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GASB Statement No. 74 Report

For the

Retiree Health Care Valuation

of the

School Employees Retirement System of Ohio

Prepared as of June 30, 2018





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

November 7, 2018

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. 74. The information is presented for the period ending June 30, 2018. The calculations in this report have been made on a basis that is consistent with our understanding of this accounting standard (GASB 74). Please note that the discount rate used to determine the Total OPEB Liability changed from 3.63% at the Prior Measurement Date to 3.70% at the current Measurement Date.

The annual actuarial valuation performed as of June 30, 2018 was used as the basis for the information presented in this report. The valuation was based upon data, furnished by the System staff, concerning active, inactive and retired members along with pertinent financial information. This information was reviewed for completeness and internal consistency, but was not audited by us. The valuation results depend on the integrity of the data. If any of the information is inaccurate or incomplete our results may be different and our calculations may need to be revised. Please see the actuarial valuation for additional details on the funding requirements for the System including actuarial assumptions and methods and the funding policy.

To the best of our knowledge, the information contained in this report is complete and accurate. The calculations were performed by qualified actuaries according to generally accepted actuarial principles and practices, as well as in conformity with Actuarial Standards of Practice issued by the Actuarial Standards Board. The calculations are based on the current provisions of the System, and on actuarial assumptions that are internally consistent and individually reasonable based on the actual experience of the System. In addition, the calculations were completed in compliance with applicable law and, in our opinion, meet the requirements of GASB 74.



November 7, 2018

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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.

These results are only for financial reporting and may not be appropriate for funding purposes or other types of analysis. Calculations for purposes other than satisfying the requirements of GASB 74 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

We, Alisa Bennett, FSA and John Garrett, ASA, are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. We are available to answer any questions on the material contained in this report or to provide explanations or further details as may be appropriate.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Alisa Bennett'.

Alisa Bennett, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

A handwritten signature in blue ink, appearing to read 'John Garrett'.

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



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REPORT OF THE ANNUAL GASB STATEMENT NO. 74

RETIREE HEALTH CARE

SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

SUMMARY OF PRINCIPAL RESULTS

Valuation Date (VD):	June 30, 2018
Prior Measurement Date:	June 30, 2017
Measurement Date (MD):	June 30, 2018
Membership Data:	
Retirees and Beneficiaries	37,649
Inactive Vested Members	5,089
Inactive Nonvested Members	0
Active Employees	<u>158,343</u>
Total	201,081
Single Equivalent Interest Rate (SEIR):	
Long-Term Expected Rate of Return	7.50%
Municipal Bond Index Rate at Prior Measurement Date	3.56%
Municipal Bond Index Rate at Measurement Date	3.62%
Year in which Fiduciary Net Position is Projected to be Depleted	2026
Single Equivalent Interest Rate at Prior Measurement Date	3.63%
Single Equivalent Interest Rate at Measurement Date	3.70%
Net OPEB Liability:	
Total OPEB Liability (TOL)	\$3,209,899,769
Fiduciary Net Position (FNP)	<u>435,629,637</u>
Net OPEB Liability (NOL = TOL – FNP)	\$2,774,270,132
FNP as a percentage of TOL	13.57%



INTRODUCTION

The Governmental Accounting Standards Board issued Statement No. 74 (GASB 74), “*Financial Reporting for Postemployment Benefit Plans other than Pension Plans*”, in June 2015. The effective date for reporting under GASB 74 for the Retiree Health Care Plan of the School Employees Retirement System of Ohio was fiscal year end June 30, 2018.

This report, prepared as of June 30, 2018 (the Measurement Date), presents information to assist the School Employees Retirement System of Ohio in meeting the requirements of GASB 74. Much of the material provided in this report is based on the data, assumptions and results of the annual actuarial valuation of the System performed as of June 30, 2018 (the Valuation Date). The results of that valuation were detailed in a report dated October 23, 2018.

GASB 74 replaces GASB 43, and represents a significant departure from the requirements of the prior statement. GASB 43 was issued as a “funding friendly” statement that required postemployment benefit plans other than pension plans (OPEB) to report items consistent with the results of the plan’s actuarial valuations, as long as those valuations met certain parameters. GASB 74 basically separates accounting from funding by creating disclosure and reporting requirements that may or may not be consistent with the basis used for funding the Plan.

A major change in GASB 74 is the requirement to determine the Total OPEB Liability (TOL) utilizing the Entry Age Normal actuarial cost method. The Net OPEB Liability (NOL) is then set equal to the TOL minus the Plan’s Fiduciary Net Position (FNP) (basically the fair (market) value of assets). The benefit provisions recognized in the calculation of the TOL are summarized in Schedule B.

Among the items needed for the liability calculation is the discount rate, or Single Equivalent Interest Rate (SEIR), as described by GASB 74. To determine the SEIR, the FNP must be projected, using GASB 74 guidelines, into the future for as long as there are anticipated benefits payable under the plan’s provisions applicable to the members and beneficiaries of the System on the Measurement Date. If the FNP is not projected to be depleted at any point in the future, 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 at a future measurement date, the SEIR 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 (3.62%).



Our calculations indicate that the FNP is projected to be depleted, so the Municipal Bond Index Rate is used in the determination of the SEIR for both the June 30, 2017 and the June 30, 2018 TOL. The SEIR is 3.70% at June 30, 2018 and 3.63% at June 30, 2017. Please see Paragraph 35.b.(2) for more explanation of the development of the SEIR.

The FNP projections are based upon the School Employees Retirement System's financial status on the Measurement Date, the indicated set of methods and assumptions, and the requirements of GASB 74. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing plan basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the System, or the System's ability to make benefit payments in future years.

The sections that follow provide the results of all the necessary calculations, presented in the order laid out in GASB 74 for note disclosure and Required Supplementary Information (RSI).



SECTION I – NOTES TO FINANCIAL STATEMENTS

The material presented herein will follow the order presented in GASB 74. Paragraph numbers are provided for ease of reference.

Paragraphs 34.a. (1)-(3): This information will be supplied by the System.

Paragraph 34.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, 2018, the date of the valuation used to determine the June 30, 2018 Total OPEB Liability.

Membership

	Number
Retirees Or Their Beneficiaries Currently Receiving Benefits	37,649
Inactive Members Entitled To But Not Yet Receiving Benefits	5,089
Active Members	158,343
Total	201,081

Paragraphs 34.a. (5)-(6) and Paragraphs 34.b.-e.: This information will be supplied by the System.

Paragraph 35.a. (1)-(4): As stated earlier, the NOL is equal to the TOL minus the FNP. That result, as of June 30, 2018, is presented in the following table.

	Fiscal Year Ending June 30, 2019
Total OPEB Liability	\$3,209,899,769
Fiduciary Net Position	<u>435,629,637</u>
Net OPEB Liability	\$2,774,270,132
Ratio of Fiduciary Net Position to Total OPEB Liability	13.57%



Paragraph 35.b.: This paragraph requires information to be disclosed regarding the actuarial assumptions and other inputs used to measure the TOL. The complete set of actuarial assumptions and other inputs utilized in developing the TOL are outlined in Appendix C. The TOL as of June 30, 2018 was determined based on an actuarial valuation prepared as of June 30, 2018, using the following actuarial assumptions and other inputs:

Price Inflation	3.00 percent
Salary increases, including price inflation	3.50 to 18.20 percent
Long-term Rate of Return, net of investment expense, including price inflation	7.50 percent
Municipal Bond Index Rate	
Prior Measurement Date	3.56 percent
Measurement Date	3.62 percent
Year FNP is projected to be depleted	2026
Single Equivalent Interest Rate, net of plan investment expense, including price inflation	
Prior Measurement Date	3.63 percent
Measurement Date	3.70 percent
Healthcare Cost Trend Rate	Pre-Medicare: 7.25% - 4.75% Medicare: 5.375% - 4.75%
Mortality	RP-2014 Blue Collar Mortality Table with fully generational projection and Scale BB, 120% of male rates and 110% of female rates. RP-2000 Disabled Mortality Table with 90% for male rates and 100% for female rates set back five years.

The actuarial assumptions used in the valuation are based on the results of the most recent actuarial experience study, which covered the five-year period ending June 30, 2015. The experience study report is dated April 2016.



Paragraph 35.b.(1)

Sensitivity analysis: The disclosure of the sensitivity of the Net OPEB Liability to changes in the healthcare cost trend rate.

Paragraph 35.b.(2)

(a) Discount rate (SEIR): The discount rate used to measure the TOL at June 30, 2018 was 3.70 percent. The discount rate used to measure the TOL at the Prior Measurement Date was 3.63 percent.

(b) Projected cash flows: The projection of cash flows used to determine the discount rate assumed that plan contributions from members and the System will be made at the current contribution rates as set out in state statute:

- a. State contribution rate: 2.00% of covered payroll; included 1.50% payroll surcharge and 0.50% additional contribution from the basic benefits plan.
- b. Administrative expenses in the prior year were projected forward with price inflation as an estimate for administrative expenses in current and future years. The portion of expenses in future years allocated to the current members was based on the proportionate share of covered payroll in each year for the remainder of the existing members to the total covered payroll for all members.
- c. Both pension and OPEB benefits are paid by the trust as a whole.

Based on those assumptions, the System's FNP was projected to not be available to make all projected future benefit payments of current System members, so the Municipal Bond Index Rate is used in the determination of the SEIR for both the June 30, 2017 and the June 30, 2018 TOL. The SEIR is 3.70% at June 30, 2018 and 3.63% at June 30, 2017.

The FNP projections are based upon the System's financial status on the Measurement Date, the indicated set of methods and assumptions, and the requirements of GASB 74. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing System basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the System, or the System's ability to make benefit payments in future years.

(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 2010 through 2015, is outlined in a report adopted by the Board on April 21, 2016. 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 capital market assumptions developed by the investment consultant are intended for use over a 10-year horizon and may not be useful in setting the long-term rate of return for funding pension plans which covers a longer timeframe. 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:** A municipal bond rate used in determining the discount rate was 3.62% on the Measurement Date.
- (e) **Periods of projected benefit payments:** Projected future benefit payments for all current plan members until benefit payments ran out.



(f) Assumed asset allocation: The target asset allocation and best estimates of arithmetic real rates of return for each major asset class, as used in the June 30, 2015 experience study, are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Cash	1.0%	0.50%
US Equity	22.5%	4.75%
International Equity	22.5%	7.00%
Fixed Income	19.0%	1.50%
Private Equity	10.0%	8.00%
Real Assets	15.0%	5.00%
Multi-Asset Strategies	10.0%	3.00%

(g) Sensitivity analysis: This paragraph requires disclosure of the sensitivity of the NOL to changes in the health care cost trend rates and the discount rate. The following exhibit presents the NOL of the Plan, calculated using the health care cost trend rates, as well as what the Plan's NOL would be if it were calculated using a health care cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate. Similarly, the exhibit presents the NOL of the System, calculated using the discount rate of 3.70 percent, as well as the System's NOL calculated using a discount rate that is 1-percentage-point lower (2.70 percent) or 1-percentage-point higher (4.70 percent) than the current rate.

Net OPEB Liability			
Discount Rate	Health Care Cost Trend Rates		
	1% Decrease	Current	1% Increase
1% Increase (4.70%)		\$2,305,446,902	
Current (3.70%)	\$2,238,327,059	\$2,774,270,132	\$3,483,954,923
1% Decrease (2.70%)		\$3,366,358,701	

Paragraph 35.c.: The TOL at June 30, 2018 is based upon an actuarial valuation prepared as of June 30, 2018.



SECTION II – REQUIRED SUPPLEMENTARY INFORMATION

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

Paragraphs 36.a.-c.: The required tables of schedules are provided in Schedule A.

Paragraph 36.d. and 37: The money-weighted rates of return will be supplied by the System.

Paragraph 38: The following information should be noted regarding the RSI, particularly for the *Schedule of Employer Contributions*:

Changes of benefit and funding terms: There have been no changes to the benefit provisions.

Changes in actuarial assumptions:

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 disable member 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 System is funded with fixed contribution rates for the state and with varying contributions for employees based on their job and personal elections. The Actuarially Determined Contributions in the *Schedule of Employer Contributions* are calculated as of the beginning of the fiscal year in which contributions are reported.

The following actuarial methods and assumptions (from the June 30, 2017 actuarial valuation) were used to determine the Actuarially Determined Contribution reported for Fiscal Year End 2018 in that schedule:

Actuarial cost method	Entry age normal
Amortization method	Level percentage of payroll, open
Remaining amortization period	30 years
Asset valuation method	Market Value
Price Inflation	3.00 percent
Salary increase, including price inflation	18.20 percent – 3.50 percent, including inflation
Long-term Rate of Return, net of investment expense, including price inflation	5.25 percent
Healthcare Cost Trend Rate	Pre-Medicare: 7.50% - 5.00% Medicare: 5.50% - 5.00%

Please see the information presented earlier in regard to Paragraph 38 for detailed information on the benefit changes and assumption changes that may have impacted the Actuarially Determined Contributions shown in the *Schedule of Employer Contributions*.



Schedule A

**REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF CHANGES IN THE NET OPEB LIABILITY
GASB 74 Paragraph 36.a**

	2018	2017
Total OPEB liability		
Service Cost	155,385,800	183,787,494
Interest	109,982,145	94,687,883
Benefit changes	0	0
Difference between expected and actual experience	53,656,583	0
Changes of assumptions	(102,900,217)	(346,945,601)
Benefit payments *	(72,071,363)	(86,257,389)
Net change in total OPEB liability	144,052,948	(154,727,613)
Total OPEB liability - beginning	3,065,846,821	3,220,574,434
Total OPEB liability - ending (a)	3,209,899,769	3,065,846,821
Plan net position		
Contributions - employer	100,056,736	65,013,891
Contributions - non-employer	0	0
Contributions - member	0	0
Net investment income	28,167,652	35,730,747
Benefit payments *	(72,071,363)	(86,257,389)
Administrative expense	(2,632,948)	(2,582,204)
Other	0	0
Net change in plan net position	53,520,077	11,905,045
Plan net position - beginning	382,109,560	370,204,515
Plan net position - ending (b)	435,629,637	382,109,560
Net OPEB liability - ending (a) - (b)	2,774,270,132	2,683,737,261

*Benefit payments are net of retiree contributions

Note: Schedule is intended to show 10-year trend. Additional years will be reported as they become available.



SCHEDULE OF CHANGES IN THE NET OPEB LIABILITY
GASB 74 Paragraph 36.b

	2018	2017
Total OPEB Liability	3,209,899,769	3,065,846,821
Plan Net Position	<u>435,629,637</u>	<u>382,109,560</u>
Net OPEB Liability	2,774,270,132	2,683,737,261
Ratio of Plan Net Position to Total OPEB Liability	13.57%	12.46%
Covered-employee payroll	3,332,395,171	3,303,055,969
Net OPEB Liability as a percentage of covered- employee payroll	83.25%	81.25%

Note: Schedule is intended to show 10-year trend. Additional years will be reported as they become available.



SCHEDULE OF EMPLOYER CONTRIBUTIONS
GASB 74 Paragraph 36.c

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined employer contribution	189,387,339	178,034,717	161,566,234	164,182,107	190,390,431	171,402,038	155,857,785	169,146,052	315,535,278	373,789,127
Actual employer contributions	100,056,736	65,013,891	77,348,691	88,989,693	75,297,406	45,489,443	56,476,230	86,908,283	84,556,869	186,915,589
Annual contribution deficiency (excess)	89,330,603	113,020,826	84,217,543	75,192,414	115,093,025	125,912,595	99,381,555	82,237,769	230,978,409	186,873,538
Covered-employee payroll	3,332,395,171	3,303,055,969	2,932,236,551	2,845,443,802	2,759,281,606	2,746,827,535	2,788,153,585	2,852,378,614	2,842,660,159	2,787,390,954
Actual contributions as a percentage of covered-employee payroll	3.00%	1.97%	2.64%	3.13%	2.73%	1.66%	2.03%	3.05%	2.97%	6.71%



SCHEDULE B

SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO Summary of Main Plan Provisions as of June 30, 2018

ELIGIBILITY FOR ACCESS TO RETIREE HEALTH CARE:

Normal Retirement:

Retire before August 1, 2017 or have 25 years of service or more on or before August 1, 2017: Attainment of age 65 with at least ten years of creditable service, or completion of 30 years of creditable service, regardless of age.

Members attaining 25 years of service after August 1, 2017: Attainment of age 67 with at least ten years of creditable service, or attainment of age 57 with at least 30 years of creditable service. Buy-up option available.

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 ten years of service.

Members attaining 25 years of service after August 1, 2017: Attainment of age 62 with at least ten years of creditable service, or attainment of age 60 with at least 25 years of creditable service.

Disability Retirement: Permanently disabled after completion of at least 5 years of total service credit.

Survivor Allowances: Beneficiary must be receiving monthly benefits due to the death of a member, age and service retiree or disability benefit recipient.

Termination: Members that terminated with at least ten years of creditable service and have attained age 60 (age 62 for those retiring after August 1, 2017).

PREMIUM PAYMENTS:

Retirees, spouses and dependent children pay either all or a portion of the cost of health care and prescription drug coverage as well as a \$35 monthly surcharge. The remainder of the cost is paid by SERS.

Medicare-eligible retirees, spouses and dependent children may qualify for the health care Premium Discount Program if their household income falls at or below a specified level. Income limits are updated annually and those wishing to participate in the program are re-verified every year. Retirees, spouses and dependent children qualifying for the program will receive a 25% discount in their monthly health care premiums.



PREMIUM PAYMENTS (Continued):

The following schedule lists the percentage of the retiree premium paid by service retirees:

Years of Service	Retirement Date on or before July 1, 1989	Retirement Date August 1, 1989 through July 1, 2008	Retirement Date on or after August 1, 2008
	Service Retiree Premium Contribution Percentage		
5 – 9	50.0%	N/A	N/A
10 – 14	17.5	100.0%	100.0%
15 – 19	17.5	50.0	100.0
20 – 24	17.5	25.0	50.0
25 – 29	17.5	17.5	30.0
30 – 34	17.5	17.5	20.0
35 and over	17.5	17.5	15.0*

* Additional 1% reduction for each year over 35.

The following schedule lists the percentage of the retiree premium paid by disability benefit recipients:

Years of Service	Disabled Benefit Recipient Premium Contribution Percentage
5 – 9	50.0%
10 – 24	33.0
25 and over	17.5

The following schedule lists the percentage of the spouse premium paid by spouses of retirees:

Service Retiree, Disability Recipient, or Member's Qualified Service	Spouse Premium Contribution Percentage
1.5 – 24	100.0%
25 – 29	90.0
30 and over	80.0

Dependent children pay 70.0% of the child premium.

In addition, SERS offered a new coverage option beginning in 2017, the Marketplace Wraparound Plan. This option is only available to healthcare participants who are not eligible for Medicare and who are not enrolled in Medicaid. Participants will be able to choose insurance from any insurer offering coverage in the federal Marketplace, and if eligible, receive a federal subsidy to lower the premium and cost-sharing amounts. The SERS Marketplace Wraparound Plan offers additional benefits to help pay for deductibles, co-pays, and other costs.

OTHER POST-EMPLOYMENT BENEFITS: Health care and prescription drug coverage is provided in all post-employment group health care plan options. Dental and vision coverage are made available to retirees, spouses and dependent children at the full cost.



2019 RETIREE GROUP HEALTH CARE PLAN OPTIONS:

Options available to members without Medicare

- ◇ Aetna Choice POS II with Express Scripts prescription drug coverage
- ◇ AultCare PPO with AultCare prescription drug coverage

Options available to members with Medicare:

- ◇ Aetna MedicareSM Plan (PPO) with Express Scripts Medicare Part D Prescription Drug Plan
- ◇ Aetna Traditional Choice Plan with Express Scripts Medicare Part D Prescription Drug Plan (only available to members with special circumstances)
- ◇ AultCare PPO with AultCare prescription drug coverage (only available to members with Part B Only)
- ◇ Paramount Elite Medicare Advantage with Express Scripts Medicare Part D Prescription Drug Plan
- ◇ PrimeTime Health Plan through AultCare with PrimeTime Medicare Part D prescription drug coverage

The following pages contain information that was provided by SERS in the 2019 Open Enrollment Guide and the 2019 Member Health Care Guide.



2019 Contribution Rates

Years of Service	Aetna Choice POS II and Aetna MedicareSM	Aetna Traditional Choice	AultCare PPO and PrimeTime	Paramount Elite HMO
Service Retirement Date on or before July 1, 1989 Premiums				
5-9.999 years				
Without Medicare	\$659		\$539	N/A
With Medicare A & B	\$117	\$428	\$148	\$139
With Medicare B Only	\$297		\$539	\$209
10-24.999 years				
Without Medicare	\$253		\$211	N/A
With Medicare A & B	\$64	\$173	\$74	\$71
With Medicare B Only	\$127		\$211	\$96
25 years & over				
Without Medicare	\$253		\$211	N/A
With Medicare A & B	\$64	\$173	\$74	\$71
With Medicare B Only	\$64		\$74	\$71

Years of Service	Aetna Choice POS II and Aetna MedicareSM	Aetna Traditional Choice	AultCare PPO and PrimeTime	Paramount HMO
Service Retirement Date August 1, 1989 through July 1, 2008 Premiums				
10-14.999 years				
Without Medicare	\$1,282		\$1,042	N/A
With Medicare A & B	\$198	\$821	\$260	\$243
With Medicare B Only	\$558		\$1,042	\$383
15-19.999 years				
Without Medicare	\$659		\$539	N/A
With Medicare A & B	\$117	\$428	\$148	\$139
With Medicare B Only	\$297		\$539	\$209
20-24.999 years				
Without Medicare	\$347		\$287	N/A
With Medicare A & B	\$76	\$232	\$91	\$87
With Medicare B Only	\$166		\$287	\$122
25 years & over				
Without Medicare	\$253		\$211	N/A
With Medicare A & B	\$64	\$173	\$74	\$71
With Medicare B Only	\$64		\$74	\$71



**2019 Contribution Rates
(continued)**

Years of Service	Aetna Choice POS II and Aetna MedicareSM	Aetna Traditional Choice	AultCare PPO and PrimeTime	Paramount Elite HMO
Service Retirement Date on or after August 1, 2008 Premiums*				
10-19.999 years				
Without Medicare	\$1,282		\$1,042	N/A
With Medicare A & B	\$198	\$821	\$260	\$243
With Medicare B Only	\$558		\$1,042	\$383
20-24.999 years				
Without Medicare	\$659		\$539	N/A
With Medicare A & B	\$117	\$428	\$148	\$139
With Medicare B Only	\$297		\$539	\$209
25-29.999 years				
Without Medicare	\$409		\$337	N/A
With Medicare A & B	\$84	\$271	\$103	\$97
With Medicare B Only	\$84		\$103	\$97
30-34.999 years*				
Without Medicare	\$284		\$236	N/A
With Medicare A & B	\$68	\$192	\$80	\$77
With Medicare B Only	\$68		\$80	\$77

* Further reductions for each year over 35.

Years of Service	Aetna Choice POS II and Aetna MedicareSM	Aetna Traditional Choice	AultCare PPO and PrimeTime	Paramount Elite HMO
Disability Benefit Recipient Premiums				
5-9.999 years				
Without Medicare	\$659		\$539	N/A
With Medicare A & B	\$117	\$428	\$148	\$139
With Medicare B Only	\$297		\$539	\$209
10-24.999 years				
Without Medicare	\$447		\$367	N/A
With Medicare A & B	\$89	\$294	\$109	\$104
With Medicare B Only	\$208		\$367	\$150
25 years & over				
Without Medicare	\$253		\$211	N/A
With Medicare A & B	\$64	\$173	\$74	\$71
With Medicare B Only	\$64		\$74	\$71



**2019 Contribution Rates
(continued)**

Years of Service	Aetna Choice POS II and Aetna Medicare SM	Aetna Traditional Choice	AultCare PPO and PrimeTime	Paramount Elite HMO
Spouse Premiums (Service Retiree, Disability Recipient, or Member's Qualified Service)				
Up to 25 years				
Without Medicare	\$1,032		\$839	N/A
With Medicare A & B	\$198	\$821	\$260	\$243
With Medicare B Only	\$558		\$383	\$383
25-29.999 years				
Without Medicare	\$932		\$759	N/A
With Medicare A & B	\$182	\$743	\$238	\$222
With Medicare B Only	\$182		\$222	\$222
30 years & over				
Without Medicare	\$833		\$678	N/A
With Medicare A & B	\$166	\$664	\$215	\$201
With Medicare B Only	\$166		\$201	\$201

Years of Service	Aetna Choice POS II and Aetna Medicare SM	Aetna Traditional Choice	AultCare PPO and PrimeTime	Paramount Elite HMO
Child Premiums				
Child w/o Medicare A	\$253		\$159	N/A
Child with Medicare A & B	\$149	\$585	\$193	\$181



SERS' Non-Medicare Plans

Non-Medicare plans are available to benefit recipients and dependents under age 65 and not Medicare eligible.

Aetna Choice POS II

This is a Preferred Provider Organization (PPO) plan with prescription drug coverage by Express Scripts. The plan is available throughout the United States.

To enroll in this plan, a member must:

- Be under age 65 and not eligible for Medicare

Use of out-of-network providers will increase out-of-pocket costs.

AultCare PPO

This is a Preferred Provider Organization (PPO) plan with prescription drug coverage by AultCare.

To enroll in this plan, a member must:

- Be under age 65 and not eligible for Medicare.
- Live in one of the Ohio counties listed on the map in the 2019 Open Enrollment Guide.

Use of out-of-network providers will increase out-of-pocket costs.

2019 SERS Marketplace Wraparound Plan

The SERS Marketplace Wraparound Plan is available to participants who are not eligible for Medicare and who are not enrolled in Medicaid. Participants are able to choose insurance from any insurer offering coverage in the federal Marketplace. If eligible, participants receive a federal subsidy to lower the premium and cost-sharing amounts. The SERS Marketplace Wraparound Plan offers additional benefits to help pay for deductibles, co-pays, and other costs.



SERS' Medicare Plans

Aetna Medicare Plan (PPO)

This is a Medicare Advantage plan with Medicare Part D prescription drug coverage administered by Express Scripts.

Ohio Residents: Aetna has a preferred provider network. Use of out-of-network providers will increase out-of-pocket costs.

Non-Ohio Residents: Can use any medical provider that accepts Medicare patients and agrees to file claims with Aetna.

This plan is available throughout the United States. To enroll, members must have:

- Medicare Part B
- Medicare Part A, if eligible

Aetna Traditional Choice Plan

This plan is NOT available for optional enrollment. It is only available in special circumstances. SERS determines when enrollment is appropriate. Medicare Part D prescription drug coverage is administered through Express Scripts.

Paramount Elite Medicare Advantage

This is a Medicare Advantage plan with Medicare Part D prescription drug coverage administered by Express Scripts. Members must use Paramount providers or pay the full cost for services.

To enroll in this plan, members must:

- Have Medicare Part B.
- Have Medicare Part A, if eligible.
- Live in one of the Ohio counties listed on the map in the 2019 Open Enrollment Guide or live in the Michigan counties of Lenawee or Monroe.

PrimeTime Health Plan

This is a Medicare Advantage plan with Medicare Part D prescription drug coverage by PrimeTime. Members must use PrimeTime providers or pay the full cost for services.

To enroll in this plan, members must:

- Have Medicare Part A and Part B.
- Live in one of the Ohio counties listed on the map in the 2019 Open Enrollment Guide.

AultCare PPO

This plan is available to individuals who do not have Medicare Part A but have Medicare Part B only. Prescription drug coverage is administered by AultCare.

To enroll in this plan, members must:

- Have Medicare Part B only.
 - Live in one of the Ohio counties listed on the map in the 2019 Open Enrollment Guide.



Prescription Drug Coverage

Prescription drug coverage is included in SERS health care coverage and does not require a separate premium. Express Scripts provides the prescription drug coverage for Aetna and Paramount. PrimeTime and AultCare provide their own prescription coverage. All prescription plans have a formulary of covered medications. These are referred to as preferred medications. Medications not on the formulary are referred to as non-preferred. The amount members are responsible for paying, known as the co-pay, is based on the medication's preferred status. Members pay the least for generic medications. Members pay the most for brand-name medications that are not preferred. Members can get prescriptions at retail pharmacies or through the mail. Members save money by having prescriptions for maintenance medications mailed to their homes.

The following is a partial list of situations or types of medications that are not covered.

- Prescriptions or medications dispensed in a hospital. These are typically covered under the medical plan.
- Prescriptions covered by Workers' Compensation.
- Prescriptions for fertility, erectile dysfunction, or cosmetic drugs.
- Over-the-counter drugs and herbal preparations, including homeopathic preparations.

With the exception of insulin, Express Scripts does not cover non-preferred medications. Members pay the full amount for non-preferred medications, and these costs do not count toward any out-of-pocket maximum or the Medicare coverage gap.

All prescription plans include these common coverage rules:

- **Prior Authorization** - For some medications, the doctor must contact the drug plan before certain prescriptions can be filled. The prescription is only covered if the doctor is able to confirm that the medication is necessary.
- **Quantity Limits** - Limits how much of a specific medication members can get at a time.
- **Step Therapy** - A process where certain medications that have proven to be safe and effective are tried as the first choice rather than starting with a more expensive prescribed medication.

Medicare Part D Prescription Drugs

SERS' health plan participants enrolled in a Medicare plan are automatically covered under a Medicare Part D prescription drug plan through SERS and should not enroll in a separate Medicare Part D plan. Enrolling in another Part D plan would cause cancellation of SERS coverage for both medical and prescription drug benefits per federal law.



Non-Medicare Plan Benefits

	Aetna Choice POS II (In-Network)	AultCare PPO (In Network)
Annual Combined Medical & Prescription Drug Out-of-Pocket Maximum	\$7,350/person \$14,700/family	\$7,350/person \$14,700/family
Deductible	\$2,000/person \$4,000/family	\$2,000/person \$4,000/family
Primary Care Office Visit	\$20 co-pay	\$20 co-pay
Specialist Office Visit	\$40 co-pay	\$40 co-pay
Outpatient Diagnostic X-Ray and Lab	20% coinsurance	20% coinsurance
Retail Walk-In Clinic	\$20 co-pay	\$20 co-pay
Urgent Care	\$40 co-pay	\$40 co-pay
Emergency Room	\$150 co-pay	\$150 co-pay
Ambulance	20% coinsurance	20% coinsurance
Inpatient Hospital	20% coinsurance after \$250 co-pay	20% coinsurance after \$250 co-pay
Outpatient Surgery	20% coinsurance	20% coinsurance
Skilled Nursing Facility (100-day max)	20% coinsurance	20% coinsurance
Home Health Care	20% coinsurance	20% coinsurance
Hospice Health Care	100% coverage	Inpatient: 100% coverage Outpatient: 20% coinsurance
Outpatient Short-Term Rehab	20% coinsurance	20% coinsurance
Chiropractic	20% coinsurance	20% coinsurance
Durable Medical Equipment	20% coinsurance	20% coinsurance
Prescription Drugs	Express Scripts <u>Retail 30-day max:</u> \$7.50 generic, 25% preferred brand (\$25 min, \$100 max) <u>Mail order 90-day max:</u> \$15 generic, 25% preferred brand (\$45 min, \$200 max) <u>Insulin Retail</u> 25% or \$30 max preferred brand, 25% or \$45 max non-preferred brand <u>Insulin Mail Order</u> 25% or \$60 preferred brand, 25% or \$115 max non-preferred brand	AultCare <u>Retail 30-day max:</u> \$7.50 generic, 25% preferred brand (\$25 min, \$100 max) <u>Mail order 90-day max:</u> \$15 generic, 25% preferred brand (\$45 min, \$200 max) Non-preferred at 100% <u>Insulin Retail</u> \$30 preferred brand, \$45 non-preferred brand <u>Insulin Mail Order</u> \$60 preferred brand, \$115 non-preferred brand



**Non-Medicare Plan Benefits
(continued)**

2019 Wraparound Benefits	Maximum Reimbursement
Deductible	Up to \$2,000*
Covered Prescription Drugs co-payment/coinsurance	50% of the Marketplace plan's prescription drug co-payment/coinsurance (up to \$200 per prescription)*
Physician Office Visit co-payment	Up to \$50 per visit*
Inpatient Hospital Admission co-payment/coinsurance	Up to \$300 per admission*
Imaging (X-rays, CT/PET scans, MRI) co-payment or coinsurance	Up to \$100 per service*
Hearing Aid	One hearing aid per year; up to \$1,500**
<p>*This is the maximum amount that the Wraparound Plan will reimburse each participant for each benefit category. Reimbursement is limited to cost-sharing after the participant's Marketplace plan has adjudicated any claim(s). Actual reimbursement may vary according to the participant's Marketplace plan's terms, but will in no event exceed the participant's actual out-of-pocket expenses under the applicable Marketplace plan.</p> <p>**The Wraparound Plan will reimburse each participant on a first dollar basis up to this limit</p> <p>The 2019 SERS Marketplace Wraparound Plan benefits noted above only apply to covered services under your Marketplace plan. Claims for non-covered services are not eligible for reimbursement, except for hearing aids.</p>	



Medicare Plan Benefits

	Aetna Medicare SM Plan (PPO)	PrimeTime Health Plan	Paramount Elite Medicare Advantage
Annual Out-of-Pocket Maximum	\$3,000 per person	\$3,000 per person	\$3,000 per person
Deductible	None	None	None
Primary Care Office Visit	\$20 co-pay	\$20 co-pay	\$20 co-pay
Specialist Office Visit	\$30 co-pay	\$30 co-pay	\$30 co-pay
Outpatient Diagnostic X-Ray	\$25 co-pay	100% coverage	100% coverage
Outpatient Diagnostic Lab	100% coverage	100% coverage	100% coverage
Urgent Care	\$40 co-pay	\$40 co-pay	\$40 co-pay
Emergency Room	\$100 co-pay	\$100 co-pay	\$100 co-pay
Ambulance	\$80 co-pay	\$80 co-pay	\$80 co-pay
Inpatient Hospital	\$150 co-pay per day 1-5, then 100%	\$150 co-pay per day 1-5, then 100%	\$150 co-pay per day 1-5, then 100%
Outpatient Surgery /Procedures	15% coinsurance up to \$200 max	\$200 co-pay	15% coinsurance up to \$200 max
Skilled Nursing Facility (100-day max)	Co-pay: \$0 per day 1-10, \$25 per day 11-20, \$50 per day 21-100	Co-pay: \$0 per day 1-15, \$20 per day 16-30, \$0 per day 31-100	Co-pay: \$0 per day 1-20, \$95 per day 21-100
Home Health Care	100% coverage	100% coverage	100% coverage
Hospice	Covered per Medicare	Covered per Medicare	Covered per Medicare
Outpatient Short-Term Rehab	\$20 co-pay	\$5 co-pay (cardiac rehab at 100% coverage)	\$20 co-pay(\$10 co-pay for cardiac/pulmonary rehab)
Chiropractic	\$20 co-pay limited to Medicare coverage	\$20 co-pay limited to Medicare coverage	\$20 co-pay limited to Medicare coverage
Durable Medical Equipment	20% coinsurance	20% coinsurance	20% coinsurance
Prescription Drugs	Express Scripts Medicare D PDP <u>Retail</u> 30-day max: \$7.50 generic, 25% preferred brand (\$25 min,\$100 max) <u>Mail order 90-day max:</u> \$15 generic, 25% preferred brand (\$45 min, \$200 max) <u>Insulin Retail</u> 25% or \$30 max preferred brand, 25% or \$45 max non-preferred brand <u>Insulin Mail Order</u> 25% or \$60 max preferred brand, 25% or \$115 max non-preferred brand	PrimeTime <u>Retail 30-day max:</u> \$7.50 generic, 25% preferred brand (\$25 min, \$100 max), 50% non-preferred brand <u>Mail order 90-day max:</u> \$15 generic, 25% preferred brand (\$45 min, \$200 max), 50% non-preferred_ brand <u>Insulin Retail</u> \$30 preferred brand, \$45 non-preferred brand <u>Insulin Mail Order</u> \$60 preferred brand, \$115 non-preferred brand	Express Scripts Medicare D PDP <u>Retail</u> 30-day max: \$7.50 generic, 25% preferred brand (\$25 min,\$100 max) <u>Mail order 90-day max:</u> \$15 generic, 25% preferred brand (\$45 min, \$200 max) <u>Insulin Retail</u> 25% or \$30 max preferred brand, \$45 max non-preferred brand <u>Insulin Mail Order</u> 25% or \$60 preferred brand, \$115 max non-preferred brand



SCHEDULE C

STATEMENT OF ACTUARIAL ASSUMPTIONS

The decremental assumptions used in the valuation were adopted by the Board in April, 2016.

INTEREST RATE: 5.25% per annum, compounded annually (net after all System expenses).

HEALTH CARE COST TREND RATES: Following is a chart detailing trend assumptions:

Calendar Year	Non-Medicare	Medicare
2018	7.25%	5.38%
2019	7.00	5.25
2020	6.75	5.13
2021	6.50	5.00
2022	6.25	4.75
2023	6.00	4.75
2024	5.75	4.75
2025	5.50	4.75
2026	5.25	4.75
2027	5.00	4.75
2028 and beyond	4.75	4.75

AGE RELATED MORBIDITY: Per capita costs are adjusted to reflect expected cost changes related to age. The increase to the net incurred claims was assumed to be:

Participant Age	Annual Increase	
	Medical	Prescription Drug
Under 41	0.00%	0.00%
41 – 45	2.50	1.25
46 – 50	2.60	1.30
51 – 55	3.20	1.60
56 – 60	3.40	1.70
61 – 65	3.70	1.85
66 – 70	3.20	1.60
71 – 75	2.40	1.20
76 – 80	1.80	0.90
81 – 85	1.30	0.65
85 and over	0.00	0.00



ANTICIPATED PLAN PARTICIPATION: The assumed annual rates of retiree participation and spouse coverage are as follows:

Retiree Gender	Spouse Coverage	Dependent Child Coverage
Male	50.0%	0.0%
Female	30.0%	0.0%

Wives are assumed to be three years younger than husbands.

Years of Service	Service Retiree Participation	Disabled Retiree Participation	Deferred Vested Retiree Participation	Death in Service Surviving Spouse Participation
1.5 – 5	N/A	N/A	N/A	100.0%
5 – 9	N/A	50.0%	N/A	100.0
10 – 14	25.0%	50.0	50.0%	100.0
15 – 19	45.0	70.0	50.0	100.0
20 – 24	70.0	75.0	50.0	100.0
25 – 29	75.0	75.0	50.0	100.0
30 – 34	80.0	80.0	50.0	100.0
35 and over	90.0	90.0	50.0	100.0

ANTICIPATED PLAN ELECTIONS: The assumed annual rates of member plan elections are as follows:

Plan Type	Future Retirees	
	Non-Medicare	Medicare
PPO	90.0%	94.0%
HMO	0.0%	6.0%
Wraparound Plan	10.0%	N/A

Anticipated plan elections within the above plan types are further expanded below:

Plan Type	Future Retirees*	
	Non-Medicare	Medicare
<u>PPO</u>		
Aetna Choice POS II	95.8%	0.0%
Aetna Medicare SM Plan	0.0%	100.0%
AultCare PPO	4.2%	0.0%
<u>HMO</u>		
PrimeTime	N/A	69.5%
Paramount HMO	N/A	30.5%

* Future disabled retirees assumed 85% Non-Medicare coverage and 15% Medicare coverage before age 65.



ANTICIPATED MEDICARE COVERAGE AT AGE 65: The assumed annual rates of future retirees obtaining Medicare coverage at age 65 are as follows:

Medicare Coverage	Percent Covered
No Medicare at age 65	1.0%
Medicare Part A	98.0%
Medicare Part B Only	1.0%

Current service retirees, disabled benefit recipients, spouses and dependent children under age 65 were assumed to have similar Medicare coverage at age 65 as their post-Medicare counterparts.

HEALTH CARE PREMIUM DISCOUNT PROGRAM PARTICIPATION: Current Medicare-eligible service retirees, disabled benefit recipients, spouses and dependent children reported as qualifying for the health care Premium Discount Program were assumed to continue participating in the program for their lifetime. The health care premium Discount Program is not available for non-Medicare participants.

MONTHLY EXPECTED MEDICAL/PRESCRIPTION DRUG CLAIMS COSTS (INCLUDES ADMINISTRATIVE EXPENSES): Following are charts detailing expected claims for the year following the valuation date. For the Medicare Advantage plans, the Health Insurance Provider Fee under the Affordable Care Act has been included since the moratoriums in 2017 and 2019 are temporary.

Retiree Costs				
Medicare Status	Aetna Choice POS II and Aetna Medicare SM	Aetna Traditional Choice	AultCare PPO and PrimeTime	Paramount HMO
Non-Medicare	\$1,247	N/A	\$1,007	N/A
Medicare A	\$194	\$786	\$225	\$208
Medicare B Only	\$527	N/A	\$1,007	\$348

Spouse Costs				
Medicare Status	Aetna Choice POS II and Aetna Medicare SM	Aetna Traditional Choice	AultCare PPO and PrimeTime	Paramount HMO
Non-Medicare	\$997	N/A	\$804	N/A
Medicare A	\$194	\$786	\$225	\$208
Medicare B Only	\$527	N/A	\$804	\$348

Children Costs				
Medicare Status	Aetna Choice POS II and Aetna Medicare SM	Aetna Traditional Choice	AultCare PPO and PrimeTime	Paramount HMO
Non-Medicare	\$312	N/A	\$178	N/A
Medicare A	\$194	\$786	\$225	\$208

The above amounts are shown as average costs and represent premiums paid to insurers.



ANNUAL EXPECTED MEDICAL/PRESCRIPTION DRUG COSTS (INCLUDES ADMINISTRATIVE EXPENSES) (continued): In the valuation, the premium costs are converted to age 65 amounts, age adjusted and blended based on actual elections for current retirees, current disabled retirees, current retiree spouses and current dependent children, and based on projected elections for future retirees and future spouses. For this valuation, we have assumed 10% participation in the SERS Marketplace Wraparound Plan for pre-Medicare retirees. Current authority allows the Wraparound plan to enroll through 2019 with continuation under discussion. Going forward, administrative and/or legislative action to allow continuation of this plan will be monitored. The age adjusted and blended amounts are as follows:

Annual Pre-65 Blended Costs Age Adjusted to 65							
Pre-65 Cost Type	Future Service Retirees	Future Disabled Retirees	Future Spouses	Current Service Retires	Current Disabled Retirees	Current Retiree Spouses	Current Dependent Children
Medical	\$11,892	\$10,178	\$9,516	\$11,928	\$8,293	\$5,688	\$4,764
Prescription Drug	2,868	2,683	2,328	2,832	2,356	2,004	1,188

Annual 65 & Older Blended Costs Age Adjusted to 65						
65 & Older Cost Type	Future Service Retirees	Future Disabled Retirees	Future Spouses	Current Service Retires	Current Disabled Retirees	Current Retiree Spouses
Medical	\$468	\$468	\$432	\$492	\$684	\$408
Prescription Drug	1,632	1,632	1,608	1,596	1,620	1,560



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

Service	Annual Rates of Withdrawal
0	45.00%
1	31.00
2	23.00
3	17.00
4	13.00
5	10.50
10	4.00
15	2.00
20	2.00
25	1.50

Age	Annual Rates of			
	Death *		Disability	
	Male	Female	Male	Female
20	.022%	.013%	.020%	.010%
25	.053	.018	.038	.010
30	.063	.019	.068	.026
35	.059	.024	.122	.055
40	.068	.032	.212	.102
45	.081	.044	.311	.170
50	.126	.074	.411	.300
55	.218	.124	.530	.450
60	.361	.188	.590	.450
65	.607	.274	.550	.300
70	1.071	.415	.300	.200
74	1.570	.629	.300	.200

* Pre-retirement mortality is based on the RP-2014 Blue Collar Mortality Table with fully generational projection and a five year age set-back for both males and females. 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			27%	19%				
55		10%	27%	19%				
60	11%	14%	27%	19%		14%	30%	19%
65			25%	19%	11%	14%	30%	19%
70			20%	22%			30%	22%
75			100%	100%			100%	100%

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

Annual Rates of			
Service	Merit & Seniority (A)	Base (Economy) (B)	Increase Next Year (1+(A))*(1+(B))
0	14.20%	3.50%	18.20%
1	5.55	3.50	9.25
2	3.14	3.50	6.75
3	2.17	3.50	5.75
4	1.45	3.50	5.00
5	1.20	3.50	4.75
6	0.97	3.50	4.50
7	0.72	3.50	4.25
8	0.48	3.50	4.00
9	0.24	3.50	3.75
10 & over	0.00	3.50	3.50

PAYROLL GROWTH: 3.50% per annum, compounded annually.

PRICE INFLATION: 3.00% per annum, compounded annually.

DEATH AFTER RETIREMENT: The RP-2014 Blue Collar Mortality Table with fully generational projection and Scale BB, 120% of male rates and 110% of female rates is used to evaluate allowances to be paid. The RP-2000 Disabled Mortality Table with 90% for male rates and 100% for female rates set back five years is used for the period after disability retirement. These assumptions are used to measure the probabilities of each benefit payment being made after retirement.



VALUATION METHOD: Entry age normal cost method. Entry age is established on an individual basis.

ASSET VALUATION METHOD: Market value.