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1974
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To
The Annual Report
Of

" The Public Employees' Retirement Association
Of Colorado "

1390 Logan – 4th Floor
Denver, Colorado 80203

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PERA'S Executive Secretary Jack Kennedy, left, confers with Carl Wilkerson, Board Chairman.

Public Employees' Retirement Board

Carl S. Wilkerson, Chairman Pueblo Public Schools
Adrian Williamson, Vice Chairman University of Colorado Medical Center

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Arthur Croissant City of Pueblo
Ada Houck Grand Junction Public Schools
Thomas D. Lindquist State Patrol
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Barclay Watson Colorado Springs Public Schools
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Mary E. Buchanan Secretary of State
John Proctor State Auditor

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Joseph P. Natale Assistant Executive Secretary

William Auld Data Processing
Kent Carsten Office Services
Donald Clippinger Accounting
Kay Gonzales Retirement Services
Allan Johnson Information Services
Kenneth Peterson Investments
Paula Westerdahl Annuities

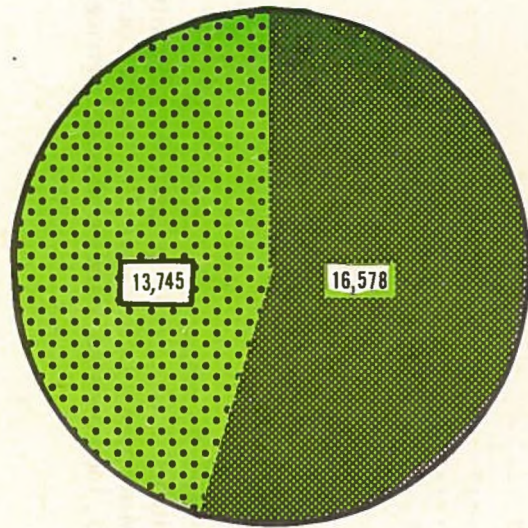
Consulting Firms

Gabriel, Roeder, Smith & Company, Actuaries
Peat, Marwick, Mitchell & Co., Certified Public Accountants
Alliance Capital Management Corporation, Investment Counsel
A.G. Becker & Co., Incorporated, Funds Evaluation Service

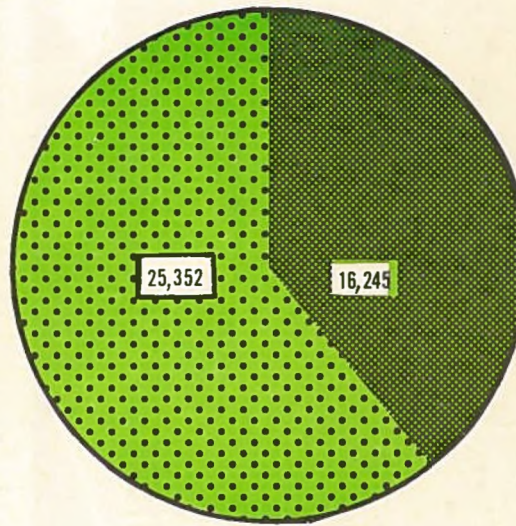
NUMBERS OF ACTIVE MEMBERS BY DIVISION 12-31-73

(Further Distribution According to Sex)

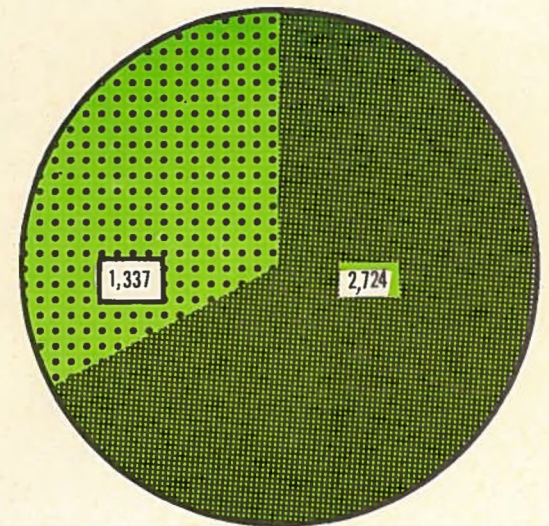
State Division



School Division



Municipal Division



WOMEN



MEN

Introduction

This supplement is intended to supply the interested member with more detail on the funds managed by the Retirement Board of the Public Employees' Retirement Association. The booklet is divided into two major parts: A Financial Report and an Actuarial Report.

In the Financial Report, the June 30, 1974, audited financial reports are presented with accompanying auditor's statement and notes. This section also deals with the growth and composition of the asset structure of the fund. Investments of the portfolio are listed as of June 30, 1974.

The Actuarial Report deals with the fundamental reality facing PERA — the growth of PERA, in terms of both people and dollar assets, and the growth of claims on the fund, accumulating over the years through a statutory promise to pay benefits at retirement.

The Public Employees' Retirement Association manages four funds — the State Division, School Division, Municipal Division, and Judges Division. Much of the data in this booklet is consolidated for all four divisions although each fund is separated from the others and is only used to pay claims against that division. Actuarial facts for active members of the Association are listed as of December 31, 1973. Data on retired lives are listed as of June 30, 1974.

Members contribute 7 3/4% of salary paid. While this money is invested, the principal amount can only be used for the benefit of the individual member or his survivor. The employers' contributions vary according to Division. These contributions are determined on the basis of actuarial valuations to provide the amount of money needed, in addition to the employee's own contributions, to pay the allowances promised by the Association.

Explanatory material including graphs appears throughout to provide more complete understanding. This publication is the first attempt at bringing this information to the attention of the membership in this form, and will be presented annually hereafter. We hope it will be of interest to you in understanding the program.

February 1, 1975

Public Employees' Retirement
Board of Colorado

1390 Logan — 4th Floor
Denver, Colorado 80203

How The System Operates

The PERA retirement plan was established in 1931, and began by covering only state employees. The plan has been greatly extended since that time and now includes employees of the State of Colorado, of all school districts in the state except Denver, and the employees of several municipalities, public health departments, and other local governmental agencies.

This plan is recognized as among the best in existence. Its purpose is to provide income to members and their families when they need it most — at retirement or in case of death or disability.

The Public Employees' Retirement Association is a joint-contributory retirement plan, operating on an actuarial reserve basis.

Here are a few facts regarding the retirement system:

THE RETIREMENT ACT: The law governing the Public Employees' Retirement Association of Colorado is Article 51 of Title 24, Colorado Revised Statutes, 1973, as amended. The last amendatory legislation was enacted in 1973 and provided several changes in the plan including increased disability and survivor benefits.

Complete copies of the law are available at the Retirement Office.

ADMINISTRATION OF SYSTEM: The administration and responsibility for the proper operation of the Association are vested in the Public Employees' Retirement Board of Colorado which is made up of fourteen members, as follows:

Four representatives elected by members from the School Division.

Four representatives elected by members from the State Division.

Three representatives elected by members from the Municipal Division.

The State Treasurer, the Secretary of State, and the State Auditor.

The members of the Association elect employee group representatives to the Board for four-year terms at the annual meeting.

The legal advisor of the Retirement Board is the State Attorney General. An executive secretary is appointed by the Retirement Board to be secretary and administrative officer of the Association. He, in turn, is responsible for the activities of the staff.

The Board also appoints an actuary who makes annual actuarial valuations to determine the adequacy of the funding of retirement benefit liabilities accrued under the retirement program. The PERA Board submits an annual actuarial valuation report to the Legislative Audit Committee and the Joint Budget Committee of the Colorado General Assembly.

A Medical Advisor is appointed by the Board to study and make recommendations regarding applications for disability retirements. The Board also appoints an advisory Investment Committee and Legislative Committee.

Administrative expenses of the Association are paid from the \$5 membership fees charged the employee upon employment and from a small portion of investment income.

INVESTMENTS: The funds of the retirement system are invested primarily in mortgages on real estate insured or guaranteed by an agency of the United States, common and preferred stock of top-rated companies, and public utility and corporate bonds. The law charges the PERA Board with the responsibility of investing the funds in a prudent and discretionary manner and limits investments in common and preferred stocks to thirty percent of the portfolio.

CONTRIBUTIONS BY MEMBERS: Effective July 1, 1973, members of the State, School, Municipal Divisions make deposits of 7-3/4% of salary paid in-

cluding pay for overtime and additional duties but excluding reimbursement of expenses. Deposits are posted to individual accounts for each employee. The accumulated amount in each account will be used for the employee's benefit if he remains in service. If he leaves service, he may withdraw the amount of his contributions without interest, or he may, if he has five or more years of service, elect a deferred annuity providing a lifetime income at age 65. If he dies before retirement and no other death benefits are payable, his beneficiary will receive his contributions.

CONTRIBUTIONS BY EMPLOYER: While members are saving for retirement, the Employer — State of Colorado, School District, Municipality, other political subdivision — will be making contributions on behalf of their employees. Rates for PERA Divisions differ. The Divisions include State Division, School Division, and Municipal Division.

The employer's contributions are determined on the basis of actuarial valuation and will provide the amount of money needed, in addition to the employee's own contributions, to provide the allowances promised by the Association. The average retired member pays only 15% of the amount he receives as an annuity. The remainder comes from the employer money and investment income.

Employer rates are as follows:

Division	First Effective Date	1st year	2nd year	3rd and Subsequent Years
State	7-1-73	9.5%	10.5%	10.64%
School	1-1-74	10.25	11.25	12.10
Municipal	1-1-74	8.5	9.5	9.86

The Employee rate for the Judges' Division is 6% of salary paid.
(The Employer rate is 12% of payroll)

WHERE TO WRITE FOR INFORMATION: Any member who wishes information which is not given in this booklet may write for further information to:

PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION
1390 Logan — 4th Floor
Denver, Colorado 80203

PERA Benefits

The following is a brief description of the benefits of the Public Employees' Retirement Association in the State, School, and Municipal Divisions. The reader is reminded that this is only a brief explanation, complete details of the benefits and other aspects of the program may be found in the Law and in the Rules and Regulations of the Retirement Board.

If You Resign

You are entitled to a refund of your own deposits to PERA. In addition to this benefit, if you have five or more years of service, you may leave your money on deposit and without further payment you will be eligible for a monthly benefit payable for the rest of your life beginning when you are 65 or earlier on a reduced basis. This monthly benefit will be based on the amount of your PERA-covered service.

If You Die

Your widow or widower will receive a monthly benefit until your youngest child is 18 years of age or until age 23 if the child is unmarried and in school. If you leave no eligible children or after benefits have been paid because of the children, your widow or widower will receive a monthly benefit beginning at his or her age of 60, earlier if you have more service. To be eligible for these survivor benefits you must have at least one year's service under PERA unless the death is service incurred in which case there is no service credit requirement. If you leave no eligible survivors for monthly benefits, your beneficiary will receive a refund of the amount of money you have deposited with PERA.

If You Are Permanently Disabled

You will receive the percentage of Final Average Salary to which you would have been entitled had you worked until age 65. This could be as high as 70% of Final Average Salary. Final Average Salary is the average of the highest five consecutive years of earnings within the period of service being considered, usually the last five years.

This benefit is payable for the rest of your life or until you recover from the disability. In order to qualify for this benefit, you must have had five years' of service credit under PERA since last date of employment.

If You Retire

You can retire as early as age 55 provided you have at least 20 years of PERA service credit at that age. You can retire at age 60 with as few as five years of PERA service credit. Your benefit depends on your Final Average Salary, your service, and at what age you decide to retire. For example, a person retiring at age 60 with 20 years of credited service would receive a monthly annuity of 50% of Final Average Salary.

The formula used to compute your retirement benefits is:

2½% of Final Average Salary — 1st 20 years of service.

1% of Final Average Salary — 21-40 years of service.

(1% is only applied to service after July 1, 1969, under current law.)

Maximum 70%

This formula is reduced in certain cases.

PEAT, MARWICK, MITCHELL & CO.

CERTIFIED PUBLIC ACCOUNTANTS

1600 BROADWAY

DENVER, COLORADO 80202

The Retirement Board
Public Employees' Retirement
Association of Colorado:

We have examined the combining balance sheet of the Public Employees' Retirement Association of Colorado (consisting of State Employees', School Employees', Municipal Employees' and Judges' Divisions) as of June 30, 1974 and the related statements of revenue and administrative expense and changes in reserve accounts for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The estimated obligation of employers for prior service based on the separate actuarial information of each division and aggregating \$547,081,764 is based on reserves required for member benefits accrued at December 31, 1973 and is presented in accordance with a certification submitted by the Association's consulting actuaries.

In our opinion, based upon our examination and relying upon the certification mentioned in the preceding paragraph, the aforementioned combining financial statements present fairly the combined and individual financial position of Public Employees' Retirement Association of Colorado (consisting of State Employees', School Employees', Municipal Employees' and Judges' Divisions) at June 30, 1974 and their combined and individual transactions for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

We have reported separately under date of August 23, 1974 on the financial statements of each of the divisions.

Peat, Marwick, Mitchell & Co.

August 23, 1974

Combining Balance Sheet

June 30, 1974

with comparative combined figures for 1973

Municipal
Employees'
Division

Assets

Cash	\$ 58,014
Receivables:	
Member and employer contributions	521,744
Dividends and accrued interest on investments	465,536
Other	1,691
	<u>988,971</u>
Investments (note 2):	
Temporary investments, at cost	1,392,812
Corporate obligations, at amortized cost	21,324,169
Stocks, at cost	4,164,295
United States Government obligations, at amortized cost	2,773,622
First mortgages, at amortized cost	836,839
Colorado bonds, at cost	—
Total investments before unamortized yield adjustment	30,491,737
Unamortized yield adjustment	1,003,797
	<u>31,495,534</u>
Land, at cost	—
Equipment and fixtures, at cost, less accumulated depreciation of \$77,807 in 1974; \$63,645 in 1973	—
Total real assets	32,542,519
Estimated obligation of employers for prior service (contra)	19,462,170
	<u>\$ 52,004,689</u>

Liabilities and Reserves

Refunds and other liabilities payable	\$ 147,071
Reserve accounts:	
Contributions:	
Members' deposits	10,059,716
Employers:	
Accumulation	9,776,258
Actuarial requirements (contra)	19,462,170
	<u>39,298,144</u>
Annuity:	
Annuitants' retirement	11,169,320
Survivors' benefit	1,049,549
Deferred annuitants'	212,861
Deferred survivors' benefit	127,744
	<u>12,559,474</u>
Insurance dividend reserve (note 3)	—
Total reserve accounts	51,857,618
Commitments (note 4)	—
	<u>\$ 52,004,689</u>

See accompanying notes to combining financial statements.

School Employees' Division	Judges' Division	State Employees' Division	Combined total	
			1974	1973
866,275	36,734	376,098	1,337,121	2,311,633
4,769,190	64,875	4,626,356	9,982,165	7,602,107
5,475,136	96,963	4,139,699	10,177,334	8,319,723
19,547	—	32,549	53,787	13,695
<u>10,263,873</u>	<u>161,838</u>	<u>8,798,604</u>	<u>20,213,286</u>	<u>15,935,525</u>
13,522,692	223,977	11,485,747	26,625,228	6,329,627
252,843,712	3,697,110	201,567,253	479,432,244	386,172,477
68,523,047	912,700	54,267,397	127,867,439	107,062,297
30,112,238	674,236	20,093,775	53,653,871	54,406,469
63,494,637	87,770	43,305,188	107,724,434	112,887,715
—	—	150,000	150,000	300,000
428,496,326	5,595,793	330,869,360	795,453,216	667,158,585
7,628,984	174,121	5,695,583	14,502,485	14,476,206
<u>436,125,310</u>	<u>5,769,914</u>	<u>336,564,943</u>	<u>809,955,701</u>	<u>681,634,791</u>
—	—	180,000	180,000	180,000
—	—	52,588	52,588	53,422
447,255,458	5,968,486	345,972,233	831,738,696	700,115,371
278,265,579	1,347,961	248,006,054	547,081,764	400,775,403
<u>725,521,037</u>	<u>7,316,447</u>	<u>593,978,287</u>	<u>1,378,820,460</u>	<u>1,100,890,774</u>
970,462	1,221	1,094,761	2,213,515	1,840,108
132,676,578	1,463,798	110,890,305	255,090,397	220,916,358
155,933,310	2,357,140	61,366,693	229,433,401	177,200,302
278,265,579	1,347,961	248,006,054	547,081,764	400,775,403
<u>566,875,467</u>	<u>5,168,899</u>	<u>420,263,052</u>	<u>1,031,605,562</u>	<u>798,892,063</u>
148,177,689	1,595,860	157,910,635	318,853,504	274,662,204
4,392,397	506,280	7,498,729	13,446,955	12,669,242
4,788,725	44,187	3,406,423	8,452,196	9,031,513
316,297	—	613,219	1,057,260	1,032,429
<u>157,675,108</u>	<u>2,146,327</u>	<u>169,429,006</u>	<u>341,809,915</u>	<u>297,395,388</u>
—	—	3,191,468	3,191,468	2,763,215
<u>724,550,575</u>	<u>7,315,226</u>	<u>592,883,526</u>	<u>1,376,606,945</u>	<u>1,099,050,666</u>
<u>725,521,037</u>	<u>7,316,447</u>	<u>593,978,287</u>	<u>1,378,820,460</u>	<u>1,100,890,774</u>

Combining Statement of Revenue and Administrative Expense

Year ended June 30, 1974
with comparative combined figures for 1973

	Municipal Employees' Division	School Employees' Division	Judges' Division	State Employees' Division	Combined total	
					1974	1973
Revenue:						
Interest Income:						
Corporate obligations	\$ 1,401,601	16,283,336	243,655	12,982,383	30,910,975	24,258,169
United States Government obligations	155,461	1,779,986	42,138	1,264,878	3,242,463	3,031,877
First mortgages	53,780	2,982,215	5,780	2,085,731	5,127,506	5,346,267
Temporary investments	67,615	818,374	9,840	699,608	1,595,437	543,788
Colorado bonds	—	—	—	5,500	5,500	10,000
Dividend income	115,688	2,012,443	27,478	1,624,677	3,780,286	2,801,413
Gain on sale of investments, net	17,991	473,761	7,786	490,951	990,489	242,479
Amortization of premiums and discounts						
on investments, net	67,738	1,070,339	13,707	745,860	1,897,644	1,944,021
Membership fees	7,040	45,933	.50	34,010	87,033	84,085
Other	1,582	78,304	.23	90,731	170,640	20,995
	<u>1,888,496</u>	<u>25,544,691</u>	<u>350,457</u>	<u>20,024,329</u>	<u>47,807,973</u>	<u>38,283,094</u>
Less amortization of yield adjustment	61,957	380,176	10,524	284,851	737,508	734,298
	<u>1,826,539</u>	<u>25,164,515</u>	<u>339,933</u>	<u>19,739,478</u>	<u>47,070,465</u>	<u>37,548,796</u>
Administrative expenses (note 5)	50,324	519,103	2,546	385,643	957,616	755,029
	<u>50,324</u>	<u>519,103</u>	<u>2,546</u>	<u>385,643</u>	<u>957,616</u>	<u>755,029</u>
Excess of revenue over expense distributed to reserve accounts	<u>\$ 1,776,215</u>	<u>24,645,412</u>	<u>337,387</u>	<u>19,353,835</u>	<u>46,112,849</u>	<u>36,793,767</u>

See accompanying notes to combining financial statements.

Combining Statement of Changes in Reserve Accounts

Year ended June 30, 1974
with comparative combined figures for 1973

	Municipal Employees' Division	School Employees' Division	Judges' Division	State Employees' Division	Combined total	
					1974	1973
Contributions:						
Members	\$ 2,781,613	28,245,465	314,586	24,401,383	55,743,047	44,944,961
Employer	2,878,105	35,457,055	529,470	29,684,566	68,549,196	56,782,847
	<u>5,659,718</u>	<u>63,702,520</u>	<u>844,056</u>	<u>54,085,949</u>	<u>124,292,243</u>	<u>101,727,808</u>
Excess of revenue over expense distributed	1,776,215	24,645,412	337,387	19,353,835	46,112,849	36,793,766
Cost of living adjustments appropriated by the Colorado State Legislature	20,748	240,557	—	393,894	655,199	691,013
Transfer from School Employees' Division to State Employees' Division	—	(216,450)	—	216,450	—	—
Refunds due to withdrawal of participating members	(721,518)	(5,171,742)	—	(5,545,180)	(11,438,440)	(10,615,450)
Benefits paid to annuitants	(991,157)	(13,219,038)	(181,674)	(14,244,029)	(28,635,898)	(23,057,869)
Increase in estimated obligation of employers for prior service-adjusted to actuaries' certificate	9,372,131	50,051,699	745,812	86,136,719	146,306,361	82,908,329
Insurance dividends received net of paid-up insurance and administrative expenses (note 3)	—	—	—	263,965	263,965	200,796
Other, net	692	(692)	—	—	—	(9,355)
Net increase for the year	<u>\$ 15,116,629</u>	<u>120,032,266</u>	<u>1,745,581</u>	<u>140,661,603</u>	<u>277,556,279</u>	<u>188,639,039</u>
Balance, beginning of year	<u>36,740,789</u>	<u>604,518,309</u>	<u>5,569,645</u>	<u>452,221,923</u>	<u>1,099,050,666</u>	<u>910,411,627</u>
Balance, end of year	<u>\$ 51,857,618</u>	<u>724,550,575</u>	<u>7,315,226</u>	<u>592,883,526</u>	<u>1,376,606,945</u>	<u>1,099,050,666</u>

See accompanying notes to combining financial statements.

Notes to Combining Financial Statements

June 30, 1974

(1) Summary of Significant Accounting Policies **Valuation of Reserve Accounts** **Basis of Combining Financial Statements**

The accompanying combining financial statements include the accounts of the State School and Municipal Employees' and Judges' Division. Each division's accounts are separately maintained and all actuarial determinations are made on the basis of each division's separate actuarial information. All significant inter-divisional amounts have been eliminated.

Employer Contributions

The statutory employer contribution rates range from 9.86 to 12.10 percent of active member payroll. The Association's actuary uses the "entry age normal" ("attained age normal" for Judges' Division) actuarial method to determine annuity liabilities and normal costs. As of December 31, 1973, after considering current cost contributions, the actuarially computed number of years necessary to accumulate assets to fund the actuarial liability for prior service ranged from 23 to 50 years. Such computations exclude the undistributed net income earned by the divisions for the period July 1 to December 31, 1973 and the December contributions not received until January, 1974.

The aggregate unfunded actuarial liability of \$547,081,764, computed as of December 31, 1973, is presented in the balance sheet as estimated obligation of employers for prior service and as an employer reserve titled "actuarial requirement."

During the year ended June 30, 1974 the Association's Retirement Board approved certain changes in the actuarial assumptions used in determining various actuarial requirements. The effect of such changes was to increase the aggregate unfunded actuarial requirements as reported under the old assumptions at June 30, 1973, by \$84,272,930.

Members' Deposits

Members' contribution rates are established by state statute and are deducted from the members' salary and remitted by the various participating agencies.

Annuity and Deferred Annuity

Annuity and deferred annuity accounts are recorded at amounts sufficient to reflect the actuarially computed discounted accrued liability of each reserve.

Investments

Temporary investments, consisting of corporate notes, are shown at purchased cost. Maturities are generally less than 30 days. Income is recognized when the notes are sold.

Stock investments, principally common stock, are recorded at purchased cost. Dividend income is recognized when dividends are declared. Gains or losses on stocks sold are recognized on the basis of the average cost of the aggregate stock holding being sold.

First mortgages are presented at amortized cost. Discounts recorded at the time of purchase are amortized on the "scientific method" for military housing units and on a straight-line basis for guaranteed purchase agreements covering a group of individual mortgages. Income is recognized on a monthly basis over the various lives of the respective mortgages.

Other investments, principally corporate obligations, are reflected at amortized cost. Premiums and discounts recorded at the time of bond purchases are amortized to the call date and maturity date, respectively. Income is recorded as earned over the life of the investment.

Unamortized yield adjustment on bond exchanges reflects the deferral of gains and losses when bonds are exchanged for similar bonds to achieve a higher yield. These gains and losses are being amortized to the respective earliest maturity date of the new bond acquired or the old bond exchanged. There were no bond exchanges in 1973. Losses of \$763,787 on bond exchanges were deferred during the year ended June 30, 1974.

Equipment and Fixtures

Equipment and fixtures are stated at cost and carried on the State Employees' Division books. Depreciation is provided using the straight-line method in order to apportion the cost of the depreciable assets over the various useful lives of from 2 to 10 years.

Administrative Expenses

The expenses incurred by the Association are allocated to the various divisions on the basis of the relationship of the number of members in the division to the total membership in the Association.

(2) Investments

A summary of investments as of June 30, 1974 with comparative combined figures for 1973 is as follows:

Investments

1974 combined

1973 combined

	Municipal Employees' Division	School Employees' Division	Judges' Division	State Employees' Division	Total	Market value	Total	Market value
Temporary investments, at cost:								
Face value	\$ 1,400,000	13,600,000	225,000	11,500,000	26,775,000		6,350,000	
Less discount	7,188	77,308	1,023	64,253	149,772		20,373	
	<u>\$ 1,392,812</u>	<u>13,522,692</u>	<u>223,977</u>	<u>11,485,747</u>	<u>26,625,228</u>	<u>26,625,228</u>	<u>6,329,627</u>	<u>6,329,627</u>
Corporate obligations, at amortized cost:								
Par value	\$ 22,653,581	262,481,033	3,947,149	209,007,304	498,089,067		403,928,068	
Less discount, net	1,329,412	9,637,321	250,039	7,440,051	18,656,823		17,755,591	
	<u>\$ 21,324,169</u>	<u>252,843,712</u>	<u>3,697,110</u>	<u>201,567,253</u>	<u>479,432,244</u>	<u>403,740,299</u>	<u>386,172,477</u>	<u>360,712,196</u>
Stocks, at cost	<u>\$ 4,164,295</u>	<u>68,523,047</u>	<u>912,700</u>	<u>54,267,397</u>	<u>127,867,439</u>	<u>113,946,685</u>	<u>107,062,297</u>	<u>109,552,064</u>
United States Government obligations, at amortized cost:								
Par value	\$ 2,776,104	30,383,985	676,402	20,170,416	54,006,907		54,849,125	
Less discount, net	2,482	271,747	2,166	76,641	353,036		442,656	
	<u>\$ 2,773,622</u>	<u>30,112,238</u>	<u>674,236</u>	<u>20,093,775</u>	<u>53,653,871</u>	<u>43,644,960</u>	<u>54,406,469</u>	<u>46,931,743</u>
First mortgages at cost:								
Face value	\$ 885,086	66,794,403	89,451	45,664,646	113,433,586		119,401,596	
Less discount, net	48,247	3,299,766	1,681	2,358,458	5,709,152		6,513,881	
	<u>\$ 836,839</u>	<u>63,494,637</u>	<u>87,770</u>	<u>43,305,188</u>	<u>107,724,434</u>	<u>83,789,192</u>	<u>112,887,715</u>	<u>98,098,480</u>
Colorado bonds, at cost	<u>\$ —</u>	<u>—</u>	<u>—</u>	<u>150,000</u>	<u>150,000</u>	<u>150,000</u>	<u>300,000</u>	<u>300,000</u>

(3) Insurance Dividend Reserve

An insurance dividend reserve is included in the records of the State Employees' Division. This reserve is being held for the benefit of all of the Association's participating members. The reserve represents dividends paid by the insurance company for excess life insurance premiums paid by the participating members. Such amount is used to purchase paid-up life insurance for eligible members when they retire and additional paid-up life insurance for active insured members. The changes in this reserve for the year ended June 30, 1974 and 1973 were as follows:

	1974	1973
Balance at beginning of year	\$ 2,763,215	2,435,419
Excess of revenue over expense allocable to insurance reserve	164,288	127,000
Dividends received from insurance company	408,452	429,710
Paid up life insurance purchased	(119,487)	(213,914)
Reimbursement to divisions for administrative expenses relating to insurance program	(25,000)	(15,000)
Balance at end of year	<u>\$ 3,191,468</u>	<u>2,763,215</u>

(4) Commitments

At June 30, 1974, the various divisions were committed to purchase investments at an aggregate cost of \$21,071,100.

The Association has entered into an agreement to lease office space at a cost of \$5,155 per month. The agreement expires on March 1, 1976.

(5) Administrative Expenses

The following is a schedule of administrative expenses for the years ended June 30, 1974 and 1973:

	1974	1973
Salaries	\$ 512,562	423,716
Employee benefits	52,289	39,270
Professional services:		
Investment counsel	97,500	55,160
Actuarial	18,950	14,950
Accounting	23,000	18,243
Rent:		
Equipment	64,597	65,926
Office	54,502	49,177
Depreciation	15,749	13,936
Stationery, printing and office expenses	43,568	28,445
Postage	24,445	19,484
Telephone	10,482	7,706
Medical examination fees	26,714	9,834
Board member expenses	10,791	4,383
Other, net	27,467	19,799
	<u>982,616</u>	<u>770,029</u>
Less reimbursement by Group Insurance Department	25,000	15,000
	<u>\$ 957,616</u>	<u>755,029</u>

PERA Investment Policy

The Board of Directors of the Public Employees' Retirement Association of Colorado hereby adopts the following policy with respect to the investment of retirement funds:

1. The gradual accumulation of common stocks up to the 30% legal limitation (at cost), at such pace as the Board may determine from time to time. The following tests for such securities shall be considered at the time of purchase:

- a. Paid a cash dividend for not less than five years prior to purchase
- b. Additional common stocks may be added or deleted from the Approved Common Stock List upon recommendation of investment counsel and concurrence of staff, subject to the Board of Directors approval.
- c. Stocks may be bought and sold as may be deemed in the best interest of the retire-

ment fund upon recommendation of investment counsel.

- d. The principles of the modified theory of dollar average on common stock investments may be considered in purchase of equities.

2. Inasmuch as the law limits purchases of equities, and the Board is charged with the responsibility for selection of common or preferred stock, no investment shall be made in mutual funds.

3. Investments may also be made in obligations guaranteed by the United States, or its agencies, and also corporate bonds — public utility or industrial. Any investment in corporate bonds shall be made only in bonds of investment quality (three highest ratings) as rated by any two national investment services as may be selected by the Board, provided convertible corporate bonds may be purchased with lower ratings and may be deemed advisable.

4. United States direct obligations and/or high grade Colorado Municipal bonds may be purchased from time to time as the Board deems advisable taking into consideration yield, price and appreciation over a long term.

5. Mortgages

- a. No individual home loans shall be made but this shall not preclude guaranteed participation agreements covering a group of individual home loans.
- b. Loans may be made for commercial or industrial purposes through qualified mortgage bankers as may be deemed advisable.
- c. The Board may retain a professional advisor on mortgages when necessary.

6. Investment in foreign issues — stocks or bonds — shall not be made until further notice.

7. The Board shall endeavor to maintain a balanced portfolio, i.e., diversification in equities, corporate bonds, government guaranteed investments, mortgages, commercial paper, and miscellaneous investment sources, always emphasizing that the soundness and safety of principal should be the primary consideration, with yield, income and appreciation secondary, and as to equities, the long range prospects should be of primary consideration. Speculative or "trading" operations should be avoided.

8. All other investments permitted by law shall be made on a "per offering" basis, with each situation being examined on its own merits as to risk and yield.

9. To implement statistical data needed, the Board should subscribe to at least two investment service publications of national recognition which will furnish current information on investment quality and market cycles of corporate stocks and bonds. The Board shall retain investment counsel to provide information and investment opinion, advisability of acquisition of and advantageous timing relative to corporate bonds, common and preferred stock, together with recommendations for diversification of portfolio, etc.

10. All final decisions on purchases and sales of investments shall be made by the Retirement Board, but the investment sub-committee and/or executive officer shall be authorized to make such purchases or sales on behalf of the Board as are permitted under Board policy. The responsibility of management of the portfolio is vested by law in the Board and such cannot be delegated.

11. Investments in the present portfolio heretofore acquired should not be disturbed, except when definite gains in capital appreciation or current yield can be unmistakably achieved by trading or refund operations, which may from time to time be available. All losses and/or gains in the equity portfolio shall be taken in toto in the fiscal year in which the transaction takes place. Gains and/or losses in the government or corporate bond portfolio shall be amortized on an annual basis to the earliest maturity date of the bond sold or purchased.

A modified accrual method of accounting shall be used with amortization of premiums and discounts on bonds purchased as follows:

- A. Premiums shall be amortized to the 1st call date.
- B. Discounts shall be amortized to maturity date.

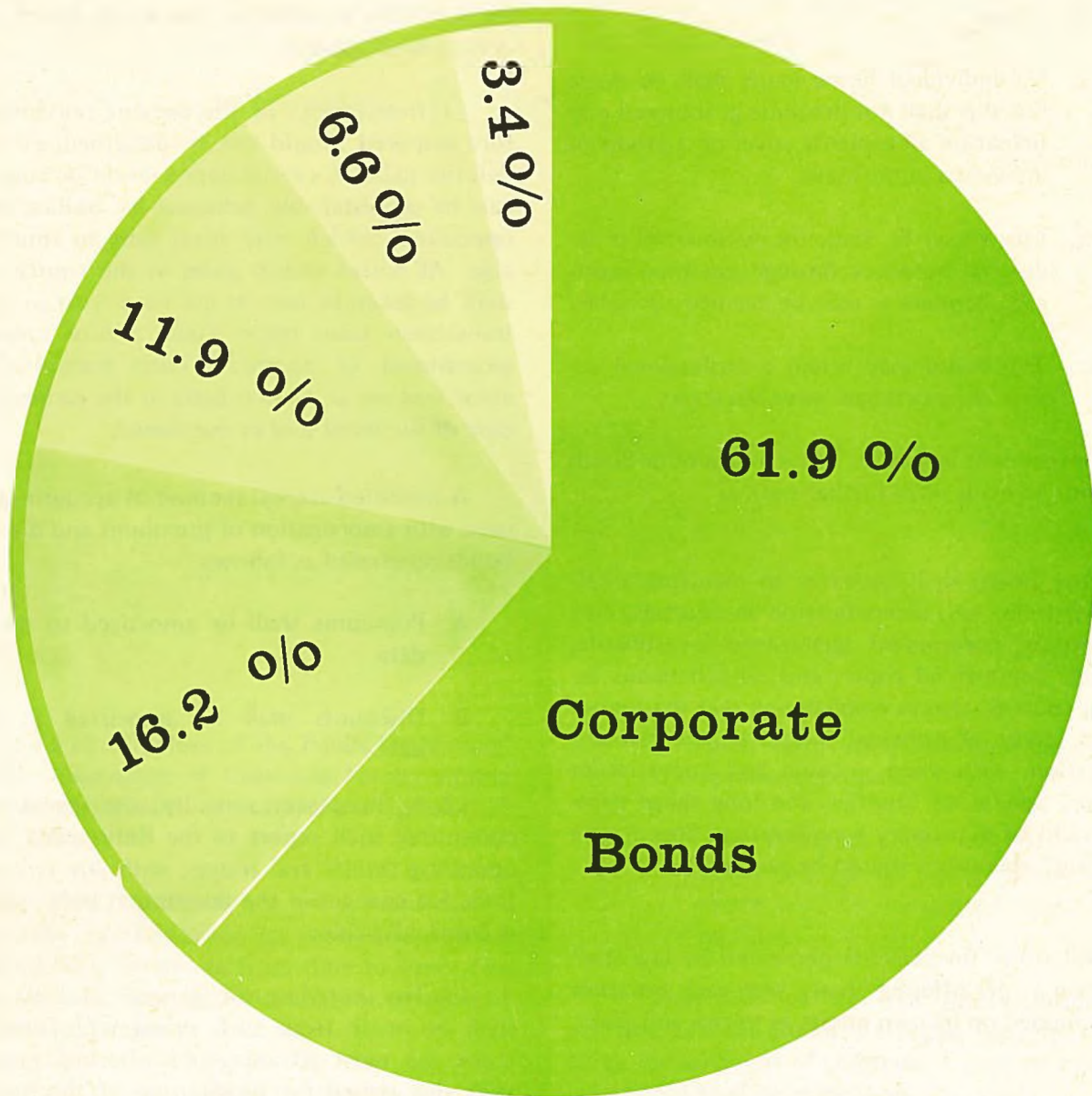
12. At least semi-annually, the investment sub-committee shall report to the Retirement Board the operating results and trends, with any recommendations for changes in the investment policy as may be deemed advisable.

13. The purchase of general market securities shall be made from such investment firms as may make the most advantageous offerings and service, with due regard for distribution of the placements, and further that common stock orders shall be filled through investment firms who are members of recognized national exchanges, as may be determined by the Retirement Board, and are desirous of handling such business at not to exceed standard commissions and/or service charges and who demonstrate their ability to handle such business to the satisfaction of the executive officers, investment sub-committee and Retirement Board. The use of third market investment firms is also permissible when beneficial to the retirement fund.

Investment Portfolio Distribution

(At Cost)

As of June 30, 1974



Corporate Bonds	61.9%
Corporate Stocks	16.2
Mortgages	11.9
U.S. Government, U.S. Agency U.S. Guaranteed	6.6
Other Holdings	3.4
Total	100.0%

Fixed Income Securities

	Par Value	Cost	Market Value June 30, 1974
Short term investments – Less			
than 30 Days	\$ 26,775,000	\$ 26,625,228	\$ 26,625,228
U.S. Government Securities	\$ 4,465,000	\$ 4,478,322	\$ 3,363,113
Corporate Obligations			
Bonds			
Public Utilities – Telephone	100,067,000	100,528,611	76,832,721
Public Utilities – Electric & Gas	134,400,422	130,333,268	102,825,593
Public Utilities – Gas & Pipeline	8,100,000	8,096,375	7,258,750
Industrial	138,756,441	132,720,609	120,775,557
Transportation	71,026,904	68,734,284	62,316,691
Financial	94,104,632	92,711,879	81,832,052
Total Corporate Obligations	<u>\$556,455,399</u>	<u>\$533,125,026</u>	<u>\$451,841,364</u>
Other Debt Obligations			
Mortgages, Contracts & Notes	<u>103,832,359</u>	<u>93,379,206</u>	<u>75,329,264</u>
Total Fixed Income Securities	<u>\$691,527,758</u>	<u>\$657,607,782</u>	<u>\$557,158,969</u>
Convertible Securities			
Convertible Bonds	\$ 1,000,000	\$ 1,000,000	821,250
Preferred Stock			
Public Utilities	5,000 (shs)	500,000	222,500

Common Stocks

Science & Technology

	Shares Held	Cost	Market Value June 30, 1974
Business Equipment			
Honeywell Inc.	16,700	\$ 1,538,189	\$ 947,725
International Business Machines Corporation	14,600	3,482,639	3,106,150
Xerox Corporation	12,300	1,429,762	1,416,038
Total Science and Technology		<u>\$ 6,450,590</u>	<u>\$ 5,469,913</u>

Consumer Products & Services

Automotive

Ford Motor Company	66,400	\$ 4,343,946	\$ 3,253,600
General Motors Corporation	56,300	4,437,858	2,737,588
		<u>\$ 8,781,804</u>	<u>\$ 5,991,188</u>

Broadcasting

CBS Inc.	111,800	\$ 4,994,021	\$ 3,954,925
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Building and Building Products

Armstrong Cork Company	56,400	\$ 2,111,471	\$ 1,473,450
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Drugs, Cosmetics and Hospital Supplies

American Home Products Corporation	79,400	\$ 1,575,998	\$ 3,195,850
Avon Products Incorporated	37,700	3,238,634	1,790,750
Bristol Myers Company	15,500	1,073,344	798,250
Johnson & Johnson	12,200	1,416,712	1,381,650
Pfizer Incorporated	84,400	2,891,774	3,080,600
Schering-Plough Corporation	30,000	2,112,686	1,965,000
Warner-Lambert Company	92,600	3,852,171	2,419,175
		<u>\$ 16,161,319</u>	<u>\$ 14,631,275</u>

	Shares Held	Cost	Market Value June 30, 1974
Food, Beverages and Tobacco			
Borden Incorporated	85,600	\$ 2,419,762	\$ 1,658,500
General Mills Incorporated	71,000	3,912,543	3,567,750
Heublein Incorporated	100,000	4,330,484	4,337,500
Pet Inc.	12,300	673,762	241,388
Philip Morris Incorporated	94,600	3,238,529	5,155,700
Ralston Purina Company	89,100	3,469,560	3,898,125
Reynolds (R.J.) Industries, Inc.	97,800	5,935,281	4,156,500
Royal Crown Cola Company	94,200	2,701,363	1,118,625
		<u>\$26,681,284</u>	<u>\$24,134,088</u>

Photography			
Eastman Kodak Company	36,300	\$ 3,013,785	\$ 3,770,663

Retailing			
Federated Department Stores, Inc.	100,600	\$ 4,266,371	\$ 3,118,600
Penney (J.C.) Company	47,300	3,174,716	3,429,250
Sears, Roebuck & Company	45,500	3,742,548	3,770,813
		<u>\$11,183,635</u>	<u>\$10,318,663</u>

Other			
Zenith Radio Corporation	18,400	\$ 1,006,817	\$ 381,800
Total Consumer Products & Services		<u>\$ 73,934,136</u>	<u>\$ 64,656,052</u>

Financial Services

Banking & Credit			
American Express Company	74,000	\$ 3,099,938	\$ 2,590,000

Insurance			
Aetna Life & Casualty Company	25,000	\$ 646,284	\$ 590,625
Total Financial Services		<u>\$ 3,746,222</u>	<u>\$ 3,180,625</u>

	Shares Held	Cost	Market Value June 30, 1974
Basic Industries			
Chemicals			
American Cyanamid Company	70,500	\$ 2,516,022	\$ 1,383,563
Dow Chemical Company	81,000	2,799,216	5,295,375
Hercules Incorporated	94,800	2,232,459	3,827,550
Nalco Chemical Company	43,100	1,198,414	1,212,188
Union Carbide Corporation	37,600	1,723,668	1,508,700
		<u>\$10,469,779</u>	<u>\$13,227,376</u>
Electrical Equipment			
General Electric Company	80,900	\$ 4,705,686	\$ 3,984,325
Machinery			
Ingersoll-Rand Company	33,600	\$ 2,180,662	\$ 2,524,200
Oil & Gas			
Exxon Corporation	45,800	\$ 3,391,759	\$ 3,211,725
Kerr-McGee Corporation	33,200	1,918,591	2,162,150
Panhandle Eastern Pipeline Company	82,500	2,891,750	2,248,125
Phillips Petroleum Company	41,800	1,945,611	2,053,425
Standard Oil Company of Indiana	15,000	1,297,808	1,245,000
Standard Oil Company of Ohio	74,500	4,060,246	3,855,375
		<u>\$ 15,205,765</u>	<u>\$ 14,775,800</u>
Total Basic Industries		\$ 32,861,892	\$ 34,511,701
Public Utilities			
Electric & Gas			
Consumers Power Company	4,700	\$ 211,031	\$ 58,750
Florida Power & Light Company	12,800	454,035	225,600
Gulfs States Utilities Company	68,000	1,508,419	697,000
Illinois Power Company	66,500	2,347,051	1,197,000
Middle South Utilities Company	12,000	294,198	138,000
Northern Indiana Public Service Company	46,500	1,287,824	662,625
Public Service Company of Colorado	9,200	242,931	111,550
Tampa Electric Company	46,000	1,133,244	540,500
Texas Utilities Company	46,600	1,315,392	815,500
		<u>\$ 8,794,125</u>	<u>\$ 4,446,525</u>
Telephone			
American Telephone & Telegraph Company	31,300	\$ 1,571,644	\$ 1,459,363
Total Public Utilities		<u>\$ 10,365,769</u>	<u>\$ 5,905,888</u>
Total Common Stocks		\$127,358,609	\$113,724,179

Summary

	Cost	Market Value June 30, 1974
Short Term Investments	\$ 26,625,228	\$ 26,625,228
Fixed Income Securities	\$630,982,554	\$530,533,741
Convertible Securities	1,000,000	821,250
Preferred Stock	500,000	222,500
Common Stocks	127,358,609	113,724,179
Total Investment Portfolio	\$786,466,391	\$671,926,898

Bond Exchanges

As indicated elsewhere in this report, the bond portfolio comprises 66% of PERA's total investment portfolio. In an attempt to improve the overall return on the bond portfolio, PERA commenced bond exchange transactions in the fiscal year beginning July 1, 1968. The investment philosophy of a bond exchange transaction is to: 1) improve the cash flow of income (interest) by selling low coupon bonds and purchasing similar bonds with a higher coupon, 2) improve the overall fixed income portfolio as to the quality of the bonds held, 3) improve the relative rate of return due to distortions within the market at any given point of time, and 4) be able to recover any realized losses within a reasonable period of time relative to the remaining years to maturity of the bond sold or purchased, whichever is shorter.

In order to quantify data and determine the benefits of each bond exchange transaction, the Association makes use of an analysis which in summary indicates the total net annual income gain or loss and the accumulated gains over the lifetime of the transaction, both in absolute dollars and rate of return improvement after any realized gain or loss on the asset sold. This analysis allows PERA to recognize a valid bond exchange transaction within the framework of our objectives and philosophy.

Becker Performance Evaluation

A. G. Becker & Company is the largest and a highly respected portfolio evaluation service in the United States and has evaluated PERA fund's performance since 1969.

A summary of the PERA fund's performance results, along with a brief description of issues to be considered in interpreting the results follow. Since the purpose of the summary is to provide an overview, the reader is cautioned against forming conclusions that may be premature. A number of important details of performance evaluation are not addressed here.

These five exhibits are reprinted from the PERA report; together, they provide a profile of the PERA fund's performance.

A. Deployment of Assets. In concise form, this exhibit shows the dollar value of each investment category of the PERA fund at the end of the last fiscal year, as well as the percent of the fund invested in that category. The policy decision to determine the fund's commitment to equities also is addressed here. A greater commitment to equity investments can offer the fund a potentially higher return. The reader should keep in mind, however, that such an investment would be subject to characteristic fluctuations in the equities market.

B. Total Fund Cumulative Annual Rate of Return. This exhibit shows how the PERA fund performed over multi-year periods compared with other funds of similar asset size. The boxes on the graph represent the range of performance results earned by all funds in the group. The PERA fund is highlighted by a diamond \diamond and the line connecting the diamonds illustrates the trend of the fund's performance. The longest time period, 1965-1974, is displayed at the left. At the right, the reader can see performance results for last year only. The fund's return is tabulated under the graph, along with a segmentation of the group's results. Percent rank indicates what proportion of the group outperformed the fund; a low percent indicates a relatively higher return. With this exhibit, the reader can choose a time

period of particular interest and examine the return the PERA fund earned for that period. In the past, a market cycle has generally covered a four-year period. For any time period one chooses to examine, the median serves as an effective standard for determining what a "reasonable" return for that period would have been. (The median is that return which outranked 50 percent of the funds in the group and which was outranked by 50 percent of the funds.)

C. Total Fund Annual Rate of Return. The main purpose of this exhibit is to show which years have had the greatest impact on the multi-year performance of the PERA fund. Another purpose for displaying returns for individual years is to demonstrate how different securities markets affect fund performance. The variation of the median can be explained, in part, by rising and falling securities markets.

D. Equities Cumulative Annual Rate of Return and

E. Fixed Income Cumulative Annual Rate of Return. These exhibits show how the equity and debt portions of the PERA fund performed over multi-year periods. Since the fund's total return is comprised of equity and fixed income rates of return, both have been included so that one can see the impact of their return on the entire fund's performance.

This summary should be regarded only as an introduction to evaluating the PERA fund's performance results. Nevertheless, it is hoped that this brief overview will be of some assistance.

Definitions: Percent Rank refers to the percent of funds with assets in excess of 50 million dollars evaluated by A. G. Becker which outperformed PERA. The number of funds evaluated as of June 30, 1974, in this category was over 600.

Population Percentile refers to the percent of total number of funds evaluated by A. G. Becker which outperformed PERA regardless of size. The number of funds evaluated as of June 30, 1974, in this category was about 2,700.

DEPLOYMENT OF ASSETS

JUNE 30 ,1974

W1427

(IN THOUSANDS AT MARKET)

TOTAL FUND ASSETS
 \$673,339

EQUITY ASSETS
 \$113,955
 16.9 %

FIXED INCOME ASSETS
 \$558,046
 82.9 %

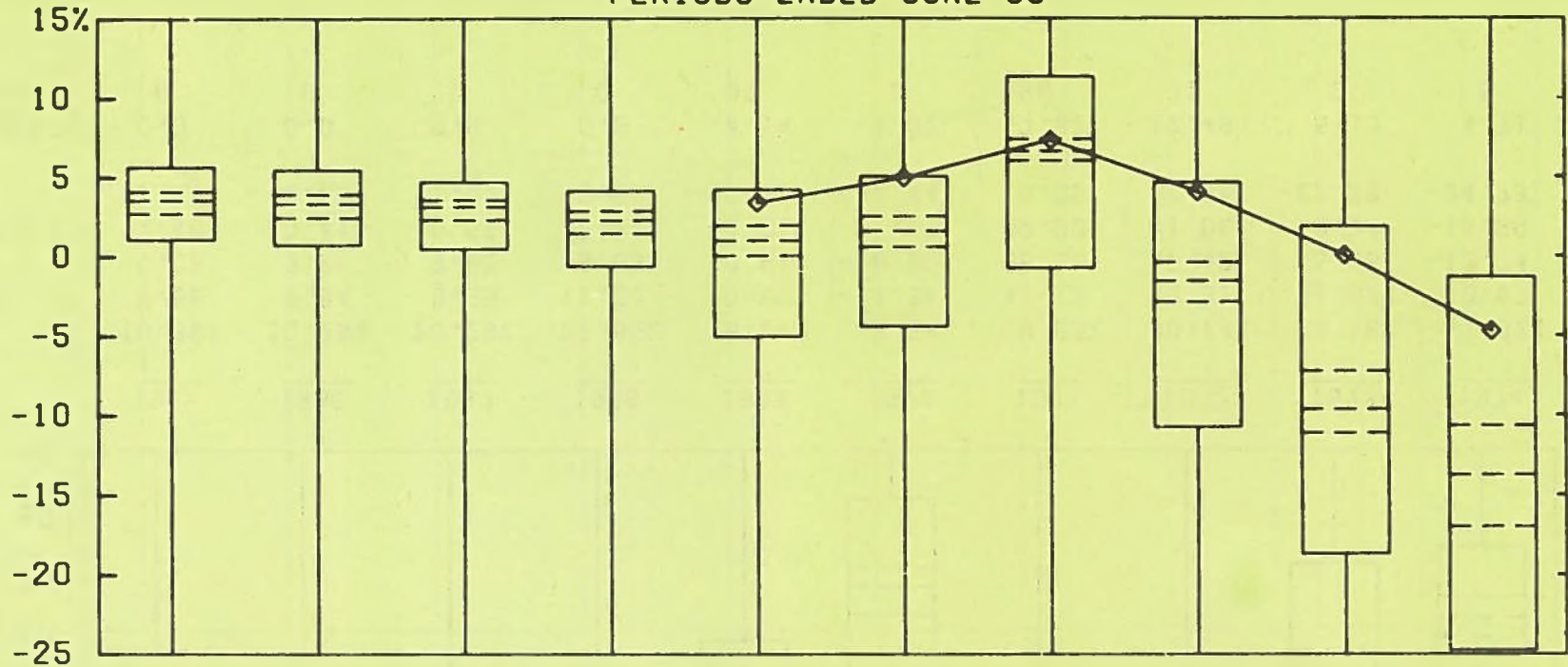
LONG TERM
 \$455,236
 67.6 %

SHORT TERM
 \$26,625
 3.9 %

PRIVATE PLACEMENTS
 \$75,363
 11.2 %

CONVERTIBLES
 \$821
 0.1 %

**TOTAL FUND
CUMULATIVE ANNUAL RATE OF RETURN
PERIODS ENDED JUNE 30**

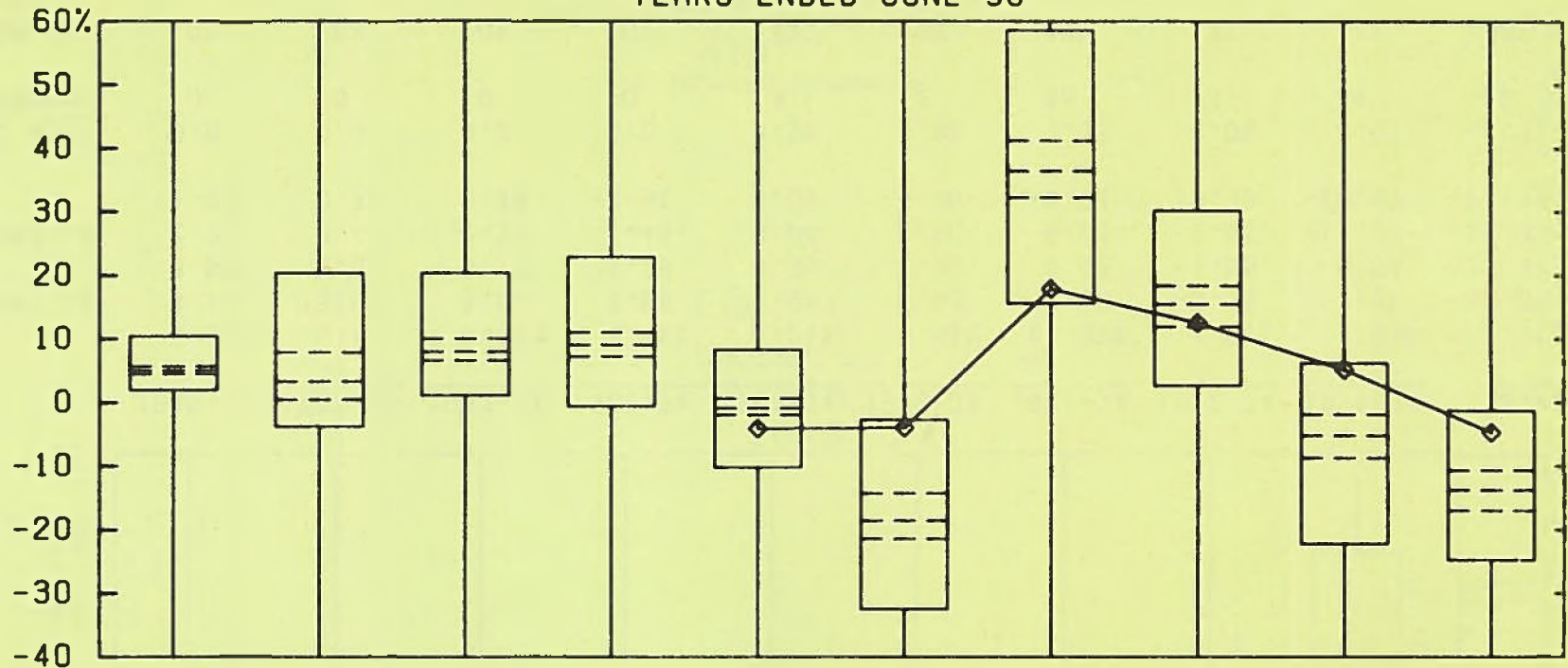


	<u>1965-74</u>	<u>1966-74</u>	<u>1967-74</u>	<u>1968-74</u>	<u>1969-74</u>	<u>1970-74</u>	<u>1971-74</u>	<u>1972-74</u>	<u>1973-74</u>	<u>1974</u>
MAXIMUM	5.64%	5.43%	4.67%	4.12%	4.21%	5.05%	11.32%	4.65%	1.87%	-1.32%
FIRST QUARTILE	4.10	3.92	3.56	2.86	1.94	2.53	7.40	-0.39	-7.22	-10.67
MEDIAN	3.55	3.32	3.12	2.28	0.99	1.60	6.62	-1.56	-9.64	-13.74
THIRD QUARTILE	2.72	2.44	2.30	1.45	0.04	0.60	6.03	-2.88	-11.12	-16.99
MINIMUM	1.07	0.72	0.48	-0.61	-5.03	-4.40	-0.74	-10.73	-18.67	-24.73
YOUR FUND W1427	0.0	0.0	0.0	0.0	3.39	4.96	7.33	4.05	0.07	-4.71
PERCENT RANK*	0	0	0	0	3	2	28	3	4	5
POPULATION PERCENTILE	0%	0%	0%	0%	4%	2%	30%	4%	4%	8%

*COMPARISONS IN ASSET SIZE GROUP EXHIBIT B

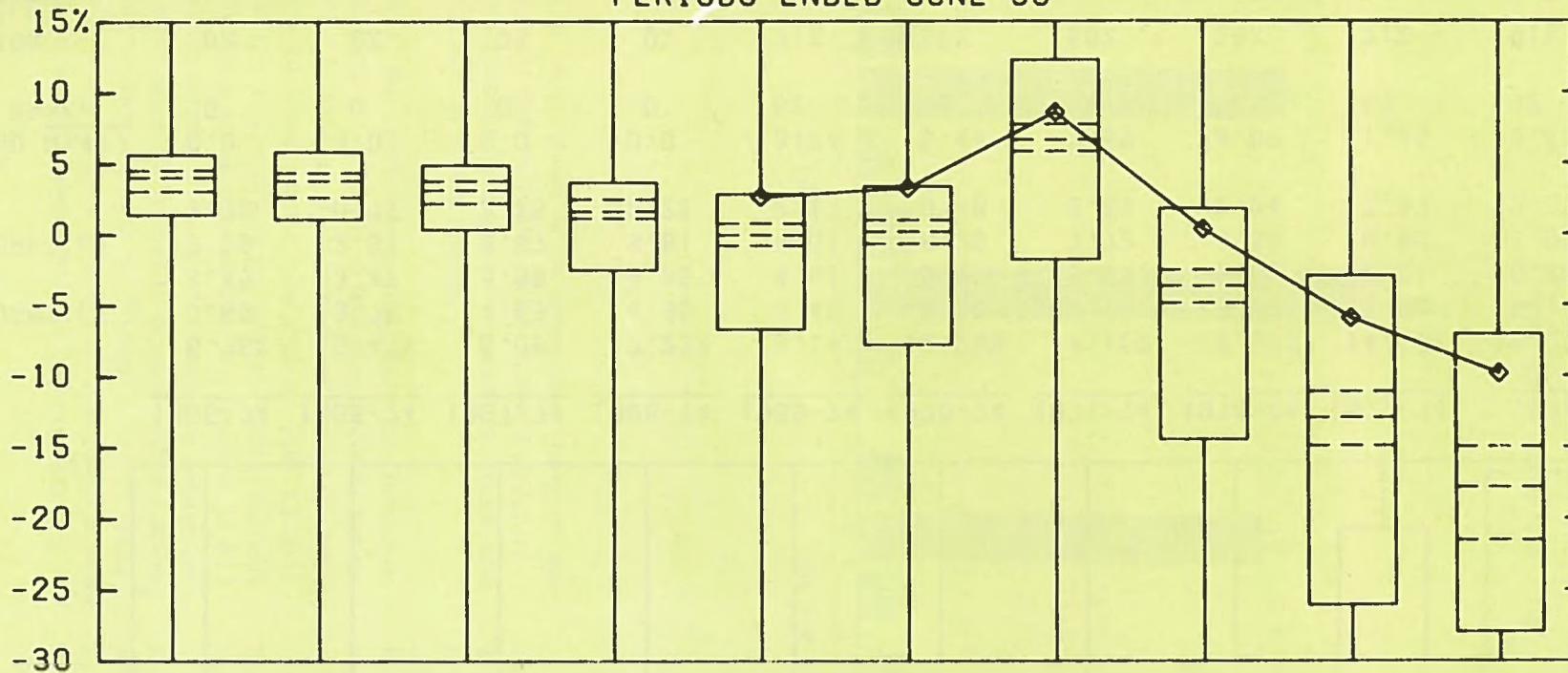
A. G. Becker & Co., Inc.

TOTAL FUND
ANNUAL RATE OF RETURN
YEARS ENDED JUNE 30



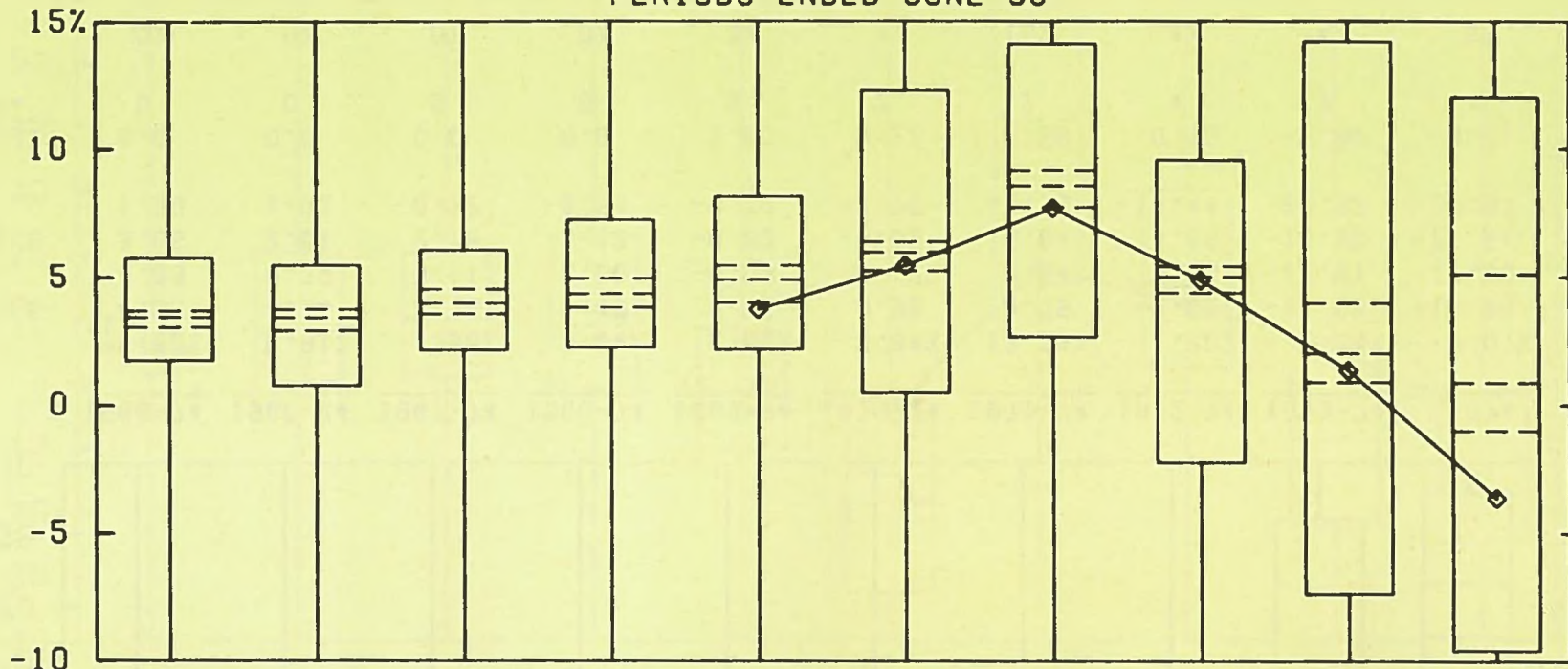
	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
MAXIMUM	10.38%	20.28%	20.29%	22.85%	8.24%	-2.84%	58.53%	30.14%	6.16%	-1.32%
FIRST QUARTILE	5.68	7.84	9.99	11.03	0.60	-14.31	41.13	18.31	-1.92	-10.67
MEDIAN	5.02	3.26	7.95	9.05	-0.91	-18.59	36.38	15.42	-5.25	-13.74
THIRD QUARTILE	4.48	0.41	6.56	7.24	-2.01	-21.47	32.20	11.86	-8.74	-16.99
MINIMUM	1.93	-3.80	1.07	-0.59	-10.22	-32.44	15.55	2.64	-22.23	-24.73
<u>YOUR FUND W1427</u>	0.0	0.0	0.0	0.0	-4.14	-4.02	17.81	12.49	5.10	-4.71
PERCENT RANK	0	0	0	0	92	2	98	71	2	5

EQUITIES
CUMULATIVE ANNUAL RATE OF RETURN
PERIODS ENDED JUNE 30



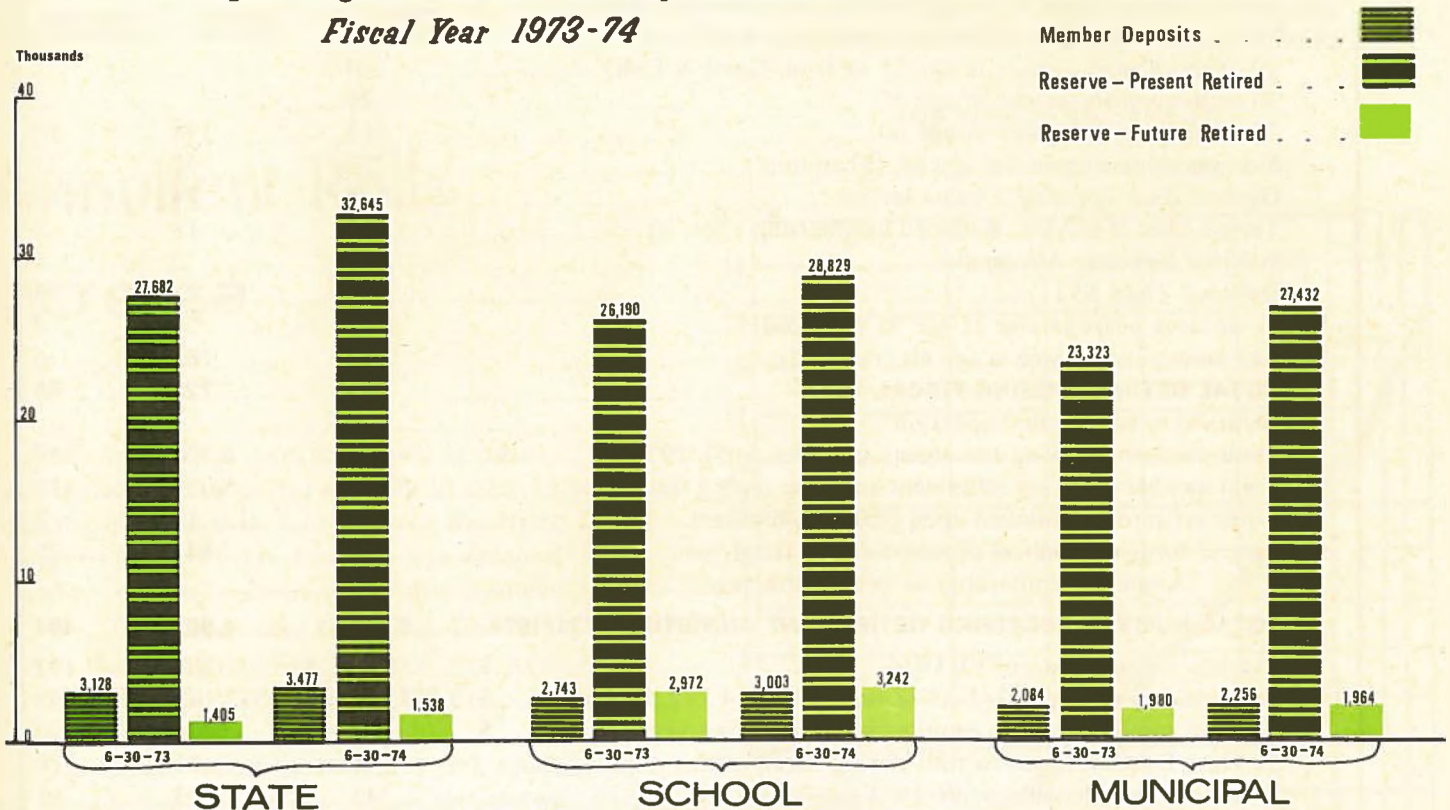
	<u>1965-74</u>	<u>1966-74</u>	<u>1967-74</u>	<u>1968-74</u>	<u>1969-74</u>	<u>1970-74</u>	<u>1971-74</u>	<u>1972-74</u>	<u>1973-74</u>	<u>1974</u>
MAXIMUM	5.62%	5.81%	4.86%	3.64%	2.80%	3.34%	12.26%	1.78%	-2.94%	-7.07%
FIRST QUARTILE	4.53	4.34	3.75	2.45	0.75	0.98	7.75	-2.52	-11.08	-14.96
MEDIAN	4.03	3.79	3.11	1.60	-0.07	0.17	6.64	-3.66	-12.91	-17.80
THIRD QUARTILE	3.06	2.61	2.18	1.12	-0.82	-0.68	5.84	-4.85	-14.88	-21.51
MINIMUM	1.39	1.05	0.32	-2.53	-6.70	-7.79	-1.79	-14.44	-26.02	-27.93
<u>YOUR FUND W1427</u>	0.0	0.0	0.0	0.0	2.60	3.22	8.58	0.35	-5.92	-9.81
PERCENT RANK*	0	0	0	0	3	2	12	4	7	4
POPULATION PERCENTILE	0%	0%	0%	0%	3%	4%	16%	4%	4%	6%

FIXED INCOME CUMULATIVE ANNUAL RATE OF RETURN PERIODS ENDED JUNE 30



	<u>1965-74</u>	<u>1966-74</u>	<u>1967-74</u>	<u>1968-74</u>	<u>1969-74</u>	<u>1970-74</u>	<u>1971-74</u>	<u>1972-74</u>	<u>1973-74</u>	<u>1974</u>
MAXIMUM	5.75%	5.47%	6.06%	7.23%	8.14%	12.29%	14.10%	9.57%	14.19%	12.03%
FIRST QUARTILE	3.69	3.75	4.53	4.95	5.46	6.38	9.15	5.42	3.98	5.11
MEDIAN	3.43	3.42	3.98	4.35	4.91	5.97	8.57	5.01	2.01	0.88
THIRD QUARTILE	3.05	2.91	3.57	3.81	4.01	5.25	7.72	4.38	0.89	-1.00
MINIMUM	1.75	0.77	2.15	2.25	2.17	0.48	2.67	-2.24	-7.37	-9.57
YOUR FUND W1427	0.0	0.0	0.0	0.0	3.74	5.44	7.69	4.88	1.36	-3.62
PERCENT RANK*	0	0	0	0	82	68	78	56	67	92
POPULATION	0%	0%	0%	0%	71%	56%	60%	59%	71%	91%
PERCENTILE										

Per Capita Figures in Reserve by Divisions *Fiscal Year 1973-74*



The chart above is an interesting study of the three main reserves in the PERA financial structure — members' deposits, reserves for presently retired, and the reserves for future retirees.

What this chart shows, using the State Division as an example on 6-30-74, is that if you divide the reserve established for those already retired by the total number of those retired, you end up with \$32,645 per retiree. If you divide the total individual deposits by the total active membership, the result is \$3,477 per active member. The third reserve, the reserve for future retired, is the reserve to be used with the active member's own deposits to finance a future retirement. For this purpose dividing the number of active members into this reserve nets \$1,538 per member.

PERA annuities are fully funded. That means that once a retirement has been granted by the Retirement Board, there is enough money set aside to pay that annuity for the rest of the annuitant's life without additional member or employer contribution. The Present Retired Reserve is the largest of the three on a per capita basis.

The member's own deposits can only be used for the member's own benefit or his survivor's benefit.

The third fund is a pooled fund, a portion of which is combined with the member's deposit and placed in the Present Retired Reserve to pay an individual benefit when such benefit is granted according to the terms of state law.

RETIREMENT STATISTICS:

Retirement annuities have been approved by the retirement board payable to retired members during the fiscal year as follows:

	STATE DIVISION	SCHOOL DIVISION	MUNICIPAL DIVISION
20 or more years service at age 55 (Patrol, Game & Fish)	4		
30 or more years service at age 55	25		
20 or more years service at age 60	163	198	16
5 or more years service at age 65 (Fractional)	250	230	21
General disability after 5 years service	146	74	16
Termination of service: Retained membership (Sec. 9)	12	18	1
Survivor Benefits: Automatic	6	3	1
Deferred (Age 65)	34	67	3
20 or more years service at age 55 (reduced)	22	24	4
5 or more years service at age 60 (reduced)	88	108	6
TOTAL RETIRED DURING FISCAL YEAR	750	722	68
Returned to rolls from suspension	2	3	
Total number receiving retirement annuities 6/30/1973	4,492	4,304	350
Total number receiving retirement annuities during fiscal year	5,244	5,029	418
Co-Beneficiaries continued upon death of annuitant	37	17	3
Less: Retired members deceased during fiscal year	174	141	20
Annuities temporarily suspended this year	2	3	
TOTAL NUMBER RECEIVING RETIREMENT ANNUITIES 6/30/1974	5,105	4,902	401
Average monthly rate 6/30/1974	\$ 216	\$ 208	\$ 192
Total paid in annuities 7/1/1973 to 6/30/1974 (12 months)	\$13,267,031	\$12,583,147	\$890,392
Average monthly rate for annuitants retired during year	\$ 285	\$ 276	\$ 290
Survivor Benefits added to rolls during fiscal year	40	33	6
Total Survivor Benefits 6/30/1974	311	203	51
Total paid in Survivor Benefits 7/1/1973 to 6/30/1974 (12 months)	\$ 618,936	\$ 422,270	\$ 85,726
Retirement annuities Deferred (future at age 65)	413	722	31
Total future liability (annually)	\$ 838,432	\$ 1,163,499	\$ 53,440
Survivor Benefits (Future)	47	28	8
Total future liability (annually)	\$ 72,193	\$ 39,104	\$ 11,033

MEMBERSHIP STATISTICS

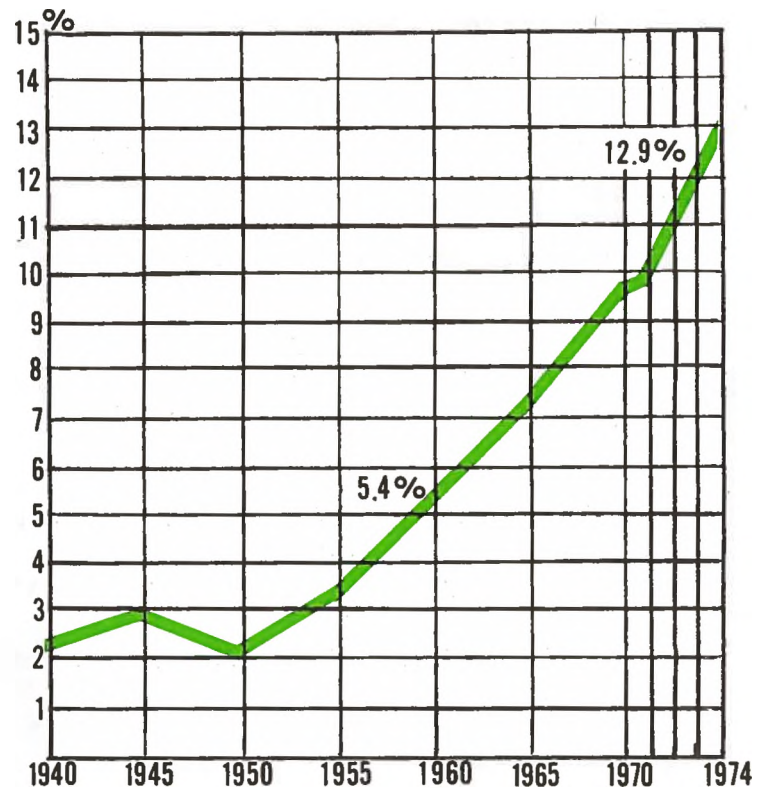
	TOTALS CONSOLIDATED	STATE DIVISION	SCHOOL DIVISION	MUNICIPAL DIVISION
TOTAL MEMBERSHIP MAY 31, 1974	91,690	37,301	49,504	4,885
<i>Active Members</i>	80,717	31,885	44,399	4,433
<i>Annuity and Survivor Benefit Members</i>	10,973	5,416	5,105	452
New Members Accepted				
June 1, 1973 to May 31, 1974	18,026	7,038	9,555	1,433
Less: Members Deceased	(82)	(42)	(34)	(6)
Members Accounts Withdrawn	(12,042)	(5,148)	(5,956)	(938)
Total Withdrawals	(12,124)	(5,190)	(5,990)	(944)
NET GAIN IN MEMBERSHIP	5,902	1,848	3,565	489

Annuitant Rolls Increase

The number of persons receiving retirement annuities has grown steadily in relation to active membership, as shown in the chart at right. Since PERA has not yet reached maturity as a retirement plan, this trend is natural. The level-cost financing principle assures that contribution rates will not have to be raised to meet the benefit load.

The figures which accompany the chart are listed in the table below, which also shows the steep growth in the dollar amount of the annuity payroll.

RETIRED MEMBERS
as a % of Active Members



Year	Number of active members on 6/30	Number of retired members on 6/30	Total annuities paid-yr. ending 6/30
1940	3,715	93	\$ 72,588
1945	5,585	171	137,442
1950	11,853	280	237,866
1955	21,185	747	745,679
1960	33,068	1,775	2,055,139
1965	49,701	3,631	5,486,225
1970	65,586	6,308	12,366,659
1971	69,472	6,940	13,879,335
1972	72,530	7,892	17,208,013
1973	76,708	9,146	21,297,570
1974	80,529	10,408	26,740,570

State Division

Active Members in Valuation

By Attained Age Groups & Years of Credited Service — 12-31-73

Active members included in the STATE DIVISION* valuation totaled 29,763, involving monthly salaries totaling \$25,493,954 (\$305,927,448 annually).

Attained Age Groups	Number With Indicated Years of Credited Service							Totals	Monthly Salaries
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up		
Under 20	202							202	\$ 78,299
20-24	2,495	34						2,530	1,303,499
25-29	3,883	543	22					4,448	3,129,841
30-34	2,466	1,054	272	3				3,795	3,313,494
35-39	1,594	951	445	132	2			3,124	2,969,912
40-44	1,397	979	505	288	49	4		3,222	3,125,995
45-49	1,335	1,016	566	316	165	83	2	3,483	3,347,520
50-54	1,124	1,051	606	403	217	142	3	3,546	3,336,063
55-59	729	822	589	415	224	151	45	2,975	2,722,876
60	109	140	104	68	30	26	10	487	437,745
61	78	131	91	74	32	22	12	440	372,904
62	88	98	71	61	23	26	13	380	335,343
63	60	79	80	64	25	18	16	342	303,824
64	40	81	72	63	21	20	6	303	266,387
65	30	79	63	56	22	9	12	271	243,778
66	22	35	20	31	8	4	4	124	116,947
67	6	22	8	4	2	1	2	45	43,679
68	5	6	4	3	3	1	2	24	24,212
69	2	6			1		1	10	10,146
70	1	2		1			1	5	5,715
71		1					1	2	1,635
72			1		1			2	2,180
73		1						1	534
74	1							1	836
75					1			1	590
Totals	15,668	7,131	3,519	1,982	826	507	130	29,763	\$25,493,954

*This does not include figures as of December 31, 1973, for State Patrolmen and certain members of the Division of Wildlife, who have separate plans and rates. If both groups were included, the State Division would have totaled 30,323, involving salaries totaling \$26,009,599 (\$312,115,188 annually).

The median attained age for regular State Division members was 41.2 years, and the median years of service was 4.7. This assumes even distribution throughout the median interval.

School Division

Active Members in Valuation

By Attained Age Groups & Years of Credited Service — 12-31-73

Active members included in the SCHOOL DIVISION valuation totaled 41,597, involving monthly salaries totaling \$30,004,784 (\$360,057,408 annually).

Attained Age Groups	Number With Indicated Years of Credited Service							Totals	Monthly Salaries
	0-4	5-9	10-14	15-19	20-24	25-29	30 & UP		
Under 20	146							146	\$ 51,307
20-24	3,396	7						3,403	1,840,301
25-29	7,018	785	2					7,805	5,278,358
30-34	3,720	2,010	308	1				6,039	4,569,431
35-39	2,812	1,392	1,061	154				5,419	4,165,112
40-44	2,384	1,225	909	531	40	1		5,090	3,888,630
45-49	1,735	1,169	703	530	291	8		4,436	3,391,046
50-54	1,184	972	704	477	274	64	5	3,680	2,718,206
55-59	875	655	608	571	253	86	11	3,059	2,208,516
60	107	110	114	123	56	20	2	532	402,764
61	79	108	101	112	53	22	3	478	365,394
62	88	84	74	103	49	9	2	409	303,403
63	52	66	85	97	47	12	1	360	273,995
64	40	59	80	82	45	16	9	331	262,483
65	26	52	59	70	33	7	2	249	189,630
66	17	13	10	11	8	1	1	61	35,985
67	7	7	5	6	3			28	17,411
68	3	5	4	5	4			21	12,604
69	5	4	4	4	1			18	9,343
70	6	3		2				11	6,038
71	2	2	2					6	3,841
72	1	1	3		2	1		8	5,352
73	1		1	3				5	3,164
74					1			1	725
75				1				1	1,011
78					1			1	734
Totals	23,704	8,729	4,837	2,883	1,161	247	36	41,597	\$30,004,784

The median attained age for School Division members was 38.1 years, and the median years of service was 4.4. This assumes even distribution throughout the median interval.

Municipal Division

Active Members in Valuation

By Attained Age Groups & Years of Credited Service – 12-31-73

Active members included in the MUNICIPAL DIVISION valuation totaled 4,061 involving monthly salaries totaling \$3,046,336 (\$36,556,032 annually).

Attained Age Groups	Number With Indicated Years of Credited Service							Totals	Monthly Salaries
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up		
Under 20	.72							.72	\$ 32,803
20-24	.533	.4						.537	305,789
25-29	.670	.85	.1					.756	533,876
30-34	.341	.113	.32	.2				.488	387,642
35-39	.208	.103	.53	.19				.383	310,582
40-44	.260	.104	.31	.40	.13	.2		.450	354,796
45-49	.177	.104	.47	.28	.16	.9		.381	307,147
50-54	.180	.100	.50	.34	.26	.13	.1	.404	331,924
55-59	.103	.75	.45	.43	.27	.13	.2	.308	248,999
60	.9	.24	.9	.11	.4	.2	.1	.60	53,912
61	.12	.19	.12	.6	.5	.3		.57	44,594
62	.11	.12	.10	.4	.3			.40	33,729
63	.12	.16	.6	.8	.3	.3	.1	.49	37,902
64	.4	.6	.9	.3	.1	.3	.1	.27	22,379
65	.9	.4	.3	.6	.2			.24	18,781
66		.2	.2			.1		.5	4,597
67	.1	.4	.3	.1	.1		.1	.11	10,477
68		.2		.1				.3	2,133
69		.2	.1					.3	3,190
70		.2						.2	.694
75				.1				.1	.390
Totals	2,602	.781	.314	.207	.101	.49	.7	4,061	\$3,046,336

The median attained age for Municipal Division members was 37.3 years, and the median years of service was 3.9. This assumes even distribution throughout the median interval.

Judges Division

Active Members in Valuation

By Attained Age Groups & Years of Credited Service – 12-31-73

Active members included in the JUDGES DIVISION valuation totaled 199 involving monthly salaries totaling \$370,606 (\$4,447,272 annually).

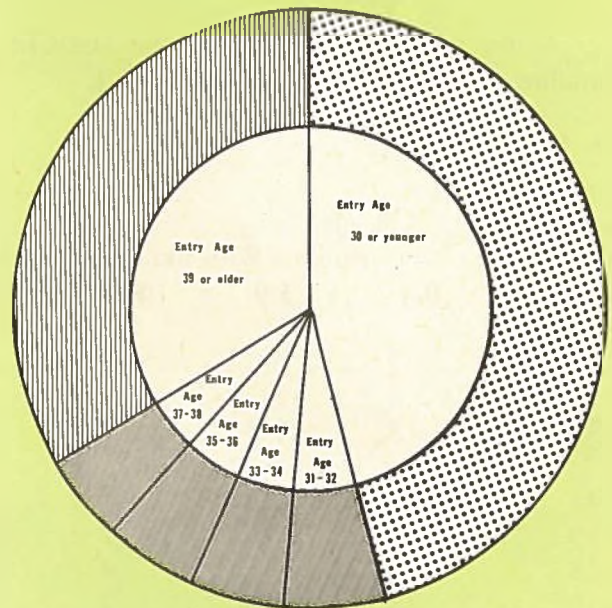
Attained Age Groups	Number With Indicated Years of Credited Service							Totals	Monthly Salaries
	0-4	5-9	10-14	15-19	20-24	25-29	30 & UP		
25-29	2							2	\$ 1,614
30-34	6							6	9,041
35-39	13	4						17	25,279
40-44	10	8						18	34,226
45-49	9	18	2	1				30	58,545
50-54	15	15	4					34	65,077
55-59	10	15	7	3	1			36	73,126
60	3	4	2	2				11	19,842
61	2	1	2					5	10,042
62	1	1						2	4,416
63	4	2						6	10,301
64		2	1					3	6,499
65	1	1		1	1			4	9,916
66	4	2					1	7	11,479
67	1	2				1		4	7,832
68	2	2						4	4,166
69	1	2	1	1	1			6	10,123
70			1		1	1		3	6,999
71		1						1	2,083
Totals	84	80	20	8	4	2	1	199	\$370,606

The median attained age for Judges Division members was 53.9 years, and the median years of service was 6.0. This assumes even distribution throughout the median interval.

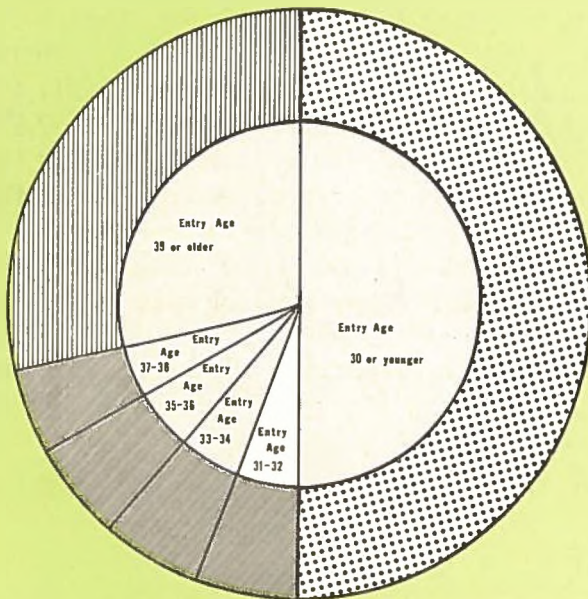
Entry Ages

The accompanying charts illustrate the various entry ages of PERA members in the State, School, and Municipal Divisions. While all of the charts are similar in composition of entry age groupings, the School and Municipal Divisions have more younger entrants, age 30 or younger, than the State Division does. The School Division has fewer entrants at age 39 and older than the State and Municipal Divisions have.

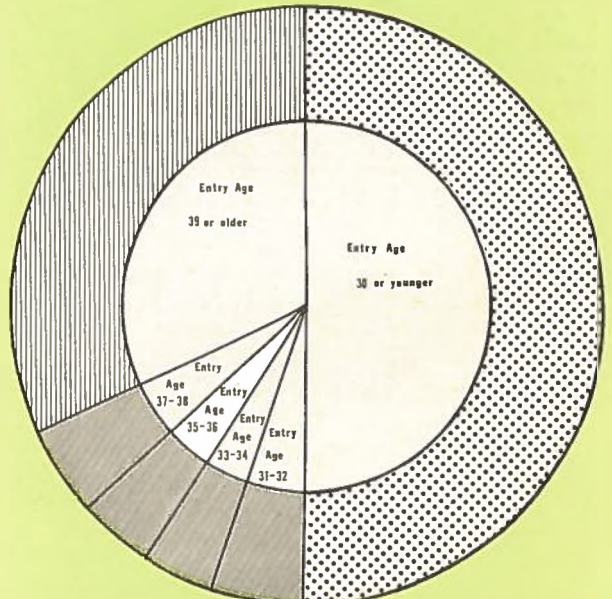
Studies such as these are useful in planning changes in retirement benefits and showing the similarities and differences in the composition of these three groups of employees.



STATE
Total — 30,323



SCHOOL
Total — 41,597



MUNICIPAL
Total — 4,061

12-31-73 Figures

Principles

Financial Principles and Operational Techniques of PERA

Promises Made, and Eventually Paid. As each year is completed, PERA in effect hands an "IOU" to each member then acquiring a year of service credit — the "IOU" says: "The Public Employees' Retirement Association of Colorado owes you one year's worth of retirement benefits, payments in cash commencing when you qualify for retirement."

The related *key financial questions* are:

Which generation of taxpayers contributes the money to cover the IOU?

The present taxpayers, who receive the benefit of the member's present year of service?

Or the future taxpayers, who happen to be in Colorado at the time the IOU becomes a cash demand?

The law governing PERA financing intends that this year's taxpayers contribute the money to cover the IOUs being handed out this year. By following this principle, the employer contribution rate will remain approximately level from generation to generation — our children and our grandchildren will con-

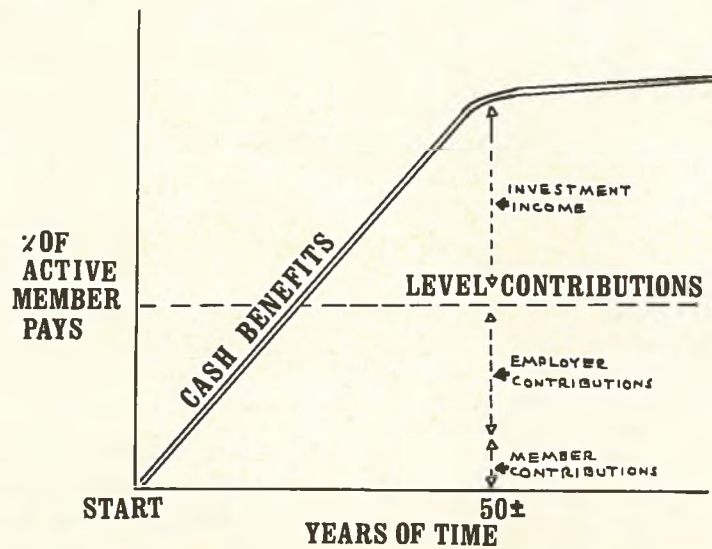
tribute the same percents of active payroll we contribute now.

(There are systems which have a design for deferring contributions to future taxpayers, lured by a lower contribution rate now and putting aside the consequence that the contribution rate must then relentlessly grow much greater over decades of time — consume now, and let your children face your *financial pollution* after you retire.) See chart on next page.

An inevitable by-product of the level-cost design is the accumulation of reserve assets, for decades, and the income produced when the assets are invested. *Invested assets are a by-product and not the objective. Investment income* becomes in effect *the 3rd contributor* for benefits to employees, and is directly related to the contribution amounts required from employees and employers.

Translated to actuarial terminology, this level-cost objective means that the contribution rates must total at least the following:

Current cost (the cost of members' service being rendered this year) . . . plus . . .



Cash Benefits Line. This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added (and happens regardless of the financing method being followed).

Level Contribution Line. Determining the level contribution line requires detailed assumptions concerning experiences in future decades, including:

- Rates of withdrawal of active members (turnover);
- Rate of mortality;
- Rates of disability;
- Ages at actual retirement;
- Rates of pay increase;
- Investment income;
- Change in active member group size.

Interest on Unfunded Accrued Liabilities (unfunded accrued liabilities are the difference between: liabilities for members' service already rendered; and the accrued assets of PERA).

Computing Contributions to Support Fund Benefits. From a given schedule of benefits and from the employee data and asset data furnished him, the actuary determines the contribution rates to support the benefits, by means of *an actuarial valuation and a funding method*.

An actuarial valuation has a number of ingredients such as: the rate of investment income which plan assets will earn; the rates of withdrawal of active members who leave covered employment before qualifying for any monthly benefit; the rates of mortality; the rates of disability; the rates of salary increases; and the assumed age or ages at actual retirement.

In making an actuarial valuation the actuary must assume what the above rates will be, for the next year and for decades in the future. Only the subsequent actual experience of the plan can indicate the degree of accuracy of the assumptions.

Reconciling Differences Between Assumed Experience and Actual Experience. Once actual experience has occurred and been observed, it will not coincide exactly with assumed experience, regardless of the skill of the actuary and the millions of calculations he made. The future can be predicted with considerable but not 100% precision.

PERA copes with these continually changing differences by having annual actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is *continuing adjustments in financial position*.

Assumptions Used By Actuary

(For State, School, and Municipal Divisions only)

1. The interest rate used in making the valuation was 6 percent per annum, compounded annually.
2. The mortality table, for post-retirement mortality, used in evaluating annuities to be paid, was the 1960 Group Annuity Mortality Table, set back no years for men and set back 5 years for women as shown below.

Single Life Retirement Values

Based on 1960 Group Annuity Mortality & 6% Interest

Sample Attained Ages	Present Value of \$1.00 Monthly for Life		Present Value of \$1.00 Mo. the First Year Increasing \$.03 Yearly		Future Life Expectancy (Years)	
	Men	Women	Men	Women	Men	Women
40	\$172.11	\$179.59	\$229.21	\$243.31	35.48	40.21
45	162.79	172.11	212.69	229.21	30.85	35.48
50	151.92	162.79	194.33	212.69	26.44	30.85
55	139.60	151.92	174.49	194.33	22.30	26.44
60	125.60	139.60	153.11	174.49	18.43	22.30
65	109.70	125.60	130.23	153.11	14.80	18.43
70	92.95	109.70	107.39	130.23	11.58	14.80
75	75.97	92.95	85.47	107.39	8.79	11.58
80	60.20	75.97	66.11	85.47	6.54	8.79
85	47.51	60.20	51.11	66.11	4.98	6.54

3. The salary scale, showing present salary assumed to result in a salary of \$1,000 at age 60.

Sample Ages	Present Salary Resulting in Salary of \$1,000 at Age 60
20	\$ 138
25	191
30	255
35	336
40	435
45	557
50	694
55	843
60	1,000

4. The probabilities of age and service retirement for members eligible to retire. For State and Municipal Division members, eligibility for superannuation retirement was assumed to be age 55 and 30 years of service, or age 60 and 10 or more years of service. For School Division members, eligibility for superannuation retirement was assumed to be age 55 and 35 years of service, or age 60 with 10 or more years of service.

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year – By Division		
	State	School	Municipal
55	10%	15%	10%
56	10	15	10
57	10	15	10
58	10	15	10
59	10	15	10
60	10	15	10
61	10	15	10
62	10	15	10
63	10	15	10
64	15	25	15
65	80	60	40
66	30	30	30
67	40	40	40
68	50	50	50
69	90	60	90
70	100	100	100

5. The probabilities of separating from service due to death or withdrawal. For State and Municipal Division members, the probabilities of withdrawal are applicable to active members under age 40 or with less than 10 years of service. For members over age 40 with 10 or more years of accrued service, the probabilities of withdrawal reduce to 50% of the values shown in the State Division, and to 20% in the Municipal Division.

In the School Division the probabilities of withdrawal are applicable to active members with less than 10 years of service. For members with 10 or more years of accrued service, the probabilities of withdrawal reduce to 10% of the values shown.

Percent of Active Participants Separating Within Next Year

Sample Ages	State		School		Municipal	
	Men	Women	Men	Women	Men	Women
20	31.31%	38.33%	30.63%	39.07%	31.31%	38.33%
25	16.53	34.10	16.11	30.81	16.53	34.10
30	12.10	21.04	11.83	22.75	12.10	21.04
35	8.48	11.27	8.58	14.31	8.48	11.27
40	6.46	7.76	6.00	10.65	6.46	7.76
45	4.18	5.86	5.14	6.86	4.18	5.86
50	4.48	4.85	4.52	5.56	4.48	4.85
55	4.04	3.78	4.17	4.25	4.04	3.78
60	3.98	3.83	3.94	3.55	3.98	3.83

6. The entry age normal cost method of valuation was used in determining superannuation annuity liabilities and normal cost.

7. In financing unfunded accrued liabilities, active member payroll was assumed to increase 3% a year.

Actuarial Assumptions for Judges Division

1. The interest rate used in making the valuation was 6 percent per annum, compounded annually.
2. The mortality table, for post-retirement mortality, used in evaluating annuities to be paid, was the 1960 Group Annuity Mortality Table, set back no years for men and set back 5 years for women.

Single Life Retirement Values

Based on 1960 Group Annuity Mortality & 6% Interest

Sample Attained Ages	Present Value \$1.00 Monthly for Life		Present Value of \$1.00 Mo. the First Year Increasing \$.015 Yearly		Future Life Expectancy (years)	
	Men	Women	Men	Women	Men	Women
40	\$172.11	\$179.59	\$200.66	\$211.45	35.48	40.21
45	162.79	172.11	187.74	200.66	30.85	35.48
50	151.92	162.79	173.13	187.74	26.44	30.85
55	139.60	151.92	157.05	173.13	22.30	26.44
60	125.60	139.60	139.35	157.05	18.43	22.30
65	109.70	125.60	119.97	139.35	14.80	18.43
70	92.95	109.70	100.17	119.97	11.58	14.80
75	75.97	92.95	80.72	100.17	8.79	11.58
80	60.20	75.97	63.16	80.72	6.54	8.79
85	47.51	60.20	49.31	63.16	4.98	6.54

3. The salary scale, showing present salary assumed to result in a salary of \$1,000 at age 60.

Sample Ages	Present Salary Resulting in Salary of \$1,000 at Age 65
25	\$ 164
30	220
35	289
40	375
45	479
50	597
55	725
60	861
65	1,000

4. The probabilities of age and service retirement for members eligible to retire. Eligibility for superannuation retirement was assumed to be age 65 with 10 or more years of service.

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year
65	40%
66	20
67	15
68	15
69	25
70	100

5. The probabilities of separating from service due to death or withdrawal. The probabilities of withdrawal are applicable to active members with accrued service less than 10 years. For members with 10 or more years of accrued service, the probabilities of withdrawal are zero.

Sample Ages	Percent of Active Members Separating Within the Next Year	
	Men	Women
25	7.79%	7.78%
30	7.31	7.29
35	6.40	6.36
40	5.33	5.27
45	4.29	4.15
50	3.14	2.88
55	1.87	1.52
60	1.48	1.02
65	2.18	1.39

6. The attained age normal cost method of valuation was used in determining superannuation annuity liabilities and normal cost.

7. In financing unfunded accrued liabilities, active member payroll was assumed to increase 3% a year.

Computed Employer Contribution Rate

Computed Employer Contribution Rate

	Expressed as Percents or Active Member Payroll			
	State	School	Municipal	Judges
Contributions for Current Cost:				
Superannuation annuities	9.60%	10.70%	9.78%	14.55%
Disability Annuities	0.85	0.85	1.00	0.60
Survivor Annuities	0.70	0.75	0.90	1.20
Total	<u>11.15</u>	<u>12.30</u>	<u>11.68</u>	<u>16.35</u>
Member current contributions				
(Future refunds)	(3.97)	(3.52)	(3.89)	(0.80)
Available for annuities	<u>3.78</u>	<u>4.23</u>	<u>3.86</u>	<u>6.20</u>
Employer Current Cost	<u>7.37</u>	<u>8.07</u>	<u>7.82</u>	<u>10.15</u>
Unfunded Accrued Liabilities	3.28	4.03	2.04	1.85
(Amortization period)	(43 years)	(29 years)	(50 years)	(23 years)
TOTAL COMPUTER EMPLOYER CONTRIBUTION RATE	10.65%	12.10%	9.86%	12.00%
ULTIMATE STATUTORY RATE	10.65%	12.10%	9.86%	12.00%

