

Kentucky's Affordable Prepaid Tuition

Actuarial Valuation Report
as of June 30, 2024





September 3, 2024

Board of Directors
Kentucky's Affordable Prepaid Tuition
100 Airport Road
Frankfort, Kentucky 40601

Attention: Mr. David Lawhorn, 529 Program Manager

Re: Kentucky's Affordable Prepaid Tuition Actuarial Valuation as of June 30, 2024

Dear Directors:

Gabriel, Roeder, Smith & Company ("GRS") has performed an actuarial valuation of the Kentucky's Affordable Prepaid Tuition Program ("KAPT" or "the Program") as of June 30, 2024. The purpose of this actuarial valuation is to evaluate the financial status of the Program as of June 30, 2024.

This report presents the principal results of the actuarial valuation of KAPT including the following:

- a) A comparison of the actuarial present value of the obligations for prepaid tuition contracts purchased through December 13, 2004 (the most recent ending date for contract sales), with the value of the assets associated with the Program as of June 30, 2024 (including any present value of future contract payments – currently none);
- b) An analysis of the factors which caused the deficit to change since the prior actuarial valuation;
- c) An analysis of the Program's remaining solvency (including budgeted contributions from the Commonwealth of \$7.5 million for FY 2025 and \$6.8 million for FY 2026);
- d) An analysis of estimated contributions additionally required by the Commonwealth to fully fund all of the Program's obligations over the remaining life of the Program; and
- e) A summary of the member data, financial data, Program provisions, and actuarial assumptions and methods utilized in the actuarial calculations.

We understand that the liabilities of the Program are backed by the full faith and credit of the Commonwealth of Kentucky (the Commonwealth), who will be responsible for satisfying the liabilities not covered by the current assets of the Program. A main conclusion of this valuation is that the Program's assets (including budgeted contributions from the Commonwealth for the 2025-2026 biennium) are expected to become depleted during the 2027 fiscal year.

Our valuation results show estimates of the Program's projected depletion date and present value of the unfunded liabilities (the Program deficit). In addition, we show the sensitivity of the Program's depletion date and deficit to changes in certain economic and demographic assumptions about future activity affecting KAPT in Section G. Actual Program experience could result in additional contributions being required other than those estimated in this report. Amounts in excess of those shown in Section G should be strongly considered by the Commonwealth to avoid insolvency of the Program.

This report was prepared at the request of the Board of Directors (the "Board") and is intended for use by the Board and those designated or approved by the Board. This report may be provided to parties other than the Board only in its entirety. This report should not be relied on for any purpose other than the purpose described above. GRS is not responsible for unauthorized use of this report.

The valuation results set forth in this report are based upon data and information as of June 30, 2024, furnished by KAPT, concerning Program benefits, financial transactions, and beneficiaries of KAPT. We reviewed this information for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by KAPT.

There are currently no Actuarial Standards of Practice that specifically refer to prepaid tuition plans. We have followed the general guidance from the Actuarial Standards of Practice on pensions due to their similar nature.

The valuation results summarized in this report involve actuarial calculations that require assumptions about future events. The major actuarial assumptions used in this analysis are based upon past Board adopted assumptions along with discussions with Program Staff regarding anticipated future investment returns and Program expenses. We have not performed an experience study, but have reviewed the assumptions. Based on our limited review, we believe these assumptions are reasonable and are generally following actuarial standards regarding pension calculations.

The assumed rates of future investment return used in this report were developed by GRS, with discussion and approval from Program Staff. The assumed rates of investment return were developed based upon the Yield Curve for Treasury Nominal Coupon Issues (TNC yield curve) published monthly by the U.S. Department of the Treasury as of June 2024, with additional conservatism included to reflect future uncertainty on cash and cash-equivalent investments. We believe this assumption to be reasonable for the purposes of measuring future Program obligations. We believe the assumed rates of future investment return do not significantly conflict with what, in our professional judgment, would be reasonable for purposes of the measurements contained herein.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

We have prepared this valuation with the understanding that the Program is closed to new participants.



Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: Program experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in Program provisions or applicable law. We have performed an analysis of the sensitivity of certain changes in future assumptions. See Section G of this report for additional details. In addition, because it is not possible or practical to consider every possible contingency, we may use estimates or simplifications of calculations to facilitate the modeling of future events. We may also exclude factors or data that are deemed to be immaterial.

GRS makes no representations or warranties to any person participating in or considering participation in the Program.

To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the Kentucky's Affordable Prepaid Tuition Program as of June 30, 2024.

James R. Sparks and Jeffrey T. Tebeau are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

The signing actuaries are independent of the Program sponsor.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



James R. Sparks, ASA, FCA, MAAA



Jeffrey T. Tebeau, FSA, EA, FCA, MAAA

JRS/JTT:rmn



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SECTION A

EXECUTIVE SUMMARY

Kentucky's Affordable Prepaid Tuition Summary of Results

Valuation Date:	Actuarial Valuation Results	
	June 30, 2024	June 30, 2023
Membership Summary		
Accounts		
8 or More Years Beyond Projected College Entrance Year (PCEY)	694	654
1-7 Years Beyond PCEY	930	1,223
At or Before PCEY	2	3
Total	1,626	1,880
Average Years until PCEY (Negative if Past PCEY)	(7.5)	(6.4)
Assets		
Market Value of Assets ¹	\$ 2,659,371	\$ 7,974,778
Present Value of Future Contract Payments	\$ 0	\$ 0
Actuarial Value of Assets	\$ 2,659,371	\$ 7,974,778
Actuarial Liabilities (Present Value of Future Tuition Payments, Refunds, Fees, Administrative, Personnel & Professional Expenses)	\$ 32,166,663	\$ 40,897,741
Margin/(Deficit)	\$ (29,507,292)	\$ (32,922,963)
Funded Ratio (Actuarial Value of Assets ÷ Actuarial Liabilities)	8.3%	19.5%
Estimated Fiscal year Fund Depleted ²	2027	2024

¹ The Commonwealth of Kentucky contributed \$3,700,000 to the Program in April 2024. The Market Value of Assets as of the validation date are based upon remaining Program cash, cash-equivalents and investments.

² The June 30, 2023 estimation of the Fund's depletion year assumed no future contributions from the Commonwealth of Kentucky. The June 30, 2024 estimation of the Fund's depletion year includes budgeted contributions by the Commonwealth General Fund of \$7,500,000 for the 2025 fiscal year and \$6,800,000 for the 2026 fiscal year.

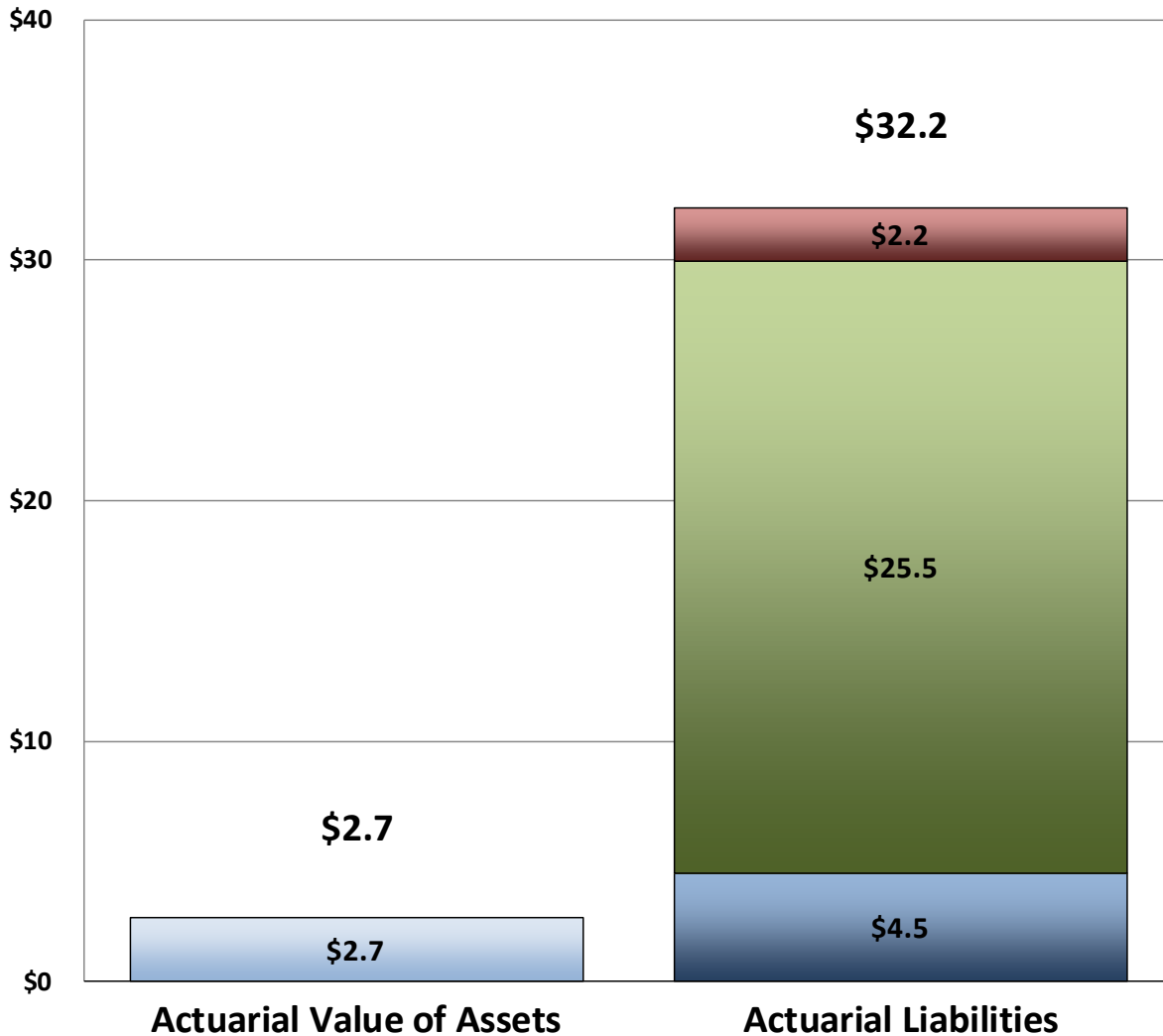
Kentucky's Affordable Prepaid Tuition Summary of Results






Actuarial Valuation Results as of June 30, 2024	
Market Value of Assets & PV of Future Contract Payments ¹	\$ 2,659,371
Actuarial Liabilities	<u>32,166,663</u>
Actuarial Deficit	\$ (29,507,292)
Deficit as a Percent of Liabilities	91.7%

¹ The Commonwealth of Kentucky contributed \$3,700,000 to the Program in April 2024. The Market Value of Assets as of the valuation date is based upon remaining Program cash, cash-equivalents and investments. There are no future contract payments due as of June 30, 2024.

Kentucky's Affordable Prepaid Tuition Summary of Assets and Liabilities as of June 30, 2024

(\$ in Millions)



Actuarial Value of Assets		Actuarial Liabilities	
	PV of Future Contract Payments		PV Admin, Personnel & Professional Expenses
	Market Value of Assets		PV Reimbursements/Refunds
			PV School Payments

PV – Present Value

Numbers may not add due to rounding.

Kentucky's Affordable Prepaid Tuition

Funded Status

	June 30, 2024	June 30, 2023
Actuarial Liabilities (Present Value of Future Tuition Payments, Refunds, Fees, Administrative, Personnel & Professional Expenses)	\$ 32,166,663	\$ 40,897,741
Actuarial Value of Assets (Including PV of Future Contract Payments)	\$ 2,659,371	\$ 7,974,778
Margin/(Deficit)	\$ (29,507,292)	\$ (32,922,963)

Change in Margin/(Deficit)

	Margin/(Deficit)
1. Values as of June 30, 2023	\$ (32,922,963)
2. Interest on Margin/(Deficit) at prior assumed rate (3.70%)	\$ (1,218,150)
3. Projected margin/(deficit) as of June 30, 2024 [(1) + (2)]	\$ (34,141,113)
4. Change Due to:	
a. Commonwealth contributions ¹	\$ 3,700,000
b. Investment experience above/(below) assumed	22,326
c. Tuition/Fee inflation for upcoming academic year	396,168
d. Change in program expense assumptions	88,943
e. Change in other program assumptions ²	177,704
f. Other program experience during fiscal year 2024	248,680
Total	\$ 4,633,821
5. Actual Margin/(Deficit) as of June 30, 2024 [(3) + (4)]	\$ (29,507,292)

¹ The Commonwealth of Kentucky contributed \$3,700,000 to the Program in April 2024.

² Changes in other program assumptions may include changes to the assumed future annual increases in tuition, changes to the assumed rates of future investment return and/or changes in valuation methodologies.

Kentucky's Affordable Prepaid Tuition Short-Term and Long-Term Present Values of Future Revenues and Expenditures

	As of June 30, 2024
1. Future Contract Payment Revenue	
Short Term ^a	\$ -
Long Term ^b	-
	\$ -
2. Future Tuition Payments & Refunds	
Short Term ^a	\$ 7,198,913
Long Term ^b	22,767,326
Total	\$ 29,966,239
3. Future Administrative, Personnel & Professional Expenses	
Short Term ^a	\$ 415,749
Long Term ^b	1,784,675
Total	\$ 2,200,424

^a Present value of amounts in following year (includes accounts payable, if any).

^b Present value of amounts after first year.

Kentucky's Affordable Prepaid Tuition Discussion

Financial Status of Program

Program Status

As of June 30, 2024, the present value of all future tuition obligations (the Actuarial Liability) under contracts outstanding (and including estimated future administrative, personnel and professional expenses) is \$32.2 million. Actuarial Value of Assets as of June 30, 2024, which includes the Program's Market Value of Assets and the present value of installment contract payments (none remaining as of the June 30, 2024 valuation), is \$2.7 million.

The difference between the Actuarial Value of Assets of \$2.7 million and future obligations of \$32.2 million represents a Program deficit of \$29.5 million. This compares to a deficit of \$32.9 million as of the prior actuarial valuation (a \$3.4 million reduction in the deficit). This reduction in the deficit is primarily attributed to the \$3.7 million contribution made by the Commonwealth into the Program during the 2024 fiscal year.

The Program is 8.3% funded as of June 30, 2024. The funded status is not appropriate for measuring the settlement cost of the Program. A funded status less than 100% is an indication that additional contributions (in other words, contributions from sources) will continue to be needed to satisfy the Program's liabilities.

We understand that the Program is backed by the full faith and credit of the Commonwealth of Kentucky. The deficit of \$29.5 million is one estimate of the present value of future contributions the Commonwealth would need to contribute as of June 30, 2024 in order to satisfy its expected obligation under the Program. This estimate requires assumptions regarding future events, which may or may not materialize.

Future Contributions

It is our understanding that the Program is anticipating to receive annual contributions from the Commonwealth at the beginning of each fiscal year (i.e., in early July of each year). The Commonwealth budgeted \$14.3 million to be contributed to the Program for the 2025-2026 biennium. The Program received \$7.5 million in early July of 2024, which was the budgeted contribution for the 2025 fiscal year and is anticipating to receive \$6.8 million for the 2026 fiscal year. For purposes of this valuation, it is assumed any future contributions will occur at the start of the fiscal year (i.e., July 1) and earn investment income during the fiscal year.

Section G of this report provides projection results based upon varying program experience and determines the estimated contributions that would be required for the Program to meet its future obligations. The estimated contributions additionally required as of June 30, 2024 range from \$31 to \$32 million (which is about \$17 to \$18 million additional contributions beyond the \$14.3 million budgeted from the 2025-2026 biennium).

The range of contribution amounts computed in Section G should not be construed as an upper or lower bound. Actual Program experience could result in additional contributions being required than those estimated in this report. Amounts in excess of those shown in Section G should be strongly considered by the Commonwealth to avoid insolvency of the Program.

Kentucky's Affordable Prepaid Tuition Discussion (Continued)

Financial Status of Program (Continued)

Management's Discussion and Analysis Language Describing Financial Status for Financial Statements

The following paragraph was specifically requested by Program Staff to be included in the actuarial valuation report:

As of the end of FY2024, the program had a deficit of \$29.5 million. This represents a \$3.4 million decrease from the previous year's deficit. Based on actuarial estimates, the Program's assets will be exhausted in fiscal year 2027, at which time, per KRS 164.708, the General Assembly shall appropriate the necessary funds to meet the liability. Over the remaining estimated life of the Program, through fiscal 2030, actuarial estimates show the Commonwealth of Kentucky will need to transfer approximately \$17.7 million above the \$14.3 million budgeted contributions by the Commonwealth, as shown in section G of this report, to support the Program.

It should be noted that actual Program experience could result in additional appropriations being required than those estimated in this report.

Kentucky's Affordable Prepaid Tuition Discussion (Continued)

Program Experience during the Year

The net Program experience during the year was favorable, resulting in the liabilities declining more than expected and the deficit decreasing (if all assumptions are met, the deficit is expected to increase with interest each year). The solvency period of the Program was extended as a result of contributions made by the Commonwealth, in addition to future budgeted contributions. We observed the following experience:

Experience increasing the deficit:

- 1) Higher than assumed school payments, reimbursements and refunds; and
- 2) Accelerating when contracts with maximized value are assumed to take a refund (see page 10 for more information).

Experience decreasing the deficit:

- 1) Commonwealth contributions to the Program to payoff the deficit - \$3.7 million in April 2024;
- 2) Investment income during the 2024 fiscal year was greater than assumed;
- 3) Actual tuition increases for UK and KCTCS were about 2.2% and 1.5%, respectively, compared to an assumed increase of 4.0% for both; and
- 4) Assumed Rate of Investment Return glide-path of 3.7% in fiscal year 2024 to 2.1% in fiscal year 2030 was increased to a glide-path of 4.5% in fiscal year 2025 to 2.5% in fiscal year 2030.

School payments, reimbursements, refunds, administrative, personnel and professional expenses were approximately \$9.2 million for the fiscal year 2024 compared with \$8.3 million projected from the June 30, 2023 valuation. While this experience had minimal impact to the Program deficit, it accelerated the insolvency of the Program during the 2024 fiscal year (prior to the contribution from the Commonwealth of \$3.7 million in April of 2024).

The increase in payouts vs. expectations was mainly attributable to reimbursements and refunds of contracts. One potential source of this experience was a result of "maximized contracts" (i.e., contracts who have maxed out the value of the contract's refund) refunding or rolling over their unused benefits from the Program. Recent law changes as a result of SECURE Act 2.0 could be impacting the behavior of these contract holders. It is our understanding that beginning in January 2024, SECURE 2.0 allowed unused funds from 529 accounts (like KAPT) to be transferred tax-free to a Roth IRA for the beneficiary of the 529 account. As of June 30, 2023, 654 contracts were maximized. Of those, 76 (about 12%) refunded during the 2024 fiscal year with a total estimated refund/rollover value of \$1.2 million. It remains to be seen how this law change will further impact the behavior of KAPT participants. The valuation methodology for projecting future reimbursements and refunds was modified for the June 30, 2024 valuation to reflect the increase in observed payouts during the 2024 fiscal year (see page 10 for more information).

Overall, the deficit of the Program decreased from an expected amount as of June 30, 2024 of \$34.1 million to \$29.5 million as a result of the experience described above (a \$4.6 million decrease).

The solvency of the Program was extended into the 2027 fiscal year as a result of the experience previously described and additional budgeted contributions by the Commonwealth of \$7.5 million for the 2025 fiscal year and \$6.8 million for the 2026 fiscal year.



Kentucky's Affordable Prepaid Tuition Discussion (Continued)

Benefit Provision Changes

No Legislation changes occurred during the year.

Data Adjustments

No adjustments were made to the June 30, 2024 census data provided by the Program Staff.

Changes to Valuation Assumptions

Assumed Rate of Investment Return

At the June 2024 Board Meeting, the Board adopted an updated investment policy in lieu of the approaching investment fund depletion. Below is the target asset allocation:

Asset Classes	Target
Large Cap US Equity	0%
Small Cap US Equity	0%
Mid Cap US Equity	0%
Non-US Equity	0%
Domestic Fixed income	0%
TIPS	0%
Short Duration US Fixed Income	0%
Cash-Equivalents	100%
Totals	100%

The assumed rates of future investment return used in this report were developed by GRS, with discussion and approval from Program Staff. The assumed rates of investment return were developed based upon the Yield Curve for Treasury Nominal Coupon Issues (TNC yield curve) published monthly by the U.S. Department of the Treasury as of June 2024, with additional conservatism included to reflect future uncertainty on cash and cash-equivalent investments. We believe this assumption to be reasonable for the purposes of measuring future Program obligations. We believe the assumed rates of future investment return do not significantly conflict with what, in our professional judgment, would be reasonable for purposes of the measurements contained herein.

The assumed rate of investment return (net of investment expenses) from the prior and current valuation are as follows:

Fiscal Year Ending:	Assumed Investment Return/Discount Rate						
	2024	2025	2026	2027	2028	2029	2030
Prior Actuarial Valuation (6/30/2023)	3.70%	3.43%	3.17%	2.90%	2.63%	2.37%	2.10%
Current Assumption (6/30/2024)	N/A	4.50%	4.00%	3.50%	3.00%	2.50%	2.50%

Kentucky's Affordable Prepaid Tuition Discussion (Continued)

Changes to Valuation Assumptions (Continued)

Refunds

With the value of contracts growing at full value for up to eight years beyond the Projected College Entrance Year (PCEY), it would seem likely that participants who have not utilized all of their contracts for schooling would hold their contracts until the date the contract reaches its maximum value.

To reflect increased experience in reimbursements and refunds, the valuation methodology for participants who already have maximized their contract value and not yet refunded was modified. Instead of assuming these contracts would be refunded over the final two years of the Program (2029 & 2030) it is now assumed these contracts will refund uniformly over the remaining life of the program (2025-2030, 1/6 per year). This will put upward pressure on projected refunds in the near term.

The results shown in this report are based on the following assumptions:

- 1) Participants who reach eight years beyond their PCEY in the future, and have not fully utilized their contracts, are assumed to refund at that point in time (assumed to be 8% of participants); and
- 2) Participants who already have maximized their contract value and not yet refunded (more than eight years beyond their PCEY) are expected to refund over the remaining life of the Program (2025-2030, 1/6 per year). **As of June 30, 2024, 694 contracts have maximized their contract value and have not yet refunded. The estimated refund value of these 694 contracts is \$8.9 million.**

In Section G of this report we provided a sensitivity testing scenario based upon an alternative assumption where participants who already have maximized their contract and have not yet refunded would refund over an accelerated time period of 3 years (2025-2027, 1/3 per year). This would increase Program obligations in the near term.

Kentucky's Affordable Prepaid Tuition Discussion (Continued)

Changes to Valuation Assumptions (Continued)

Expenses

Our projections of Program expenses are based on the Program Staff's estimates received in connection with the June 30, 2024 actuarial valuation.

The following paragraph was provided by Program Staff regarding changes to future Program expenses:

In FY 2023, KHEAA began charging the KAPT program \$150,000 a year for administration cost to run the program on behalf of the Commonwealth of Kentucky. The fee is designed to offset cost that has previously been covered by KHESLC/KHEAA and never allocated as an expense of the program.

Below is the projection of future Program administrative, personnel and professional expenses through the closure of the Program provided by Program Staff:

Fiscal Year	Administrative, Personnel & Professional Expenses
2025	\$425,000
2026	\$425,000
2027	\$400,000
2028	\$400,000
2029	\$400,000
2030	\$400,000

Program Status

The Program has a closure date of June 30, 2030, at which point any remaining contract values will be refunded. The Board could elect to start selling contracts again and is charged with annually making that decision. However, if new contracts were to be sold, they would be part of a different plan and would not be backed by the full faith and credit of the Commonwealth. See Appendix B for a discussion regarding the sales of new contracts.

Future Outlook

As the Program nears completion, it is uncertain how this may impact members' behavior, especially for those who have already maximized their account value and not refunded their remaining accounts. Acceleration of refunding accounts could result in expediting the depletion date.

For purposes of discounting future cash flows to develop the Actuarial Liability, the assumed rates of future investment return used in this report are intended to be conservative estimates of what the Program would earn on investments, if solvent. It is our understanding that the Program is anticipating to receive annual transfers in July of each fiscal year from the Commonwealth of Kentucky.

It is important to remember that the projections shown herein are based on future activity that cannot be precisely predicted.



SECTION B

PROGRAM DESCRIPTION

Kentucky's Affordable Prepaid Tuition

Summary of Program Description Evaluated June 30, 2024

Purchasing Contracts – KAPT is currently closed to new participants. Current members purchased from three types of contracts with the following benefits:

- **Value Plan** – Provides in-state tuition and mandatory fees at Kentucky Community and Technical College System (KCTCS). KCTCS tuition price for full-time enrollment will be guaranteed. Depending on tuition rates, any money left over can cover qualified educational expenses.
- **Standard Plan** – Provides in-state undergraduate tuition and mandatory fees at Kentucky's eight public universities. Guarantees tuition price for full-time enrollment at the Commonwealth's most expensive public university (currently University of Kentucky). Depending on tuition rates, any money left over can cover qualified educational expenses such as books, room and board.
- **Premium Plan** – Provides tuition at Kentucky's private colleges and universities. While no particular school's tuition is guaranteed, the value of the plan grows at the same rate as the University of Kentucky's tuition. Depending on tuition rates, any money left over can cover qualified educational expenses such as books, room and board.

Contract Payments – Contract holders may agree to pay off their contracts in a variety of ways:

- Lump-Sum Payment (Full Contract paid-in-full at time of enrollment to the Program)
- 3-Year Monthly Payments (36 monthly payments after purchase of contract)
- 5-Year Monthly Payments (60 monthly payments after purchase of contract)
- 7-Year Monthly Payments (96 monthly payments after purchase of contract)
- Extended Monthly Payments (Monthly payments after purchase of contract for defined period up to and including the year of high school matriculation)
- Custom Monthly Payments (Monthly payments based upon a custom determined schedule)

Kentucky's Affordable Prepaid Tuition

Summary of Program Description Evaluated June 30, 2024

Refunds

If a contract holder elects to close account prior to July 1 of their Projected College Entrance Year (PCEY), the amount refunded will include payments made towards the contract minus administrative and cancellation fees.

If a contract holder elects to close account beyond July 1 of their PCEY and before the end of their contract's utilization period, the contract holder receives the tuition payout value of the account at that time minus administrative and cancellation fees and any benefits already used.

If a contract holder elects to close account beyond the end of their contract's utilization period, the contracts receive the following:

If refunds occurred prior to June 30, 2019:

- Accounts with utilization period end dates prior to 2012 – The value of the remaining prepaid tuition account for the 2014-2015 academic year.
- Accounts with utilization period end dates on or after 2012 – The value of the remaining prepaid tuition account at the end of the utilization period plus any applicable tuition plan value increases in each of the next two years (capped at 3% per annum).

If refunds occur on or after June 30, 2019:

- The value of the remaining prepaid tuition account at the end of the utilization period plus any applicable tuition plan value increases through the first eight years beyond the contract holder's original Projected College Entrance Year (PCEY).

Accounts have until June 30, 2030 to utilize benefits. Any remaining contract value will be refunded.

Change in Beneficiary

Contract holders can change the beneficiary as long as the new beneficiary is an eligible member of the family of the current beneficiary.

For purposes of this valuation, it is assumed that no contracts will change beneficiaries.

This is a summary of the contract provisions as they pertain to this valuation and as the Actuary understands them. If our understanding is not correct or has omitted material items, please contact the Actuary and do not rely on the results of this report. This should not be construed as actual contract terms.

SECTION C

DETAILED CHANGE IN MARGIN/(DEFICIT)

Kentucky's Affordable Prepaid Tuition Detailed Change in Margin/(Deficit)

	(A)	(B)	(B) - (A)
	Actuarial Liabilities	Actuarial Value of Assets	Margin/(Deficit)
1. Values as of June 30, 2023	\$ 40,897,741	\$ 7,974,778	\$ (32,922,963)
2. Expected Contract Payments	\$ -	\$ -	\$ -
3. Expected Tuition Payments, Refunds, and Administrative Fees	\$ (8,259,416)	\$ (8,259,416)	\$ -
4. Interest on Margin/(Deficit) at prior assumed rate (3.70%)	\$ 1,344,758	\$ 126,608	\$ (1,218,150)
5. Projected Margin/(Deficit) as of June 30, 2024 [(1) + (2) + (3) + (4)]	\$ 33,983,083	\$ (158,030)	\$ (34,141,113)
6. Change Due to:			
a. Commonwealth contributions ¹	\$ -	\$ 3,700,000	\$ 3,700,000
b. Investment experience above/(below) assumed	-	22,326	22,326
c. Tuition/Fee inflation for upcoming academic year	(396,168)	-	396,168
d. Change in program expense assumptions	(88,943)	-	88,943
e. Change in other program assumptions ²	(177,704)	-	177,704
f. Other program experience during fiscal year 2024	(1,153,605)	(904,925)	248,680
Total	\$ (1,816,420)	\$ 2,817,401	\$ 4,633,821
7. Actual values as of June 30, 2024 [(5) + (6)]	\$ 32,166,663	\$ 2,659,371	\$ (29,507,292)

¹ The Commonwealth of Kentucky contributed \$3,700,000 to the Program in April 2024.

² Changes in other program assumptions may include changes to the assumed future annual increases in tuition, changes to the assumed rates of future investment return and/or changes in valuation methodologies.

SECTION D

PROGRAM ASSETS

Kentucky's Affordable Prepaid Tuition Statement of Total Assets (at Market Value)

Market Value of Cash and Investment Assets Held				
	as of June 30, 2024		as of June 30, 2023	
	Amount	% of Total	Amount	% of Total
Cash	\$ 2,657,827	99.94%	\$ 4,355,331	54.10%
U.S. Treasury and Government Agency Securities	\$ -	0.00%	\$ 3,618,579	45.85%
Money Market	\$ 1,544	0.06%	\$ 868	0.05%
Total	\$ 2,659,371	100.00%	\$ 7,974,778	100.00%

Total Market Value of Assets shown above excludes any present value for future contract payments (none remaining as of June 30, 2023).

Kentucky's Affordable Prepaid Tuition Reconciliation of Total Assets (at Market Value)

	FY 2024	FY 2023
Total Market Value of Assets at the beginning of the Fiscal Year	\$ 7,974,778	\$ 19,079,821
Additions:		
Contract Payments	\$ -	\$ 3,206
State General Fund revenue	3,700,000	-
Total Additions	\$ 3,700,000	\$ 3,206
Investment Revenues:		
a. Net increase (decrease) in fair value of investments	\$ 779,799	\$ (638,199)
b. Interest and investment income	(\$630,865)	828,276
Total Investment Revenues	\$ 148,934	\$ 190,077
Deductions:		
a. Administrative expenses ¹	\$ 53,445	\$ 70,185
b. Personnel and professional expenses	381,080	379,500
c. Refunds	1,665,685	1,706,073
d. Tuition benefits expense, net ²	7,064,123	9,159,869
Total Deductions	\$ 9,164,333	\$ 11,315,627
Change in Net Position	\$ (5,315,399)	\$ (11,122,344)
Change in Net Receivables	\$ (8)	\$ 17,301
Total Market Value of Assets at the End of the Fiscal Year	\$ 2,659,371	\$ 7,974,778

¹ Includes Administrative Expenses and Trustee Fee Expense.

² Tuition benefits expense, net of \$7,064,123 for the 2024 fiscal year includes reimbursements of \$2,044,785 and school payments of \$5,019,338.

Total Market Value of Assets shown above excludes any present value for future contract payments (none remaining as of June 30, 2023).

SECTION E

CONTRACT DATA

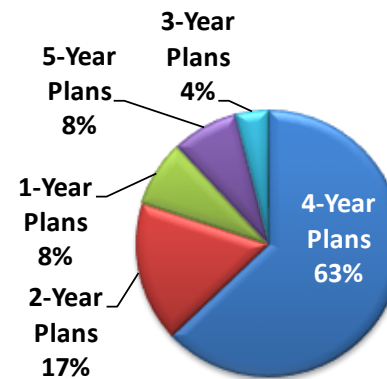
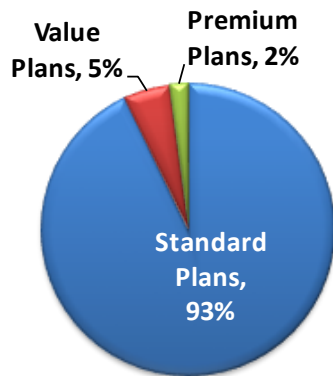
Kentucky's Affordable Prepaid Tuition Member Matriculation Summary as of June 30, 2024

Projected Matriculation Year	Type of Contract												Total	
	Value Plan 1 Year	Value Plan 2 Years	Standard Plan 1 Year	Standard Plan 2 Years	Standard Plan 3 Years	Standard Plan 4 Years	Standard Plan 5 Years	Premium Plan 1 Year	Premium Plan 2 Years	Premium Plan 3 Years	Premium Plan 4 Years	Premium Plan 5 Years		
2004	-	1	1	-	-	5	-	-	-	-	-	-	7	0.4%
2005	-	-	-	2	1	4	-	-	-	-	1	-	8	0.5%
2006	-	1	-	4	3	10	1	-	-	-	1	-	20	1.2%
2007	2	1	3	4	3	17	1	-	-	-	1	-	32	2.0%
2008	-	1	3	5	-	23	2	-	-	-	2	1	37	2.3%
2009	1	2	2	8	4	21	1	-	-	-	-	-	39	2.4%
2010	-	-	3	4	5	14	3	1	-	-	1	-	31	1.9%
2011	1	1	4	10	2	34	3	-	-	-	1	-	56	3.4%
2012	1	3	5	9	4	29	1	-	-	-	1	-	53	3.3%
2013	1	1	5	6	1	45	7	-	-	-	-	1	67	4.1%
2014	-	6	7	27	6	75	3	-	1	1	1	1	128	7.9%
2015	2	3	6	10	3	64	10	-	-	-	2	-	100	6.2%
2016	1	5	8	12	6	71	12	-	-	-	1	-	116	7.1%
2017	4	4	6	14	3	91	17	-	1	-	1	1	142	8.7%
2018	2	10	12	22	7	113	12	-	-	-	1	-	179	11.0%
2019	1	6	9	23	2	77	9	-	1	1	1	1	131	8.1%
2020	2	1	16	24	6	115	14	-	1	-	1	-	180	11.1%
2021	2	4	16	24	5	111	14	-	1	-	2	-	179	11.0%
2022	2	3	2	9	2	62	9	1	-	1	1	-	92	5.7%
2023	-	-	3	5	-	14	3	-	-	-	1	-	26	1.6%
2024	-	-	-	-	-	1	-	-	-	-	-	-	1	0.1%
2025	-	-	-	1	-	1	-	-	-	-	-	-	2	0.1%
2026	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
2027	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
2028	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
2029	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%
2004-2016	9	25	47	101	38	412	44	1	1	1	12	3	694	42.7%
2017+	13	28	64	122	25	585	78	1	4	2	8	2	932	57.3%
Grand Total	22	53	111	223	63	997	122	2	5	3	20	5	1,626	100.0%
	1.4%	3.3%	6.8%	13.7%	3.9%	61.3%	7.5%	0.1%	0.3%	0.2%	1.2%	0.3%	100.0%	



Kentucky's Affordable Prepaid Tuition Member Payment Option Summary as of June 30, 2024

Contract Payment Type	Type of Contract												Total	
	Value Plan 1 Year	Value Plan 2 Years	Standard Plan 1 Year	Standard Plan 2 Years	Standard Plan 3 Years	Standard Plan 4 Years	Standard Plan 5 Years	Premium Plan 1 Year	Premium Plan 2 Years	Premium Plan 3 Years	Premium Plan 4 Years	Premium Plan 5 Years		
Lump Sum	7	15	59	85	20	394	50	-	2	3	11	4	650	40.0%
3-Year Monthly	1	5	14	12	3	56	8	-	-	-	2	-	101	6.2%
5-Year Monthly	2	5	9	17	6	87	15	1	2	-	3	1	148	9.1%
7-Year Monthly	4	9	8	49	14	188	25	-	-	-	2	-	299	18.4%
Monthly Extended	8	19	21	58	20	233	17	1	1	-	1	-	379	23.3%
Custom Monthly	-	-	-	2	-	39	7	-	-	-	1	-	49	3.0%
Total	22	53	111	223	63	997	122	2	5	3	20	5	1,626	100.0%
	1.4%	3.3%	6.8%	13.7%	3.9%	61.3%	7.5%	0.1%	0.3%	0.2%	1.2%	0.3%	100.0%	



SECTION F

METHODS AND ASSUMPTIONS

Kentucky's Affordable Prepaid Tuition Valuation Methods and Assumptions

The assumptions are based upon past Program experience and future expectations. We believe the assumptions are reasonable.

Assumed Rate of Investment Return/Discount Rate – These rates in the table were provided by Graystone Consulting. It is our understanding these rates were intended to include conservatism to reflect future uncertainty on cash and cash-equivalent investments.

	Assumed Investment return					
Fiscal Year Ending	2025	2026	2027	2028	2029	2030
Assumed Rates of Return	4.50%	4.00%	3.50%	3.00%	2.50%	2.50%

Assumed Rate of Tuition Increases: The assumed rate of tuition increases is prescribed by KAPT.

4-Year Universities – 4.00% for all future years.

2-Year Community Colleges – 4.00% for all future years.

Assumed Utilization Hours[#]: It is assumed 92% of contracts who reach Projected Contract Enrollment Year (PCEY) on or after the valuation date will utilize 32 KAPT hours per year until they have exhausted all value or reached the end of their utilization period. Contracts with remaining value beyond the utilization period are assumed to refund eight years after their PCEY (maximum refundable value).

Liabilities are modeled assuming two payments per year for School payouts (one at beginning of September and one at beginning of January).

Refunds: It is assumed 8% of contracts with PCEY on or after the valuation date will not utilize any additional KAPT hours in the future and will continue holding their contract until eight years after PCEY, at which time they will be issued a refund.

Past Due Refunds: Those who are already eight years past their PCEY and have not already refunded are assumed to refund uniformly over the remaining life of the program (2025-2030, 1/6 per year).

Election of Program Changes: None.

Election of Change of Beneficiary: None.

Liability Adjustments for Administrative, Personnel and Professional Expenses: Below is the projection of future administrative, personnel and professional expenses through the closure of the Program provided by Program Staff:

Fiscal Year	Administrative, Personnel & Professional Expenses
2025	\$425,000
2026	\$425,000
2027	\$400,000
2028	\$400,000
2029	\$400,000
2030	\$400,000

Contract Terms: No changes in contract terms are assumed once initiated.



Kentucky's Affordable Prepaid Tuition Valuation Methods and Assumptions

Annual Payout Values for the 2024/2025 Academic Year (based on usage of 32 KAPT hours):

Value Plan: \$6,304.00
 Standard Plan: \$13,502.08
 Premium Plan: 2001-2002 KAPT Enrollment – \$42,745.28
 2002-2003 KAPT Enrollment – \$46,747.52
 2004-2005 KAPT Enrollment – \$39,444.48

Cancellations: It is assumed contracts which have not yet reached their PCEY will cancel and refund based upon the rates below. It is assumed the amount refunded equals the amount of money the contract holder has paid into the Program.

Years Since Purchase	Contract Payment Plan					
	Lump-Sum	36 Monthly Payments	60 Monthly Payments	84 Monthly Payments	Extended Payments	Custom Payments
0	1.50%	3.00%	5.00%	6.00%	8.00%	8.00%
1	1.00%	2.00%	4.00%	4.00%	7.00%	7.00%
2	0.75%	1.00%	3.00%	3.00%	5.00%	5.00%
3	0.75%	1.00%	2.00%	2.00%	4.00%	4.00%
4	0.50%	0.75%	1.00%	1.00%	3.00%	3.00%
5	0.50%	0.75%	0.75%	1.00%	2.00%	2.00%
6	0.50%	0.75%	0.75%	1.00%	1.00%	1.00%
7+	0.50%	0.75%	0.75%	0.75%	0.75%	0.75%



SECTION G

PROJECTION RESULTS

Kentucky's Affordable Prepaid Tuition

Sensitivity Testing Results

The actuarial assumptions regarding future increases in tuition costs and fees and the future rate of investment return were adopted by KAPT. In our opinion, the adopted assumptions are reasonable for the purpose of the measurement. However, no one knows with certainty what the future holds with respect to economic and other contingencies. For example, while it is assumed that the assets of the Program will earn 4.50% net of investment expenses during the fiscal year 2025, actual return is expected to vary from year to year. Therefore, we have projected the Program's results under alternative assumptions for future investment income and tuition increases.

For projection purposes, it is assumed budgeted and estimated additional annual contributions from the Commonwealth will be received by the Program at the beginning of each fiscal year. The valuation result's insolvency test only includes contributions budgeted from the 2025-2026 biennium.

Varying Program experience will impact the anticipated contributions required to meet future Program obligations. The range of contributions should not be construed as an upper or lower bound. Actual Program experience could result in additional appropriations being required than those estimated in this report.

Page Description

- 22 Summary of valuation and sensitivity testing results
- 23 **Valuation Results – Insolvency Test:** Valuation results including budgeted contributions by the Commonwealth from the 2025-2026 biennium.
- 24 **Valuation Results – Solvency Test:** Valuation Results including budgeted contributions by the Commonwealth from the 2025-2026 biennium, plus estimated contributions additionally required from the Commonwealth during the 2027-2030 fiscal years.
- 25 **Sensitivity Testing:** Investment returns are 100 basis points per year higher than assumed.
- 26 **Sensitivity Testing:** Investment returns are 100 basis points per year lower than assumed.
- 27 **Sensitivity Testing:** Tuition increases are 100 basis points per year higher than assumed.
- 28 **Sensitivity Testing:** Tuition increases are 100 basis points per year lower than assumed.
- 29 **Sensitivity Testing:** Contracts which, as of the valuation date, are more than eight years past their Projected College Entrance Year (PCEY) but have not refunded yet are assumed to refund uniformly over 3 years (2025-2027, 1/3 per year) – i.e., accelerated refunds from valuation results.

The summary of the impact of each of these scenarios on the principal valuation results is presented on the following page. See pages 23 through 29 for detailed projection results of each scenario.

Kentucky's Affordable Prepaid Tuition Sensitivity Testing Results (\$ in Millions)

(\$ in Millions)	Sensitivity Testing Scenarios						
	Valuation Results (Insolvency Test) (Page 23)	Valuation Results (Solvency Test) (Page 24)	Assumed Investment Return +100 Basis Points Per Year (Page 25)	Assumed Investment Return -100 Basis Points Per Year (Page 26)	Assumed Tuition Increases +100 Basis Points Per Year (Page 27)	Assumed Tuition Increases -100 Basis Points Per Year (Page 28)	Assumed Max Value Contracts Refund Over Next 3 Years (Page 29)
<u>Assumed Investment Return in Fiscal Year Ending June 30,</u>							
2025	4.50%	4.50%	5.50%	3.50%	4.50%	4.50%	4.50%
2026	4.00%	4.00%	5.00%	3.00%	4.00%	4.00%	4.00%
2027	3.50%	3.50%	4.50%	2.50%	3.50%	3.50%	3.50%
2028	3.00%	3.00%	4.00%	2.00%	3.00%	3.00%	3.00%
2029	2.50%	2.50%	3.50%	1.50%	2.50%	2.50%	2.50%
2030	2.50%	2.50%	3.50%	1.50%	2.50%	2.50%	2.50%
<u>Assumed Tuition Increase (University/Community College)</u>							
2025-2026 and Thereafter	4.00%/4.00%	4.00%/4.00%	4.00%/4.00%	4.00%/4.00%	5.00%/5.00%	3.00%/3.00%	4.00%/4.00%
Margin/(Deficit)	(\$29.51)	(\$29.51)	(\$28.73)	(\$30.32)	(\$29.92)	(\$29.10)	(\$29.90)
(Increase)/Decrease in Deficit from Valuation Results			\$0.78	(\$0.81)	(\$0.41)	\$0.41	(\$0.39)
<u>Budgeted Contributions from the Commonwealth after the Valuation Date:</u>							
2025 Fiscal Year	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50
2026 Fiscal Year	<u>\$6.80</u>	<u>\$6.80</u>	<u>\$6.80</u>	<u>\$6.80</u>	<u>\$6.80</u>	<u>\$6.80</u>	<u>\$6.80</u>
2025-2026 Fiscal Years Total	\$14.30	\$14.30	\$14.30	\$14.30	\$14.30	\$14.30	\$14.30
<u>Estimated Contributions Additionally Required for the Program's Assets to Remain Level during Fiscal Years' 2027-2030:</u>							
2027 Fiscal Year	N/A	\$5.29	\$5.24	\$5.35	\$5.36	\$5.23	\$9.79 *
2028 Fiscal Year	N/A	\$6.14	\$6.08	\$6.20	\$6.27	\$6.02	\$4.68
2029 Fiscal Year	N/A	\$5.61	\$5.55	\$5.67	\$5.76	\$5.47	\$3.16
2030 Fiscal Year	<u>N/A</u>	<u>\$0.40</u>	<u>\$0.27</u>	<u>\$0.54</u>	<u>\$0.53</u>	<u>\$0.28</u>	<u>\$0.00</u>
2027-2030 Fiscal Years Total	N/A	\$17.44	\$17.14	\$17.76	\$17.92	\$17.00	\$17.63
2025-2030 Fiscal Years Total	N/A	\$31.74	\$31.44	\$32.06	\$32.22	\$31.30	\$31.93
Fiscal Year Insolvent	2027	N/A	N/A	N/A	N/A	N/A	2026

* Page 29 - This alternate scenario assumes all maximized accounts will be refunded over an accelerated 3 year period (2025-2027, 1/3 per year). In this scenario, the Program is expected to become insolvent during the 2026 fiscal year. The estimated contribution additionally required for the 2027 fiscal year is the estimated contribution to restore a \$3 million dollar asset base by the end of the 2027 fiscal year.



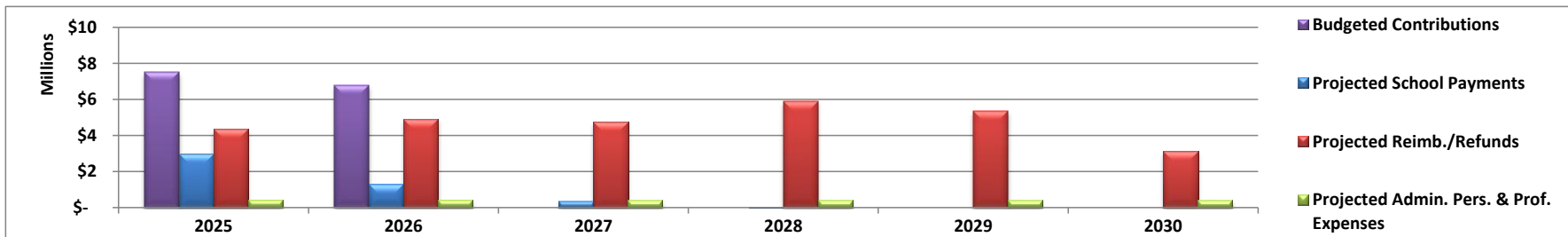
Kentucky's Affordable Prepaid Tuition June 30, 2024 Projection Based on Valuation Results

(Insolvency Test – Includes Budgeted Contributions from the Commonwealth)

Administrative Assumptions	
Assumed Administrative, Personnel and Professional Expenses:	2025-2026: \$425,000 2027-2030: \$400,000
Closure of Program:	2030

Valuation Results	
Present Value of Future Tuition and Fees	\$ 32,166,663
Present Value of Future Contract Payments	\$ -
June 30, 2024 Actuarial Value of Assets	\$ 2,659,371
Margin/(Deficit)	\$ (29,507,292)
Funded Status	8.3%
Year Insolvent	2027

Fiscal Year Ending 6/30	Assumed Net Investment Return During Year	Assumed Tuition Increase for UK	Assumed Tuition Increase for KCTCS	Market Value of Assets Beginning of Fiscal Year	Budgeted Contributions ¹ From The Commonwealth	Projected School Payments ²	Projected Reimb./Refunds ³	Projected Admin. Pers. & Prof. Expenses	Projected Contract Payments	Investment Income ⁴	Market Value of Assets End of Fiscal Year
2024				\$ 2,659,371	\$ 7,500,000	\$ (2,982,300)	\$ (4,354,766)	\$ (425,000)	\$ -	\$ 256,271	\$ 2,659,371
2025	4.50%	N/A	N/A	2,659,371	6,800,000	(1,287,322)	(4,911,518)	(425,000)	-	233,971	2,653,575
2026	4.00%	4.00%	4.00%	3,063,707		(353,235)	(4,733,971)	(400,000)	-	50,914	(2,372,585)
2027	3.50%	4.00%	4.00%	(2,372,585)		(41,919)	(5,879,807)	(400,000)	-	-	(8,694,311)
2028	3.00%	4.00%	4.00%	(8,694,311)		-	(5,355,530)	(400,000)	-	-	(14,449,842)
2029	2.50%	4.00%	4.00%	(14,449,842)		-	(3,109,778)	(400,000)	-	-	(17,959,619)
2030	2.50%	4.00%	4.00%								



¹ Contributions assumed to be received by the Program at the beginning of each fiscal year.

² Assuming half of the payments occur in the beginning of September and half in the beginning January.

³ Assumed all maximized refunds as of 6/30/2024 are paid uniformly over the remaining life of the program (2025-2030, 1/6 per year). All other contracts are assumed to refund 8 years after Projected College (time at which contract value is maximized).

⁴ Investment Income assumed to be zero if/when the market value of assets in the Program are projected to be depleted.

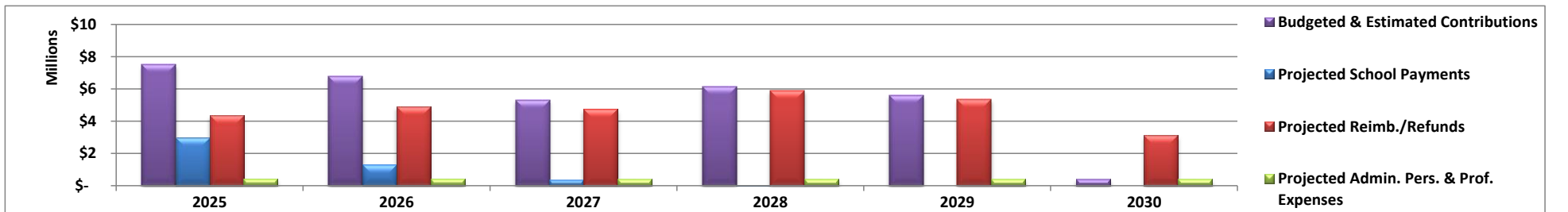
Kentucky's Affordable Prepaid Tuition June 30, 2024 Projection Based on Valuation Results

(Solvency Test – Includes Budgeted & Estimated Additional Contributions from the Commonwealth)

Administrative Assumptions	
Assumed Administrative, Personnel and Professional Expenses:	2025-2026: \$425,000 2027-2030: \$400,000
Closure of Program:	2030

Valuation Results	
Present Value of Future Tuition and Fees	\$ 32,166,663
Present Value of Future Contract Payments	\$ -
June 30, 2024 Actuarial Value of Assets	\$ 2,659,371
Margin/(Deficit)	\$ (29,507,292)
Funded Status	8.3%
Year Insolvent	N/A

Fiscal Year Ending 6/30	Assumed Net Investment Return During Year	Assumed Tuition Increase for UK	Assumed Tuition Increase for KCTCS	Market Value of Assets Beginning of Fiscal Year	Budgeted Contributions ¹ From The Commonwealth	Estimated Contributions ¹ Additionally Required	Projected School Payments ²	Projected Reimb./Refunds ³	Projected Admin. Pers. & Prof. Expenses	Projected Contract Payments	Investment Income ⁴	Market Value of Assets End of Fiscal Year
2024				\$ 2,659,371	\$ 7,500,000		\$ (2,982,300)	\$ (4,354,766)	\$ (425,000)	\$ -	\$ 256,271	\$ 2,659,371
2025	4.50%	N/A	N/A	\$ 2,659,371	\$ 7,500,000		\$ (1,287,322)	\$ (4,911,518)	\$ (425,000)	\$ -	\$ 233,971	\$ 3,063,707
2026	4.00%	4.00%	4.00%	2,653,575	6,800,000	\$ 5,294,960	(353,235)	(4,733,971)	(400,000)	-	192,246	3,063,707
2027	3.50%	4.00%	4.00%	3,063,707		\$ 6,142,368	(41,919)	(5,879,807)	(400,000)	-	179,358	3,063,707
2028	3.00%	4.00%	4.00%	3,063,707		\$ 5,611,778	-	(5,355,530)	(400,000)	-	143,753	3,063,707
2029	2.50%	4.00%	4.00%	3,063,707		\$ 403,121	-	(3,109,778)	(400,000)	-	42,950	0
2030	2.50%	4.00%	4.00%	3,063,707								



¹ Contributions assumed to be received by the Program at the beginning of each fiscal year.

² Assuming half of the payments occur in the beginning of September and half in the beginning January.

³ Assumed all maximized refunds as of 6/30/2024 are paid uniformly over the remaining life of the program (2025-2030, 1/6 per year). All other contracts are assumed to refund 8 years after Projected College Entrance Year (time at which contract value is maximized).

⁴ Investment Income assumed to be zero if/when the market value of assets in the Program are projected to be depleted.

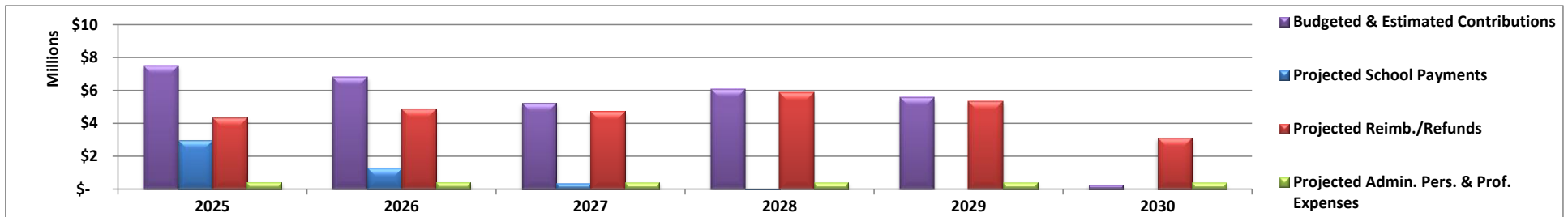


Kentucky's Affordable Prepaid Tuition June 30, 2024 Projection Based on Investment Return +100 Basis Points

Administrative Assumptions	
Assumed Administrative, Personnel and Professional Expenses:	2025-2026: \$425,000 2027-2030: \$400,000
Closure of Program:	2030

Valuation Results	
Present Value of Future Tuition and Fees	\$ 31,391,253
Present Value of Future Contract Payments	\$ -
June 30, 2024 Actuarial Value of Assets	\$ 2,659,371
Margin/(Deficit)	\$ (28,731,882)
Funded Status	8.5%
Year Insolvent	N/A

Fiscal Year Ending 6/30	Assumed Net Investment Return During Year	Assumed Tuition Increase for UK	Assumed Tuition Increase for KCTCS	Market Value of Assets Beginning of Fiscal Year	Budgeted Contributions ¹ From The Commonwealth	Estimated Contributions ¹ Additionally Required	Projected School Payments ²	Projected Reimb./Refunds ³	Projected Admin. Pers. & Prof. Expenses	Projected Contract Payments	Investment Income ⁴	Market Value of Assets End of Fiscal Year
2024												\$ 2,659,371
2025	5.50%	N/A	N/A	\$ 2,659,371	\$ 7,500,000		\$ (2,982,300)	\$ (4,354,766)	\$ (425,000)	\$ -	\$ 312,196	2,709,500
2026	5.00%	4.00%	4.00%	2,709,500	6,800,000		(1,287,322)	(4,911,518)	(425,000)	-	294,273	3,179,933
2027	4.50%	4.00%	4.00%	3,179,933		\$ 5,238,189	(353,235)	(4,733,971)	(400,000)	-	249,017	3,179,933
2028	4.00%	4.00%	4.00%	3,179,933		6,081,184	(41,919)	(5,879,807)	(400,000)	-	240,543	3,179,933
2029	3.50%	4.00%	4.00%	3,179,933		5,552,943	-	(5,355,530)	(400,000)	-	202,587	3,179,933
2030	3.50%	4.00%	4.00%	3,179,933		270,215	-	(3,109,778)	(400,000)	-	59,630	0



¹ Contributions assumed to be received by the Program at the beginning of each fiscal year.

² Assuming half of the payments occur in the beginning of September and half in the beginning January.

³ Assumed all maximized refunds as of 6/30/2024 are paid uniformly over the remaining life of the program (2025-2030, 1/6 per year). All other contracts are assumed to refund 8 years after Projected College Entrance Year (time at which contract value is maximized).

⁴ Investment Income assumed to be zero if/when the market value of assets in the Program are projected to be depleted.

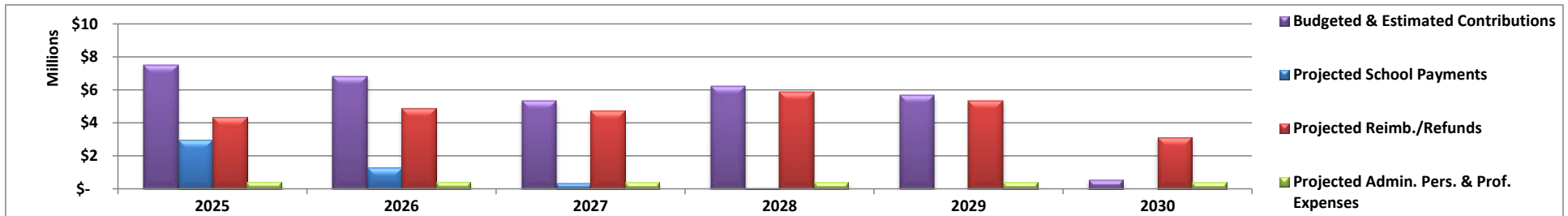


Kentucky's Affordable Prepaid Tuition June 30, 2024 Projection Based on Investment Return -100 Basis Points

Administrative Assumptions	
Assumed Administrative, Personnel and Professional Expenses:	2025-2026: \$425,000 2027-2030: \$400,000
Closure of Program:	2030

Valuation Results	
Present Value of Future Tuition and Fees	\$ 32,977,745
Present Value of Future Contract Payments	\$ -
June 30, 2024 Actuarial Value of Assets	\$ 2,659,371
Margin/(Deficit)	\$ (30,318,374)
Funded Status	8.1%
Year Insolvent	N/A

Fiscal Year Ending 6/30	Assumed Net Investment Return During Year	Assumed Tuition Increase for UK	Assumed Tuition Increase for KCTCS	Market Value of Assets Beginning of Fiscal Year	Budgeted Contributions ¹ From The Commonwealth	Estimated Contributions ¹ Additionally Required	Projected School Payments ²	Projected Reimb./Refunds ³	Projected Admin. Pers. & Prof. Expenses	Projected Contract Payments	Investment Income ⁴	Market Value of Assets End of Fiscal Year
2024												\$ 2,659,371
2025	3.50%	N/A	N/A	\$ 2,659,371	\$ 7,500,000		\$ (2,982,300)	\$ (4,354,766)	\$ (425,000)	\$ -	\$ 199,981	2,597,285
2026	3.00%	4.00%	4.00%	2,597,285	6,800,000		(1,287,322)	(4,911,518)	(425,000)	-	174,379	2,947,824
2027	2.50%	4.00%	4.00%	2,947,824		\$ 5,350,927	(353,235)	(4,733,971)	(400,000)	-	136,279	2,947,824
2028	2.00%	4.00%	4.00%	2,947,824		6,202,862	(41,919)	(5,879,807)	(400,000)	-	118,864	2,947,824
2029	1.50%	4.00%	4.00%	2,947,824		5,669,858	-	(5,355,530)	(400,000)	-	85,672	2,947,824
2030	1.50%	4.00%	4.00%	2,947,824		535,965	-	(3,109,778)	(400,000)	-	25,988	0



¹ Contributions assumed to be received by the Program at the beginning of each fiscal year.

² Assuming half of the payments occur in the beginning of September and half in the beginning January.

³ Assumed all maximized refunds as of 6/30/2024 are paid uniformly over the remaining life of the program (2025-2030, 1/6 per year). All other contracts are assumed to refund 8 years after Projected College Entrance Year (time at which contract value is maximized).

⁴ Investment Income assumed to be zero if/when the market value of assets in the Program are projected to be depleted.

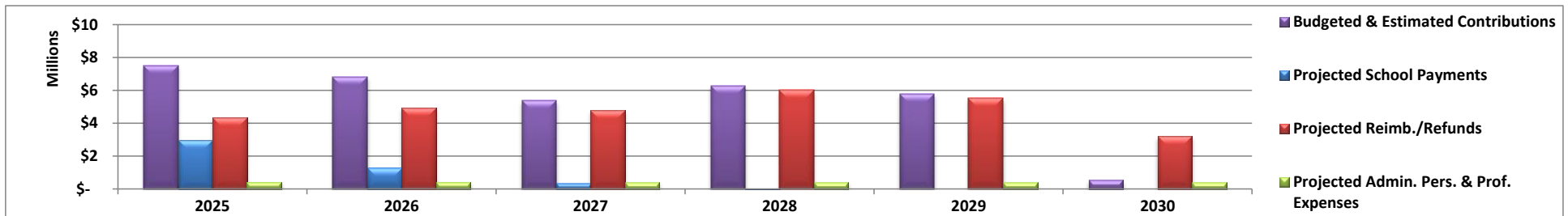


Kentucky's Affordable Prepaid Tuition June 30, 2024 Projection Based on Tuition Increases +100 Basis Points

Administrative Assumptions	
Assumed Administrative, Personnel and Professional Expenses:	2025-2026: \$425,000 2027-2030: \$400,000
Closure of Program:	2030

Valuation Results	
Present Value of Future Tuition and Fees	\$ 32,580,023
Present Value of Future Contract Payments	\$ -
June 30, 2024 Actuarial Value of Assets	\$ 2,659,371
Margin/(Deficit)	\$ (29,920,652)
Funded Status	8.2%
Year Insolvent	N/A

Fiscal Year Ending 6/30	Assumed Net Investment Return During Year	Assumed Tuition Increase for UK	Assumed Tuition Increase for KCTCS	Market Value of Assets Beginning of Fiscal Year	Budgeted Contributions ¹ From The Commonwealth	Estimated Contributions ¹ Additionally Required	Projected School Payments ²	Projected Reimb./Refunds ³	Projected Admin. Pers. & Prof. Expenses	Projected Contract Payments	Investment Income ⁴	Market Value of Assets End of Fiscal Year
2024												\$ 2,659,371
2025	4.50%	N/A	N/A	\$ 2,659,371	\$ 7,500,000		\$ (2,982,300)	\$ (4,354,766)	\$ (425,000)	\$ -	\$ 256,271	2,653,575
2026	4.00%	5.00%	5.00%	2,653,575	6,800,000		(1,299,701)	(4,944,433)	(425,000)	-	232,993	3,017,435
2027	3.50%	5.00%	5.00%	3,017,435		\$ 5,364,928	(360,062)	(4,796,686)	(400,000)	-	191,821	3,017,435
2028	3.00%	5.00%	5.00%	3,017,435		6,270,968	(43,140)	(6,007,705)	(400,000)	-	179,878	3,017,435
2029	2.50%	5.00%	5.00%	3,017,435		5,761,970	-	(5,506,426)	(400,000)	-	144,456	3,017,435
2030	2.50%	5.00%	5.00%	3,017,435		527,886	-	(3,189,244)	(400,000)	-	43,922	0



¹ Contributions assumed to be received by the Program at the beginning of each fiscal year.
² Assuming half of the payments occur in the beginning of September and half in the beginning January.
³ Assumed all maximized refunds as of 6/30/2024 are paid uniformly over the remaining life of the program (2025-2030, 1/6 per year). All other contracts are assumed to refund 8 years after Projected College Entrance Year (time at which contract value is maximized).
⁴ Investment Income assumed to be zero if/when the market value of assets in the Program are projected to be depleted.

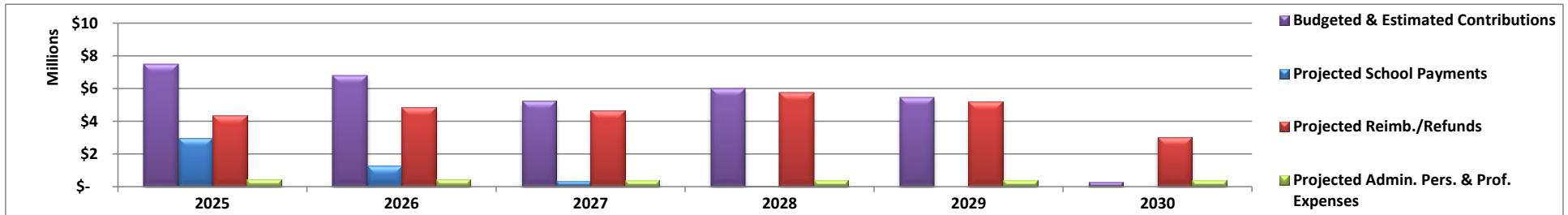


Kentucky's Affordable Prepaid Tuition June 30, 2024 Projection Based on Tuition Increases -100 Basis Points

Administrative Assumptions	
Assumed Administrative, Personnel and Professional Expenses:	2025-2026: \$425,000 2027-2030: \$400,000
Closure of Program:	2030

Valuation Results	
Present Value of Future Tuition and Fees	\$ 31,762,215
Present Value of Future Contract Payments	\$ -
June 30, 2024 Actuarial Value of Assets	\$ 2,659,371
Margin/(Deficit)	\$ (29,102,844)
Funded Status	8.4%
Year Insolvent	N/A

Fiscal Year Ending 6/30	Assumed Net Investment Return During Year	Assumed Tuition Increase for UK	Assumed Tuition Increase for KCTCS	Market Value of Assets Beginning of Fiscal Year	Budgeted Contributions ¹ From The Commonwealth	Estimated Contributions ¹ Additionally Required	Projected School Payments ²	Projected Reimb./Refunds ³	Projected Admin. Pers. & Prof. Expenses	Projected Contract Payments	Investment Income ⁴	Market Value of Assets End of Fiscal Year
2024				\$ 2,659,371	\$ 7,500,000		\$ (2,982,300)	\$ (4,354,766)	\$ (425,000)	\$ -	\$ 256,271	\$ 2,653,575
2025	4.50%	N/A	N/A	2,653,575	6,800,000		(1,274,944)	(4,878,603)	(425,000)	-	234,950	3,109,978
2026	4.00%	3.00%	3.00%	3,109,978		\$ 5,225,648	(346,475)	(4,671,856)	(400,000)	-	192,682	3,109,978
2027	3.50%	3.00%	3.00%	3,109,978		6,016,192	(40,722)	(5,754,345)	(400,000)	-	178,875	3,109,978
2028	3.00%	3.00%	3.00%	3,109,978		5,465,824	-	(5,208,925)	(400,000)	-	143,101	3,109,978
2029	2.50%	3.00%	3.00%	3,109,978		281,318	-	(3,033,310)	(400,000)	-	42,014	0
2030	2.50%	3.00%	3.00%	3,109,978			-			-		



¹ Contributions assumed to be received by the Program at the beginning of each fiscal year.

² Assuming half of the payments occur in the beginning of September and half in the beginning January.

³ Assumed all maximized refunds as of 6/30/2024 are paid uniformly over the remaining life of the program (2025-2030, 1/6 per year). All other contracts are assumed to refund 8 years after Projected College Entrance Year (time at which contract value is maximized).

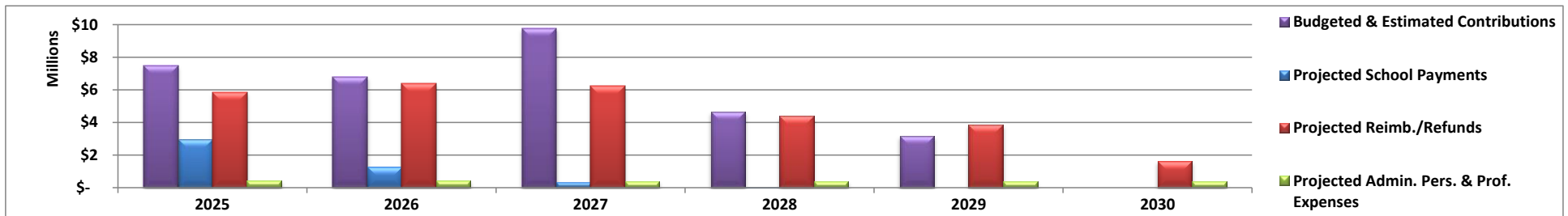


Kentucky's Affordable Prepaid Tuition June 30, 2024 Projection Based on Maximized Refunds Paid Uniformly Over Next 3 Years (Accelerated)

Administrative Assumptions	
Assumed Administrative, Personnel and Professional Expenses:	2025-2026: \$425,000 2027-2030: \$400,000
Closure of Program:	2030

Valuation Results	
Present Value of Future Tuition and Fees	\$ 32,554,802
Present Value of Future Contract Payments	\$ -
June 30, 2024 Actuarial Value of Assets	\$ 2,659,371
Margin/(Deficit)	\$ (29,895,431)
Funded Status	8.2%
Year Insolvent	2026

Fiscal Year Ending 6/30	Assumed Net Investment Return During Year	Assumed Tuition Increase for UK	Assumed Tuition Increase for KCTCS	Market Value of Assets Beginning of Fiscal Year	Budgeted Contributions ¹ From The Commonwealth	Estimated Contributions ¹ Additionally Required	Projected School Payments ²	Projected Reimb./Refunds ³	Projected Admin. Pers. & Prof. Expenses	Projected Contract Payments	Investment Income ⁴	Market Value of Assets End of Fiscal Year
2024				\$ 2,659,371	\$ 7,500,000		\$ (2,982,300)	\$ (5,843,134)	\$ (425,000)	\$ -	\$ 223,151	\$ 2,659,371
2025	4.50%	N/A	N/A	\$ 2,659,371	\$ 7,500,000		\$ (2,982,300)	\$ (5,843,134)	\$ (425,000)	\$ -	\$ 223,151	\$ 1,132,088
2026	4.00%	4.00%	4.00%	1,132,088	6,800,000		(1,287,322)	(6,399,885)	(425,000)	-	147,932	(32,187)
2027	3.50%	4.00%	4.00%	(32,187)		\$ 9,792,785	(353,235)	(6,222,338)	(400,000)	-	214,976	3,000,000 †
2028	3.00%	4.00%	4.00%	3,000,000		4,677,290	(41,919)	(4,391,440)	(400,000)	-	156,069	3,000,000
2029	2.50%	4.00%	4.00%	3,000,000		3,163,911	-	(3,867,163)	(400,000)	-	99,926	1,996,674
2030	2.50%	4.00%	4.00%	1,996,674		-	-	(1,621,410)	(400,000)	-	24,736	0



¹ Contributions assumed to be received by the Program at the beginning of each fiscal year.

² Assuming half of the payments occur in the beginning of September and half in the beginning January.

³ Assumed all maximized refunds as of 6/30/2024 are paid uniformly over 3 years (2025-2027, 1/3 per year). All other contracts are assumed to refund 8 years after Projected College Entrance Year (time at which contract value is maximized).

⁴ Investment Income assumed to be zero if/when the market value of assets in the Program are projected to be depleted.

† The estimated contribution additionally required for the 2027 fiscal year is the estimated contribution to restore a \$3 million dollar asset base by the end of the 2027 fiscal year.



APPENDIX A

INVESTMENT POLICY'S INVESTMENT OBJECTIVE

Kentucky's Affordable Prepaid Tuition Plan Investment Policy's Investment Objective

Below provides the investment objective of the KAPT Board's current investment policy for the Program as of June 30, 2024. Please refer to the full investment policy of Kentucky's Affordable Prepaid Tuition Plan for more information.

II. INVESTMENT OBJECTIVE

The objectives of the Fund have been established based upon current and projected financial requirements. The objectives are:

1. Minimizing return volatility while generating a rate of return that closely matches the rate of tuition inflation.
2. To remain sufficiently liquid to meet KAPT benefit payments in a timely manner.

A diversified portfolio strategy will be used in an effort to achieve the objectives identified above. The strategic target asset allocation, based on an analysis performed by the Fund's investment consultant, shall be as follows:

<u>Asset Class</u>	<u>Target %</u>	<u>Range %</u>	<u>Benchmark</u>
Large Cap US Equities	0	0	
Mid Cap US Equities	0	0	
Small Cap US Equities	0	0	
Non-U.S. Equities	0	0	
Total Equity	0	0	
Domestic Fixed-Income	0	0	
Short Duration US Fixed Income	0	0	Bloomberg Barclays U.S. 1-3 Year Government/Credit Bond Index
Cash Equivalents	100	100	J.P. Morgan One-Month U.S. Dollar Libor Index
Total Fixed Income/Cash	100	100	

Adherence to the asset allocation is monitored quarterly by the Board, but more frequently by the investment manager. Rapid unanticipated market shifts or changes in economic conditions may cause the asset mix to fall outside of the stated ranges. Rebalancing the Fund to comply with the stated ranges is the responsibility of the investment manager. The Fund's investment consultant will reevaluate the strategic asset allocation on an annual basis and report their findings to the Board.

Any investment of funds made will consider asset allocation, rate of return, and fee structure. For the purpose of evaluating success/failure in meeting the Fund's rate of return objectives, inflation will be measured by a rate of inflation which reflects tuition costs. Investment return means total compound return, calculated to recognize all cash income plus realized and unrealized capital gains and losses, net of transaction costs and disbursements.

In order to measure performance of the investment program, the return for the Total Fund will be compared to a blend of benchmark returns in proportion to the target asset allocation.

At the May 2022 KAPT Board meeting, when the Investment Policy was revised, the program manager will liquidate all equity holdings within 90-days of Board approval. Once the liquidation has been completed and remaining assets have been moved to fixed income/cash equivalents, section III. *Eligible Investments* will no longer be applicable as it relates to Fund equity references.

Upon revision of the Investment Policy at the June 2024 KAPT Board meeting, the program manager will liquidate all fixed income holdings within 10-days of Board approval. Once the liquidation has been completed and remaining assets have been moved to cash/cash equivalents, section III. *Eligible Investments* will no longer be applicable as it relates to fixed income references.



APPENDIX B

DISCUSSION OF SELLING NEW CONTRACTS

Kentucky's Affordable Prepaid Tuition

Discussion of Selling New Contracts

Background

The Board must annually consider the selling of new contracts. Contracts were last sold in 2004.

Long-Term Growth of Contracts

Under the original Program, participants could leave their contracts in the Program (unused) for as long as they desired and the contract value would continue to grow at the rate of the increase in tuition growth (primarily at the University of Kentucky). Since pricing is based on a present value of expected payments, appropriate pricing under a Program design, such as this, cannot be determined when the value of the contract can grow forever and the rate of increase in value (assumed tuition increases) exceeds the discount rate (assumed rate of investment return).

However, the legislated Program changes in 2014 limited the growth of unused contracts to six years beyond the expected utilization period. Legislated changes in 2019 modified that limit to eight years past the Projected College Entrance Year (PCEY). Under either the 2014 limit or the 2019 limit, an appropriate pricing can be determined. If the limit is changed in the future, we would need to assess whether appropriate prices could still be determined.

Separation of Programs

We understand that if the Board were to re-open sales of new contracts, a separate Program would be created (such as a KAPT II). We further understand that contracts under the new Program would not be backed by the full faith and credit of the Commonwealth and the assets of the new Program would not be used to pay the benefits of the old Program. We further understand that there would be a time limit on the growth of the contract value (similar or the same as under the current KAPT Program).

Development of Pricing

Under these parameters, we believe that appropriate pricing can be developed. The pricing would be dependent on the following:

- The age of the participant at contract purchase;
- Expected matriculation date;
- Assumptions regarding:
 - Rates of utilization
 - Rates of future tuition increases (or growth of contract value)
 - Rates of assumed investment return
 - Timing of expected tuition payments (or refunds)
 - Rates of cancellation
 - Rates of administrative expenses paid by the contract holder
- Risk margin; and
- Board's funding and pricing policy/guidelines.

Kentucky's Affordable Prepaid Tuition

Discussion of Selling New Contracts (Continued)

Important Considerations

Risk Margins

Risk margins are an important aspect of contract pricing. Essentially the contracts are an insurance policy with one-time pricing. Pricing is traditionally built using assumptions developed on average expectations. Meaning that absent risk margins built into the pricing, half of the time the contracts are underpriced and that half the time the contracts are overpriced. This type of pricing can work when only a short period of time is covered and assumptions can be continually reviewed and contracts can be repriced (such as automobile insurance). In the case of a prepaid tuition plan the time frame between purchase and benefit payment can be as long as 25 years. In addition, short-term risks (for participants who are older at contract purchase) may place significant pressure on cash flow for Programs that are new or smaller. By recognizing these risks, Programs can build a margin into the pricing to manage these risks.

There are two types of Risk Margins that we have seen utilized in contract pricing: implicit risk margin and explicit risk margin. Implicit risk margins are created when pricing assumptions are more conservative than average expectations. For example, a Program may believe that the long term average increase in tuition will be 4%, but include pricing based on increases of 6% for the next six years, 5% for the following six years and 4% for the remaining six years (assuming 18 years for complete payment of benefits).

Another example of an implicit risk premium would be if the long term investment return expectation is 5%, but pricing assumed 3% for the next six years, 4% for the six years after that and 5% for the remaining six years (assuming 18 years for complete payment of benefits).

Explicit risk margins are created when pricing is increased by a specific factor, such as 15% across the board for all prices.

We have assisted other pre-paid Programs in developing funding policies that connect the risk margin in the pricing to the funded status of the Program (and the relativity to the Board's funding target). For example, an initial risk premium could be established of 10% explicit and 5% implicit (totalling to 15%). In addition, a funded status target might be established of 115%. Then, in years when the funded target is exceeded, the risk margin is reduced. Conversely, if the funded target missed, the risk margin would be increased.

Program Size

There is a common misconception that a prepaid tuition Program must have a certain level of participation to be viable. While we do not agree with this sentiment, we do believe that the Program size has implications for the Board to consider. One consideration is the funding target (or risk reserve). Because the Program is basically insurance, the size of the Program is the risk pool. The larger the pool, the more the Program is spreading risk and therefore the smaller the risk reserve will need to be (as a percent of liabilities). Conversely, the smaller the risk pool, the larger the risk reserve needs to be in order to keep the Program healthy.

Kentucky's Affordable Prepaid Tuition Discussion of Selling New Contracts (Concluded)

Program size is also a consideration when determining if the Program is an appropriate use of resources. This is a policy decision, not an actuarial decision. However, the issue is essentially, the expected size of the Program (once it matures) sufficient to justify allocating Commonwealth resources to the maintenance of the Program. A side concern is whether or not the Program is being utilized by the intended population.

Final Thoughts

Should the Board wish to explore opening a new Program and selling new contracts, we would be happy to work with the Board to develop a funding policy, initial pricing assumptions and contract pricing.