



North Carolina Committee on Actuarial
Valuation of Retired Employees' Health Benefits

Review of Assumptions for December 31, 2019 OPEB Valuation

May 29, 2020 / Daniel J. Rhodes, FSA, MAAA and Kenneth C. Viera, FSA, FCA, MAAA

OPEB Actuarial Valuation Assumptions for the December 31, 2019 Valuation

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**Decisions
needed here**



Valuation Purpose

GASB Statements 74 and 75

- Measure State obligations to provide other postemployment benefits (OPEB)
- Provide information for the Plan Audit (GASB 74)
- Determine the Actuarially Determined Contribution (ADEC)
- Annual OPEB Expense for fiscal 2021, and fiscal 2021 disclosure information (GASB 75)
- Provide exhibits useful for preparing required financial statement recognition and disclosure items

Dates for this valuation

- Valuation Date is December 31, 2019
- Measurement Date is June 30, 2020
- GASB 74 Reporting Date is June 30, 2020
- GASB 75 Reporting Date is June 30, 2021

Deliverables for this valuation

- 2020 GASB 74 report (late August)
- 2021 GASB 75 report, with allocations (late February)
- Auditor requests (as needed)

Accounting and Funding Methodology

GASB 75 Budgeting Methods for Expense

- Mandated by GASB 75
- Actuarial cost method — Entry Age Level Percent of Pay
- Asset valuation method — market value
- Recognition of Changes in Net OPEB Liability
 - Plan changes are recognized immediately
 - Asset gains and losses are recognized over 5 years
 - Other changes are over 6 years (Total Future Service/All Participants)

Funding Assumptions and Methods for the Actuarially Determined Contribution (ADEC)

- Current funding policy is essentially a pay-as-you-go process
- The ADEC is not required, but is a measure of how large the contribution would be if the Plan were to be pre-funded
- The State can periodically reset the method for calculating the ADEC
- Demographic assumptions are generally the same as for GASB, but the ADEC can be based on a different cost method and the discount rate can differ
- Decisions about the ADEC are after the assumptions section

Assumptions set by the State Annually

	Descriptor	December 31, 2018 Assumption	December 31, 2019 Assumption	Comments
Long-Term Rate of Return on Plan Assets	Investment return	7.00%	No Change	This is the pension assumption.
Inflation	A building block component for several items	3.00%	No Change	This is the pension assumption.
Assumed Payroll Growth	Used for the ADEC	3.50%	No Change	This is the pension assumption.
Ultimate Health Trend	The final entry in the Health Trend that is projected for 80+ years	5.00%	No Change	This is the expectation for US medical spending in general. There is an inflation component, a component based on historic measures, and the limiting factor that medical expenses will flatten out as a percentage of GDP.

Assumptions typically set by the Health Actuary Annually

	Descriptor	December 31, 2018 Assumption	December 31, 2019 Assumption	Comments
Substantive Plan	Plan documents, SPDs, Notices, Ordinances, Past Practices and Public Law that describe the benefits due and that are expected to be due to participants	Detailed in the valuation report	Same process as last year	Reviewed by the State Also includes current retiree contributions (2020 rates)
Plan Changes	Change in plan terms must be recognized immediately in OPEB expense under GASB 75	Plan changes as of January 1, 2020 were known at the time of the valuation, and were expected to be cost neutral.	Plan changes as of January 1, 2021 were known at the time of the valuation, and will be reflected in this year's results.	
Claims Cost Rates	Derivation of the average expected rates for each coverage	Separate rates for Non-Medicare (70/30, 80/20) and Medicare (70/30, MA Base, MA Enhanced)	Being developed	Non-Medicare starting costs will include anticipated impact of Clear Pricing Project
Medicare Advantage	Incorporate Humana 5-year MA proposal effective January 1, 2021	See next slide	See next slide	

Assumptions typically set by the Health Actuary Annually

Medicare Advantage Assumption

- New Medicare Advantage contract with Humana effective January 1, 2021
- Includes \$0 MA-PD premium for base plan and \$69 for buy-up plan, guaranteed for five years
- Valuation will include current UHC rate for year 1 (2020), then \$0 cost for Humana rate for years 2 – 6 (2021 – 2025)
- To estimate what premium could be in 2026, after the end of the five-year rate guarantee, we projected the various aspects of the Humana bid (claims, CMS revenue, PDP subsidies, etc.) at appropriate trend rates
- We also compared to the prior UHC rates, trended forward and adjusted for difference in loss ratio between UHC and Humana
- Calculation results in a projected premium of approximately \$54 in 2026 for the base plan
 - This \$54 will be added to the \$69 buy-up premium for a projected premium of \$123 for the buy-up plan
- Premium will be assumed to increase in 2027 and beyond at valuation trend rates

Assumptions typically set by the Health Actuary Annually

	Descriptor	December 31, 2018 Assumption	December 31, 2019 Assumption	Comments
Health Trend	The expected increases in health care costs	Separate trends for Medical, Rx, MA Plans, Retiree Contributions and Admin	Being developed	Short-term trends will be consistent with Q1 financial projections (in process)
Participation Rate	The assumed percentage of active employees that retire and elect to be covered under the Plan	100% for employees, 10% for spouses	Spouse participation under review due to \$0 MA premium.	
Migration Assumption	The assumed movement of participants between plans	See next slide	See next slide	
Medicare Eligibility	Some hires prior to 1988 were not required to be covered under Medicare, resulting in larger over age 65 claims	100% eligible	No Change	
Morbidity	A required process of allocating average claims to each age and gender	Segal Standard Table	No Change	

Assumptions typically set by the Health Actuary Annually

Migration Assumption

2018 Valuation

	2019	2020	2021	2022	2023+
Non-Medicare Retiree					
70/30 Plan	47.627%	48.220%	48.813%	49.407%	50.000%
80/20 Plan	52.373%	51.780%	51.187%	50.593%	50.000%
Medicare Retiree					
70/30 Plan	14.207%	13.655%	13.103%	12.552%	12.000%
MA Base	74.043%	74.783%	75.522%	76.261%	77.000%
MA Enhanced	11.750%	11.562%	11.375%	11.187%	11.000%

2019 Valuation

- Migration based on assumptions used for financial projections
- Q1 Financial update still in progress
- Assumption will be updated based on new Medicare Advantage contract and premiums rates

Assumptions typically set by the Health Actuary Annually

	Descriptor	December 31, 2018 Assumption	December 31, 2019 Assumption	Comments
Tobacco Attestation	Different retiree contributions apply for those in 80/20 Plan based on completing attestation of tobacco use	98.5% of participants in 80/20 Plan assumed to complete attestation	Will be updated consistent with Q1 financial model.	
Administrative Expense Rates	Separate from the expenses included in the premiums, applies to self-funded plans	Per participant expenses (retiree and spouses) calculated	Being developed	New TPA fees effective January 1, 2022 will be accounted for in trend adjustments
Excise Tax on High Cost Health Plans (“Cadillac Tax”)	40% “Cadillac Tax” on richer health plans, part of ACA	Tax would be effective in 2022	No longer valued	Tax was repealed in December 2019 appropriations bill
Health Insurer Tax (“HIT”)	Tax on insured plans, part of ACA	Tax not applicable in 2019, assumed to return in 2020 and built into trend assumption	Tax no longer applies after 2020	Tax was repealed in December 2019 appropriations bill

Assumptions/Methods Typically set by the State Periodically

- Relationship between Valuation Date, Measurement Date and Reporting Date
- Demographic Assumptions
 - Typically reset every five years in a study by the Pension Actuary, and approved by the State for use
 - Consistent with the Pension Valuation
 - Pension actuary is currently performing an experience study
 - Results expected to be released after this OPEB valuation is completed
 - New assumptions will be used in next year's OPEB valuation
- Determination of Basis for Allocation of Costs to Agencies
- Funding Policy for the Actuarially Determined Contribution
 - Actuarial Cost Method
 - Discount Rate (Long-term Rate of Return or Discount Rate for GASB 75)
 - Amortization Period (Years, Level \$ or Percent of Pay, and Open/Closed)

We suggest keeping these the same as the prior year.
If the State were to consider prefunding OPEB liabilities, we would have further discussion on methods and assumptions for funding calculations.

Demographic Assumptions set by the State Periodically

Consistent with the Pension Plan — should change when pension assumption changes

	Descriptor	December 31, 2018 Assumption	December 31, 2019 Assumption	Comments
Pre-retirement mortality	Probability of death while active	Differing mortality for Law Enforcement, Teachers, and General Employees by EE/Spouse and Gender	No Change	Includes projection scale. Part of the 2015 demographic study.
Post-retirement mortality	Probability of post-employment death	Differing mortality for Law Enforcement, Teachers, and General Employees by EE/Spouse and Gender	No Change	Includes projection scale. Part of the 2015 demographic study.
Salary growth	The salary growth by individual	Teachers: 7.55% grading down to 3.50% Law Enforcement: 8.10% grading down to 3.50% General Employees: 5.50% grading down to 3.50%	No Change	Part of the 2015 demographic study.

Demographic Assumptions set by the State Periodically

Consistent with the Pension Plan — should change when pension assumption changes

	Descriptor	December 31, 2018 Assumption	December 31, 2019 Assumption	Comments
Turnover	Probability of terminating service prior to retirement eligibility each year prior to retirement eligibility	Based on age, service, gender, and employment classification	No Change	Part of the 2015 demographic study.
Disability	Probability of becoming disabled prior to retirement eligibility each year prior to retirement eligibility	Based on age, service, gender, and employment classification	No Change	Includes projection scale. Part of the 2015 demographic study.
Retirement	Probability of retiring each year after meeting the age and service eligibility requirements	Based on age, service, gender, and employment classification	No Change	Part of the 2015 demographic study.
Spouse age difference	Actual data is used for retirees, but active employees are valued based on assumption at retirement	Husbands are assumed to be four years older than their wives.	No Change	Part of the 2015 demographic study.

GASB 75 Assumptions/Methods for Accounting

	Descriptor	December 31, 2018 Assumption	December 31, 2019 Assumption	Comments
Actuarial Cost Method	Basis for assigning costs accruals to active employees	Entry Age Level Percent of Payroll	No Change	No choice, prescribed by GASB 75
Discount Rate	The rate used to discount future projected benefit payments to the valuation date 20-year, general obligation, municipal bond index rate as of the Measurement Date, unless pre-funding, in which case that same rate is blended with the long-term rate of return	3.87% as of June 30, 2018, and 3.50% as of June 30, 2019	3.50% as of June 30, 2019, and market rate as of June 30, 2020 (as required by GASB)	No choice, prescribed by GASB 75 This assumption has significant impact on the liability calculation - as the rates move downward, the liability will increase
Expense Methodology	The development of the OPEB Cost from the benefit liabilities and assets	GASB 75 Basis	No Change	No choice, prescribed by GASB 75
Allocation of Expense to Contributing Employers (Agencies)	The basis the OPEB expense is allocated to contributing divisions.	Based on the Present Value of Future Salaries	No Change	Consistent with the pension plans methodology. The Cost Method is a level percent of salary cost method, which led to this basis.

Assumptions/Methods for Funding

Generally, the Actuarially Determined Contribution is the annual accrual (Normal Cost), plus a recognition of the unfunded liability, plus an adjustment for timing.

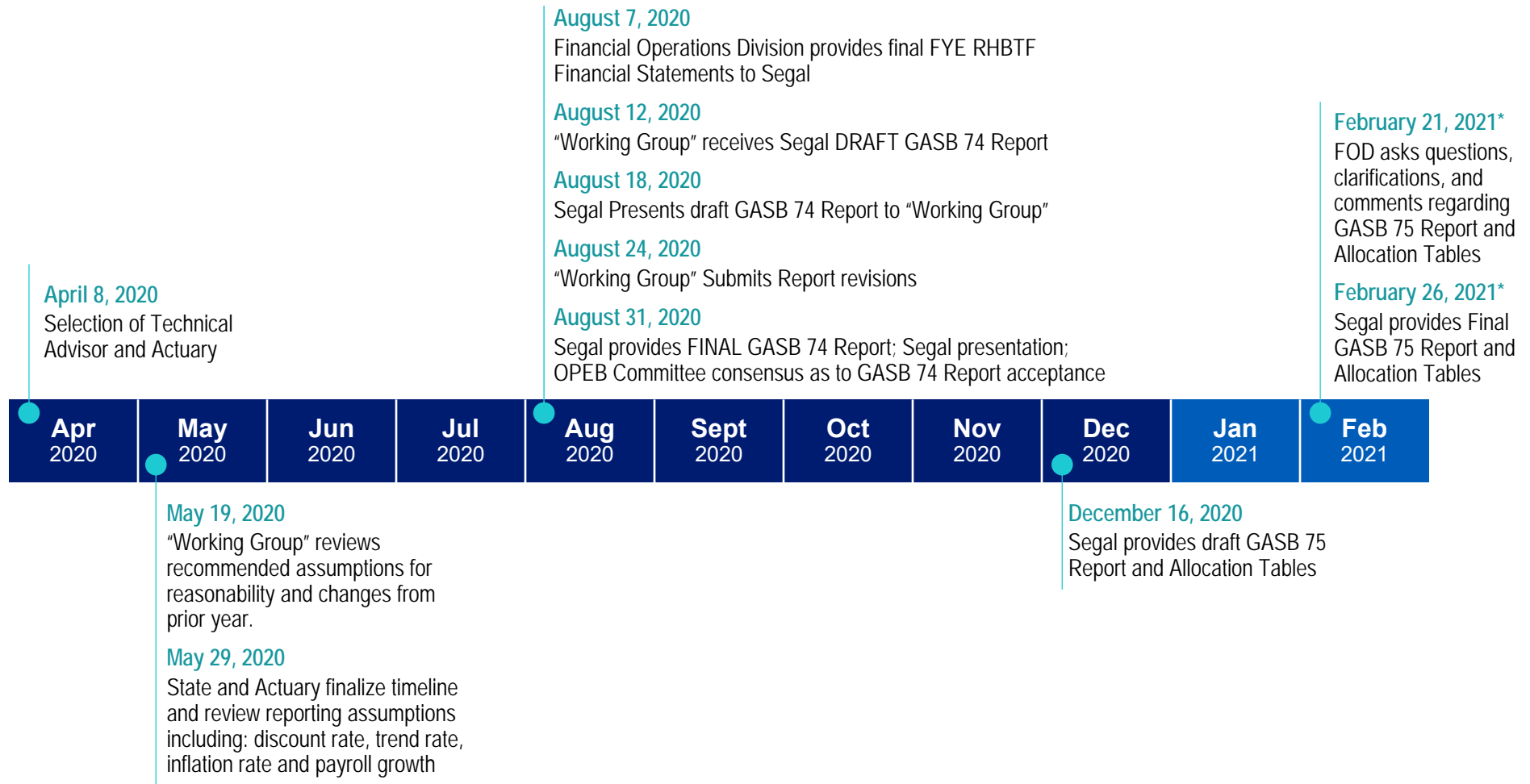
	Descriptor	December 31, 2018 Assumption	December 31, 2019 Assumption	Comments
Actuarial Cost Method	Basis for assigning costs accruals to active employees	Entry Age Level Percent of Payroll	Entry Age Level Percent of Payroll	Could consider other cost methods if plan were actually prefunded
Discount Rate	The rate used to discount future projected benefit payments to the valuation date	GASB 75 discount rate as of fiscal year end	GASB 75 discount rate as of fiscal year end	Could consider using long-term return assumption if plan were actually prefunded
Amortization Methodology	Method for recognizing the unfunded liability	30-year, open, level percent of pay	30-year, open, level percent of pay	Could consider a closed funding period if plan were actually prefunded
Projecting to Future Years	ADEC is not calculated on a projected basis since there is no funding policy in place	Calculated the ADEC for fiscal 2019	Calculated the ADEC for fiscal 2020	

Other Items and Committee Concerns

- Questions or concerns from previous valuations of which Segal should be aware
- Other State changes or directions that need to be reflected in this valuation



Proposed 2020 Process and High Level Timeline



* FOD is simultaneously verifying the GASB 75 Report and Allocation Tables as well as other Reports (i.e., DIPNC, CDBP, etc) for the CAFR from December to February. It could be possible that FOD provides feedback to the actuary prior to 2/12/2021 where FOD would expect a final GASB Report and Allocation Tables within 2 weeks of the final comments.

Thank You

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