

REPORT ON  
ACTUARIAL VALUATION OF THE  
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM  
JUNE 30, 1978

**TOWERS, PERRIN, FORSTER & CROSBY**  
ONE CENTURY PLAZA  
LOS ANGELES, CALIFORNIA 90067  
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November 15, 1978

Board of Administration  
City Employees' Retirement System  
Room 505, City Hall South  
111 E. First Street  
Los Angeles, California 90012

Gentlemen:

We are pleased to transmit herewith our Report setting forth the results of the valuation of your Retirement System as of June 30, 1978.

The valuation was based upon financial statements and employee data furnished by the Retirement Office.

We would like to take this opportunity to express our appreciation for the courtesy and cooperation accorded us by the Retirement Office during the course of our work.

Respectfully submitted,

TOWERS, PERRIN, FORSTER & CROSBY



Harry M. Church

HMC/he

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REPORT ON  
ACTUARIAL VALUATION OF THE  
CITY EMPLOYEES' RETIREMENT SYSTEM  
OF THE  
CITY OF LOS ANGELES

In accordance with our agreement we have completed the actuarial valuation of the City Employees' Retirement System as of June 30, 1978.

In order to complete this valuation, the office of the Retirement System furnished us with a magnetic tape which contains all of the pertinent information for each member of the System as of June 30, 1978, including such information as current compensation, years of service credited, rates of contribution, and accumulated contributions. In addition to the above information on active members, we were also furnished a tape for persons currently receiving an allowance from the Retirement System, together with such data as was necessary to determine the value of the allowance already entered upon. A summary of the active and retired membership of the System as of June 30, 1978 is shown in the following table.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

SUMMARY OF MEMBERSHIP OF SYSTEM  
AS OF JUNE 30, 1978

ACTIVE MEMBERS

	<u>Number</u>	<u>Annual Salary</u>	<u>Age</u>	<u>Average Monthly Salary</u>
Male Members	17,024	\$290,204,416	42	\$1,421
Female Members	<u>6,689</u>	<u>83,434,240</u>	36	1,039
Total 6-30-78	23,713	\$373,638,656	40	1,313
Total 6-30-77	21,547	345,662,256	41	1,337
Percent Increase	10.1%	8.1%	--	-1.8%

PENSIONERS

	<u>Number</u>	<u>Annual Allowance</u>		<u>Average Monthly Allowance</u>	
		<u>Basic</u>	<u>C.O.L.</u>	<u>Basic</u>	<u>C.O.L.</u>
Service Retirement	5,498	\$28,828,316	\$5,942,176	\$437	\$ 90
Disability Retirement	<u>497</u>	<u>1,540,348</u>	<u>325,331</u>	258	55
Total 6-30-78	5,995	\$30,368,664	\$6,267,507	422	87
Total 6-30-77	5,538	26,136,756	5,446,010	393	82
Percent Increase	8.3%	16.2%	15.1%	7.4%	6.1%

The Retirement Office also furnished us with an accounting balance sheet setting forth the assets and liabilities of the System as of June 30, 1978. No physical audit of these assets was made by us and our calculations are based upon the balance sheet as submitted.

SECTION II  
RESULTS OF VALUATION

Introduction

The purpose of the actuarial valuation is to analyze the financial condition of the system and to recommend any necessary changes in City contributions. The calculations are based on the actuarial assumptions developed as a result of the June 30, 1977 investigation and an accepted actuarial cost method. The "Beta Formula" was applied to all active members.

Entry Age Normal Funding Method

This method defines the Normal Cost as the level percent of salary necessary to fund the projected future benefits over the period from the date of participation to the date of retirement. The Supplemental Present Value is equal to the excess of total liabilities over the present value of future member contributions and the present value of future Normal Costs. The excess of the Supplemental Present Value over the assets is called the Unfunded Supplemental Present Value and is funded over a fixed period of years. This method is being used by the City of Los Angeles for most benefits. The Supplemental Present Value is generally being amortized over the period ending June 30, 2004 by contributions that will increase in accordance with the salary scale, i.e., 3-1/2% per year. Certain small liabilities are being amortized over shorter periods by level dollar amounts.

Term Cost Basis

Under this method, the amount contributed in any one year is the present value of expected claims arising during the year. This method is being used to fund the Family Death Benefit.

Our valuation of the Retirement System as of June 30, 1978 was based upon the following accounting balance sheet furnished by the Retirement Office. As indicated earlier in this Report, this statement of assets of the System was accepted by us without audit.



LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

ACCOUNTING BALANCE SHEET

JUNE 30, 1978

ASSETS

CASH

In City Treasury	\$ 1,730,667.59
Health Insurance Trust Fund	138,839.23
On Hand	100.00
Total Cash	<u>\$ 1,869,606.82</u>

RECEIVABLES

Accrued Interest	\$ 8,792,416.90
Dividends Receivable	356,746.50
Due from Other Funds	1,671,151.55
Due on Securities	58,701.31
Other Receivables	743.75
Total Receivables	<u>\$ 10,879,760.01</u>

INVESTMENTS

Temporary Short-Term @ Par	\$ 88,700,000.00
Bonds @ Par	455,032,527.38
Premium on Investments	2,382,611.40
Discount on Investments	(9,334,354.46)
Stocks @ Cost	88,736,169.52
Total Investments	<u>\$625,516,953.84</u>

Total Assets	<u><u>\$638,266,320.67</u></u>
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LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

ACCOUNTING BALANCE SHEET

JUNE 30, 1978

LIABILITIES, RESERVES AND FUND BALANCE

CURRENT LIABILITIES

Accrued Benefits Payable	\$ 319,726.52
Accounts Payable	258,696.05
Due Insurance Carriers	138,839.23
Due on Securities	143,337.42
Total Current Liabilities	<u>\$ 860,599.22</u>

DEFERRED INCOME \$ 1,321,888.28

RESERVES

Actuarial:

Member Contributions	\$189,681,349.46
Annuities	77,829,372.63
Prior Service	199,442.47
Subsequent Service	292,406,759.11
Cost of Living (510.1)	72,371,532.71
Family Death Benefit Insurance	4,991,576.10
Total Actuarial Reserves	<u>\$637,480,032.48</u>

Others:

Undistributed Earnings	\$ 245,609.80
Gain/Loss on Equities	(4,079,854.92)
Total Other Reserves	<u>\$ (3,834,245.12)</u>

Total Reserves \$633,645,787.36

FUND BALANCE \$ 2,438,045.81

Total Liabilities, Reserves and Fund Balance \$638,266,320.67

An actuarial valuation of the Retirement System was made as of June 30, 1978 on the basis of the assumptions developed during the course of the June 30, 1977 investigation and upon a 5-3/4% interest assumption. The resulting values of assets and liabilities developed by the valuation are set forth in the following Actuarial Balance Sheet. It is to be noted that the valuation reflects 3% future cost of living increases and member cost of living contributions equal to 15% of their normal plus survivor contributions.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL BALANCE SHEET

AS OF JUNE 30, 1978

ASSETS

1.	Total Assets from Accounting Balance Sheet			\$ 638,266,321
2.	Present Value of Future Contributions of Members			353,545,872
3.	Present Value of Future Contributions by the City on Account of:			
	a. Basic Pensions:			
	i. Normal Cost		\$166,017,309	
	ii. Amortization of Certain Liabilities:			
	-Prior Service Pensions	\$ 8,090,110		
	-Increase due to 1965 Amendments	5,156,303		
	-Supplemental Present Value	<u>385,734,746</u>	398,981,159	
	b. Cost of Living Pensions:			
	i. Normal Cost		87,849,332	
	ii. Amortization of Certain Liabilities:			
	-Increase due to 1967 Amendments	20,443,803		
	-Supplemental Present Value	<u>242,342,125</u>	<u>262,785,928</u>	<u>915,633,728</u>
4.	Total Assets			<u>\$1,907,445,921</u>

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL BALANCE SHEET

AS OF JUNE 30, 1978

LIABILITIES

5. Current Liabilities and Deferred Income		\$ 2,182,488
6. Present Value of Benefits Already Granted:		
a. Basic	\$ 324,040,157	
b. Cost of Living	<u>160,431,021</u>	484,471,178
7. Present Value of Benefits to be Granted:		
a. Basic	\$1,090,821,538	
b. Cost of Living	<u>326,375,340</u>	1,417,196,878
8. Reserve for Gain or Loss on Equities		(4,079,855)
9. Undistributed Earnings Reserve		245,610
10. Family Death Benefit Insurance Reserve		4,991,576
11. Fund Balance		<u>2,438,046</u>
12. Total Liabilities		<u>\$1,907,445,921</u>

### Comments on Actuarial Balance Sheet

The Actuarial Balance Sheet has been prepared in a condensed format and we have utilized some terminology that we hope will aid in its review and discussion.

"Cost of Living Pensions" are the post retirement increases provided by Section 510.1 of Article XXXIV of the City Charter, and related Ordinances.

"Basic Pensions" are all benefits other than "Cost of Living Pensions" and Family Death Benefits provided by Article XXXIV of the City Charter, and related Ordinances.

"Amortization of Certain Past Service Liabilities" refers to those liabilities of the System being amortized over fixed periods of time pursuant either to Charter, Ordinance, or Board authorization.

## Funding Ratios

The schedule below compares the assets on hand with the present value of benefits earned to date. We will show these figures each year to acquaint you with the funding progress.

A funding ratio of over 100% would mean that monies had already been paid for benefits yet to be earned and we do not believe that that is appropriate in a public retirement system. Accordingly, unless prohibited by the proposed PERISA, our recommendations on contributions will be such as to prevent a funding ratio of over 100%.

1.	*Present Value of Benefits Earned to June 30, 1978	
	(a) Basic Benefits	\$ 865,299,232
	(b) Cost of Living Benefits	<u>318,858,753</u>
	(c) Total	1,184,157,985
2.	Applicable Assets on Hand	
	(a) Basic Benefits	542,432,427
	(b) Cost of Living Benefits	<u>90,056,029</u>
	(c) Total	\$ 632,488,456
3.	Funding Ratio	
	(a) Basic Benefits	63%
	(b) Cost of Living Benefits	28%
	(c) Total	53%

\*Calculated on basis of ongoing system, i.e., reflecting all actuarial assumptions including future salary increases. Death and Disability benefits prorated by years of service to normal retirement age. This is sometimes referred to as the "Plan Continuation Liability."

### Vested Liability

Based on the calculations referred to in the preceding section, we estimate that the liability for vested benefits as of June 30, 1978 amounts to \$1,153,033,658. Applicable assets on hand amount to \$632,488,456. Thus, as of June 30, 1978 there was an excess of vested liability over applicable assets on hand amounting to \$520,545,202. It is to be noted that applicable assets on hand amount to 55% of the vested liability. The corresponding figure for June 30, 1977 was 52%.



SECTION III  
RECOMMENDATIONS

Based on the actuarial valuation of the Retirement System as of June 30, 1978, we respectfully submit the following recommendations in accordance with the provisions of Article XXXIV of the City Charter and related ordinances.

Based on the entry age normal cost funding method, members will make cost of living contributions equal to 15% of their normal plus survivor contributions, and upon the assumption that all members will contribute on the basis of the full rates recommended in our June 30, 1977 report, we recommend that the City contributions for the fiscal year 1979-1980 be made up as follows:

	Recommended City Contributions For 1979-1980	
	Percentage of Salary	Fixed Dollar Amount
a. For Basic Pensions:		
i. Normal Cost	4.63%	
ii. Prior Service-Minimum Pensions (Charter-Period ending June 30, 1997)		\$ 710,937
iii. Increase due to 1965 Amendments (Charter-Period ending June 30, 1990)		606,627
iv. Supplemental Present Value	5.29%	---
v. Total Basic Pensions:	9.92%	\$1,317,564

	<u>Recommended City Contributions For 1979-1980</u>	
	<u>Percentage of Salary</u>	<u>Fixed Dollar Amount</u>
b. For Cost of Living Pensions:		
i. Normal Cost	2.45%	\$ ---
ii. Increase due to 1967 Amendment (Charter-Period ending June 30, 1997)	---	1,796,547
iii. Supplemental Present Value (Period ending June 30, 2004)	<u>3.32%</u>	<u>---</u>
iv. Total Cost of Living Pensions	5.77%	\$1,796,547
c. Total Basic and Cost of Living Pensions	15.69%	\$3,114,111
d. For Family Death Benefits: \$5.14 per month for each participating member in the Family Death Benefit Insurance Plan.		

The new ordinance that became effective in October of 1975 permits the City to "subsidize" a portion of employee contributions. Since the portion that will be subsidized by the City will not be refunded to the member upon his termination of employment prior to retirement, the City does not have to pay into the System the total amount of employee contributions that it subsidizes.

Based upon the actuarial valuation carried out as of June 30, 1978 we recommend that the City contribute to the System 70.85% of the employee contribution it subsidizes - i.e., for each \$10,000 the City subsidizes, the City should contribute \$7,085 to the System.

5. Comments

We believe that if the recommendations contained herein are adopted, the system will be maintained on a sound basis in accordance with the actuarial assumptions and methods and funding methods underlying the calculations.

SECTION IV  
STATISTICAL INFORMATION

- Mortality after Service Retirement
  
- Mortality after Disability Retirement
  
- Summary of Major Plan Provisions

EXPECTATION OF LIFE

1971 Group Annuity  
(x-0)(x6)

<u>Age</u>	<u>Male</u>	<u>Female</u>
15	60.13 years	65.97 years
20	55.26	61.10
25	50.40	56.23
30	45.57	51.37
35	40.76	46.53
40	36.01	41.72
45	31.36	36.96
46	30.45	36.01
47	29.55	35.07
48	28.66	34.13
49	27.78	33.20
50	26.91	32.28
51	26.05	31.36
52	25.20	30.45
53	24.36	29.55
54	23.53	28.66
55	22.71	27.78
56	21.90	26.91
57	21.10	26.05
58	20.31	25.20
59	19.53	24.36
60	18.76	23.53
61	18.00	22.71
62	17.26	21.90
63	16.53	21.10
64	15.81	20.31
65	15.11	19.53
66	14.43	18.76
67	13.77	18.00
68	13.13	17.26
69	12.50	16.53
70	11.91	15.81

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

SUMMARY OF MAJOR PLAN PROVISIONS

1. Membership Requirements

First of month following employment.

2. Final Monthly Compensation

Highest 12-month average salary.

3. Service Retirement

A. Eligibility

10 years of service and age 55, or 30 years of service any age, or age 70.

B. Allowance

Beta Formula - 2.16% of Final Monthly Compensation for each year of service (reduced if retirement prior to age 60).

Prior Formula - 2% of Final Monthly Compensation for each year of service (reduced if retirement prior to age 58-3/4).

C. Form of Payment

Monthly allowance payable for life with 50% continuance to eligible spouse. Larger continuance available as option with reduced allowance.

4. Disability Retirement

A. Eligibility

Five or more years of continuous service and physically or mentally incapacitated so that unable to perform duties of position.

B. Allowance

1/70 of Final Monthly Compensation for each year of continuous service. If service is less than 23-1/3 years, then service is projected to retirement, with a maximum total service (actual plus projected) of 23-1/3 years.

C. Form of Payment

Monthly allowance payable for life, with 50% continuance to eligible surviving spouse if employee had that coverage at time of retirement.

5. Deferred Service Retirement

A. Eligibility

Terminate City service with 5 or more years of retirement credit, apply in writing within 3 years after termination, and agree to leave accumulated contributions on deposit.

Application required for retirement at any time after attaining age 55 provided at least 10 years have elapsed when he first became a member, or at age 70 without any elapsed time requirement.

5. Deferred Service Retirement (continued)

B. Allowance

Same as Service Retirement.

C. Form of Payment

Same as Service Retirement.

6. Death prior to Retirement

A. Not Eligible to Retire

The sum of

- i. accumulated contributions,
- ii. a monthly pension to the surviving spouse, minor children, or dependent parents of the deceased member, payable for a period equal to 2 months times the number of completed years of service credit of 12 months at the rate of 1/2 of the average monthly salary for the year prior to death, and
- iii. if deceased member was a qualified member of the Family Death Benefit Insurance Plan, such benefits as are payable under that Plan.



B. Eligibility for Disability Retirement or Death Duty Related

The sum of the following:

- i. 60% of the allowance the member would have received had he been granted a disability retirement allowance the day before he died, payable for the lifetime of the member's surviving spouse, and
- ii. if the deceased member was a qualified member of the Family Death Benefit Insurance Plan, such benefits as are payable under the Plan.

C. Eligible for Retirement

Surviving spouse receives a lifetime survivorship allowance based upon an actuarially computed percentage of the retirement allowance the member would have been entitled to had he been granted an Option 1 service retirement the day before he died. Benefits under the Family Death Benefit Insurance Plan, if any, are not payable. The surviving spouse may elect A or B above in lieu of C.

7. Death After Retirement

- A. 50% continuance to surviving eligible spouse, if covered under the plan.
- B. Upon the death of both the member and his surviving spouse, designated beneficiary receives any unused contributions which may remain (provided the normal cash refund annuity was selected) and any accrued but unpaid retirement allowance due at time of death.
- C. \$500 death benefit paid to designated beneficiary of deceased member for assumption of obligation to pay expense of burial.

8. Post-Retirement Cost of Living Benefits

As of each July 1 benefits being paid increased (proportionately if paid less than 12 months) by increase in Consumer Price Index (to a maximum of 3%). Increases in CPI above 3% are "banked" to apply in years when CPI increase is less than 3%.

9. Employee Contributions

Each member contributes through payroll deduction at a rate of contribution established by the Board of Administration. For those covered by the BETA formula, rates are approximately 8% higher than the rates for members not covered under the BETA formula (at the present time, the City is paying 1/2 of contributions of BETA formula members). Included in these rates are an additional amount to provide a 50% continuance of member's retirement allowance to his surviving spouse; if member is not married, additional contributions are refunded or applied to increase retirement allowance. Members are now paying 15% of the foregoing contributions for cost of living benefits.

10. Family Death Benefit Insurance Plan

A. Eligibility

Employee may elect coverage after 18 months of City retirement service credit.

B. Benefits

Benefits similar to those provided by Survivors Insurance under Social Security payable if member dies in active service after 18 months of Plan membership.

C. Cost

Member and City share cost of Plan (currently \$5.14 per month contribution for each).