

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, 1995

November 22, 1995





The Wyatt Company

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November 22, 1995

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, 1995. 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, 1994.

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

- (1) The 1995 evaluation has been based upon the Fund benefit provisions as in effect on January 1, 1995. 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 assumptions, actuarial cost method and asset valuation method are the same as those used in the prior year's evaluation. A summary of these items is set forth in Table 4.
- (3) The basic data used in the evaluation represent all active members, retirants and beneficiary-survivors covered by the Fund as of January 1, 1995. In total, 44,015 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.

WEED:jml

Fellow-Society of Actuaries
Wayne E. Dydio

Wayne E. Dydio

Sincerely yours,

near future.

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

	Total Current Rate Per Cent	
Health Care Plan and Medicare	6.50	6.50
Current Rate Per Cent for		
Disability and Pension Benefits	29.76%	27.05%
Police		
Fire		

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	Total Current Rate Per Cent	
Health Care Plan and Medicare	6.50	6.50
Current Rate Per Cent for		
Disability and Pension Benefits	29.76%	27.05%
Police		
Fire		

been developed as follows:

Table I. In summary, the total actuarial rate per cent, applicable for the calendar year beginning January 1, 1995, has

(4) The highlights of the evaluation results may be found in



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of Contribution as of January 1, 1995

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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, 1995

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, 1995.

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, 1995 membership data and upon the Annual Report and audited financial statements for the fiscal year ending December 31, 1994. 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.





The evaluation is based upon the data that were prepared and submitted to us under the direction of Mr. Henry E. Hellings, 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 44,015 members. A summary of the data is as follows:

A compilation of the membership data, as of January 1, 1995, 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 38.6 and 26.5, respectively, for police, and 38.9 and 26.6 for firemen; these measurements are slightly higher than 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 \$39,951 based on the 1995 data, and \$38,017, based on the 1994 data, for an increase of 5.1%; for firemen, the corresponding amounts are \$40,143, \$38,338 and 4.7%, 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 retirees by attained age group and sex as of January 1, 1995. Also shown are the annual rate of pension, average attained age, and average annual pension payable to retirees. The prior year's corresponding information is also shown. The average attained age of retirees is 61.5 years for

	POLICE	FIREMEN	TOTAL	ACTIVES	RETIREES	BENEFICIARY-SURVIVORS	TOTAL
	14,072	10,511	24,583	7,397	6,224	13,621	24,758
	3,289	2,522	5,811	10,511	6,224	13,621	19,257
				14,072	7,397	24,583	44,015

The evaluation is based upon the data that were prepared and submitted to us under the direction of Mr. Henry E. Hellings, 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 44,015 members. A summary of the data is as follows:

The total membership count of 44,015 compares to a membership of 43,186 individuals as of January 1, 1994, an increase of about 1.9%.

A compilation of the membership data, as of January 1, 1995, 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 38.6 and 26.5, respectively, for police, and 38.9 and 26.6 for firemen; these measurements are slightly higher than 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 \$39,951 based on the 1995 data, and \$38,017, based on the 1994 data, for an increase of 5.1%; for firemen, the corresponding amounts are \$40,143, \$38,338 and 4.7%, 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 retirees by attained age group and sex as of January 1, 1995. Also shown are the annual rate of pension, average attained age, and average annual pension payable to retirees. The prior year's corresponding information is also shown. The average attained age of retirees is 61.5 years for

police and 64.1 years for firemen, slightly higher than 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 \$20,300 for police and \$20,300 for firemen. The corresponding averages last year were, respectively, \$19,422 and \$19,477. The total annual rate of pension for retired police as of January 1, 1995 of \$150,161,440 represents a 7.6% increase over the rate of payout one year ago; similarly, the total annual rate of pension for retired firemen as of January 1, 1995 of \$126,345,472 represents a 5.5% 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 71.4 for police and 73.3 for firemen, compared to 71.3 and 73.2 one year ago. In addition, there were 341 police beneficiaries and 257 firemen beneficiaries receiving optional benefit payments, compared to 312 police and 220 firemen beneficiaries one year ago. These tables also show that there are 338 dependent children of police and 173 dependent children of firemen receiving benefits as of the evaluation date.

Presented below is a reconciliation of the number of retirees and beneficiaries included in our January 1, 1994 and 1995 evaluations.

Police	Number at 1/1/94	Additions During Year	Deletions During Year	Number at 1/1/95
Retirants & Beneficiaries	10,407	648	369	10,686
Deferred Vested	<u>42</u>	<u>29</u>	<u>10</u>	<u>61</u>
Total	10,449	677	379	10,747

Fire

Retirants & Beneficiaries	8,588	454	296	8,746
Deferred Vested	<u>24</u>	<u>10</u>	<u>5</u>	<u>29</u>
Total	8,612	464	301	8,775

The retirees and beneficiaries include children, parents and widows.





1.	Bonds *	\$2,187,665,920	2.	Stocks - Book Value *	1,611,504,222	3.	Short-Term	413,995,280	4.	Venture Capital	7,580,389	5.	Real Estate	283,322,152	*	Market Value of Bonds	\$2,084,543,602	*	Market Value of Stocks	\$1,831,246,036
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The book value of the investment portfolio was \$4,504,067,963 which consisted of:

1.	Cash	\$ 4,981,090	2.	Office Property	2,989,283	3.	Receivables	152,555,951	4.	Other Assets	974,498				

of December 31, 1994 was \$4,665,568,785, inclusive of:

The Comprehensive Annual Financial Report indicates that the cost value of assets as

Report for the Year Ended December 31, 1994" which was furnished to us by the Fund.

The valuation assets have been based upon the "Comprehensive Annual Financial

D. VALUATION ASSETS AND ACTUARIAL ASSUMPTIONS

Plan provisions have been recognized in this report.

No. 284, and the Death Benefit Fund established by 1976 House Bill No. 1010). No changes to

entirely by contributions from the State of Ohio (the 1972 pension increases of 1971 House Bill

including all amendments in effect as of the valuation date, except for changes that are funded

upon the provisions of the Statewide Plan, as set forth in Section 742 of the Revised Code,

cent are summarized in Table 3. That table and the evaluation presented in this report are based

Ohio with respect to disability and pension benefits that are used to determine the current rate per

The basic provisions of the Police and Firemen's Disability and Pension Fund of

C. PLAN PROVISIONS

The cost value was offset by payables totaling \$42,994,258 and other liabilities of \$5,593,333. Hence, the net assets available for benefits as of December 31, 1994 was \$4,616,981,194.

For valuation purposes this net cost value is used for the bond, real estate, short-term, and venture capital asset classes. For stocks, the value is determined under the 4-Year Market Adjustment Method. Valuation assets equal the sum of these two components, less \$2,865,884 of contributions that have yet to be refunded to employees who terminated with less than 15 years of service.

This is the third valuation for which stocks are being valued under the 4-Year Market Adjustment Method. The method was first used in 1993 with an initial value equal to market value. The 1995 valuation is the second in which a phase-in is used on gains and losses.

The combined realized and unrealized gain/(loss) on stocks for 1993 was a gain of \$125,257,957. The corresponding result for 1994 was a loss of \$(51,841,975). These gains/(losses) are phased-in at 25% per year, which means 75% of the 1994 loss, \$(38,881,481) and 50% of the 1993 gain, \$62,628,979, are excluded from 1995 valuation assets. The stock portion of valuation assets equals market value of stocks less the excluded gains/(losses). The resulting value is \$1,807,498,538. When the method has been in place for four years there will be exclusions for gains or losses from the prior three years: 75% for the prior year, 50% for the second prior year, and 25% for the third prior year.

After determining total valuation assets, the Health Care Stabilization Fund balance is subtracted to obtain the assets used for the pension and disability rate percents. The Health Care Stabilization Fund was created effective January 1, 1992, with \$150 million 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





scale assumption.

percentages compare to an average expected increase of 5.4% based upon the age-graded salary

members was, as noted above, 5.1% for police and 4.7% for firemen. These increase

The increase during the past year in the average annual current salary of active

description of the actuarial cost method are presented in Table 4.

are the same as those employed in the prior evaluation. A summary of the assumptions and a

The actuarial assumptions and the actuarial cost method used in the instant evaluation

\$207,654,800.

benefit payments, and expenses, is \$376,538,700 (Item (4)) compared to actual growth of

growth in valuation assets due to investment performance, based on accrual basis contributions,

compares to the interest rate assumption of 8.25%. Also, as is indicated in Table 6, the expected

assets, prior to the allocation of assets to the Health Care Stabilization Fund. This return

method at both December 31, 1993 and December 31, 1994. The calculation also involves total

calculation of this rate of return uses valuation assets under the 4-Year Market Adjustment

During 1994, the rate of return on valuation assets was approximately 4.55%. The

This results in valuation assets of \$2,571,300,000 for police and \$2,054,200,000 for firemen.

due to investment results in proportion to expected growth based upon the valuation interest rate.

Table 6. This development is based upon an allocation of the actual change in valuation assets

The allocation of the valuation assets between police and firemen is developed in

rounded to the nearest \$100,000, are \$4,625,500,000.

police and \$75,674,600 for firemen. After excluding this amount, the resulting valuation assets,

premiums, are debited to the fund. The fund value as of December 31, 1994 is \$108,891,000 for

E. EVALUATION RESULTS

Table 1 summarizes the January 1, 1995 evaluation results and sets forth the actuarially determined current rate per cent of contribution applicable to the calendar year commencing January 1, 1995. 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 \$4,348,200,000 for police and \$3,409,200,000 for firemen (Item B.4.). Thus, the combined actuarial present value of future benefits (for both police and firemen) approximates \$7.8 billion.

In Section C, we show the development of the current rate per cent for disability and pension benefits, based upon this January 1, 1995 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 \$213,301,582 and represents the outstanding principal as of December 31, 1994 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 \$105,600,000 for police and \$107,700,000 for firemen, rounded to the nearest \$100,000.



for police and 33.5% for firemen.

Medicare benefits. As can be seen, the total current rate per cent with respect to 1995 is 36.26%

combination of the figures for disability and pension benefits and for health care plan and

item D.2. of Table I shows the total current rate per cent, and represents a

commentary.

to be 6.50%. Additional discussion of health care funding is provided in Section G of this

effective January 1, 1992, the current rate per cent for health care has been defined by the Board

Medicare benefits. In conjunction with the establishment of the Health Care Stabilization Fund

item D.1. of Table I shows the current rate per cent for health care plan and

met entirely by additional appropriations from the State of Ohio.

Benefit Fund established by Amended House Bill No. 1010, since these additional costs will be

include the cost of the 1972 pension increases precipitated by House Bill No. 284 or the Death

Fund House Bill No. 694 and House Bill No. 215. As indicated earlier, these figures do not

credit; (5) an appropriation to fund House Bill No. 204; and (6) an appropriation to partially

annual to fund for part of the additional cost arising from the "purchase": of military service

appropriation of \$1.2 million per annum; (4) a State of Ohio appropriation of an additional \$1.2 million per

include: (1) the 10% contribution for active members; (2) the original State of Ohio

table, these figures are 29.76% for police and 27.05% for firemen. The current rate per cents

pension benefits (i.e., excluding consideration of health care plan benefits). As indicated in the

item C.6. of Table I shows the current rate per cent for 1995 for the disability and

increased by 65% of that amount, or \$117,000,000.

liability. The employer accrued liability is reduced by the \$180,000,000, and Fund assets are

dollar (a 35% discount). Together, these cities had approximately \$180,000,000 in accrued

under House Bill No. 38. Several cities have paid off their remaining balances at 65 cents on the

The \$213,301,582 reflects a large decrease in the accrued liability due to settlements

F. COMPARISON OF EVALUATION RESULTS WITH PREVIOUS YEAR

Table 5 sets forth a comparison of evaluation results for 1994 and 1995. Section A indicates that the number of active members has increased by 221 for police and by 171 for firemen. Also, the number of participants currently receiving benefits has increased by 279 for police and 158 for firemen. As a percentage of total membership, 43.2% of police members are currently receiving benefits, compared to 42.9% last year; the corresponding percentages for firemen are, respectively, 45.4% and 45.4%.

The actuarial present values of future benefits have increased by \$259.9 million for police and \$181.4 million for firemen as is indicated in Section B. Valuation assets, in turn, increased by \$139.3 million for police and \$128.4 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 28.28% to 29.76%, or by 1.48%, for police, while for firemen the corresponding rate has increased from 26.12% to 27.05%, for an increase of 0.93%.

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, 1994	28.28%	26.12%
2. Actuarial (gains) or losses and changes in membership	(.27)	(.77)
3. Actual investment growth versus expected growth	1.65	1.58
4. Settlements of Employer Accrued Liability	.10	.12
5. Rate per cent as of January 1, 1995	29.76%	27.05%





valuation assets to determine valuation assets for pension and disability benefits, i.e. the Health personnel. As mentioned earlier in this report, Health Care Fund assets are deducted from total Fund. The balance in this fund as of December 31, 1994 is \$184,565,600 as developed by Fund

This 1995 valuation is the third to recognize the establishment of the Health Care

expenditures are assumed to occur at the end of the month.

assumed to be made at the beginning of the month and employer contributions and health care

have established an accounting procedure under which retiree and survivor contributions are

million for 1994. Interest is credited at the valuation rate, currently 8.25%. Fund personnel

credited with retiree and survivor health care contributions, which were approximately \$4.9

In addition to the 6.50% employer contribution, the Health Care Fund is also

expense were limited to 6.50% of payroll and all actuarial assumptions were realized.

May 17, 1991, which indicated that the Fund could achieve long-term solvency if health care

This 6.50% was derived from the results of the Wyatt Company's 35-Year Forecast Study, dated

that the employer contribution to be allocated to this fund would be 6.50% of payroll each year.

In conjunction with the establishment of the Health Care Fund, the Board directed

used to pay pension and disability benefits.

segregation, for accounting purposes, of the assets used to pay health care benefits from those

Stabilization Fund with an initial allocation of \$150 million. This Health Care Fund allows the

Effective January 1, 1992 the Board of Trustees established the Health Care

G. HEALTH CARE FUNDING

the accrued liability, which is effectively treated as an asset, is decreased by the 35% discount.

However, the long-term effect of the settlements is expected to be positive, due to expected

investment earnings on the settlement payments received.

The settlements of employer accrued liability initially raise the rate per cents because

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.

The 15-Year Forecast Study presented in a report dated November 7, 1994 shows the expected balance in the Health Care Fund at the beginning of each year for the period 1994 through 2009 under various assumption/active membership growth scenarios. Table 7 presents results under 1995 valuation assumptions, a 1.5% per year assumed growth in active membership and modest health care inflation assumptions. Under this scenario the Health Care Fund is expected to be exhausted sometime during the year 2009.

The forecast also shows projected health care costs as a percentage of payroll under the various scenarios. Under the 1.5% active membership growth/modest health care inflation scenario, the pay-as-you-go rate is projected to be 8.74% during the year 2004 and 9.61% during the year 2009. Also, the projected net health care costs for 1994 was \$60.2 million, and for 1995, \$64.6 million. The Health Care Fund's expected balance as of January 1, 1995 was \$171 million, and, as of January 1, 1996, \$189 million.

The actual net health care cost for 1994 was \$60.5 million and the actual balance as of January 1, 1995 was \$184.6 million. For the first nine months of 1995, the net health care cost was \$49.2 million, which produces an expected annual net cost of \$65.6 million for 1995.





1995 expected results, compared to the actual results, are as follows:

statutory rates should be adequate at least through 2003. Under this scenario the January 1,

returns of 9.4% each year thereafter, presented in Table 7 of the Forecast Study, showed that

membership growth, modest health care inflation, and a 0% asset return in 1994 and projected

The 15-Year Forecast Study scenario, which included an annual 1.5% active

whether or not the current statutory rates are adequate, for the valuation year in question.

That determination then, along with the Forecast Study results, allows for a determination as to

determine which of the scenarios in the forecast study most closely models actual experience.

contribution rates. Specifically, the evaluation results provide the information needed to

Year Forecast Study, provide a basis for assessing the adequacy of the current statutory employer

The rate per cents developed in these evaluation reports, in conjunction with the 15-

H. INADEQUACY OF STATUTORY RATES

the health care component of the rate per cent at 6.5% for at least the next 10 to 15 years.

implies that it is reasonable to assume that the Health Care Fund will provide funds to stabilize

Care Fund as of January 1, 1996 should be modestly higher than the expected balance. This

under the 1.5% growth/modest inflation scenario of the forecast. Also, the balance in the Health

So, it appears that actual results for 1994 and 1995 are very close to those predicted

The Health Care Fund balance as of September 30, 1995 was \$197.7 million.

	<u>January 1, 1995</u> <u>Forecast-Table 7</u>	<u>Actual</u>
1. Active Population	24,554	24,583
2. 1995 Payroll	\$1,016,129,800	\$1,034,000,000 (estimated based on 9 months actual)
3. Present Value of Future Pay	\$10,193,000,000	\$10,303,100,000
4. Present Value of Future Benefits	\$7,726,500,000	\$7,757,400,000
5. Market Value of Assets	\$4,766,200,000	\$4,717,400,000
6. Funded Status (Item 5/Item 4)	61.69%	60.81%

As is apparent, the 1995 results agree closely with the forecast results under the indicated scenario. Accordingly, we conclude that for 1995 the statutory rates are adequate.

However, an adjustment should be made to eliminate the disparity between the police and firemen statutory rates. The 1995 actuarial rate for police of 36.26% compares to the actuarial rate for firemen of 33.55%, for an excess of 2.71%. In 1994, the excess was 2.16%, and in 1993, 1.03%. The statutory rates, however, after considering approximately \$4.4 million in state subsidies are about 29.8% for police and 34.4% for firemen. These various rates strongly suggest that a change be made to the statutory rates that equalizes the rate for both police and firemen.

That rate would be 21.5% plus, for 1995, about .4% for state subsidy plus the 10% member contribution rate, for a total of 31.9%. The combined actuarial rate for 1995 would be 35.1%. The 35.1% is 3.2% in excess of the 31.9%. This 3.2% however, when compared to an estimated payroll of \$1,034 million, amounts to \$33,088,000, which is about .7% of the market value of assets. This small percentage is additional support for the conclusion stated above, namely, that the 1995 statutory rates are adequate.





...and the Board of Trustees will be asked to consider this evaluation.

As a final note, it would be well to remember that the Board of Trustees has the authority to change the contribution rates.

It is also important to remember that the Board of Trustees has the authority to change the contribution rates.

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Associate - Society of Actuaries

Peter N. Dorsay

Peter N. Dorsay

Fellow - Society of Actuaries

Wayne E. Dydo

Wayne E. Dydo

THE WYATT COMPANY

Respectfully submitted,

report in determinations concerning the appropriateness of the actual employer contribution rates.

In conclusion, we recommend that the Board of Trustees consider this evaluation.

* * * * *

Table 1

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Summary of Evaluation Results as of January 1, 1995 1/

	<u>Police</u>	<u>Firemen</u>
A. <u>MEMBERSHIP</u>		
1. Number of Active Members	14,072	10,511
2. Number of Retirants	7,397	6,224
3. Number of Beneficiary-Survivors		
a. Surviving Spouses and Beneficiaries	2,951	2,349
b. Children	338	173
c. Total Beneficiary-Survivors	3,289	2,522
4. Total Membership <u>2/</u>	24,758	19,257
B. <u>SUMMARY OF ACTUARIAL PRESENT VALUES OF FUTURE BENEFITS</u>		
1. Active Members <u>3/</u>	\$2,688,800,000	\$2,081,100,000
2. Retirants	1,530,500,000	1,233,200,000
3. Beneficiary-Survivors	128,900,000	95,000,000
4. Actuarial Present Value for All Members	4,348,200,000	3,409,200,000
C. <u>DEVELOPMENT OF CURRENT RATE PER CENT FOR DISABILITY AND PENSION BENEFITS</u>		
1. Actuarial Present Value of Future Benefits	\$4,348,200,000	\$3,409,200,000
2. Valuation Assets	2,571,300,000	2,054,200,000
3. Actuarial Present Value of Employer Accrued Liability	105,600,000	107,700,000
4. Actuarial Present Value of Active Member Future Compensation	5,657,900,000	4,645,200,000



D. TOTAL CURRENT RATE PER CENT	
6. Current Rate Per Cent for Disability and Pension Benefits	27.05%
5. Net Rate Per Cent, Prior to Expense Loading ((Item C1 - C2 - C3) ÷ C4)	26.85%
4. Current Rate Per Cent for Police Firemen	29.54%
3. Net Rate Per Cent, Prior to Expense Loading ((Item C1 - C2 - C3) ÷ C4)	29.76%
2. Total Current Rate Per Cent (Item C6 + D1)	36.26 33.55
1. Current Rate Per Cent for Health Care Plan and Medicare 4/	6.50 6.50

Table I
(continued)

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, 1995
 (Females are indicated in parentheses and are included in adjacent totals)

Attained Age Group	0-4 1/ 1/	5-9	10-14	15-19	20-24	25-29	30- Over	Totals	Average Annual Salary		
									As of January 1, 1995	As of January 1, 1994	As of January 1, 1994
Under 25	331(39)	1(0)	-	-	-	-	-	332(39)	\$27,094	\$24,980	
25 - 29	1,828(194)	343(33)	3(0)	-	-	-	-	2,174(227)	33,516	31,717	
30 - 34	1,088(135)	1,317(116)	213(29)	1(0)	-	-	-	2,619(280)	37,691	35,709	
35 - 39	394(63)	685(75)	1,008(112)	381(29)	5 (0)	-	-	2,473(279)	40,549	38,537	
40 - 44	163(20)	330(33)	637(74)	1,105(54)	361 (9)	11(0)	-	2,607(190)	42,159	40,060	
45 - 49	100(6)	109(12)	195(30)	491(39)	1,065(14)	467(2)	9(0)	2,436(103)	44,265	42,328	
50 - 54	23(1)	47(5)	33(5)	65(5)	264(7)	518(5)	89(1)	1,039(29)	44,831	43,120	
55 - 59	11(0)	18(1)	12(0)	13(0)	24(1)	123(1)	97(1)	298(4)	43,868	41,241	
60 - 64	3(0)	8(0)	5(0)	6(0)	10(0)	11(1)	29(0)	72(1)	40,335	39,846	
65 & Over	2(0)	1(0)	-	-	1(0)	-	18(0)	22(0)	47,463	42,443	
Total	3,943(458)	2,859(275)	2,106(250)	2,062(127)	1,730(31)	1,130(9)	242(2)	14,072(1,152)	\$39,951	\$38,017	
									January 1, 1995	January 1, 1994	
Average Attained Age											
Average Hire Age											
	38.6										
	26.5										

1/ Includes 858 members hired in 1994.

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Age Group	Males	Females	Total	as % of TOTAL	January 1, 1995	As of January 1, 1994	Annual Rate of Pension J/	
							Col. (4)	As of Col. (4)
Under 40	88	24	112	11%	\$ 1,826,619	\$ 2,019,969		
40 - 44	219	24	243	3	4,462,659	4,639,132		
45 - 49	571	28	599	8	13,105,889	12,460,430		
50 - 54	1,285	12	1,297	17	32,000,972	29,263,340		
55 - 59	1,230	9	1,239	17	30,735,336	27,316,370		
60 - 64	1,069	13	1,082	15	23,615,830	23,306,302		
65 - 69	1,244	8	1,252	17	22,840,674	21,741,280		
70 - 74	776	10	786	11	11,960,333	10,102,989		
75 - 79	405	8	413	5	5,489,265	4,987,106		
80 - 84	265	2	267	4	3,067,979	2,782,693		
85 - 89	74	-	74	1	714,790	648,719		
90 & Over	32	1	33	1	341,081	243,035		
TOTAL	7,258	139	7,397	100%	\$ 150,161,440	\$ 139,511,376		
Average Age Attained	61.5	53.1	61.4	61.5	January 1, 1994	\$19,422	Average Annual Benefit	
					January 1, 1995	20,300		

Distribution of Retirees by Attained Age Group
and Sex as of January 1, 1995

Police

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Table 2(a)
(continued)

Table 2(a)
(continued)

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Police

Distribution of Beneficiary-Survivors by Attained Age Group
as of January 1, 1995

<u>Attained Age Group</u> (1)	<u>Number Receiving Benefits</u> (2)	<u>Col. (2) as % of TOTAL</u> (3)
A. SURVIVING SPOUSES 1/		
Under 40	37	1%
40 - 44	52	2
45 - 49	80	3
50 - 54	117	4
55 - 59	197	8
60 - 64	259	10
65 - 69	369	14
70 - 74	407	16
75 - 79	395	15
80 - 84	321	12
85 - 89	224	9
90 & Over	152	6
TOTAL	2,610	100%
Average Attained Age	71.4	
B. BENEFICIARIES RECEIVING OPTIONS		
Under 35	6	2%
35 - 39	5	2
40 - 44	14	4
45 - 49	22	7
50 - 54	39	11
55 - 59	48	14
60 - 64	62	18
65 - 69	66	19
70 - 74	45	13
75 - 79	27	8
80 - 84	6	2
85 - 89	1	-
90 & Over	-	-
TOTAL	341	100%
C. CHILDREN	338	

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, 1995
(Females are indicated in parentheses and are included in adjacent totals)

Attained Age Group	Average Annual Salary						
	As of January 1, 1995	As of January 1, 1994	30- Over	Totals	15-19	20-24	25-29
0-4 1/	5-9	10-14					
Under 25	208(2)	2(0)	-	-	-	-	-
25 - 29	895(14)	319(8)	1(0)	-	-	-	-
30 - 34	858(22)	955(29)	263(6)	8(0)	-	-	-
35 - 39	332(12)	717(26)	832(6)	305(2)	2(0)	-	-
40 - 44	117(5)	288(11)	597(6)	787(0)	216(1)	1(0)	-
45 - 49	33(1)	82(5)	117(5)	412(0)	835(1)	185(0)	3(0)
50 - 54	13(0)	16(2)	22(0)	50(0)	327(0)	347(0)	59(0)
55 - 59	3(0)	1(0)	6(0)	9(0)	46(0)	94(0)	96(0)
60 - 64	1(0)	2(0)	4(0)	8(0)	4(0)	25(0)	46(0)
65 & Over	-	0(0)	-	-	4(0)	4(0)	6(0)

January 1, 1995

Average Attained Age

1/ Includes 475 members hired in 1994.

Table 2(b)
(continued)

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Firemen

Distribution of Retirants by Attained Age Group
and Sex as of January 1, 1995

<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, 1995</u> (6)	<u>As of January 1, 1994</u> (7)
Under 40	42	3	44	1%	\$ 718,632	\$ 842,754
40 - 44	89	3	92	1	1,603,587	1,830,721
45 - 49	229	1	230	4	5,003,304	5,365,739
50 - 54	791	-	791	13	19,557,708	18,678,436
55 - 59	1,027	-	1,027	16	26,060,156	24,389,840
60 - 64	1,103	-	1,103	18	25,257,516	24,400,070
65 - 69	1,371	-	1,371	22	26,298,000	24,572,814
70 - 74	734	-	734	12	11,658,135	10,102,232
75 - 79	432	-	432	7	5,708,764	5,780,881
80 - 84	289	-	289	4	3,388,723	2,936,957
85 - 89	82	-	82	1	853,195	658,063
90 & Over	29	-	29	1	237,755	225,750
TOTAL	6,218	6	6,224	100%	\$126,345,472	\$119,784,264

Average Attained Age	
January 1, 1994	63.9
January 1, 1995	64.2
39.6	63.9
40.6	64.1

Average Annual Benefit	January 1, 1994	\$19,477
	January 1, 1995	20,300

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



C. CHILDREN

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		TOTAL
Under 35	1%	100%
35 - 39	2	257
40 - 44	2	
45 - 49	6	
50 - 54	6	
55 - 59	9	
60 - 64	12	
65 - 69	19	
70 - 74	22	
75 - 79	40	
80 - 84	57	
85 - 89	6	
90 & over	2	
	1	

B. BENEFICIARIES RECEIVING OPTIONS

Average Attained Age 73.3

		TOTAL
Under 40	1%	100%
40 - 44	1	2,092
45 - 49	2	
50 - 54	4	
55 - 59	6	
60 - 64	9	
65 - 69	14	
70 - 74	16	
75 - 79	341	
80 - 84	16	
85 - 89	9	
90 & Over	7	
	152	

A. SURVIVING SPOUSES J/

Age Group	Benefits Col. (2) as Receiving Number	% of TOTAL Col. (2)
Attained as of January 1, 1995	25	1%
40 - 44	23	
45 - 49	44	
50 - 54	73	
55 - 59	112	
60 - 64	187	
65 - 69	298	
70 - 74	333	
75 - 79	341	
80 - 84	16	
85 - 89	9	
90 & Over	7	

as of January 1, 1995

Distribution of Beneficiary-Survivors by Attained Age Group

Firemen

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Table 2(b)
(continued)

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:
(a) Eligibility:		Upon death to any member of the Fund, active or retired,
		(i) Surviving Spouse's Benefit - An annual amount equal to \$4,920.
8. Flat Death Benefits		
		(a) Eligibility:
		25 years of service.
		(b) Benefit:
		Commening at age 48, the accrued Service Retirement Benefit.
Vesting After 25 Years		
		(a) Eligibility:
		15 years of service.
		(b) Benefit:
		Commening 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 15 Years		
		(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.
7. Termination of Service		
		(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.
6. Ordinary Disability (Off duty)		
		(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.
(continued)		
Table 3		

Table 3
(continued)

- (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:





12. Group Health Insurance and Medicare:
Commening 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, 1988, the first annual increase in the Consumer Price Index, plus unused prior increases, equals or exceeds 3%. The first annual increase is paid July 1, 1988. Beginning in 1989, the \$18,000 limit is increased by \$500 each year.
Retirees prior to July 24, 1986 whose annual 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.
Effective July 1, 1989, the minimum annual pension needed to survive the current annual pension to \$4,200.
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
February 28, 1980, have pension increases of \$46 with escalating benefits) who retired prior to
Effective January 1, 1982, retirees (excluding those with escalating benefits) who retired prior to January 1, 1974 have pension increases of 5% of the first
Effective July 1, 1979, retirees (excluding those with automatic escalating provision,
(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,
Effective January 1, 1982, retirees (excluding those with escalating benefits) who retired prior to January 1,
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.
Effective July 1, 1989, the minimum annual pension needed to survive the current annual pension to \$4,200.
Retirees prior to July 24, 1986 whose annual 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.
Effective July 1, 1988, the first annual increase in the Consumer Price Index, plus unused prior increases, equals or exceeds 3%. The first annual increase is paid July 1, 1988. Beginning in 1989, the \$18,000 limit is increased by \$500 each year.
Effective January 1, 1977, the Fund will pay the premium for supplemental Medicare (Part B).

(continued)

Table 3

Table 3
(continued)

- 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.



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

Age	Police	Firemen
50	.012847	.004884
45	.009658	.004385
40	.014759	.007482
35	.022161	.012432
30	.031525	.015071
25	.047001	.016655

Age	Police	Firemen
55	.004377	.004377
50	.002773	.002773
45	.001568	.001568
40	.000845	.000845
35	.000569	.000569
30	.000406	.000406
25	.000307	.000307

(b) **Termination:** The rates of termination are based upon the results of the 1987-1991 Quintennial Evaluation. The following rates at selected ages are illustrative:

Age	Police	Firemen
55	.004377	.004377
50	.002773	.002773
45	.001568	.001568
40	.000845	.000845
35	.000569	.000569
30	.000406	.000406
25	.000307	.000307

(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:

Age	Police	Firemen
55	.004377	.004377
50	.002773	.002773
45	.001568	.001568
40	.000845	.000845
35	.000569	.000569
30	.000406	.000406
25	.000307	.000307

B. **Rates and Other Assumptions Among Active Members:** 1. **Before Retirement -**
A rate of 8.25% per annum, compounded annually. A. **Interest:** Summary of Actuarial Assumptions and Actuarial Cost Method

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Table 4

Table 4
(continued)

(c) Disability:

The rates of disability are based upon the results of the 1987-1991 Quinquennial Evaluation and upon the disability experience for 1992-1994. The following rates at selected ages are illustrative:

<u>Age</u>	<u>Rate of Disability</u>	
	<u>Police</u>	<u>Firemen</u>
25	.001175	.000236
30	.002370	.001254
35	.005326	.002934
40	.011544	.007136
45	.021970	.015119
50	.033918	.028520
55	.051672	.046271

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:

	<u>Police</u>	<u>Firemen</u>
On duty permanent and total	22%	27%
On duty partial	75	70
Off duty ordinary	3	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 are based upon the experience during the periods 1989 through 1994. These rates are applicable after the member has satisfied the conditions for retirement. The rates are as follows:

<u>Age(s)</u>	<u>Police Rate</u>	<u>Firemen Age(s)</u>	<u>Firemen Rate</u>
48	0.35	48	0.35
49 - 53	0.25	49 - 59	0.25
54 - 60	0.20	60 - 64	0.35
61 - 64	0.25	65	1.00
65	1.00		





(continued)		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:	
Age	Probability of Mortality	55	0.008753
60	0.013012	65	0.020979
65	0.033316	70	0.033316
70	0.056741	75	0.056741
75	0.099390	80	0.158333
80	0.158333	85	0.236172
85	0.199390	90	0.236172
90	0.236172	95	0.316061
The mortality, after retirement of active members expected to go on disability retirement, is based on the results of the 1987-1991 Retirement Evaluation. The rates are based on the Quinquennial Mortality Table projected to 1980 using Scale C and include loads for disability.		(b) On Disability Retirement Pension:	
Age	Probability of Mortality	35	0.008424
40	0.009636	45	0.016736
50	0.035482	55	0.016736
55	0.060183	60	0.09636
60	0.136516	65	0.16736
65	0.20027	70	0.236172
70	0.265027	75	0.29516
75	0.32516	80	0.35516
80	0.38516	85	0.41516
85	0.44516	90	0.47516
90	0.50516	95	0.53516

Table 4
(continued)

**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:

<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





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

3. Dependent Children -

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

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:

Surviving Spouses -

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
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Probability of Mortality
Age

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

Surviving Spouses -

Probabilities Among Survivors:

Table 4
(continued)

Table 4
(continued)

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.



(Continued)

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Table 5

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Comparison of Evaluation Results for 1994 and 1995

	1995		1994	
	<u>Police</u>	<u>Firemen</u>	<u>Police</u>	<u>Firemen</u>
A. MEMBERSHIP				
1. Number of Active Members	14,072	10,511	13,851	10,340
2. Number of Retirants and Beneficiary-Survivors	10,686	8,746	10,407	8,588
3. Total Membership	24,758	19,257	24,258	18,928
B. ACTUARIAL PRESENT VALUE AND ASSETS (000,000 omitted)				
1. Present Value of Future Benefits	\$4,348.2	\$3,409.2	\$4,088.3	\$3,227.8
2. Valuation Assets	2,571.3	2,054.2	2,432.0	1,925.8
3. Present Value of Employer Accrued Liability	105.6	107.7	175.2	167.8
4. Present Value of Active Member Future Compensation	5,657.9	4,645.2	5,276.3	4,375.6
C. CURRENT RATE PER CENT				
1. Disability and Pension Benefits	29.76%	27.05%	28.28%	26.12%
2. Health Care Plan and Medicare 1/	6.50	6.50	6.50	6.50
3. Total	36.26	33.55	34.78	32.62





See footnote on next page.

Asset Allocation for 1995		Assets		1/1/94 Valuation		Transactions during 1994	
		Policie	Firemen	Total		a. Employee contributions	b. Net employee contributions
(1)	1/1/94 Valuation	\$2,528,551,516	\$1,997,204,062	\$4,525,755,578			
(2)	Transactions during 1994					a. Employee contributions	b. Net employee contributions
						c. Retiree medical contributions	d. Local Funds receipts
						e. Benefit payments and expenses	f. Total transactions
(3)	Item 1 plus Item 2(f)	2,564,320,872	2,038,133,934	4,602,454,806			
(4)	Expected Investment Growth	210,080,986	166,457,692	376,538,678			
(5)	Valuation Assets, Total					a. Book Value Excluding Stocks	b. Market Adjusted Stock Value /
(6)	Actual Investment Growth					c. Contribution Returns Due	d. Total
(7)	Allocation of Item 6 in proportion to Item 4	115,856,171	91,798,649	207,654,820			
(8)	Health Care Stabilization Fund	108,890,966	75,674,620	184,565,586			
(9)	1/1/95 Valuation Assets (Item 3 plus Item 7 less Item 8)	2,571,286,077	2,054,257,963	4,625,544,040			

The following table presents a development of the allocation of assets between police and firemen as of January 1, 1995.

Asset Allocation for 1995

POLICE AND FIREMEN'S DISABILITY AND PENSION FUND OF OHIO

Table 6

Table 6
(continued)

<u>1/ The Market Adjusted Stock Value is developed as follows:</u>	<u>12/31/92</u>	<u>12/31/93</u>	<u>12/31/94</u>
1. Unrealized Gain/(Loss)			
a. Market Value of Stocks	\$1,468,043,276	\$1,620,250,036	\$1,831,246,036
b. Book Value of Stocks	1,175,107,740	1,284,053,979	1,611,504,222
c. Cumulative Unrealized Gain/(Loss) (1.a - 1.b)	292,935,536	336,196,057	219,741,814
d. Annual Unrealized Gain/(Loss)		43,260,521	(116,454,243)
2. Annual Realized Gain/(Loss) Reported by Fund		81,997,436	64,612,268
3. Total Gain/(Loss)		125,257,957	(51,841,975)
4. Gain/(Loss) Excluded from 1995 Market Value			
a. For 1994 (.75 x Item 3)			(38,881,481)
b. For 1993 (.50 x Item 3)			62,628,979
c. For Prior Years			N/A
c. Total			23,747,498
5. Market Adjusted Stock Value (1.a - 4.d)			1,807,498,538



