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GASB Statement No. 67 Report

For the

Basic Benefits Valuation

of the

School Employees Retirement System of Ohio

Prepared as of

June 30, 2023





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

November 22, 2023

School Employees Retirement System of Ohio
300 East Broad Street
Suite 100
Columbus, Ohio 43215-3746

Ladies and Gentlemen:

Presented in this report is information to assist the School Employees Retirement System of Ohio (System) in meeting the requirements of the Governmental Accounting Standards Board (GASB) Statement No. 67. The information is presented for the period ending June 30, 2023.

The annual actuarial valuation performed as of June 30, 2023 was used as a basis for the information presented in this report. The valuation was based upon data, furnished by System staff, concerning active, inactive and retired members, along with pertinent financial information.

In order to prepare the results in this report, we have utilized actuarial models that were developed to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

To the best of our knowledge, this report is complete and accurate. The necessary calculations were performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems. Further, the calculations were prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board, and, in our opinion, meet the requirements of GASB 67.



November 22, 2023

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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. In addition, the calculations were completed in compliance with the laws governing the System. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

Respectfully submitted,

A handwritten signature in blue ink that reads 'Todd B. Green' followed by a horizontal line.

Todd B. Green, ASA, EA, FCA, MAAA
President

A handwritten signature in blue ink that reads 'John Garrett'.

John Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

TBG:JG:bvb



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**REPORT OF THE ANNUAL GASB STATEMENT NO. 67
REQUIRED INFORMATION FOR THE
SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO
PREPARED AS OF JUNE 30, 2023**

SECTION I – INTRODUCTION

This report, prepared as of June 30, 2023 (the Measurement Date), presents information to assist the System in complying with Governmental Accounting Standards Board Statement No. 67 (GASB 67). Much of the material provided in this report is based on the data, assumptions and results of the annual actuarial valuation of the School Employees Retirement System of Ohio as of June 30, 2023.

GASB 67 divorces accounting and funding, creating disclosure and reporting requirements that may or may not be consistent with the basis used for funding the System.

GASB 67 requires the determination of the Total Pension Liability (TPL) utilizing the Entry Age Normal actuarial funding method. The Net Pension Liability (NPL) is then set equal to the TPL minus the System’s Fiduciary Net Position (FNP) (the market values of assets) as of the Measurement Date. The benefit provisions recognized in the calculation of the TPL are summarized in Schedule B.

Among the assumptions needed for the liability calculation is a Single Equivalent Interest Rate (SEIR). To determine the SEIR, the FNP must be projected into the future for as long as there are anticipated benefits payable under the plan’s provision applicable to the membership and beneficiaries of the System on the Measurement Date. If the FNP is projected to not be depleted at any point in the future, as is the case as of the June 30, 2023 measurement date, the long-term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR.

If, however, the FNP is projected to be depleted, the Discount Rate is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long term expected rate of return, and the present value determined by discounting those benefits after the date of depletion by a 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate. The rate used, if necessary, for this purpose is the Fidelity General Obligation 20-year Municipal Bond Index Rate (3.86%).

The sections that follow provide the results of all the necessary calculations, presented in the order laid out in GASB 67 for note disclosure and Required Supplementary Information (RSI).



SECTION II – FINANCIAL STATEMENT NOTES

The material presented herein will follow the order presented in GASB 67. Paragraph numbers are provided for ease of reference.

Paragraphs 30(a) (1)-(3): The information required is to be supplied by the System.

Paragraph 30(a) (4): The data required regarding the membership of the School Employees Retirement System of Ohio were furnished by the Staff of the Retirement System. The following table summarizes the membership of the system as of June 30, 2023, the Measurement Date.

Membership

	Number
Retirees Or Their Beneficiaries Currently Receiving Benefits	81,833
Inactive Members Entitled To But Not Yet Receiving Benefits	6,413
Inactive Members Entitled To A Refund	274,280
Active Members	159,873
Total	<u>522,399</u>

Paragraphs 30(a)(5)-(6) and Paragraphs 30(b)-(f): The information required is to be supplied by the System.



Paragraphs 31(a) (1)-(4): The information is provided in the following table. As stated above, the NPL is equal to the TPL minus the FNP. That result as of June 30, 2023 is presented in the table below.

Fiscal Year Ending June 30, 2023	
Total Pension Liability	\$23,084,316,697
Fiduciary Net Position	<u>17,558,801,466</u>
Net Pension Liability	\$5,525,515,231
Ratio of Fiduciary Net Position to Total Pension Liability	76.06%

Paragraph 31(b): This paragraph requires information regarding the actuarial assumptions used to measure the TPL. The actuarial assumptions utilized in developing the TPL are outlined in Schedule B. The total pension liability was determined by an actuarial valuation as of June 30, 2023, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.40 percent
Salary increases	13.58 percent - 3.25% percent, including inflation
Investment rate of return	7.00 percent, net of investment expense, including inflation
Mortality	The PUB-2010 General Employee Amount Weighted Below Median Healthy Retiree mortality table projected to 2017 with ages set forward 1 year and adjusted 94.20% for males and set forward 2 years and adjusted 81.35% for females.

The actuarial assumptions used in the June 30, 2023 valuation were based on the results of an actuarial experience study for the period July 1, 2015 – July 1, 2020, adopted by the Board in April 2021.



Paragraph 31.b.(1)

- (a) Discount rate:** The discount rate used to measure the total pension liability was 7.00%.
- (b) Projected cash flows:** The projection of cash flows used to determine the discount rate assumed that local employers would contribute the actuarially determined contribution rate of projected compensation over the remaining 21-year amortization period of the unfunded actuarial accrued liability. Once the 21-year amortization period has been concluded, the minimum employer allocation to Basic Benefits is assumed to be 10%.
- (c) Long-term rate of return:** The long-term expected return on plan assets is reviewed as part of the regular experience studies prepared every five years for the System. The most recent analysis, performed for the period covering fiscal years 2015 through 2020, is outlined in a report adopted by the Board in April 2021. Several factors are considered in evaluating the long-term rate of return assumption including long-term historical data, estimates inherent in current market data, and a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected return, net of investment expense and inflation) were developed by the investment consultant for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The assumption is intended to be a long-term assumption and is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years.
- (d) Municipal bond rate:** Fidelity General Obligation 20-year Municipal Bond Index Rate (3.86%). The discount rate determination does not use a municipal bond rate.
- (e) Periods of projected benefit payments:** projected future benefit payments for all current plan members were projected through 2137.



(f) Assumed Asset Allocation: The target asset allocation as of July 1, 2023 and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Cash	3.00%	0.76%
US Equity	22.00%	6.20%
Non-US Equity Developed	12.00%	6.91%
Non-US Equity Emerging	6.00%	8.92%
Fixed Income /Global Bonds	18.00%	2.46%
Private Equity	14.00%	10.30%
Real Estate / Real Assets	20.00%	5.01%
Private Debt / Private Credit	5.00%	6.42%

Sensitivity analysis: this paragraph requires disclosure of the sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability of the System, calculated using the discount rate of 7.00% percent, as well as what the System’s net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

	1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
System’s net pension liability	\$8,155,377,885	\$5,525,515,231	\$3,310,356,527

Paragraph 31(c): The date of the actuarial valuation upon which the TPL is based is June 30, 2023. Roll forward procedures were not used.



SECTION III – REQUIRED SUPPLEMENTARY INFORMATION

There are several tables of Required Supplementary Information (RSI) that need to be included in the System’s financial statements:

Paragraphs 32(a)-(c): The required tables are provided in Schedule A.

Paragraph 32(d): The money-weighted rates of return required are to be supplied by the System.

Paragraph 34: In addition the following should be noted regarding the RSI:

Changes of benefit terms: The following changes were made to the benefit terms as identified:

2018

- With the authority granted the Board under Senate Bill 8, the Board has enacted a three-year COLA delay for future benefit recipients commencing benefits on or after April 1, 2018.

2017

- The COLA was changed from a fixed 3.00% to a COLA that is indexed to CPI-W not greater than 2.5% with a floor of 0% beginning January 1, 2018. In addition, with the authority granted the Board under HB 49, the Board has enacted a three-year COLA suspension for benefit recipients in calendar years 2018, 2019 and 2020.

Changes of assumption: The following changes were made to the actuarial assumptions as identified:

2023

- Cost-of-Living Adjustments was increased from 2.00% to 2.50% for calendar year 2024.

2022

- Cost-of-Living Adjustments was increased from 2.00% to 2.50% for calendar year 2023.

2021

- Assumed rate of inflation was reduced from 3.00% to 2.40%
- Payroll growth assumption was reduced from 3.50% to 1.75%
- Assumed real wage growth was increased from 0.50% to 0.85%
- Cost-of-Living-Adjustments was reduced from 2.50% to 2.00%
- The discount rate was reduced from 7.50% to 7.00%



- Rates of withdrawal, compensation, participation, spouse coverage assumption, retirement and disability were updated to reflect recent experience.
- Mortality among active members was updated to the following:
 - PUB-2010 General Amount Weighted Below Median Employee mortality table. Future improvement in mortality rates is reflected by applying the MP-2020 projection scale generationally.
- Mortality among service retired members was updated to the following:
 - PUB-2010 General Employee Weighted Below Median Healthy Retiree mortality table projected to 2017 with ages set forward 1 year and adjusted 94.20% for males and set forward 2 years and adjusted 81.35% for females. Future improvement in mortality rates is reflected by applying the MP-2020 projection scale generationally.
- Mortality among contingent survivors was updated to the following:
 - PUB-2010 General Amount Weighted Below Median Contingent Survivor mortality table projected to 2017 with ages set forward 1 year and adjusted 105.5% for males and adjusted 122.5% for females. Future improvement in mortality rates is reflected by applying the MP-2020 projection scale generationally.
- Mortality among disabled members was updated to the following:
 - PUB-2010 General Disabled Retiree mortality table projected to 2017 with ages set forward 5 years and adjusted 103.3% for males and set forward 3 years and adjusted 106.8% for females. Future improvement in mortality rates is reflected by applying the MP-2020 projection scale generationally.

2016

- Assumed rate of inflation was reduced from 3.25% to 3.00%
- Payroll Growth Assumption was reduced from 4.00% to 3.50%
- Assumed real wage growth was reduced from 0.75% to 0.50%
- Rates of withdrawal, retirement and disability were updated to reflect recent experience.
- Mortality among active members was updated to the following:
 - RP-2014 Blue Collar Mortality Table with fully generational projection and a five-year age set-back for both males and females.
- Mortality among service retired members, and beneficiaries was updated to the following:
 - RP-2014 Blue Collar Mortality Table with fully generational projection with Scale BB, 120% of male rates, and 110% of female rates.
- Mortality among disabled members was updated to the following:
 - RP-2000 Disabled Mortality Table, 90% for male rates and 100% for female rates, set back five years is used for the period after disability retirement.



Method and assumptions used in calculations of actuarially determined contributions. The actuarially determined contribution rates are determined on an annual basis. The following actuarial methods and assumptions were used to determine contribution rates reported in that schedule:

Actuarial cost method	Entry age
Amortization method	Level percentage of payroll, closed
Remaining amortization period	21 years
Asset valuation method	4-year smoothed market
Inflation	2.40 percent
Salary increase	13.58 percent – 3.25 percent, including inflation
Investment rate of return	7.00 percent, net of pension plan investment and administrative expenses, including inflation



SCHEDULE A

**REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY
GASB 67 Paragraph 32(a)**

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total pension liability										
Service Cost	460,216,525	434,605,440	373,675,302	369,976,273	355,452,912	368,167,321	335,918,449	344,059,634	338,060,547	332,975,336
Interest	1,514,327,908	1,457,466,508	1,525,995,298	1,488,777,887	1,449,726,066	1,420,093,605	1,436,626,290	1,385,878,598	1,341,777,662	1,296,763,757
Benefit changes	0	0	0	0	0	(357,618,668)	(998,484,758)	0	0	0
Difference between expected and actual experience	177,650,685	330,257,785	(155,871,041)	1,562,953	60,411,674	286,313,613	275,031,424	50,307,199	78,749,615	53,951,305
Changes of assumptions	37,078,750	36,995,852	126,558,803	0	0	0	0	668,216,579	0	0
Benefit payments	(1,378,757,376)	(1,335,404,562)	(1,302,035,913)	(1,280,910,125)	(1,260,400,360)	(1,248,097,556)	(1,170,689,006)	(1,110,694,355)	(1,076,498,383)	(993,355,839)
Refunds of contributions	<u>(97,668,607)</u>	<u>(82,209,215)</u>	<u>(72,374,764)</u>	<u>(72,849,117)</u>	<u>(75,639,810)</u>	<u>(59,575,036)</u>	<u>(60,692,833)</u>	<u>(70,340,495)</u>	<u>(60,635,651)</u>	<u>(55,668,466)</u>
Net change in total pension liability	712,847,885	841,711,808	495,947,685	506,557,871	529,550,482	409,283,279	(182,290,434)	1,267,427,160	621,453,790	634,666,093
Total pension liability - beginning	<u>22,371,468,812</u>	<u>21,529,757,004</u>	<u>21,033,809,319</u>	<u>20,527,251,448</u>	<u>19,997,700,966</u>	<u>19,588,417,687</u>	<u>19,770,708,121</u>	<u>18,503,280,961</u>	<u>17,881,827,171</u>	<u>17,247,161,078</u>
Total pension liability - ending (a)	<u>23,084,316,697</u>	<u>22,371,468,812</u>	<u>21,529,757,004</u>	<u>21,033,809,319</u>	<u>20,527,251,448</u>	<u>19,997,700,966</u>	<u>19,588,417,687</u>	<u>19,770,708,121</u>	<u>18,503,280,961</u>	<u>17,881,827,171</u>
Plan net position										
Contributions - employer	556,661,200	524,356,285	483,851,685	491,557,790	464,683,489	435,103,620	467,796,738	436,421,681	395,804,105	405,029,627
Contributions - member	398,907,335	375,838,354	346,781,820	352,343,063	345,212,684	324,842,074	336,627,658	314,325,716	303,866,076	295,690,550
Net investment income	1,147,508,467	(338,351,099)	3,976,995,866	413,108,397	831,584,377	1,242,021,081	1,613,368,560	106,543,126	441,455,552	1,888,288,396
Benefit payments	(1,378,757,376)	(1,335,404,562)	(1,302,035,913)	(1,280,910,125)	(1,260,400,360)	(1,248,097,556)	(1,170,689,006)	(1,110,694,355)	(1,076,498,383)	(993,355,839)
Administrative expense	(30,540,558)	(21,585,745)	(12,770,334)	(28,002,623)	(31,880,024)	(26,993,893)	(24,403,350)	(21,808,880)	(19,305,477)	(19,582,190)
Refunds of contributions	<u>(97,668,607)</u>	<u>(82,209,215)</u>	<u>(72,374,764)</u>	<u>(72,849,117)</u>	<u>(75,639,810)</u>	<u>(59,575,036)</u>	<u>(60,692,833)</u>	<u>(70,340,495)</u>	<u>(60,635,651)</u>	<u>(55,668,466)</u>
Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,874,997</u>	<u>0</u>
Net change in plan net position	596,110,461	(877,355,982)	3,420,448,360	(124,752,615)	273,560,356	667,300,290	1,162,007,767	(345,553,207)	(13,438,781)	1,520,402,078
Prior Period Adjustment	0	(1)	1	275,138	0	10,423,132				
Plan net position - beginning	<u>16,962,691,005</u>	<u>17,840,046,988</u>	<u>14,419,598,627</u>	<u>14,544,076,104</u>	<u>14,270,515,748</u>	<u>13,613,638,590</u>	<u>12,451,630,823</u>	<u>12,797,184,030</u>	<u>12,810,622,811</u>	<u>11,300,482,029</u>
Plan net position - ending (b)	<u>17,558,801,466</u>	<u>16,962,691,005</u>	<u>17,840,046,988</u>	<u>14,419,598,627</u>	<u>14,544,076,104</u>	<u>14,270,515,748</u>	<u>13,613,638,590</u>	<u>12,451,630,823</u>	<u>12,797,184,030</u>	<u>12,820,884,107</u>
Net pension liability - ending (a) - (b)	<u>5,525,515,231</u>	<u>5,408,777,807</u>	<u>3,689,710,016</u>	<u>6,614,210,692</u>	<u>5,983,175,344</u>	<u>5,727,185,218</u>	<u>5,974,779,097</u>	<u>7,319,077,298</u>	<u>5,706,096,931</u>	<u>5,060,943,064</u>



SCHEDULE OF THE NET PENSION LIABILITY
GASB 67 Paragraph 32(b)

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total pension liability	\$ 23,084,316,697	\$ 22,371,468,812	\$ 21,529,757,004	\$ 21,033,809,319	\$ 20,527,251,448	\$ 19,997,700,966	\$ 19,588,417,687	\$ 19,770,708,121	\$ 18,503,280,961	\$ 17,881,827,171
Plan net position	<u>17,558,801,466</u>	<u>16,962,691,005</u>	<u>17,840,046,988</u>	<u>14,419,598,627</u>	<u>14,544,076,104</u>	<u>14,270,515,748</u>	<u>13,613,638,590</u>	<u>12,451,630,823</u>	<u>12,797,184,030</u>	<u>12,820,884,107</u>
Net pension liability	\$ 5,525,515,231	\$ 5,408,777,807	\$ 3,689,710,016	\$ 6,614,210,692	\$ 5,983,175,344	\$ 5,727,185,218	\$ 5,974,779,097	\$ 7,319,077,298	\$ 5,706,096,931	\$ 5,060,943,064
Ratio of plan net position to										
total pension liability	76.06%	75.82%	82.86%	68.55%	70.85%	71.36%	69.50%	62.98%	69.16%	71.70%
Covered-employee payroll	\$ 3,964,732,486	\$ 3,734,288,775	\$ 3,449,254,911	\$ 3,477,578,726	\$ 3,462,524,396	\$ 3,332,395,171	\$ 3,302,805,662	\$ 2,932,236,551	\$ 2,845,443,802	\$ 2,922,291,681
Net pension liability as a percentage of covered-employee payroll	139.37%	144.84%	106.97%	190.20%	172.80%	171.86%	180.90%	249.61%	200.53%	173.18%



SCHEDULE OF EMPLOYER CONTRIBUTIONS
GASB 67 Paragraph 32(c)

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Actuarially determined employer contribution	\$ 556,661,200	\$ 524,356,285	\$ 483,851,685	\$ 491,557,790	\$ 464,683,489	\$ 435,103,620	\$ 467,796,738	\$ 436,421,681	\$ 395,804,105	\$ 405,029,627
contributions	<u>556,661,200</u>	<u>524,356,285</u>	<u>483,851,685</u>	<u>491,557,790</u>	<u>464,683,489</u>	<u>435,103,620</u>	<u>467,796,738</u>	<u>436,421,681</u>	<u>395,804,105</u>	<u>405,029,627</u>
Annual contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered-employee payroll	\$ 3,964,732,486	\$ 3,734,288,775	\$ 3,449,254,911	\$ 3,477,578,726	\$ 3,462,524,396	\$ 3,332,395,171	\$ 3,302,805,662	\$ 2,932,236,551	\$ 2,845,443,802	\$ 2,922,291,681
Actual contributions as a percentage of covered-employee payroll	14.04%	14.04%	14.03%	14.14%	13.42%	13.06%	14.16%	14.88%	13.91%	13.86%



SCHEDULE B

ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the valuation were based on the actuarial experience study for the five-year period ending June 30, 2020, adopted by the Board April 2021

INTEREST RATE: 7.00% per annum net of investment expenses, compounded annually (net after all System expenses).

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed rates of separation from active service are as follows:

Service	Annual Rates of Withdrawal
0	40.00%
1	19.00
2	11.00
3	9.00
4	8.00
5	6.50
10	3.50
15	2.25

Age	Annual Rates of			
	Death *		Disability	
	Male	Female	Male	Female
20	.041%	.013%	.020%	.010%
25	.041	.012	.039	.010
30	.052	.019	.071	.028
35	.068	.030	.127	.059
40	.096	.047	.214	.106
45	.143	.072	.313	.180
50	.218	.107	.414	.300
55	.320	.157	.530	.450
60	.466	.238	.590	.450
65	.682	.380	.533	.300
70	1.025	.627	.300	.200
74	1.461	.937	.300	.200

* Pre-retirement mortality is based on the PUB-2010 General Amount Weighted Below Median Employee Mortality Table with fully generational projection using the MP-2020 projection scale. The above rates represent the base rates used.



Annual Rates of								
Age	Retirement Eligible prior to 8/1/17				Retirement Eligible after 8/1/17			
	Reduced	Reduced (55/25)	First Eligible Unreduced	Subsequent Unreduced	Reduced	Reduced (60/25)	First Eligible Unreduced	Subsequent Unreduced
50			21%	19%				
55		10%	27%	19%				
57		10%	27%	19%			30%	19%
60	43%	15%	27%	19%		6%	30%	19%
62	43%	15%	27%	19%	5%	6%	30%	19%
65			50%	33%	15%	17%	30%	19%
68			50%	33%			30%	18%
70			50%	33%			30%	18%
75			100%	100%			100%	100%

SALARY INCREASES: Representative values of the assumed annual rates of salary increases are as follows:

Service	Annual Rates of		
	Merit & Seniority (A)	Base (Economy) (B)	Increase Next Year $(1+(A))*(1+(B))$
0	10.00%	3.25%	13.58%
1	3.00	3.25	6.35
2	1.75	3.25	5.06
3	1.25	3.25	4.54
4	1.00	3.25	4.28
5-9	0.75	3.25	4.02
10-15	0.50	3.25	3.77
16-17	0.25	3.25	3.51
18 & over	0.00	3.25	3.25

PAYROLL GROWTH: 1.75% per annum, compounded annually.

PRICE INFLATION: 2.40% per annum, compounded annually.

ANNUAL COLA: Increase of 2.00% of initial retirement allowance on anniversary of retirement date. On and after April 1, 2018, COLAs for future retirees will be delayed until the fourth anniversary of benefit commencement.



DEATH AFTER RETIREMENT: These assumptions are used to measure the probabilities of a benefit payment being made after retirement.

SERVICE RETIREMENT: PUB-2010 General Employee Amount Weighted Below Median Healthy Retiree mortality table projected to 2017 with ages set forward 1 year and adjusted 94.20% for males and set forward 2 years and adjusted 81.35% for females. Future improvement in mortality rates is reflected by applying the MP-2020 projection scale generationally.

DISABLED RETIREMENT: PUB-2010 General Disabled Retiree mortality table projected to 2017 with ages set forward 5 years and adjusted 103.3% for males and set forward 3 years and adjusted 106.8% for females. Future improvement in mortality rates is reflected by applying the MP-2020 projection scale generationally.

CONTINGENT SURVIVOR: PUB-2010 General Amount Weighted Below Median Contingent Survivor mortality table projected to 2017 with ages set forward 1 year and adjusted 105.5% for males and adjusted 122.5% for females. Future improvement in mortality rates is reflected by applying the MP-2020 projection scale generationally.

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. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 25% of the difference between market value and expected market value. The actuarial value of assets cannot be less than 80% or more than 120% of market value.

FUNDING POLICY: If the funded ratio is less than 70%, the entire 14% employers' contribution shall be allocated to SERS' basic benefits. If the funded ratio is 70% but less than 80%, at least 13.50% of the employers' contribution shall be allocated to SERS' basic benefits, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is 80% but less than 90%, at least 13.25% of the employers' contribution shall be allocated to SERS' basic benefits, with the remainder (if any) allocated to the Health Care Fund. If the funded ratio is 90% or greater, the Health Care Fund may receive any portion of the employers' contribution that is not needed to fund SERS' basic benefits.



SCHEDULE C

SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

Summary of Benefit and Contribution Provisions

Contributions for basic benefits	Members contribute 10% of pay and employers contribute 14% of pay. Employer contributions not required to finance basic benefits may be allocated to the Health Care Fund.
Final Average Salary	Average annual salary over the member's three highest years of service.
Normal Retirement	
Condition for Retirement <i>Retire before August 1, 2017 or have 25 years of service or more on or before August 1, 2017</i>	Attainment of age 65 with at least 5 years of creditable service, or completion of 30 years of creditable service, regardless of age.
<i>Members attaining 25 years of service after August 1, 2017</i>	Attainment of age 67 with at least 10 years of creditable service, or attainment of age 57 with at least 30 years of creditable service. Buy-up option was available.
Amount of Allowance	The annual retirement allowance payable shall not be greater than 100% of final average salary, and is the greater of: <ol style="list-style-type: none">1. Money Purchase - the greater of: The sum of:<ol style="list-style-type: none">a. An annuity based on the value of the member's accumulated contributions at retirementb. A pension equal to the annuityc. 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:<ol style="list-style-type: none">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:<ol style="list-style-type: none">c. \$86 multiplied by the years of service.



Early Retirement

Condition for Early Retirement

Retire before August 1, 2017 or have 25 years of service or more on or before August 1, 2017

Not eligible for unreduced service retirement but has attained age 55 with at least 25 years of service, or age 60 with 5 years of service.

Members attaining 25 years of service after August 1, 2017

Attainment of age 62 with at least 10 years of creditable service, or attainment of age 60 with at least 25 years of creditable service.

Amount of Allowance

Retire before August 1, 2017 or have 25 years of service or more on or before August 1, 2017

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 or years of service:

<u>Attained Age</u>	<u>Years of Ohio Service Credit</u>	<u>Percentage</u>
58	25	75%
59	26	80
60	27	85
61		88
	28	90
62		91
63		94
	29	95
64		97

Members attaining 25 years of service after August 1, 2017

Actuarial equivalent of the normal retirement allowance accrued to the date of early retirement. The Defined Benefit amount determined above is actuarially adjusted for the years before age 65 (age 67 if after August 1, 2017) or 30 years of service, whichever is shorter, but in no event is the adjusted benefit less than the following percentages of the Defined Benefit amount based on years of service:

<u>Years of Ohio Service Credit</u>	<u>Percentage</u>
25	75%
26	80
27	85
28	90
29	95



Disability Retirement

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

- Amount of Allowance**
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:

<u>Age at Disability</u>	<u>Minimum Duration In Months</u>
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 1.5 years of Ohio service credit and with at least 0.25 year of Ohio contributing service credit within 2.5 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:** For allowances that commenced before January 7, 2013, an allowance is payable to a deceased member's qualified child who is under age 18 and never been married, under age 22 and in school, or adjudged incompetent prior to the member's death and the child attaining age 18 or age 22 if attending school. For allowances that commence on or after January 7, 2013, an allowance is payable to a deceased member's qualified child who is under age 19 and never been married or adjudged incompetent prior to the member's death and the child attaining age 19.
3. **Qualified Parent's Allowance:** A monthly allowance is payable to a dependent parent age 65 or older.



Survivor (Death-in-Service) Allowances (continued)

Amount of Allowances

Except when survived by a qualified 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:

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

<u>Years of Service</u>	<u>Annual Benefit as Percent of Member's FAS</u>
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/her behalf, the member's accumulated contributions, without interest, may be refunded.

Deferred Benefits

Members who retire prior to August 1, 2017 must have at least 5 years of service credit and those members who retire on and after August 1, 2017 must have at least 10 years of service credit and are eligible to draw the benefit the first of the month following their 62nd birthday.

Normal Form of Benefit

Single Life Annuity

Optional Forms of Benefit

A member upon retirement may elect to receive an 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/her 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 further payment to the pensioner, his/her beneficiary or 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

Pre 1/1/2018: On each anniversary of the initial date of retirement, the allowances of all retirees and survivors are increased by 3% of the base benefit.

On and after 1/1/2018: On each anniversary of the initial retirement, the allowance of all retirees and survivors may be increased by the annual rate of increase in the CPI-W measured as of the June preceding the beginning of the applicable calendar year. The annual rate of increase shall not be less than 0% nor greater than 2.5%. COLAs shall be suspended for calendar years 2018, 2019, and 2020.

On and after 4/1/2018: COLAs for future retirees will be delayed until the fourth anniversary of benefit commencement.

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 has paid Medicare Part B premiums and has chosen the health care option, is reimbursed \$45.50 per month for premiums. The reimbursement will continue to the spouse upon the death of the retiree in cases where the retiree elected a Joint and Survivor payment form.

Reemployed 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 reemployed 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 reemployed 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	<p>If a reemployed 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/her beneficiary.</p> <p>If a reemployed 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 reemployed retirant would have received at the effective date of retirement over the sum of the annuity payments received by the reemployed retirant to the date of death.</p>
Member Contributions	Each reemployed retirant is required to contribute 10% of his/her 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	Reemployed retirants of SERS are not eligible to receive any of the other benefits provided to SERS members.
Member Contributions	10% of salary.