



## **Guaranteed Education Tuition Committee Meeting**

July 15, 2002

2:00 p.m. – 5:00 p.m.

Washington State Investment Board

### **MINUTES**

#### **CALL TO ORDER**

Marc Gaspard, HECB Executive Director and GET Committee Chair, called the meeting to order at 2:00 p.m. Committee members in attendance in addition to the Chair included Michael J. Murphy, State Treasurer; Marty Brown, Director of OFM; Beth Stecher Berendt, Citizen Member; and Mooi Lien Wong, Citizen Member.

#### HECB Staff in attendance:

Bruce Botka, HECB Director of Government Relations and Policy  
Barbara Dunn, HECB Communications Officer  
Larry Lee, GET Operations Manager  
Betty Lochner, GET Director  
Lyle Jacobsen, HECB Special Assistant

#### Guests in attendance:

Karen Barrett, Senate Ways and Means Committee  
Gary Bruebaker, State Investment Board  
Elaine Emans, State Treasurer's Office  
William Reimert, Milliman USA  
Cathy Stevens, The Marketing Partners  
Wendy Dore, The Marketing Partners

#### **WELCOME**

Marc opened the meeting with introductions from committee members, staff and guests in attendance. Betty Lochner gave a brief overview of the agenda and indicated there were no changes. Betty directed the committee members to supplemental materials provided for review.

#### **APPROVAL OF MINUTES**

**It was moved by Marty Brown to adopt the minutes as presented, which was seconded by Mike Murphy. The motion was approved and carried unanimously.**

#### **YEAR-END SALES REPORT**

Betty reported that the 2001-02 enrollment year ended as the most successful year in sales since the program had begun. As of June 30, 2002, there were 10,514 new accounts opened, with an additional 500 (approx) incomplete on-line applications that are still being processed. Total program participants have grown to 23,796, which almost double the participant base from this time last year. Total GET funds, including future payments expected, are at \$180 million. Betty directed the committee to the supplement documents, which included a county breakdown for this year and an income status report.

Marc added that those who have been through the enrollment process have commented that they have been given great customer service, which he commended the staff for.

#### **UPDATE ON DEVELOPMENT OF A COLLEGE SAVINGS PLAN**

Betty reported that at the last GET Committee Meeting, the committee directed staff to go forward with a new Request for Proposals (RFP) with a bundled approach. Jeff VanOrden from Milliman USA is currently working on the new RFP. The first draft will

be ready for staff review the week of July 22<sup>nd</sup>. The final draft will be ready for GET committee approval by the first week of August.

### **MARKETING PLAN 2002-2003**

Wendy Dore reviewed the outcome of last year's marketing efforts. The enrollment goal was 4,000 new accounts and we ended up with close to 11,000 new accounts. This summer outreach activities are continuing with county fair booth participation, summer media promotions and a planning/production process for next year. Goals for next year include 4,000 new enrollments, and increased awareness in key markets. They will continue awareness to build an easy contact system, continue visual connections and increase corporate connections. The schedule for fall includes radio, TV ads, newspaper, School/PTA/Corporate direct mail and State government payroll stuffers. There is also a plan to test creative concepts to include holiday promotions for gifts. The budget for television ads is at \$365,000, which will run for 9 weeks.

### **INVESTMENT UPDATE**

Gary Bruebaker directed the committee to handouts of the first and second quarter, 2002 investment updates (ending March 31 and June 30<sup>th</sup>). The balance as of March 31, 2002 was \$88.9 million. The balance as of June 30, 2002 is \$115.8 million. Gary reported that on June 4<sup>th</sup>, \$2.8 million came into the fund on that day alone, which was the highest daily amount received in the fund to date.

The first quarter return (as of March 31) was 1.29%. The second quarter (as of June 30<sup>th</sup>) shows a return of -2.26% for that quarter. Overall GET is 2.61% in the positive for overall investment performance. The second quarter under performed the benchmark. GET currently has more than 65% of assets in the Whilshire 5000. Marty asked if there might be a time when we want to change the asset allocation. Gary indicated that GET's asset allocation should be changed and that SIB is recommending that we reposition our allocations. Marc indicated that the discussion regarding investment reallocation would take place later in the meeting when price setting is discussed.

### **APPROVAL OF REVISED FY03 BUDGET**

Betty referred the committee to the revised budget handout. The proposed budget includes moving the remaining marketing dollars left from the spring campaign to the fall campaign (new fiscal year). The new budget also includes two additional staff (FTE) to accommodate the increased volume of program participants. The new staff positions would be a matriculation coordinator to handle the increasing numbers of students using GET benefits and an additional customer service representative to handle the increased number of daily calls from current account holders. These new positions bring the staffing level to 11.5 FTE.

**It was moved by Marty to adopt the revised FY03 budget, which was seconded by Mike. The motion carried unanimously.**

**PROPOSED ENROLLMENT DATES FOR 2002-2003**

Betty directed the committee to the staff report. During the last enrollment year the unit price was set based on legislative approval of a 6.1% tuition increase for the 2002-03 academic year. During the 2002 legislative session, the legislature increased the tuition setting authority to up to 16% for public research universities (WSU and UW). This created the problem of having the enrollment year end after the new tuition authority was announced, with no opportunity to adjust the unit price until September 1. The statute directs the committee to set the unit price annually, and gives the committee the authority to adjust it annually to ensure the actuarial soundness of the program. Our actuarial consultants have recommended that the committee have the flexibility to adjust the price when needed. The staff report reviews several options, including the recommended option, Option 3, which proposes establishing the 2002-03-enrollment period to be September 15 through March 31. The unit price would be adjusted on April 1 or later as needed.

Committee members were in favor of shortening the enrollment period to end March 31, but raised several concerns about the impact of the change of a price without a date certain. After active discussion, the chair asked that the item be tabled until after the discussion on price setting took place.

**ACTUARIAL ANALYSIS AND UNIT PRICE SETTING**

Bill Reimert went over the supplemental handouts. He indicated that there is a tremendous amount of uncertainty in terms of future tuition. There were \$4.5 million last year in the stabilization reserve. This year we are at a deficit \$18.8 million in the stabilization reserve. Bill explained that, for this year, tuition went up 16% when we had anticipated 6.1%. That affected current obligations and the value of all contracts sold in the last 12 months. The other significant piece is in the investment return rates, which were negative.

Bill recapped the past unit costs and went over several different assumptions, models, and scenarios that discuss a new unit price between \$50 and \$58. Bill explained what the cumulative costs to the state would be under worst case scenarios. He used the capital investment information provided by the SIB and other factors; along with standard tuition rates and tuition payouts.

There were numerous questions concerning the assumptions Bill had presented and the risks involved with each.

Mike commented that if the unit price goes up too high, customers will be discouraged from purchasing units. Mooi Lien raised the question of what would be a realistic rate of return GET should be using. The SIB has capital market investment rates that are looked at over the next 10 years. Marty expressed concern that lowest proposed unit price presented is a 26% premium over current tuition costs. Beth commented that from a marketing perspective all of the press shows that the state budget will get worse and that tuition could go up considerably higher than that the 10%.

Marc asked Bill if there is any kind of standard that other states have adopted. Bill responded that other states use their own individual actuarial approach to price setting. For example, the state of Ohio, starting in July of 1999, had prices that were 98-100% of current tuition. They have since raised their prices three times and are now selling at 127% of current tuition. The increases have not affected their sales.

Marc commented that the committee has received a lot of information and presented the option to table the pricing and the dates of enrollment.

After further discussion regarding the various scenarios discussed, it was decided that the committee needed more time to review the materials and make a decision. Staff was asked to schedule a special subsequent meeting to finish the discussion and make a decision regarding the new unit price and enrollment dates.

### **INVESTMENT REALLOCATION OPTIONS**

Marc asked Bill if he had recommendations for investment reallocation.

Bill handed out some capital market assumptions and then some graphs that were attached along with four investment allocation options that were presented to the committee.

Marc asked that Gary Bruebaker comment on the investment reallocation options. Based on the updated data on the contracts sold, Gary Bruebaker recommends Option 4 as a great option for the program. He would like to implement this new option to begin use in August.

Mooi Lien asked about what annualized returns are over what period of time. Gary explained that this was over a 10+ year timeframe. Marty expressed concern in the increase of non US equities.

Marc asked the committee if they would like to take action on investment options presented by Gary and the SIB. Mooi Lien expressed that she was not comfortable in taking actions at this time. Marc directed staff to add the Investment Reallocation action item to the next meeting agenda. Marc asked Gary to take comments from today and include it in the options he will present at the next meeting. This item would be included in the upcoming special meeting to be scheduled within the next few weeks.

Betty added that the new Savings Plan RFP should be ready to present for approval at that meeting as well.

### **DIRECTOR'S REPORT**

This item was tabled and will be presented at the next meeting.

There being no other business, the meeting was adjourned at 5:07 p.m.

**Proposed Change for 2002-03 Enrollment Dates**  
**REVISED**

July 30, 2002

**Background**

At the July 15, 2002 GET Committee meeting, several options were explored for changing the 2002-03 enrollment year to allow the program to adjust the price annually, if necessary, to maintain the actuarial soundness of the program. This would allow the adjusted unit price to more accurately reflect proposed or actual tuition increases and reduce potential liability for the program.

RCW 28B.95.030 (6) provides, "The governing body shall annually determine the current value of a tuition unit," and RCW 28B.95.080 provides, "If funds are not sufficient to ensure the actuarial soundness of the account, the governing body shall adjust the price of subsequent tuition credit purchases to ensure its soundness".

After consulting legal counsel, it is recommended that the price be set annually and then adjusted annually, if necessary,

The committee discussed the staff recommendation of setting the price annually on September 1 and adjusting it annually on April 1 or later as needed. The committee expressed concerns about the uncertainty of when the new price adjustment would take place and the potential for customer confusion.

**Staff Recommendation – 2002-03 Enrollment Year - REVISED**

It is recommended that the 2002-03 Enrollment Year be set from September 15, 2002 to March 31, 2003, to mitigate the effects of any unforeseen legislative action on tuition increases.

The price would be adjusted, if necessary, on May 1. Existing account holders would be able to purchase additional units on a lump sum basis at the adjusted unit price through August 31, 2003.

For the 2003-04 enrollment year, the new unit price would be set in the summer and effective September 1, 2003.

# GET Investment Portfolio / July 2002

## Portfolio Statistics

	Current	Optimal 60-40 Split	60-40 Split Non-U.S. <50% U.S. Equity	60-40 Split Non-U.S. <25% U.S. Equity
Cash	0.00	0.00	0.00	0.00
TIPs	50.00	40.00	40.00	40.00
Fixed Income	0.00	0.00	0.00	0.00
U.S. Equity	35.00	38.76	40.00	48.00
Non-U.S. Equity	15.00	21.24	20.00	12.00
Expected Return	7.75	8.10	8.10	8.10
Standard Deviation	9.55	11.00	11.00	11.09
Yield	2.59	2.40	2.40	2.42
Sharpe Ratio	0.31	0.30	0.30	0.30

## Return Percentiles: Current

	1 Year	3 Year	5 Year	10 Year	15 Year	20 Year
95th Percentile	24.13	16.72	14.53	12.37	11.42	10.86
66th Percentile	11.30	9.60	9.08	8.56	8.33	8.19
Expected Value	7.73	7.45	7.40	7.35	7.34	7.33
34th Percentile	3.46	5.07	5.57	6.08	6.31	6.44
5th Percentile	-7.23	-1.34	0.55	2.48	3.35	3.87

## Return Percentiles: Expected Return = Optimal 60-40 Split

	1 Year	3 Year	5 Year	10 Year	15 Year	20 Year
95th Percentile	27.09	18.43	15.88	13.38	12.28	11.64
Expected Value	8.10	7.73	7.66	7.60	7.58	7.57
5th Percentile	-8.99	-2.34	-0.19	2.01	3.01	3.60

## Return Percentiles: 60-40 Split Non-U.S. <50% U.S. Equity

	1 Year	3 Year	5 Year	10 Year	15 Year	20 Year
95th Percentile	27.09	18.43	15.88	13.38	12.28	11.64
Expected Value	8.10	7.73	7.66	7.60	7.58	7.57
5th Percentile	-9.00	-2.34	-0.20	2.01	3.01	3.60

## Return Percentiles: 60-40 Split Non-U.S. <25% U.S. Equity

	1 Year	3 Year	5 Year	10 Year	15 Year	20 Year
95th Percentile	27.24	18.51	15.94	13.41	12.31	11.66
Expected Value	8.10	7.72	7.65	7.59	7.57	7.56
5th Percentile	-9.12	-2.42	-0.26	1.96	2.96	3.56

July 25, 2002

Ms. Betty Lochner  
Executive Director  
Washington Guaranteed Education Tuition Program  
919 Lakeridge Way, SW  
Olympia, WA 98504-3450

Re: Unit prices for September 2002 through March 2003

Dear Betty:

As you requested, we have summarized on the attached exhibits the effect of setting the unit price for September 2002 through March 2003 at \$50, \$52, \$54, \$56 or \$58. Consistent with the handouts and discussion at the July 15<sup>th</sup> Committee meeting, the attached exhibits provide the following information.

1. The level of tuition increases/stabilization reserve that would be supported by the various prices.
2. The return to purchasers under alternative tuition forecasts.
3. The probability of the unit prices being adequate to cover the tuition benefits and administrative costs associated with the units sold at these rates.

We have illustrated a wide range of possible unit prices in light of:

- the desire of Committee members to hold unit prices to the lower end of the range to keep the unit price attractive relative to current tuition, and,
- our belief that prices at the higher end of the range are appropriate in light of
  - (a) the possibility that tuition may increase significantly in the future and
  - (b) the estimated current deficit in the GET program.

As discussed at the July 15<sup>th</sup> meeting, it is important that the Committee base unit prices on assumptions it believes are reasonable. In particular, we do not have confidence in our ability to forecast future tuition at Washington public universities. It is important to establish adequate prices for units because it is not possible to ask purchasers for additional payments to cover tuition and/or administrative costs if they prove to be higher than anticipated or to supplement investment returns if they fall short of expectations.

### **Provision for tuition increases / stabilization reserve in unit prices**

Past unit prices were established anticipating 6.75% annual increases in tuition. In addition, provision was made to accumulate a stabilization reserve ranging from 2.8% to 8.1%.

As shown in the handouts distributed at the July 15<sup>th</sup> meeting, we recommend that a margin of at least 10% be added to unit prices calculated if the “actuarial methodology” is adopted. Such a stabilization reserve is necessary to provide some protection to the GET program from adverse experience from investments and/or tuition increases.

We do not recommend a comparable margin if the “financial economics” model for unit prices is adopted. We believe that a reasonable argument can be made for setting unit prices based on the “financial economics” model anywhere between the estimated cost of the tuition benefits only (without extra provision for anticipated administrative costs) and the estimated cost of both the expected tuition benefits and administrative costs associated with each unit.

Exhibits A, B and C illustrate the tuition increase and/or stabilization reserve provision implicit in unit prices ranging from \$50 to \$58. Exhibit A illustrates the tuition forecast scenario where tuition increases in 2003 and 2004 are expected to be of similar magnitude to tuition increases in later years, Exhibit B illustrates the tuition forecast scenario where tuition increases in 2003 and 2004 are 10% per year and Exhibit C illustrates the tuition forecast scenario where tuition increases in 2003 and 2004 are 8% per year. The top portion of each Exhibit illustrates the tuition increase implicit in the “financial economics” method and the bottom portion illustrates the tuition increase and/or stabilization reserve provision implicit in the “actuarial” method.

For example, if the Committee adopts the “financial economics” model for calculating prices, a \$52 unit price would make provision for only 5.83% annual increases in tuition in all years (this is the full expense figure from the top of Exhibit A). Moving on to the second (10% tuition increases in 2003 and 2004) and third (8% tuition increases in 2003 and 2004) tuition forecast scenarios, the \$52 unit price would provide for 4.93% and 5.36% annual tuition increases in 2005 and later years.

If the Committee adopts the “actuarial” model used in the past, a \$52 unit price would make provision for a 6.88% annual rate of tuition growth in all future years and a 10% stabilization reserve, or alternatively a 6.75% annual rate of tuition growth in all future years and a 11.36% stabilization reserve under the first tuition scenario (shown at the bottom of Exhibit A). Moving on to the second (10% tuition increases in 2003 and 2004) and third (8% tuition increases in 2003 and 2004) tuition forecast scenarios, the \$52 unit price would provide for 6.21% and 6.64% annual tuition increases in 2005 and later years.

The following table summarizes appropriate unit prices (before being rounded) based on three alternative forecasts of tuition growth in the future.

Tuition Increases 2003 & 2004/thereafter	Actuarial Model (with 10% for stabilization reserve)	Financial Economics Model	
		without provision for administrative costs	with provision for administrative costs
6.75%/6.75%	\$51.36	\$53.46	\$56.96
10.00%/6.60%	53.66	56.03	59.53
8.00%/6.60%	51.85	54.01	57.51

### **Tuition Forecast Scenarios**

To illustrate the rates of return to purchasers and estimate the probability and magnitude of possible deficits, we have illustrated three alternative forecasts of tuition increases.

Scenario 1 - 6.75% per year – this is the assumed rate of tuition increases used in past years to set unit prices.

Scenario 2 - 10% in both 2003 and 2004 and 6.6% per year thereafter.

Scenario 3 - 8% in both 2003 and 2004 and 6.6% per year thereafter.

As indicated above, 6.75% is the rate of tuition increases we have assumed in past unit prices. In addition, the current state budget indicates that tuition increases will be limited to 6.75%.

The second tuition forecast scenario reflects an expectation that there will be two more years of higher than normal tuition increases, averaging about 10% per year, before tuition increases fall back to more “normal” levels. If that were to happen, tuition for the 2004-5 academic year will be \$5,469. This would represent a cumulative increase of 7.4% per year since the 1981-2 academic year.

We based the tuition growth assumption for the period after 2004-5 on the 7.4% cited above adjusted to reflect the 2.5% assumed annual price inflation instead of the actual 3.3% price inflation during the period 1981 to 2004. (Note that the 2.5% inflation forecast is based on the survey of professional forecasters conducted by the Philadelphia Federal Reserve Bank that is published quarterly. This rate is also quite close to the 2.41% yield difference on July 24<sup>th</sup> between the US nominal and inflation adjusted bonds maturing in February and April 2029, respectively. The difference between the yields on these bonds should represent the implied inflation forecast of financial markets over this time period.)

The third tuition forecast scenario reflects two years of higher than normal tuition increases, but at a more moderate level than the second scenario.

### **Rate of return for purchasers**

Exhibit D illustrates the expected rate of return to lump sum purchasers for selected beneficiary ages at the time of purchase. For comparison purposes, we have also shown yields as of July 24<sup>th</sup> on US Treasury Bonds and AAA Municipal Bonds of similar duration. Separate rate of return calculations are shown for each of the three tuition forecast scenarios described above, i.e.,

1. 6.75% in all future years,
2. 10% in 2003 and 2004 and 6.6% thereafter, and,
3. 8% in 2003 and 2004 and 6.6% thereafter.

For example with a \$52.00 unit price, if future tuition increases are 6.75% (scenario 1), a unit purchased for a newborn would return 6.05% per year while a unit purchased for a 16 year old beneficiary would return 2.93% per year. Under scenario 2 (10% in 2003 and 2004; 6.6% thereafter), the rates of return would be 6.24% and 4.63%, respectively. Under scenario 3 (8% in 2003 and 2004; 6.6% thereafter), the rates of return would be 6.04% and 3.55%, respectively. For comparison purposes, a US Treasury bond maturing in June 2004, when a 16-year-old would graduate, would yield 2.32% and an AAA Municipal Bond with a comparable maturity would yield 1.83% based on July 24<sup>th</sup> closing prices. Comparable yields on a US Treasury bond for a newborn is 5.34%.

### **Summary of Prices as a % of current tuition**

Exhibit E summarizes the various unit prices, \$50 through \$58, as a percentage of 1% of the 2002-3 academic year highest tuition in Washington, \$45.20. (WSU's tuition will be \$4520.)

### **Probability and magnitude of possible deficits**

In the handouts for the July 15<sup>th</sup> meeting we estimated the probability of a deficit and illustrated the timing and magnitude of the deficits at a 5% probability of occurrence level. For two of the three alternative forecasts of tuition increases as described above, we have updated and expanded those estimates of the probability and magnitude of possible deficits for each of the unit prices.

We only prepared these analyses for (1) the 6.75% tuition increase scenario and (2) the 10% for two years followed by 6.6% thereafter. (Since the third scenario falls between these two - it is closer to the 6.75% scenario than the 10% followed by 6.6% scenario - we decided that it was probably unnecessary to provide all three exhibits. If you would like to see the third, we'd be glad to produce it.)

In Exhibits F and G, we have shown 5% and added 25% and 50% probability levels to better indicate the probability and magnitude of the estimated possible deficits for the various illustrated unit prices. Instead of indicating the timing and level of cumulative deficits – this would represent the state support necessary to satisfy Program obligations – associated solely with the sale of 4,000 new contracts averaging 200 units each, we plotted the timing and level of cumulative deficits for the current contracts plus:

1. no additional contracts; and,
2. 4,000 contracts with unit prices of;
  - \$50,
  - \$54, and,
  - \$58.

We did not plot the \$52 and \$56 unit prices because these lines fell between the other lines and can be readily interpolated from the lines plotted.

We made these changes because we believe that it presents a better picture of the risks faced by the Program as well as the beneficial effect of continuing to sell additional units/contracts. For example, the 50<sup>th</sup> percentile lines indicated the expected (i.e., 50% probability level or median) projected result. These lines indicate that selling additional units at any of the illustrated prices are expected to delay the time when state support would be required as well as the projected estimated magnitude of that support.

Looking at the more adverse percentiles illustrated, selling additional units would continue to delay the need for state support, but would generally increase the projected estimated magnitude of that support. At the 25% probability level, selling additional units at a \$50 price would delay the time when state support would be needed but would increase the magnitude of the required support. But if unit prices were set at \$58, even the magnitude of the projected estimated deficits would be reduced at the 25% probability level.

The exhibits also indicate the probability of incurring deficits on account of current contracts in force with and without an additional year's sales. For example, based on the 6.75% tuition increase scenario, there is a 61.8% probability of incurring a deficit with no additional sales. This figure decreases to 58.2% if units are sold at a \$50 price. Those figures indicate that under both tuition increase scenarios that the probability of ultimately requiring state support would decrease if units are sold in the coming year. In addition it indicates the fairly obvious point that the higher the unit price, the greater the beneficial effect of selling additional units. (This assumes that sales would be unaffected by the higher unit prices. We believe that this is a reasonable assumption in the current financial market / tuition increase environment, but this is certainly debatable!)

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These projections do not anticipate additional unit sales after the 2002-3 year. Based on these projections, it seems reasonable to conclude that if we included additional sales beyond 2002-3 in the projections that the timing of required state subsidies could be further delayed. The projected affect of such sales on the potential magnitude of required state support would depend on the level of unit prices and the number of contracts/units sold.

### **Investment Return Assumptions**

We have also modified this analysis somewhat from the figures handed out on July 15<sup>th</sup> to reflect the possible Committee decision to increase the assets allocated to equities (which would serve to increase the program's expected returns) and modifications we made in SIB's capital market assumptions. We have based the calculations on the attached exhibits on an assumed portfolio investment return of approximately 7.25%. We increased this rate in anticipation of a possible Committee decision to move to an asset allocation that would reduce the allocation to TIPs, Treasury Inflation Protection securities, and increase the allocation to equities. This is higher than the 7.00% used in the handouts from the July 15<sup>th</sup> meeting, but is lower than the 7.50% used to price units in prior years. In the event the Committee decides to stay with the current 50% TIPs / 50% equities allocation, we believe that 7.0% would be the appropriate investment return assumption for developing unit prices if the "actuarial" model is adopted.

In preparing the modeling to estimate the probability and magnitude of possible future deficits, we used the SIB's capital market assumptions adjusted to reflect the recent decline in bond yields (both traditional bonds and TIPs). The adjustment was a reduction of 0.50% in expected bond returns from 6.0% to 5.5%. (Real yields on TIPs on July 24<sup>th</sup> ranged from 2.06% to 3.08%. When these real returns are added to the inflation assumption of 2.5%, the range of total yields on TIPs is 4.56% to 5.58%.)

### **Recommendation**

We recommend that GET establish a unit price of \$56.00, or higher, per unit. Based on the "actuarial" model, a \$56.00 unit price would provide for the possibility of 10% increases in tuition in 2003 and 2004 (and 6.60% thereafter) if future investment returns average 7.25% compounded as well provide as a 14.8% margin to (1) cover adverse future investment or tuition experience or (2) pay down the current program deficit. It would also approximately equal the cost of tuition (assuming 10% for two years and 6.6% thereafter) from a "financial economics" perspective. This unit price would be 24% higher than 2002-3 tuition.

A slightly lower unit price could be developed if the unit price were subject to change prior to March 31, 2003. For example, a \$55.00 unit price would provide for roughly the same level of tuition increases/stabilization reserve as \$56.00 if the unit price could be changed after December 31, 2002.

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**Variability of Results**

Differences between the figures shown above and actual amounts will depend on the extent to which future experience conforms to the assumptions. It is certain that actual experience will not conform exactly to the assumptions. Actual amounts will differ from projected amounts to the extent that actual experience deviates from expected experience.

It is important to understand that the results based on stochastic modeling are only illustrative of the range of results that are possible and are dependent on the assumptions utilized. The assumptions are shown in Exhibit H.

**Data Reliance**

We relied on data and other information provided by GET. We have not audited or verified this data and other information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

\* \* \* \* \*

We would be glad to respond to any questions you have regarding the above.

Sincerely,

William A. Reimert

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## Washington Guaranteed Education Tuition Program

**Tuition Growth Assumption after 2004-05 implicit in Unit Prices of \$50, \$52, \$54, \$56 and \$58**

### Proposed New Financial Economics Pricing Model

Provision for Future Administrative Costs	Unit Price for Fall 2002				
	<u>\$50</u>	<u>\$52</u>	<u>\$54</u>	<u>\$56</u>	<u>\$58</u>
None	6.12%	6.49%	6.85%	7.19%	7.52%
Full	5.43%	5.83%	6.22%	6.58%	6.94%

### Actuarial Pricing Model used in prior years

Stabilization Reserve in This Year's Pricing	Unit Price for Fall 2002				
	<u>\$50</u>	<u>\$52</u>	<u>\$54</u>	<u>\$56</u>	<u>\$58</u>
0.00% Stabilization Reserve	7.45%	7.85%	8.23%	8.60%	8.95%
7.08% Stabilization Reserve	6.75%	7.16%	7.54%	7.91%	8.26%
10.00% Stabilization Reserve	6.48%	6.88%	7.27%	7.64%	7.99%
11.36% Stabilization Reserve	6.35%	6.75%	7.14%	7.51%	7.87%
15.64% Stabilization Reserve	5.96%	6.37%	6.75%	7.13%	7.49%
19.93% Stabilization Reserve	5.58%	5.99%	6.38%	6.75%	7.11%
24.21% Stabilization Reserve	5.21%	5.62%	6.02%	6.39%	6.75%

Assumptions:

Investment Returns - Proposed New Pricing Model	Treasury Strip Yield Curve
Investment Returns - Actuarial Pricing Model	7.25%
Tuition Growth in next 2 years	Same as above
Highest 2002-2003 Tuition	\$4,520
New Contracts	4,000
Total Units	800,000
Avg Date of Unit Purchase	February 1
Age Distribution	Actual 1998-2002

## Washington Guaranteed Education Tuition Program

**Tuition Growth Assumption after 2004-05 implicit in Unit Prices of \$50, \$52, \$54, \$56 and \$58**

### Proposed New Financial Economics Pricing Model

Provision for Future Administrative Costs	Unit Price for Fall 2002				
	<u>\$50</u>	<u>\$52</u>	<u>\$54</u>	<u>\$56</u>	<u>\$58</u>
None	5.28%	5.74%	6.18%	6.60%	7.00%
Full	4.43%	4.93%	5.40%	5.85%	6.29%

### Actuarial Pricing Model used in prior years

Stabilization Reserve in This Year's Pricing	Unit Price for Fall 2002				
	<u>\$50</u>	<u>\$52</u>	<u>\$54</u>	<u>\$56</u>	<u>\$58</u>
0.00% Stabilization Reserve	6.91%	7.40%	7.86%	8.30%	8.73%
2.48% Stabilization Reserve	6.60%	7.09%	7.56%	8.01%	8.43%
6.58% Stabilization Reserve	6.11%	6.60%	7.07%	7.52%	7.96%
10.00% Stabilization Reserve	5.71%	6.21%	6.68%	7.13%	7.57%
10.68% Stabilization Reserve	5.63%	6.13%	6.60%	7.06%	7.49%
14.78% Stabilization Reserve	5.17%	5.67%	6.15%	6.60%	7.04%
18.88% Stabilization Reserve	4.71%	5.22%	5.70%	6.16%	6.60%

Assumptions:

Investment Returns - Proposed New Pricing Model	Treasury Strip Yield Curve
Investment Returns - Actuarial Pricing Model	7.25%
Tuition Growth in next 2 years	10.00%
Highest 2002-2003 Tuition	\$4,520
New Contracts	4,000
Total Units	800,000
Avg Date of Unit Purchase	February 1
Age Distribution	Actual 1998-2002

## Washington Guaranteed Education Tuition Program

**Tuition Growth Assumption after 2004-05 implicit in Unit Prices of \$50, \$52, \$54, \$56 and \$58**

### Proposed New Financial Economics Pricing Model

Provision for Future Administrative Costs	Unit Price for Fall 2002				
	<u>\$50</u>	<u>\$52</u>	<u>\$54</u>	<u>\$56</u>	<u>\$58</u>
None	5.71%	6.17%	6.60%	7.02%	7.42%
Full	4.86%	5.36%	5.83%	6.28%	6.71%

### Actuarial Pricing Model used in prior years

Stabilization Reserve in This Year's Pricing	Unit Price for Fall 2002				
	<u>\$50</u>	<u>\$52</u>	<u>\$54</u>	<u>\$56</u>	<u>\$58</u>
0.00% Stabilization Reserve	7.34%	7.82%	8.28%	8.72%	9.15%
6.04% Stabilization Reserve	6.60%	7.09%	7.56%	8.01%	8.44%
10.00% Stabilization Reserve	6.14%	6.64%	7.11%	7.56%	7.99%
10.29% Stabilization Reserve	6.11%	6.60%	7.08%	7.53%	7.96%
14.53% Stabilization Reserve	5.63%	6.13%	6.60%	7.06%	7.49%
18.77% Stabilization Reserve	5.16%	5.67%	6.15%	6.60%	7.04%
23.01% Stabilization Reserve	4.71%	5.22%	5.70%	6.16%	6.60%

Assumptions:

Investment Returns - Proposed New Pricing Model	Treasury Strip Yield Curve
Investment Returns - Actuarial Pricing Model	7.25%
Tuition Growth in next 2 years	8.00%
Highest 2002-2003 Tuition	\$4,520
New Contracts	4,000
Total Units	800,000
Avg Date of Unit Purchase	February 1
Age Distribution	Actual 1998-2002

**Exhibit C**

## Washington Guaranteed Education Tuition Program

### Expected Rates of Return to Lump Sum Purchasers for Selected Beneficiary Ages

Age at Purchase	Unit Price for Fall 2002	Tuition Forecast Scenario			Yields as of July 24, 2002	
		1	2	3	U.S. Treasury Bonds	AAA Municipal Bonds
16	\$50	4.08%	5.81%	4.71%		
	\$52	2.93%	4.63%	3.55%		
	\$54	1.85%	3.52%	2.45%	2.32%	1.83%
	\$56	0.81%	2.46%	1.41%		
	\$58	-0.17%	1.46%	0.42%		
15	\$50	4.66%	5.98%	5.12%		
	\$52	3.76%	5.06%	4.21%		
	\$54	2.91%	4.19%	3.35%	2.80%	2.25%
	\$56	2.08%	3.36%	2.53%		
	\$58	1.30%	2.56%	1.74%		
13	\$50	5.30%	6.17%	5.57%		
	\$52	4.67%	5.53%	4.94%		
	\$54	4.07%	4.92%	4.34%	3.52%	2.88%
	\$56	3.49%	4.34%	3.76%		
	\$58	2.93%	3.78%	3.20%		
8	\$50	5.93%	6.36%	6.02%		
	\$52	5.57%	6.00%	5.66%		
	\$54	5.22%	5.65%	5.31%	4.45%	3.82%
	\$56	4.89%	5.32%	4.98%		
	\$58	4.57%	4.99%	4.66%		
Newborn	\$50	6.26%	6.46%	6.26%		
	\$52	6.05%	6.24%	6.04%		
	\$54	5.85%	6.04%	5.84%	5.34%	n/a
	\$56	5.65%	5.84%	5.64%		
	\$58	5.46%	5.65%	5.45%		

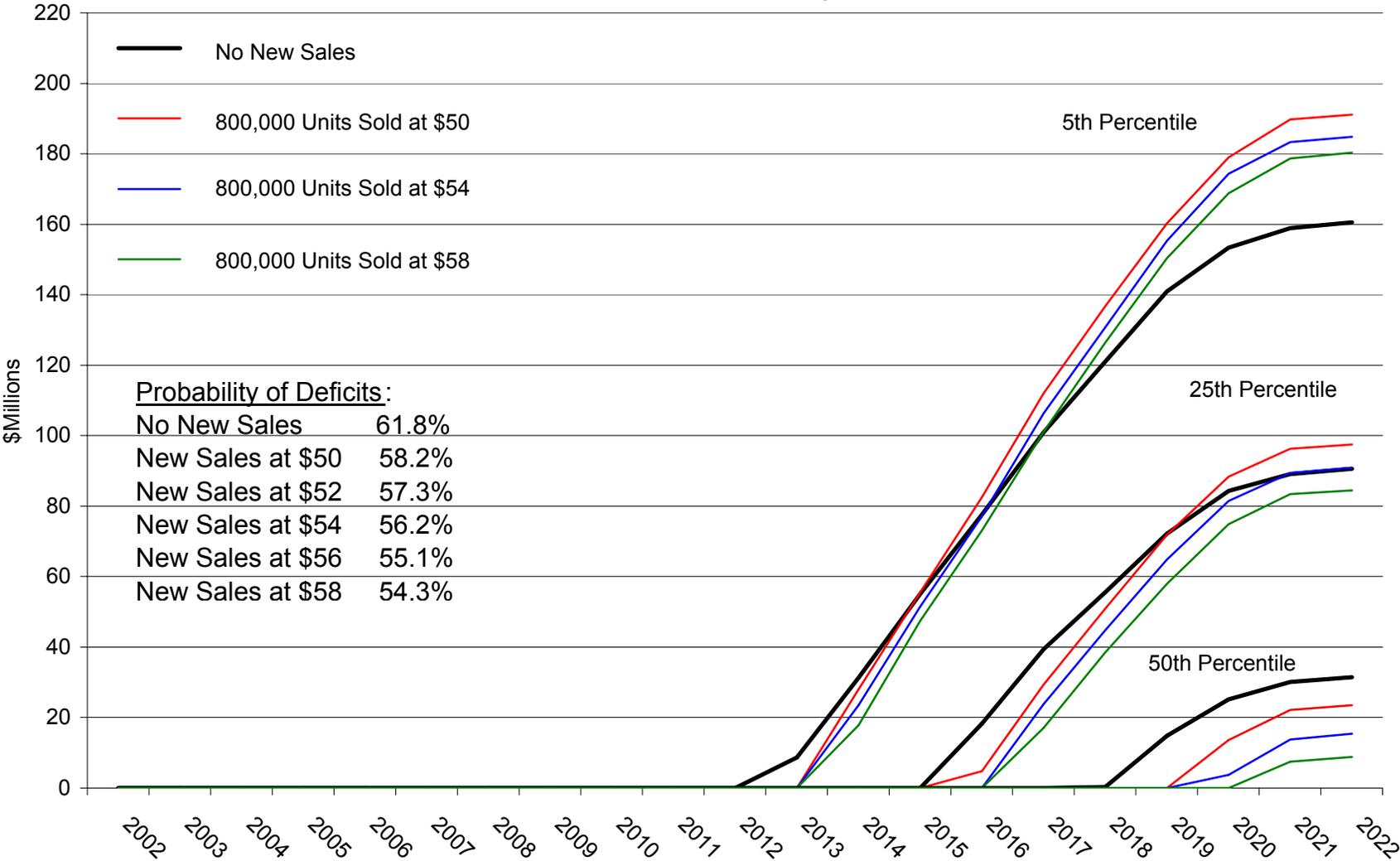
# Washington Guaranteed Education Tuition Program

## Price as a Percentage of Tuition for Unit Prices of \$50, \$52, \$54, \$56 and \$58

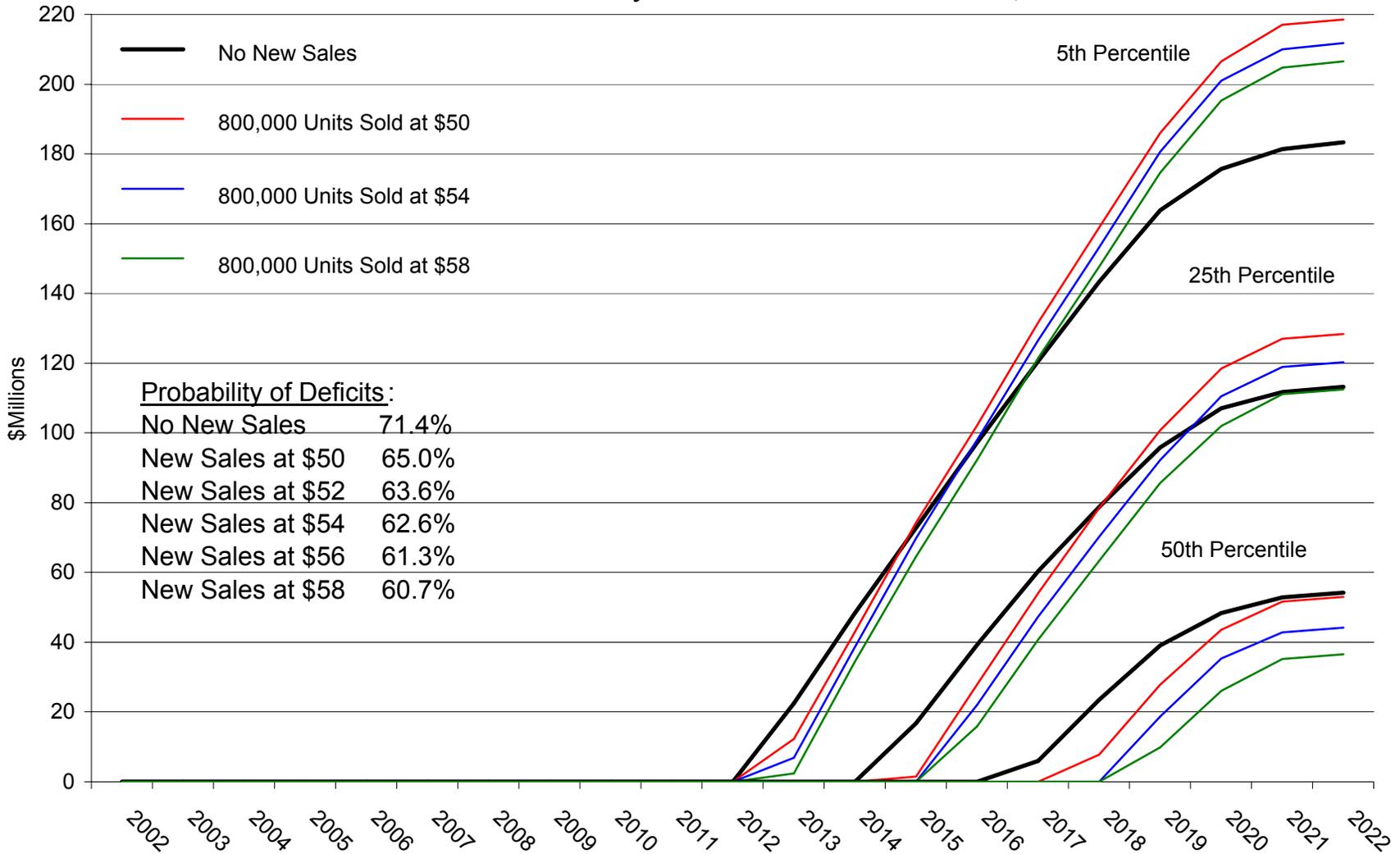
	Unit Price for Fall 2002				
	<u>\$50</u>	<u>\$52</u>	<u>\$54</u>	<u>\$56</u>	<u>\$58</u>
Price as a Percentage of Tuition	110.6%	115.0%	119.5%	123.9%	128.3%

Highest 2002-2003 Tuition \$4,520

Cumulative Cost to State of Deficits  
 5th, 25th, and 50th Percentile Results for Different Price Levels  
 Tuition Assumed to Increase Randomly with a 6.75% Mean



Cumulative Cost to State of Deficits  
 5th, 25th, and 50th Percentile Results for Different Price Levels  
 Tuition Assumed to Increase Randomly with a 10% Mean for 2 Years, then a 6.60% Mean



## GET Portfolio Analysis

### Capital Market Assumptions

	Expected Annual Return	Standard Deviation		Asset Allocation
U.S. Equity	9.50%	18.00%		48.0%
Non U.S. Equity	9.50%	20.00%		12.0%
U.S. Fixed Income	5.50%	6.00%		--
TIPs	5.50%	5.50%		40.0%
Tuition*	6.90%	5.60%	Expected Annual Return	7.90%
CPI	2.50%	3.20%	Standard Deviation	10.90%
			Median 15-Yr Return	7.28%

#### Correlation Table

	U.S. Equity	Non U.S. Equity	U.S. Fixed Income	TIPs	Tuition	CPI
U.S. Equity	1.00	0.70	0.35	0.20	0.00	-0.20
Non U.S. Equity		1.00	0.20	0.10	0.00	-0.20
U.S. Fixed Income			1.00	0.50	0.00	-0.20
TIPs				1.00	0.15	0.50
Tuition					1.00	0.15
CPI						1.00

\* Tuition is expected to increase at a 6.75% annualized rate over 15 years