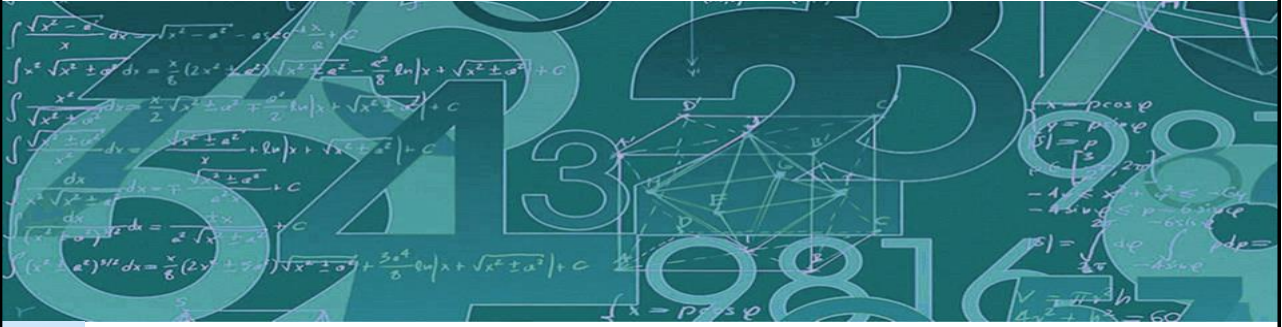


2023 GET Unit Price Setting

Presentation to: WA529 Committee

Graham Dyer, Senior Actuarial Analyst

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September 13, 2023

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Today's Presentation

Purpose

- Updated actuarial analysis to assist the Committee in adopting a unit price for the upcoming enrollment period (2023-24)

Current Program Status

- Key changes from 2022 results
- Estimated funded status and reserves as of June 30, 2023
- Results of June 30, 2023, GET Actuarial Valuation Report may vary

Price-Setting Information

- Key considerations for 2023 Analysis
- 2023-24 enrollment best estimate unit price and range

Risk Analysis

- Key pricing metrics under various stress tests

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Current Program Status – Three Key Changes from 2022 Analysis

1. 2022-23 unit sales and distributions
2. Key assumption updates
 - Investment Return Assumption
 - Tuition Growth Assumption
3. Actual investment return of 7.84% for FY 2023

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How Did Key Assumptions Change?

Investment Return

- WSIB updated their Capital Market Assumptions in 2023
- We base our return assumption on information from WSIB and our professional judgment

Tuition Growth

- Short-term: BLS reported 11.7% growth in Washington state median wage
- Long-term: We increased our inflation assumption which is a building block of our long-term tuition growth assumption

Key Assumptions		
Investment Return		
	Prior	New
All Years	4.75%	5.00%
Tuition Growth by School Year		
	Prior	New
2021-23	2.70%	N/A
2023-25	2.70%	3.00%
2025-27	4.00%	3.25%
2027-29+	4.00%	4.15%

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Program Status at June 30, 2023

Funded Status Summary				
(Dollars in Millions)	2022 GAVR	Financial Reporting Roll-Forward		
		2023 Data Update	Step 2	Step 3
Present Value of Future Obligations	\$1,152	\$1,161		
(A) MVA at June 30	\$1,524	\$1,571		
(B) Present Value of Receivables	\$96	\$76		
Present Value of Fund (A) + (B)	\$1,620	\$1,647		
Funded Status	141%	142%		
Reserve/(Deficit)	\$468	\$487		

Step 1 – New Data

- Project one year forward with new unit sales and distributions for FY 2023
- Number of units outstanding remained relatively stable at 10.1 million
- Approximately 410,000 units purchased during 2022-23 enrollment cycle

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Program Status at June 30, 2023

Funded Status Summary				
(Dollars in Millions)	2022 GAVR	Financial Reporting Roll-Forward		
		2023 Data Update	Key Assumption Updates	Step 3
Present Value of Future Obligations	\$1,152	\$1,161	\$1,142	
(A) MVA at June 30	\$1,524	\$1,571	\$1,571	
(B) Present Value of Receivables	\$96	\$76	\$76	
Present Value of Fund (A) + (B)	\$1,620	\$1,647	\$1,647	
Funded Status	141%	142%	144%	
Reserve/(Deficit)	\$468	\$487	\$504	

Step 2 – Key Assumption Updates

- Increase assumed investment return
- Increase short- and long-term tuition growth assumptions reflecting higher inflation
- Resets the 4-year short-term current law tuition growth assumption format

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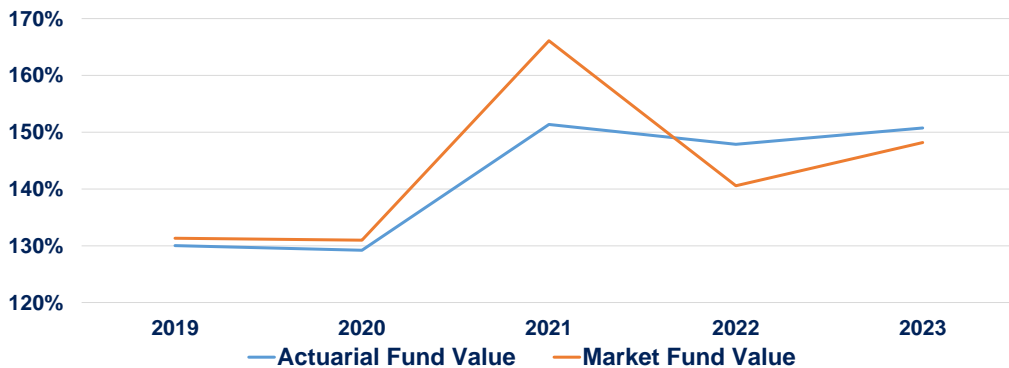
Program Status at June 30, 2023

Funded Status Summary				
(Dollars in Millions)	2022 GAVR	Financial Reporting Roll-Forward		
		2023 Data Update	Key Assumption Updates	2023 MVA (Final Roll-Forward)
Present Value of Future Obligations	\$1,152	\$1,161	\$1,142	\$1,142
(A) MVA at June 30	\$1,524	\$1,571	\$1,571	\$1,617
(B) Present Value of Receivables	\$96	\$76	\$76	\$76
Present Value of Fund (A) + (B)	\$1,620	\$1,647	\$1,647	\$1,693
Funded Status	141%	142%	144%	148%
Reserve/(Deficit)	\$468	\$487	\$504	\$550

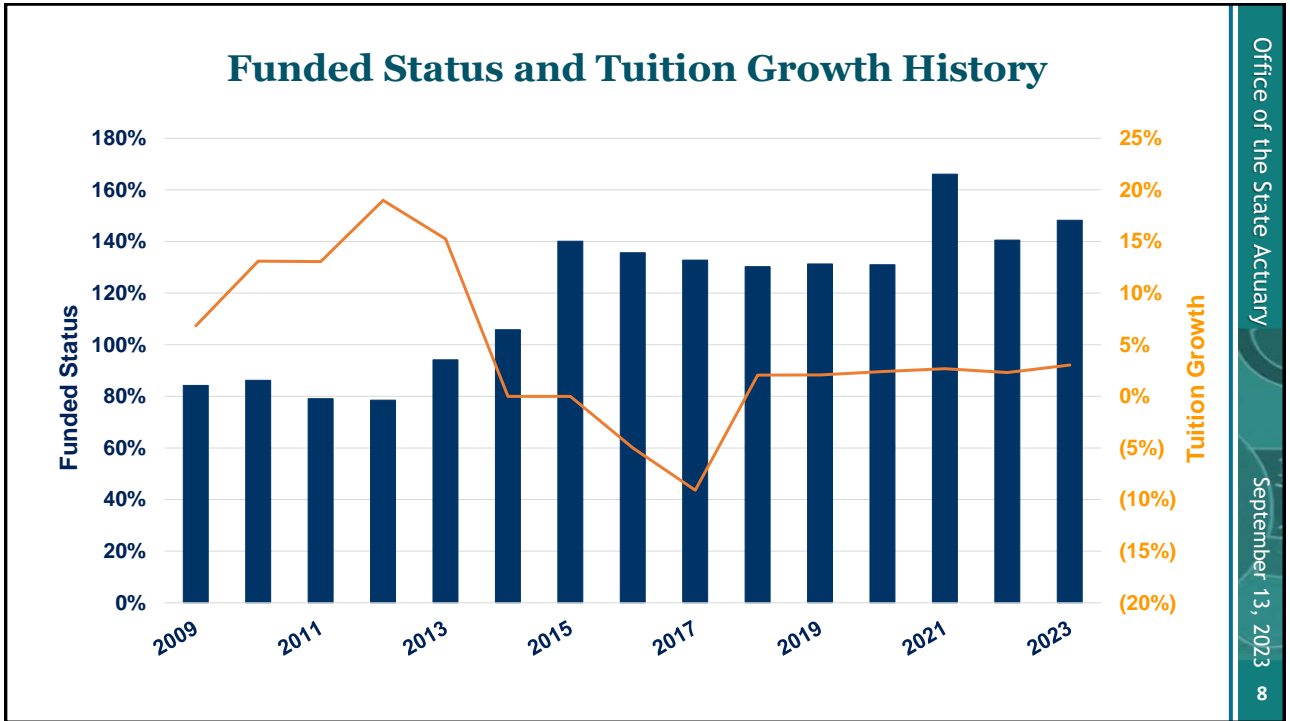
Step 3 – 2023 MVA (Market Value of Assets)

- Update the MVA to reflect actual returns for FY 2023
- Assumed investment return = 4.75%
- Actual investment return = 7.84%

Funded Status by Asset Value



- Funded Status at June 30, 2023, is 151% using the actuarial (or smoothed) value of assets and 148% using the market value
- An 8-year asset smoothing method was used to determine the actuarial value of assets



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Price-Setting Considerations

- The responsibility to adopt a unit price rests solely with the Committee, subject to the requirements of the Price Cap
- 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, we calculate a best estimate and a best estimate range for the unit price that allows the Committee members to balance policy issues
- We consider any price within the best estimate range to be reasonable from an actuarial perspective

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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 level included in best estimate unit price

Amortization

- An optional component that covers unexpected past costs from significant program or policy changes, as well as adverse demographic and economic experience
- Not included in current unit pricing

Price-Setting Adoption – Key Considerations

- Current tuition policy began with the 2015-16 academic year
- Unit sales slowed last year
- Best estimate calculation continues to include a 15% reserve
- Price cap conditions met
 - Funded status as of June 30, 2023, is above 120%
 - Tuition policy remains unchanged

GET Unit Price Information	
Price Cap Calculation	
2023-24 Payout Value	\$120.16
+10 Percent	12.02
2023-24 Price Cap	\$132.00

Unit Price Information

- 2023-24 unit payout value is \$120.16
- The 2023-24 price cap is \$132
- Last year the Committee adopted a unit price equal to the payout value of \$116.63

GET Unit Price Information		
2023-24 Enrollment		
Unit Price	Best Estimate	Best Estimate Range
Expected Cost	\$101.19	
Expenses	3.13	
Reserve	15.65	
Amortization	N/A	
Total Unit Price	\$119	\$106 – \$135
Premium	(0.1%)	(11.8%) - 12.4%

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

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Risk Analysis for Unit Pricing

- The program's ongoing 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
- As with any financial security program, risks can change over time and some risks may not materialize
 - When applicable, the Price Cap can lower the reserve component of the unit price and rely on current program reserves to manage risk

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Summary of Risk Analysis for Unit Pricing

Risk Analysis

- We performed scenario-based risk analysis to test the 15% reserve policy
- We recommend the Committee continue to monitor and evaluate the program’s risks/reserve policy as part of future unit price setting

Risk Scenarios

- We project the assets and liabilities of a single example unit sale under five scenarios
 1. Best estimate assumptions
 2. Lower than assumed investment returns (see Appendix)
 3. Higher than assumed tuition growth (see Appendix)
 4. A combination of scenario 2 and 3
 5. Extension of current law tuition policy
- We also show the estimated impact to the June 30, 2023, plan funded status
- Please see the Appendix for details on the assumptions and methods used in this risk analysis

Best Estimate Results

- Approximate results if future experience matches expectations

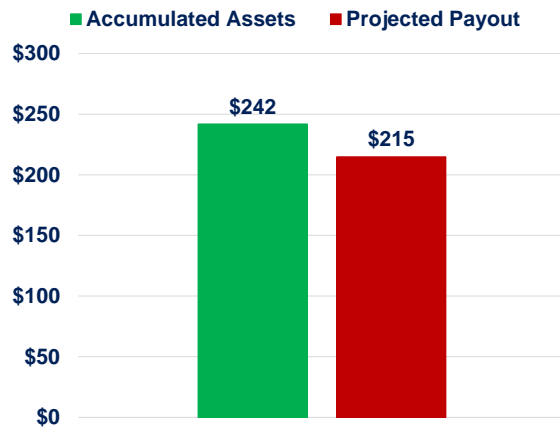
- Includes 15% reserve component

Tuition Growth Assumption by School Year	
2024-25	3.00%
2025-27	3.25%
2027-29+	4.15%

Investment Return Assumption	
	5.00%

Funded Status Estimate June 30, 2023	
	148%

Projection of a Unit Sale

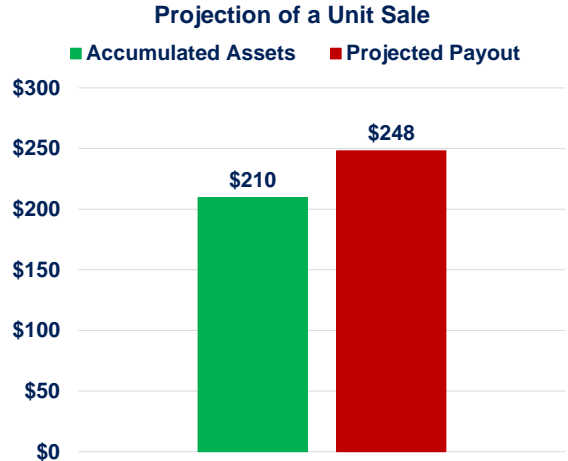


Risk Scenario – Investment Returns 1% Lower than Expected and Tuition Growth 1% Higher than Expected

Tuition Growth Assumption by School Year		
	Best Estimate	Risk Scenario
2024-25	3.00%	4.00%
2025-27	3.25%	4.25%
2027-29+	4.15%	5.15%

Investment Return Assumption	
Best Estimate	Risk Scenario
5.00%	4.00%

Funded Status Estimate June 30, 2023	
Best Estimate	Risk Scenario
148%	132%

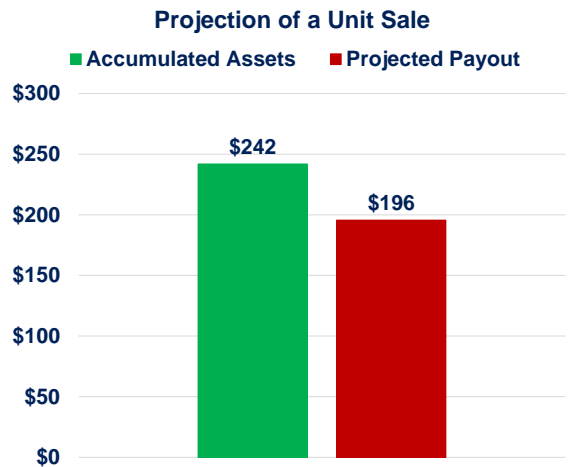


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Risk Scenario – Current Law Tuition Growth

Tuition Growth Assumption by School Year		
	Best Estimate	Risk Scenario
2024-25	3.00%	3.00%
2025-27	3.25%	3.25%
2027-29	4.15%	3.25%
2029-35	4.15%	3.50%
2035-38	4.15%	3.25%
2039+	4.15%	2.80%

Funded Status Estimate June 30, 2023	
Best Estimate	Risk Scenario
148%	152%



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Summary of Results

Current Program Status

- Funded status of 148% and reserves of \$550 million at June 30, 2023;
 - Funded status of 141% and reserves of \$468 million at June 30, 2022
- Reflects changes in key assumptions and higher than assumed investment return during FY 2023
- Based on a roll-forward from June 30, 2022

Price-Setting Information

- Best estimate unit price of \$119 with a range of \$106 to \$135 for next enrollment period
- Current law caps the unit price at \$132
- Payout value of \$120.16 for current academic school year
- Unit price of \$116.63 adopted for last enrollment period

Risk Analysis

- Current 15% reserve policy mitigates impacts from adverse experience
- A lower reserve policy could be reasonable if you consider current funded status and tuition policy

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Questions?



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Questions? Please Contact: The Office of the State Actuary
leg.wa.gov/OSA; state.actuary@leg.wa.gov
360-786-6140, PO Box 40914, Olympia, WA 98504
Luke Masselink and Graham Dyer

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Thank You

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Appendix

- Historical Unit Price and Premiums
- Program Status at June 30, 2023 – Additional Detail
- Tuition Growth and Return Assumptions for Best Estimate Range
- Risk Scenario – Investment Returns 1% Lower than Expected
- Risk Scenario – Tuition Growth 1% Higher than Expected
- Current Program Status Disclosures
- Data, Assumptions and Methods
- Actuarial Certification

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September 13, 2023

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Historical Unit Price and Premiums

Historical Unit Information				
Enrollment Year	Adopted Unit Price	Payout Value	Premium	Units Sold
1998-99	\$35	\$33.96	3%	1,374,095
1999-00	38	35.21	8%	615,327
2000-01	41	36.41	13%	523,702
2001-02	42	38.98	8%	2,463,500
2002-03	52	45.20	15%	2,099,531
2003-04	57	48.36	18%	1,896,635
2004-05	61	51.54	18%	2,108,360
2005-06	66	55.06	20%	2,146,191
2006-07	70	58.88	19%	2,339,431
2007-08	74	62.90	18%	2,102,305
2008-09	76	67.20	13%	3,177,699
2009-10	101	76.00	33%	2,624,367
2010-11	117	85.92	36%	2,697,696
2011-12	163	102.23	59%	1,503,962
2012-13	172	117.82	46%	1,038,773
2013-14	172	117.82	46%	741,701
2014-15	172	117.82	46%	618,367
2015-16	-	111.93	N/A	-
2016-17	-	101.76	N/A	-
2017-18	113	103.86	9%	770,665
2018-19	113	106.01	7%	639,646
2019-20	121	108.44	12%	505,222
2020-21	133	111.03	20%	550,062
2021-22	114.01	114.01	0%	735,322
2022-23	\$116.63	\$116.63	0%	408,958

Note: Price and premium displayed are before any refunded amortization component or retroactive price adjustments.

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Program Status at June 30, 2023 – Additional Detail

Funded Status Summary						
	2022 GAVR	2023 Data Update	2023 Financial Reporting Roll Forward Key Assumption Updates			2023 MVA (Final Roll-Forward)
			Current Law Tuition Policy Reset	Tuition Growth Assumption	Investment Return Assumption	
<i>(Dollars in Millions)</i>						
Present Value of Future Obligations	\$1,152	\$1,161	\$1,140	\$1,160	\$1,142	\$1,142
(A) MVA at June 30	\$1,524	\$1,571	\$1,571	\$1,571	\$1,571	\$1,617
(B) Present Value of Receivables	\$96	\$76	\$76	\$76	\$76	\$76
Present Value of Fund (A) + (B)	\$1,620	\$1,647	\$1,647	\$1,647	\$1,647	\$1,693
Funded Status	141%	142%	145%	142%	144%	148%
Reserve/(Deficit)	\$468	\$487	\$508	\$488	\$504	\$550

- Current Law Tuition Policy Reset refers to resetting current law tuition policy to remain in place for 4 years consistent with the biennial Legislative budget cycle and our *2021 GET Experience Study*

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Tuition Growth and Return Assumptions for Best Estimate Range

Tuition Growth Assumptions			
	2024-25	2025-27	2027+
Low Price Range	3.00%	3.25%	3.65%
Best Estimate	3.00%	3.25%	4.15%
High Price Range	3.00%	3.25%	4.65%

Investment Return Assumptions	
	All Years
Low Price Range	5.50%
Best Estimate	5.00%
High Price Range	4.50%

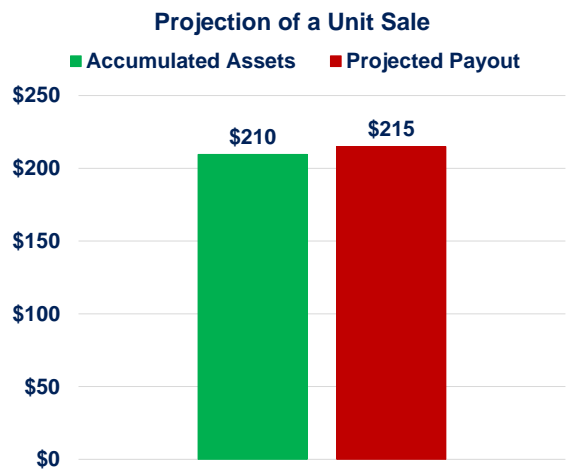
- To develop the best estimate range, we varied both the assumed rate of investment return and tuition growth rates

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Risk Scenario – Investment Returns 1% Lower than Expected

Investment Return Assumption	
Best Estimate	Risk Scenario
5.00%	4.00%

Funded Status Estimate June 30, 2023	
Best Estimate	Risk Scenario
148%	140%

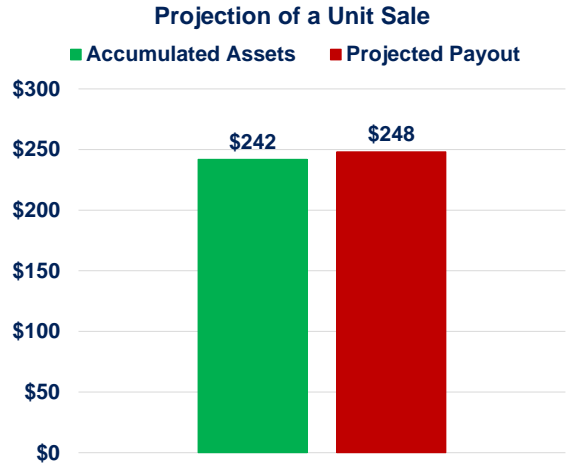


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Risk Scenario – Tuition Growth 1% Higher than Expected

Tuition Growth Assumption by School Year		
	Best Estimate	Risk Scenario
2024-25	3.00%	4.00%
2025-27	3.25%	4.25%
2027-29+	4.15%	5.15%

Funded Status Estimate June 30, 2023	
Best Estimate	Risk Scenario
148%	140%



Current Program Status Disclosures

- Current program status in this presentation is based on a roll-forward of the results of the [June 30, 2022, GET Actuarial Valuation Report \(GAVR\)](#)
- See our letter from August 18, 2023, for supporting information on the data, assumptions, and methods used in this presentation for the current status of the program
- 2023 roll-forward results may vary from the 2023 GAVR available in November

Data, Assumptions and Methods

- Price setting and Risk analysis
 - To determine the expense component of the unit price, we relied on projected program expenses and fee revenue provided by program staff as documented in the 2022 GAVR
 - We reviewed this data and found it reasonable for purposes of this analysis
 - 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
- Current program status and funded status measurements
 - We used the same data as disclosed in our letter from August 18, 2023

Data, Assumptions and Methods *(Continued)*

- Price-setting analysis
 - To develop the best estimate unit price and range, we relied on the key assumptions disclosed in this presentation
 - We used the new unit sales profile and redemption rate assumption disclosed in the [2021 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 2022 GAVR
- We excluded the potential impacts of differential tuition policy from our analysis
- Risk analysis
 - For each risk 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
 - To determine funded status measurements, we used the same assumptions as disclosed in our letter from August 18, 2023, unless otherwise noted in this presentation

Data, Assumptions and Methods *(Continued)*

■ 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 unit sales 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, 2022, as disclosed in the 2022 GAVR
 - Divide that amount by the number of unredeemed units at June 30, 2022
 - Increase that amount with inflation to reflect the growth to the next enrollment period
- Finally, we include a reserve component in the unit price to account for adverse deviation from our assumptions (unexpected costs)

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Data, Assumptions and Methods *(Continued)*

■ Risk analysis

- For each scenario, we compare the projected unit payout value to the expected growth in assets attributable to the purchase of a single unit (accumulated assets)
 - We selected a 15-year period to approximate the average holding period of new contracts
 - We calculate a hypothetical unit price as the present value of the 15-year projected unit payout value under our best estimate tuition growth rates with a 15 percent reserve
 - We excluded the expense component from this analysis
- To determine funded status measurements, we used the same methods as disclosed in our letter from August 18, 2023

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Actuarial Certification

- Actuarial standards of practice that specifically apply to the measurement or evaluation of prepaid tuition programs have not been defined within the actuarial profession
 - We used the standards of practice for pension systems where possible
- The data, assumptions, and methods used in this analysis are reasonable and appropriate for the primary purpose stated on slide 1 and are in conformity with generally accepted actuarial principles and standards of practice as of the date of this presentation
 - The use of another set of assumptions and methods could also be reasonable and could produce materially different results
- This analysis may not be appropriate for other purposes and should be replaced with updated analysis for adopting a unit price in subsequent enrollment periods
- 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
- No members of the WA529 Committee or their respective staff attempted to bias our work product
 - We are not aware of any matters that impacted the independence and objectivity of our work
- Luke Masselink, ASA, 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