

Michigan Education Trust – Plan D

Actuarial Soundness Valuation Report as of
September 30, 2022





December 19, 2022

Ms. Diane Brewer
Executive Director
Michigan Education Trust
430 W. Allegan Street
P.O. Box 30198
Lansing, Michigan 48933

Re: Michigan Education Trust – Plan D Actuarial Valuation as of September 30, 2022

Dear Ms. Brewer:

Gabriel, Roeder, Smith & Company (“GRS”) has performed an actuarial soundness valuation of the Michigan Education Trust – Plan D (“MET”) as of September 30, 2022. Although the term “actuarial soundness” is not specifically defined, the purpose of this actuarial valuation is to evaluate the financial status of the program as of September 30, 2022.

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

- A comparison of the actuarial present value of the obligations for prepaid tuition contracts purchased through September 30, 2022, with the value of the assets associated with the program as of that same date;
- An analysis of the factors which caused the deficit/surplus to change since the prior actuarial valuation; and
- A summary of the actuarial assumptions and methods utilized in the actuarial calculations.

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

The actuarial soundness valuation results set forth in this report are based upon data and information, furnished by MET, concerning program benefits, financial transactions and beneficiaries of MET. 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 MET. Further, the data and information provided is through September 30, 2022 and does not reflect subsequent market changes. There were no program changes subsequent to September 30, 2022.

The actuarial soundness valuation results summarized in this report involve actuarial calculations that require assumptions about future events. The actuarial assumptions used in this analysis were based on an experience review for the period from October 1, 2012 to September 30, 2017, and were adopted for use commencing with the September 30, 2018 valuation. The major actuarial assumptions (discount rate and rates of future tuition increase) used in this analysis were provided by and are the responsibility of MET.

Given the current asset allocation and liquidity requirements, the net investment rate of return assumption of 5.50 percent appears to be reasonable. However, other assumptions could also be reasonable, and could result in materially different results.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law. We have performed an analysis of the sensitivity of certain changes in future assumptions.

We believe that the actuarial methods used in this report are reasonable and appropriate for the purpose for which they have been used. In addition, because it is not possible or practical to consider every possible contingency, we may use summary information, 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.

This report is not a recommendation to anyone to participate in MET. GRS makes no representations or warranties to any person participating in or considering participation in MET. Current and future participants should be aware that the promises of MET will only be met if the assets of MET are sufficient to pay its obligations.

To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the Michigan Education Trust – Plan D as of September 30, 2022. All calculations have been made in conformity with generally accepted actuarial principles and practices commonly applicable to similar types of arrangements.



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.

Paul T. Wood and James R. Sparks are both 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 MET.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



Paul T. Wood, ASA, FCA, MAAA
Senior Consultant and Actuary



James R. Sparks, ASA, FCA, MAAA
Consultant and Actuary

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SECTION A

EXECUTIVE SUMMARY

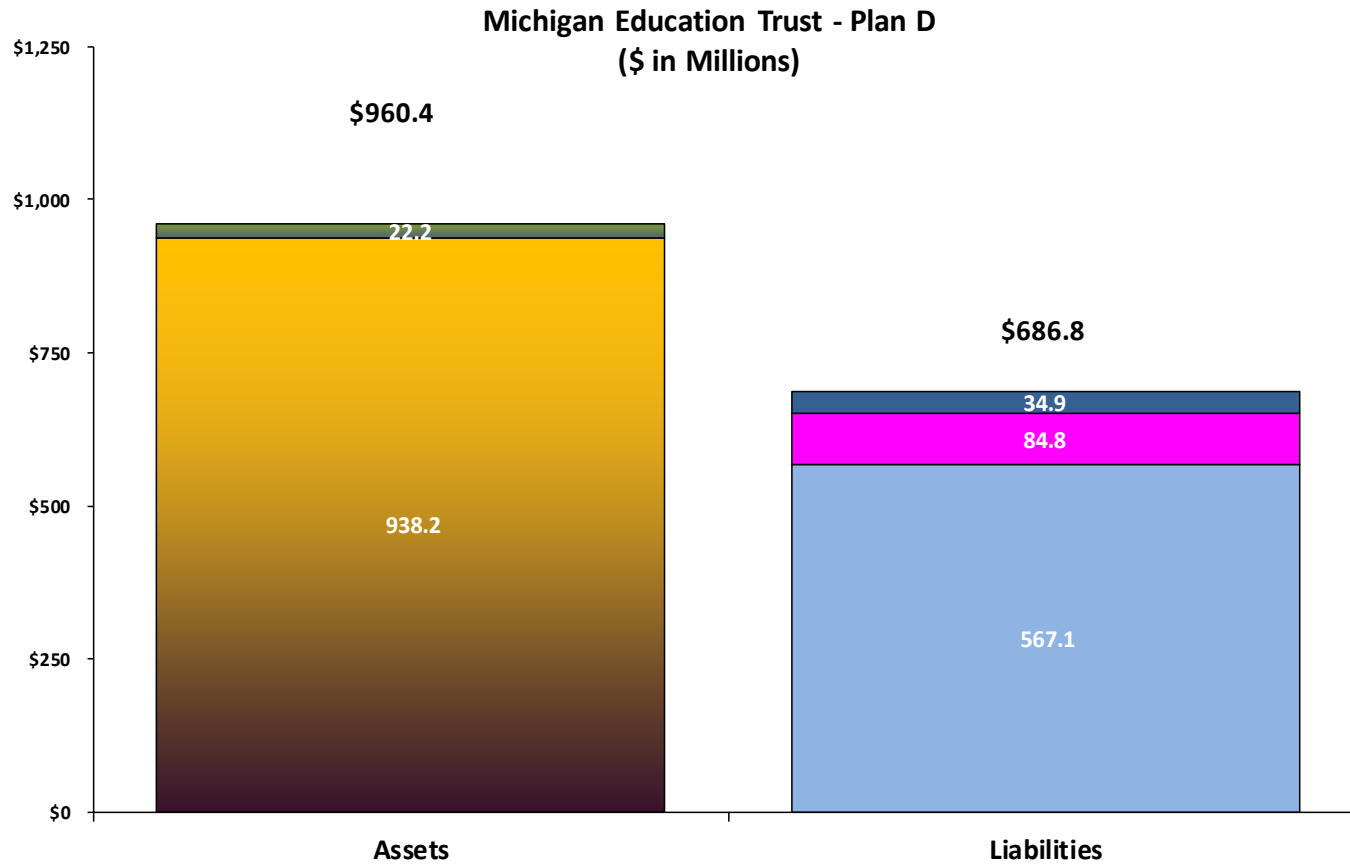
Summary of Results

Principal Valuation Results

Valuation Date:	September 30, 2022
Contract Summary:	
Counts	
Not yet in Payment Status	22,507
In Payment Status or Termination in Progress*	9,450
Total	31,957
Average Years until Expected Matriculation or Refund if not yet in Payment Status or Not Using Contract	
	6.4
Assets	
Valuation Assets (Market Value)	\$ 960,352,274
Approximate Return on Valuation Assets for Year Ended September 30, 2022	-6.17%
Actuarial Liabilities (Present Value of Future Tuition Payments, Fees, and Administrative Expenses)	
	\$ 686,820,436
Surplus/(Deficit)	\$ 273,531,838
Funded Ratio	139.8%

* Counts include 4,703 contracts that are classified as "In Payment Status" but have not used any credits within the past year.

Summary of Assets and Liabilities as of September 30, 2022



ASSETS	LIABILITIES
PV Future Contributions	PV Administrative Fees
Net Market Value of Assets	PV Benefits (in Payment Status or Termination in Progress)
	PV Benefits (Not in Payment Status or Not Using Contract)

Funded Status as of September 30, 2022

	<u>September 30, 2022</u>
Actuarial Present Value of Future Tuition Payments, Fees and Expenses	\$ 686,820,436
Market Value of Assets (Including the Present Value of Installment Contract Receivables)	\$ 960,352,274
Surplus/(Deficit) as of September 30, 2022	\$ 273,531,838

Gain/Loss Summary

	<u>Surplus/(Deficit)</u>
(1.) Value at September 30, 2021	\$ 376,864,197
(2.) Interest on (1.) at Assumed Rate from Previous Valuation	\$ 20,727,531
(3.) New Enrollment Group	\$ 797,241
(4.) Projected Value at September 30, 2022 [(1.) + (2.) + (3.)]	\$ 398,388,969
(5.) Change Due to:	
a. Asset Experience	\$ (122,202,617)
b. Tuition/Fee Inflation	2,727,931
c. Assumption Changes	-
d. Other Experience	(5,382,445)
Total [(5.)a. + (5.)b. + (5.)c. + (5.)d.]	\$ (124,857,131)
(6.) Actual Value at September 30, 2022 [(4.) + (5.)]	\$ 273,531,838

Discussion

Actuarial Valuation

Gabriel, Roeder, Smith & Company (“GRS”) has performed an actuarial soundness valuation of the Michigan Education Trust – Plan D (“MET”) as of September 30, 2022.

The primary purposes of the actuarial soundness valuation are to:

- Determine the actuarial present value of the obligations for prepaid tuition contracts purchased through September 30, 2022 and compare such liabilities with the value of the assets associated with the program as of that same date; and
- Analyze the factors which caused the deficit/surplus to change since the prior actuarial valuation.

This report summarizes the results under the current assumptions and also presents the impact of variances in the rate of tuition and fee increases as well as the rate of investment return on assets. In addition, the report provides summaries of the beneficiary data, financial data, plan provisions and actuarial assumptions and methods.

Background

MET is a public body created by Michigan’s Legislature (Public Act 316 of 1986) and housed within the Michigan Department of Treasury. MET must operate and finance its activities only through its assets. To protect those assets from other uses by the State, only MET, and not the State, controls its assets.

MET allows beneficiaries to mitigate some future tuition and fee increase risks. The beneficiaries are also eligible for certain federal and state tax advantages.

Three different plan options are available. The **Full Benefits Plan** provides full in-state tuition and mandatory fees at any Michigan public university, or tuition and mandatory fees at Michigan public community colleges (in-district or out-of-district) up to the number of credit hours required for a standard four-year baccalaureate degree (usually 120 semester credit hours). Individuals may purchase the Full Benefits Plan in semester increments up to 10 semesters (five years) of tuition.

The **Limited Benefits Plan** provides in-state tuition and mandatory fees at Michigan public universities, or tuition and mandatory fees at Michigan public community colleges (in-district or out-of-district) up to 105 percent of the weighted average tuition of all Michigan public four-year universities. If a student decides to attend a Michigan public college where tuition costs are higher than average, the number of credits allowed will be prorated based on the number of credit hours MET can purchase with 105 percent of the weighted average cost of Michigan public four-year universities. This plan might not cover the full cost of Michigan’s most expensive institutions.

Students who attend a school where tuition is not fully covered under the Limited Benefits Plan will receive the number of credit hours MET can purchase at the time of college enrollment.



For example, on a preliminary basis, in the 2022/2023 school year:

- If a student with a four-year Limited Benefits Plan contract attends the University of Michigan-Ann Arbor, MET will pay for 108 credit hours.
- If a student attends Michigan Technological University, MET will pay for 108 credit hours.

Individuals may purchase the Limited Benefits Plan in semester increments up to 10 semesters (five years).

The **Community College Plan** provides in-district tuition and mandatory fees at Michigan public community colleges. Some areas of the State are not within a community college district. Students who attend a community college out of their district will be responsible for paying the difference between the out-of-district and in-district tuition cost. Individuals may purchase the Community College Plan in semester increments up to ten semesters (five years) under this contract.

For contracts sold during and after the 2012/2013 enrollment period, the mandatory fees paid cannot exceed the 2012 rate charged by the Public Educational Institutions. On November 14, 2019, the MET Board Resolution 2019-12 (mandatory fees) resolved to allow purchasers and MET to amend certain previously purchased MET contracts (2013-2019) upon purchaser's formal request and with MET entering into the appropriate contract amendment. This amendment will allow for removal of the cap limiting Mandatory fees.

MET Plan D is open to children from newborn through adult. The Beneficiary must be a resident of the State of Michigan and must have a valid Social Security Number.

Actuarial Assumptions

The actuarial soundness valuation results summarized in this report involve actuarial calculations that require assumptions about future events. The actuarial assumptions used in this analysis were based on an experience review for the period from October 1, 2012 to September 30, 2017, and were adopted for use commencing with the September 30, 2018 actuarial soundness valuation. The major actuarial assumptions (discount rate and rates of future tuition increase) used in this analysis were provided by and are the responsibility of MET.

In the previous actuarial soundness valuation as of September 30, 2021, a discount rate assumption of 5.50 percent and a tuition increase assumption of 4.50 percent were used. Each year, the discount rate and tuition increase assumption are reviewed for reasonableness. Staff at the Department of Treasury then recommends updated assumptions to the MET Board. The recommended assumptions for the actuarial soundness valuation as of September 30, 2022, are as follows:

- Discount Rate: 5.50% percent.
- Tuition Increase Assumption: 4.50 percent for all future years.

In summary, there were no assumption changes for this valuation.



The MET Board approved these assumptions for use in the September 30, 2022 actuarial soundness valuation at its August 3, 2022 meeting.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law. We have performed an analysis of the sensitivity of certain changes in future assumptions.

Financial Status of Program

As of September 30, 2022, the present value of all future tuition obligations under contracts outstanding (and including estimated future administrative expenses) at that date is \$686.8 million. Fund assets as of September 30, 2022, including the market value of program assets and the present value of installment contract receivables, are \$960.4 million.

The difference between the market value of assets of \$960.4 million and program obligations of \$686.8 million represents a program surplus of \$273.5 million. The comparable program surplus as of the last actuarial soundness valuation as of September 30, 2021 was \$376.9 million.

Under the approved assumptions, the program is 139.8 percent funded and is expected to pay all contracted benefits. It should be noted that new contracts are being offered in 2022 and are intended to be offered in future years.

Gain/Loss Analysis

As previously described, the program surplus decreased from \$376.9 million as of September 30, 2021 to \$273.5 million as of September 30, 2022. This decrease in the surplus was primarily attributed to investments earning less than the assumed 5.50 percent.

Benefit Provisions

We understand there were no other changes in program provisions since the last actuarial valuation as of September 30, 2021.

Assets

MET assets are held in trust. MET provided the asset information used in the September 30, 2022 actuarial soundness valuation.

This report contains several exhibits summarizing the plan's assets, including a summary of the market value of assets broken down by asset category and a reconciliation of the assets from the last valuation date to the current valuation date.



SECTION B

ACTUARIAL SOUNDNESS VALUATION RESULTS

Exhibit I

Principal Valuation Results as of September 30,

	<u>2022</u>	<u>2021</u>
1 Number of Contracts		
a. Not yet in Payment Status	22,507	23,570
b. In Payment Status or Termination in Progress*	9,450	9,609
c. Total	<u>31,957</u>	<u>33,179</u>
 Average Years until Expected Matriculation or Refund if Not Yet In Payment Status	 6.4	 6.4
2 Assets		
a. Market Value of Assets (in Trust)	\$ 938,186,365	\$ 1,055,604,234
b. PV Future Contract Contributions	22,165,909	25,411,244
c. Total Market Value of Assets (MVA)	<u>\$ 960,352,274</u>	<u>\$ 1,081,015,478</u>
3 Actuarial Results		
Liabilities - Tuition and Fees		
a. Not yet in Payment Status or Not Using Contract	\$ 567,139,647	\$ 581,811,833
b. In Payment Status or Termination in Progress	84,753,637	88,705,777
c. Total	<u>\$ 651,893,284</u>	<u>\$ 670,517,610</u>
Liabilities - Present Value of Future Administrative Expenses	\$ 34,927,152	\$ 33,633,671
Liabilities Total	\$ 686,820,436	\$ 704,151,281
Surplus/(Deficit)	\$ 273,531,838	\$ 376,864,197
Funded Ratio	139.8%	153.5%

* Counts for 2022 include 4,703 contracts that are classified as "In Payment Status" but have not used any credits within the past year.



Exhibit I

Principal Valuation Results as of September 30, (Concluded)

	2022	2021
1. Assets		
a. Market Value of Assets (in Trust)	\$ 938,186,365	\$ 1,055,604,234
b. PV Future Contract Contributions (Short Term) ^a	5,057,638	5,795,631
c. PV Future Contract Contributions (Long Term) ^b	17,108,271	19,615,613
d. Total Market Value of Assets (MVA)	\$ 960,352,274	\$ 1,081,015,478
2. Actuarial Present Value of Tuition, Fees and Admin Expenses		
a. Short Term ^a	\$ 63,420,648	\$ 63,100,683
b. Long Term ^b	623,399,788	641,050,598
c. Total	\$ 686,820,436	\$ 704,151,281
Surplus/(Deficit)	\$ 273,531,838	\$ 376,864,197
Funded Ratio	139.8%	153.5%

^a Present value of amounts in following year.

^b Present value of amounts after first year.

Exhibit II

Gain/Loss Summary

	Present Value of Benefits	PV Future Member Contributions	Market Value of Assets	Surplus/(Deficit)
(1.) Values at September 30, 2021	\$ 704,151,281	\$ 25,411,244	\$ 1,055,604,234	\$ 376,864,197
(2.) Contributions/Miscellaneous Income (Not including New Enrollment Group)	\$ 2,340,000	\$ (8,264,446)	\$ 10,604,446	\$ -
(3.) Benefit Payments and Administrative Expenses	\$ (85,479,629)	\$ -	\$ (85,479,629)	\$ -
(4.) Interest on (1.), (2.), and (3.) at Assumed Rate from Previous Valuation	\$ 36,472,582	\$ 1,173,388	\$ 56,026,725	\$ 20,727,531
(5.) New Enrollment Group	\$ 26,574,679	\$ 3,738,714	\$ 23,633,206	\$ 797,241
(6.) Projected Values at September 30, 2022 [(1.) + (2.) + (3.) + (4.) + (5.)]	\$ 684,058,913	\$ 22,058,900	\$ 1,060,388,982	\$ 398,388,969
(7.) Change Due to:				
a. Asset Experience	\$ -	\$ -	\$ (122,202,617)	\$ (122,202,617)
b. Tuition/Fee Inflation	(2,727,931)	-	-	2,727,931
c. Assumption Changes	-	-	-	-
d. Other Experience	5,489,454	107,009	-	(5,382,445)
Total [(7.)a. + (7.)b. + (7.)c. + (7.)d.]	\$ 2,761,523	\$ 107,009	\$ (122,202,617)	\$ (124,857,131)
(8.) Actual Values at September 30, 2022 [(6.) + (7.)]	\$ 686,820,436	\$ 22,165,909	\$ 938,186,365	\$ 273,531,838

Exhibit III

Sensitivity Testing Results

The actuarial assumptions regarding future increases in tuition costs and fees and the future rate of investment return were prescribed to us by MET. In our opinion, the actuarial assumptions prescribed to us 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 fund will earn 5.50 percent each year throughout the life of the contracts, actual returns are expected to vary from year to year. Therefore, we have projected MET results under alternative assumptions for future investment income and tuition increases, as follows:

1. Current actuarial soundness valuation assumptions approved by the MET Board (5.50 percent investment return, 4.50 percent tuition increases).
2. Tuition increases are 100 basis points higher/lower in each future year than assumed in this year's actuarial soundness valuation.
3. The investment return is 100 basis points higher/lower in each future year than assumed in this year's actuarial soundness valuation.
4. Tuition increases are 100 basis points higher and the investment return is 100 basis points lower in each future year than assumed in this year's actuarial soundness valuation.
5. Tuition increases are 100 basis points lower and the investment return is 100 basis points higher in each future year than assumed in this year's actuarial soundness valuation.

The impact of each of these scenarios on the principal actuarial soundness valuation results is presented on the following page.



Exhibit III

Sensitivity Testing Results (Concluded)

\$ in Millions

	Current Valuation Assumptions	Assumed Tuition Increases +100 Basis Points	Assumed Tuition Increases -100 Basis Points	Assumed Investment Return +100 Basis Points	Assumed Investment Return -100 Basis Points	Assumed Tuition Increases +100 Basis Points and Investment Return -100 Basis Points	Assumed Tuition Increases -100 Basis Points and Investment Return +100 Basis Points
Assumed Investment Return	5.50%	5.50%	5.50%	6.50%	4.50%	4.50%	6.50%
Assumed Tuition Increases	4.50%	5.50%	3.50%	4.50%	4.50%	5.50%	3.50%
1 Assets							
a. Market Value of Assets (in Trust)	\$938.2	\$938.2	\$938.2	\$938.2	\$938.2	\$938.2	\$938.2
b. PV Future Contract Contributions	\$22.2	\$22.2	\$22.2	\$21.5	\$22.9	\$22.9	\$21.5
c. Total Market Value of Assets (MVA)	\$960.4	\$960.4	\$960.4	\$959.7	\$961.1	\$961.1	\$959.7
2 Actuarial Results							
Liabilities - Tuition and Fees							
a. Not yet in Payment Status or Not Using Contract	\$567.1	\$607.2	\$530.7	\$526.4	\$613.1	\$658.1	\$493.8
b. In Payment Status or Termination in Progress	\$84.8	\$85.3	\$84.2	\$83.6	\$86.0	\$86.5	\$83.1
c. Total	\$651.9	\$692.5	\$614.9	\$610.0	\$699.0	\$744.7	\$576.9
Liabilities - PV of Future Admin. Expenses	\$34.9	\$34.9	\$34.9	\$33.1	\$37.0	\$37.0	\$33.1
Liabilities Total	\$686.8	\$727.5	\$649.9	\$643.1	\$736.0	\$781.6	\$610.0
Surplus/(Deficit)	\$273.5	\$232.9	\$310.5	\$316.6	\$225.1	\$179.5	\$349.7
Funded Ratio	139.8%	132.0%	147.8%	149.2%	130.6%	123.0%	157.3%
Difference From Results Based on Current Assumptions							
Deficit	\$0.0	\$(40.6)	\$37.0	\$43.1	\$(48.4)	\$(94.0)	\$76.2
Funded Ratio	0.0%	(7.8%)	8.0%	9.4%	(9.2%)	(16.8%)	17.5%

Numbers may not add due to rounding.



SECTION C

FUND ASSETS

Statement of Plan Assets

Year Ended September 30, 2022

(Assets at Market Value)

1. Cash and cash equivalents	\$	31,131,988
2. Investments		
a. Short-term Investments	\$	78,206,487
b. Unamortized discount on short-term investments		-
c. Bonds		185,439,101
d. Equity mutual funds		642,972,197
Total investments	\$	906,617,785
3. Deferred Outflows of Resources		
a. Pension Deferred Outflows of Resources	\$	246,673
b. Health Insurance OPEB Deferred Outflows of Resources		763,466
c. Life Insurance OPEB Deferred Outflows of Resources		98,096
Total	\$	1,108,235
4. Receivables		
a. Advances to state general fund	\$	709,433
b. Interest and dividends receivable		1,447,651
c. Tuition contracts receivable		22,165,909
d. Due from Plans B & C		2,401,658
Total receivables	\$	26,724,651
5. Liabilities		
a. Net Pension Payable	\$	1,277,644
b. Life Insurance OPEB Payable		433,190
c. Healthcare OPEB Payable		1,216,491
d. Due to vendors and contract purchasers		16,142
Total liabilities	\$	2,943,467
6. Deferred Inflows of Resources		
a. Pension Deferred Inflows of Resources	\$	650,405
b. Health Insurance OPEB Deferred Inflows of Resources		1,527,035
c. Life Insurance OPEB Deferred Inflows of Resources		109,479
Total	\$	2,286,919
7. Net assets = (1) + (2) + (3) + (4) - (5) - (6)	\$	960,352,274

Numbers may not add due to rounding.



Reconciliation of Plan Assets Year Ended September 30, 2022

1. Value of assets at beginning of year	\$	1,081,015,478
2. Changes during year		
a. Additions		
(1) Investment income	\$	24,632,969
(2) Miscellaneous income		4,265,231
(3) Net gain on sale of security		9,019,779
(4) Prepaid tuition of 2022 enrollments		-
(5) Other contracts receipts		<u>31,897,652</u>
Total Additions = (1) + (2) + (3) + (4) + (5)	\$	<u>69,815,631</u>
b. Deductions		
(1) Administrative and other expenses	\$	8,147,111
(2) Amounts paid under contracts		
(a) Tuition benefits	\$	58,193,164
(b) Termination benefits		
[1] Paid to colleges	\$	11,709,473
[2] Loan defaults/Death refunds		-
[3] Paid to refund designee		<u>7,429,883</u>
Total termination benefits	\$	<u>19,139,356</u>
Total paid under contracts = (a) + (b)		<u>77,332,520</u>
(3) Adjustment to Tuition Benefits related to FY Tuition Contracts Receivable figure		<u>3,245,335</u>
Total Deductions = (1) + (2) + (3)	\$	<u>88,724,964</u>
c. Unrealized appreciation (depreciation)	\$	<u>(101,753,871)</u>
Net increases (decreases) during year = a - b + c	\$	<u>(120,663,204)</u>
Net value of assets at end of year = 1 + 2	\$	<u><u>960,352,274</u></u>

Numbers may not add due to rounding.



SECTION D

PARTICIPANT DATA

Historical Summary as of September 30, 2022

	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>
<u>Number of Contracts</u>					
Lump Sum					
Full benefits	14,549	15,401	16,216	16,990	17,654
Limited benefits	4,033	4,298	4,547	4,777	4,929
Community college	1,672	1,739	1,837	1,930	2,047
Monthly Purchase					
Full benefits	4,778	5,081	5,425	5,735	6,063
Limited benefits	1,538	1,669	1,793	1,936	2,092
Community college	1,442	1,506	1,563	1,616	1,672
Pay As You Go					
Full benefits	2,392	2,032	1,813	1,545	1,174
Limited benefits	1,238	1,162	1,030	887	617
Community college	<u>315</u>	<u>291</u>	<u>245</u>	<u>206</u>	<u>139</u>
Total	<u>31,957</u>	<u>33,179</u>	<u>34,469</u>	<u>35,622</u>	<u>36,387</u>
<u>Assets</u>					
Market value	<u>\$960,352,274</u>	<u>\$1,081,015,478</u>	<u>\$988,589,182</u>	<u>\$1,004,415,400</u>	<u>\$1,008,528,407</u>



Contract Data Summary

	Lump Sum			Monthly Purchase			Pay As You Go			Total
	Full Benefits	Limited Benefits	Community College	Full Benefits	Limited Benefits	Community College	Full Benefits	Limited Benefits	Community College	
Total as of 9/30/2021	15,401	4,298	1,739	5,081	1,669	1,506	2,032	1,162	291	33,179
Adjustment for prior years	68	22	(2)	(10)	4	(13)	1	4	4	78
New contracts issued	296	72	26	74	15	28	381	119	21	1,032
Contracts paid in full	<u>(1,216)</u>	<u>(359)</u>	<u>(91)</u>	<u>(367)</u>	<u>(150)</u>	<u>(79)</u>	<u>(22)</u>	<u>(47)</u>	<u>(1)</u>	<u>(2,332)</u>
Total as of 9/30/2022	<u>14,549</u>	<u>4,033</u>	<u>1,672</u>	<u>4,778</u>	<u>1,538</u>	<u>1,442</u>	<u>2,392</u>	<u>1,238</u>	<u>315</u>	<u>31,957</u>



Contracts in Payment Status as of September 30, 2022

	Full Benefits <u>Contracts</u>	Limited Benefits <u>Contracts</u>	Community College <u>Contracts</u>	<u>Total</u>
1. Michigan Public 4-Year College				
Central Michigan University	143	62	0	205
Eastern Michigan University	139	47	0	186
Ferris State University	59	24	0	83
Kendall Art & Design of Ferris	16	2	0	18
Grand Valley State University	312	154	0	466
Lake Superior State University	15	14	0	29
Michigan State University	1,778	388	0	2,166
Michigan Technological University	112	42	0	154
Northern Michigan University	55	22	0	77
Oakland University	231	89	0	320
Saginaw Valley State University	45	37	0	82
University of Michigan-Dearborn	97	37	0	134
University of Michigan-Flint	43	11	0	54
University of Michigan-Ann Arbor	1,802	189	0	1,991
Wayne State University	262	77	0	339
Western Michigan University	185	73	1	259
Inactive Students	<u>0</u>	<u>2</u>	<u>0</u>	<u>2</u>
Total Michigan Public 4-Year College	<u>5,294</u>	<u>1,270</u>	<u>1</u>	<u>6,565</u>

Contracts in Payment Status as of September 30, 2022 (Continued)

	Full Benefits <u>Contracts</u>	Limited Benefits <u>Contracts</u>	Community College <u>Contracts</u>	<u>Total</u>
2. Michigan Community College				
Alpena Community College	1	1	4	6
Bay De Noc Community College	0	2	2	4
Delta College	8	3	32	43
Glen Oaks Community College	1	0	2	3
Gogebic Community College	0	0	2	2
Grand Rapids Community College	22	2	35	59
Henry Ford Community College	16	5	32	53
Jackson Community College	6	1	17	24
Kalamazoo Valley Community College	7	3	23	33
Kellogg Community College	1	1	12	14
Kirtland Community College	0	0	6	6
Lake Michigan Community College	4	2	3	9
Lansing Community College	37	12	52	101
Macomb County Community College	27	11	68	106
Mid-Michigan Community College	7	2	6	15
Monroe Community College	2	1	4	7
Montcalm Community College	1	3	0	4
Mott Community College	15	2	34	51
Muskegon Community College	3	1	5	9
North Central Michigan College	0	0	6	6
Northwestern Michigan College	7	8	12	27
Oakland Community College	49	10	53	112
Schoolcraft College	54	15	61	130
Southwestern Michigan College	1	1	3	5
St. Clair County Community College	7	1	16	24
Washtenaw Community College	22	8	26	56
Wayne County Community College	1	0	12	13
West Shore Community College	<u>1</u>	<u>0</u>	<u>2</u>	<u>3</u>
Total Michigan Community College	<u>300</u>	<u>95</u>	<u>530</u>	<u>925</u>
Total Active Contracts (1.) + (2.)	<u>5,594</u>	<u>1,365</u>	<u>531</u>	<u>7,490</u>



Contracts in Payment Status as of September 30, 2022 (Concluded)

	Full Benefits <u>Contracts</u>	Limited Benefits <u>Contracts</u>	Community College <u>Contracts</u>	<u>Total</u>
3. Terminations in Progress				
Reason:				
Michigan Independent College	201	60	23	284
Out-of-State/Pay College	849	133	27	1,009
Out-of-State/Pay Refund Designee	49	26	4	79
Full Scholarship	10	11	0	21
Not Attending College	62	8	1	71
Death, Disability & Hardship	177	71	10	258
Attending Community College with Full/Limited Benefits Contract	0	0	0	0
Attending 4-year College with Community College Contract	44	17	157	218
Other (Military)	<u>6</u>	<u>2</u>	<u>0</u>	<u>8</u>
Total Terminations in Progress	<u>1,398</u>	<u>328</u>	<u>222</u>	<u>1,948</u>
4. Inactive Students	<u>8</u>	<u>1</u>	<u>3</u>	<u>12</u>
Grand Total, Contracts in Payment Status (1.) + (2.) + (3.) + (4.)	<u>7,000</u>	<u>1,694</u>	<u>756</u>	<u>9,450</u>
5. Not Yet in Payment Status	<u>14,719</u>	<u>5,115</u>	<u>2,673</u>	<u>22,507</u>
Grand Total, Active Contracts (1.) + (2.) + (3.) + (4.) + (5.)	<u>21,719</u>	<u>6,809</u>	<u>3,429</u>	<u>31,957</u>



Contracts Paid in Full in the Year Ending September 30, 2022

	Lump Sum			Monthly Purchase			Pay As You Go			Total
	Full Benefits	Limited Benefits	Community College	Full Benefits	Limited Benefits	Community College	Full Benefits	Limited Benefits	Community College	
1. Attended Public Colleges	833	261	24	224	99	20	21	42	0	1,524
2. Terminations										
Michigan Independent College	75	20	5	19	12	7	0	1	0	139
Out-of-State/Pay College	165	32	9	59	12	3	0	2	0	282
Out-of-State/Pay Refund Designee	8	10	1	9	4	4	1	0	0	37
Full Scholarship	24	2	3	11	4	3	0	0	0	47
Not Attending College	94	29	11	36	16	24	0	1	1	212
Disability/Death	3	2	1	3	0	1	0	0	0	10
Attending Community College with Full/Limited Benefits Contract	13	3	0	4	2	0	0	1	0	23
Attending 4-year College with Community College Contract	0	0	37	2	1	16	0	0	0	56
Other (Military)	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	0	0	0	2
Total Terminations	<u>383</u>	<u>98</u>	<u>67</u>	<u>143</u>	<u>51</u>	<u>59</u>	<u>1</u>	<u>5</u>	<u>1</u>	<u>808</u>
Total Contracts Paid in Full	<u>1,216</u>	<u>359</u>	<u>91</u>	<u>367</u>	<u>150</u>	<u>79</u>	<u>22</u>	<u>47</u>	<u>1</u>	<u>2,332</u>



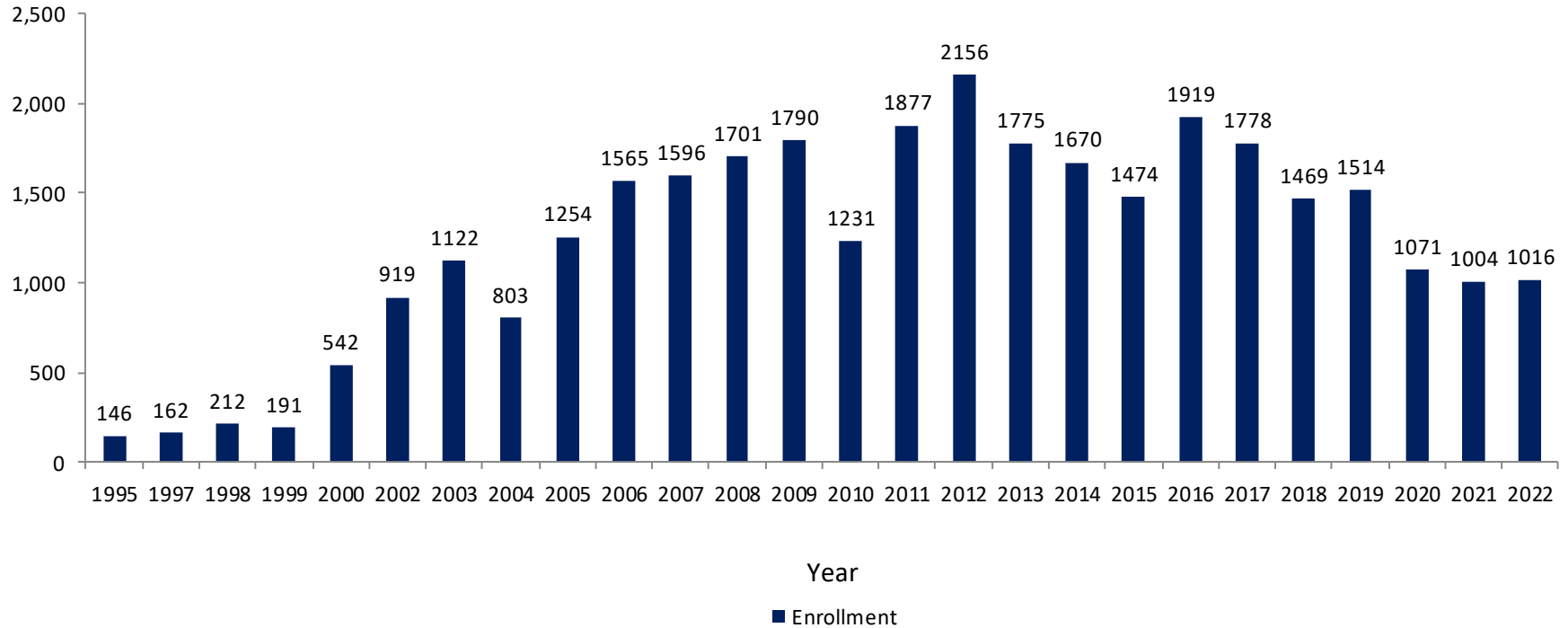
Active Monthly Purchase Contracts

	Full Benefits	Limited Benefits	Community College	Total
Active Purchasers as of 9/30/2021	915	400	419	1,734
Adjustment for prior years	12	4	1	17
New Contracts Issued	80	17	28	125
Purchases completed	(187)	(67)	(78)	(332)
Discontinued	<u>(21)</u>	<u>(3)</u>	<u>(6)</u>	<u>(30)</u>
Active Purchasers as of 9/30/2022	<u>799</u>	<u>351</u>	<u>364</u>	<u>1,514</u>

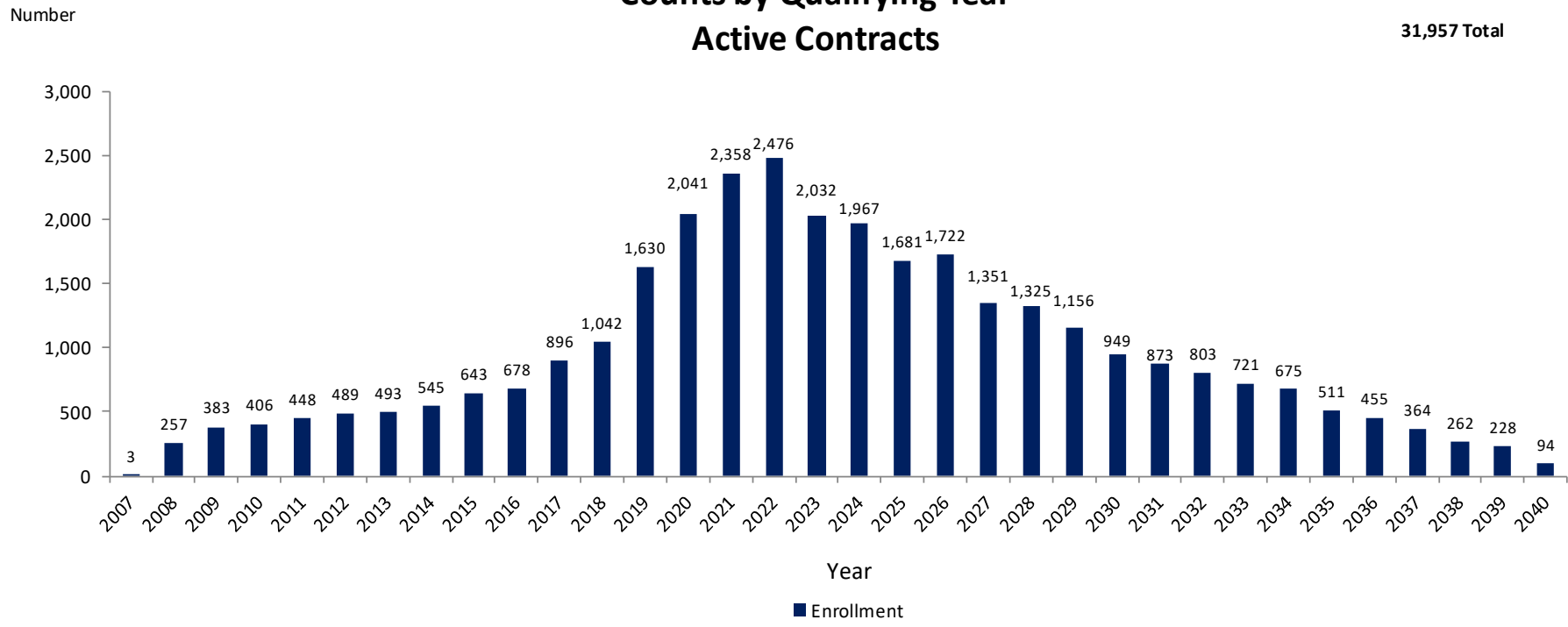
Michigan Education Trust - Plan D Counts by Enrollment Year Active Contracts

31,957 Total

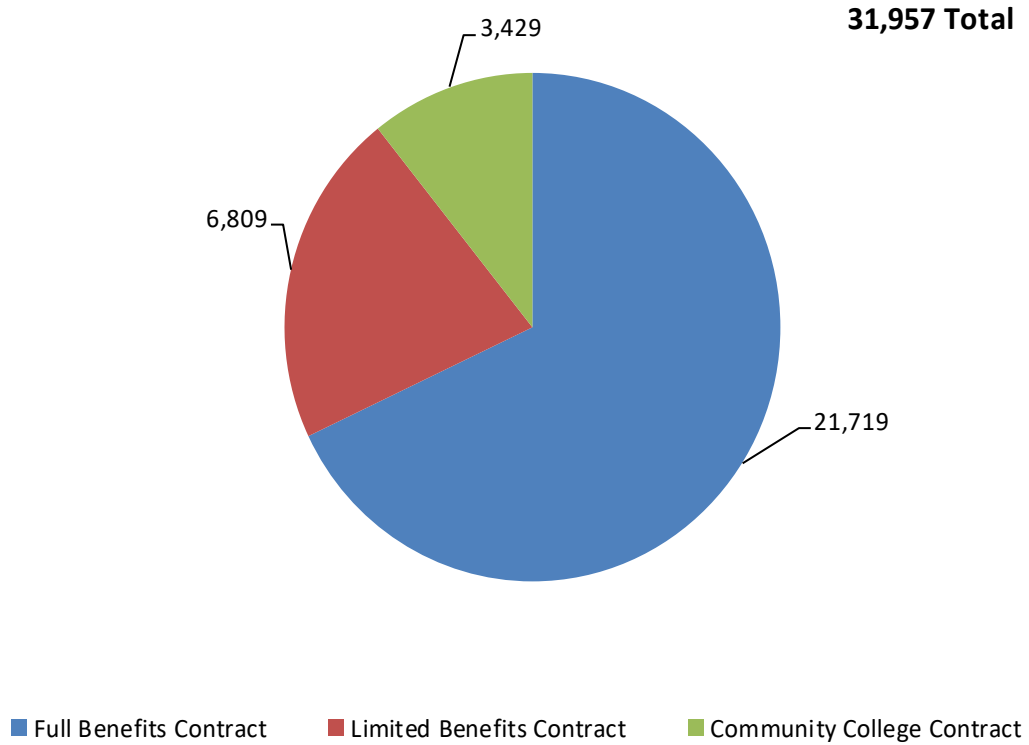
Number



Michigan Education Trust - Plan D Counts by Qualifying Year Active Contracts



Michigan Education Trust - Plan D Counts by Contract Type Active Contracts



SECTION E

ACTUARIAL SOUNDNESS VALUATION METHODS AND ASSUMPTIONS

Valuation Methods and Assumptions

The **actuarial assumptions** used in the valuation are shown in this section.

Measurement Date: September 30, 2022

The **net investment return rate:** 5.50 percent per annum, compounded annually

Weighted Average Tuition and Increases by Contract Type

	Four-Year Public College	Community College
Weighted Average Tuition and Fees	\$16,024	\$4,364
Average Tuition and Fees	\$15,613	\$4,809
Lowest Tuition and Fees	\$13,046	\$3,410
Tuition and Fees Increase Assumption	4.50%	4.50%

The Weighted Average Tuition and Fees used in the actuarial soundness valuation are based on preliminary tuition and fees for 2022/2023.

For contracts sold between 2013 and 2019, the mandatory fees paid cannot exceed the 2012 rate charged by the Public Educational Institutions. Board Resolution 2019-12 (mandatory fees) resolved to allow purchasers and MET to amend certain previously purchased MET contracts (2013-2019) upon purchaser's formal request and with MET entering into the appropriate contract amendment.

The Tuition and Fee increase assumptions were chosen by the Board and consider historical public tuition and fee inflation over a 5- to 10-year horizon, as well as current economic and political conditions.

Administrative Expenses

Administrative expenses of the Program are assumed to be paid through a combination of investment earnings and fees assessed on purchasers. Total administrative expenses budgeted for MET Plans B and C and MET Plan D net of advertising expenses is equal to \$4,933,624. This amount was prorated by the number of active contracts in MET Plans B and C vs. MET Plan D. Therefore, the amount budgeted for MET Plan D in 2022/2023 is \$4,670,552. This amount is assumed to increase by 2.25 percent per year. Furthermore, it is assumed that future contract purchases would cover advertising expenses. Advertising expenses for 2022/2023 were budgeted to be \$1,000,000. This amount is also assumed to increase by 2.25 percent per year.

Bias Load

A load of 8.0 percent was added for full benefits four-year public universities, 2.0 percent was added for limited benefits four-year public universities and zero percent for two-year community colleges is added to the WAT for all contract types to recognize the bias toward enrollment at more expensive schools.

Experience Load

Two features of the program may cause greater payments than expected. These two features are a) the ability of a beneficiary to attend a college for which block pricing is in effect, resulting in the possibility of having the program pay for more years than purchased and b) the ability of a beneficiary who purchased a contract prior to 2012 to have more than 120 hours covered (even though, for example, four years of coverage was purchased) due to being in a specific program requiring more than 120 hours for an undergraduate degree (e.g., Engineering). A load of 2.0 percent was added to all liabilities attributable to contracts sold prior to the 2013 enrollment period and no experience load for contracts sold during and after the 2013 enrollment period.

Future Contract Sales

MET Plan D is open to new entrants. This assumption does not impact the closed-group actuarial soundness valuation, but rather is used in analyzing pricing.

Rates of Matriculation and Refund at and Beyond Qualifying Year

Beneficiaries are assumed to either matriculate or receive a refund according to the following schedule:

<u>Years after Qualifying Year</u>	<u>Matriculation and Refund Rate</u>
0	45%
1	40%
2	40%
3	35%
4	20%
5	15%
6	15%
7	10%
8	10%
9	10%
10	10%
11	10%
12	10%
13	10%
14	10%
15	100%

Probability of Matriculation or Refund upon Transition to Payment Status

<u>Years after Qualifying</u>	<u>Matriculation Rate</u>	<u>Refund Rate</u>
<u>Year</u>		
0	75%	25%
1	75%	25%
2	75%	25%
3	75%	25%
4	75%	25%
5	60%	40%
6	50%	50%
7	40%	60%
8	40%	60%
9	40%	60%
10	25%	75%
11	25%	75%
12	25%	75%
13	25%	75%
14	25%	75%
15	0%	100%

Utilization of Benefits (applies only to members who have not begun utilizing benefits)

Beneficiaries are assumed to use the benefits as defined in the contract beginning in their qualifying year and subsequently according to the following schedule:

<u>Distribution of Benefit Utilization</u>				
<u>Number of Years Since Benefit Utilization Begins</u>	<u>Number of Years Purchased</u>			
	<u>0 - 1</u>	<u>1 - 2</u>	<u>2 - 3</u>	<u>More Than 3</u>
1	67%	33%	22%	17%
2	22%	33%	22%	17%
3	11%	20%	22%	17%
4		7%	17%	17%
5		7%	10%	17%
6			4%	7%
7			3%	5%
8				2%
9				2%



Utilization of Benefits (applies only to members who have begun utilizing benefits)

Once a beneficiary has begun using benefits, it is assumed that beneficiaries will utilize 20 credits per year until benefits are fully depleted.

If the contract beneficiary has matriculated, but the contract beneficiary has not used credits within the past year, the matriculation rates, refund rates and benefit utilization rates that apply to members who have not yet matriculated are assumed.

Contract Terminations

Refund Type	Refund	Amount of Refund - Full or Limited Benefits	Amount of Refund - Community College Benefits	Termination Code and Code Description	Distribution of Contract Termination		
					Full Benefits	Limited Benefits	Community College Benefits
1	Weighted Average Tuition	\$ 16,024	\$ 4,364	1 - Attend Mich. Independent college direct refund to college	28.0%	34.0%	17.0%
2	Average Tuition*	\$ 15,613	\$ 4,809	2 - Attend out of state college - direct refund to college 4 - Full scholarship	58.0%	35.0%	13.0%
3	Lowest Tuition	\$ 13,046	\$ 3,410	3 - Attend Mich. Independent or out of state college - direct refund to designee 5 - Will not attend college 10 - Other (military)	11.0%	22.0%	5.0%
4	Lowest Tuition	\$ 13,046	N/A	7 - Purchase full or limited benefit, but attend community college	3.0%	9.0%	0.0%
5	Community College WAT	N/A	\$ 4,364	8 - Purchase community college, but attend 4-year public college	0.0%	0.0%	65.0%
6	Lowest Tuition	\$ 13,046	\$ 3,410	6 - Death or disability	0.0%	0.0%	0.0%
Average Refund					\$ 15,369	\$ 14,957	\$ 4,374

*Not applicable to Limited Benefits Contracts.

The Weighted Average Tuition and Fees used in the actuarial soundness valuation are based on preliminary tuition and fees for 2022/2023.

Refunds are paid out in accordance with the contract provisions over a period of four years for full and limited benefit contracts and two years for community college contracts.

Mortality and Disability

No assumption is made for death or disability. Valuing the rate of incidence is expected to be immaterial.



SECTION F

PLAN PROVISIONS

Plan Provisions

A. Issue Years: 1995, 1997, 1998, 1999, 2000, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, and 2022.

B. Benefit Provisions

1. Full Benefits Plan

- | | |
|-----------------------------------|---|
| a. Michigan Public 4-Year College | Full benefits plan provides for tuition and mandatory fees for the number of years specified in the contract, from one to five years. |
| b. Community College | If the beneficiary elects to attend a community college, MET will pay the community college tuition cost or the lowest university tuition cost, depending on the options selected by the beneficiary. |
| c. Michigan Independent College | If the beneficiary elects to attend a Michigan independent college, the contract may be terminated and MET will pay tuition to the independent college based on the weighted average tuition cost. If the payment is not made to the college, the amount will be based on the lowest tuition. |
| d. Out-of-State College | If the beneficiary elects to attend an out-of-state college, the contract may be terminated and MET will pay to the college four annual installments based on the average tuition cost. If payment is not made to the college, the amount will be based on the lowest tuition. |
| e. Full Scholarship | If the beneficiary receives a full scholarship, the contract may be terminated and MET will pay four annual installments based on the average tuition cost. |
| f. Death or Disability | If the beneficiary dies or has a disability which renders the beneficiary incapable of attending college, the contract may be terminated and MET will pay one installment based on the lowest tuition cost. |
| g. No College | If the beneficiary does not attend college, the contract may be terminated and MET will pay four annual installments based on the lowest tuition cost. |

Plan Provisions (Continued)

2. Limited Benefits Plan

- a. Michigan Public 4-Year College
Limited benefits plan provides for tuition and mandatory fees for the number of years specified in the contract, from one to four years not to exceed 105% of the WAT. However, if tuition and mandatory fees exceed 105% of the WAT, the beneficiary is provided a reduced number of credit hours.
- b. Community College
If the beneficiary elects to attend a community college, MET will pay the community college tuition cost or the lowest university tuition cost, depending on options selected by the beneficiary.
- c. Michigan Independent College
If the beneficiary elects to attend a Michigan independent college, the contract may be terminated and MET will provide funds to the independent college based on the weighted average tuition at the colleges with tuition less than 105% of the weighted average tuition. If payment is not made to the college, the amount will be based on the lowest tuition.
- d. Out-of-State College
If the beneficiary elects to attend an out-of-state college, the contract may be terminated and MET will pay four annual installments based on the lowest tuition cost.
- e. Full Scholarship
If the beneficiary receives a full scholarship, the contract may be terminated and MET will pay four annual installments based on the lowest tuition cost.
- f. Death or Disability
If the beneficiary dies or has a disability which renders the beneficiary incapable of attending college, the contract may be terminated and MET will pay one installment based on the lowest tuition cost.
- g. No College
If the beneficiary does not attend college, the contract may be terminated and MET will pay four annual installments based on the lowest tuition cost.

Plan Provisions (Continued)

3. Community College Plan

- a. Community College
Community college plan provides for tuition and mandatory fees for the number of years specified in the contract, from one to two years.
- b. Other Michigan College
If the beneficiary elects to attend a Michigan four-year public college or a Michigan independent college, the contract may be terminated and MET will pay tuition to the college in two annual installments as needed based on the community college weighted average tuition cost in the year prior to the contract termination.
- c. Out-of-State College
If the beneficiary elects to attend an out-of-state college, the contract may be terminated and MET will pay to the college two annual installments based on the community college average tuition cost. If payment is not made to the college, the amount will be based on the lowest tuition.
- d. Full Scholarship
If the beneficiary receives a full scholarship, the contract may be terminated and MET will pay two annual installments based on the community college average tuition cost.
- e. Death or Disability
If the beneficiary dies or has a disability which renders the beneficiary incapable of attending college, the contract may be terminated and MET will pay one installment based on the community college lowest tuition cost.
- f. No College
If the beneficiary does not attend college, the contract may be terminated and MET will pay two annual installments based on the community college lowest tuition cost.

C. Transferability

If the contract is transferred to an older beneficiary, MET may charge additional costs, which include a transfer fee, the cost differential between beneficiary ages/grades and MET's loss of investment income. If the older beneficiary accepts the academic year of the original beneficiary, the additional cost can be waived.

Plan Provisions (Concluded)

D. Monthly Purchase

The purchaser of a monthly purchase contract purchases a percent of educational benefits with every monthly purchase amount which is received by MET. A purchaser may choose to make monthly payments over 4, 7, 10 or 15 years.

E. Mandatory Fees for Contracts Sold during and after the 2012/2013 Enrollment Period

For contracts sold during and after the 2012/2013 enrollment period, the mandatory fees paid cannot exceed the 2012 rate charged by the Public Educational Institutions. On November 14, 2019, the MET Board Resolution 2019-12 (mandatory fees) resolved to allow purchasers and MET to amend certain previously purchased MET contracts (2013-2019) upon purchaser's formal request and with MET entering into the appropriate contract amendment. This amendment will allow for remove of the cap limiting Mandatory fees.

F. Pay-As-You-Go

The Pay-As-You-Go purchase option allows contracts to be purchased by the credit hour rather than in semester increments. Contracts can be opened by purchasing a minimum of one credit hour. Once a contract is opened additional contributions can be made at any time, in any amount \$25 or greater. Every time a contribution is made credits, or fraction of credits, are purchased based upon the prices in effect at that time.