

P.F.F.F. ACTUARIAL
Valuations, P.B.F.F.

POLICE AND FIREMEN'S DISABILITY
AND PENSION FUND OF OHIO

Actuarial Evaluation to Determine
the Actuarial Rate Per Cent of
Contribution as of January 1, 1993

January 28, 1994

2



January 28, 1994

Board of Trustees
The Police and Firemen's Disability
and Pension Fund of Ohio
230 East Town Street
Columbus, Ohio 43215

Gentlemen:

We are pleased to submit to you herewith our report presenting the results of the actuarial evaluation to determine the actuarial rate per cent of contribution as of January 1, 1993. This report has been based upon the employee data which were supplied to us by the Executive Director and upon statements showing the assets and liabilities of the Fund as of December 31, 1992.

We would like to call your attention to the following items from the report:

- (1) The 1993 evaluation has been based upon the Fund benefit provisions as in effect on January 1, 1993. Excluded from the results, however, are the 1971 Amended Substitute House Bill No. 284 and the cost of the Death Benefit Fund established by 1976 Amended House Bill No. 1010, since we understand that these benefits are being funded by the State of Ohio. A brief summary of the main benefit specifications of the Fund considered in this evaluation is contained in Table 3.
- (2) The actuarial cost method is the same as that used in the prior year's evaluation. Actuarial assumptions regarding mortality, termination, salary increase and widow remarriage have been changed to reflect the recommendations presented in the quinquennial evaluation report for the period 1987 through 1991, dated May 21, 1993. The changes made are discussed in Section D of the text of this evaluation. A summary of the actuarial assumptions and actuarial cost method is set forth in Table 4.

Board of Trustees
January 28, 1994
Page 2

- (3) This report reflects the establishment of the Health Care Stabilization Fund in two ways. First, the assets designated for the Health Care Fund have been excluded from total assets to arrive at valuation assets for pension and disability benefits. Second, the pay-as-you-go determination of the health care rate per cent has been replaced by a flat 6.50% of payroll, the Board-defined allocation to the Health Care Fund.
- (4) The asset valuation method has been changed for common and preferred stocks: the valuation assets for those investments equals the value under the 4-Year Market Adjustment method, with initial value equal to market value.
- (5) The basic data used in the evaluation represent all active members, retirants and beneficiary-survivors covered by the Fund as of January 1, 1993. In total, 42,130 members were considered in the evaluation. A distribution of the coverage, by category, membership status and age, is set forth in various Table 2's.
- (6) The highlights of the evaluation results may be found in Table 1. In summary, the total actuarial rate per cent, applicable for the calendar year beginning January 1, 1993, has been developed as follows:

	<u>Police</u>	<u>Fire</u>
Current Rate Per Cent for Disability and Pension Benefits	26.66%	25.63%
Current Rate Per Cent for Health Care Plan and Medicare	6.50	6.50
Total Current Rate Per Cent	33.16%	32.13%

Wyatt

Board of Trustees
January 28, 1994
Page 3

We look forward to discussing this report with the Board of Trustees in the near future.

Sincerely yours,

Wayne E. Dydo
Wayne E. Dydo
Fellow-Society of Actuaries

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POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO
Actuarial Evaluation to Determine the Actuarial Rate Per Cent
of Contribution as of January 1, 1993

TABLE OF CONTENTS

Text of Report

<u>Section</u>	<u>Contents</u>	<u>Page</u>
A	PURPOSE	1
B	BASIC DATA	2
C	PLAN PROVISIONS	3
D	VALUATION ASSETS AND ACTUARIAL ASSUMPTIONS	4
E	EVALUATION RESULTS	6
F	COMPARISON OF EVALUATION RESULTS WITH PREVIOUS YEAR	8
G	HEALTH CARE FUNDING	9
H	ADEQUACY OF STATUTORY RATES	11

Tables of Report

<u>Table</u>	<u>Contents</u>	
1	Summary of Evaluation Results as of January 1, 1993	14
2(a) Police	Distribution of Members by Attained Age Group and Length of Service as of January 1, 1993	16
2(a) Police	Distribution of Retirants by Attained Age Group and Sex as of January 1, 1993	17
2(a) Police	Distribution of Beneficiary-Survivors by Attained Age Group as of January 1, 1993	18
2(b) Firemen	Distribution of Members by Attained Age Group and Length of Service as of January 1, 1993	19
2(b) Firemen	Distribution of Retirants by Attained Age Group and Sex as of January 1, 1993	20
2(b) Firemen	Distribution of Beneficiary-Survivors by Attained Age Group as of January 1, 1993	21
3	Description of Benefits Under Statewide Plan	22
4	Summary of Actuarial Assumptions and Actuarial Cost Method	27
5	Comparison of Evaluation Results for 1992 and 1993	33
6	Asset Allocation for 1993	34

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Actuarial Evaluation to Determine the Actuarial Rate Per Cent
of Contribution as of January 1, 1993

A. PURPOSE

The Board of Trustees of the Police and Firemen's Disability and Pension Fund of Ohio has retained The Wyatt Company, as Actuary to the Fund, to perform the necessary actuarial evaluations required pursuant to the terms of the 1965 Amended House Bill No. 642. This report sets forth the results of our evaluation to determine the actuarial rate per cent for the year beginning January 1, 1993.

Section 742.14 of House Bill No. 642 provided for the initial determination of the appropriate current rate per cent, to be used as of January 1, 1967. The aforementioned section, as amended in 1986 by Amended Substitute House Bill No. 721, furthermore, provides as follows:

"The Board shall annually thereafter have prepared by a competent Actuary familiar with retirement systems, a report showing the adequacy of the rate of the Policemen Employers' Contribution provided for by Section 742.33 of the Revised Code, and the adequacy of the rate of the Firemen Employers' Contribution provided for by Section 742.34 of the Revised Code."

In addition, House Bill No. 721 added Section 742.311 which reads as follows:

"The Ohio Retirement Study Commission shall annually review the adequacy of the contribution rates provided under Sections 742.31, 742.33, and 742.34 of the Revised Code and the contribution rates recommended by the Actuary of the Police and Firemen's Disability and Pension Fund for the forthcoming year. The Ohio Retirement Study Commission shall make recommendations to the General Assembly which it finds necessary for the proper financing of the Police and Firemen's Disability and Pension Fund."

Pursuant to these two Sections, we have performed an actuarial evaluation based upon the January 1, 1993 membership data and upon the Annual Report and audited financial statements for the fiscal year ending December 31, 1992. The highlights of the evaluation are set forth in Table 1 at the end of this report, and are discussed in a subsequent section of this report.

B. BASIC DATA

The evaluation is based upon the data that were prepared and submitted to us under the direction of Mr. Henry E. Helling, III, Executive Director of the Fund. This information represented a complete census of members as of the valuation date and showed a total count of 42,130 members.

A summary of the data is as follows:

	<u>Police</u>	<u>Firemen</u>	<u>Total</u>
Actives	13,540	10,149	23,689
Retirants	6,900	5,972	12,872
Beneficiary-Survivors	<u>3,164</u>	<u>2,405</u>	<u>5,569</u>
Total	<u>23,604</u>	<u>18,526</u>	<u>42,130</u>

The total membership count of 42,130 compares to a membership of 41,249 individuals as of January 1, 1992, an increase of about 2%.

A compilation of the membership data, as of January 1, 1993, is contained in Tables 2(a) and 2(b) for police and firemen, respectively. The first page of each table shows a distribution of active members by attained age group and length of service as of the evaluation date. Also shown are the average attained age and average hire age, which are 39 and 26, respectively, for both police and firemen; these measurements are unchanged from last year. Also shown are the average annual salaries for each age group, and in total, as of the two valuation dates. For police, the total averages are \$36,783 based on the 1993 data, and \$35,305, based on the 1992 data, for an increase of 4.2%; for firemen, the corresponding amounts are \$36,783, \$35,266 and 4.3%, respectively. The present value of future compensation, shown in Table 1, Item C.4, is based on the Table 2 salaries increased by the age-graded salary scale for one year.

The second pages of Tables 2(a) and 2(b) set forth the distribution of retirants by attained age group and sex as of January 1, 1993. Also shown are the annual rate of pension, average attained age, and average annual pension payable to retirants. The prior year's corresponding information is also shown. The average attained age of retirants is 61 years for police and 64 years for

firemen, unchanged from last year. This year we find that the average annual benefit to retirants, without considering the benefit increase (up to \$50 a month) effective January 1, 1972 provided by the 1971 House Bill No. 284, is \$18,488 for police and \$18,537 for firemen. The corresponding averages last year were, respectively, \$17,617 and \$17,676. The total annual rate of pension for retired police as of January 1, 1993 of \$127,565,696 represents a 9% increase over the rate of payout one year ago; similarly, the total annual rate of pension for retired firemen as of January 1, 1993 of \$110,701,720 represents an 8% increase over the rate of payout one year earlier.

The third pages of Tables 2(a) and 2(b) show the distribution of beneficiary-survivors by attained age group, as of the evaluation date. The average attained ages for surviving spouses are 71 for police and 73 for firemen, the same as of one year ago. In addition, there were 292 police beneficiaries and 210 firemen beneficiaries receiving optional benefit payments, compared to 265 police and 191 firemen beneficiaries one year ago. These tables also show that there are 332 dependent children of police and 150 dependent children of firemen receiving benefits as of the evaluation date.

C. PLAN PROVISIONS

The basic provisions of the Police and Firemen's Disability and Pension Fund of Ohio with respect to disability and pension benefits that are used to determine the current rate per cent are summarized in Table 3. That table and the evaluation presented in this report are based upon the provisions of the Statewide Plan, as set forth in Section 742 of the Revised Code, including all amendments in effect as of the valuation date, except for changes that are funded entirely by contributions from the State of Ohio (the 1972 pension increases of 1971 House Bill No. 284, and the Death Benefit Fund established by 1976 House Bill No. 1010). No changes to Plan provisions have been recognized in this report.

D. VALUATION ASSETS AND ACTUARIAL ASSUMPTIONS

The valuation assets have been based upon the "Comprehensive Annual Financial Report for the Year Ended December 31, 1992" which was furnished to us by the Fund.

The Comprehensive Annual Financial Report indicates that the cost value of assets as of December 31, 1992 was \$3,927,136,211, inclusive of:

1. Cash	\$ 11,853,793
2. Office Property	3,657,163
3. Receivables	113,959,335
4. Other Assets	<u>315,640</u>
	\$129,785,931

The book value of the investment portfolio was \$3,797,350,280 which consisted of:

1. Bonds *	\$1,971,538,215
2. Stocks - Book Value *	1,175,107,740
3. Short-Term	425,911,772
4. Venture Capital	13,767,653
5. Real Estate	<u>211,024,900</u>
	\$3,797,350,280
* Market Value of Bonds	\$2,109,497,004
* Market Value of Stocks	\$1,468,043,276

The cost value was offset by payables totaling \$33,632,305 and other liabilities of \$1,368,880. Hence, the net assets available for benefits as of December 31, 1992 was \$3,892,135,026.

Assets for valuation purposes were taken to be this net cost value, for the bond, real estate, short-term, and venture capital asset classes, and for stocks, the value determined under the 4-Year Market Adjustment Method, with an initial value equal to market value, less \$2,696,000 of contributions that have yet to be refunded to employees who terminated with less than 15 years of service. Last year's valuation assets used the 15% corridor on the market value of stocks, where the asset value of stocks was held to a minimum of 85% of the market value. The change to the 4-Year Market Adjustment Method with initial value equal to market value increased the valuation assets by \$220,206,500.

Also, first recognized this year is the establishment of the Health Care Stabilization Fund which was created effective January 1, 1992. Initially, \$150 million was allocated for health care expenses - \$81,777,000 for police and \$68,223,000 for firemen. The fund is credited with retiree and beneficiary premiums, a portion of employer contributions equal to 6.5% of payroll, and 8.25% effective annual interest. All medical expense payments, including medicare premiums, are debited to the fund. The fund values as of December 31, 1992, are \$86,925,900 for police and \$67,982,300 for firemen. These amounts have been excluded from the valuation assets. The resulting valuation assets, rounded to the nearest \$100,000, is \$4,027,500,000.

The allocation of the valuation assets between police and firemen is developed in Table 6. This development is based upon an allocation of the actual change in valuation assets due to investment results in proportion to expected growth based upon the valuation interest rate. This results in valuation assets of \$2,252,100,000 for police and \$1,775,400,000 for firemen.

During 1992, the rate of return on valuation assets was approximately 8.63%. The calculation of this rate of return uses valuation assets under the 15% corridor method at both December 31, 1991 and December 31, 1992. The calculation also involves total assets, prior to the allocation of assets to the Health Care Stabilization Fund. This return compares to the interest rate assumption of 8.25%. Also, as is indicated in Table 6, the expected growth in valuation assets (with the 15% corridor) due to investment performance, based on accrual basis contributions, benefit payments, and expenses, is \$302,144,600 (Item (4)) compared to actual growth of \$315,929,400 (footnote 2/).

The actuarial assumptions and the actuarial cost method used in the instant evaluation are the same as those employed in the prior evaluation except for the following changes based upon the results of the fifth quinquennial evaluation covering the period 1987 through 1991:

- (1) A change in the termination rates to the graduated 1987-91 experience rates. In general, the rates decreased.
- (2) A change in the 5.75% salary scale to an age-graded salary increase assumption.
- (3) Changes in the pre- and post-retirement mortality probabilities for active members, service retirees and disability retirees. All of these probabilities are to be based on the 1951 Group Annuity Mortality Table projected to 1980.
- (4) A decrease in the probabilities of remarriage among surviving spouses to the graduated 1987-91 experience rates.

A summary of the assumptions and a description of the actuarial cost method are presented in Table 4.

The increase during the past year in the average annual current salary of active members was, as noted above, 4.19% for police and 4.30% for firemen. These increase percentages compare to an average expected increase of 5.4% based upon the new age-graded salary scale assumption.

E. EVALUATION RESULTS

Table 1 summarizes the January 1, 1993 evaluation results and sets forth the actuarially determined current rate per cent of contribution applicable to the calendar year commencing January 1, 1993. In Section A of Table 1, we indicate the extent of the membership, by police and firemen, for various categories. This section represents a summary compilation of the data breakdown shown in the various Table 2's.

Section B of Table 1 sets forth a summary of the actuarial present values of future benefits, by police and firemen, with respect to active members, retirants, and beneficiary survivors. The total present values are \$3,806,500,000 for police and \$3,019,700,000 for firemen (Item B.4.). Thus, the combined actuarial present value of future benefits (for both police and firemen) approximates \$6.8 billion.

In Section C, we show the development of the current rate per cent for disability and pension benefits, based upon this January 1, 1993 evaluation. This rate includes a loading for administrative expenses, as indicated in the assumptions set forth in Table 4. The rate is determined by subtracting the valuation assets and the employer accrued liability from the actuarial present value of future benefits, and dividing the resulting amount by the actuarial present value of active member future compensation.

The employer accrued liability used in this valuation is \$400,480,943 and represents the outstanding principal as of December 31, 1992 of the original accrued liability under the funding scheme prescribed by the Ohio Revised Code. This amount is set forth in the Comprehensive Annual Financial Report. The allocation of this accrued liability between police and firemen, as developed by Fund office personnel, is \$208,400,000 for police and \$192,100,000 for firemen, rounded to the nearest \$100,000.

Item C.6. of Table 1 shows the current rate per cent for the disability and pension benefits (i.e., excluding consideration of health care plan benefits). As indicated in the table, these figures are 26.66% for police and 25.63% for firemen. The current rate per cents include: (1) the 10% contribution for active members; (2) the original State of Ohio appropriation of \$1.2 million per annum; (3) a State of Ohio appropriation of \$1.5 million per annum for Senate Bill No. 48; (4) a State of Ohio appropriation of an additional \$1.2 million per annum to fund for part of the additional cost arising from the "purchase": of military service credit; (5) an appropriation to fund House Bill No 204; and (6) an appropriation to partially fund House Bill No. 694 and House Bill No. 215. As indicated earlier, these figures do not include the cost of the 1972 pension increases precipitated by House Bill No. 284 or the Death Benefit Fund established by Amended House Bill No. 1010, since these additional costs will be met entirely by additional appropriations from the State of Ohio.

Item D.1. of Table 1 shows the current rate per cent for health care plan and Medicare benefits. In conjunction with the establishment of the Health Care Stabilization Fund effective January 1, 1992, the current rate per cent for health care has been defined by the Board to be 6.50%. Additional discussion of health care funding is provided in Section G of this commentary.

Item D.2. of Table 1 shows the total current rate per cent, and represents a combination of the figures for disability and pension benefits and for health care plan and Medicare benefits. As can be seen, the total current rate per cent with respect to 1993 is 33.16% for police and 32.13% for firemen.

F. COMPARISON OF EVALUATION RESULTS WITH PREVIOUS YEAR

Table 5 sets forth a comparison of evaluation results for 1992 and 1993. Section A indicates that the number of active members has increased by 215 for police and by 153 for firemen. Also, the number of participants currently receiving benefits has increased by 329 for police and 184 for firemen. As a percentage of total membership, 42.6% of police members are currently receiving benefits, compared to 42.2% last year; the corresponding percentages for firemen are, respectively, 45.2% and 45.0%.

The actuarial present values of future benefits have increased by \$313.5 million for police and \$137.0 million for firemen as is indicated in Section B. Valuation assets, in turn, increased by \$195.5 million for police and \$153.5 million for firemen. The portion of increase in valuation assets due to the new methodology is \$123.1 million for police and \$97.1 million for firemen.

In Section C we set forth a comparison of contribution rate per cents. Item C.1. indicates that the current rate per cent for disability and pension benefits has increased from 26.27% to 26.66%, or by .39%, for police, while for firemen the corresponding rate has decreased from 26.67% to 25.63%, for a decrease of 1.04%.

A reconciliation of last year's contribution rates for disability and pension benefits to this year's is as follows:

	<u>Police</u>	<u>Firemen</u>
1. Rate per cent as of January 1, 1992 (Items 2-5 based on old assumptions)	26.27%	26.67%
2. Actuarial (gains) or losses and changes in membership	.44	.02
3. Actual investment growth based on 1992 asset valuation methodology versus expected growth	(.16)	(.14)
4. Health Care Fund Asset Allocation	1.76	1.61
5. Change due to asset methodology	(2.50)	(2.29)
6. Assumption changes	.85	(.24)
7. Rate per cent as of January 1, 1993	26.66%	25.63%

In addition, the health care plan and Medicare component of the rate per cent decreased from 7.51% to 6.50%, for a net decrease of 1.01%. This decrease is due to the establishment of the Health Care Stabilization Fund, which is discussed further in the next section.

G. HEALTH CARE FUNDING

Effective January 1, 1992 the Board of Trustees established the Health Care Stabilization Fund with an initial allocation of \$150 million. This Health Care Fund allows the segregation, for accounting purposes, of the assets used to pay health care benefits from those used to pay pension and disability benefits.

In conjunction with the establishment of the Health Care Fund, the Board directed that the employer contribution to be allocated to this fund would be 6.50% of payroll each year. This 6.50% was derived from the results of the Wyatt Company's 35-Year Forecast Study, dated May 17, 1991, which indicated that the Fund could achieve long-term solvency if health care expense were limited to 6.50% of payroll and all actuarial assumptions were realized.

In addition to the 6.50% employer contribution, the Health Care Fund is also credited with retiree and survivor health care contributions, which were approximately \$2.4 million for 1992. Interest is credited at the valuation rate, currently 8.25%, effective annual rate. Fund personnel have established an accounting procedure under which retiree and survivor contributions are assumed to be made at the beginning of the month and employer contributions and health care expenditures are assumed to occur at the end of the month.

This 1993 valuation is the first to recognize the establishment of the Health Care Fund. The balance in this fund as of December 31, 1992 is \$154,908,178, as developed by Fund personnel. As mentioned earlier in this report, Health Care Fund assets are deducted from total valuation assets to determine valuation assets for pension and disability benefits, i.e. the Health Care Fund value is considered to be in terms of valuation assets.

For purposes of determining the total actuarial rate per cent of contribution, the Board-defined 6.50% health care contribution replaces the calculation of the pay-as-you-go rate. However, the actual funding of health care benefits can still be considered to be essentially on a pay-as-you-go basis, but with the Health Care Stabilization Fund providing temporary smoothness in the allocated rate per cent. In particular, health care liabilities were not considered to be prefunded by the establishment of the \$150 million Health Care Fund, nor is there any funding program in place which would accomplish such prefunding.

Beginning with the January 1, 1994 valuation, we will also provide an additional report focussing on the solvency of the Health Care Stabilization Fund. This will involve the use of projected health care benefits, as developed in prior FAS 106 reports. The new report will analyze the appropriateness of the 6.50% employer contribution allocation, in relation to (1) actual health care expenditures for the year and (2) projected solvency of the Health Care Fund.

For 1993 we note that the 6.50% compares to a rate per cent of 6.64% calculated under the pay-as-you-go method. Also, the Health Care Fund is projected to maintain a positive balance for about eight years under the current benefit and contributions provisions. This is based on an analysis dated July 26, 1993.

H. ADEQUACY OF STATUTORY RATES

The rate per cents developed in this report are to be used by the Ohio Retirement Study Commission to assess the adequacy of the current statutory employer contribution rates. In this section we present observations to assist the Commission in this regard.

The statutory rates are 19.5% for police and 24.0% for firemen. After adding in the member contribution rate of 10%, the total statutory rates are 29.5% for police and 34.0% for firemen, and include the cost of providing for postretirement health care benefits. In addition, state subsidies in the neighborhood of \$4.9 million help finance pension benefits. The \$4.9 million increases the statutory rates by about .5% for police and .6% for firemen. The total statutory rates are thus 30.0% for police and 34.6% for firemen.

These rates compare to the 33.16% police rate and the 32.13% firemen rate developed in this valuation. Thus, while the police rate exceeds the statutory rate by 3.16%, the firemen rate is below the statutory rate by 2.47%.

Assessing the adequacy of the two rates is helped by a combined-rate analysis. If the 1986 legislation had established a single rate for both police and firemen, it would have been 21.5% (based on the methodology used to set the current statutory rates). The 21.5% is also the same rate that would result in total 1993 city contributions being the same as expected to be collected under the current statutory rates.

Taking member and state contributions into account, the total combined rate would be 32.1% for 1993. And for 1993 the actuarially determined combined rate would be 32.7%, or only .6% in excess of this combined rate. This analysis leads us to conclude that the statutory rates are adequate for 1993 and also to recommend that the Board consider requesting the legislature to look at the possibility of establishing one rate at 21.5%.

Another approach to adequacy assessment that we have relied on in the past and will continue to recommend to the Board is use of the 35-Year Forecast Study. The most recent Forecast was presented to the Board on June 6, 1991.

One scenario in the Forecast that models the current situation is the one under which medical costs were held to 6.50% of payroll and a moderate mortality improvement was assumed (called Mortality Improvement I in the study). This scenario approximately corresponds to the current valuation, with the Board-defined 6.50% health care contribution and the new assumptions derived from the 1987-1991 quinquennial.

Appendix Table 2 of the Forecast Study presents the scenario under consideration. The expected rates for 1993 are 34.39% for police and 34.31% for firemen, compared to actual 1993 rates of 33.16% and 32.13%. Since that scenario resulted in a solvent Fund after 35 years, and since current actuarial rates are less than the forecast rates, the adequacy of the current statutory rates is confirmed for 1993.

We can also consider the Forecast scenario which was based on medical expense growth at the rates assumed in the 1991 FAS 106 report, and was the scenario that projected Fund insolvency by the year 2025. Appendix Table 4 of the Forecast Study indicates that expected 1993 rates under this scenario are 35.75% for police and 36.41% for firemen. So, again, the actual 1993 rates are lower than the forecast rates.

In summary, although the police actuarial rate for 1993 exceeds the statutory rate, there is no indication that a solvency crisis is developing. Hence, the statutory rates can be assessed to be adequate for the present.

For 1994 and later years, we recommend that the effect of the new actuarial assumptions on projected health care expenditure be measured: neither the Forecast Study nor the 1993 FAS 106 report considered the impact of improved retiree mortality. The next FAS 106 report needs to provide a new projection of health care payouts which can be used to continue our assessment of the long-term status of the Fund.

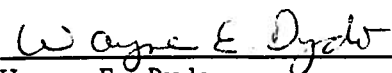
When these FAS 106 health care results are available, it will then be appropriate to prepare an updated Forecast Study and we recommend that the Board authorize such an update. The update will provide valuable information on the long-term effects of the establishment of the Health Care Stabilization Fund, medical cost-control measures, new actuarial assumptions, and the new valuation asset methodology.

* * * * *

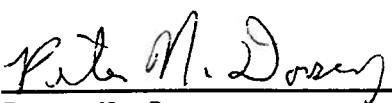
In conclusion, we recommend that the Board of Trustees and the Ohio Retirement Study Commission consider this evaluation report in determinations concerning the appropriateness of the actual employer contribution rates.

Respectfully submitted,

THE WYATT COMPANY



Wayne E. Dydo
Fellow - Society of Actuaries



Peter N. Dorsey
Associate - Society of Actuaries

Table 1

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Summary of Evaluation Results as of January 1, 1993 1/

	<u>Police</u>	<u>Firemen</u>
A. <u>MEMBERSHIP</u>		
1. Number of Active Members	13,540	10,149
2. Number of Retirants	6,900	5,972
3. Number of Beneficiary-Survivors		
a. Surviving Spouses and Beneficiaries	2,832	2,255
b. Children	332	150
c. Total Beneficiary-Survivors	3,164	2,405
4. Total Membership 2/	23,604	18,526
B. <u>SUMMARY OF ACTUARIAL PRESENT VALUES OF FUTURE BENEFITS</u>		
1. Active Members 3/	\$2,382,700,000	\$1,844,600,000
2. Retirants	1,303,600,000	1,087,800,000
3. Beneficiary-Survivors	120,200,000	87,300,000
4. Actuarial Present Value for All Members	3,806,500,000	3,019,700,000
C. <u>DEVELOPMENT OF CURRENT RATE PER CENT FOR DISABILITY AND PENSION BENEFITS</u>		
1. Actuarial Present Value of Future Benefits	\$3,806,500,000	\$3,019,700,000
2. Valuation Assets	2,252,100,000	1,775,400,000
3. Actuarial Present Value of Employer Accrued Liability	208,400,000	192,100,000
4. Actuarial Present Value of Active Member Future Compensation	5,087,300,000	4,135,800,000
5. Net Rate Per Cent, Prior to Expense Loading ((Item C1 - C2 - C3) ÷ C4)	26.46%	25.44%

Table 1
(continued)

	<u>Police</u>	<u>Firemen</u>
6. Current Rate Per Cent for Disability and Pension Benefits	26.66%	25.63%
D. <u>TOTAL CURRENT RATE PER CENT</u>		
1. Current Rate Per Cent for Health Care Plan and Medicare <u>4/</u>	6.50	6.50
2. Total Current Rate Per Cent (Item C6 + D1)	33.16	32.13

- 1/ Excludes assets and liabilities arising from the increases due to the 1971 House Bill No. 284 and from the Death Benefit Fund established by House Bill No. 1010.
- 2/ Excluding 52 inactive policemen and 22 inactive firemen.
- 3/ Includes present values of \$3,800,000 for 52 policemen and \$1,500,000 for 22 firemen who have terminated with more than 15 years of service.
- 4/ As specified by the Board of Trustees, 6.50% of payroll is the portion of the employer contributions to be credited to the Health Care Stabilization Fund. For valuation purposes this replaces the determination of a pay-as-you-go rate per cent for health care.

Table 2(a)

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Police

Distribution of Members by Attained Age Group and Length of Service as of January 1, 1993
(Females are indicated in parentheses and are included in adjacent totals)

Attained Age Group	Length of Service						30-Over	Totals	Average Annual Salary																			
	0-4 1/2	5-9	10-14	15-19	20-24	25-29			As of January 1, 1993	As of January 1, 1992																		
Under 25	309(30)	1	-	-	-	-	-	310(30)	\$24,583	\$23,940																		
25 - 29	1,750(179)	285(19)	-	-	-	-	-	2,035(198)	30,727	29,459																		
30 - 34	959(102)	1,019(100)	262(28)	2	-	-	-	2,242(230)	34,510	33,534																		
35 - 39	392(76)	673(69)	1,290(117)	338(17)	5	-	-	2,698(279)	37,322	35,654																		
40 - 44	182(19)	262(28)	637(64)	1,062(46)	451(4)	10	-	2,604(161)	38,741	37,456																		
45 - 49	76(5)	94(14)	135(14)	443(26)	1,125(11)	378(1)	5	2,256(71)	40,742	38,840																		
50 - 54	26(4)	35(2)	33(1)	52	296(8)	486(2)	87(2)	1,015(19)	41,415	39,263																		
55 - 59	9	18	10	15	38(1)	98(2)	91(1)	279(4)	39,289	38,255																		
60 - 64	4	4	4	5	5	3(1)	48	73(1)	37,970	36,167																		
65 & Over	3	2	-	-	-	2	21	28	44,873	41,493																		
Total	3,710(415)	2,393(232)	2,371(224)	1,917(89)	1,920(24)	977(6)	252(3)	13,540(993)	\$36,783	\$35,305																		
<table border="0"> <thead> <tr> <th colspan="2"></th> <th colspan="2">January 1, 1993</th> <th colspan="2">January 1, 1992</th> </tr> </thead> <tbody> <tr> <td>Average Attained Age</td> <td></td> <td>39</td> <td></td> <td>39</td> <td></td> </tr> <tr> <td>Average Hire Age</td> <td></td> <td>26</td> <td></td> <td>26</td> <td></td> </tr> </tbody> </table>													January 1, 1993		January 1, 1992		Average Attained Age		39		39		Average Hire Age		26		26	
		January 1, 1993		January 1, 1992																								
Average Attained Age		39		39																								
Average Hire Age		26		26																								

1/ Includes 769 members hired in 1992.

Wyatt

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Police

Distribution of Retirants by Attained Age Group
and Sex as of January 1, 1993

<u>Attained Age Group</u> (1)	<u>Males</u> (2)	<u>Females</u> (3)	<u>Total</u> (4)	<u>Col. (4) as % of TOTAL</u> (5)	<u>Annual Rate of Pension 1/</u>	
					<u>As of January 1, 1993</u> (6)	<u>As of January 1, 1992</u> (7)
Under 40	95	26	121	2%	\$ 1,850,086	\$ 1,777,838
40 - 44	234	15	249	4	4,421,678	4,712,376
45 - 49	562	17	579	8	11,874,952	10,756,289
50 - 54	1,112	9	1,121	16	26,004,928	22,202,822
55 - 59	1,054	9	1,063	15	24,287,808	22,456,310
60 - 64	1,183	13	1,196	17	23,247,028	22,872,754
65 - 69	1,201	8	1,209	18	19,389,152	17,455,402
70 - 74	605	9	614	9	8,371,882	7,260,005
75 - 79	432	8	440	6	5,080,876	4,777,567
80 - 84	206	1	207	3	2,185,605	1,639,359
85 - 89	68	2	70	1	630,915	690,211
90 & Over	31	-	31	1	220,778	179,251
TOTAL	6,783	117	6,900	100%	\$127,565,696	\$116,780,184

Average
Attained Age
January 1, 1992 62 54 61
January 1, 1993 62 53 61

Average Annual
Benefit

January 1, 1992 \$17,617
January 1, 1993 18,488

1/ Excludes increases due to House Bill No. 284.

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Police

Distribution of Beneficiary-Survivors by Attained Age Group
as of January 1, 1993

<u>Attained Age Group</u> (1)	<u>Number Receiving Benefits</u> (2)	<u>Col. (2) as % of TOTAL</u> (3)
A. <u>SURVIVING SPOUSES</u> <u>1/</u>		
Under 40	41	1%
40 - 44	58	2
45 - 49	79	3
50 - 54	115	5
55 - 59	186	7
60 - 64	274	11
65 - 69	363	14
70 - 74	345	14
75 - 79	403	16
80 - 84	321	13
85 - 89	231	9
90 & Over	124	5
TOTAL	2,540	100%
Average Attained Age	71	
B. <u>BENEFICIARIES RECEIVING OPTIONS</u>		
Under 35	6	2%
35 - 39	7	3
40 - 44	16	6
45 - 49	21	7
50 - 54	35	12
55 - 59	38	13
60 - 64	64	22
65 - 69	47	16
70 - 74	36	12
75 - 79	19	7
80 - 84	1	-
85 - 89	1	-
90 & Over	1	-
TOTAL	292	100%
C. <u>CHILDREN</u>	332	

1/ Includes dependent parents.

Table 2(b)

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Firemen

Distribution of Members by Attained Age Group and Length of Service as of January 1, 1993
 (Females are indicated in parentheses and are included in adjacent totals)

Attained Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30- Over	Totals	Average Annual Salary		
									As of January 1, 1993	As of January 1, 1992	
Under 25	275(5)	1	-	-	-	-	-	276(5)	\$25,502	\$24,448	
25 - 29	1,029(20)	231(11)	-	-	-	-	-	1,260(31)	30,464	29,010	
30 - 34	853(24)	770(22)	331	3	-	-	-	1,957(46)	34,372	33,044	
35 - 39	345(19)	575(16)	914(5)	238	2	-	-	2,074(40)	37,140	35,571	
40 - 44	121(7)	200(6)	618(3)	803(1)	147	1	-	1,890(17)	38,440	36,912	
45 - 49	40(1)	40	85(2)	502	698	161	3	1,529(3)	40,199	38,727	
50 - 54	11(1)	12	13	56	340	364	61	857(1)	42,234	40,650	
55 - 59	5	4	5	13	32	82	125	266	43,114	41,887	
60 - 64	-	1	3	4	4	1	20	33	45,525	42,341	
65 & Over	1	-	-	-	1	1	4	7	44,800	44,946	
Total	2,680(77)	1,834(55)	1,969(10)	1,619(1)	1,224	610	213	10,149(143)	\$36,783	\$35,266	
								<u>January 1, 1993</u>	<u>January 1, 1992</u>		
Average Attained Age										39	39
Average Hire Age										26	26

1/ Includes 508 members hired in 1992.

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Firemen

Distribution of Retirants by Attained Age Group
and Sex as of January 1, 1993

<u>Attained Age Group</u> (1)	<u>Males</u> (2)	<u>Females</u> (3)	<u>Total</u> (4)	<u>Col. (4) as % of TOTAL</u> (5)	<u>Annual Rate of Pension 1/</u>	
					<u>As of January 1, 1993</u> (6)	<u>As of January 1, 1992</u> (7)
Under 40	53	1	54	1%	\$ 874,615	\$ 848,147
40 - 44	98	3	101	2	1,756,167	1,659,849
45 - 49	242	-	242	4	5,042,695	4,605,909
50 - 54	727	-	727	12	16,585,953	14,753,543
55 - 59	947	-	947	16	22,072,046	21,009,086
60 - 64	1,213	-	1,213	20	25,013,984	25,903,146
65 - 69	1,298	-	1,298	22	22,280,680	18,926,684
70 - 74	588	-	588	10	8,245,282	7,088,787
75 - 79	477	-	477	8	5,607,691	5,451,207
80 - 84	224	-	224	3	2,404,608	1,905,701
85 - 89	75	-	75	1	602,644	457,593
90 & Over	26	-	26	1	215,353	229,126
TOTAL	5,968	4	5,972	100%	\$110,701,720	\$102,838,784

<u>Average Attained Age</u>			
January 1, 1992	64	39	64
January 1, 1993	64	41	64

<u>Average Annual Benefit</u>		
	January 1, 1992	\$17,676
	January 1, 1993	18,537

1/ Excludes increases due to House Bill No. 284.

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Firemen

Distribution of Beneficiary-Survivors by Attained Age Group
as of January 1, 1993

<u>Attained Age Group</u> (1)	<u>Number Receiving Benefits</u> (2)	<u>Col. (2) as % of TOTAL</u> (3)
A. <u>SURVIVING SPOUSES</u> <u>1/</u>		
Under 40	18	1%
40 - 44	25	1
45 - 49	55	3
50 - 54	62	3
55 - 59	118	5
60 - 64	180	9
65 - 69	314	15
70 - 74	290	14
75 - 79	362	18
80 - 84	281	14
85 - 89	201	10
90 & Over	139	7
TOTAL	2,045	100%
Average Attained Age	73	
B. <u>BENEFICIARIES RECEIVING OPTIONS</u>		
Under 35	2	1%
35 - 39	4	2
40 - 44	5	2
45 - 49	16	8
50 - 54	14	7
55 - 59	32	15
60 - 64	39	19
65 - 69	55	26
70 - 74	19	9
75 - 79	20	9
80 - 84	4	2
TOTAL	210	100%
C. <u>CHILDREN</u>	150	

1/ Includes dependent parents.

Table 3

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Description of Benefits Under Statewide Plan
(Per Ohio Revised Code Chapter 742, Excluding
Consideration of 1971 House Bill No. 284
and 1976 House Bill No. 1010)

1. Service Retirement

- (a) Eligibility: Age 48 and 25 years of service.
- (b) Benefit: An annual pension equal to a percentage of the average annual salary, where the percentage equals 2.5% for each of the first 20 years of service, 2% for each of the next five years of service, and 1.5% for service in excess of 25 years, to a maximum of 72% of the average annual salary. Average annual salary means one-third of the total salary during the three years during which the total earnings were greatest.

2. Special Service Retirement
for Late Hires

- (a) Eligibility: Age 62 and 15 years of service.
- (b) Benefit: The same as the Service Retirement Benefit.

3. Permanent and Total
Disability (On duty)

- (a) Eligibility: No age or service requirement.
- (b) Benefit: An annual pension equal to 72% of the annual salary during the last year of active service.

4. Partial Disability
(On duty)

- (a) Eligibility: No age or service requirement.
- (b) Benefit: An annual pension to be fixed by the Board of Trustees, but not to exceed 60% of the average annual salary; provided that if the member has 25 or more years of service the annual disability pension is equal to the accrued Service Retirement Benefit.

5. Heart Disease Disability

- (a) Eligibility: No age or service requirement.

(b) Benefit: An annual pension in an amount determined in accordance with the benefit provisions of Item 3. or Item 4. above, as the case may be.

6. Ordinary Disability
(Off duty)

(a) Eligibility: Any age and five years of service.

(b) Benefit: An annual pension to be fixed by the Board, but not to exceed the accrued Service Retirement Benefit, or \$5,000, whichever is greater.

7. Termination of Service
Prior to Retirement

One of the following benefits depending upon the particular circumstances:

Refund

(a) Eligibility: No age or service requirement.

(b) Benefit: A lump-sum amount equal to the sum of the contributions made by the member to the Fund.

Vesting After 15 Years

(a) Eligibility: 15 years of service.

(b) Benefit: Commencing at age 48 or hire age plus 25 years, whichever is later; an annual pension equal to 1-1/2% of the average annual salary multiplied by the number of years of service.

Vesting After 25 Years

(a) Eligibility: 25 years of service.

(b) Benefit: Commencing at age 48, the accrued Service Retirement Benefit.

8. Flat Death Benefits

(a) Eligibility: Upon death to any member of the Fund, active or retired.

(b) Benefit: (i) Surviving Spouse's Benefit - An annual amount equal to \$4,920.

(ii) Surviving Children - An annual amount equal to \$1,416, payable until such child attains age 18 or marries, whichever occurs first. (Similar payments made, regardless of age, to disabled children.) An annual amount equal to \$1,416 will continue beyond age 18 up to age 22 while the child is a student.

(iii) Dependent Parents - An annual amount of \$1,896 to one dependent parent or \$948 each to two dependent parents, during their lifetime or until dependency ceases or until remarriage, provided that deceased member leaves no surviving spouse or surviving children.

Note: Payment of the above benefits will be suspended during any period payments are being made pursuant to Sec. 742.63 RC (Death Benefit Fund established by Sec. 742.61 RC).

9. Pre-retirement Surviving Spouse Benefit

(a) Eligibility:

Upon death before retirement but after having satisfied the requirements for retirement.

(b) Benefit:

The surviving spouse or contingent dependent beneficiary will receive 50% of the benefit that the deceased member would have been entitled to had he retired on the day of his death under the 50% Joint & Survivor annuity form.

10. Member Contributions:

10% of salary.

11. Pension Increases for Certain Retirants:

Commencing January 1, 1974, the pensions of persons who retired between July 1, 1968 and June 30, 1971 will be increased by \$2.00 per month times the number of years on retirement as of June 30, 1973.

Effective January 1, 1977, annual pensions (except those arising from volunteer or part-time service, or early vested service) shall be increased as follows:

Table 3
(continued)

(i) if the annual pension was less than \$2,700, then the pension shall be increased to \$3,000; (ii) if the annual pension was \$2,700 or more, the increase shall be \$300 per year. These increases do not apply to benefits being paid under pre-1947 plans with an automatic escalating provision.

Effective July 1, 1979, retirees (excluding those with escalating benefits) who retired prior to January 1, 1974 have pension increases of 5% of the first \$5,000 of annual pension.

Effective January 1, 1982, retirees (excluding those with escalating benefits) who retired prior to February 28, 1980, have pension increases of \$46 per month.

Effective August 1, 1988, members who retired prior to February 28, 1984 and who were receiving an annual benefit of less than \$13,000 have pension increases of \$50 per month, or if larger, the amount needed to increase the current annual pension to \$4,200.

Effective July 1, 1989, the minimum annual pension for current retirees with 25 or more years of service is \$5,000, the annual pension of a surviving spouse is increased to \$4,920, and the annual benefit of a dependent surviving child is increased to \$1,416.

Retirees prior to July 24, 1986 whose annual straight life pension is less than \$18,000 will receive an increase in their annual pension of \$360, actuarially adjusted to reflect optional annuity forms of benefits. The increase is paid only if the annual increase in the Consumer Price Index, plus unused prior increases, equals or exceeds 3%. The first increase is paid July 1, 1988. Beginning in 1989, the \$18,000 limit is increased by \$500 each year.

12. Group Health Insurance
and Medicare:

Commencing January 1, 1974, the Board may contract for group health insurance on the basis of part or all of the cost of the premium for the coverage to be paid by the Fund.

Effective January 1, 1977, the Fund will pay the premium for supplemental Medicare (Part B).

Effective July 1, 1992 pensioners and survivors make monthly medical benefit contributions, which are credited to the Health Care Stabilization Fund. Monthly contributions range from \$0 to \$50 depending on the type and amount of the participant's pension.

13. COLA or Terminal Pay:

Members retiring after July 24, 1986 and who have 15 or more years of service as of January 1, 1989, are allowed to select between (1) a pension calculated on the basis of average salary which is increased to reflect terminal pay adjustments, or (2) a pension based on average salary excluding the terminal pay adjustment, but increasing by 3% of the initial pension each retirement anniversary after July 1, 1989. The 3% addition is paid only if the annual increase in the Consumer Price Index, plus unused prior increases, equals or exceeds 3%. This additive 3% COLA annuity without terminal pay adjustment is the automatic form for active members with less than 15 years of service as of January 1, 1989.

14. Optional Forms of Payment:

Effective February 28, 1980, retiring members may elect to have actuarially reduced benefits payable under certain and continuous and joint and survivor annuity forms. The maximum certain period is 20 years, and the continuation percentage under the joint and survivor form is limited to 100%.

Effective September 26, 1984, members who retired before February 28, 1980 may make a one-time election to have their benefits reduced and paid under the joint and survivor annuity form with the surviving spouse as survivor annuitant.

Effective September 9, 1989, elected options may be cancelled within one year after benefits commence.

15. Lump Sum Death Benefit:

Effective November 2, 1989, a \$1,000 lump sum payment will be made on account of death of a retired member.

Table 4

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Summary of Actuarial Assumptions and Actuarial Cost Method

A. Interest: A rate of 8.25% per annum, compounded annually.

B. Rates and Other Assumptions Among Active Members:

1. Before Retirement -

(a) Mortality:

Mortality is based on the 1951 Group Annuity Mortality Table projected to 1980 using Scale C, with a one-year set-forward in age. The projected values are multiplied by 0.5 at all ages to obtain the assumed mortality rates. The following rates at selected ages are illustrative:

<u>Age</u>	<u>Rate of Mortality</u>	
	<u>Police</u>	<u>Firemen</u>
25	.000307	.000307
30	.000406	.000406
35	.000569	.000569
40	.000845	.000845
45	.001568	.001568
50	.002773	.002773
55	.004377	.004377

(b) Termination:

The rates of termination are based upon the results of the 1987-1991 Quinquennial Evaluation. The following rates at selected ages are illustrative:

<u>Age</u>	<u>Rate of Termination</u>	
	<u>Police</u>	<u>Firemen</u>
25	.047001	.016655
30	.031525	.015071
35	.022161	.012432
40	.014759	.007482
45	.009658	.004385
50	.012847	.004884

Note: The present values of future benefits for active members resulting from the use of these withdrawal rates are actuarially adjusted to include provision for prospective terminated employees eligible for vested termination benefits arising from the vesting provisions of the 1971 Amended Substitute Senate Bill No. 137.

(c) Disability:

The rates of disability are based upon the results of the 1982-1986 Quinquennial Evaluation. The following rates at selected ages are illustrative:

<u>Age</u>	<u>Rate of Disability</u>	
	<u>Police</u>	<u>Firemen</u>
25	.000904	.000205
30	.001823	.001090
35	.004097	.002551
40	.008880	.006205
45	.016900	.013147
50	.026091	.024800
55	.039748	.040236

Note: The present values of future benefits for active members resulting from the use of these disability rates reflect the fact that the occurrence of disability by type approximates the following:

On duty permanent and total	40%
On duty partial	57
Off duty ordinary	3

(d) Salary Increase Rate:

The per annum rates of future salary increase can be divided into two component parts: (i) inflationary increase of 4% per year and (ii) age-graded promotional increases as follows:

<u>Age(s)</u>	<u>Promotional Increase</u>	<u>Total Increase</u>
under 30	3.00%	7.00%
30 - 34	1.75	5.75%
over 34	1.00	5.00%

(e) Retirement:

The rates of retirement for ages 53 through 65 are based upon the experience during the periods 1982 through 1986. The rates of retirement for ages 48 through 52 are based upon the experience for 1989. These rates are applicable after the member has satisfied the conditions for retirement. The rates are as follows:

<u>Age(s)</u>	<u>Police</u>	<u>Firemen</u>
48 - 52	.25	.25
53 - 59	.25	.30
60 - 64	.30	.40
65	1.00	1.00

2. After Retirement -

(a) On Service Retirement Pension:

The mortality, after retirement of active members expected to go on service retirement, is based on the 1951 Group Annuity Mortality Table projected to 1980 using Scale C, with a one-year set-forward in age. The following probabilities at selected ages are illustrative:

<u>Age</u>	<u>Probability of Mortality</u>
55	.008753
60	.013012
65	.020979
70	.033316
75	.056741
80	.099390
85	.158333
90	.236172
95	.316061

(b) On Disability Retirement Pension:

The mortality, after retirement of active members expected to go on disability retirement, is based on the results of the 1987-1991 Quinquennial Evaluation. The rates are based on the 1951 Group Annuity Mortality Table projected to 1980 using Scale C and include loads for disability. The following probabilities at selected ages are illustrative:

<u>Age</u>	<u>Probability of Mortality</u>
35	.008560
45	.010262
55	.018051
65	.038838
75	.071826
85	.168254
95	.297806

C. Probabilities of Mortality Among Pensioners

1. Nondisabled Pensioners:

The mortality among all nondisabled retirants is equal to the 1951 Group Annuity Mortality Table rates projected to 1980 using Scale C, with a one-year set-forward in age. The following probabilities at selected ages are illustrative:

Table 4
(continued)

<u>Age</u>	<u>Probability of Mortality</u>
35	.001138
40	.001691
45	.003136
50	.005545
55	.008753
60	.013012
65	.020979
70	.033316
75	.056741
80	.099390
85	.158333
90	.236172
95	.316061

2. Disabled Pensioners:

The mortality among all disabled retirants is based on the 1951 Group Annuity Mortality Table projected to 1980 using Scale C and includes loads for disability. The following probabilities at selected ages are illustrative:

<u>Age</u>	<u>Probability of Mortality</u>
35	.008560
40	.009043
45	.010262
50	.012495
55	.018051
60	.022001
65	.038838
70	.050322
75	.071826
80	.111137
85	.168254
90	.222882
95	.297806

D. Probabilities Among Survivors:

1. Probabilities of Mortality Among Surviving Spouses -

The mortality among all present surviving spouses is based on the Projected Annuity Mortality Table rates, decreased by 15% at all ages. The following probabilities at selected ages are illustrative:

Table 4
(continued)

<u>Age</u>	<u>Probability of Mortality</u>
35	.001326
40	.001938
45	.002950
50	.004471
55	.006775
60	.010464
65	.016448
70	.026121
75	.042560
80	.067465
85	.102527
90	.151530
95	.219657

2. Probability of Remarriage Among Surviving Spouses -

The probabilities of remarriage of surviving spouses are based upon the results of the 1987-1991 Quinquennial Evaluation. The following probabilities at selected ages are illustrative:

<u>Age</u>	<u>Probability of Remarriage</u>
35	.030686
40	.025594
45	.017015
50	.008101
55	.006225
60	.005491
65	.002442
70	.001092
75	.000491

3. Dependent Children -

No specific allowance has been made, in the evaluation of this benefit, for the probability of mortality prior to age 18, or the probability of disability at age 18 and thereafter. In valuing the benefit beyond age 18, it is assumed that 1/3 of the dependent children will be students and eligible for payments to age 22.

4. Dependent Parents -

Costs based upon allowance for mortality (the Projected Annuity Mortality Table rates), but no specific allowance for change in dependency status.

E. COLA Annuities:

It has been assumed that, where an election is possible, all members will elect the COLA annuity. It has also been assumed that the Consumer Price Index will increase each year at a rate equal to or greater than 3%.

F. Expense Loading: The net costs were loaded by 3/4 of 1% to allow for future administrative expenses of the Fund.

G. Actuarial Cost Method: The "frozen initial liability" method has been used in developing the required contributions to the Fund. Under this approach, the present value of future benefits is reduced by valuation assets and the present value of the employer accrued liability. This net amount is then expressed as a percentage of the present value of active member future compensation and that percentage is applied to current payroll to determine the actual contribution.

The employer accrued liability was determined for each separate police and firemen's fund as of April 1, 1966. Each employer with an existing liability is presently making payments at the rate of 5% of the original liability (adjusted for any excess payments) pursuant to the schedule set forth in Section 742.30 of the Ohio Revised Code.

H. Valuation Assets: Valuation assets equal the net cost (book) value of all Fund assets, except common and preferred stocks are included in valuation assets with a value equal to that developed under the 4-Year Market Adjustment Method, with an initial value equal to market value. Under this method realized and unrealized gains are recognized in the assets over a 4-year period: valuation assets equal market value less 75% of the previous year's realized and unrealized gains, 50% of the second previous year's realized and unrealized gains, and 25% of the third previous year's realized and unrealized gains. Full implementation of the phase-in is to occur on January 1, 1996. The balance in the Health Care Stabilization Fund is excluded from total assets to arrive at valuation assets for pension and disability benefits. Contributions due to be refunded to terminated members are also excluded from valuation assets.

Table 5

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Comparison of Evaluation Results for 1992 and 1993

	<u>1993</u>		<u>1992</u>	
	<u>Police</u>	<u>Firemen</u>	<u>Police</u>	<u>Firemen</u>
A. <u>MEMBERSHIP</u>				
1. Number of Active Members	13,540	10,149	13,325	9,996
2. Number of Retirants and Beneficiary-Survivors	10,064	8,377	9,735	8,193
3. Total Membership	23,604	18,526	23,060	18,189
B. <u>ACTUARIAL PRESENT VALUE AND ASSETS (000,000 omitted)</u>				
1. Present Value of Future Benefits	\$3,806.5	\$3,019.7	\$3,493.0	\$2,882.7
2. Valuation Assets	2,252.1	1,775.4	2,056.6	1,621.9
3. Present Value of Employer Accrued Liability	208.4	192.1	210.0	193.5
4. Present Value of Active Member Future Compensation	5,087.3	4,135.8	4,703.0	4,031.5
C. <u>CURRENT RATE PER CENT</u>				
1. Disability and Pension Benefits	26.66%	25.63%	26.27%	26.67%
2. Health Care Plan and Medicare <u>1/</u>	6.50	6.50	7.51	7.51
3. Total	33.16	32.13	33.78	34.18

1/ The 1992 health care rate per cent represents the pay-as-you-go contribution rate. The 1993 rate is the 6.50% designated by the Board as the amount to be credited to the Health Care Stabilization Fund.

Table 6

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Asset Allocation 1993

The following table presents a development of the allocation of assets between police and firemen as of January 1, 1993.

	<u>Police</u>	<u>Firemen</u>	<u>Total</u>
(1) 1/1/92 Valuation Assets	\$2,056,573,836	\$1,621,906,235	\$3,678,480,071
(2) Transactions during 1992			
a. Employer contributions	98,486,291	91,080,315	189,566,606
b. Net employee contributions	50,036,204	38,197,646	88,233,850
c. Retiree medical contributions	1,245,453	1,154,641	2,400,094
d. Local Funds receipts	10,600,739	9,775,228	20,375,967
e. Benefit payments and expenses	<u>(177,698,851)</u>	<u>(155,119,092)</u>	<u>(332,817,943)</u>
f. Total transactions	(17,330,164)	(14,911,262)	(32,241,426)
(3) Item (1) plus Item 2(f)	2,039,243,672	1,606,994,973	3,646,238,645
(4) Expected Investment Growth	168,952,472	133,192,175	302,144,647
(5) Valuation Assets, Total <u>1/</u>	N/A	N/A	4,182,374,560
(6) Actual Investment Growth <u>2/</u> (Item 5 less Item 3)	N/A	N/A	536,135,915
(7) Allocation of Item 6 in proportion to Item 4	299,795,112	236,340,803	536,135,915
(8) Health Care Stabilization Fund	86,925,902	67,982,276	154,908,178
(9) 1/1/93 Valuation Assets (Item 3 plus Item 7 less Item 8)	\$2,252,112,882	\$1,775,353,500	\$4,027,466,382

1/ Equals total book value of assets, \$3,892,135,026, less contributions due to be refunded of \$2,696,002 plus \$292,935,536, the excess of market value (\$1,486,043,276) over book value (\$1,175,107,740) of common and preferred stocks.

2/ Represents \$315,929,424 of investment return based on valuation assets under the 15% corridor method, plus the \$220,206,491 generated by using the 4-Year Market Adjustment Method rather than the 15% corridor.