# Ross <br> REPORT ON THE ANNUAL VALUATION OF THE <br> SCHOOL EMPLOYEES RETIREMENT SYSTEM <br> OF OHIO 

PREPARED AS OF JUNE 30, 2004

November 10, 2004
Board of Trustees
School Employees' Retirement
System of Ohio
300 East Broad St., Suite 100
Columbus, OH 43215-3746
Dear Members of the Board:

Presented in this report are the results of the annual actuarial valuation of the School Employees Retirement System of Ohio. The purpose of the valuation is to measure the System's funding progress and to determine the required actuarial level of contributions for the basic benefits of SERS for the year ending June 30, 2004.

The date of the valuation was June 30, 2004.
The valuation was based upon data, furnished by the Executive Director and the SERS staff, concerning active, inactive and retired members along with pertinent financial information. The complete cooperation of the SERS staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the presentation of contribution rates on page 1 and the comments on page 7.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent qualified actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems.

The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board and generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the system, and on actuarial assumptions that are individually and in the aggregate internally consistent and reasonably based on the actual experience of the system.

Respectfully submitted,



Philip Bonanno, E.A.
Director, Consulting Actuary

## TABLE OF CONTENTS



## REPORT ON THE ANNUAL VALUATION OF THE SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO PREPARED AS OF JUNE 30, 2004

## SECTION I-SUMMARY OF PRINCIPAL RESULTS

1. This report, prepared as of June 30,2004 , presents the results of the annual actuarial valuation of the System which values the basic benefit provisions including post-retirement death benefits and Medicare Part-B reimbursements. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below.

## SUMMARY OF PRINCIPAL RESULTS

| VALUATION DATE <br> Active members included in valuation | 6/30/04 |  | 6/30/03 |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| Number |  | 123,139 |  | 122,315 |
| Annual compensation | \$ | 2,394,125,140 | \$ | 2,302,288,847 |
| Retirees |  |  |  |  |
| Number |  | 60,569 |  | 59,999 |
| Annual allowances | \$ | 491,618,849 | \$ | 461,212,013 |
| Deferred Vesteds |  |  |  |  |
| Number |  | 9,121 |  | 8,796 |
| Annual deferred allowances | \$ | 26,048,188 | \$ | 24,377,942 |
| Assets (net of Health Care Assets) |  |  |  |  |
| Market related actuarial value | \$ | 8,666,538,476 | \$ | 8,771,784,331 |
| Market value | \$ | 8,264,582,923 | \$ | 7,218,857,541 |
| Unfunded accrued liability | \$ | 2,584,340,799 | \$ | 1,862,689,769 |
| Employer contribution rate |  |  |  |  |
| Normal |  | 4.69\% |  | 4.68\% |
| Accrued liability |  | 5.88 |  | 4.41 |
| Total |  | 10.57\% |  | 9.09\% |
| Accrued liability payment period |  | 30 years |  | 30 years |

2. The Board has set a total contribution rate of $24 \%$ of payroll, $14 \%$ from employers and $10 \%$ from employees. Contributions in excess of those required to support the basic benefits of SERS are allocated to support health care benefits provided SERS retirees.
3. The valuation balance sheet showing the results of the valuation is given in Section III.
4. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains or losses during the valuation year are given in Section V and the rates of contribution payable by employers are given in Section VI.
5. There were no changes in benefit provisions, actuarial assumptions, or methods since the last valuation.
6. Schedule A of this report presents the development of the actuarial value of assets. Schedule B details the actuarial assumptions and methods employed. Schedule $C$ gives a summary of the benefit and contribution provisions of the plan.
7. The table on the following page provides a history of some pertinent figures.
8. All historical information and data shown in this report with a valuation date prior to June 30, 2002 were obtained from the previous actuary's valuation report.
9. Valuations results as of June 30,2001 were restated by the previous actuary after issuance of the valuation report. This report reflects those restatements.
2

## SECTION II - MEMBERSHIP DATA

Data regarding the membership of the System for use as a basis for the valuation were furnished by the System's office. The following tables summarize the membership of the system as of June 30, 2004 upon which the valuation was based. Detailed tabulations of the data are given in Schedule D.

Active Members

| Number | Payroll | Group Averages |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Age | Service |  |
| 123,139 | $\$ 2,394,125,140$ | $\$ 19,442$ | 46.3 | 8.8 |

The total number of active members includes 70,279 vested members and 52,860 non-vested members.

## Retired Lives

|  |  | Annual <br> Type of Benefit Payment |  | No. |
| :--- | ---: | ---: | ---: | ---: |
| Benefits | Group Averages |  |  |  |
|  |  |  | Benefit | Age |
| Retirement | 51,323 | $\$ 412,910,368$ |  | $\$ 8,045$ |
| Disability | 5,180 | $56,708,712$ | 74.8 |  |
| Survivor | 4,066 | $21,999,769$ | 10,948 | 63.2 |
|  |  |  | 5,411 | 70.3 |
| Total in SERS | $\mathbf{6 0 , 5 6 9}$ | $\$ 491,618,849$ | $\mathbf{\$ 8 , 1 1 7}$ | $\mathbf{7 3 . 5}$ |

This valuation also includes 85,737 inactive members eligible for a contribution refund only (including 33,021 members not reported in the data files who had completed 1 or more years of service before terminating). Their contributions totaled $\$ 84,106,703$ as of June 30,2004 . In addition, there are 7,722 reemployed retirants with contributions of $\$ 18,237,174$, and 9,121 terminated vested members with annual deferred pension benefits of $\$ 26,048,188$.

## SECTION III-VALUATION BALANCE SHEET

The following valuation balance sheet shows the assets and liabilities of the retirement system as of the current valuation date of June 30, 2004 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2003. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date. The development of the actuarial value of assets is presented in Schedule A.

VALUATION BALANCE SHEET
SHOWING THE ASSETS AND LIABILITIES OF THE SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

| ASSETS | JUNE 30, 2004 | JUNE 30, 2003 |
| :---: | :---: | :---: |
| Current actuarial value of assets | \$ 8,666,538,476 | \$ 8,771,784,331 |
| Future member contributions | \$ 2,058,536,804 | \$ 1,999,468,748 |
| Prospective employers' contributions |  |  |
| Normal contributions | \$ 900,909,344 | \$ 872,373,699 |
| Unfunded accrued liability contributions | \$ 2.584,340,799 | \$ 1,862,689,769 |
| Total prospective contributions | \$ 3,485,250,143 | \$ 2,735,063,468 |
| Total assets | \$ 14,210,325,423 | \$ 13,506,316,547 |
| LIABILITIES |  |  |
| Present value of benefits payable on account of present retired members and beneficiaries | \$ 5,173,265,691 | \$ 4,880,716,092 |
| Present value of benefits payable on account of active members | 8,699,838,197 | 8,297,816,978 |
| Present value of benefits payable on account of inactive and deferred vested members for service rendered before the valuation date | 337,221,535 | 327,783,477 |
| Total liabilities | \$ 14,210,325,423 | \$ 13,506,316,547 |

## SECTIONIV - COMMENTS ON VALUATION

The valuation balance sheet gives the following information with respect to the funds of the System as of June 30, 2004.

Total Assets
Current actuarial assets as of the valuation date equaled $\$ 8,666,538,476$. Future member contributions were valued to be $\$ 2,058,536,804$. Prospective employers' contributions were calculated to be $\$ 3,485,250,143$, of which $\$ 900,909,344$ is attributable to service rendered after the valuation date (normal contributions) and $\$ 2,584,340,799$ is attributable to service rendered before the valuation date (unfunded accrued liability contributions).

Therefore, the balance sheet shows the present value of current and future assets of the System to be $\$ 14,210,325,423$ as of June 30, 2004.

## Total Liabilities

The present value of benefits payable on account of presently retired members and beneficiaries totaled $\$ 5,173,265,691$ as of the valuation date. The present value of future benefit payments on behalf of active members amounted to $\$ 8,699,838,197$. In addition, the present value of benefits for inactive members, due to service rendered before the valuation date, was calculated to be $\$ 337,221,535$.

Therefore, the balance sheet shows the present value for all prospective benefit payments under the System to be $\$ 14,210,325,423$ as of June 30, 2004.

Section 3309.47 of State law requires that active members contribute $8 \%$ of annual compensation to the System, but the Board has the authority to raise the rate to $10 \%$. Effective July 1, 2003 the rate was increased from $9 \%$ to $10 \%$ of compensation.

Section 3309.49 requires that the employers contribute a certain percentage of the annual compensation of members to cover the normal contributions and a certain percentage to cover the accrued liability contributions of the System. These individual contribution percentages are established in accordance with an actuarial valuation. The sum of these normal and accrued liability contributions shall not exceed $14 \%$ of the annual compensation of all members.

The following table provides a breakdown of total and accrued liabilities, and shows the resulting unfunded actuarial accrued liability.

|  | Total Liability | Accrued Liability |
| :---: | :---: | :---: |
| Active Members |  |  |
| Retirement | \$7,199,370,140 | \$5,329,566,877 |
| Death | 121,049,679 | 77,293,312 |
| Disability | 732,990,014 | 356,887,110 |
| Termination | 497,309,073 | (122,340,545) |
| Medicare Part-B | 140,121,993 | -93,837,811 |
| Death After Retirement | 8,997,298 | 5,147,484 |
| Total | \$8,699,838,197 | \$5,740,392,049 |
| Benefit Recipients |  |  |
| Retirement/Survivor/Disability | \$4,955,868,846 | \$4,955,868,846 |
| Medicare Part-B | 197,050,568 | 197,050,568 |
| Death After Retirement | 20,346,277 | 20,346,277 |
| Total | \$5,173,265,691 | \$5,173,265,691 |
| Deferred Vested Members | 194,762,735 | 194,762,735 |
| Inactive Members | 142,458,800 | 142,458,800 |
| Total Actuarial Values | \$ 14,210,325,423 | \$ 11,250,879,275 |
| Actuarial Value of Assets |  | 8,666,538,476 |
| Unfunded Actuarial Accrued Liability |  | \$2,584,340,799 |

## SECTION V - DERIVATION OF EXPERIENCE GAINS AND LOSSES

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common.

The sources of gains and losses will be detailed in a separate report. This section shows the overall net actuarial gain or loss for the year ended June 30, 2004. Detail on the derivation of the experience gain (loss) for the year ended June 30, 2004 is shown below.
$\$$ millions
(1) UAAL* as of 06/30/03
(2) Normal cost from last valuation 110.7
(3) Actual employer contributions 231.9
(4) Interest accrual: (1) $\times .0825+[[(2)-(3)] \times .0404] \quad 148.8$
(5) Expected UAAL before changes: $(1)+(2)-(3)+(4) \quad 1,890.3$
(6) Change due to plan amendments 0.0
(7) Change due to new actuarial assumptions or methods 0.0
(8) Expected UAAL after changes: $(5)+(6)+(7) \quad 1,890.3$
(9) Actual UAAL as of $6 / 30 / 04 \quad 2,584.3$
(10) Gain (loss) (8) - (9) \$(694.0)
(11) Gain (loss) as percent of actuarial accrued liabilities at start of year ( $\$ 10,634.5$ )

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## SECTION VI-REQUIRED CONTRIBUTION RATES

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by employers to the Retirement System. The following table shows the rates of contribution payable by employers as determined from the present valuation for the 2004/2005 fiscal year.

## BREAKDOWN OF REQUIRED CONTRIBUTIONS

(expressed as percents of payroll)

|  | Basic Benefits | Post Retirement Death Benefit | Medicare Part-B | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Normal Cost |  |  |  |  |  |
| Service Retirement Benefits | 9.34\% |  |  |  |  |
| Disability Benefits | 1.81 |  |  |  |  |
| Survivor Benefits | 0.22 |  |  |  |  |
| Refunds | 3.01 |  |  |  |  |
| Total | 14.38\% | 0.02\% | 0.29\% | 14.69\% |  |
| UAAL Payment | 5.46 | 0.01 | 0.41 | 5.88 |  |
| Total Contribution | 19.84\% | 0.03\% | 0.70\% | 20.57\% |  |
| Member Contribution | 10.00 | 0.00 | 0.00 | 10.00 |  |
| Employer Contribution | 9.84\% | 0.03\% | 0.70\% | 10.57\% |  |
|  |  |  | 2.5 | 11.5 |  |
|  |  |  | 2.35 | 11.65 |  |
|  |  |  | 2.54 | 11.46 |  |

## SECTION VII- SUPPLEMENTAL DISCLOSURE INFORMATION

1. Statement Nos. 25 and 27 of the Governmental Accounting Standards Board (GASB) set forth certain items of information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

## NUMBER OF ACTIVE AND RETIRED PARTICIPANTS AS OF JUNE 30, 2004

| GROUP | NUMBER |
| :--- | :---: |
| Retired participants and beneficiaries |  |
| currently receiving benefits | 60,569 |
| Terminated participants and beneficiaries |  |
| entitled to benefits but not yet receiving |  |
| benefits | 94,858 |
| Active Participants | $\underline{123,139}$ |
| Total | 278,566 |

2. Another such item is the schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS
(\$ Thousands)

| Plan Year Ended | (1) <br> Actuarial <br> Value of Assets | (2) <br> Actuarial <br> Accrued <br> Liability <br> (AAL) <br> Entry Age | (3) Percent Funded (1)/(2) | (4) Unfunded AAL (2)-(1) | (5) Annual Covered Payroll | (6) <br> Unfunded AAL as a Percentage of Covered Payroll (4)/(5) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 06/30/95@ | \$4,310,487 | \$5,839,027 | 73.8\% | \$1,528,540 | \$1,429,559 | 106.9\% |
| 06/30/96\#* | 4,777,498 | 6,128,781 | 78.0 | 1,351,283 | 1,475,873 | 91.6 |
| 06/30/97* | 5,521,248 | 6,504,638 | 84.9 | 983,390 | 1,551,609 | 63.4 |
| 06/30/98^ | 6,412,649 | 7,037,449 | 91.1 | 624,800 | 1,651,883 | 37.8 |
| 06/30/99+ | 7,331,692 | 7,534,903 | 97.3 | 203,211 | 1,768,098 | 11.5 |
| 06/30/00 | 8,281,286 | 8,100,427 | 102.2 | $(180,859)$ | 1,866,283 | (9.7) |
| 06/30/01\#^ | 8,790,858 | 9,256,656 | 95.0 | 465,798 | 1,974,097 | 23.6 |
| 06/30/02 | 8,878,760 | 9,986,306 | 88.9 | 1,107,546 | 2,175,735 | 50.9 |
| 06/30/03^ | 8,771,784 | 10,634,474 | 82.5 | 1,862,690 | 2,302,289 | 80.9 |
| 06/30/04 | 8,666,538 | 11,250,879 | 77.0 | 2,584,341 | 2,394,125 | 107.9 |

^ After change in benefit provisions.
\# After change in actuarial assumptions.

* After change in asset method.

Includes Medicare Part-B Supplement for this year and future years.

+ After change in method.

3. The annual required contribution (ARC) of the employer as a percentage of payroll, determined in accordance with the parameters of GASB 25/27, is shown below. The accrued liability rate is based on amortization of the unfunded actuarial accrued liability of $\$ 2,584,340,799$ over a 30 -year period from the valuation date.

2004/2005 FISCAL YEAR
ANNUAL REQUIRED CONTRIBUTION (ARC)
BASED ON THE VALUATION AS OF JUNE 30, 2004

| ANNUAL REQUIRED CONTRIBUTION (ARC) | RATE |
| :--- | :---: |
| Normal | $4.69 \%$ |
| Accrued liability | $\underline{5.88}$ |
| Total | $10.57 \%$ |

4. Additional information as of June 30, 2004 follows.

| Valuation date | $6 / 30 / 04$ |
| :--- | :--- |
| Actuarial cost method |  |
| Amortization method | Entry age |
| Remaining amortization period | Level percent open |
| Asset valuation method | 30 years |
| Actuarial assumptions: | 4 -year smoothed market |
| Investment rate of  <br> return*  <br> Projected salary  <br> Increases*  <br> *Includes inflation at  <br> Cost-of-living adjustments $8.25 \%$ |  |

## Schedule of Employer Contributions

| Fiscal Year <br> $7-1 / 6-30$ | Valuation <br> Date 6-30 | Annual Required <br> Contribution | Percentage <br> Contributed |
| :---: | :---: | :---: | :---: |
| $1995-96$ | 1995 | $\$ 150,103,657$ | $100 \%$ |
| $1996-97$ | 1996 | $144,487,949$ | 100 |
| $1997-98$ | 1997 | $139,955,108$ | 100 |
| $1998-99$ | 1998 | $127,195,004$ | 100 |
| $1999-00$ | 1999 | $98,148,589$ | 100 |
| $2000-01$ | 2000 | $78,459,360$ | 100 |
| $2001-02$ | 2001 | $110,795,693$ | 100 |
| $2002-03$ | 2002 | $181,236,112$ | 100 |
| $2003-04$ | 2003 | $212,193,468$ | 100 |
| $2004-05$ | 2004 | $256,046,087$ |  |

Solvency Tests
(\$ in Millions)

| June 30 | Actuarial Accrued Liabilities for |  |  |  | Net Assets Available for Benefits | Portions of Accrued Liabilities covered by Assets |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) <br> Accumulated Employee and Inactive Contributions |  | (2) <br> Retirees and Beneficiaries Currently Receiving Benefits | (3) <br> Active and Inactive Members Employer Financed Portion |  |  |  |  |
|  |  |  | (1) |  |  | (2) | (3) |
| 1995 |  | \$1,034 |  | \$2,700 | \$2,105 | \$4,310 | 100\% | 100\% | 27.4\% |
| 1996 |  | 1,105 | 2,790 | 2,234 | 4,777 | 100 | 100 | 39.5 |
| 1997 |  | 1,177 | 2,996 | 2,332 | 5,521 | 100 | 100 | 57.8 |
| 1998 |  | 1,255 | 3,269 | 2,513 | 6,413 | 100 | 100 | 75.2 |
| 1999 |  | 1,341 | 3,469 | 2,725 | 7,332 | 100 | 100 | 92.6 |
| 2000 |  | 1,429 | 3,734 | 2,937 | 8,281 | 100 | 100 | 106.2 |
| 2001 |  | 1,407 | 4,294 | 3,556 | 8,791 | 100 | 100 | 86.9 |
| 2002 |  | 1,525 | 4,599 | 3,862 | 8,879 | 100 | 100 | 71.3 |
| 2003 |  | 1,643 | 4,881 | 4,110 | 8,772 | 100 | 100 | 54.7 |
| 2004 | 60 | 1,785 | 5,173 | 4,293 | 8,667 | 100 | 100 | 39.8 |

Schedule of Active Member Valuation Data

|  | Active members |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Valuation Date | Number | Annual Payroll <br> (in millions) | Annual Average <br> Pay | \% Increase in <br> Average Pay |  |
|  |  |  |  |  |  |
| 1995 | 100,784 | $\$ 1,429.6$ | $\$ 14,184$ | $4.1 \%$ |  |
| 1996 | 101,777 | $1,475.9$ | 14,501 | 2.2 |  |
| 1997 | 103,739 | $1,551.6$ | 14,957 | 3.1 |  |
| 1998 | 109,878 | $1,651.9$ | 15,456 | 3.3 |  |
| 1999 | 110,175 | $1,768.1$ | 16,048 | 3.8 |  |
|  |  | $1,866.3$ | 16,398 |  |  |
| 2000 | 113,811 | $1,974.1$ | 11,065 | 2.2 |  |
| 2001 | 115,684 | $2,175.7$ | 18,093 | 4.1 |  |
| 2002 | 120,254 | 18,823 | 6.0 |  |  |
| 2003 | 122,315 | $2,302.3$ | 4.0 |  |  |
| 2004 | 123,139 | $2,394.1$ | 19,442 | 3.3 |  |

Schedule of Retirants Added to And Removed From Rolls

| Item | Fiscal year ended June 30 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
| Beginning of Year | 52,413 | 53,478 | 54,554 | 55,563 | 56,632 | 57,824 | 58,795 | 59,349 | 59,999 |
| Added | 4,032 | 3,993 | 4,174 | 4,127 | 4,647 | 4,051 | 3,977 | 3,414 | 3,013 |
| Removed | $(2,967)$ | $(2,917)$ | $(3,165)$ | $(3,058)$ | $(3,455)$ | $(3,080)$ | $(3,423)$ | $(2,764)$ | $(2,443)$ |
| End of Year | 53,478 | 54,554 | 55,563 | 56,632 | 57,824 | 58,795 | 59,349 | 59,999 | 60,569 |

Asset Summary

1. Assets at June 30, 2003
2. Contributions and Misc. Revenue
3. Investment Increment
4. Benefit Payments
5. Assets at June 30, 2004
$(1)+(2)+(3)+(4)$
6. Investment Increment/Mean Assets*

Market Value
\$7,522,414,151
647,308,811
1,132,220,190
$(736,499,525)$
\$ 8,565,443,627
15.1\%
(0.2)\%

Actuarial Value
\$ 9,075,340,941
647,308,811
$(18,751,047)$
(736,499,525)
\$ 8,967,399,180

* Based on the approximation formula: $1 /[.5 \times(A+B-1)]$, where

I = Investment increment
$A=$ Beginning of year asset value
$B=$ End of year asset value

## SCHEDULE B

## Statement of Actuarial Assumptions and Methods

Interest Rate: $8.25 \%$ per annum, compounded annually (net after all System expenses).
Salary Increases: Assumed annual rates of salary increases are as follows:

| Service | Base (Economy) | Merit \& Seniority | Total Increase |
| :---: | :---: | :---: | :---: |
| 0 | $4.25 \%$ | $20.75 \%$ | $25.00 \%$ |
| 1 | 4.25 | 1.25 | 17.50 |
| 2 | 4.25 | 10.75 | 15.00 |
| 3 | 4.25 | 8.75 | 13.00 |
| 4 | 4.25 | 7.75 | 12.00 |
| 5 | 4.25 | 5.75 | 10.00 |
| 6 | 4.25 | 4.75 | 9.00 |
| 7 | 4.25 | 3.75 | 8.00 |
| 8 | 4.25 | 2.75 | 7.00 |
| 9 | 4.25 | 1.75 | 6.00 |
| $10-14$ | 4.25 | 0.75 | 5.00 |
| $15 \&$ Over | 4.25 | 0.50 | 4.75 |

Total covered payroll of the entire membership is assumed to increase $4.25 \%$ per year in the future.
Service Retirement: Representative values of the assumed annual rates of service retirement are as follows:

| Age | Male | Female |
| :---: | :---: | :---: |
| 50 | $45.0 \%$ | $36.0 \%$ |
| 55 | 30.0 | 27.0 |
| 60 | 11.0 | 23.0 |
| 61 | 11.0 | 14.0 |
| 62 | 17.0 | 14.0 |
| 63 | 14.0 | 14.0 |
| 64 | 17.0 | 14.0 |
| 65 | 35.0 | 30.0 |
| 70 | 25.0 | 38.0 |
| 75 | 100.0 | 100.0 |

Withdrawal Rates: Representative values of the assumed annual rates of withdrawal are as follows:

| Service | Rate |
| :---: | :---: |
| 0 | $50.00 \%$ |
| 1 | 24.00 |
| 2 | 14.00 |
| 3 | 9.00 |
| 4 | 8.00 |
| 5 | 7.50 |
| 10 | 4.25 |
| 15 | 2.50 |
| 20 | 1.75 |

Disability Rates: Representative values of the assumed annual rates of disability are as fol ${ }^{\text {on ws: }}$

| Age | Male | Female |
| :---: | :---: | :---: |
| 30 | $.150 \%$ | $.100 \%$ |
| 35 | .495 | .100 |
| 40 | .540 | .210 |
| 45 | .675 | .250 |
| 50 | 1.100 | .525 |
| 55 | 1.100 | .810 |

Mortality Rates: Mortality Rates for retirees and survivors are based on the 1994 Group Annuity Mortality table with male ages set back three years and female ages set back one year. Mortality for active members is $70 \%$ of the retiree table for males and $55 \%$ for females. Mortality for disabled members is developed from experience.

Representative values of the assumed annual rates of retiree mortality are as follows:

| Service Retired Members, Beneficiaries and Survivors (1994 Group Annuity Mortality Table (-3, -1) |  |  |
| :---: | :---: | :---: |
| Age | Male | Female |
| 20 | .0430\% | .0280\% |
| 30 | . 0727 | . 0331 |
| 40 | . 0891 | . 0652 |
| 50 | . 1899 | . 1310 |
| 60 | . 5581 | . 3863 |
| 70 | 1.8034 | 1.2709 |
| 80 | 4.5171 | 3.5362 |
| Disability Retired Members |  |  |
| Age | Male | Female |
| 40 | 2.2571\% | . $7450 \%$ |
| 50 | 2.8975 | 1.1535 |
| 60 | 4.2042 | 2.1839 |
| 70 | 6.2583 | 3.7635 |
| 80 | 10.9372 | 7.2312 |

Marriage Assumption: $80 \%$ married with the husband three years older than his wife.
Valuation Method: Entry Age Normal cost method. Entry age is established on an individual basis.
Asset Valuation Method: Actuarial value, as developed in Schedule A. Actuarial value of assets is based on a four-year average of adjusted market value returns. The difference between the actual returns at market value for the year and expected returns is determined. Twenty-five percent ( $25 \%$ ) of that difference is added to the expected value along with corresponding amounts from each of the prior three years.

## SCHEDULE C

## SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO Summary of Benefit and Contribution Provisions as of June 30, 2004

## Contributions for Basic Benefits

Final Average Salary

## Normal Retirement

Condition for Retirement

Amount of Allowance

Members contribute $10 \%$ of pay and employers contribute 14\% of pay. Employer contributions not required to finance basic benefits are allocated to the health care program.

Average annual salary over the member's three highest years of service.

Attainment of age 65 with at least five years of creditable service, or completion of 30 years of creditable service, regardiess of age.

The annual retirement allowance payable shall not be greater than $100 \%$ of final average salary, and is the greater of:

1. Money Purchase - the greater of :

The sum of:
a. An annuity based on the value of the member's accumulated contributions at retirement
b. A pension equal to the annuity
c. $\$ 40$ multiplied by the member's years of service prior to $9 / 1 / 1937$.
or:
d. For members who have 10 or more years of service credit prior to 10/1/1956, an annual benefit of $\$ 180$.
2. Defined Benefit - the greater of:

The sum of:
a. $2.2 \%$ of final average salary multiplied by the member's years of service up to 30 ,
b. $2.5 \%$ of final average salary multiplied by the member's years of service in excess of 30 ,
or:
c. $\$ 86$ multiplied by the years of service.

## Early Retirement

Condition for Retirement

Amount of Allowance

Not eligible for unreduced service retirement but has attained age 55 with at least 25 years of service, or age 60 with five years of service.

Normal retirement allowance accrued to the date of early retirement. The Defined Benefit amount determined above is adjusted by the following percentages based on attained age and/or years of service:

| Attained Age | Years of Ohio Service Credit | Percentage |
| :---: | :---: | :---: |
| 58 | 25 | 75\% |
| 59 | 26 | 80 |
| 60 | 27 | 85 |
| 61 |  | 88 |
|  | 28 | 90 |
| 62 |  | 91 |
| 63 |  | 94 |
|  | 29 | 95 |
| 64 |  | 97 |

An allowance is paid upon becoming permanently disabled after completion of at least 5 years of total service credit.

1. For those who were active members prior to July 29, 1992 and did not elect the benefit structure outlined below, an allowance based on service to date of disablement, plus, if the age at disablement is less than 60 , continuous service to age 60. The allowance is computed in the same manner as the defined benefit service retirement allowance, subject to a minimum of $30 \%$ of FAS and a maximum of $75 \%$ of FAS. It is payable for life, unless terminated.
2. For those who became active members after July 28, 1992, and for those who were active members prior to July 29, 1992 who so elected, an allowance equal to the greater of (i) $45 \%$ of FAS, or (ii) the lesser of $60 \%$ of FAS, or the allowance computed in the same manner as the defined benefit service retirement allowance. The allowance will continue until:
a. The date the member is granted a service retirement benefit, or
b. The date the allowance is terminated, or
c. The later of the date the member attains age 65 or the date the disability allowance has been paid for the minimum duration in accordance with the following schedule:

Age at Disability
60 and earlier
61
62
63
64

## 65

66
67
68
69 and older

Minimum Duration

In Months
60
60
48
48
36
36
24
24
24

## Death Benefits Prior to Retirement

Death While Eligible to Retire

## Survivor (Death-in-Service) Allowances

Condition for Benefit

If a member dies in service after becoming eligible to retire with a service allowance and leaves a surviving spouse or other sole dependent beneficiary, the survivor may elect to receive the same amount that would have been paid had the member retired the last day of the month of death and elected the $100 \%$ joint and survivor form of payment.

Upon the death of a member with at least $11 / 2$ years of Ohio service credit and with at least $1 / 4$ year of Ohio contributing service credit within $21 / 2$ years prior to the date of death, the survivor allowances are payable as follows:

1. Qualified Spouse: A monthly allowance commencing at age 62, except that the benefit is payable immediately if: (1) the qualified deceased member had 10 or more years of Ohio service credit; or (2) is caring for a surviving child, or (3) is incompetent.
2. Qualified Child: An allowance is payable to the qualified child of a deceased member who is under age 18, under age 22 and in school, or incompetent.
3. Qualified Parent's Allowance: A monthly allowance is payable to a dependent parent age 65 or more.

Except when survived by a dependent child(ren), upon the death of a member prior to retirement, the accumulated contributions of the member without interest is payable. Alternatively, the beneficiary may elect the following amounts, payable monthly while eligible:

| Number of <br> Qualified <br> Survivors | Annual Benefit <br> as Percent of <br> Member's FAS | Minimum <br> Monthly <br> Allowance |
| :---: | :---: | :---: |
| 1 | $25 \%$ | $\$ 96$ |
| 2 | 40 | 186 |
| 3 | 50 | 236 |
| 4 | 55 | 236 |
| 5 or more | 60 | 236 |

If the deceased member had attained at least 20 years of service, the total benefits payable to all qualified survivors are not less than:

| Years of <br> Service | Annual Benefit as Percent <br> of Member's FAS |
| :---: | :---: |
| 20 | $29 \%$ |
| 21 | 33 |
| 22 | 37 |
| 23 | 41 |
| 24 | 45 |
| 25 | 48 |
| 26 | 51 |
| 27 | 54 |
| 28 | 57 |
| 29 or more | 60 |

## Termination Benefits

Refund of Members' Accumulated Contributions

Deferred Benefits

## Normal Form of Benefit

Optional Forms of Benefit

In the event a member leaves service before any monthly benefits are payable on his behalf, his accumulated contributions, without interest, may be refunded.

If a member with at least 5 years of contributing service credit leaves service before being eligible for an immediate monthly allowance and does not withdraw any part of his accumulated contributions, he will be entitled to a deferred allowance at age 60. The amount of the allowance is based on his credited service and final average salary at termination of employment.

Single Life Annuity
A member upon retirement may elect to receive his allowance in one of the following forms that are computed to be actuarially equivalent to the applicable retirement allowance:

Upon the death of a retiree, $50 \%, 100 \%$, or some other percentage of his reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.

Post-Retirement Death Benefit

Post-Retirement Increases

Medicare Part B

## Re-Employed Retirants

Eligibility

Amount of Allowance

Benefits Payable Upon Death

A reduced retirement allowance shall be continued throughout the life of the pensioner, but with the further guarantee of payment to the pensioner, his beneficiary or his estate for a specified number of years certain.

A member can select a partial lump-sum option at retirement. Under this option, the partial lump-sum shall not be less than 6 times and not more than 36 times the base maximum monthly benefit, and the base maximum monthly benefit will be actuarially reduced. A member selecting the partial lump-sum option may also select any of the regular options, which would result in a further reduction in the monthly benefit. In addition, the monthly benefit payable cannot be less than $50 \%$ of the unreduced amount.

Regardless of the form of benefit selected, a lump sum benefit of $\$ 1,000$ is paid at the death of the retiree.

On each anniversary of the initial date of retirement, the allowances of all retirees and survivors are increased by $3 \%$ of the base benefit.

Each recipient of a service retirement benefit, a disability benefit or a survivor benefit who was credited with at least 10 years of service and is covered under Medicare Part-B is reimbursed $\$ 45.50$ per month for premiums for that coverage.

Effective July 1, 1991, service retirees of SERS, or service or disability retirees of one of the other four Ohio retirement systems who are employed in a SERS covered position are required to contribute to a money purchase annuity, a type of defined contribution plan.

Upon termination of employment, a re-employed retirant who has attained age 65 is eligible to receive an annuity based on the amount of his/her accumulated contributions, and an equal amount of employer contributions, plus interest to the effective date of retirement. Interest is granted on the re-employed retirant's prior fiscal year account balance, calculated using a rate determined by the SERS Board, compounded annually. The benefit is payable as a lump sum or as an annuity if the amount of such annuity is at least $\$ 25$.

If a re-employed retirant dies while employed, a lump sum payment of the monthly annuity, discounted to the present value using the current actuarial assumption rate of interest, will be paid to his beneficiary.

If a re-employed retirant dies while receiving a monthly annuity, a lump sum payment will be made to a beneficiary in an amount equal to the excess, if any, of the lump sum

Member Contributions

Employer Contributions

Other Benefits
payment the re-employed retirant would have received at the effective date of retirement over the sum of the annuity payments received by the re-employed retirant to the date of death.

Each re-employed retirant is required to contribute $10 \%$ of his pay by payroll deductions.

Employer contributions are expressed as percents of member covered payroll. Employers are required to contribute $14 \%$ of payroll.

Re-employed retirant members of SERS are not eligible to receive any of the other benefits provided to regular SERS members.

## SCHEDULE D

## DETAILED TABULATIONS OF THE DATA

Annuity and Pension Reserve Fund Retirants and Beneficiaries June 30, 2004
Type of Benefit, Annual Amount, and Basic Benefit Actuarial Liabilities

| Group | Number | \% of Current Total Benefit |  |  | Current Total Benefit | Actuarial <br> Liabilities |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Base <br> Allowances | $\begin{aligned} & \text { H.B. } 204 \\ & \text { and } 284 \\ & \hline \end{aligned}$ | Retirement Increases |  |  |
| Superannuation Retirement |  |  |  |  |  |  |
| Straight Life Allowance - Benefit Terminating at Death |  |  |  |  |  |  |
| Males | 3,957 | 76.5\% | 0.0\% | 23.4\% | \$41,241,692 | \$366,499,568 |
| Females | 24,997 | 78.0\% | 0.0\% | 22.0\% | 172,327,658 | 1,614,444,482 |
| Total | 28,954 |  |  |  | \$213,569,350 | \$1,980,944,050 |
| Option II Allowance - Joint and Survivor Benefits |  |  |  |  |  |  |
| Males | 6,748 | 81.0\% | 0.0\% | 19.0\% | \$83,716,570 | \$988,838,020 |
| Females | 9,615 | 85.7\% | 0.0\% | 14.3\% | 81,979,553 | 961,036,459 |
| Total | 16,363 |  |  |  | \$165,696, 123 | \$1,949,874,479 |
| Option III Allowance - Life Benefits With Guaranteed Benefits |  |  |  |  |  |  |
| Males | 387 | 74.9\% | 0.1\% | 25.0\% | \$3,136,825 | \$27,817,375 |
| Females | 913 | 76.3\% | 0.0\% | 23.7\% | 5,396,262 | 51,582,999 |
| Total | 1,300 |  |  |  | \$8,533,087 | \$79,400,374 |
| Allowance to Survivor Beneficiary of Deceased Superannuation Retirant Who Elected Option II - Life Benefit |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Males | 945 | 70.8\% | 0.1\% | 29.1\% | \$3,142,074 | \$25,192,863 |
| Females | 3.699 | 64.3\% | 0.1\% | 35.5\% | 21,588,147 | 174,932,812 |
| Total | 4,644 |  |  |  | \$24,730,221 | \$200, 125,675 |

Note that the actuarial liabilities include annual pension allowances and lump sum death benefits, but exclude Medicare Part-B supplement.

Annuity and Pension Reserve Fund<br>Retirants and Beneficiaries<br>June 30, 2004<br>Type of Benefit, Annual Amount, and Basic Benefit Actuarial Liabilities (continued)

| Group | Number | \% of Current Total Benefit |  |  | Current Total Benefit | Actuarial Liabilities |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Base <br> Allowances | $\begin{array}{r} \text { H.B. } 204 \\ \text { and } 284 \\ \hline \end{array}$ | Post <br> Retirement Increases |  |  |
| Allowance to Survivor Beneficiary of Deceased Superannuation Retirant Who Elected Option III - Guaranteed Period Only |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Males | 23 | 83.8\% | 0.0\% | 16.2\% | \$150,969 | \$545,424 |
| Females | $\underline{39}$ | 78.3\% | 0.0\% | 21.7\% | $\underline{230,618}$ | 783.548 |
| Total | 62 |  |  |  | \$381,587 | \$1,328,972 |
| Total for Superannuation Allowances Being Paid |  |  |  |  |  |  |
| Males | 12,060 | 79.2\% | 0.0\% | 20.8\% | \$131,388,130 | \$1,408,893,250 |
| Females | 39,263 | 79.2\% | 0.0\% | 20.8\% | 281,522,238 | 2,802,780,300 |
| Total | 51,323 |  |  |  | \$412,910,368 | \$4,211,673,550 |
| Disability Retirement |  |  |  |  |  |  |
| Straight Life Allowance - Benefit Terminating at Death |  |  |  |  |  |  |
| Males | 1,664 | 80.9\% | 0.0\% | 19.0\% | \$25,895,533 | \$218,756,401 |
| Females | 3,516 | 80.7\% | 0.0\% | 19.3\% | 30,813,179 | 303,366,683 |
| Total | 5,180 |  |  |  | \$56,708,712 | \$522,123,084 |
| Total Benefits Being Paid From Annuity and Pension Reserve Fund |  |  |  |  |  |  |
| Males | 13,724 | 79.5\% | 0.0\% | 20.5\% | \$157,283,663 | \$1,627,649,651 |
| Females | 42,779 | 79.3\% | 0.0\% | 20.7\% | 312,335,417 | 3,106,146,983 |
| Total | 56,503 |  |  |  | \$469,619,080 | \$4,733,796,634 |

Annuity and Pension Reserve Fund
Retirants June 30, 2004
Current Annual Total Benefits by Attained Age

| Attained Age | Superannuation |  | Disability |  | Totals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Annual <br> Benefits | Number | Annual <br> Benefits | Number | Annual Benefits |
| Under 20 |  |  |  |  |  |  |
| 20-24 |  |  |  |  |  |  |
| 25-29 |  |  |  |  |  |  |
| 30-34 |  |  | 4 | \$45,719 | 4 | \$45,719 |
| 35-39 |  |  | 28 | 463,425 | 28 | 463,425 |
| 40-44 |  |  | 148 | 2,418,134 | 148 | 2,418,134 |
| 45-49 | 52 | \$1,406,673 | 344 | 5,610,114 | 396 | 7,016,787 |
| 50-54 | 370 | 10,018,125 | 621 | 9,761,461 | 991 | 19,779,586 |
| 55-59 | 1,089 | 21,909,775 | 897 | 11,332,336 | 1,986 | 33,242,111 |
| 60-64 | 5,079 | 55,485,190 | 1,052 | 11,762,929 | 6,131 | 67,248,119 |
| 65-69 | 8,955 | 87,283,326 | 772 | 7,166,168 | 9,727 | 94,449,494 |
| 70.74 | 9,260 | 79,318,123 | 553 | 4,112,640 | 9,813 | 83,430,763 |
| 75-79 | 8,839 | 63,216,212 | 400 | 2,376,444 | 9,239 | 65,592,656 |
| 80-84 | 7,335 | 44,135,387 | 261 | 1,303,248 | 7,596 | 45,438,635 |
| 85-89 | 3,965 | 18,545,254 | 81 | 302,463 | 4,046 | 18,847,717 |
| 90-94 | 1,390 | 5,285,549 | 16 | 45,290 | 1,406 | 5,330,839 |
| 95-99 | 251 | 1,051,990 | 3 | 8,341 | 254 | 1,060,331 |
| 100 | 12 | 49,044 |  |  | 12 | 49,044 |
| 101 | 7 | 35,995 |  |  | 7 | 35,995 |
| 102 | 7 | 21,964 |  |  | 7 | 21,964 |
| 103 | 3 | 29,195 |  |  | 3 | 29,195 |
| 104 | 2 | 4,229 |  |  | 2 | 4,229 |
| 105 \& Over | 1 | 2,529 |  |  | 1 | 2,529 |
| Total | 46,617 | \$387,798,560 | 5,180 | \$56,708,712 | 51,797 | \$444,507,272 |

Annuity and Pension Reserve Fund
Survivors of Retirants June 30, 2004
Current Annual Total Benefits by Attained Age

| Attained Age | Life Annuities |  | Periods Certain |  | Totals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Annual <br> Benefits | Number | Annual Benefits | Number | Annual Benefits |
| Under 20 | 2 | \$4,337 | 1 | \$6,519 | 3 | \$ 10,856 |
| 20-24 | 7 | 25,915 |  |  | 7 | 25,915 |
| 25-29 | 1 | 16,680 |  |  | 1 | 16,680 |
| 30-34 | 6 | 28,096 |  |  | 6 | 28,096 |
| 35-39 | 3 | 33,623 |  |  | 3 | 33,623 |
| 40-44 | 11 | 26,347 | 3 | 17,935 | 14 | 44,282 |
| 45-49 | 34 | 151,872 | 4 | 23,603 | 38 | 175,475 |
| 50-54 | 51 | 238,848 | 5 | 19,422 | 56 | 258,270 |
| 55-59 | 82 | 586,522 | 2 | 2,045 | 84 | 588,567 |
| 60-64 | 152 | 1,116,454 | 5 | 25,710 | 157 | 1,142,164 |
| 65-69 | 348 | 2,259,036 | 8 | 56,990 | 356 | 2,316,026 |
| 70-74 | 648 | 4,416,405 | 16 | 60,664 | 664 | 4,477,069 |
| 75-79 | 1,001 | 6,102,932 | 10 | 114,540 | 1,011 | 6,217,472 |
| 80-84 | 1,134 | 5,219,136 | 8 | 54,159 | 1,142 | 5,273,295 |
| 85-89 | 783 | 3,082,984 |  |  | 783 | 3,082,984 |
| 90-94 | 305 | 1,197,663 |  |  | 305 | 1,197,663 |
| 95-99 | 72 | 215,215 |  |  | 72 | 215,215 |
| 100 | 1 | 921 |  |  | 1 | 921 |
| 101 | 2 | 5,185 |  |  | 2 | 5,185 |
| 102 | 1 | 2,050 |  |  | 1 | 2,050 |
| 103 |  |  |  |  |  |  |
| 104 |  |  |  |  |  |  |
| 105 \& Over |  |  |  |  |  |  |
| Total | 4,644 | \$24,730,221 | 62 | \$381,587 | 4,706 | \$25,111,808 |

## Survivor Benefit Fund

Beneficiaries June 30, 2004
Annual Amount, and Basic Benefit Actuarial Liabilities

| Group | Number | \% of Current Annual Benefit |  |  |  | Actuarial Liabilities |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Base <br> Allowances | HB 204 and 284 | Post Retirement Increases |  |  |
| Benefits Being Paid From Survivor Benefit Fund |  |  |  |  |  |  |
| Males | 1,612 | 84.1\% | 0.0\% | 15.9\% | \$7,061,737 | \$96,168,606 |
| Females | $\underline{2,454}$ | 75.9\% | 0.1\% | 24.0\% | 14.938,032 | 125,903,606 |
| Total | 4,066 | 78.5\% | 0.1\% | 21.4\% | \$21,999,769 | \$222,072,212 |

Note that actuarial liabilities are calculated for pension allowances for all survivors, including contingent (multiple) beneficiaries and beneficiaries in blackout; excluded are liabilities for the Medicare Part-B supplement. The total benefit amounts include those amounts for all contingent (multiple) beneficiaries although they are excluded from the total number of survivors reported.

## Survivor Benefit Fund

Survivors of Deceased Active Members June 30, 2004
Current Annual Total Benefits by Attained Age

| Attained Age | Totals |  |
| :---: | :---: | :---: |
|  | Number | Annual Benefits |
| Under 20 | 47 | \$ 308,958 |
| 20-24 | 17 | 106,701 |
| 25-29 | 2 | 16,453 |
| 30-34 | 5 | 34,992 |
| 35-39 | 27 | 297,932 |
| 40-44 | 55 | 491,550 |
| 45-49 | 125 | 1,152,894 |
| 50-54 | 151 | 1,334,461 |
| 55-59 | 246 | 1,872,062 |
| 60-64 | 451 | 2,637,488 |
| 65-69 | 668 | 3,761,347 |
| 70-74 | 709 | 3,639,325 |
| 75-79 | 668 | 2,968,828 |
| 80-84 | 503 | 1,939,445 |
| 85-89 | 279 | 1,053,870 |
| 90-94 | 94 | 318,205 |
| 95-99 | 17 | 57,719 |
| 100 |  |  |
| 101 |  |  |
| 102 |  |  |
| 103 | 1 | 5,140 |
| 104 | 1 | 2,399 |
| 105 \& Over |  |  |
| Total | 4,066 | \$21,999,769 |

## SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO <br> Total Active Member Data as of June 30, 2004 <br> Tabulated by Attained Age and Years of Service

| $\begin{gathered} \text { Attained } \\ \text { Age } \\ \hline \end{gathered}$ | Years of Service to Valuation Date |  |  |  |  |  |  | Totals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0.4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 plus | No. | Valuation Payroll |
| Under 20 | 782 |  |  |  |  |  |  | 782 | \$ 4,221,424 |
| 20-24 | 4,874 | 147 |  |  |  |  |  | 5,021 | 44,282,123 |
| 25-29 | 4,817 | 875 | 45 |  |  |  |  | 5,737 | 83,542,737 |
| 30-34 | 5,751 | 1,937 | 409 | 54 |  |  |  | 8,151 | 136,266,108 |
| 35-39 | 7,667 | 3,617 | 1,022 | 508 | 95 |  |  | 12,909 | 221,091,895 |
| 40-44 | 9,285 | 6,407 | 2,482 | 1,395 | 833 | 213 |  | 20,615 | 384,365,468 |
| 45-49 | 7,474 | 6,759 | 4,159 | 2,525 | 1,326 | 945 | 116 | 23,304 | 486,038,039 |
| 50-54 | 4,592 | 4,158 | 3,504 | 3,561 | 1,857 | 1,057 | 349 | 19,078 | 431,199,027 |
| 55-59 | 3,138 | 2,218 | 2,132 | 2,856 | 2,321 | 1,454 | 377 | 14,496 | 334,990,130 |
| 60 | 446 | 329 | 243 | 321 | 320 | 292 | 96 | 2,047 | 45,913,458 |
| 61 | 416 | 312 | 239 | 327 | 335 | 294 | 107 | 2,030 | 45,792,222 |
| 62 | 308 | 208 | 199 | 249 | 237 | 250 | 114 | 1,565 | 34,844,529 |
| 63 | 260 | 182 | 161 | 191 | 209 | 220 | 94 | 1,317 | 29,041,704 |
| 64 | 226 | 165 | 108 | 156 | 191 | 174 | 106 | 1,126 | 24,103,164 |
| 65 | 174 | 117 | 94 | 128 | 128 | 153 | 102 | 896 | 18,598,928 |
| 66 | 195 | 103 | 85 | 102 | 127 | 117 | 88 | 817 | 15,484,398 |
| 67 | 167 | 82 | 65 | 69 | 64 | 106 | 96 | 649 | 11,817,700 |
| 68 | 116 | 91 | 60 | 66 | 47 | 56 | 86 | 522 | 9,523,476 |
| 69 | 102 | 73 | 53 | 40 | 48 | 66 | 72 | 454 | 8,397,987 |
| 70 \& Over | 398 | 287 | 181 | 175 | 140 | 183 | 259 | 1,623 | 24,610,623 |
| Totals | 51,188 | 28,067 | 15,241 | 12,723 | 8,278 | 5,580 | 2,062 | 123,139 | \$ 2,394,125,140 |

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 46.3 years
Service: 8.8 years
Annual Pay: \$19,442

## SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

Male Active Member Data as of June 30, 2004
Tabulated by Attained Age and Years of Service

| $\begin{gathered} \text { Attained } \\ \text { Age } \\ \hline \end{gathered}$ | Years of Service to Valuation Date |  |  |  |  |  |  | Totals |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0.4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 plus | No. |  | Valuation <br> Payroll |
| Under 20 | 415 |  |  |  |  |  |  | 415 | \$ | 2,358,090 |
| 20-24 | 2,256 | 67 |  |  |  |  |  | 2,323 |  | 21,595,275 |
| 25-29 | 1,945 | 347 | 25 |  |  |  |  | 2,317 |  | 35,642,703 |
| 30-34 | 1,786 | 622 | 173 | 21 |  |  |  | 2,602 |  | 51,809,849 |
| 35-39 | 1,818 | 790 | 364 | 240 | 46 |  |  | 3,258 |  | 77,622,064 |
| 40-44 | 2,173 | 967 | 495 | 540 | 478 | 118 |  | 4,771 |  | 126,170,846 |
| 45-49 | 2,159 | 1,072 | 624 | 579 | 603 | 532 | 63 | 5,632 |  | 159,309,872 |
| 50-54 | 1,639 | 892 | 592 | 583 | 495 | 374 | 182 | 4,757 |  | 138,981,662 |
| 55-59 | 1,407 | 698 | 481 | 472 | 390 | 245 | 126 | 3,819 |  | 106,405,943 |
| 60 | 231 | 132 | 67 | 78 | 58 | 27 | 21 | 614 |  | 15,971,436 |
| 61 | 213 | 128 | 81 | 87 | 69 | 34 | 17 | 629 |  | 16,958,979 |
| 62 | 171 | 105 | 74 | 73 | 40 | 29 | 24 | 516 |  | 13,096,771 |
| 63 | 159 | 98 | 56 | 53 | 40 | 23 | 15 | 444 |  | 11,044,398 |
| 64 | 122 | 81 | 50 | 49 | 42 | 15 | 10 | 369 |  | 8,748,580 |
| 65 | 95 | 63 | 39 | 42 | 28 | 15 | 12 | 294 |  | 6,814,547 |
| 66 | 101 | 51 | 37 | 33 | 25 | 11 | 6 | 264 |  | 5,449,966 |
| 67 | 91 | 46 | 22 | 17 | 15 | 13 | 9 | 213 |  | 4,197,103 |
| 68 | 63 | 47 | 31 | 20 | 8 | 4 | 12 | 185 |  | 3,641,506 |
| 69 | 60 | 44 | 32 | 14 | 16 | 11 | 7 | 184 |  | 3,608,359 |
| 70 \& Over | 183 | 130 | 102 | 69 | 35 | 21 | 21 | 561 |  | 9,118,032 |
| Totals | 17,087 | 6,380 | 3,345 | 2,970 | 2,388 | 1,472 | 525 | 34,167 |  | 818,545,981 |

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 45.3 years
Service: 8.0 years
Annual Pay: \$23,957

## SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

Female Active Member Data as of June 30, 2004
Tabulated by Attained Age and Years of Service

| Attained Age | Years of Service to Valuation Date |  |  |  |  |  |  | Totals |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0.4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 plus | No. |  | Valuation <br> Payroll |
| Under 20 | 367 |  |  |  |  |  |  | 367 | \$ | 1,863,334 |
| 20-24 | 2,618 | 80 |  |  |  |  |  | 2,698 |  | 22,686,848 |
| 25-29 | 2,872 | 528 | 20 |  |  |  |  | 3,420 |  | 47,900,034 |
| 30-34 | 3,965 | 1,315 | 236 | 33 |  |  |  | 5,549 |  | 84,456,259 |
| 35-39 | 5,849 | 2,827 | 658 | 268 | 49 |  |  | 9,651 |  | 143,469,831 |
| 40-44 | 7,112 | 5,440 | 1,987 | 855 | 355 | 95 |  | 15,844 |  | 258,194,622 |
| 45-49 | 5,315 | 5,687 | 3,535 | 1,946 | 723 | 413 | 53 | 17,672 |  | 326,728,167 |
| 50-54 | 2,953 | 3,266 | 2,912 | 2,978 | 1,362 | 683 | 167 | 14,321 |  | 292,217,365 |
| 55-59 | 1,731 | 1,520 | 1,651 | 2,384 | 1,931 | 1,209 | 251 | 10,677 |  | 228,584,187 |
| 60 | 215 | 197 | 176 | 243 | 262 | 265 | 75 | 1,433 |  | 29,942,022 |
| 61 | 203 | 184 | 158 | 240 | 266 | 260 | 90 | 1,401 |  | 28,833,243 |
| 62 | 137 | 103 | 125 | 176 | 197 | 221 | 90 | 1,049 |  | 21,747,758 |
| 63 | 101 | 84 | 105 | 138 | 169 | 197 | 79 | 873 |  | 17,997,306 |
| 64 | 104 | 84 | 58 | 107 | 149 | 159 | 96 | 757 |  | 15,354,584 |
| 65 | 79 | 54 | 55 | 86 | 100 | 138 | 90 | 602 |  | 11,784,381 |
| 66 | 94 | 52 | 48 | 69 | 102 | 106 | 82 | 553 |  | 10,034,432 |
| 67 | 76 | 36 | 43 | 52 | 49 | 93 | 87 | 436 |  | 7,620,597 |
| 68 | 53 | 44 | 29 | 46 | 39 | 52 | 74 | 337 |  | 5,881,970 |
| 69 | 42 | 29 | 21 | 26 | 32 | 55 | 65 | 270 |  | 4,789,628 |
| 70 \& Over | 215 | 157 | 79 | 106 | 105 | 162 | 238 | 1,062 |  | 15,492,591 |
| Totals | 34,101 | 21,687 | 11,896 | 9,753 | 5,890 | 4,108 | 1,537 | 88,972 |  | 575,579,159 |

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

## Age: 46.7 years

Service: 9.1 years
Annual Pay: $\$ 17,709$

## SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

Active Member as of June 30, 2004
By Annual Pay


## SCHEDULEE

## GLOSSARY

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability".

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method".

Actuarial Equivalent. A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost". Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

## GLOSSARY <br> (concluded)

Plan Termination Liability. The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a "going concern" basis and is not normally determined in a routine actuarial valuation.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability".

Valuation Assets. The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.


[^0]:    * Unfunded actuarial accrued liability.

