALANCE			
Employee Contributions	\$86,903,308	\$27,779,317	\$114,682,625
General Reserve and Unrealized Gain	858,630,922	279,300,339	1,137,931,261
Total	<u>\$945,534,230</u>	<u>\$307,079,656</u>	<u>\$1,252,613,886</u>

APPENDICES

MAJOR PROVISIONS OF THE RETIREMENT PLAN

Briefly summarized below are the major provisions of the 1961 San Jose Police and Fire Department Retirement Plan, as amended through June 30, 1997.

Final Average Salary (FAS)

Final average salary is defined as the highest 12 consecutive months of compensation earnable, not to exceed 108% of compensation paid to the member during the 12 months immediately preceding the last 12 months of service. FAS excludes overtime pay and expense allowances.

Return of Contributions

If a member should resign or die before becoming eligible for retirement, his or her contributions plus 2% interest per annum will be refunded.

Service Retirement Benefit

Members with 20 years of service who have attained age 55 are eligible to retire. Members age 70 (no service requirement) and members with 30 years of service, regardless of age, are also eligible to retire.

The normal service retirement benefit is 2.5% of FAS per year of service, not to exceed 75% of FAS.

A special study was performed by the plan's prior actuary in 1992 (and subsequently adopted by the Board) which allows members with 25 years of service to retire at age 50 with unreduced benefits. Otherwise, members age 50 with 20 years of service receive their accrued service retirement benefit, reduced for interest below age 55.

Ten years of service are required for vesting purposes.

Disability Benefit***Nonservice-connected***

Members with 2 years of service, regardless of age, are eligible for nonservice-connected disability. The benefit is 32% of FAS for the first 2 years of service plus 1% of FAS for each successive year. The maximum benefit is 50% of FAS.

Members with more than 20 years of service receive 2.5% of FAS per year of service, not to exceed 75% of FAS.

Service-connected

Members may retire regardless of length of service, and the benefit is the greater of 2.5% of FAS per year of service (maximum 75% of FAS) or 50% of FAS.

Death Benefit (before and after retirement)

Nonservice-connected

Eligibility is based on 2 years of service, regardless of age. The spouse receives 24% of FAS for the first 2 years of service plus 0.75% of FAS for each successive year. The maximum benefit is 37.5% of FAS.

If a member has eligible dependent children (under age 18, or age 22 if a full time student), the benefits are as follows:

1 child	25% of FAS
2 children	37.5% of FAS
3 or more children	50% of FAS

The total benefits payable to a family shall not exceed 75% of FAS.

If a member does not have a spouse nor dependent children at death, a lump sum equal to the greater of the member's contributions or \$1,000 is paid to the estate.

These benefits are payable for active member deaths and deaths after nonservice-connected disability retirement.

Service-connected

The spouse receives 37.5% of FAS. Eligible dependent children receive 25% of FAS per child. The total benefits payable to a family shall not exceed 75% of FAS.

These benefits are payable for active member deaths and deaths after service-connected disability retirement and service retirement.

Death Benefit - Inactive Members (after retirement)

The spouse receives 1.875% of FAS per year of service, not to exceed 37.5% of FAS. Eligible dependent children receive the following:

1 child	1.25% of FAS per year of service
2 children	1.875% of FAS per year of service
3 or more children	2.5% of FAS per year of service

The total benefits payable to a family shall not exceed 75% of FAS.

Cost of Living

The maximum increase in retirement allowance is 3% a year. The increases are based on the annual change in the Consumer Price Index.

Post-Retirement Health and Dental

Retirees and survivors with 15 years of service, or receiving a benefit of at least 37.5% of FAS, receive the same medical coverage that the City pays for an active member. Members must have retired from active service to be eligible.

Members' Retirement Contributions

The members' contribution rates are recalculated on an actuarial basis at each actuarial study. The members presently contribute at the rate of 9.40% of pay. This rate includes costs resulting from study performed by the plan's prior actuary in 1995.

City's Retirement Contributions

The City presently contributes at a rate of 21.61% of pay for all members. This rate includes costs resulting from study performed by the plan's prior actuary in 1995. The City rate is the percentage of salary necessary, on an actuarial basis, to provide for the payment of the benefits promised, also taking into account the contributions being made by the members and the assets on hand. These rates are changed in accordance with the results of each actuarial study.

APPENDIX B

SUMMARY OF ASSUMPTIONS AND FUNDING METHOD

Assumptions

Valuation Interest Rate	8%
Inflation Rate	4.75%
Post-Retirement Mortality	
(a) Service	
Males	1994 Male Group Annuity Mortality Table (set back 1 year)
Females	1994 Female Group Annuity Mortality Table
(b) Disability	PERS Industrial Disability Table 88-92
Pre-Retirement Mortality	Based upon the 6/30/97 Experience Analysis
Withdrawal Rates	Based upon the 6/30/97 Experience Analysis
Disability Rates	Based upon the 6/30/97 Experience Analysis
Service Retirement Rates	Based upon the 6/30/97 Experience Analysis
Salary Scales	10.75% for the first five years of service. Graded increases thereafter ranging from 10.45% at age 25 to 4.85% at ages 60 and over. Of the total salary increases, 4.75% is for inflation.
Percentage of Members Married	85%
Reciprocity	75% of all terminated vested members are assumed to be employed by a reciprocal entity.
Assets	Five-year smoothed recognition of total market return that differs from the 8% return target.

Funding Method

The System's liability is being funded on the Entry Age Normal Cost method with the Unfunded Actuarial Accrued Liability being amortized over a period of 40 years beginning in 1977, with 20 years remaining on the June 30, 1997 valuation date.

PROBABILITIES OF SEPARATION Prior to Retirement

Age	Withdrawal 0<=X<1	Withdrawal 1<=X<2	Withdrawal 2<=X<3	Withdrawal 3<=X<4	Withdrawal 4<=X<5	Withdrawal 5<=X<10	Withdrawal X>=10	Terminated Vested	Non-Duty Disability	Duty Disability	Non-Duty Death	Duty Death	Service Retirement
20	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000000	0.000000	0.000100	0.000045	0.000000
21	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000000	0.000050	0.000100	0.000045	0.000000
22	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000000	0.000099	0.000100	0.000045	0.000000
23	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000000	0.000149	0.000125	0.000045	0.000000
24	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000000	0.000198	0.000125	0.000045	0.000000
25	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000000	0.000205	0.000125	0.000045	0.000000
26	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000050	0.000246	0.000125	0.000090	0.000000
27	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000050	0.000287	0.000125	0.000090	0.000000
28	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000050	0.000327	0.000125	0.000090	0.000000
29	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000050	0.000368	0.000125	0.000090	0.000000
30	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000050	0.000695	0.000125	0.000135	0.000000
31	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000100	0.002205	0.000125	0.000135	0.000000
32	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000100	0.002713	0.000125	0.000135	0.000000
33	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000100	0.003222	0.000150	0.000180	0.000000
34	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000150	0.003730	0.000150	0.000180	0.000000
35	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000400	0.001528	0.000150	0.000180	0.000000
36	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000600	0.001763	0.000150	0.000225	0.000000
37	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.000800	0.002056	0.000150	0.000225	0.000000
38	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.001000	0.002350	0.000175	0.000270	0.000000
39	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.001200	0.002644	0.000175	0.000270	0.000000
40	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.001400	0.001923	0.000175	0.000315	0.000000
41	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.001600	0.002692	0.000200	0.000315	0.000000
42	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.001600	0.003653	0.000200	0.000360	0.000000
43	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.001600	0.004806	0.000225	0.000405	0.000000
44	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.007000	0.001600	0.006151	0.000250	0.000405	0.000000
45	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.003815	0.001400	0.009164	0.000250	0.000450	0.000000
46	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.003815	0.001200	0.011455	0.000275	0.000495	0.000000
47	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.003815	0.001000	0.014204	0.000300	0.000495	0.000000
48	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.003815	0.001000	0.017870	0.000300	0.000540	0.000000
49	0.090000	0.013000	0.013000	0.013000	0.013000	0.008500	0.002000	0.003815	0.001000	0.022452	0.000325	0.000585	0.000000
50	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.001000	0.049227	0.000350	0.000630	0.100000
51	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.001000	0.057431	0.000375	0.000630	0.060000
52	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.001000	0.065636	0.000400	0.000675	0.065000
53	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.001000	0.073841	0.000450	0.000720	0.070000
54	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.001000	0.082045	0.000475	0.000765	0.100000
55	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.130737	0.000525	0.000810	0.150000
56	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.161498	0.000575	0.000855	0.150000
57	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.192260	0.000625	0.000900	0.150000
58	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.223022	0.000700	0.000945	0.150000
59	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.246093	0.000775	0.000990	0.200000
60	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.254788	0.000875	0.001035	0.250000
61	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.269776	0.000975	0.001080	0.300000
62	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.281016	0.001100	0.001125	0.300000
63	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.290758	0.001225	0.001215	0.400000
64	0.090000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.299751	0.001400	0.001260	0.500000
65	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000

YEARS OF LIFE EXPECTANCY AFTER SERVICE RETIREMENT
San Jose Police and Fire

<u>Age</u>	<u>Member</u>	<u>Beneficiary</u>	<u>Age</u>	<u>Member</u>	<u>Beneficiary</u>
50	30.94	34.24	80	8.46	9.88
51	30.01	33.29	81	7.97	9.30
52	29.09	32.34	82	7.51	8.74
53	28.18	31.40	83	6.65	8.20
54	27.28	30.47	84	6.65	7.68
55	26.38	29.53	85	6.24	7.18
56	25.49	28.61	86	5.86	6.71
57	24.61	27.68	87	5.48	6.25
58	23.74	26.77	88	5.12	5.83
59	22.88	25.86	89	4.78	5.42
60	22.04	24.97	90	4.45	5.05
61	21.20	24.09	91	4.15	4.70
62	20.38	23.22	92	3.87	4.37
63	19.57	22.36	93	3.61	4.07
64	18.78	21.52	94	3.37	3.79
65	18.01	20.69	95	3.15	3.53
66	17.26	19.88	96	2.95	3.28
67	16.53	19.09	97	2.77	3.06
68	15.81	18.30	98	2.61	2.85
69	15.11	17.53	99	2.46	2.65
70	14.43	16.77	100	2.33	2.48
71	13.77	16.01	101	2.21	2.31
72	13.11	15.26	102	2.09	2.16
73	12.48	14.53	103	1.98	2.02
74	11.85	13.81	104	1.87	1.89
75	11.25	13.11	105	1.77	1.78
76	10.66	12.43	106	1.68	1.69
77	10.08	11.76	107	1.61	1.62
78	9.52	11.11	108	1.56	1.57
79	8.98	10.49	109	1.52	1.53
			110	1.49	1.49

Member
94 GAM Male-1

Beneficiary
94 GAM Female

YEARS OF LIFE EXPECTANCY AFTER DISABILITY RETIREMENT
San Jose Police and Fire

<u>Age</u>	<u>Member</u>	<u>Age</u>	<u>Member</u>	<u>Age</u>	<u>Member</u>
20	54.84	50	26.93	80	7.61
21	53.86	51	26.07	81	7.23
22	52.89	52	25.22	82	6.87
23	51.92	53	24.39	83	6.51
24	50.95	54	23.56	84	6.16
25	49.98	55	22.75	85	5.82
26	49.02	56	21.94	86	5.48
27	48.05	57	21.16	87	5.15
28	47.09	58	20.38	88	4.81
29	46.13	59	19.62	89	4.48
30	45.18	60	18.88	90	4.16
31	44.22	61	18.15	91	3.86
32	43.27	62	17.44	92	3.57
33	42.32	63	16.75	93	3.30
34	41.38	64	16.08	94	3.04
35	40.43	65	15.43	95	2.79
36	39.49	66	14.80	96	2.56
37	38.56	67	14.18	97	2.35
38	37.63	68	13.58	98	2.15
39	36.71	69	13.00	99	1.95
40	35.79	70	12.43	100	1.77
41	34.88	71	11.87	101	1.61
42	33.98	72	11.33	102	1.45
43	33.08	73	10.81	103	1.30
44	32.18	74	10.30	104	1.17
45	31.30	75	9.80	105	1.04
46	30.41	76	9.32	106	.92
47	29.53	77	8.86	107	.81
48	28.66	78	8.42	108	.71
49	27.79	79	8.00	109	.61

88' - 92' PERS Industrial Disability

System Membership and Benefit Statistics

Active Members			
	June 30, 1997	June 30, 1995	Percent Change
A. Number	1,954	1,812	7.8%
B. Average Age	39.64	40.25	-1.5%
C. Average Years of Service	12.67	13.50	-6.1%
D. Annual Salary			
i. Total	\$ 129,850,000	\$ 109,196,000	18.9%
ii. Average	\$ 66,453	\$ 60,263	10.3%
Retired and Inactive Vested Members			
	June 30, 1997	June 30, 1995	Percent Change
Retired Members			
A. Service Retirement			
i. Number	210	159	32.1%
ii. Annual Allowance			
Basic Only	\$8,119,000	\$5,869,000	38.3%
COLA	\$937,000	\$615,000	52.4%
Total	\$9,056,000	\$6,484,000	39.7%
Average Monthly Amount	\$3,594	\$3,398	5.7%
B. Disability Retirement			
i. Number	570	514	10.9%
ii. Annual Allowance			
Basic Only	\$15,585,000	\$12,864,000	21.2%
COLA	\$4,460,000	\$3,673,000	21.4%
Total	\$20,045,000	\$16,537,000	21.2%
Average Monthly Amount	\$2,931	\$2,681	9.3%
C. Beneficiaries			
i. Number	160	151	6.0%
ii. Annual Allowance			
Basic Only	\$1,846,000	\$1,647,000	12.1%
COLA	\$1,043,000	\$915,000	14.0%
Total	\$2,889,000	\$2,562,000	12.8%
Average Monthly Amount	\$1,505	\$1,414	6.4%
Inactive Vested Members			
A. Number	32	29	10.3%

**CITY OF SAN JOSE - POLICE AND FIRE
ACTIVE MEMBERS**

Age Group	YEARS OF SERVICE									TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-19										0
20-24	21									21
	46,923									46,923
25-29	231	41								272
	49,892	63,302								51,913
30-34	148	183	26							357
	53,492	65,210	69,181							60,642
35-39	50	103	123	47						323
	53,844	66,104	70,007	72,749						66,659
40-44	14	41	98	146	45					344
	54,173	66,853	69,883	72,308	76,434					70,769
45-49	1	11	32	81	131	60				316
	56,308	66,085	70,679	70,732	75,402	77,841				73,805
50-54	1	2	3	25	86	122	11			250
	54,902	65,953	73,759	70,155	73,000	75,116	80,636			73,964
55-59			1	1	16	28	14	4		64
			66,744	63,134	71,652	73,122	89,212	77,908		76,318
60-64					3	1	3			7
					80,512	66,744	71,333			74,611
65-69										0
70-74										0
75+										0
Total	466	381	283	300	281	211	28	4	0	1,954
	51,479	65,452	69,992	71,742	74,673	75,587	83,927	77,908	0	66,454

Total Salary \$129,850,342
Average Age 39.64
Average Service 12.67

CITY OF SAN JOSE - POLICE AND FIRE

SERVICE RETIREMENT

Age Group	YEARS OF RETIREMENT									TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
BELOW 30										0
30-34										0
35-39										0
40-44										0
45-49										0
50-54	50 48,869									50 48,869
55-59	74 46,490	13 44,208								87 46,149
60-64	14 43,265	24 33,488	1 33,368							39 36,994
65-69	3 58,041	3 41,856	6 45,021	2 17,784						14 43,242
70-74				2 24,057	1 11,720					3 19,944
75-79				1 63,777	6 24,185					7 29,841
80-84					4 35,126	3 24,043				7 30,376
85-89										0
90+						1 27,330	2 20,598			3 22,842
Total	141 47,259	40 37,600	7 43,356	5 29,492	11 27,030	4 24,865	2 20,598			210 43,126

Total Retired Benefit \$9,056,434
Average Age 59.76
Average Years Retired 5.60

CITY OF SAN JOSE - POLICE AND FIRE

DISABLED RETIREES

YEARS OF RETIREMENT

Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL
BELOW 30										0
30-34	2	1								3
	27,858	24,381								26,699
35-39	5	1								6
	30,418	27,080								29,862
40-44	2	4	3							9
	28,293	28,807	23,871							27,048
45-49	10	3	5	1	1					20
	32,975	27,331	25,813	16,471	19,354					28,832
50-54	48	13	8	8	9	1				87
	42,915	29,437	25,550	19,271	17,981	15,216				34,233
55-59	69	27	21	10	3	2				132
	45,175	40,474	27,991	19,703	17,068	18,844				38,512
60-64	26	41	28	10	6	6				117
	47,029	44,704	35,992	23,321	19,860	15,990				38,562
65-69	2	17	39	18	7	4	1			88
	46,588	45,977	39,065	26,101	22,312	17,615	16,591			35,356
70-74		2	7	36	9	5	2			61
		54,197	36,076	30,371	28,194	22,085	15,676			30,324
75-79			1	8	14	3				26
			43,183	31,524	29,759	29,619				30,802
80-84					7	9				16
					26,131	34,892				31,059
85-89					1	2	1		1	5
					50,404	27,074	15,383		13,619	26,711
90+										0
Total	164	109	112	91	57	32	4		1	570
	43,214	40,798	34,106	26,552	24,762	24,586	15,832		13,619	35,167

Total Retired Benefit \$20,045,366
Average Age 61.33
Average Years Retired 10.96

CITY OF SAN JOSE - POLICE AND FIRE

BENEFICIARIES

Age Group	YEARS OF RETIREMENT									TOTAL
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-19	1		3	1						5
	15,255		10,014	10,631						11,186
20-24	2	2		1						5
	15,570	14,202		9,119						13,733
25-29										0
30-34	1	1								2
	29,566	14,285								21,925
35-39	1		1							2
	23,377		14,128							18,753
40-44	1	1	2							4
	39,963	40,826	12,967							26,681
45-49	5	5	3			1				14
	15,661	26,044	21,403		10,471					20,229
50-54	4	5	1							10
	24,959	28,537	45,328							28,785
55-59	6	4	5	1						16
	18,395	13,406	16,144	16,980						16,356
60-64	10	8	2	4		1				25
	11,926	21,967	15,365	13,078	4,500					15,301
65-69	6	2	6	2		4				20
	21,780	26,512	19,755	14,555	18,959					20,359
70-74	3	7	3	1		4	1			19
	22,137	16,231	14,265	15,498	21,894	14,506				17,916
75-79	6	2	4	2			1		1	16
	14,579	13,842	21,799	15,108		41,546		12,251		17,898
80-84	1	4	3	1		1	1			11
	15,625	13,398	14,170	10,700	16,155	15,955				14,049
85-89		3	3	2		1		2		11
		21,722	16,151	10,940	10,921		13,212			15,713
90+										0
Total	47	44	36	15	12	3	2	1		160
	18,027	20,429	17,516	13,096	17,122	24,002	13,212	12,251		18,058

Total Retired Benefit \$2,889,287
Average Age 62.04
Average Years Retired 9.61

**Summary of Monthly Allowances
As of June 30, 1997**

Option	Number	Monthly Allowance		
		Basic	Cost of Living	Total
SERVICE RETIREMENT				
A	188	\$ 590,592	\$ 74,931	\$ 665,523
B	4	13,770	555	14,325
C	6	21,749	387	22,136
E	1	4,598	190	4,788
G	2	7,822	475	8,297
I	3	14,064	774	14,838
K	2	8,269	368	8,637
L	2	8,894	-	8,894
N	1	3,117	110	3,227
P	1	3,719	319	4,038
Total	210	\$ 676,594	\$ 78,109	\$ 754,703

DISABILITY RETIREMENT				
A	545	\$1,217,814	\$ 368,655	\$1,586,469
B	5	12,136	364	12,500
C	7	22,035	913	22,948
E	1	2,052	139	2,191
F	2	6,169	116	6,285
K	4	14,181	775	14,956
M	2	8,094	152	8,246
O	1	3,401	-	3,401
Q	1	4,916	-	4,916
S	1	3,984	316	4,300
U	1	3,981	256	4,237
Total	570	\$1,298,763	\$ 371,686	\$1,670,449

BENEFICIARIES				
	160	\$ 153,860	\$ 86,914	\$ 240,774

Grand Total	940	\$2,129,217	\$ 536,709	\$2,665,926
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APPENDIX E
GLOSSARY OF ACTUARIAL TERMINOLOGY

Glossary of Actuarial Terminology

AAL: See Actuarial (Accrued Liability)

Accrued Benefit: The amount of an individual's benefit (whether or not vested) as of a specified date, determined in accordance with the terms of a pension plan and based on compensation (if applicable) and service to that date.

Actuarial Accrued Liability: "Target assets" which would be on hand were the System's current level of benefits to have been funded by normal costs from date of entry into the System by all current members and interest at the current investment return assumption were credited each year. It also includes the actuarial present value of all retired members and beneficiaries future benefits.

Actuarial Asset Value: The value of Assets used by the actuary in the actuarial valuation. In order to reduce the impact of assets value fluctuation and to capture the long term intrinsic value of the System's assets, actuaries sometimes use smoothing methods. These methods usually reflect the current market value of assets in some manner.

Actuarial Assumptions: Those assumptions such as interest (investment return), salary increases, termination from service and mortality needed by the actuary to complete an actuarial valuation.

Actuarial Gain (Loss): The difference between actual experience and actuarial assumption anticipated experience during the period between two actuarial valuation dates.

Actuarial Present Value: The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:

- (a) adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, Social Security, marital status, etc.)
- (b) multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and
- (c) discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Valuation: The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

Actuary: A business mathematician trained in mathematics, risk analysis and finance. An actuary is assigned the task of determining the contribution required to maintain financial balance as to inflow and outflow from a retirement system.

Assets: Underlying funds available to provide for the System's benefits. It reflects the accumulation of all contributions and investment earnings.

Contribution to the Unfunded Actuarial Accrued Liability (UAAL): That annual contribution rate which, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earnings rate. The contribution is calculated to remain as a level percentage of future active member payroll (including payroll of new members as they enter the System) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments are scheduled to increase at the annual inflation rate.

GASB: The Government Accounting Standards Board...which promulgates financial reporting and disclosure requirements for governmental entities, including public retirement systems.

GASB Statement No. 5: A set of disclosures promulgated by GASB to provide users of financial statements information as to the funding status of a public retirement system. GASB No. 5 specifies the Pension Benefit Obligation as a standardized target level of assets.

Investment Return Assumption: The average rate of investment earnings which is assumed will be earned by System funds.

Normal Cost: That annual contribution which, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement benefits. Accumulation includes annual crediting of interest at the assumed investment earnings rate. The contribution rate is expressed as a percentage of the member's compensation.

Pension Benefit Obligation: A standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to date.

Projected Unit Credit Actuarial Funding Method: An actuarial method for pre-funding future retirement benefits. Under this method the member contribution stream plus the employer contribution stream is determined as a pro-rata portion of the amount necessary to finance future benefits for current members. The pro-ration is based on the pattern by which benefits accrue to member by age and service.

UAAL: (See Unfunded Actuarial Accrued Liability).

Unfunded Actuarial Accrued Liability: Actuarial Accrued Liability minus the Actuarial Value of Assets.