2020-21 GET Unit Price Setting

Presentation to: WA529 Committee

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September 9, 2020

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Today's Presentation

Purpose and Intended Use

- Updated actuarial analysis to assist the Committee in adopting a unit price for the upcoming enrollment period
- This analysis may not be appropriate for other purposes and should be replaced with updated analysis for adopting a unit price after the next enrollment period

Disclosure

- See the Appendix to this presentation for additional information on the data, assumptions, and methods we used to prepare this price-setting and risk analysis
- See our letter dated August 20, 2020, for supporting information on the current status of the program

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Analysis Summary

Current Program Status

- 132% funded status and $375 million reserve at June 30, 2020
- Based on a roll-forward from June 30, 2019
- Results of *June 30, 2020, Actuarial Valuation Report* may vary

Price Setting Information

- Best estimate unit price range of $129 to $147 for next enrollment period
- Payout value of $111.03 for current academic school year
- Unit price of $121 adopted for last enrollment period

Risk Analysis

- We analyzed reserve levels ranging from 10% to 20%
- Current 15% reserve policy remains reasonable

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Current Program Status at June 30, 2020

Funded Status Summary		
(Dollars in Millions)	**2020***	**2019 GAVR**
Present Value of Future Obligations	**$1,185**	**$1,108**
Market Value of Assets	1,458	1,355
Present Value of Receivables	102	101
Present Value of Fund	**$1,559**	**$1,456**
Funded Status	**132%**	**131%**
Reserve/(Deficit)	**$375**	**$347**

**Based on a roll-forward procedure starting with the 2019 GAVR.*

- 2020 results reflect updated investment return and tuition growth assumptions
- 2020 roll-forward results may vary from the *June 30, 2020, GET Actuarial Valuation Report* (GAVR) available/final in November

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Updated Assumptions

- Lowered the assumed rate of investment return from 5.25% to 4.75%
  - Based on the program's new asset allocation and expected COVID-19 impacts
  - Reminder: Asset allocation changed from 60/40 to 40/60 (global equities/fixed income)
- Retained the tuition growth assumptions from last year with minor update
  - We do not assume a continuation of the current law tuition policy
  - Based on our professional judgment and consideration of potential tuition policy changes in response to current and anticipated future budget shortfalls

Tuition Growth Assumption By School Year		
	Prior Assumption	New Assumption
2020-21	2.2%	2.4%
2021-22	5.5%	5.5%
2022-23	5.5%	5.5%
2023-29	5.5%	5.5%
2029+	5.0%	5.0%

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Potential Assumption Changes for Next Year

- WSIB will have updated Capital Market Assumptions (CMAs) next spring
  - New CMAs could lead to an updated assumed rate of investment return
- Legislature will set tuition policy for 2021-23 in the next regular session
  - We will update our tuition growth assumptions to reflect actual tuition policy
- We will complete an experience study next year
  - Review and update all our assumptions

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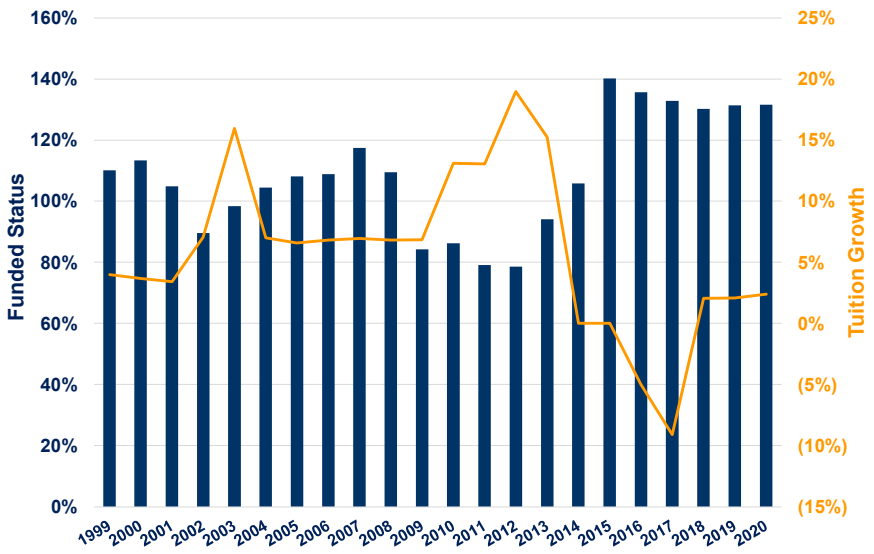
Funded Status and Tuition Growth History



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Components of Unit Price

Expected Cost
- Covers the present value of the expected cost of future tuition and applicable state-mandated fees

Expenses
- Contributes to the payment of administrative expenses

Reserve
- Covers unexpected future costs such as higher than expected tuition growth or lower than expected investment returns
- 15% reserve included in recently adopted unit price

Amortization
- An optional component that covers unexpected past costs from significant program or policy changes
- Not included in current unit pricing

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Unit Price Information with 15% Reserve Policy

GET Unit Price Information			
	2020-21 Enrollment		2019-20 Enrollment
Unit Price	Best Estimate	Best Estimate Range	Best Estimate
Expected Cost	$116.91		$102.86
Expenses	3.03		2.78
Reserve	17.99		15.87
Amortization	N/A		N/A
Total Unit Price	**$137**	**$129 – $147**	**$121**
Increase Above Prior Year	13.2%	6.6% – 21.5%	7.1%
Premium	23.4%	16.2% – 32.4%	11.6%

Note: Totals are truncated and may not agree. Premium represents the increase of the Total Unit Price over today's unit payout value, $111.03, expressed as percentage.

- The total unit price and premium increased primarily from the lower assumed rate of return
- To develop the best estimate range, we varied both the assumed rate of investment return and tuition growth rates

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Tuition Growth and Return Assumptions for Best Estimate Range

Tuition Growth Assumptions			
	2020-21	2021-29	2029-30+
Low Price Range	2.40%	**5.00%**	5.00%
Best Estimate	2.40%	**5.50%**	5.00%
High Price Range	2.40%	**6.00%**	5.00%

Investment Return Assumptions			
	2020-21	2021-29	2029-30+
Low Price Range	4.75%	**5.15%**	4.75%
Best Estimate	4.75%	**4.75%**	4.75%
High Price Range	4.75%	**4.35%**	4.75%

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Risk Analysis for Unit Pricing

- The program's on-going success depends on maintaining a delicate balance between risk and affordability
  - "Risk" that the state will need to contribute to the program
  - "Affordability" of future GET units to be purchased by customers
- The Committee manages risk when selling units through the reserve component in the unit price
  - The larger the reserve, the lower the risk to the state; but
  - The higher the reserve, the less affordable the unit price and vice versa

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Risk Analysis for Unit Pricing (cont'd)

- For the risk analysis, we demonstrate the level of protection a 10%, 15%, or 20% reserve provides against adverse tuition growth or return scenarios
- Put another way, we evaluate whether the accumulated value of assets collected from the purchaser would be sufficient to provide for the redemption of the unit 15 years later
  - Assuming asset and tuition growth consistent with each scenario
- Current 15% reserve policy remains reasonable
- As with any financial security program, risks can change over time and some risks may not materialize
- We recommend the Committee continue to monitor and evaluate the program's risks/reserve policy

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Higher than Expected Tuition Growth or Lower than Expected Returns

- In this scenario, we vary either tuition growth or investment returns with
  - A fixed and level change to the best estimate assumption each year
- We don't change both assumptions at the same time in this scenario

Protection Provided by Various Reserves			
Assumption	10% Reserve	15% Reserve	20% Reserve
		FY 21 - FY 24	
Tuition Growth (ROR as Expected); or	6.20%	6.50%	6.80%
Investment Return (TG as Expected)	4.05%	3.75%	3.45%
		FY 25 - FY 28	
Tuition Growth (ROR as Expected); or	6.20%	6.50%	6.80%
Investment Return (TG as Expected)	4.05%	3.75%	3.45%
		FY 29+	
Tuition Growth (ROR as Expected); or	5.70%	6.00%	6.30%
Investment Return (TG as Expected)	4.05%	3.75%	3.45%
Calculated Unit Price	$131	$137	$143

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Higher than Expected Tuition Growth and Lower than Expected Returns

- In this scenario, we vary both tuition growth and investment returns with
  - A 4-year period of higher/lower than expected tuition growth/rate of return (short-term shock)
  - Followed by a 4-year recovery period before returning to our long-term expectations

Protection Provided by Various Reserves			
Assumption	10% Reserve	15% Reserve	20% Reserve
		FY 21 - FY 24 (Short-Term Shock)	
Tuition Growth	10.5%	11.0%	11.6%
Investment Return	(0.2)%	(0.8)%	(1.4)%
		FY 25 - FY 28 (Recovery Period)	
Tuition Growth	2.75%	2.75%	2.75%
Investment Return	9.50%	9.50%	9.50%
		FY 29+ (Long-Term Expectations)	
Tuition Growth	5.00%	5.00%	5.00%
Investment Return	4.75%	4.75%	4.75%
Calculated Unit Price	$131	$137	$143

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Price-Setting Considerations

- The responsibility to adopt a unit price rests solely with the Committee
- In adopting a unit price, the Committee considers many policy issues; including, but not limited to, the management of program risks
- To assist the Committee in adopting an appropriate unit price that allows the Committee members to balance policy issues, we developed a best estimate range for the unit price
- We consider any price within the best estimate range to be reasonable

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Questions?

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Questions? Please Contact:
The Office of the State Actuary
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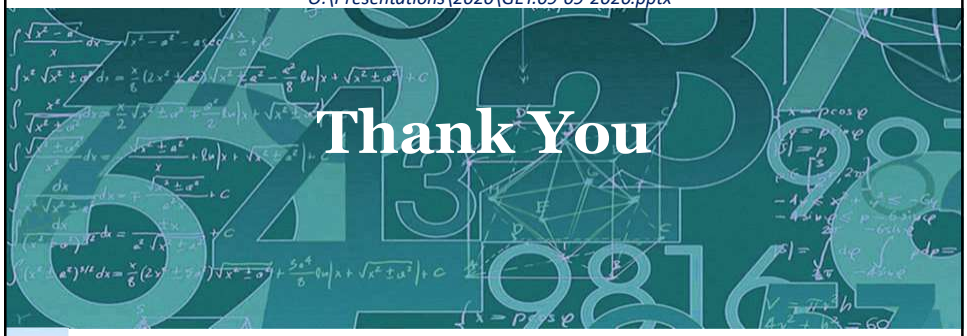

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Appendix

- Data We Used
- Assumptions We Used
- Methods We Used
- Actuarial Certification

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Data We Used

- To determine the expense component of the unit price, we relied on projected program expenses and fee revenue provided by program staff
- We reviewed the data and found it reasonable for purposes of this analysis
- This data is available upon request and will be documented in the 2020 GAVR when published
- Program staff provided the current payout value and we relied on that information to prepare the price-setting and risk analysis
- No other data was required to perform the price-setting and risk analysis

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Assumptions We Used

- Price-setting analysis
  - To develop the best estimate unit price and the best estimate range, we relied on the key assumptions disclosed in this presentation
  - We used the new entrant profile disclosed in the *2015 GET Experience Study* to determine the expected duration between unit purchase and ultimate redemption of the unit
  - All other assumptions are consistent with those disclosed in the *2015 GET Experience Study*
- Risk analysis
  - For each scenario, we varied our assumptions from the best estimate assumptions to produce different accumulated assets and projected payout values from our best estimate
  - The assumptions are disclosed in this presentation
- We excluded the potential impacts of differential tuition policy from our analysis

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Methods We Used

- Price-setting analysis
  - To determine the best estimate unit price and range, we estimate the future payout value of a single unit based on assumptions for future tuition growth and holding periods for the unit (the duration between purchase and ultimate redemption)
  - Assumed holding periods are based on the assumed new entrant profile
  - We calculate the present value of this future unit using the expected rate of investment return
  - We then add an additional component to the unit price for contributions to the administrative expenses of the program using the following procedure
    - Start with the present value of program expenses for currently unredeemed units at June 30, 2020
    - Increase that amount with one year of interest at 4.75% to reflect a present value at the end of the next enrollment period
    - Divide that amount by the number of unredeemed units at June 30, 2020
  - Finally, we include a reserve component in the unit price to account for adverse deviation from our assumptions (unexpected costs)

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Methods We Used (cont'd)

- Risk analysis
  - In our analysis, we demonstrate the level of protection a 10%, 15% or 20% reserve provides against select adverse scenarios (above expected tuition growth and below expected investment returns)
  - For a given level of reserve, we solve for the above/below expected annual tuition growth/return experience that would produce an accumulated value of assets collected from a purchaser that matches the redemption value of the unit 15 years later
  - For the purposes of this analysis, we calculate a hypothetical unit price under simplified assumptions and methods when determining accumulated assets from the sale of a single unit
    - We exclude the expense component in the unit price
    - The unit price in these scenarios will not match the best estimate provided in this presentation

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Actuarial Certification

- The data, assumptions, and methods used in this analysis are reasonable and appropriate for the primary purpose stated on page 1 and are in conformity with generally accepted actuarial principles and standards of practice as of the date of this presentation
- Since this analysis is based on assumptions about uncertain future events, actual results will differ to the extent that future experience differs from these assumptions
- This analysis will need to be updated in the future if changes are made to the GET program or the Legislature reforms future tuition policy
- Matthew M. Smith, FCA, EA, MAAA, served as the certifying actuary for this work and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein
- Mr. Smith is available to the WA529 Committee to provide extra guidance and explanations as needed

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