

Michigan Education Trust – Plans B and C

Actuarial Soundness Valuation Report as of
September 30, 2017



December 4, 2017

Ms. Robin Lott
Executive Director
Michigan Education Trust
430 W. Allegan Street
P.O. Box 30198
Lansing, MI 48933

Re: Michigan Education Trust – Plans B and C Actuarial Valuation as of September 30, 2017

Dear Ms. Lott:

Gabriel, Roeder, Smith & Company (“GRS”) has performed an actuarial soundness valuation of the Michigan Education Trust - Plans B and C (“MET”) as of September 30, 2017. 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, 2017. This report presents the principal results of the actuarial valuation of MET including the following:

- A comparison of the actuarial present value of the obligations for prepaid tuition contracts purchased through September 30, 2017, 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. GRS is not responsible for unauthorized use of this report. 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. 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, 2017, and does not reflect subsequent market changes. Furthermore, we are not aware of any program changes subsequent to September 30, 2017.

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, 2010 to September 30, 2013, and were adopted for use commencing with the September 30, 2014, valuation. Effective with the previous valuation, 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 that have not yet matriculated are assumed.

Given the current asset allocation and liquidity requirements, the net investment rate of return assumption of 2.21 percent appears to be reasonable.

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 - Plans B and C as of September 30, 2017. All calculations have been made in conformity with generally accepted actuarial principles and practices commonly applicable to similar types of arrangements.

Paul T. Wood is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions herein.



Ms. Robin Lott
Michigan Education Trust - Plans B and C
December 4, 2017
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The signing individuals are independent of MET.

Respectfully submitted,

A handwritten signature in black ink that reads "Paul T. Wood". The signature is written in a cursive style with a large initial "P".

Paul T. Wood, ASA, MAAA, FCA
Consultant

A handwritten signature in black ink that reads "Kenneth G. Alberts". The signature is written in a cursive style with a large initial "K".

Kenneth G. Alberts
Consultant

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SECTION A

EXECUTIVE SUMMARY

Summary of Results

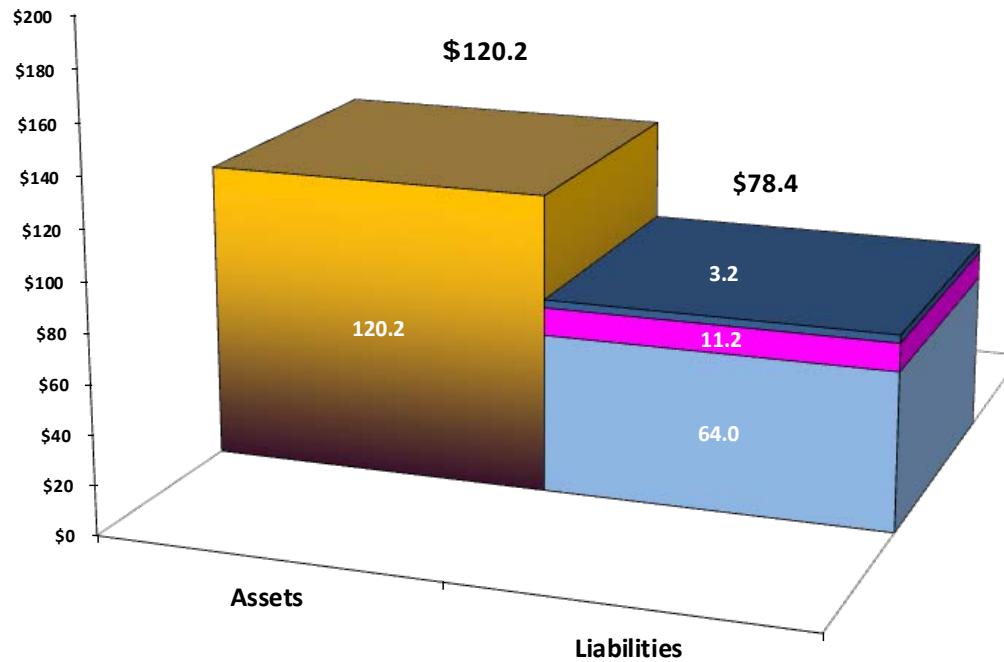
Principal Valuation Results

Valuation Date:	Plan B	Plan C	Plans B and C Combined
	September 30, 2017	September 30, 2017	September 30, 2017
Contract Summary:			
Counts			
Not yet in Payment Status	1,370	55	1,425
In Payment Status or Termination in Progress*	<u>3,091</u>	<u>65</u>	<u>3,156</u>
Total	4,461	120	4,581
Average Years until Enrollment if not yet in Payment Status or Not Using Contract	4.7	4.7	4.7
Assets			
Valuation Assets (Market Value)	\$ 119,065,988	\$ 1,144,121	\$ 120,210,109
Approximate Return on MVA for Year Ended September 30, 2017			1.43%
Actuarial Liabilities (Present Value of Future Tuition Payments, Fees, and Administrative Expenses)	\$ 77,704,946	\$ 656,820	\$ 78,361,766
Surplus/(Deficit)	\$ 41,361,042	\$ 487,301	\$ 41,848,343
Funded Ratio	153.2%	174.2%	153.4%

*Counts include 2,040 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, 2017

Michigan Education Trust - Plans B and C (\$ in Millions)



ASSETS

Net Market Value of Assets

LIABILITIES

PV Administrative Fees

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, 2017

	September 30, 2017
Actuarial Present Value of Future Tuition Payments, Fees and Expenses	\$ 78,361,766
Market Value of Assets	\$120,210,109
Surplus/(Deficit) as of September 30, 2017	\$ 41,848,343

Gain/Loss Summary

	Surplus/(Deficit)
(1.) Value at September 30, 2016	\$ 34,478,246
Contributions/Miscellaneous Income	\$ -
Benefit Payments	\$ -
(2.) Interest on (1.) at Assumed Rate from Previous Valuation	\$ 465,457
(3.) Projected Value at September 30, 2017 [(1.) + (2.)]	\$ 34,943,702
(4.) Change Due to:	
a. Asset Experience	\$ 152,471
b. Tuition/Fee Inflation	\$ 2,100,952
c. Assumption Changes	\$ 4,559,530
d. Other Experience	\$ 91,688
(5.) Total [(4.)a. + (4.)b. + (4.)c. + (4.)d.]	\$ 6,904,641
(6.) Actual Value at September 30, 2017 [(3.) + (5.)]	\$ 41,848,343

Discussion

Actuarial Valuation

Gabriel, Roeder, Smith & Company (“GRS”) has performed an actuarial soundness valuation of the Michigan Education Trust – Plans B and C (“MET”) as of September 30, 2017.

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, 2017, 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 risk. 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, in the 2017/2018 school year:

- If a student with a four-year Limited Benefits Plan contract attends the University of Michigan-Ann Arbor, MET will pay for 107 credit hours.
- If a student attends Michigan Technological University, MET will pay for 108 credit hours.
- If a student attends Michigan State University, MET will pay for 110 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.

MET Plans B and C are closed to new entrants.

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, 2010 to September 30, 2013, and were adopted for use commencing with the September 30, 2014, actuarial soundness valuation. The major actuarial assumptions used in this analysis were provided by and are the responsibility of MET.

In the previous actuarial soundness valuation as of September 30, 2016, a discount rate assumption of 1.35 percent and a tuition increase assumption of 7.1 percent for the first two years, 5.75 percent for the second year, 5.0 percent for the third year, and 4.5 percent thereafter 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, 2017, are as follows:

- Discount Rate: 2.21 percent.
- Tuition Increase Assumption: 7.1 percent for the first year, 5.75 percent for the second year, 5.0 percent for the third year and 4.5 percent thereafter.

In summary, the discount rate was increased from 1.35 percent to 2.21 percent and the tuition increase assumption was unchanged for respective future calendar years.

The MET Board approved these assumptions for use in the September 30, 2017, actuarial soundness valuation at its August 3, 2017 meeting. The impact of the change in assumptions is shown in Exhibit II on page B-3.

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, 2017, the present value of all future tuition obligations under contracts outstanding (and including estimated future administrative expenses) at that date is \$78.4 million. Fund assets as of September 30, 2017, including only the market value of program assets, are \$120.2 million.

The difference between the market value of assets of \$120.2 million and program obligations of \$78.4 million represents a program surplus of \$41.8 million. The comparable program surplus as of the last actuarial soundness valuation as of September 30, 2016, was \$34.5 million.

Under the approved assumptions, the program is 153.4 percent funded and is expected to pay all contracted benefits.

Gain/Loss Analysis

As previously described, the program surplus increased from \$34.5 million as of September 30, 2016, to \$41.8 million as of September 30, 2017. Favorable investment returns, lower than expected tuition increases, and the change in discount rate contributed to the increase in the surplus.

Benefit Provisions

We understand there were no changes in the program provisions since the last actuarial valuation as of September 30, 2016.

Assets

MET assets are held in trust. MET provided the asset information used in the September 30, 2017 actuarial 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 actuarial soundness valuation date to the current valuation date.

SECTION B

ACTUARIAL SOUNDNESS VALUATION RESULTS

Exhibit I
Principal Valuation Results as of September 30,

	<u>2017</u>	<u>2016</u>
1. Number of Contracts		
a. Not yet in Payment Status:	1,425	1,459
b. In Payment Status or Termination in Progress:*	3,156	3,880
c. Total	<u>4,581</u>	<u>5,339</u>
 Average Years until Enrollment if Not Yet In Payment Status	 4.7	 4.5
2. Assets		
a. Market Value of Assets (in Trust)	\$ 120,210,109	\$ 127,124,597
b. PV Future Contract Contributions	-	-
c. Total Market Value of Assets (MVA)	<u>\$ 120,210,109</u>	<u>\$ 127,124,597</u>
3. Actuarial Results		
Liabilities - Tuition and Fees		
a. Not yet in Payment Status or Not Using Contract:	\$ 63,941,274	\$ 75,361,430
b. In Payment Status or Termination in Progress:	<u>11,218,262</u>	<u>14,234,479</u>
c. Total	\$ 75,159,536	\$ 89,595,909
 Liabilities - Present Value of Future Administrative Expenses	 \$ 3,202,230	 \$ 3,050,443
 Liabilities Total	 \$ 78,361,766	 \$ 92,646,352
 Surplus/(Deficit)	 \$ 41,848,343	 \$ 34,478,245
 Funded Ratio	 153.4%	 137.2%

*Counts for 2017 include 2,040 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)

	<u>2017</u>	<u>2016</u>
1. Market Value of Assets (in Trust)	\$ 120,210,109	\$ 127,124,597
2. Actuarial Present Value of Tuition, Fees and Admin Expenses		
a. Short Term ^a	\$ 8,504,176	\$ 10,115,110
b. Long Term ^b	\$ 69,857,590	\$ 82,531,242
c. Total	<u>\$ 78,361,766</u>	<u>\$ 92,646,352</u>
Surplus/(Deficit)	\$ 41,848,343	\$ 34,478,245
Funded Ratio	153.4%	137.2%

^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	Valuation Assets	Surplus/(Deficit)
(1.) Values at September 30, 2016	\$ 92,646,352	\$ 127,124,598	\$ 34,478,246
(2.) Contributions/Miscellaneous Income	\$ -	\$ -	\$ -
(3.) Benefit Payments and Administrative Expenses	\$ (8,724,448)	\$ (8,724,448)	\$ -
(4.) Interest on (1.), (2.), and (3.) at Assumed Rate from Previous Valuation	\$ 1,192,032	\$ 1,657,489	\$ 465,457
(5.) Projected Values at September 30, 2017 [(1.) + (2.) + (3.) + (4.)]	\$ 85,113,936	\$ 120,057,638	\$ 34,943,702
(6.) Change Due to:			
a. Asset Experience	\$ -	\$ 152,471	\$ 152,471
b. Tuition/Fee Inflation	\$ (2,100,952)	\$ -	\$ 2,100,952
c. Assumption Changes	\$ (4,559,530)	\$ -	\$ 4,559,530
d. Other Experience	\$ (91,688)	\$ -	\$ 91,688
(7.) Total [(6.)a. + (6.)b. + (6.)c. + (6.)d.]	\$ (6,752,170)	\$ 152,471	\$ 6,904,641
(8.) Actual Values at September 30, 2017 [(5.) + (7.)]	\$ 78,361,766	\$ 120,210,109	\$ 41,848,343

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 2.21 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 (2.21 percent investment return, 7.1/5.75/5.0/4.5 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 (Continued)
\$ 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	2.21%	2.21%	2.21%	3.21%	1.21%	1.21%	3.21%
Assumed Tuition Increases*	7.1%/4.5%	8.1%/5.5%	6.1%/3.5%	7.1%/4.5%	7.1%/4.5%	8.1%/5.5%	6.1%/3.5%
1 Assets							
a. Market Value of Assets (in Trust)	\$120.2	\$120.2	\$120.2	\$120.2	\$120.2	\$120.2	\$120.2
b. PV Future Contract Contributions	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
c. Total Market Value of Assets (MVA)	\$120.2	\$120.2	\$120.2	\$120.2	\$120.2	\$120.2	\$120.2
2 Actuarial Results							
Liabilities - Tuition and Fees							
a. Not yet in Payment Status or Not Using Contract:	\$ 63.9	\$ 67.9	\$ 60.3	\$ 59.5	\$ 68.9	\$ 73.4	\$ 56.3
b. In Payment Status or Termination in Progress:	\$ 11.2	\$ 11.3	\$ 11.2	\$ 11.1	\$ 11.4	\$ 11.5	\$ 11.0
c. Total	\$ 75.2	\$ 79.2	\$ 71.5	\$ 70.6	\$ 80.3	\$ 84.9	\$ 67.3
Liabilities - PV of Future Admin. Expenses	\$ 3.2	\$ 3.2	\$ 3.2	\$ 3.0	\$ 3.4	\$ 3.4	\$ 3.0
Liabilities Total	\$ 78.4	\$ 82.4	\$ 74.7	\$ 73.6	\$ 83.7	\$ 88.3	\$ 70.3
Surplus/(Deficit)	\$ 41.8	\$ 37.8	\$ 45.5	\$ 46.6	\$ 36.5	\$ 31.9	\$ 49.9
Funded Ratio	153.4%	145.9%	160.9%	163.3%	143.6%	136.1%	171.0%
Difference From Results Based on Current Assumptions							
Surplus	\$ 0.0	\$ (4.0)	\$ 3.7	\$ 4.8	\$ (5.3)	\$ (9.9)	\$ 8.1
Funded Ratio	0.0%	(7.5%)	7.5%	9.9%	(9.8%)	(17.3%)	17.6%

*Graded schedule 7.1% for the first year, 5.75% for the second year, 5.0% for the third year and 4.5% thereafter.

SECTION C

FUND ASSETS

Statement of Plan Assets (Assets at Market Value)

Michigan Education Trust - Plans B and C Statement of Plan Net Assets Year ended September 30, 2017

1. Cash and cash equivalents	\$	6,529,398
2. Investments		
a. Short-term investments	\$	6,992,542
b. Unamortized discount on short-term investments	\$	4,872
c. Bonds	\$	106,791,656
Total investments	\$	113,789,070
3. Deferred Outflows of Resources		
	\$	15,589
4. Receivables		
a. Advances to state general fund	\$	-
b. Interest and dividends receivable	\$	742,381
c. Due from others	\$	-
Total receivables	\$	742,381
5. Liabilities		
a. Due to Plan D	\$	403,088
b. Compensated absences	\$	186,703
c. Pension Liability	\$	273,426
Total liabilities	\$	863,217
6. Deferred Inflows of Resources		
	\$	3,112
5. Net assets = (1) + (2) + (3) + (4) - (5) - (6)	\$	120,210,109

Reconciliation of Plan Assets

Michigan Education Trust - Plans B and C
Statement of Changes in Plan Net Assets
Twelve Month Period ended September 30, 2017

1. Value of assets at beginning of year	\$	127,124,597
2. Changes during year		
a. Additions		
(1) Investment income	\$	2994203.69
(2) Miscellaneous income	\$	55,686
(3) Net gain on sale of security	\$	<u>(6,690)</u>
Total Additions = (1) + (2) + (3)	\$	3,043,199
b. Deductions		
(1) Administrative and other expenses	\$	335,071
(2) Amounts paid under contracts		
(a) Tuition benefits	\$	2,382,367
(b) Termination benefits		
[1] Paid to colleges	\$	773,066
[2] Loan defaults/Death refunds	\$	230,211
[3] Paid to refund designee	\$	<u>5,003,734</u>
Total termination benefits	\$	6,007,012
Total paid under contracts = (a) + (b)	\$	<u>8,389,379</u>
Total Deductions = (1) + (2)	\$	8,724,449
c. Unrealized appreciation (depreciation)	\$	<u>(1,233,238)</u>
Net increases (decreases) during year = a - b + c	\$	<u>(6,914,488)</u>
Net value of assets at end of year = 1 + 2	\$	<u><u>120,210,109</u></u>

Numbers may not add due to rounding.

SECTION D

PARTICIPANT DATA

Historical Summary as of September 30, 2017

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
<u>Number of Contracts</u>					
Full benefits	4,440	5,162	5,907	6,771	7,816
Limited benefits	21	24	30	36	43
Community college	<u>120</u>	<u>153</u>	<u>176</u>	<u>202</u>	<u>230</u>
Total	<u>4,581</u>	<u>5,339</u>	<u>6,113</u>	<u>7,009</u>	<u>8,089</u>
<u>Assets</u>					
Market value	<u>\$120,210,109</u>	<u>\$127,124,597</u>	<u>\$132,608,692</u>	<u>\$141,977,693</u>	<u>\$155,411,599</u>

Contract Data Summary

	Lump Sum			Monthly Purchase			Total
	Full Benefits	Limited Benefits	Community College	Full Benefits	Limited Benefits	Community College	
Total as of 9/30/2016	4,914	24	146	248	0	7	5,339
Adjustment for prior years*	(128)	(1)	(10)	(5)	0	(1)	(145)
New contracts issued	0	0	0	0	0	0	0
Contracts paid in full	<u>(571)</u>	<u>(2)</u>	<u>(22)</u>	<u>(18)</u>	<u>0</u>	<u>0</u>	<u>(613)</u>
Total as of 9/30/2017	<u>4,215</u>	<u>21</u>	<u>114</u>	<u>225</u>	<u>0</u>	<u>6</u>	<u>4,581</u>

To our knowledge, all participants covered by monthly purchases have fully paid their contract obligations.

* Adjustments include the following:

- 42 contracts depleted through transfer
- 367 contracts expired in FY2017
- 19 contracts expired/refunded/depleted in FY2017
- 214 contracts created by transfer
- 10 contracts reinstated from expired or depleted
- 59 contracts reinstated and depleted

Contracts in Payment Status as of September 30, 2017

	Full Benefits Contracts	Limited Benefits Contracts	Community College Contracts	Total
1. Michigan Public 4-Year College				
Central Michigan University	146	0	0	146
Eastern Michigan University	88	0	0	88
Ferris State University	74	0	0	74
Kendall Art & Design of Ferris	0	0	0	0
Grand Valley State University	104	2	0	106
Lake Superior State University	11	0	0	11
Michigan State University	492	0	0	492
Michigan Technological University	54	1	0	55
Northern Michigan University	39	0	0	39
Oakland University	92	0	0	92
Saginaw Valley State University	31	0	0	31
University of Michigan-Dearborn	51	0	0	51
University of Michigan-Flint	25	0	0	25
University of Michigan-Ann Arbor	284	0	0	284
Wayne State University	119	0	0	119
Western Michigan University	<u>130</u>	<u>0</u>	<u>0</u>	<u>130</u>
Total Michigan Public 4-Year College	<u>1,740</u>	<u>3</u>	<u>0</u>	<u>1,743</u>

Contracts in Payment Status as of September 30, 2017 (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	0	0	0	0
Bay De Noc Community College	1	0	0	1
Delta College	10	0	2	12
Glen Oaks Community College	1	0	0	1
Gogebic Community College	0	0	0	0
Grand Rapids Community College	27	1	6	34
Henry Ford Community College	25	0	2	27
Jackson Community College	9	0	5	14
Kalamazoo Valley Community College	12	0	2	14
Kellogg Community College	4	0	1	5
Kirtland Community College	1	0	0	1
Lake Michigan Community College	7	0	1	8
Lansing Community College	59	1	4	64
Macomb County Community College	51	1	8	60
Mid-Michigan Community College	11	0	3	14
Monroe Community College	6	0	0	6
Montcalm Community College	1	0	0	1
Mott Community College	20	1	3	24
Muskegon Community College	3	0	1	4
North Central Michigan College	3	0	0	3
Northwestern Michigan College	17	1	2	20
Oakland Community College	81	0	9	90
Schoolcraft College	57	0	4	61
Southwestern Michigan College	2	0	0	2
St. Clair County Community College	7	0	2	9
Washtenaw Community College	50	0	2	52
Wayne County Community College	18	0	2	20
West Shore Community College	<u>2</u>	<u>0</u>	<u>0</u>	<u>2</u>
Total Michigan Community College	<u>485</u>	<u>5</u>	<u>59</u>	<u>549</u>
Total Active Contracts (1.) + (2.)	<u>2,225</u>	<u>8</u>	<u>59</u>	<u>2,292</u>

Contracts in Payment Status as of September 30, 2017 (Concluded)

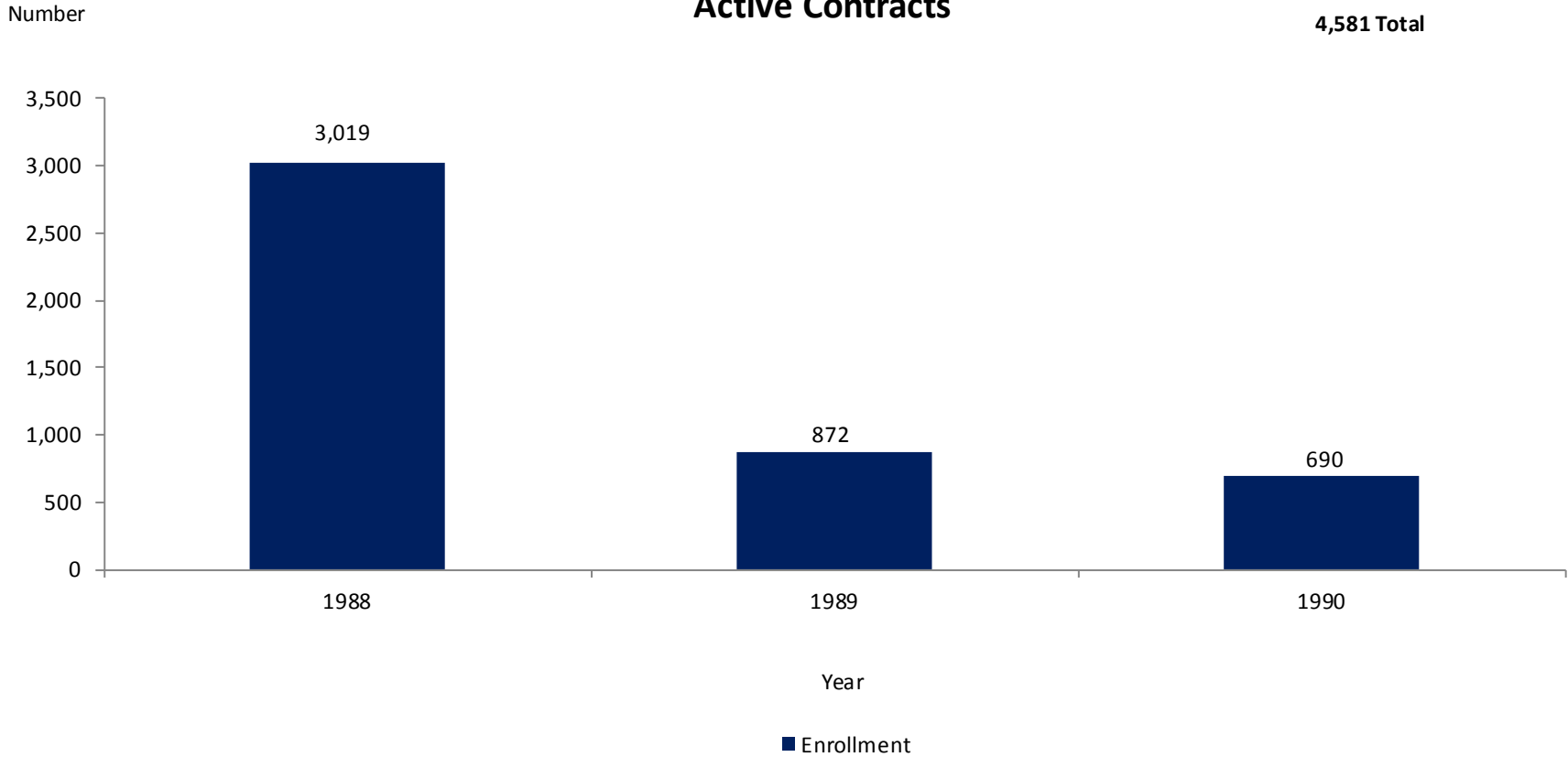
	Full Benefits Contracts	Limited Benefits Contracts	Community College Contracts	Total
3. Terminations in Progress				
Reason:				
Michigan Independent College	90	0	2	92
Out-of-State/Pay College	202	0	0	202
Out-of-State/Pay Refund Designee	9	0	0	9
Full Scholarship	7	0	1	8
Not Attending College	166	0	0	166
Attending Community College with Full/Limited Benefits Contract	71	1	0	72
Attending 4-year College with Community College Contract	0	0	3	3
Other (Military)	<u>2</u>	<u>0</u>	<u>0</u>	<u>2</u>
Total Terminations in Progress	<u>547</u>	<u>1</u>	<u>6</u>	<u>554</u>
4. Inactive Students	<u>308</u>	<u>2</u>	<u>0</u>	<u>310</u>
Grand Total, Contracts in Payment Status (1.) + (2.) + (3.) + (4.)*	<u>3,080</u>	<u>11</u>	<u>65</u>	<u>3,156</u>
5. Not Yet in Payment Status	<u>1,360</u>	<u>10</u>	<u>55</u>	<u>1,425</u>
Grand Total, Active Contracts (1.) + (2.) + (3.) + (4.) + (5.)	<u>4,440</u>	<u>21</u>	<u>120</u>	<u>4,581</u>

*Counts for 2017 include 2,040 contracts that are classified as "In Payment Status" but have not used any credits within the past year.

Contracts Paid in Full in the Year Ending September 30, 2017

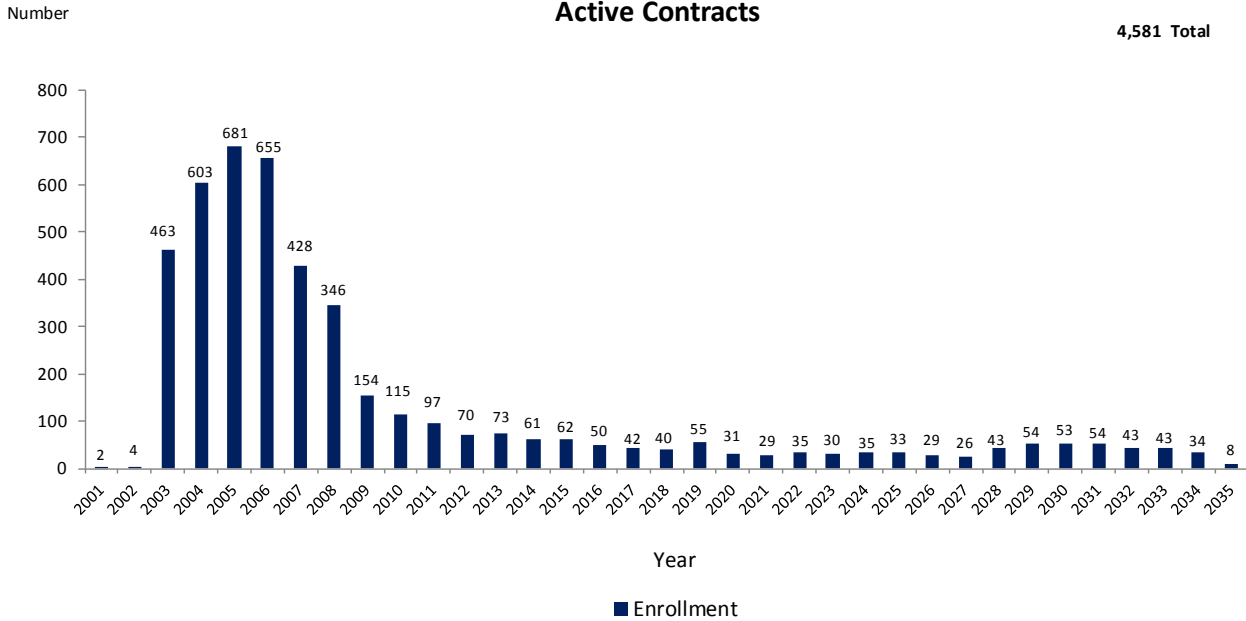
	Lump Sum			Monthly Purchase			Total
	Full Benefits	Limited Benefits	Community College	Full Benefits	Limited Benefits	Community College	
1. Attended Public Colleges	280	2	6	9	0	0	297
2. Terminations							
Michigan Independent College	30	0	0	1	0	0	31
Out-of-State/Pay College	46	0	1	3	0	0	50
Out-of-State/Pay Refund Designee	10	0	0	0	0	0	10
Full Scholarship	9	0	0	0	0	0	9
Not Attending College	169	0	14	5	0	0	188
Disability/Death	8	0	0	0	0	0	8
Attending Community College with Full/Limited Benefits Contract	18	0	0	0	0	0	18
Attending 4-year College with Community College Contract	0	0	1	0	0	0	1
Other (Military)	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>
Total Terminations	<u>291</u>	<u>0</u>	<u>16</u>	<u>9</u>	<u>0</u>	<u>0</u>	<u>316</u>
Total Contracts Paid in Full	<u>571</u>	<u>2</u>	<u>22</u>	<u>18</u>	<u>0</u>	<u>0</u>	<u>613</u>

Michigan Education Trust - Plans B and C Counts by Enrollment Year Active Contracts



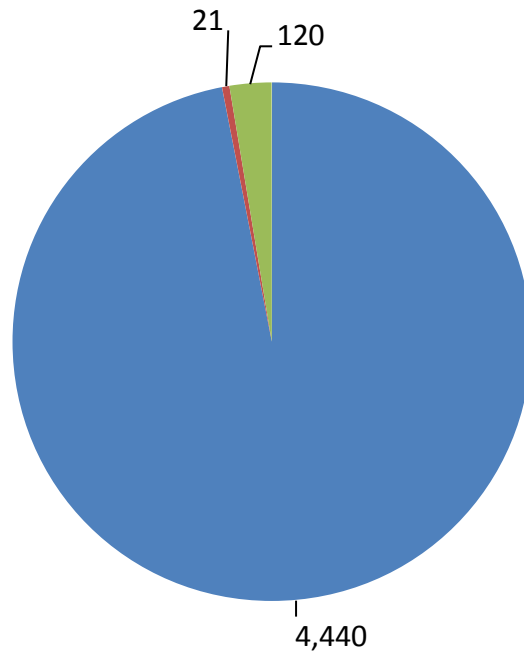
Michigan Education - Plans B and C Counts by Qualifying Year Active Contracts

4,581 Total



Michigan Education Trust - Plans B and C Counts by Contract Type Active Contracts

4,581 Total



■ Full Benefits Contract ■ Limited Benefits Contract ■ Community College Contract

SECTION E

ACTUARIAL SOUNDNESS VALUATION METHODS & ASSUMPTIONS

Valuation Methods and Assumptions

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

Measurement Date: September 30, 2017

The net investment return rate: 2.21 percent per annum, compounded annually

Weighted Average Tuition and Increases by Contract Type

	<u>Four-Year Public College</u>	<u>Community College</u>
Weighted Average Tuition and Fees	\$13,980	\$3,807
Average Tuition and Fees	\$13,372	\$4,142
Lowest Tuition and Fees	\$10,517	\$2,990
Tuition and Fees Increase Assumption - Year One	7.10%	7.10%
Tuition and Fees Increase Assumption - Year Two	5.75%	5.75%
Tuition and Fees Increase Assumption - Year Three	5.00%	5.00%
Tuition and Fees Increase Assumption - Year Four and Beyond	4.50%	4.50%

The Weighted Average Tuition and Fees used in the actuarial soundness valuation are based on preliminary tuition and fees for 2017/2018.

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 \$4,138,034. 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 Plans B and C in 2017-2018 is \$455,320.

Bias Load

A load of 5.0 percent for 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 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 to account for this.

Future Contract Sales

MET Plans B and C are closed to new entrants.

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:

Years After Qualifying Year	Matriculation and Refund Rate
0	40%
1	60%
2	40%
3	35%
4	25%
5	15%
6	15%
7	10%
8	10%
9	10%
10	10%
11	5%
12	5%
13	5%
14	5%
15	100%

Probability of Matriculation or Refund upon Transition to Payment Status

<u>Years After Qualifying Year</u>	<u>Matriculation Rate</u>	<u>Refund Rate</u>
0	70%	30%
1	95%	5%
2	90%	10%
3	90%	10%
4	75%	25%
5	70%	30%
6	65%	35%
7	60%	40%
8	55%	45%
9	55%	45%
10	45%	55%
11	60%	40%
12	60%	40%
13	60%	40%
14	35%	65%
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</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	\$ 13,980	\$ 3,807	1 - Attend Mich. Independent college direct refund to college	22.0%	12.0%	33.0%
2	Average Tuition*	\$ 13,372	\$ 4,142	2 - Attend out of state college - direct refund to college 4 - Full scholarship	39.0%	21.0%	22.0%
3	Lowest Tuition	\$ 10,517	\$ 2,990	3 - Attend Mich. Independent or out of state college - direct refund to refund designee 5 - Will not attend college 10 - Other (military)	26.0%	38.0%	9.0%
4	Lowest Tuition	\$ 10,517	N/A	7 - Purchase full or limited benefit, but attend community college	13.0%	29.0%	0.0%
5	Community College WAT	N/A	\$ 3,807	8 - Purchase community college, but attend 4-year public college	0.0%	0.0%	36.0%
6	Lowest Tuition	\$ 10,517	\$ 2,990	6 - Death or disability	0.0%	0.0%	0.0%
Average Refund					\$ 12,392	\$ 11,532	\$ 3,807

*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 2017/2018.

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.

Inactive Contracts

Assume that this group will take a refund 15 years after their qualifying year based on projected lowest tuition.

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: 1988, 1989 and 1990

B. Benefit Provisions

1. Full Benefits Plan

- | | |
|--------------------------------------|---|
| a. Michigan Public Four-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 Four-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 (Concluded)

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, up to five 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 (Continued)

D. Loans

If a purchaser defaults on a loan secured by the contract, MET will reimburse the savings institution for the default and will reduce the amount of benefits purchased in proportion to the amount remaining after the payment to the savings institution.

E. 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.