# SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

REPORT ON THE ANNUAL ACTUARIAL BASIC BENEFITS VALUATION

AND

GAIN/LOSS ANALYSIS OF FINANCIAL EXPERIENCE

PREPARED AS OF JUNE 30, 2006

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November 7, 2006

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 <u>annual actuarial valuation</u> and the <u>annual gain/loss analysis of financial experience</u> of the basic benefits 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, 2006. The gain/loss analysis details the difference between the actual and the expected unfunded actuarial accrued liabilities and shows the breakdown of the overall gain/loss by economic and non-economic risk areas.

The date of the valuation was June 30, 2006.

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.

<u>Your attention is directed particularly</u> to the presentation of contribution rates on page 1 and the comments on page 8 as well as the breakdown of the overall gain (loss) by risk area on pages 11 and 12. Additional gain/loss detail can be found in the appendix.

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,

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# REPORT ON THE ANNUAL VALUATION OF THE SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO PREPARED AS OF JUNE 30, 2006

## **SECTION I - SUMMARY OF PRINCIPAL RESULTS**

1. This report, prepared as of June 30, 2006, 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	06/30/06	06/30/05
Active members included in valuation		
Number	123,266	122,855
Annual compensation	\$ 2,553,272,600	\$ 2,452,534,537
Retirees	00.504	04.400
Number	62,521	61,433
Annual allowances	\$ 566,770,892	\$ 527,931,968
Deferred Vesteds	!	
Number	10,183	9,519
Annual deferred allowances	\$ 31,615,576	\$ 29,136,295
Assets (net of Health Care Assets)		
Market related actuarial value	\$ 9,541,787,220	\$ 8,892,564,844
Market value	\$ 9,980,203,361	\$ 9,001,585,552
Unfunded accrued liability	\$ 3,154,886,157	\$ 3,136,876,011
	!	
Employer contribution rate		
Normal	3.95%	4.73%
Accrued liability	<u>6.73</u>	<u>6.97</u>
Total	10.68%	11.70 %
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 changes in benefit provisions, actuarial assumptions, and methods since the last valuation, as follows:

## **Benefit Provision Change:**

Effective July 1, 2006 the amount of employer contributions to the accounts of re-employed retirants will not necessarily be equal to the employees' contributions, but will be determined by the Board.

### **Decremental Changes:**

Actives: - Reduced rates of mortality at all ages for males and females.

- Reduced rates of disability at all ages for males and females.

Adjusted the unisex rates of withdrawal.

Adjusted rates of service retirement for males and females.

Retirees: - Increased rates of mortality for male service retirees and beneficiaries.

- Adjusted rates of mortality for male and female disability retirees.

### **Economic Changes:**

- Reduced the overall interest rate from 8.25% to 8.00%.
- Reduced the wage inflation assumption from 4.25% to 4.00%.
- Reduced the price inflation assumption from 3.75% to 3.50%.

#### **Asset Valuation Method Change:**

- Maintained the current four-year smoothing of investment gains and losses, but limited the actuarial value of assets to be a minimum of 80% and a maximum of 120% of market value of assets.
- 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. 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 reports.
- 8. Valuations results as of June 30, 2001 were restated by the previous actuary after issuance of the valuation report. This report reflects those restatements.
- 9. The valuation results produce an employer contribution requirement of 10.68% of payroll. This contribution rate includes an adjustment due to a restatement of health care assets. The value of such restatement, which increases the unfunded accrued liability, is approximately \$70.0 million as of June 30, 2006. Although this amount will be credited on a monthly basis to the health care fund through June 2007, annual valuations will recognize this adjustment over a 30-year period from June 2005, resulting in an increase in the required pension contribution of 0.15% of payroll for this valuation year.
- 10. The table on the following page provides a history of some pertinent figures.



# School Employees Retirement System of Ohio

# Comparative Schedule

						Retired Lives					
Valuation		Active Me	embers		Nur	nber			Accrued	Valuation	
Date		Payroll	Average	Salary		Active/	Annual	Benefits	Liability	Assets	UAAL
June 30	Number	\$ Millions	\$	% Incr.	Retired	Retired	\$ Millions	% of Payroll		\$ Millions	
1999	110,175	\$1,768	\$16,048	3.8%	56,632	1.9	\$350.6	19.8%	\$7,535	\$7,332	\$203
2000	113,811	1,866	16,398	2.2	57,824	2.0	376.7	20.2	7,919	8,100	(181)
2001	115,684	1,974	17,065	4.1	58,795	2.0	404.5	20.5	9,257	8,791	466
2002	120,254	2,176	18,093	6.0	59,349	2.0	432.2	19.9	9,986	8,879	1,107
2003	122,315	2,302	18,823	4.0	59,999	2.0	461.2	20.0	10,635	8,772	1,863
2004	123,139	2,394	19,442	3.3	60,569	2.0	491.6	20.5	11,251	8,667	2,584
2005	122,855	2,453	19,963	2.7	61,433	2.0	527.9	21.5	11,961	8,893	3,137*
2006	123,266	2,553	20,714	3.8	62,521	2.0	566.8	22.2	12,627	9,542	3,155*

<sup>\*</sup> After the adjustment to reflect health care asset restatement.

#### **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, 2006 upon which the valuation was based. Detailed tabulations of the data are given in Schedule D.

#### **Active Members**

		Group Averages			
Number	Payroll	Salary	Age	Service	
123,266	\$ 2,553,272,600	\$ 20,714	47.1	9.3	

The total number of active members includes 76,416 vested members and 46,850 non-vested members.

#### **Retired Lives**

		Annual	Group Averages	
Type of Benefit Payment	No.	Benefits	Benefit	Age
Retirement	53,041	\$ 478,917,241	\$ 9,029	74.5
Disability	5,260	62,845,662	11,948	63.7
Survivor	4,220	25,007,989	5,926	70.3
	,	, ,	,	
Total in SERS	62,521	\$ 566,770,892	\$ 9,065	73.3

This valuation also includes 82,932 inactive members eligible for a contribution refund only (including 38,575 members not reported in the data files who had completed 1 or more years of service before terminating). Their contributions totaled \$95,473,751 as of June 30, 2006. In addition, there are 7,892 re-employed retirants with account balances of of \$42,206,862 (including employer contributions and interest). There were also 10,183 terminated vested members with annual deferred pension benefits of \$31,615,576. Included in the "Retirement" numbers in the above table are 155 re-retirees receiving only an annuity from their contributions and their employers' matching contributions as well as 178 re-retirees receiving such annuities in addition to their regular pension benefit. The sum of the annual annuity payments attributable to these re-retirees is \$977,060.

# **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, 2006 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2005. 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

	JUNE 30, 2006	JUNE 30, 2005	
ASSETS			
Current actuarial value of assets	\$ 9,541,787,220	\$ 8,892,564,844	
Future member contributions	\$ 2,130,474,234	\$ 2,080,050,190	
Prospective employers' contributions			
Normal contributions Unfunded accrued liability contributions *	\$ 778,213,038 \$ <u>3,084,865,936</u>	\$ 912,853,180 \$ <u>3,068,452,750</u>	
Total prospective contributions	\$ 3,863,078,974	\$ 3,981,305,930	
Total assets	\$ <u>15,535,340,428</u>	\$ <u>14,953,920,964</u>	
LIABILITIES			
Present value of benefits payable on account of present retired members and beneficiaries	\$ 6,006,232,038	\$ 5,550,872,161	
Present value of benefits payable on account of active members	9,103,422,283	8,992,870,144	
Present value of benefits payable on account of inactive and deferred vested members for service rendered before the valuation date	425,686,107	410,178,659	
Total liabilities	\$ <u>15,535,340,428</u>	\$ <u>14,953,920,964</u>	

Included in the retiree liability shown above for 2006 is the liability attributable to re-retiree annual annuity payments. Such liability amounts to \$9,216,710.

<sup>\*</sup> prior to reflecting the restatement of health care assets

#### **SECTION IV - COMMENTS ON VALUATION**

The valuation balance sheet gives the following information with respect to the funds of the System as of June 30, 2006.

#### **Total Assets**

Current actuarial assets as of the valuation date equaled \$9,541,787,220. Future member contributions were valued to be \$2,130,474,234. Prospective employers' contributions were calculated to be \$3,863,078,974, of which \$778,213,038 is attributable to service rendered after the valuation date (normal contributions) and \$3,084,865,936 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 \$15,535,340,428 as of June 30, 2006.

#### **Total Liabilities**

The present value of benefits payable on account of presently retired members and beneficiaries totaled \$6,006,232,038 as of the valuation date. The present value of future benefit payments on behalf of active members amounted to \$9,103,422,283. In addition, the present value of benefits for inactive members, due to service rendered before the valuation date, was calculated to be \$425,686,107.

Therefore, the balance sheet shows the present value for all prospective benefit payments under the System to be \$15,535,340,428 as of June 30, 2006.

Section 3309.47 of State law requires that active members contribute between 8% and 10% of annual compensation to the System. Since July 1, 2003 the members have been required to contribute 10% of compensation.

Section 3309.49 requires that the employers contribute a certain percentage, not to exceed 14%, of the annual compensation of members to cover the normal contributions and a certain percentage to cover the accrued liability contributions of the System.

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 Death Disability Termination Medicare Part-B Death After Retirement  Total	\$7,460,960,741 129,457,223 621,335,413 731,521,146 150,182,663 9,965,097 \$9,103,422,283	\$ 5,697,901,150 86,246,915 316,702,317 (11,108,418) 99,360,424 5,632,623 \$ 6,194,735,011
Retirees		
Retirement/Survivor/Disability Medicare Part-B Death After Retirement	\$5,792,626,507 191,961,855 21,643,676	\$5,792,626,507 191,961,855 21,643,676
Total	\$6,006,232,038	\$6,006,232,038
Deferred Vested Members	247,225,122	247,225,122
Inactive Members	<u>178,460,985</u>	<u>178,460,985</u>
Total Actuarial Values	\$ 15,535,340,428	\$ 12,626,653,156
Actuarial Value of Assets		9,541,787,220
Unadjusted Unfunded Actuarial Accrued Liability		\$3,084,865,936
Adjustment for Restatement of Health Care Assets		\$70,020,221
Adjusted Unfunded Actuarial Accrued Liability		\$3,154,886,157

# <u>SECTION V – DERIVATION OF EXPERIENCE GAINS AND LOSSES</u>

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 are shown in detail on the next two pages. A summary of the overall net actuarial gain or loss for the year ended June 30, 2006 is shown below.

		\$ millions
(1)	UAAL* as of June 30, 2005	\$3,136.9
(2)	Normal cost from last valuation	119.0
(3)	Actual employer contributions	256.5
(4)	Interest accrual: (1) x .0825 + [[(2) - (3)] x .0404]	253.2
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	3,252.6
(6)	Change due to plan amendments	0.0
(7)	Change due to new actuarial assumptions	(156.5)
(8)	Change due to new actuarial methods	0.0
(9)	Change due to restatement of health care assets	0.0
(10)	Expected UAAL after changes: (5) + (6) + (7) + (8) + (9)	3,096.1
(11)	Actual UAAL as of June 30, 2005	3,154.9
(12)	Gain (loss) (10) - (11)	\$(58.8)
(13)	Gain (loss) as percent of actuarial accrued liabilities at start of year (\$11,961.0)	-0.5%

<sup>\*</sup> Unfunded actuarial accrued liability.

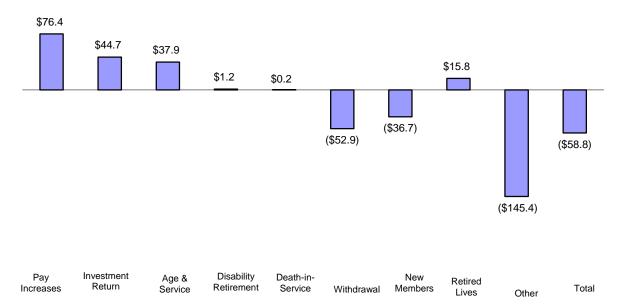
# **ANALYSIS OF FINANCIAL EXPERIENCE**

# Gains & Losses in Accrued Liabilities Resulting from Differences Between Assumed Experience & Actual Experience As of June 30, 2006 (\$ Millions)

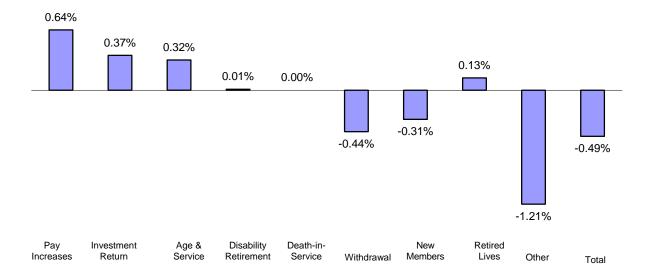
Beginning of Year Accrued Liabilities	\$11,961.0	100.0%
Type of Risk Area	\$ Gain (Loss)	Gain (Loss) as a % of Accrued <u>Liabilities</u>
Economic Risk Areas		
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	\$76.4	0.64%
<b>Investment Income.</b> If there is greater investment income than assumed, there is a gain. If less income, a loss.	44.7	0.37
Non-Economic Risk Areas		
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	37.9	0.32
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	1.2	0.01
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	0.2	0.00
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(52.9)	(0.44)
<b>New Members.</b> Additional unfunded accrued liability will produce a loss.	(36.7)	(0.31)
<b>Death After Retirement.</b> If retirants live longer than assumed, there is a loss. If not as long, a gain.	15.8	0.13
<b>Other.</b> Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, etc. Note that the loss due to data adjustments only was \$146.5 million.	<u>(145.4)</u>	( <u>1.21)</u>
Gain (or Loss) During Year From Financial Experience	\$(58.8)	(.49)%
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, or method changes.	<u>156.5</u>	<u>1.31</u>
Composite Gain (or Loss) During Year	\$ <u>97.7</u>	<u>0.82</u> %

# OHIO SERS GAIN (LOSSES) BY RISK AREA During the Twelve Months Ended June 30, 2006

# Type of Risk Area



# % of Accrued Liabilities



# **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 2006-2007 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	8.56%			
Disability Benefits	1.42			
Survivor Benefits	0.21			
Refunds	<u>3.45</u>			
Total	13.64%	0.02%	0.29%	13.95%
UAAL Payment	6.32	0.02	0.39	6.73
Total Contribution	19.96%	0.04%	0.68%	20.68%
Member Contribution	10.00%	0.00	0.00	10.00%
Employer Contribution	9.96%	0.04%	0.68%	10.68%

## **SECTION VII - SUPPLEMENTAL DISCLOSURE INFORMATION**

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, 2006

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	62,521
Terminated participants and beneficiaries entitled to benefits but not yet receiving	
benefits	93,115
Active Participants	<u>123,266</u>
Total	278,902

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

# SCHEDULE OF FUNDING PROGRESS (\$ Thousands)

Plan Year Ended	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Percent Funded (1)/(2)	(4) Unfunded AAL (2)-(1)	(5) Annual Covered Payroll	(6) Unfunded AAL as a Percentage of Covered Payroll (4)/(5)
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
06/30/05	8,892,565	11,961,018	74.3	3,136,876*	2,452,535	127.9
06/30/06	9,541,787	12,626,653	75.6	3,154,886*	2,553,273	123.6

<sup>^</sup> After change in benefit provisions.

- \* After restatement of health care assets
- + After change in method.



<sup>#</sup> After change in actuarial assumptions.

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 \$3,154,886,157 over a 30-year period from the valuation date.

# 2006-2007 FISCAL YEAR ANNUAL REQUIRED CONTRIBUTION (ARC) BASED ON THE VALUATION AS OF JUNE 30, 2006

ANNUAL REQUIRED CONTRIBUTION (ARC)	RATE
Normal	3.95%
Accrued liability	<u>6.73</u>
Total	10.68%

4. Additional information as of June 30, 2006 follows.

Valuation date	06/30/06
Actuarial cost method	Entry age
Amortization method	Level percent open
Remaining amortization period	30 years
Asset valuation method	4-year smoothed market
Actuarial assumptions:	
Investment rate of return^	8.00%
Projected salary Increases*	4.50 – 24.75%
^ Includes price inflation at	3.50%
* Includes wage inflation at	4.00%
Cost-of-living adjustments	3.00%

# **Schedule of Employer Contributions**

Fiscal Year 7-1/6-30	Valuation Date 6-30	Annual Required Contribution	Percentage Contributed
1997-98	1997	\$139,955,108	100.0%
1998-99	1998	127,195,004	100.0
1999-00	1999	98,148,589	100.0
2000-01	2000	78,459,360	100.0
2001-02	2001	110,795,693	100.0
2002-03	2002	181,236,112	100.0
2003-04	2003	212,193,468	100.0
2004-05	2004	256,046,087	100.0
2005-06*	2005	294,035,898	96.5
2006-07	2006	278,509,373	

<sup>\*</sup> ARC decreased to \$265,813,818 due to the adoption of the new actuarial assumptions retroactive to July 1, 2005. The percentage contributed is less than 100% due to contributions made toward the health care adjustment.

# Solvency Tests (\$ in Millions)

	Actuari	al Accrued Liabilitie	s for					
June 30	(1) Accumulated Employee and Inactive Contributions	(2) Retirees and Beneficiaries Currently Receiving Benefits	(3) Active and Inactive Members Employer Financed Portion	Net Assets Available for Benefits	ا	ortions of Accr Liabilities cover by Assets	red	
					(1)	(2)	(3)	
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	1,785	5,173	4,293	8,667	100	100	39.8	
2005	1,943	5,551	4,467	8,893	100	100	31.3	
2006	2,064	6,006	4,557	9,542	100	100	32.3	

# Schedule of Active Member Valuation Data

	Active members				
Valuation Date	Number	Annual Payroll (in millions)	Annual Average Pay	% Increase in Average Pay	
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	
2000	113,811	1,866.3	16,398	2.2	
2001	115,684	1,974.1	17,065	4.1	
2002	120,254	2,175.7	18,093	6.0	
2003	122,315	2,302.3	18,823	4.0	
2004	123,139	2,394.1	19,442	3.3	
2005	122,855	2,452.5	19,963	2.7	
2006	123,266	2,553.3	20,714	3.8	

# Schedule of Retirants Added to And Removed From Rolls

		Fiscal year ended June 30								
Item	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Beginning of Year	53,478	54,554	55,563	56,632	57,824	58,795	59,349	59,999	60,569	61,433
Added	3,993	4,174	4,127	4,647	4,051	3,977	3,414	3,013	3,683	3,750
Removed	(2,917)	(3,165)	(3,058)	(3,455)	(3,080)	(3,423)	(2,764)	(2,443)	(2,819)	(2,662)
End of Year	54,554	55,563	56,632	57,824	58,795	59,349	59,999	60,569	61,433	62,521

**SCHEDULE A** 

# **Development of Actuarial Value of Assets**

	Valuation Date:	June 30, 2005	June 30, 2006	June 30, 2007	June 30, 2008	June 30, 2009
A.	Actuarial Value Beginning of Year	\$ 8,967,399,180	\$ 9,160,047,000			
B.	Market Value End of Year	9,269,067,708	10,275,765,294			
C.	Market Value Beginning of Year	8,565,443,627	9,269,067,708			
D.	Cash Flow					
D1		662,748,672	686,485,096			
D2		0	70,831,789			
D3		(155,635)	(3,587,709)			
D4	,	(806,409,407)	(855,547,936)			
D5		0	0			
D6	. Net	(143,816,370)	(101,818,760)			
E.	Investment Income					
E1	. Market Total: B - C - D6	847,440,451	1,108,516,346			
E2	. Assumed Rate	8.25%				
E3		733,878,007	728,731,010			
E4	•	113,562,444	379,785,336			
F.	Phased-In Recognition of Investment Income					
F1	S S S S S S S S S S S S S S S S S S S	28,390,611	94,946,334			
F2		96,795,920	28,390,611	94,946,334		
F3		(169,742,962)	96,795,920	28,390,611	94,946,334	
F4		(352,857,386)	(169,742,962)	96,795,920	28,390,611	94,946,334
F5		(397,413,817)	50,389,903	220,132,865	123,336,945	94,946,334
	•	(007,410,017)	00,000,000	220,102,000	120,000,040	04,040,004
G.	Actuarial Value End of Year:					
	A + D6 + E3 + F5	\	¢ 0.027.240.452			
	(not less than 80% or greater than 120% of B	) \$ 9,160,047,000	\$ 9,837,349,153			
H.	Difference Between Market & Actuarial					
	Values:	109,020,708	438,416,141	218,283,277	94,946,334	0
I.	Health Care Valuation Assets	267,482,156	295,561,933			
1	Basic Benefits Valuation Assets		\$ 9,541,787,220			
J.	Dasic Denenils Valuation Assets	φ 0,092,304,644	φ 5,341,707,220			

The actuarial value of assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 4-year period. During periods when investment performance exceeds the assumed rate, the actuarial value of assets will tend to be less than market value. During periods when investment performance is less than assumed, the actuarial value will tend to be greater than market value.

# Asset Summary

# June 30, 2006

		Market Value	Actuarial Value
1.	Assets at June 30, 2005	\$9,269,067,708	\$ 9,160,047,000
2.	Contributions and Misc. Revenue	753,729,176	753,729,176
3.	Investment Increment	1,108,516,346	779,120,913
4.	Benefit Payments	(855,547,936)	(855,547,936)
5.	Assets at June 30, 2006 (1) + (2) + (3) + (4)	\$ 10,275,765,294	\$ 9,837,349,153
6.	Investment Increment/Mean Assets*	12.0%	8.6%

Based on the approximation formula:  $I/[.5 \times (A + B - I)]$ , 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: 8.00% 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	4.00%	20.75%	24.75%
1	4.00	13.25	17.25
2	4.00	10.75	14.75
3	4.00	8.75	12.75
4	4.00	7.75	11.75
5	4.00	5.75	9.75
6	4.00	4.75	8.75
7	4.00	3.75	7.75
8	4.00	2.75	6.75
9	4.00	1.75	5.75
10 - 14	4.00	0.75	4.75
15 & Over	4.00	0.50	4.50

Total covered payroll of the entire membership is assumed to increase 4.00% per year in the future.

**Service Retirement:** Representative values of the assumed annual rates of service retirement are as follows:

Age	Male	Female
50	40.0%	33.0%
55	25.0	25.0
60	10.0	20.0
61	10.0	15.0
62	15.0	15.0
63	10.0	10.0
64	10.0	10.0
65	25.0	25.0
70	20.0	20.0
75	100.0	100.0

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

Service	Rate
0	55.00%
1	20.00
2	15.00
3	10.00
4	7.50
5	6.50
10	5.00
15	3.75
20	3.50

Disability Rates: Representative values of the assumed annual rates of disability are as follows:

Age	Male	Female
30	.1120%	.0075%
35	.3710	.0075
40	.4050	.1570
45	.5060	.1870
50	.8250	.3940
55	.8250	.6080

**Mortality Rates:** Mortality Rates for retirees and survivors are based on the 1994 Group Annuity Mortality table with male ages set back one year and female ages set back one year. Mortality for active members is 60% of the retiree table for males and 50% 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 (-1, -1)

(1994	Group Annuity	Mortality Table (-1, -1
Age	Male	Female
20	.0484%	.0280%
30	.0779	.0331
40	.0999	.0652
50	.2326	.1310
60	.7090	.3863
70	2.1729	1.2709
80	5.5861	3.5362

<b>Disability Retired Members</b>								
Age	Male	Female						
40	2.3040%	2.0900%						
50	2.4040	2.2220						
60	3.9060	2.3660						
70	4.8610	2.6010						
80	7.8120	5.5470						

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. The actuarial value of assets shall not be less than 80% nor greater than 120% of the market value of assets.

#### **SCHEDULE C**

# SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO Summary of Benefit and Contribution Provisions as of June 30, 2006

**Contributions for Basic Benefits** 

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.

Final Average Salary

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

**Normal Retirement** 

Condition for Retirement

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

Amount of Allowance

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:

- An annuity based on the value of the member's accumulated contributions at retirement
- b. A pension equal to the annuity
- \$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	Years of Ohio	D
<u>Age</u>	Service Credit	<u>Percentage</u>
58	25	75%
59	26	80
60	27	85
61		88
	28	90
62		91
63		94
	29	95
64		97

## **Disability Retirement**

Condition for Retirement

Amount of Allowance

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:



	<b>Minimum Duration</b>
Age at Disability	In Months
60 and earlier	60
61	60
62	48
63	48
64	36
65	36
66	24
67	24
68	24
69 and older	12

#### **Death Benefits Prior to Retirement**

#### **Death While Eligible to Retire**

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.

# Survivor (Death-in-Service) Allowances

Condition for Benefit

Upon the death of a member with at least 1½ years of Ohio service credit and with at least ¼ year of Ohio contributing service credit within 2½ years prior to the date of death, the survivor allowances are payable as follows:

- 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.
- 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.
- Qualified Parent's Allowance: A monthly allowance is payable to a dependent parent age 65 or more.

Amount of Allowances

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 Qualified Survivors	Annual Benefit as Percent of <u>Member's FAS</u>	Minimum Monthly <u>Allowance</u>
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 Service	Annual Benefit as Percent 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

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

**Deferred Benefits** 

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.

#### **Normal Form of Benefit**

### Single Life Annuity

**Optional Forms of Benefit** 

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.

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 unreduced monthly benefit, and the monthly benefit will be actuarially reduced. In addition, the monthly benefit payable cannot be less than 50% of the unreduced amount.

**Post-Retirement Death Benefit** 

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

**Post-Retirement Increases** 

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

**Medicare Part B** 

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.

**Re-Employed Retirants** 

Eligibility

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.

Amount of Allowance

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. Effective July 1, 2006 the amount of employer contributions will be determined by the Board. Interest is granted on the reemployed 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. Upon termination of employment, a re-employed retirant who has not attained age 65 may request a lump sum refund of his/her own contributions; there is no payment of employer contributions or interest.

Benefits Payable Upon Death

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 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.

Member Contributions Each re-employed retirant is required to contribute 10% of

his pay by payroll deductions.

**Employer Contributions** Employer contributions are expressed as percents of

member covered payroll. Employers are required to

contribute 14% of payroll.

Other Benefits 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, 2006

# Type of Benefit, Annual Amount, and Basic Benefit Actuarial Liabilities

		% of Current Total Benefit				
		Base	H.B. 204	Retirement	Current Total	Actuarial
Group	Number	Allowances	and 284	Increases	Benefit	Liabilities
		Sup	erannuation	Retirement		
	Si	raight Life Allo	wance - Ben	efit Terminatin	g at Death	
Males	4,201	76.9%	0.0%	23.1%	\$ 48,778,766	\$ 423,405,523
Females	<u>25,563</u>	77.8%	0.0%	22.2%	<u>198,692,414</u>	1,894,277,674
Total	29,764				\$247,471,180	\$2,317,683,197
		Option II Allow	ance - Joint	and Survivor E	Benefits	
Males	6,838	81.2%	0.0%	18.8%	\$ 94,100,723	\$1,121,117,136
Females	<u>10,323</u>	85.1%	0.0%	14.9%	99,557,403	<u>1,183,909,820</u>
Total	17,161				\$193,658,126	\$2,305,026,956
	Optio	n III Allowance	- Life Benefi	its With Guaran	teed Benefits	
Males	362	75.7%	0.1%	24.2%	\$3,258,258	\$28,473,764
Females	899	76.8%	0.0%	23.2%	<u>5,975,963</u>	<u>59,125,369</u>
Total	1,261				\$9,234,221	\$87,599,133
	Allowance		•	-	rannuation Retir	ant
		Who Ele	cted Option	II – Life Benefi	t	
Males	1,036	70.8%	0.1%	29.1%	\$ 3,643,191	\$ 27,385,186
Females	<u>3,763</u>	63.8%	0.1%	36.1%	24,564,920	<u>198,689,375</u>
Total	4,799				\$28,208,111	\$226,074,561

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 Retirants and Beneficiaries June 30, 2006 Type of Benefit, Annual Amount, and Basic Benefit Actuarial Liabilities (continued)

		% of Current Total Benefit				
		Post				
		Base	H.B. 204	Retirement	Current Total	Actuarial
Group	Number	Allowances	and 284	Increases	Benefit	Liabilities
	Allowance	to Survivor Ber	neficiary of D	eceased Supe	rannuation Retir	ant
		Who Elected C	Option III - Gu	uaranteed Perio	od Only	
Males	19	81.0%	0.0%	19.0%	\$162,534	\$ 576,639
Females	<u>37</u>	80.6%	0.0%	19.4%	<u>183,069</u>	<u>733,105</u>
Total	56				\$345,603	\$1,309,744
		Total for Supe	rannuation A	Ilowances Bei	ng Paid	
Males	12,456	79.4%	0.0%	20.6%	\$149,943,472	\$1,600,958,24 8
Females	•	79.4% 78.9%	0.0%	20.6%		_
remales	<u>40,585</u>	76.9%	0.0%	21.1%	328,973,769	3,336,735,343 \$4,937,693,59
Total	53,041				\$478,917,241	1
		I	Disability Re	tirement		
	St	raight Life Allo	wance - Ben	efit Terminatin	g at Death	
Males	1,641	80.1%	0.0%	19.9%	\$27,870,772	\$256,693,831
Females	<u>3,619</u>	80.0%	0.0%	20.0%	34,974,890	<u>367,394,601</u>
Total	5,260				\$62,845,662	\$624,088,432
	Total Ber	nefits Being Pa	id From Ann	uity and Pensi	on Reserve Fund	d
Males	14,097	79.5%	0.0%	20.5%	\$177,814,244	\$1,857,652,079
Females	44,204	79.0%	0.0%	21.0%	363,948,659	3,704,129,944
Total	58,301				\$541,762,903	\$5,561,782,023

# Annuity and Pension Reserve Fund Retirants as of June 30, 2006 Current Annual Total Benefits by Attained Age

	Superannuation		Di	sability		Totals
Attained		Annual		Annual		Annual
Age	Number	Benefits	Number	Benefits	Number	Benefits
_						
Under 20						
20-24						
25-29						
30-34			2	\$ 25,856	2	\$ 25,856
35-39			19	250,308	19	250,308
40-44			114	1,948,400	114	1,948,400
45-49	51	\$ 1,806,427	319	5,610,026	370	7,416,453
50-54	398	11,702,857	645	10,700,242	1,043	22,403,099
55-59	1,342	31,012,559	978	14,248,965	2,320	45,261,524
60-64	5,167	61,636,831	996	12,060,014	6,163	73,696,845
65-69	9,136	98,519,444	788	8,404,303	9,924	106,923,747
70-74	9,485	91,527,499	563	4,640,470	10,048	96,167,969
75-79	8,960	73,164,617	432	2,911,959	9,392	76,076,576
80-84	7,291	48,781,006	260	1,472,996	7,551	50,254,002
85-89	4,373	24,209,574	118	493,042	4,491	24,702,616
90-94	1,639	6,708,693	22	67,392	1,661	6,776,085
95-99	320	1,228,465	4	11,689	324	1,240,154
100	10	23,272			10	23,272
101	2	4,790			2	4,790
102	4	11,047			4	11,047
103	4	9,263			4	9,263
104	3	11,533			3	11,533
105 & Over	1	5,650			1	5,650
Total	48,186	\$ 450,363,527	5,260	\$ 62,845,662	53,446	\$ 513,209,189

# Annuity and Pension Reserve Fund Survivors of Retirants as of June 30, 2006 Current Annual Total Benefits by Attained Age

	Life Annuities		Period	ds Certain	,	Totals
Attained		Annual Annual		Annual		Annual
Age	Number	Benefits	Number	Benefits	Number	Benefits
Under 20	2	\$ 4,553			2	\$ 4,553
20-24	3	12,596			3	12,596
25-29	6	32,666			6	32,666
30-34	4	21,826	1	\$ 8,079	5	29,905
35-39	9	50,022			9	50,022
40-44	9	33,016			9	33,016
45-49	33	178,665	6	63,287	39	241,952
50-54	54	384,077	1	4,056	55	388,133
55-59	93	653,505	5	19,445	98	672,950
33-39	95	033,303	3	13,443	30	072,930
60-64	165	1,396,281	3	3,768	168	1,400,049
65-69	330	2,307,689	10	71,484	340	2,379,173
70-74	602	4,416,201	14	62,761	616	4,478,962
75-79	993	6,588,241	9	75,069	1,002	6,663,310
00.04	4.400	0.404.070		20,200	4.400	0.500.070
80-84	1,182	6,484,278	6	36,398	1,188	6,520,676
85-89	848	3,814,964	1	1,256	849	3,816,220
90-94	366	1,451,990			366	1,451,990
95-99	93	357,918			93	357,918
100	4	15,705			4	15,705
101	1	850			1	850
102	1	952			1	952
103						
104	1	2,116			1	2,116
105 &						
Over						
Total	4,799	\$28,208,111	56	\$345,603	4,855	\$28,553,714

# Survivor Benefit Fund Beneficiaries as of June 30, 2006 Annual Amount, and Basic Benefit Actuarial Liabilities

		% of (	Current Ann			
Group	Number	Base Allowances	HB 204 and 284	Post - Retirement Increases	Current Annual Benefits	Actuarial Liabilities
Benefits Being Paid From Survivor Benefit Fund						
Males Females	1,745 2,475	83.7% 76.4%	0.0% 0.1%	16.3% 23.5%	\$ 8,357,962 16,650,027	\$ 103,179,969 149,308,191
Total	4,220	78.4% 78.9%	0.0%	21.1%	\$25,007,989	\$ 252,488,160

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 as of June 30, 2006 Current Annual Total Benefits by Attained Age

	Т	otals
Attained		Annual
Age	Number	Benefits
Under 20	54	\$ 352,504
20-24	16	129,943
25-29		
30-34	8	70,624
35-39	31	312,501
40-44	56	581,143
45-49	124	1,080,315
50-54	182	1,780,189
55-59	280	2,453,076
00 00	200	2,400,070
60-64	443	2,852,453
65-69	659	4,121,091
70-74	715	3,967,736
75-79	704	3,463,224
00.04	50.4	0.000.004
80-84	534	2,269,901
85-89	272	1,065,481
90-94	113	416,152
95-99	27	84,326
100	1	3,807
101	1	3,523
102		,
103		
104		
105 & Over		
Total	4,220	\$25,007,989

## SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO Total Active Member Data as of June 30, 2006 Tabulated by Attained Age and Years of Service

		Ye			Totals				
Attained									Valuation
Age	0 - 4	5 - 9	10 – 14	15 - 19	20 - 24	25 - 29	30 plus	No.	Payroll
Under 20	762							762	\$ 4,391,374
20 – 24	4,617	146						4,763	41,389,466
25 – 29	4,590	1,082	56					5,728	84,873,417
30 – 34	4,454	2,022	431	34				6,941	124,324,005
35 – 39	6,357	3,842	1,065	422	51			11,737	216,435,658
40 – 44	7,544	6,524	2,424	1,132	707	165		18,496	361,253,407
45 – 49	6,705	7,527	4,468	2,462	1,287	1,005	123	23,577	512,746,609
50 – 54	4,257	5,055	4,017	3,520	2,042	1,154	451	20,496	488,883,708
55 – 59	3,095	2,997	2,424	3,062	2,783	1,636	536	16,533	406,939,906
60	370	325	251	316	395	289	99	2,045	50,056,360
61	359	297	236	280	314	276	102	1,864	44,930,684
62	294	318	216	213	276	261	116	1,694	39,964,990
63	299	327	184	224	262	265	131	1,692	39,102,469
64	221	207	150	182	188	197	136	1,281	28,876,490
65	209	167	105	125	163	159	107	1,035	22,910,309
66	175	140	84	89	125	113	107	833	17,541,753
67	156	105	74	76	93	106	104	714	14,849,700
68	157	101	56	75	74	98	94	655	12,604,323
69	128	88	48	35	49	64	95	507	9,098,484
70 & Over	378	399	225	190	215	183	323	1,913	32,099,488
Totals	45,127	31,669	16,514	12,437	9,024	5,971	2,524	123,266	\$ 2,553,272,600

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

Age: 47.1 years Service: 9.3 years Annual Pay: \$ 20,714



### SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO Male Active Member Data as of June 30, 2006 Tabulated by Attained Age and Years of Service

		Υ			Totals				
Attained									Valuation
Age	0 - 4	5 - 9	10 – 14	15 - 19	20 - 24	25 - 29	30 plus	No.	Payroll
Under 20	412							412	\$ 2,551,777
20 – 24	2,186	76						2,262	20,808,734
25 – 29	1,943	451	28					2,422	38,263,208
30 – 34	1,535	641	184	16				2,376	49,572,103
35 – 39	1,675	830	385	197	18			3,105	75,847,383
40 – 44	1,958	1,018	488	409	381	100		4,354	117,783,619
45 – 49	1,971	1,202	629	525	566	553	72	5,518	162,789,558
50 – 54	1,614	1,062	665	555	536	484	254	5,170	158,878,073
55 – 59	1,360	943	536	501	458	314	180	4,292	127,757,967
60	184	119	79	63	72	38	15	570	16,301,546
61	180	127	83	80	55	31	17	573	15,934,683
62	169	138	70	54	58	36	17	542	14,526,657
63	165	146	72	54	70	32	11	550	14,421,454
64	126	111	65	52	45	25	16	440	10,894,400
65	116	103	45	28	37	19	14	362	8,820,302
66	96	78	35	29	33	11	8	290	6,658,249
67	84	61	42	23	24	14	8	256	5,532,444
68	84	48	25	23	19	12	4	215	4,286,659
69	68	46	19	10	11	7	9	170	3,223,229
70 & Over	194	181	124	84	58	28	22	691	12,598,083
Totals	16,120	7,381	3,574	2,703	2,441	1,704	647	34,570	\$ 867,450,128

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

Age: 46.0 years Service: 8.3 years Annual Pay: \$25,093



### SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO Female Active Member Data as of June 30, 2006 Tabulated by Attained Age and Years of Service

		Yea			Totals				
Attained									Valuation
Age	0 - 4	5 - 9	10 – 14	15 - 19	20 - 24	25 - 29	30 plus	No.	Payroll
Under 20	350							350	\$ 1,839,597
20 – 24	2,431	70						2,501	20,580,732
25 – 29	2,647	631	28					3,306	46,610,209
30 – 34	2,919	1,381	247	18				4,565	74,751,902
35 – 39	4,682	3,012	680	225	33			8,632	140,588,275
40 – 44	5,586	5,506	1,936	723	326	65		14,142	243,469,788
45 – 49	4,734	6,325	3,839	1,937	721	452	51	18,059	349,957,051
50 – 54	2,643	3,993	3,352	2,965	1,506	670	197	15,326	330,005,635
55 – 59	1,735	2,054	1,888	2,561	2,325	1,322	356	12,241	279,181,939
60	186	206	172	253	323	251	84	1,475	33,754,814
61	179	170	153	200	259	245	85	1,291	28,996,001
62	125	180	146	159	218	225	99	1,152	25,438,333
63	134	181	112	170	192	233	120	1,142	24,681,015
64	95	96	85	130	143	172	120	841	17,982,090
65	93	64	60	97	126	140	93	673	14,090,007
66	79	62	49	60	92	102	99	543	10,883,504
67	72	44	32	53	69	92	96	458	9,317,256
68	73	53	31	52	55	86	90	440	8,317,664
69	60	42	29	25	38	57	86	337	5,875,255
70 & Over	184	218	101	106	157	155	301	1,222	19,501,405
								•	<i>,</i> ,
Totals	29,007	24,288	12,940	9,734	6,583	4,267	1,877	88,696	\$ 1,685,822,472

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

Age: 47.6 years Service: 9.7 years Annual Pay: \$19,007



### SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

### Active Member as of June 30, 2006

### By Annual Pay

				Poi	rtion of
	Number	of Active N	lembers	Total	Number
Annual Pay	Men	Women	Totals	Group	Cumulative
Less than \$1,000	226	357	583	0.5%	0.5%
\$1,000 - 1,999	1,107	1,431	2,538	2.1%	2.6%
2,000 - 2,999	1,995	2,174	4,169	3.4%	6.0%
3,000 - 3,999	1,794	2,655	4,449	3.6%	9.6%
4,000 - 4,999	1,388	2,604	3,992	3.2%	12.8%
5,000 - 5,999	1,070	2,579	3,649	3.0%	15.8%
6,000 - 6,999	824	2,564	3,388	2.7%	18.5%
7,000 - 7,999	706	2,610	3,316	2.7%	21.2%
8,000 - 8,999	647	2,554	3,201	2.6%	23.8%
9,000 - 9,999	653	2,674	3,327	2.7%	26.5%
10,000 - 11,999	1,268	5,319	6,587	5.3%	31.8%
12,000 - 13,999	1,178	6,357	7,535	6.1%	37.9%
14,000 - 15,999	1,148	7,620	8,768	7.1%	45.0%
16,000 - 17,999	1,160	7,052	8,212	6.7%	51.7%
18,000 - 19,999	1,044	6,515	7,559	6.1%	57.8%
20,000 - 24,999	2,162	11,023	13,185	10.7%	68.5%
25,000 - 29,999	2,613	7,694	10,307	8.4%	76.9%
30,000 - 35,799	3,969	6,543	10,512	8.5%	85.4%
35,800 and over	9,618	8,371	17,989	14.6%	100.0%
Totals	34,570	88,696	123,266		

### SCHEDULE E

## GAIN/LOSS ANALYSIS COMMENTS AND DETAILED TABULATIONS OF THE DATA

### **COMMENTS**

- 1. Regular actuarial valuations measure the Retirement System's present financial position and contributions adequacy by calculating and financing the liabilities created by the present benefit program. This process involves discounting to present values the future benefit payments on behalf of present active and retired members and their survivors. However, valuations do not produce information regarding the amount of increases or decreases in unfunded actuarial accrued liabilities (UAAL) -- gain/loss analyses do.
- 2. The overall gain/loss to the Retirement System is the difference between the actual UAAL and the expected UAAL. A gain/loss analysis shows the breakdown of the overall system gain/loss by economic and non-economic risk areas. The economic risk areas are investment return and pay increases. The non-economic risk areas are service retirement, disability retirement, death in active service, termination (vested and non-vested), retiree mortality, and new members. Gains and losses resulting from data adjustments, timing of financial transactions, etc. are included separately as a miscellaneous item.
- 3. It is expected that actual experience will not coincide 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. Changes in actuarial assumptions should be made for risk areas when the differences between actual and expected experience are consistently sizable over a period of years. Differences over a relatively short period of time may or may not be indicative of long-term trends, which are the basis of actuarial assumptions.

- 4. The actuarial assumptions used in this analysis are the same as those used in the June 30, 2005 actuarial valuation of the Retirement System. These assumptions were adopted by the Board in June 2001.
- 5. Beginning with the June 30, 1995 valuation, the funding of retiree health care benefits has been changed from the Entry Age Normal funding method to an asset target method. Accrued liabilities for such benefits have not been calculated since then. The analysis in this report shows gains and losses to the System due to basic benefits only.
- 6. Any historical information and data shown in the report with a valuation date prior to June 30, 2002 were obtained from the previous actuary's report.
- 7. Results as of June 30, 2001 were restated by the previous actuary after issuance of their report. This report reflects those restatements.

### **School Employees Retirement System of Ohio**

### **Experience Gains & Losses By Risk Area**

### **Comparative Schedule**

(\$ Millions)

				Gain (L	oss) by Ri	sk Area					
	Ec	Economic Non-Economic								1	
Year Ending June 30	Pay Increases	Investments	Age & Service Retirement	Disability	Death In Service	Withdrawal	New Members	Retired Lives	Other *	\$	% of AAL
1997	\$76.1	\$256.1	\$(8.1)	\$(2.4)	\$0.6	\$3.1	^	\$(1.4)	\$(34.2)	\$289.8	4.7%
1998	50.5	486.6	20.1	(0.2)	(0.0)	(20.0)	^	(1.3)	(75.9)	459.8	7.1
1999	47.3	487.7	24.4	2.7	(0.7)	(18.0)	^	1.0	(84.6)	459.8	6.5
2000	(22.8	465.6	27.4	0.5	(0.4)	(5.7)	^	14.4	(136.2)	342.8	4.6
2001	51.3	(13.0)	32.4	7.3	(0.9)	68.0	٨	(3.3)	(76.6)	57.8	0.7
2002	(151.3)	(533.6)	41.5	0.2	1.6	(9.8)	(38.6)	44.1	35.5	(610.4)	(6.6)
2003	28.0	(781.4)	(29.7)	(0.3)	(0.3)	38.8	(37.1)	30.0	(24.7)	(776.7)	(7.8)
2004	83.6	(763.8)	(45.2)	0.0	0.5	56.6	(48.6)	23.3	(0.4)	(694.0)	(6.5)
2005	101.6	(397.4)	(82.6)	2.1	(0.7)	52.7	(42.7)	12.4	(81.7)	(436.3)	(3.9)
2006	76.4	44.7	37.9	1.2	0.2	(52.9)	(36.7)	15.8	(145.4)	(58.8)	(0.5)

<sup>\*</sup> Includes effect of changes in data, timing of financial transactions, etc.

<sup>^</sup> Included in "Other" risk area.

The market related 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.

The actuarial value of assets for the basic benefits as of June 30, 2006 was \$9,541,787,220. The value for the previous year was \$8,892,564,844.

# School Employees Retirement System of Ohio Development of Gain (Loss) for Basic Benefits From Investment Return

For the Year Ended June 30, 2006

		\$ Millions
1.	Actuarial value of assets as of June 30, 2005	\$8,892.6
2.	Actuarial value of assets as of June 30, 2006	
	a. Actual	9,541.8
	<ul> <li>If 8.25% assumed investment return was achieved for all phased-in years recognized in the asset method</li> </ul>	9,497.1
3.	Gain (Loss): 2a minus 2b	<u>\$44.7</u>

## Pay Increases During the 2005-2006 Valuation Year To Members Active at Beginning and End of Year

Central			
Age Group			
Beginning		Pay Inc	reases
of Year	Number	Actual	Expected
Under 25	1,439	0.02%	18.97%
25	3,500	7.25	14.47
30	4,441	7.66	11.93
35	8,058	7.22	10.50
40	13,818	7.07	9.17
45	20,170	6.09	7.89
50	20,610	5.29	7.02
55	16,331	4.66	6.50
60	10,704	4.40	6.35
65 & Over	7,298	3.86	6.24
Total	106,369	5.58%	7.85%

## Members Who Became Age & Service Retirees During Valuation Year 2005-2006 (Retirement With Allowance Beginning Immediately)

			Year	s of Service	to Valuatio	n Date		
Attained								
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 plus	Total
Under 50	0	0	0	0	0	0	15	15
				_		_		
50	0	0	0	0	0	0	12	12
51	0	0	0	0	0	0	7	7
52	0	0	0	0	0	0	11	11
53	0	0	0	0	0	0	15	15
54	0	0	0	0	0	0	9	9
55	0	0	0	0	0	20	16	36
56	0	0	0	0	1	12	15	28
57	0	0	0	0	0	22	15	37
58	0	0	0	0	0	21	14	35
59	0	0	0	0	1	23	20	44
60	0	7	11	16	34	21	10	99
61	0	10	7	9	28	27	15	96
62	0	14	14	15	20	24	24	111
63	0	11	19	11	20	27	17	105
64	0	11	10	8	16	22	20	87
65	0	9	17	19	21	25	22	113
66	0	8	5	16	22	19	17	87
67	0	10	9	11	15	18	15	78
68	0	3	6	4	11	12	11	47
69	0	6	5	11	3	8	2	35
			•					
70 & over	0	27	28	25	19	21	71	191
Totals	0	116	131	145	211	322	373	1,298

Average Age: 64.2 Average Service: 23.1

Note that this table excludes active members who worked less than one-quarter of the fiscal year for the last two years. These members are deemed inactive members by the System.

## Members Who Died in 2005-2006 Valuation Year With a Death-in-Service Allowance Payable

Central Age	
Group	Number
Under 25	0
25	0
	0
30	0
35	2
40	12
45	13
50	14
55	22
60	14
65	12
70 & over	7
Total	96

Average Age: 56.1 Average Service: 15.6

## Members Who Died in 2005-2006 Valuation Year and Received a Refund of Contributions

Central Age	Number
Group	Number
Under 25 25 30 35 40	1 0 0 1 3
45 50 55 60 65	4 11 11 7 7
70 & over	20
Total	65

Average Age: 60.8 Average Service: 14.8

### Members Who Became Disability Retirees During the 2005-2006 Valuation Year

Central Age	
Group	Number
Under 25	0
25	0
30	1
35	4
40	15
45	44
50	82
55	106
60	24
65	9
70 & over	8
Total	293

Average Age: 54.6 Average Service: 16.7

## Members Receiving a Refund of Contributions or Becoming Inactive Without a Refund in the 2005-2006 Valuation Year (Non-vested Terminations)

Central	
Age	
Group	Number
Огоар	Hamber
	0.440
Under 25	2,148
25	1,982
30	1,424
35	1,711
40	1,917
	,
45	1,805
50	1,212
55	801
60	274
65	313
	0.0
70 & over	266
Total	13,853

Average Age: 39.4 Average Service: 2.9

### Members Who Became Inactive in the 2005-2006 Valuation Year with a Deferred Allowance (Vested Terminations)

Central Age Group	Number
<u> </u>	
Under 25	4
25	41
30	60
35	86
40	144
45	175
50	171
55	136
60	25
65	23
70 & over	16
Total	881

Average Age: 47.4 Average Service: 9.3

### **SCHEDULE F**

#### **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.

<u>Actuarial Assumptions</u>. 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.

<u>Actuarial Cost Method</u>. 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".

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

<u>Actuarial Present Value</u>. 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.

<u>Amortization</u>. 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.

<u>Experience Gain (Loss)</u>. 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.

(concluded on next page)



## GLOSSARY (concluded)

<u>Plan Termination Liability</u>. 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.

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

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

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

