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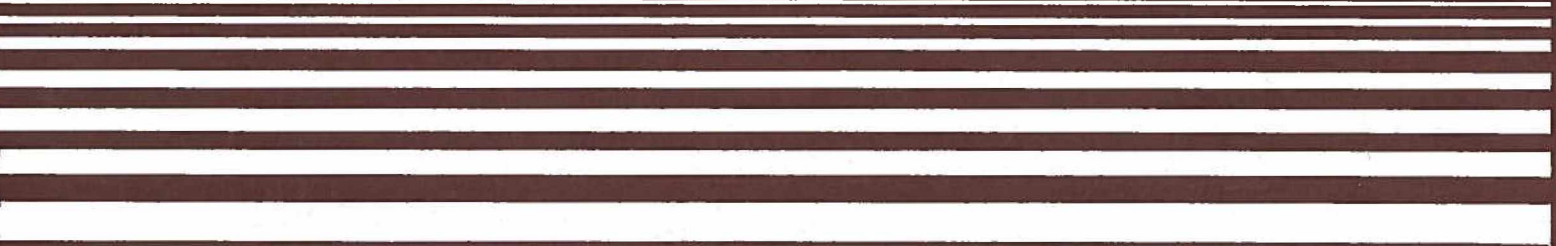


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PERA STATISTICAL SUPPLEMENT 76

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1976 STATISTICAL SUPPLEMENT To the Annual Report

The Public Employees' Retirement Association Of Colorado

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Introduction

This booklet is divided into two major parts: a financial report and an actuarial report. The purpose of this supplement is to supply the interested member with detailed investment, financial, and actuarial information used by the Retirement Board in managing the Public Employees' Retirement Association.

In the financial report, the June 30, 1976, 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, 1976.

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 has 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, 1975. Data on retired lives is listed as of June 30, 1976.

Members contribute 7¼ percent of salary paid. While this money is invested, the member's 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 materials including several graphs appear throughout to

help explain the program. This is the third year for this Annual Statistical Supplement. We hope that this year's report will also be of interest to you and will be helpful in understanding and evaluating the program.

January, 1977

**Public Employees' Retirement
Board of Colorado**
1300 Logan
Denver, Colorado 80203

How the Plan 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 Re-

vised Statutes, 1973, as amended. The last amendatory legislation was enacted in 1976.

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:

Five representatives elected by members from the School Division.

Four representatives elected by members from the State Division.

Two representatives elected by members from the Municipal Division.

One representative elected by those retired under PERA.

The State Treasurer and State Auditor.

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

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 public utility and corporate bonds, common and preferred stock of top-rated companies, and in real estate mortgages insured and guaranteed by agencies of the United States Government.

The law charges the PERA Board with responsibility of investing the

funds in a prudent and discretionary manner and limits investments in common and preferred stocks to 30 percent of the portfolio.

CONTRIBUTIONS BY MEMBERS: Effective July 1, 1973, members of the State, School, Municipal Divisions make deposits of 7-¾% of salary paid including 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 or in some cases earlier. 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.

Most State Division employers pay 10.64 percent of payroll. (Both employee and employer rates are greater than regular state rates for certain wildlife officers and for members of the Colorado State Patrol.) School Division employers pay 12.10 percent of payroll. Municipal Division employers pay 9.86 percent.

The employee rate for the Judges' Division is 7% 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
1300 Logan
Denver, Colorado 80203

Summary of 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.

Final Average Salary (FAS) is a frequently used term describing PERA benefits. It means the average of the highest five consecutive years of earnings within the period of service being considered, usually the last five years.

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 60 to 65. 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

Most members will receive a maximum of 50 percent FAS. This could be higher if you have more than 20 years covered service. One percent of FAS would be added for each year over 20. If you were hired after age 45, the percentage of FAS would be less than 50 percent.

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 percent of Final Average Salary.

The formula used to compute your retirement benefits is:

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

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

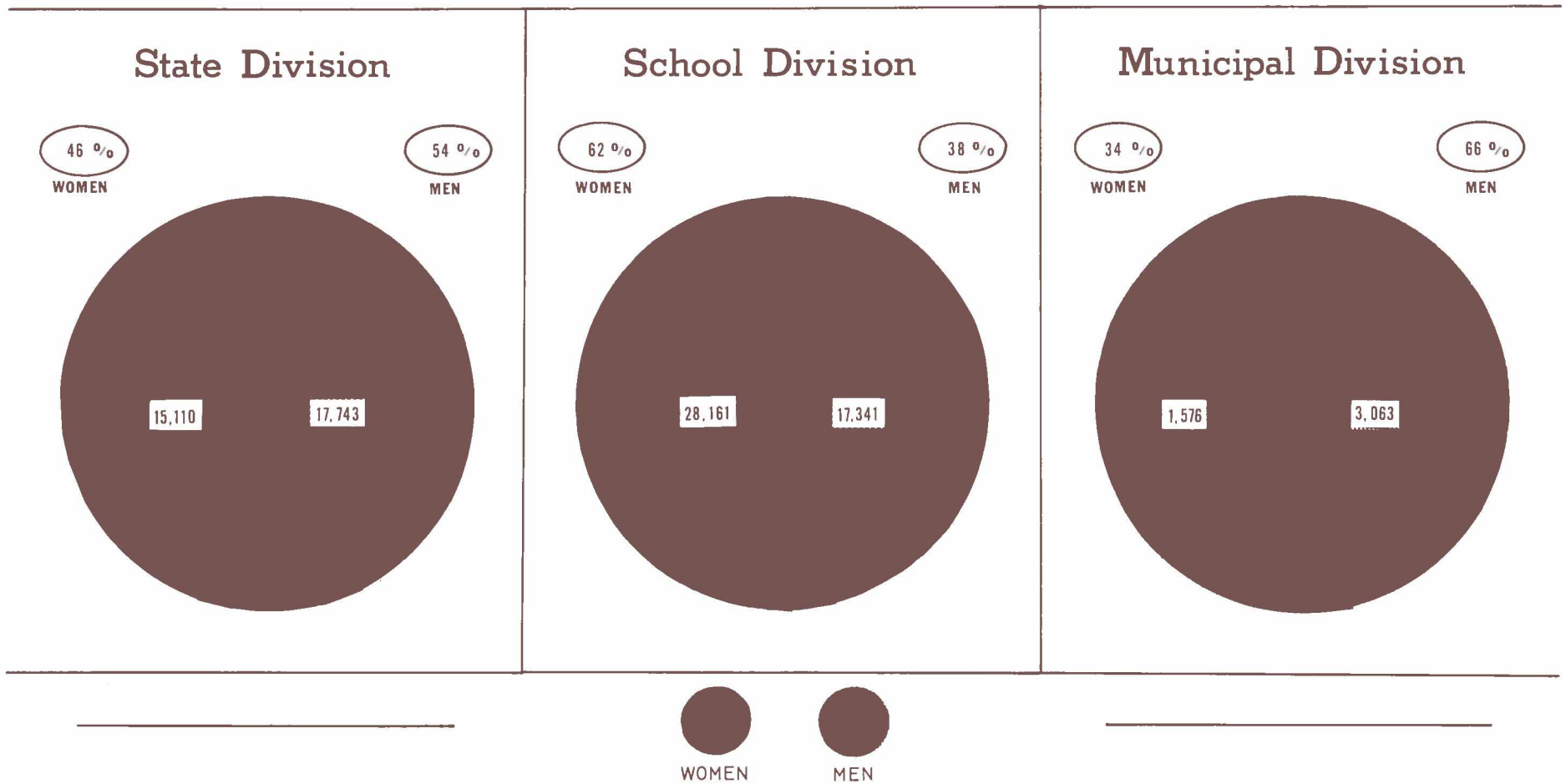
(1% is only applied in full to service after July 1, 1969, under current law.)

Maximum-70%

This formula is reduced in certain cases.

NUMBERS OF ACTIVE MEMBERS BY DIVISION 12-31-75

(Further Distribution According to Sex)



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, 1976 and the related combining 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.

In our opinion, the aforementioned combining financial statements present fairly the individual financial positions of Public Employees' Retirement Association of Colorado (consisting of State Employees', School Employees', Municipal Employees' and Judges' Divisions) at June 30, 1976 and their 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 25, 1976 on the financial statements of each of the divisions for the years ended June 30, 1976 and 1975. The columns on the accompanying financial statements captioned "Combined total - Memorandum Only" are not necessary for a fair presentation of the financial statements, but are presented as additional analytical data.

Peat, Marwick, Mitchell & Co.

August 25, 1976

Combining Balance Sheet

June 30, 1976
with comparative combined totals for 1975

Assets

	Municipal Employees' Division	School Employees' Division	Judges' Division	State Employees' Division	Combined total (Memorandum only)	
					1976	1975
Cash.....	\$ 40,559	1,315,529	69,636	844,182	2,269,906	2,036,267
Receivables:						
Member and employer contributions	779,493	5,330,576	80,781	6,635,972	12,826,822	11,618,702
Dividends and accrued interest on investments	795,242	8,970,773	142,290	7,147,915	17,056,220	13,432,374
Other	39,915	998,650	5,336	878,894	1,922,795	322,474
	<u>1,614,650</u>	<u>15,299,999</u>	<u>228,407</u>	<u>14,662,781</u>	<u>31,805,837</u>	<u>25,373,550</u>
Investments (note 2):						
Temporary investments, at cost	1,252,042	18,528,055	174,624	15,285,994	35,240,715	41,128,266
Corporate obligations, at amortized cost	31,730,966	365,081,619	5,052,352	292,281,996	694,146,933	590,585,140
Stocks, at cost	6,518,929	93,543,269	1,241,161	72,725,453	174,028,812	152,957,485
United States Government obligations, at amortized cost	2,965,299	45,744,203	534,955	33,215,759	82,460,216	49,159,089
First mortgages, at amortized cost	4,329,311	86,843,052	670,969	60,200,281	152,043,613	115,806,495
Total investments before unamortized yield adjustment	46,796,547	609,740,198	7,674,061	473,709,483	1,137,920,289	949,636,475
Unamortized yield adjustment	1,212,971	7,479,060	227,244	5,595,335	14,514,610	15,443,631
	<u>48,009,518</u>	<u>617,219,258</u>	<u>7,901,305</u>	<u>479,304,818</u>	<u>1,152,434,899</u>	<u>965,080,106</u>
Land, at cost	—	—	—	180,000	180,000	180,000
Construction in progress (note 4)	—	—	—	2,504,359	2,504,359	385,073
Equipment and fixtures, at cost, less accumulated depreciation of \$95,552 in 1976; \$91,849 in 1975	—	—	—	61,696	61,696	59,978
Total real assets	49,664,727	633,834,786	8,199,348	497,557,836	1,189,256,697	993,114,974
Estimated obligation of employers for prior service (contra)	24,710,951	324,880,882	1,146,705	320,818,114	671,556,652	582,509,667
	<u>\$74,375,678</u>	<u>958,715,668</u>	<u>9,346,053</u>	<u>818,375,950</u>	<u>1,860,813,349</u>	<u>1,575,624,641</u>

Liabilities and Reserves

	Municipal Employees' Division	School Employees' Division	Judges' Division	State Employees' Division	Combined total (Memorandum only)	
					1976	1975
Refunds and other liabilities payable.....	\$ 215,490	918,405	1,487	1,583,494	2,718,876	1,798,018
Reserve accounts:						
Contributions:						
Members' deposits.....	14,765,730	178,727,643	1,929,158	149,690,326	345,112,857	296,810,405
Employers':						
Accumulation	16,228,975	233,499,809	2,983,736	102,069,607	354,782,127	278,690,440
Actuarial requirements (contra)	24,710,951	324,880,882	1,146,705	320,818,114	671,556,652	582,509,667
	<u>55,705,656</u>	<u>737,108,334</u>	<u>6,059,599</u>	<u>572,578,047</u>	<u>1,371,451,636</u>	<u>1,158,010,512</u>
Annuity:						
Annuitants' retirement	16,633,920	208,288,956	2,578,647	224,059,644	451,561,167	384,429,622
Survivors' benefit	1,434,576	6,416,011	653,861	10,892,053	19,396,501	17,063,535
Deferred annuitants'	239,403	5,531,677	52,459	4,094,808	9,918,347	9,267,864
Deferred survivors' benefit	146,633	452,285	—	857,531	1,456,449	1,314,196
	<u>18,454,532</u>	<u>220,688,929</u>	<u>3,284,967</u>	<u>239,904,036</u>	<u>482,332,464</u>	<u>412,075,217</u>
Insurance dividend reserve (note 3).....	—	—	—	4,310,373	4,310,373	3,740,894
Total reserve accounts	74,160,188	957,797,263	9,344,566	816,792,456	1,858,094,473	1,573,826,623
Commitments (note 4)						
	<u>\$74,375,678</u>	<u>958,715,668</u>	<u>9,346,053</u>	<u>818,375,950</u>	<u>1,860,813,349</u>	<u>1,575,624,641</u>

See accompanying notes to combining financial statements.

Combining Statement of Revenue and Administrative Expenses

Year ended June 30, 1976
with comparative combined totals for 1975

	Municipal Employees' Division	School Employees' Division	Judges' Division	State Employees' Division	Combined total (Memorandum only)	
					1976	1975
Revenue:						
Interest income:						
Corporate obligations	\$2,286,451	26,525,435	366,088	21,421,651	50,599,625	39,748,352
United States Government obligations	157,707	2,135,017	35,023	1,489,085	3,816,832	3,139,306
First mortgages	225,217	4,344,186	40,579	2,981,938	7,591,920	5,203,454
Temporary investments	81,572	927,100	12,491	871,170	1,892,333	2,528,030
Dividend income	206,997	2,997,269	41,441	2,340,591	5,586,298	4,558,969
Gain (loss) on sale of investments, net	(40,319)	503,564	10,810	305,006	779,061	992,831
Amortization of premiums and discounts on investments, net	147,726	1,287,326	30,722	1,043,564	2,509,338	2,323,963
Membership fees	4,350	41,620	110	32,205	78,285	86,275
Other, net	5,332	132,570	2,227	111,520	251,649	171,896
	<u>3,075,033</u>	<u>38,894,087</u>	<u>539,491</u>	<u>30,596,730</u>	<u>73,105,341</u>	<u>58,753,076</u>
Less amortization of yield adjustment	<u>96,824</u>	<u>461,690</u>	<u>17,112</u>	<u>380,039</u>	<u>955,665</u>	<u>908,036</u>
	<u>2,978,209</u>	<u>38,432,397</u>	<u>522,379</u>	<u>30,216,691</u>	<u>72,149,676</u>	<u>57,845,040</u>
Administrative expenses (note 5)	<u>71,397</u>	<u>739,556</u>	<u>3,706</u>	<u>555,349</u>	<u>1,370,008</u>	<u>1,182,875</u>
Excess of revenue over expense distributed to reserve accounts	<u>\$2,906,812</u>	<u>37,692,841</u>	<u>518,673</u>	<u>29,661,342</u>	<u>70,779,668</u>	<u>56,662,165</u>

See accompanying notes to combining financial statements.

Combining Statement of Changes in Reserve Accounts

Year ended June 30, 1976
with comparative combined totals for 1975

	Municipal Employees' Division	School Employees' Division	Judges' Division	State Employees' Division	Combined total (Memorandum only)	
					1976	1975
Contributions:						
Members	\$ 3,841,989	35,767,557	352,028	33,003,125	72,964,699	63,517,341
Employer	4,792,365	53,619,957	594,184	45,007,723	104,014,229	86,117,643
	<u>8,634,354</u>	<u>89,387,514</u>	<u>946,212</u>	<u>78,010,848</u>	<u>176,978,928</u>	<u>149,634,984</u>
Excess of revenue over expense	2,906,812	37,692,841	518,673	29,661,342	70,779,668	56,662,165
Cost of living adjustments appropriated by the Colorado State Legislature	50,734	654,143	—	1,032,733	1,737,610	621,462
Transfers for split annuities:						
From School Employees' Division to State Employees' Division	—	(433,498)	—	433,498	—	—
From State Employees' Division to Municipal Employees' Division	316	—	—	(316)	—	—
From Judges' Division to State Employees' Division	—	—	(11,440)	11,440	—	—
Refunds due to withdrawal of participating members .	(1,090,616)	(6,275,040)	(18,681)	(5,783,528)	(13,167,865)	(11,022,125)
Benefits paid to annuitants	(1,504,910)	(18,904,042)	(273,752)	(20,759,748)	(41,442,452)	(34,452,224)
Increase in estimated obligation of employers for prior service, adjusted to actuaries' certificates	5,418,316	28,773,808	307,255	54,547,606	89,046,985	35,427,903
Insurance dividends received net of paid-in insurance and administrative expenses (note 3) .	—	—	—	334,976	334,976	347,513
Net increase for the year	<u>14,415,006</u>	<u>130,895,726</u>	<u>1,468,267</u>	<u>137,488,851</u>	<u>284,267,850</u>	<u>197,219,678</u>
Balance, beginning of year	<u>59,745,182</u>	<u>826,901,537</u>	<u>7,876,299</u>	<u>679,303,605</u>	<u>1,573,826,623</u>	<u>1,376,606,945</u>
Balance, end of year	<u>\$74,160,188</u>	<u>957,797,263</u>	<u>9,344,566</u>	<u>816,792,456</u>	<u>1,858,094,473</u>	<u>1,573,826,623</u>

See accompanying notes to combining financial statements.

Notes to Combining Financial Statements

June 30, 1976

(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.

Employer Contributions

The effective statutory employer contribution rates ranged 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, 1975, 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 24 to 39 years. Such computations exclude the undistributed net income earned by the divisions for the period July 1 to December 31 of each year and the December contributions not received until the following January.

The aggregate unfunded actuarial liability of \$671,556,652 computed as of December 31, 1975 is presented in the balance sheet as estimated obligation of employers for prior service and as an employer reserve titled "actuarial requirements."

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 payable. Gains or losses on stocks sold are recognized on the basis of the average cost of the aggregate stock being sold.

First mortgages are presented at amortized cost. Discounts recorded at the time of purchase are amortized on a straight-line basis for guaranteed purchase agreements covering a group of individual mortgages and by the use of the "scientific method" for other 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 losses when bonds are exchanged for similar bonds to achieve a higher yield. These losses are amortized to the respective earliest maturity date of the new bond acquired or the old bond exchanged. Losses of \$26,646 and \$1,849,182 on bond exchanges were deferred during the years ended June 30, 1976 and 1975, respectively.

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, 1976 with comparative combined totals is as follows:

	1976					1975 Combined		
	Municipal Employees' Division	School Employees' Division	Judges' Division	State Employees' Division	Combined (Memorandum only) Total	Market value	(Memorandum only) Total	Market value
Temporary investments, at cost:								
Face value \$	1,255,000	18,575,000	175,000	15,325,000	35,330,000		41,265,000	
Less discount	2,958	46,945	376	39,006	89,285		136,734	
	<u>\$ 1,252,042</u>	<u>18,528,055</u>	<u>174,624</u>	<u>15,285,994</u>	<u>35,240,715</u>	<u>35,240,715</u>	<u>41,128,266</u>	<u>41,128,266</u>
Corporate obligations, at amortized cost:								
Par value \$	33,903,896	380,460,667	5,395,712	304,390,510	724,150,785		619,759,054	
Less discount, net	2,172,930	15,379,048	343,360	12,108,514	30,003,852		29,173,914	
	<u>\$31,730,966</u>	<u>365,081,619</u>	<u>5,052,352</u>	<u>292,281,996</u>	<u>694,146,933</u>	<u>633,003,523</u>	<u>590,585,140</u>	<u>516,367,698</u>
Stocks, at cost . . . \$	6,518,929	93,543,269	1,241,161	72,725,453	174,028,812	194,639,308	152,957,485	162,715,085
United States Government obligations, at amortized cost:								
Par value \$	2,964,020	45,943,274	534,955	33,259,606	82,701,855		49,424,318	
Less dis- counts (prem- ium), net	(1,279)	199,071	—	43,847	241,639		265,229	
	<u>\$ 2,965,299</u>	<u>45,744,203</u>	<u>534,955</u>	<u>33,215,759</u>	<u>82,460,216</u>	<u>75,316,395</u>	<u>49,159,089</u>	<u>40,943,205</u>
First mortgages, at amortized cost:								
Face value . . \$	4,523,066	90,098,961	721,013	62,848,745	158,191,785		122,610,068	
Less discount, net	193,755	3,255,909	50,044	2,648,464	6,148,172		6,803,573	
	<u>\$ 4,329,311</u>	<u>86,843,052</u>	<u>670,969</u>	<u>60,200,281</u>	<u>152,043,613</u>	<u>141,844,341</u>	<u>115,806,495</u>	<u>94,951,680</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, 1976 and 1975 were as follows:

	1976	1975
Balance at beginning of year	\$3,740,894	3,191,468
Excess of revenue over expense allocable		
to insurance reserve	234,503	201,913
Dividends received from insurance company ..	565,621	572,315
Paid-up life insurance purchased	(198,959)	(194,553)
Reimbursement to divisions for administrative		
expenses relating to insurance program	(31,686)	(30,249)
	<u> </u>	<u> </u>
Balance at end of year	<u>\$4,310,373</u>	<u>3,740,894</u>

(4) Commitments

At June 30, 1976, the various divisions were committed to purchase investments at an aggregate cost of \$32,300,000.

The Association has an agreement to lease office space at a base cost of \$5,200 per month. The agreement is cancellable upon 30 days notice.

The Association entered into an agreement to construct an office building at a cost of approximately \$3,306,000 on which \$2,504,359 was expended as of June 30, 1976. The amount expended is included in the records of the State Employees' Division. Construction is scheduled for completion prior to December 31, 1976.

(5) Administrative Expenses

The following is a schedule of administrative expenses for the years ended June 30, 1976 and 1975:

	1976	1975
Salaries	\$ 737,362	637,363
Employee benefits	84,113	73,796
Professional services:		
Investment counsel	124,076	110,000
Actuarial	16,850	18,150
Accounting	25,650	25,000
Equipment servicing and rent	93,011	79,499
Office rent	62,468	62,775
Depreciation	18,924	17,226
Stationery, printing, and office expenses	56,052	56,985
Postage	61,339	36,193
Telephone	13,543	10,139
Medical examination fees	54,754	42,298
Board member expenses	12,285	11,770
Other, net	41,267	31,930
	<u>1,401,694</u>	<u>1,213,124</u>
Less reimbursement by Group Insurance		
Department	31,686	30,249
	<u>\$1,370,008</u>	<u>1,182,875</u>

PERA Investment Policy

Goal

The function of the Public Employees' Retirement Association is to provide present and future retirement or survivor benefits for its members. In keeping with that function, the preservation of capital is of paramount importance. Every effort will be made to manage the portfolio so that benefits can be paid from regular income and not from contributions or anticipated appreciation of investments. A substantial improvement in the funds' rate of return over a reasonable period of time should allow consideration of reduction of unfunded accrued liabilities, improved benefits, or reduced contributions, maintaining a level contribution fund.

Policy

The fund is long-term in nature and the selection of investments is regulated by (1) statutory limitations, (2) limits of acceptable risk and (3) the objective of a maximized total rate of return. Approval of all purchases and sales of investments is vested by law in the PERA Board. The Investment Officer is authorized to execute investment transactions on behalf of the Board as permitted under these policy and procedures statements.

Investment decisions shall be made within the framework of the goal established for the rate of return, limits of acceptable risk and fund objectives. At any point in time, certain types of investments have greater relative attractiveness than others. To maximize the realized rate of return, it is necessary to determine the relative values ascribed to differing types of investments within a given investment environment.

The Association believes that individual holdings should stand alone on merit as well as complement the entire group of holdings.

Diversification shall be considered as part of the effort to minimize liquidity risks, maximize total rate of return and limit exposure to unanticipated business risks. Since the portfolio is long term in nature and is constructed to avoid the necessity of liquidating holdings to meet benefits payments, liquidity is not a first consideration; however, every reasonable effort will be made to provide protection for the portfolio in future deteriorating markets.

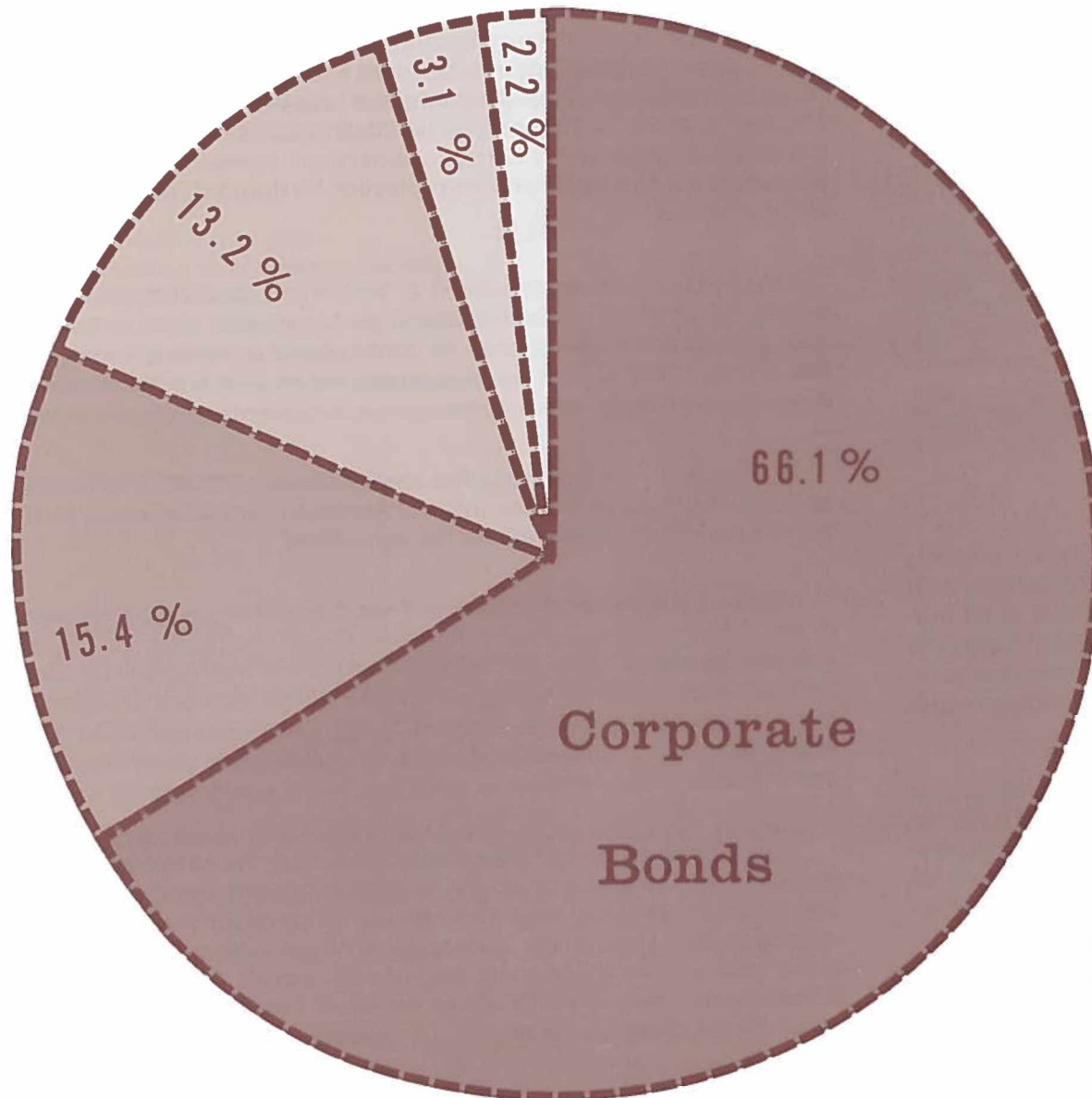
No holding will be considered a "permanent" part of the portfolio. Any security can be sold at any time either to maximize gains or to minimize losses. The portfolio shall be continuously monitored in order to identify such instruments as over valued stocks or low yield bonds in order to take appropriate action.

Investment in foreign securities shall not be considered. This will not be construed to mean that securities of American companies doing business in foreign countries will not be considered.

Generally Accepted Accounting Principles (GAAP) will be followed in accounting for the portfolio; however, GAAP should not restrict investment decisions. The deferral and amortization method will be used for bond exchange transactions. Securities will be recorded at adjusted cost; market values will be reported to the Board quarterly. The firm engaged for the annual audit shall be consulted when questions concerning accounting procedures arise.

An annual evaluation will be conducted by a performance evaluation service of the investment industry. In addition the annual external audit and the annual actuarial valuations shall be reviewed in conjunction with the evaluation of investment performance. All evaluations will be related to the Association's stated goals. Because these goals are long-term, cumulative performance results will be considered as more important than performance in any one year.

Investment Portfolio Distribution



(At Cost)
As of June 30, 1976

Corporate Bonds	66.1%
Corporate Stocks	15.4
Mortgages	13.2
Other	3.1
U.S. Treas. Obligations	2.2
Total	100.0%

Fixed Income Securities

	Par Value	Cost	Market Value June 30, 1976
Short term investments - Less than 30 days	\$ 35,330,000	\$ 35,240,715	\$ 35,240,715
Corporate Obligations			
Bonds			
Public Utilities - Telephone	111,597,000	101,684,532	80,738,353
Public Utilities - Electric & Gas	155,148,069	146,149,328	123,203,233
Public Utilities - Gas & Pipeline	9,350,000	9,112,203	8,373,625
Industrial	293,384,434	280,406,464	275,685,022
Transportation	65,610,446	65,119,958	59,941,582
Financial	<u>146,262,692</u>	<u>143,382,159</u>	<u>135,093,090</u>
Total Corporate Obligations	\$781,352,641	\$745,854,644	\$683,034,905
U. S. Treasury Obligations	24,500,000	24,497,113	24,479,287
Other Debt Obligations			
Mortgages, Contracts & Notes	<u>158,191,784</u>	<u>148,840,027</u>	<u>141,871,095</u>
Total Fixed Income Securities	\$999,374,425	\$954,432,499	\$884,626,002
Convertible Securities			
Convertible Bonds	\$ 1,000,000	\$ 1,000,000	\$ 820,000
Preferred Stock			
Public Utilities	5,000 (shs)	\$ 500,000	\$ 259,375

Common Stocks

	Shares Held	Cost	Market Value June 30, 1976
Science & Technology			
Business Equipment			
International Business Machines Corporation	25,150	\$ 5,680,313	\$ 6,960,262
Xerox Corporation	19,700	1,939,428	1,214,013
Total Science and Technology		\$ 7,619,741	\$ 8,174,275
Consumer Products & Services			
Automotive			
Ford Motor Company	66,400	\$ 4,343,946	\$ 3,884,400
General Motors Corporation	56,300	4,437,859	3,856,550
		\$ 8,781,805	\$ 7,740,950
Broadcasting			
CBS Inc.	155,000	\$ 6,321,926	\$ 9,106,250
Building and Building Products			
Armstrong Cork Company	80,300	\$ 2,551,046	\$ 2,087,800
Drugs, Cosmetics and Hospital Supplies			
American Home Products Corporation	214,000	\$ 6,143,157	\$ 7,329,500
Avon Products Incorporated	72,700	4,513,871	3,435,075
Bristol-Myers Company	15,500	1,073,344	1,232,250
Johnson & Johnson	12,200	1,416,712	1,024,800
Pfizer Incorporated	55,000	1,883,926	1,608,750
Schering-Plough Corporation	101,800	6,070,958	5,471,750
Warner-Lambert Company	158,000	6,102,012	5,174,500
		\$27,203,980	\$25,276,625
Food, Beverages and Tobacco			
General Mills Incorporated	142,000	\$ 3,912,543	\$ 4,473,000
Heublein Incorporated	109,800	4,718,092	5,435,100
Philip Morris Incorporated	149,400	5,823,910	7,656,750
Ralston Purina Company	89,100	3,469,560	4,599,788
Reynolds (R.J.) Industries, Inc.	97,800	5,935,281	5,513,475
Royal Crown Cola Company	94,200	2,701,363	1,730,925
		\$26,560,749	\$29,409,038
Photography			
Eastman Kodak Company	51,400	\$ 4,492,254	\$ 5,146,425

	Shares Held	Cost	Market Value June 30, 1976
Retailing			
Federated Department Stores, Inc.....	100,600	\$ 4,266,370	\$ 4,791,075
Penney (J.C.) Company.....	82,300	4,767,216	4,300,175
Sears, Roebuck & Company	45,500	3,742,548	2,946,125
		<u>\$12,776,134</u>	<u>\$12,037,375</u>
Total Consumer Products & Services		\$88,687,894	\$90,804,463

Financial Services

Banking & Credit			
American Express Company	146,500	\$ 4,949,036	\$ 5,347,250
Insurance			
Aetna Life and Casualty Company.....	201,600	\$ 4,549,511	\$ 5,594,400
Travelers Corporation.....	201,600	4,221,095	6,552,000
		<u>\$ 8,770,606</u>	<u>\$12,146,400</u>
Total Financial Services		\$13,719,642	\$17,493,650

Basic Industries

Chemicals			
American Cyanamid Company	17,100	\$ 610,237	\$ 436,050
Dow Chemical Company	109,000	1,883,308	5,259,250
Nalco Chemical Company	97,200	2,321,362	3,134,700
		<u>\$ 4,814,907</u>	<u>\$ 8,830,000</u>
Electrical Equipment			
General Electric Company	108,300	\$ 5,815,895	\$ 6,186,638
Machinery			
Caterpillar Tractor Company	111,750	\$ 4,737,353	\$ 6,788,813
Ingersoll-Rand Company.....	93,400	6,199,052	8,546,100
		<u>\$10,936,405</u>	<u>\$15,334,913</u>
Oil & Gas			
Exxon Corporation	78,000	\$ 6,411,989	\$ 8,160,750
Kerr-McGee Corporation.....	33,500	1,899,899	2,717,688
Panhandle Eastern Pipeline Company	124,800	4,158,511	4,383,600
Phillips Petroleum Company	129,300	6,469,492	7,935,788

	Shares Held	Cost	Market Value June 30, 1976
Standard Oil Company of Indiana	106,000	4,865,220	5,353,000
Standard Oil Company of Ohio	84,500	4,759,950	6,147,375
		\$28,565,061	\$34,698,201

Oil Services

Halliburton Company	91,800	\$ 3,797,062	\$ 5,840,775
Total Basic Industries		\$53,929,330	\$70,890,527

Public Utilities

Electric & Gas

Florida Power & Light Company	12,800	\$ 454,035	\$ 305,600
Gulf States Utilities Company	68,000	1,508,418	892,500
Illinois Power Company	50,000	1,764,520	1,250,000
Middle South Utilities Company	12,000	294,197	175,500
Northern Indiana Public Service Company	46,500	1,287,824	819,563
Public Service Company of Colorado	9,200	242,929	143,750
Tampa Electric Company	46,000	1,133,244	776,250
Texas Utilities Company	46,600	1,315,391	885,400
		\$ 8,000,558	\$ 5,248,563

Telephone

American Telephone & Telegraph Company	31,300	\$ 1,571,645	\$ 1,768,450
Total Public Utilities		\$ 9,572,203	\$ 7,017,013

Total Common Stocks **\$173,528,810** **\$194,379,928**

Summary

	Cost	Market Value June 30, 1976
Short Term Investments	\$ 35,240,715	\$ 35,240,715
Fixed Income Securities	919,191,784	849,385,287
Convertible Securities	1,000,000	820,000
Preferred Stock	500,000	259,375
Common Stocks	173,528,810	194,379,928
Total Investment Portfolio	\$1,129,461,309	\$1,080,085,305

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 . The longest time period, 1965-1976, 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, 1976, in this category was about 750.

The total number of funds evaluated as of June 30, 1976, by Becker was 3400.

MARKET VALUE OF INVESTMENTS
AS OF JUNE 30, 1976

IN THOUSANDS OF DOLLARS

TOTAL FUND
INVESTMENTS
\$1,081,353

EQUITY
INVESTMENTS
\$194,559
18.0 %

FIXED INCOME
INVESTMENTS
\$885,445
81.9 %

MARKETABLE DEBT
\$707,514
65.4 %

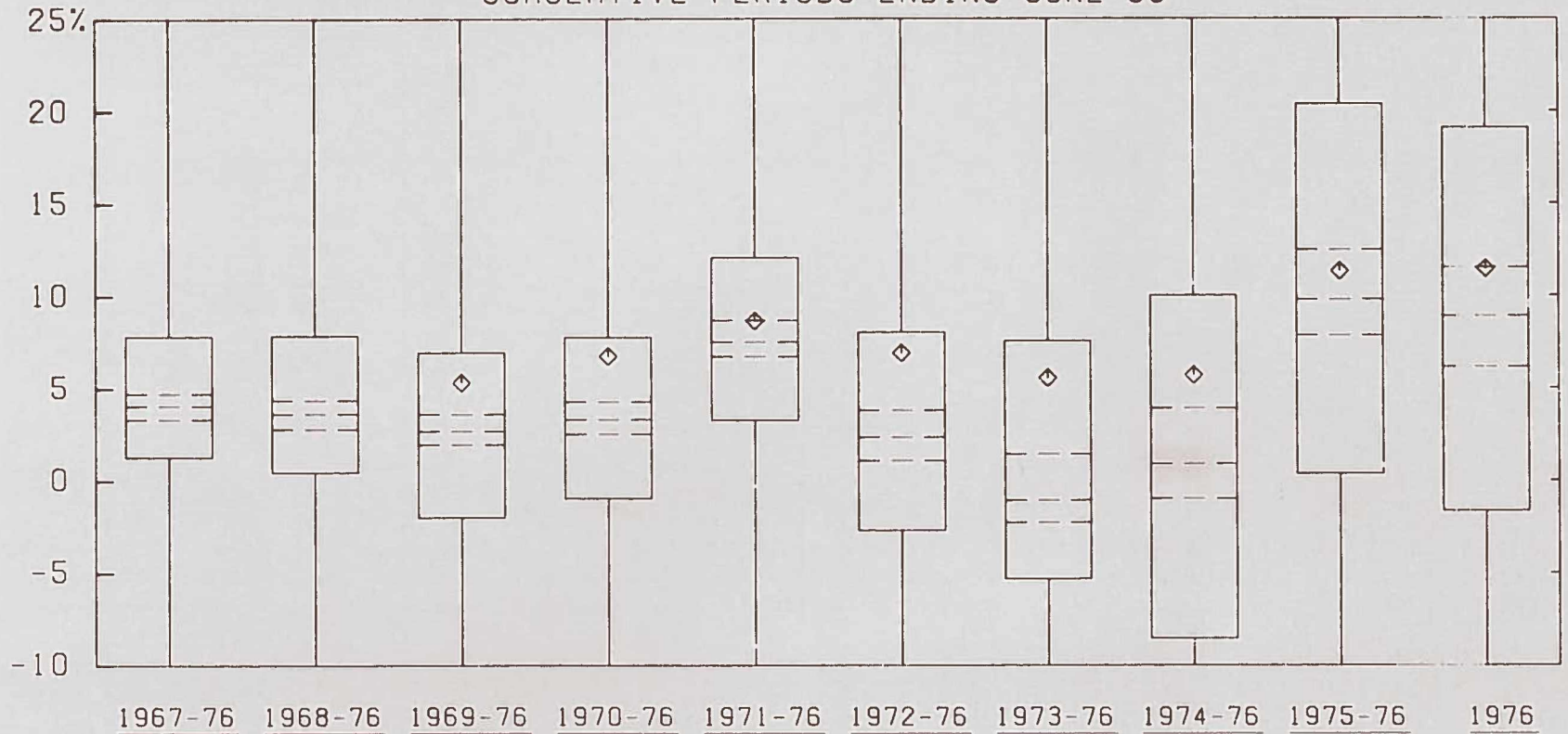
CASH EQUIVALENTS
\$35,240
3.3 %

CONVERTIBLES
\$820
0.1 %

PRIVATE PLACEMENTS
\$141,871
13.1 %

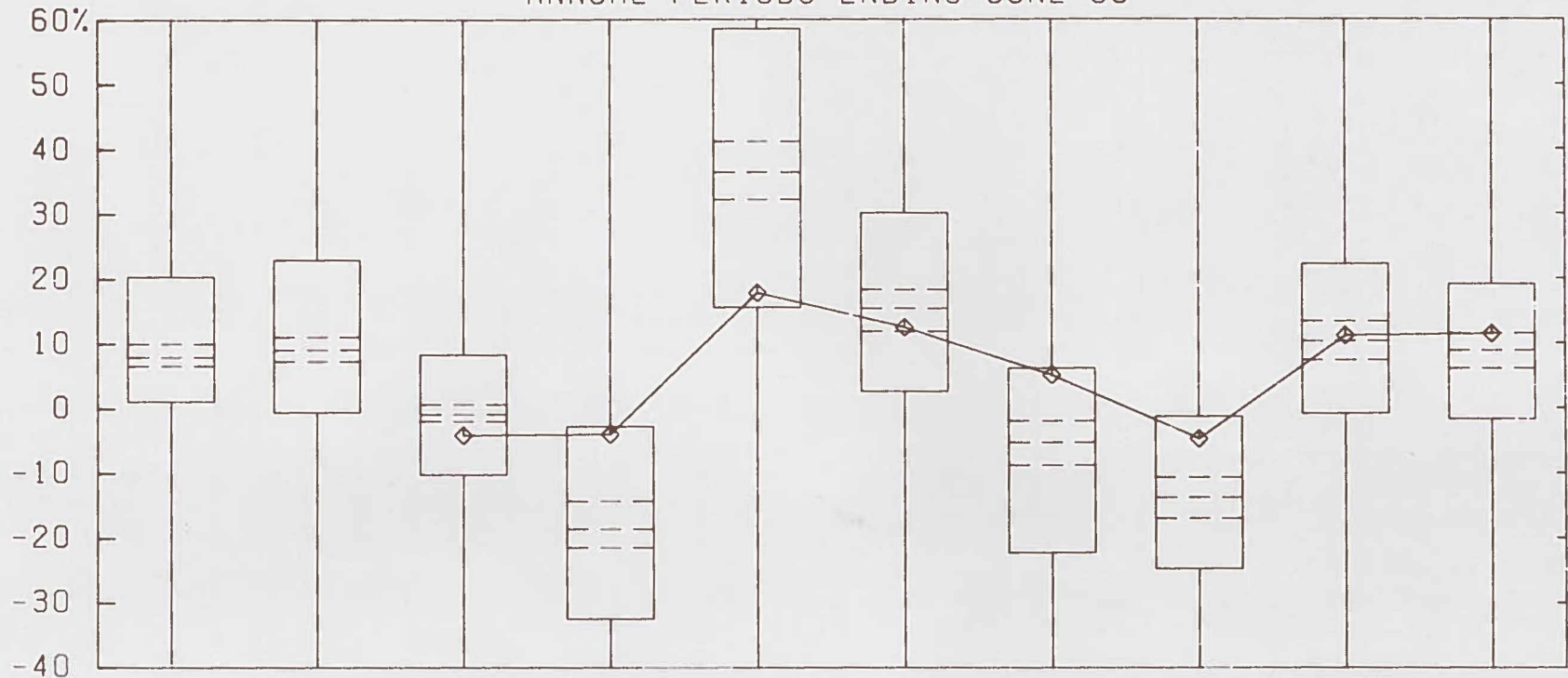
EXHIBIT A

TOTAL FUND
ANNUALIZED TOTAL RATES OF RETURN
CUMULATIVE PERIODS ENDING JUNE 30



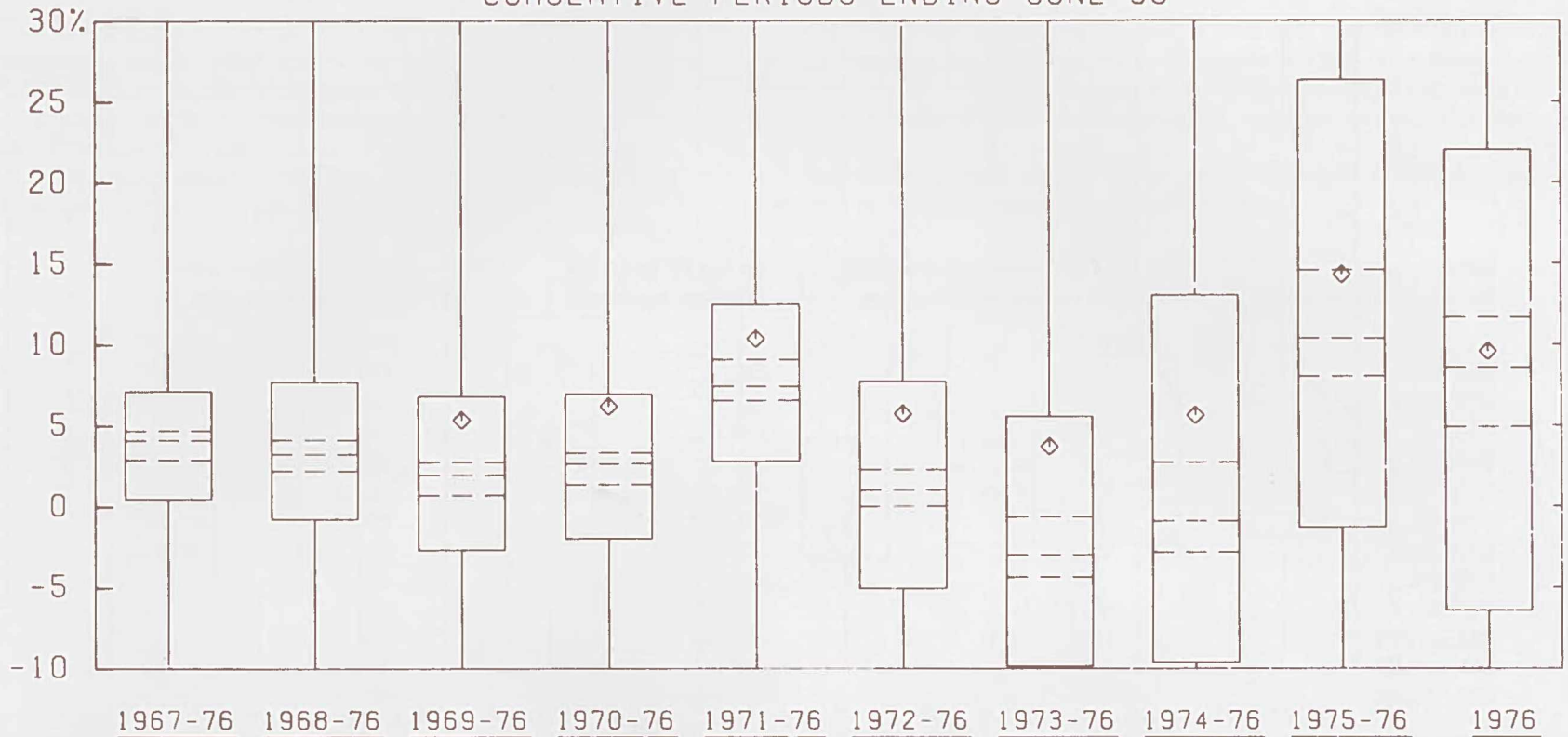
	<u>1967-76</u>	<u>1968-76</u>	<u>1969-76</u>	<u>1970-76</u>	<u>1971-76</u>	<u>1972-76</u>	<u>1973-76</u>	<u>1974-76</u>	<u>1975-76</u>	<u>1976</u>
MAXIMUM	7.80	7.83	6.93	7.76	12.05	8.02	7.54	10.00	20.36	19.07
FIRST QUARTILE	4.72	4.37	3.61	4.27	8.66	3.80	1.43	3.90	12.48	11.52
MEDIAN	4.06	3.63	2.70	3.31	7.49	2.35	-1.05	0.91	9.79	8.90
THIRD QUARTILE	3.34	2.80	1.97	2.53	6.70	1.08	-2.26	-0.99	7.86	6.14
MINIMUM	1.28	0.47	-1.97	-0.95	3.26	-2.69	-5.30	-8.53	0.36	-1.63
YOUR FUND	0.0	0.0	5.31	6.73	8.64	6.90	5.55	5.70	11.32	11.45
PERCENT RANK	0	0	6	1	25	1	2	9	36	26

TOTAL FUND
TOTAL RATES OF RETURN
ANNUAL PERIODS ENDING JUNE 30



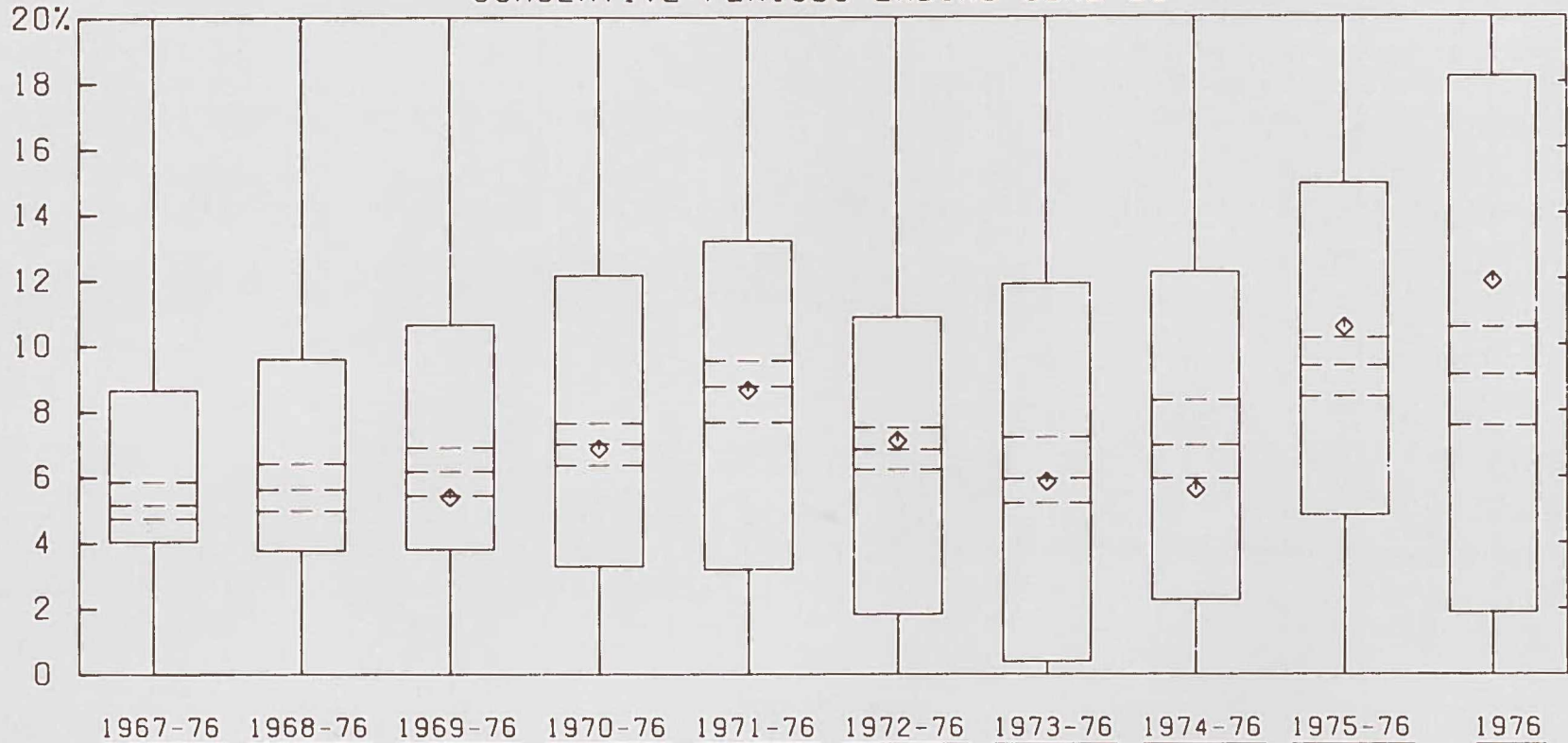
	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
MAXIMUM	20.29	22.85	8.24	-2.84	58.53	30.14	6.16	-1.32	22.18	19.07
FIRST QUARTILE	9.99	11.03	0.60	-14.31	41.13	18.31	-1.92	-10.67	13.41	11.52
MEDIAN	7.95	9.05	-0.91	-18.59	36.38	15.42	-5.25	-13.74	10.36	8.90
THIRD QUARTILE	6.56	7.24	-2.01	-21.47	32.20	11.86	-8.74	-16.99	7.42	6.14
MINIMUM	1.07	-0.59	-10.22	-32.44	15.55	2.64	-22.23	-24.73	-0.82	-1.63
YOUR FUND	0.0	0.0	-4.14	-4.02	17.76	12.49	5.10	-4.71	11.19	11.45
PERCENT RANK	0	0	92	2	98	71	2	5	41	26

EQUITIES
ANNUALIZED TOTAL RATES OF RETURN
CUMULATIVE PERIODS ENDING JUNE 30



	<u>1967-76</u>	<u>1968-76</u>	<u>1969-76</u>	<u>1970-76</u>	<u>1971-76</u>	<u>1972-76</u>	<u>1973-76</u>	<u>1974-76</u>	<u>1975-76</u>	<u>1976</u>
MAXIMUM	7.13	7.71	6.81	6.95	12.46	7.71	5.54	13.03	26.32	22.02
FIRST QUARTILE	4.70	4.12	2.76	3.33	9.08	2.27	-0.65	2.72	14.60	11.67
MEDIAN	4.10	3.25	1.98	2.67	7.42	1.01	-2.99	-0.90	10.39	8.59
THIRD QUARTILE	2.90	2.21	0.72	1.37	6.55	0.01	-4.35	-2.83	8.04	4.92
MINIMUM	0.48	-0.76	-2.66	-1.96	2.80	-5.03	-9.83	-9.59	-1.28	-6.40
YOUR FUND	0.0	0.0	5.35	6.21	10.37	5.72	3.71	5.63	14.31	9.60
PERCENT RANK	0	0	4	2	14	3	3	11	26	39

FIXED INCOME*
ANNUALIZED TOTAL RATES OF RETURN
CUMULATIVE PERIODS ENDING JUNE 30



	1967-76	1968-76	1969-76	1970-76	1971-76	1972-76	1973-76	1974-76	1975-76	1976
MAXIMUM	8.66	9.61	10.65	12.14	13.18	10.86	11.86	12.21	14.90	18.16
FIRST QUARTILE	5.87	6.43	6.91	7.64	9.53	7.51	7.20	8.31	10.21	10.53
MEDIAN	5.16	5.64	6.18	7.01	8.75	6.84	5.95	6.95	9.36	9.09
THIRD QUARTILE	4.75	4.98	5.45	6.36	7.66	6.23	5.20	5.93	8.42	7.55
MINIMUM	4.04	3.78	3.81	3.29	3.20	1.84	0.39	2.26	4.83	1.89
YOUR FUND	0.0	0.0	5.39	6.87	8.63	7.10	5.84	5.59	10.53	11.93
PERCENT RANK	0	0	76	58	53	39	54	83	18	14

*MARKETABLE DEBT + CASH EQUIVALENTS + CONVERTIBLES + PRIVATE PLACEMENTS.

Annuitant Rolls Increase

The number of persons receiving retirement annuities has grown steadily in relation to active membership, as shown in the table below. Since PERA has not yet reached maturity as a retirement plan, this trend is natural. The trend will continue, and the annuitants on rolls will increase rapidly, until members enrolled near the beginning of the plan reach retirement age and attrition begins among the annuitants, a relatively young group at present.

The level-cost financing principle assures that deduction rates will not have to be raised to meet the benefit load. The current percentages of pay will be sufficient to meet the increasing annuity payroll, if the benefit provisions contained in state law are not changed.

The steep growth in the dollar amount of the annuitant payroll is shown in the right-hand column of the table.

Year	Number of retired members on 6/30	Number of active members on 6/30	Retired members as % of active members on 6/30	Total annuities paid-yr. ending 6/30
1940	93	3,715	2.5%	\$ 72,588
1945	171	5,585	3.1	137,442
1950	280	11,853	2.4	237,866
1955	747	21,185	3.5	745,679
1960	1,775	33,068	5.4	2,055,139
1965	3,631	49,701	7.3	5,486,225
1970	6,308	65,586	9.6	12,366,658
1971	6,940	69,472	10.0	14,385,068
1972	7,892	72,530	10.9	17,208,013
1973	9,146	76,708	11.9	21,297,570
1974	10,408	80,529	12.9	26,740,570
1975	11,650	84,781	13.7	32,242,456
1976	12,788	87,605	14.6	37,837,649

Membership Statistics	Consolidated Totals	State Division	School Division	Municipal Division
TOTAL MEMBERSHIP MAY 31, 1976	101,220	41,398	54,544	5,278
Active Members	87,764	34,787	48,275	4,702
Annuitants and Survivor Benefit Members	13,456	6,611	6,269	576
New Members Accepted				
July 1, 1975 to May 31, 1976	15,875	6,751	8,279	845
Less: Members Deceased	(60)	(28)	(27)	(5)
Members Accounts Withdrawn	(10,288)	(4,281)	(5,043)	(964)
Total Withdrawals	(10,348)	(4,309)	(5,070)	(969)
NET GAIN IN MEMBERSHIP	5,527	2,442	3,209	(124)

Retirement Statistics

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

	State	School	Municipal
20 or more years service at age 55 (Patrol, Wildlife)	2		
35 or more years service at any age	2		
30 or more years service at age 55	31		1
20 or more years service at age 60	121	175	13
5 or more years service at age 65 (Fractional)	222	177	31
General disability after 5 years service	133	103	21
Termination of service: Retained membership (Sec. 9)	8	23	
Survivor Benefits; Automatic	6	2	
Deferred (Age 65)	22	45	3
20 or more years service at age 55 (reduced)	21	35	3
5 or more years service at age 60 (reduced)	101	131	11

TOTAL RETIRED DURING FISCAL YEAR	669	691	83
Total number receiving retirement annuities 6/30/1975	5741	5461	448
Total number receiving retirement annuities during fiscal year	6410	6152	531
Co-Beneficiaries continued upon the death of annuitant	53	32	5
Less: Retired members deceased during fiscal year	222	148	20
Annuities temporarily suspended this year	5		

TOTAL NUMBER RECEIVING RETIREMENT ANNUITIES 6/30/1976	6236	6036	516
Average monthly rate 6/30/1976	\$ 241	\$ 232	\$ 215
Total paid in annuities 7/1/1975 to 6/30/1976 (12 months)	\$18,844,136	\$17,679,666	\$1,313,847
Average monthly rate for annuitants retired during year	\$ 335	\$ 320	\$ 273
Survivor Benefits added to rolls during fiscal year	49	38	7
Total Survivor Benefits 6/30/1976	378	250	66
Total paid in Survivor Benefits 7/1/1975 to 6/30/1976 (12 months)	\$ 924,569	\$ 601,788	\$ 143,827
Retirement annuities deferred (Future at age 65)	378	777	36
Total future liability (annually)	\$ 1,168,134	\$ 1,457,965	\$ 68,378
Survivor Benefits (Future)	36	22	4
Total future liability (annually)	\$ 55,768	\$ 29,211	\$ 6,880

State Division

Active Members in Valuation By Attained Age Groups & Years of Credited Service — 12-31-75

Active members included in the STATE DIVISION* valuation totaled 32,326, involving monthly salaries totaling \$34,567,839 (\$414,814,068 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	155							155	\$72,408
20-24	2,627	28						2,655	1,697,665
25-29	4,672	625	12					5,309	4,571,707
30-34	2,980	1,202	334	11				4,527	4,896,968
35-39	1,785	1,124	559	125	11			3,604	4,232,359
40-44	1,397	995	564	259	89	1		3,305	3,967,133
45-49	1,303	1,058	657	344	199	80	3	3,644	4,445,206
50-54	1,069	1,037	699	411	247	181	18	3,662	4,380,913
55-59	762	877	675	439	280	167	45	3,245	3,796,308
60	100	127	117	86	44	36	11	521	600,608
61	66	108	119	77	25	18	14	427	483,251
62	67	124	95	62	22	25	8	403	455,270
63	41	104	78	55	18	13	13	322	350,049
64	45	82	58	39	29	15	15	283	320,167
65	22	43	32	29	18	7	9	160	185,934
66	4	15	9	7	1		1	37	35,990
67	7	8	7	3	1			26	26,286
68	4	7	5	9	2			27	27,861
69		2		1			1	4	6,705
70 & over	4	3	1		2			10	15,051
Totals	17,110	7,569	4,021	1,957	988	543	138	32,326	\$34,567,839

*This does not include figures as of December 31, 1975, 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 32,853 involving salaries totaling \$35,198,058 (\$422,376,696 annually).

The median attained age for regular State Division members was 39.9 years, and the median service was 4.7 years. This assumes even distribution throughout the median interval.

School Division

Active Members in Valuation By Attained Age Groups & Years of Credited Service — 12-31-75

Active members included in the SCHOOL DIVISION valuation totaled 45,502, involving monthly salaries totaling \$37,511,507 (\$450,138,084 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	132							132	\$ 56,648
20-24	2,947	7						2,954	1,755,749
25-29	7,823	1,172	2					8,997	6,783,647
30-34	4,257	2,442	373	1				7,073	5,945,892
35-39	3,182	1,618	1,186	195	1			6,182	5,354,162
40-44	2,523	1,414	941	731	71	1		5,681	5,026,372
45-49	1,754	1,383	845	617	315	20		4,934	4,348,412
50-54	1,181	970	821	508	373	90	10	3,953	3,477,040
55-59	788	715	617	579	332	77	21	3,129	2,636,449
60	117	115	113	100	73	20	8	546	478,895
61	108	117	96	88	59	12	6	486	402,241
62	71	90	82	93	50	19	3	408	358,427
63	48	73	91	67	59	12	7	357	321,930
64	53	44	55	73	53	13	2	293	262,274
65	29	46	35	75	38	6	2	231	206,998
66	11	13	10	11	4			49	32,348
67	6	10	6	5				27	20,562
68	7	10	2	4	2			25	13,420
69	5	4	2	2	2			15	9,410
70 & over	6	8	7	4	4	1		30	20,631
Totals	25,048	10,251	5,284	3,153	1,436	271	59	45,502	\$37,511,507

The median attained age for School Division members was 37.9 years and the median service was 4.5 years. This assumes even distribution throughout the median interval.

Municipal Division

Active Members in Valuation By Attained Age Groups & Years of Credited Service — 12-31-75

Active members included in the MUNICIPAL DIVISION valuation totaled 4,639 involving monthly salaries totaling \$4,125,941 (\$49,511,292 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	37							37	\$17,996
20-24	537	10						547	359,581
25-29	824	116	3					943	784,642
30-34	483	158	53	1				695	670,771
35-39	247	114	66	15	3			445	429,243
40-44	235	118	51	34	19			457	448,136
45-49	187	136	46	28	28	9		434	399,178
50-54	179	105	52	44	24	13	4	421	395,419
55-59	107	111	56	39	30	18	7	368	350,650
60	18	19	11	5	4	2		59	52,835
61	10	12	5	4	3	5	1	40	38,379
62	13	14	12	8	3	1	1	52	49,736
63	5	15	16	4	6	1		47	43,431
64	9	6	13	4	3			35	32,254
65	5	12	6	4	4	2	1	34	31,267
66	1	3	1	2				7	7,278
67	3	4						7	5,968
68		1	1	1				3	3,866
69		1	1					2	2,063
70 & over	1	2	3					6	3,248
Totals	2,901	957	396	193	127	51	14	4,639	\$ 4,125,941

The median attained age for Municipal Division members was 36.1 years, and the median service was 4.0 years. This assumes even distribution throughout the median interval.

Judges Division

Active Members in Valuation By Attained Age Groups & Years of Credited Service - 12-31-75

Active members included in the JUDGES DIVISION valuation totaled 217, involving monthly salaries totaling \$416,066 (\$4,992,792 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		
25-29	3						3	\$3,593
30-34	7						7	8,947
35-39	13	4					17	29,611
40-44	17	6	3				26	49,204
45-49	8	5	11	1			25	46,316
50-54	17	8	13	2			40	84,523
55-59	2	12	16	3	1		34	68,280
60	4	1	1		2		8	15,957
61		4	4	1			9	19,123
62	1	4	2	4			11	19,842
63		2	1	1	1		5	10,042
64	2		2				4	8,832
65	1	5	1				7	12,634
66		2		1			3	6,499
67		1	1	1		1	4	9,916
68	1	3	1				5	8,625
69		2					3	5,499
70 & over		2	2	1		1	6	8,623
Totals	76	61	58	15	4	2	217	\$416,066

The median attained age for Judges Division members was 53.8 years, and the median service was 7.7 years. This assumes even distribution throughout the median interval.

Per Capita Reserves

Fiscal Years 1973-1976

		Present Retired Reserve	Members' Deposits	Future Retired Reserve
STATE DIVISION	June 30, 1973.....	\$30,203	\$3,128	\$1,404
	June 30, 1974.....	30,933	3,477	1,924
	June 30, 1975.....	33,502	3,800	2,219
	June 30, 1976.....	35,930	4,300	2,932
SCHOOL DIVISION	June 30, 1973.....	\$29,893	\$2,743	\$2,972
	June 30, 1974.....	30,228	3,003	3,530
	June 30, 1975.....	32,333	3,349	4,088
	June 30, 1976.....	34,508	3,717	4,856
MUNICIPAL DIVISION	June 30, 1973.....	\$25,442	\$2,084	\$1,980
	June 30, 1974.....	27,854	2,256	2,192
	June 30, 1975.....	29,920	2,537	2,585
	June 30, 1976.....	32,236	3,136	3,446

The table above shows some important facts about the three main reserves in the PERA financial structure — reserves for presently retired, members' deposits, and the reserves for future retirees.

Using the State Division as an example on 6-30-76, if you divide the reserve established for those already receiving retirement annuities by the total number of those recipients, you end up with \$35,930 per retiree. If you divide the total individual deposits by the total active membership, the result is \$4,300 per active member. The reserve for future retired is used with active members' own deposits to finance the retirement of each retiring member. This reserve divided by the number of active members nets \$2,932 per member.

PERA annuities are fully funded. This means that once a member retires, there is enough money set aside to pay his annuity for the rest of his life without additional member or employer deductions. The Present Retired Reserve is the largest of the three on a per capita basis. Its growth in each division from year to year indicates the higher retirement amounts being paid.

The member's personal deposits are only used for the member's own benefit or his survivor's benefit.

The Future Retired Reserve is a pooled fund containing employer deductions and interest within each division. It helps fund benefits earned by active members over their careers. When an individual is granted a benefit at retirement, which is determined according to the provisions of State Law, a portion of the Future Retired Reserve is combined with the member's deposits and placed in the Present Retired Reserve to pay his benefit.

While PERA retirees' benefits are fully funded, benefits that have been earned but are not yet payable to actively-employed members are not presently fully funded. This means that assets in Members' Deposits and the Future Retired Reserve total less than the liabilities for service active members have already rendered. This shortfall is called the unfunded accrued liability. State Law requires, and PERA is following, a schedule to amortize the unfunded liability over a period not exceeding 60 years.

Actuarial Principles

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 contribute 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 . . .

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

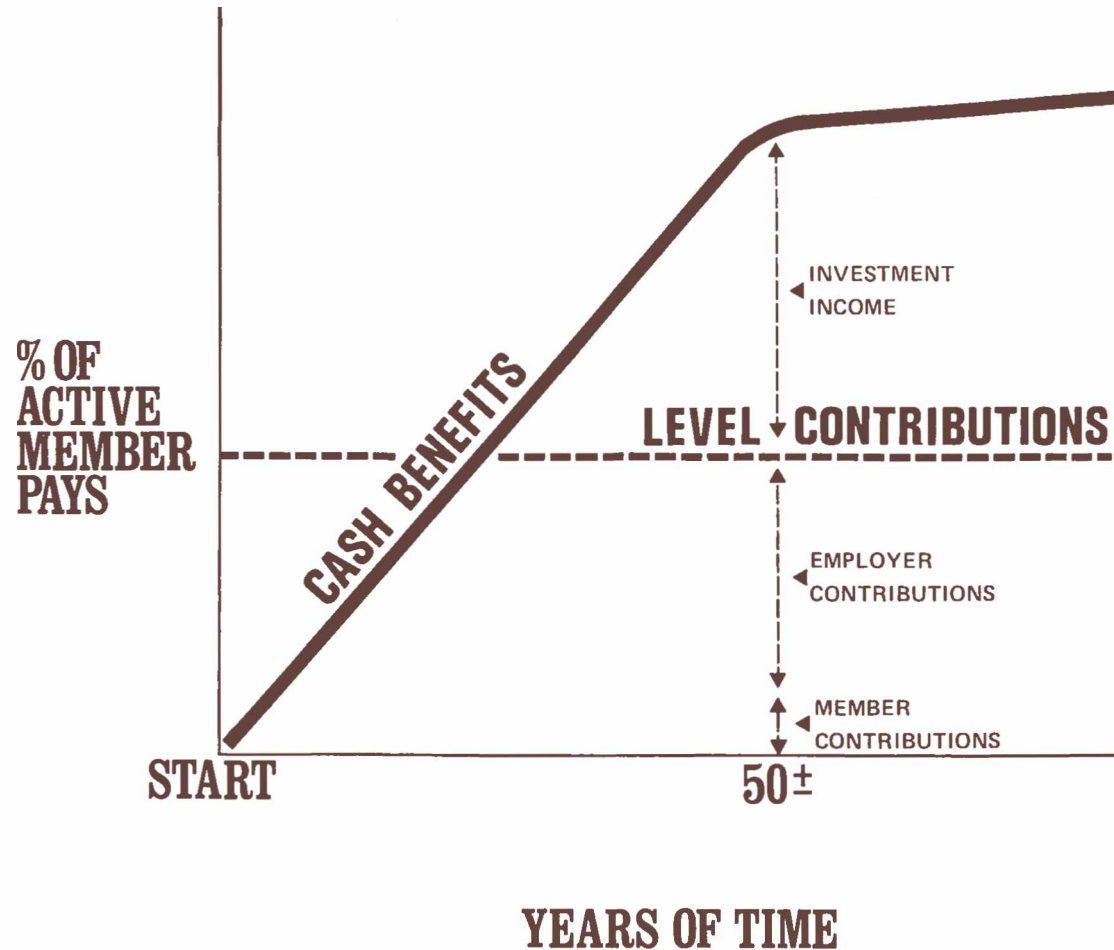
Computing Contributions to Support Fund Benefits. From a given schedule of benefits and from the employee data and asset data furnished him, the actuary determines the contribution rates to support the benefits, by means of **an actuarial valuation and a funding method.**

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 assumptions must be made as to 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 wisdom of the assumptions or the skill of the actuary and the millions of calculations he made. The future can be predicted with considerable precision, except inflation, but not 100 percent 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.**



Cash Benefits Line. This relentlessly increasing line is the fundamental reality of retirement plan financing. As the ratio of retired to active, working members rises, the benefits paid rise as a percent of payroll.

The line increases over time even if new benefits aren't added. It increases regardless of the financing method being followed.

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

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

Assumptions Used By Actuary

(For State, School, and Municipal Divisions only)

1. **The interest rate** used in making the valuation was six 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 five 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.

Percent of Eligible Active Members

Retirement Ages	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 percent of the values shown in the State Division, and to 20 percent 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 percent of the values shown.

Sample Ages	Percent of Active Participants Separating Within Next Year					
	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 percent a year.

Actuarial Assumptions for Judges Division

1. The interest rate used in making the valuation was six 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 five 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
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 65.

Sample Ages	Present Salary Resulting in Salary of \$1,000 at Age 65	
	25	\$ 164
30	220	50
35	289	55
40	375	60
		65
		479
		597
		725
		861
		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%	68
66	20	69
67	15	70
		15
		25
		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 percent a year.

Computed Employer Contribution Rate

	Expressed as Percents of Active Member Payroll			
	State	School	Municipal	Judges
Contributions for				
Current Cost:				
Superannuation annuities	9.75%	10.65%	9.88%	14.58%
Disability annuities	1.05	0.85	1.20	0.50
Survivor Annuities	<u>0.60</u>	<u>0.60</u>	<u>0.80</u>	<u>1.50</u>
Total	11.40	12.10	11.88	16.58
Member current contributions	7.75%	7.75%	7.75%	7.00%
(Future refunds)	(3.71)	(3.55)	(3.57)	(1.05)
Available for annuities	<u>4.04</u>	<u>4.20</u>	<u>4.18</u>	<u>5.95</u>
Employer Current Cost	7.36	7.90	7.70	10.63
Unfunded Accrued Liabilities	3.29	4.20	2.16	1.37
(Amortization period)	(39 years)	(25 years)	(39 years)	(24 years)
TOTAL COMPUTED EMPLOYER				
CONTRIBUTION RATE	10.65%	12.10%	9.86%	12.00%
STATUTORY RATE	10.65%	12.10%	9.86%	12.00%

Dec. 31, 1975

