

MICHIGAN EDUCATION TRUST - PLAN D  
ACTUARIAL SOUNDNESS VALUATION REPORT  
AS OF SEPTEMBER 30, 2015

December 8, 2015

Ms. Robin Lott  
Executive Director  
Michigan Education Trust  
P.O. Box 30198  
Lansing, MI 48909

**Re: Michigan Education Trust - Plan D Actuarial Valuation as of September 30, 2015**

Dear Ms. Lott:

Gabriel, Roeder, Smith & Company (“GRS”) has performed an actuarial soundness valuation of the Michigan Education Trust - Plan D (“MET”) as of September 30, 2015. 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, 2015.

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, 2015, 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. This report should not be relied on for any purpose other than the purpose described above.

The 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 otherwise 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, 2015, and does not reflect subsequent market changes.

The 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.

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Michigan Education Trust - Plan D  
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Given the current asset allocation and liquidity requirements, the net investment rate of return assumption of 6.00 percent appears to be consistent with applicable Actuarial Standards of Practice. 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, 2015. All calculations have been made in conformity with generally accepted actuarial principles and practices commonly applicable to similar types of arrangements.

Paul T. Wood and Lance Weiss are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

The signing actuaries are independent of MET.

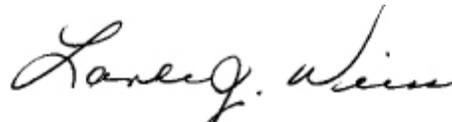
Respectfully submitted,

Gabriel, Roeder, Smith & Company

Sincerely,



Paul T. Wood, A.S.A., M.A.A.A., F.C.A.  
Consultant



Lance Weiss, E.A., M.A.A.A., F.C.A.  
Senior Consultant

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**SECTION A**  
EXECUTIVE SUMMARY

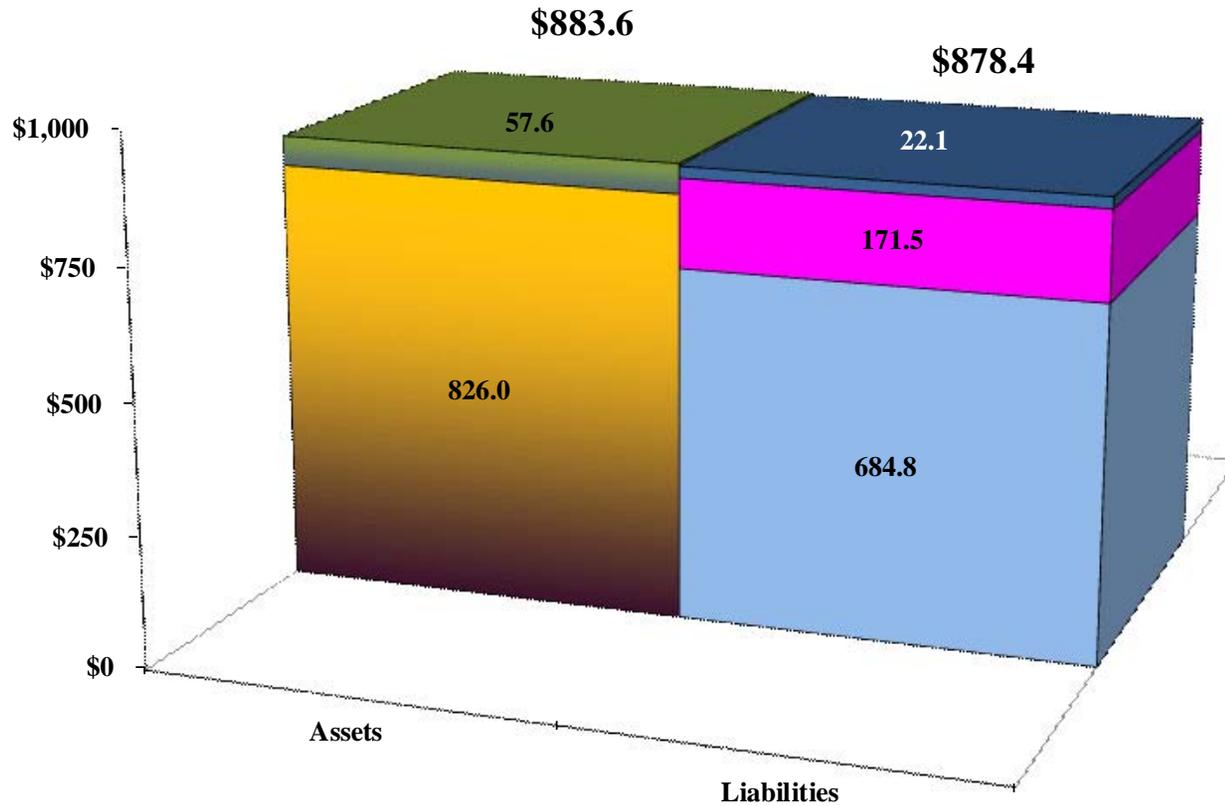
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## SUMMARY OF RESULTS

### Principal Valuation Results

Valuation Date:	September 30, 2015
Contract Summary:	
Counts	
Not yet in Payment Status	28,274
In Payment Status or Termination in Progress	9,141
Total	37,415
Average Years until Enrollment if not yet in Payment Status	7.0
Assets	
· Valuation Assets	\$ 883,583,213
· Approximate Return on MVA for Year Ended September 30, 2015	0.44%
Actuarial Liabilities (Present Value of Future Tuition Payments, Fees, and Administrative Expenses)	\$ 878,404,736
Surplus/(Deficit)	\$ 5,178,477
Funded Ratio	100.6%

**SUMMARY OF ASSETS AND LIABILITIES AS OF SEPTEMBER 30, 2015**  
**Michigan Education Trust - Plan D**  
**(\$ in Millions)**



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)

**Funded Status as of September 30, 2015**

	September 30, 2015
Actuarial Present Value of Future Tuition Payments, Fees and Expenses	\$878,404,736
Market Value of Assets (Including the Present Value of Installment Contract Receivables)	\$883,583,213
Surplus/(Deficit) as of September 30, 2015	\$5,178,477

**Gain/Loss Summary**

	Surplus/(Deficit)
(1.) Value at September 30, 2014	\$ 27,943,920
(2.) Interest on (1.) at Assumed Rate from Previous Valuation	\$ 1,676,636
(3.) New Enrollment Group	\$ 10,669,446
(4.) Projected Value at September 30, 2015 [(1.) + (2.) + (3.)]	\$ 40,290,002
(5.) Change Due to:	
a. Asset Experience	\$ (52,722,134)
b. Tuition/Fee Inflation	29,984,813
c. Assumption Changes	(16,282,658)
d. Other Experience	3,908,454
(6.) Total [(5.)a. + (5.)b. + (5.)c. + (5.)d.]	\$ (35,111,525)
(7.) Actual Value at September 30, 2015 [(4.) + (6.)]	\$ 5,178,477

## 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, 2015.

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, 2015, 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 member 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 lock in future college tuition costs at current prices. 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 2015/2016 school year:

- If a student with a four-year Limited Benefits Plan contract attends the University of Michigan-Ann Arbor, MET will pay for 104 credit hours.
- If a student attends Michigan Technological University, MET will pay for 100 credit hours.
- If a student attends Michigan State 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 four semesters (two 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.

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 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. 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, 2014, a discount rate assumption of 6.0 percent and a tuition increase assumption of 7.1 percent for the first three years 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, 2015, are as follows:

- Discount Rate: 6.0 percent
- Tuition Increase Assumption: 7.1 percent for the first three years and 4.5 percent, thereafter.

In effect, the tuition increase assumption for the initial select period was reset to three years. The MET Board approved these assumptions for use in the September 30, 2015, actuarial soundness valuation at its October 9, 2015, meeting. The impact of the change in the tuition increase assumption is shown in Exhibit II on page 10.

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, 2015, the present value of all future tuition obligations under contracts outstanding (and including estimated future administrative expenses) at that date is \$878.4 million. Fund assets as of September 30, 2015, including the market value of program assets and the present value of installment contract receivables, are \$883.6 million.

The difference between the market value of assets of \$883.6 million and program obligations of \$878.4 million represents a program surplus of \$5.2 million. The comparable program surplus as of the last actuarial valuation as of September 30, 2014, was \$28.0 million.

Under the approved assumptions, the program is 100.6 percent funded and is expected to pay all contracted benefits. It should be noted that new contracts are being offered in 2016 and are intended to be offered in future years.

**Gain/Loss Analysis**

As described above, the program surplus decreased from \$28.0 million as of September 30, 2014, to \$5.2 million as of September 30, 2015. The primary factors which caused the surplus to decrease are changes

in the tuition and fee inflation assumption and unfavorable investment returns due to overall market declines. The decrease in surplus was partially offset by lower tuition and fee increases than expected.

**Benefit Provisions**

We understand there were no changes in program provisions since the last actuarial valuation as of September 30, 2014.

**Assets**

MET assets are held in trust. MET provided the asset information used in the September 30, 2015, 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 valuation date to the current valuation date.

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**SECTION B**  
VALUATION RESULTS

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**Exhibit I**  
**Principal Valuation Results as of September 30,**

	<u>2015</u>	<u>2014</u>
1 Number of Contracts		
a. Not yet in Payment Status:	28,274	29,008
b. In Payment Status or Termination in Progress:	9,141	8,786
c. Total	<u>37,415</u>	<u>37,794</u>
 Average Years until Enrollment if Not Yet In Payment Status	 7.0	 7.2
2 Assets		
a. Market Value of Assets (in Trust)	\$ 826,018,504	\$ 849,961,710
b. PV Future Contract Contributions	57,564,709	62,709,353
c. Total Market Value of Assets (MVA)	<u>\$ 883,583,213</u>	<u>\$ 912,671,063</u>
3 Actuarial Results		
Liabilities - Tuition and Fees		
a. Not yet in Payment Status:	\$ 684,840,349	\$ 697,662,060
b. In Payment Status or Termination in Progress:	171,473,247	165,607,853
c. Total	<u>\$ 856,313,596</u>	<u>\$ 863,269,913</u>
 Liabilities - Present Value of Future Administrative Expenses	 \$ 22,091,140	 \$ 21,457,230
 Liabilities Total	 \$ 878,404,736	 \$ 884,727,143
 Surplus/(Deficit)	 \$ 5,178,477	 \$ 27,943,920
 Funded Ratio	 100.6%	 103.2%

**Exhibit I**  
**Principal Valuation Results as of September 30, (Continued)**

	<u>2015</u>	<u>2014</u>
1 Assets		
a. Market Value of Assets (in Trust)	\$ 826,018,504	\$ 849,961,710
b. PV Future Contract Contributions (Short Term) <sup>a</sup>	12,778,403	14,149,452
c. PV Future Contract Contributions (Long Term) <sup>b</sup>	44,786,306	48,559,901
d. Total Market Value of Assets (MVA)	<u>\$ 883,583,213</u>	<u>\$ 912,671,063</u>
2 Actuarial Present Value of Tuition, Fees and Admin Expenses		
a. Short Term <sup>a</sup>	\$ 84,770,567	\$ 78,035,076
b. Long Term <sup>b</sup>	793,634,169	806,692,067
c. Total	<u>\$ 878,404,736</u>	<u>\$ 884,727,143</u>
Surplus/(Deficit)	\$ 5,178,477	\$ 27,943,920
Funded Ratio	100.6%	103.2%

<sup>a</sup> Present value of amounts in following year.

<sup>b</sup> 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, 2014	\$ 884,727,143	\$ 62,709,353	\$ 849,961,710	\$ 27,943,920
(2.) Contributions/Miscellaneous Income (Not including New Enrollment Group)	\$ -	\$ (12,770,354)	\$ 12,770,354	\$ -
(3.) Benefit Payments	\$ (71,726,354)	\$ -	\$ (71,726,354)	\$ -
(4.) Interest on (1.), (2.), and (3.) at Assumed Rate from Previous Valuation	\$ 50,963,181	\$ 3,385,031	\$ 49,254,786	\$ 1,676,636
(5.) New Enrollment Group	\$ 32,051,375	\$ 9,835,534	\$ 32,885,287	\$ 10,669,446
(6.) Projected Values at September 30, 2015 [(1.) + (2.) + (3.) + (4.) + (5.)]	\$ 896,015,345	\$ 63,159,564	\$ 873,145,783	\$ 40,290,002
(7.) Change Due to:				
a. Asset Experience	\$ -	\$ (5,594,855)	\$ (47,127,279)	\$ (52,722,134)
b. Tuition/Fee Inflation	(29,984,813)	-	-	29,984,813
c. Assumption Changes	16,282,658	-	-	(16,282,658)
d. Other Experience	(3,908,454)	-	-	3,908,454
(8.) Total [(7.)a. + (7.)b. + (7.)c. + (7.)d.]	\$ (17,610,609)	\$ (5,594,855)	\$ (47,127,279)	\$ (35,111,525)
(9.) Actual Values at September 30, 2015 [(6.) + (8.)]	\$ 878,404,736	\$ 57,564,709	\$ 826,018,504	\$ 5,178,477

## 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 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 6.0 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 follow:

1. Current valuation assumptions approved by the MET Board (6.0 percent investment return, 7.1/4.5 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 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	6.00%	6.00%	6.00%	7.00%	5.00%	5.00%	7.00%
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%
<b>1 Assets</b>							
a. Market Value of Assets (in Trust)	\$826.0	\$826.0	\$826.0	\$826.0	\$826.0	\$826.0	\$826.0
b. PV Future Contract Contributions	57.6	57.6	57.6	55.8	59.4	59.4	55.8
c. Total Market Value of Assets (MVA)	\$883.6	\$883.6	\$883.6	\$881.8	\$885.5	\$885.5	\$881.8
<b>2 Actuarial Results</b>							
<b>Liabilities - Tuition and Fees</b>							
a. Not yet in Payment Status:	\$684.8	\$739.0	\$635.7	\$631.9	\$744.4	\$805.2	\$587.8
b. In Payment Status or Termination in Progress:	171.5	173.2	169.8	168.8	174.3	176.0	167.1
c. Total	\$856.3	\$912.1	\$805.5	\$800.7	\$918.7	\$981.2	\$754.9
Liabilities - PV of Future Admin. Expenses	\$22.1	\$22.1	\$22.1	\$21.0	\$23.3	\$23.3	\$21.0
Liabilities Total	\$878.4	\$934.2	\$827.6	\$821.7	\$942.0	\$1,004.5	\$775.9
Surplus/(Deficit)	\$5.2	(\$50.6)	\$56.0	\$60.1	(\$56.5)	(\$119.0)	\$105.9
Funded Ratio	100.6%	94.6%	106.8%	107.4%	94.0%	88.2%	113.6%
<b>Difference From Results Based on Current Assumptions</b>							
Deficit	\$0.0	(\$55.8)	\$50.8	\$54.9	(\$61.7)	(\$124.2)	\$100.7
Funded Ratio	0.0%	(6.0%)	6.2%	6.8%	(6.6%)	(12.4%)	13.0%

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**SECTION C**  
FUND ASSETS

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**STATEMENT OF PLAN ASSETS  
(ASSETS AT MARKET VALUE)**

**Michigan Education Trust - Plan D**

**Statement of Plan Net Assets**

**Year ended September 30, 2015**

1. Cash and cash equivalents	\$	12,130,105
2. Investments		
a. Short-term Investments	\$	68,601,047
b. Unamortized discount on short-term investments		(605,313)
c. Bonds		219,845,884
d. Equity mutual funds		525,058,295
Total investments	\$	812,899,913
3. Receivables		
a. Advances to state general fund	\$	-
b. Interest and dividends receivable		1,566,114
c. Tuition contracts receivable		57,564,709
d. Due from others		3,865,704
Total receivables	\$	62,996,527
4. Deferred Outflows of Resources	\$	472,205
5. Liabilities		
a. Undisbursed charitable tuition	\$	-
b. Pension Liability		1,555,317
c. Due to vendors and contract purchasers		-
d. Due to Plans B&C		3,177,712
Total liabilities	\$	4,733,029
6. Deferred Inflows of Resources	\$	182,508
7. Net assets = (1) + (2) + (3) + (4) - (5) - (6)	\$	883,583,213

## RECONCILIATION OF PLAN ASSETS

### Michigan Education Trust - Plan D Statement of Changes in Plan Net Assets Twelve Month Period ended September 30, 2015

1. Value of assets at beginning of year*	\$ 911,153,884
2. Changes during year	
a. Additions	
(1) Investment income	\$ 22,971,801
(2) Miscellaneous income	1,987,021
(3) Net gain on sale of security	33,629,185
(4) Prepaid tuition of 2015 enrollments	15,252,210
(5) Other contracts receipts	28,416,410
Total Additions = (1) + (2) + (3) + (4) + (5)	\$ 102,256,627
b. Deductions	
(1) Administrative and other expenses	\$ 2,417,534
(2) Amounts paid under contracts	
(a) Tuition benefits	55,050,196
(b) Termination benefits	
[1] Paid to colleges	\$ 9,501,957
[2] Loan defaults/Death refunds	268,321
[3] Paid to refund designee	4,488,346
Total termination benefits	\$ 14,258,624
Total paid under contracts = (a) + (b)	\$ 69,308,820
Total Deductions = (1) + (2)	\$ 71,726,354
c. Unrealized appreciation (depreciation)	\$ (58,100,944)
Net increases (decreases) during year = a - b + c	\$ (27,570,671)
Net value of assets at end of year = 1 + 2	\$ 883,583,213

\*Asset value at beginning of year was restated to \$911,153,884 from \$912,671,063.

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## **SECTION D**

### **PARTICIPANT DATA**

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## HISTORICAL SUMMARY AS OF SEPTEMBER 30, 2015

	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>
<b><u>Number of Contracts</u></b>					
<b>Lump Sum</b>					
Full benefits	19,081	19,261	19,335	19,312	18,800
Limited benefits	5,219	5,226	5,155	5,020	4,739
Community college	2,169	2,184	1,781	1,753	1,689
<b>Monthly Purchase</b>					
Full benefits	6,882	7,070	7,208	7,244	7,122
Limited benefits	2,327	2,356	2,369	2,356	2,256
Community college	<u>1,737</u>	<u>1,697</u>	<u>1,684</u>	<u>1,626</u>	<u>1,577</u>
<b>Total</b>	<b><u>37,415</u></b>	<b><u>37,794</u></b>	<b><u>37,532</u></b>	<b><u>37,311</u></b>	<b><u>36,183</u></b>
<b><u>Assets</u></b>					
Market value	<b><u>\$883,583,213</u></b>	<b><u>\$912,671,063</u></b>	<b><u>\$852,104,885</u></b>	<b><u>\$776,197,668</u></b>	<b><u>\$648,318,540</u></b>

## CONTRACT DATA SUMMARY

	Lump Sum			Monthly Purchase			Total
	<u>Full Benefits</u>	<u>Limited Benefits</u>	<u>Community College</u>	<u>Full Benefits</u>	<u>Limited Benefits</u>	<u>Community College</u>	
Total as of 9/30/2014	19,261	5,226	2,184	7,070	2,356	1,697	37,794
Adjustment for prior years*	117	26	46	31	19	3	242
New contracts issued	818	300	86	181	83	112	1,580
Contracts paid in full	<u>(1,115)</u>	<u>(333)</u>	<u>(147)</u>	<u>(400)</u>	<u>(131)</u>	<u>(75)</u>	<u>(2,201)</u>
<b>Total as of 9/30/2015</b>	<b><u>19,081</u></b>	<b><u>5,219</u></b>	<b><u>2,169</u></b>	<b><u>6,882</u></b>	<b><u>2,327</u></b>	<b><u>1,737</u></b>	<b><u>37,415</u></b>

\*Adjustments include the following:

- 158 contracts depleted and not included in paid in full, expired in FY2015, or cancelled in FY2015
- 82 contracts depleted in FY2014 included in paid in full
- 6 contracts depleted in FY2014 and reinstated in FY2015
- 58 FY2014 contracts loaded in FY2015
- 254 contracts created by transfer

## CONTRACTS IN PAYMENT STATUS AS OF SEPTEMBER 30, 2015

	<b>Full Benefits Contracts</b>	<b>Limited Benefits Contracts</b>	<b>Community College Contracts</b>	<b>Total</b>
<b>1. Michigan Public 4-Year College</b>				
Central Michigan University	286	121	0	407
Eastern Michigan University	143	53	0	196
Ferris State University	107	41	0	148
Grand Valley State University	374	151	0	525
Lake Superior State University	22	6	0	28
Michigan State University	1,559	336	0	1,895
Michigan Technological University	95	35	0	130
Northern Michigan University	63	16	0	79
Oakland University	247	110	0	357
Saginaw Valley State University	50	25	0	75
University of Michigan-Dearborn	132	33	0	165
University of Michigan-Flint	39	15	0	54
University of Michigan-Ann Arbor	1,568	140	0	1,708
Wayne State University	197	55	0	252
Western Michigan University	<u>232</u>	<u>94</u>	<u>1</u>	<u>327</u>
<b>Total Michigan Public 4-Year College</b>	<b><u>5,114</u></b>	<b><u>1,231</u></b>	<b><u>1</u></b>	<b><u>6,346</u></b>

**CONTRACTS IN PAYMENT STATUS AS OF SEPTEMBER 30, 2015 (CONT'D)**

	<b>Full Benefits Contracts</b>	<b>Limited Benefits Contracts</b>	<b>Community College Contracts</b>	<b>Total</b>
<b>2. Michigan Community College</b>				
Alpena Community College	1	0	4	5
Bay De Noc Community College	1	1	3	5
Delta College	11	3	18	32
Glen Oaks Community College	1	0	2	3
Gogebic Community College	0	0	0	0
Grand Rapids Community College	17	3	27	47
Henry Ford Community College	16	5	15	36
Jackson Community College	6	3	13	22
Kalamazoo Valley Community College	9	5	19	33
Kellogg Community College	1	2	8	11
Kirtland Community College	1	0	2	3
Lake Michigan Community College	8	1	4	13
Lansing Community College	32	15	51	98
Macomb County Community College	28	16	69	113
Mid-Michigan Community College	5	10	2	17
Monroe Community College	5	3	8	16
Montcalm Community College	0	1	1	2
Mott Community College	10	4	20	34
Muskegon Community College	2	1	9	12
North Central Michigan College	6	0	4	10
Northwestern Michigan College	11	3	14	28
Oakland Community College	72	15	47	134
Schoolcraft College	41	19	43	103
Southwestern Michigan College	1	2	4	7
St. Clair County Community College	7	0	27	34
Washtenaw Community College	30	7	25	62
Wayne County Community College	4	1	11	16
West Shore Community College	<u>1</u>	<u>0</u>	<u>3</u>	<u>4</u>
<b>Total Michigan Community College</b>	<b><u>327</u></b>	<b><u>120</u></b>	<b><u>453</u></b>	<b><u>900</u></b>
<b>Total Active Contracts (1.) + (2.)</b>	<b><u>5,441</u></b>	<b><u>1,351</u></b>	<b><u>454</u></b>	<b><u>7,246</u></b>

**CONTRACTS IN PAYMENT STATUS AS OF SEPTEMBER 30, 2015 (CONT'D)**

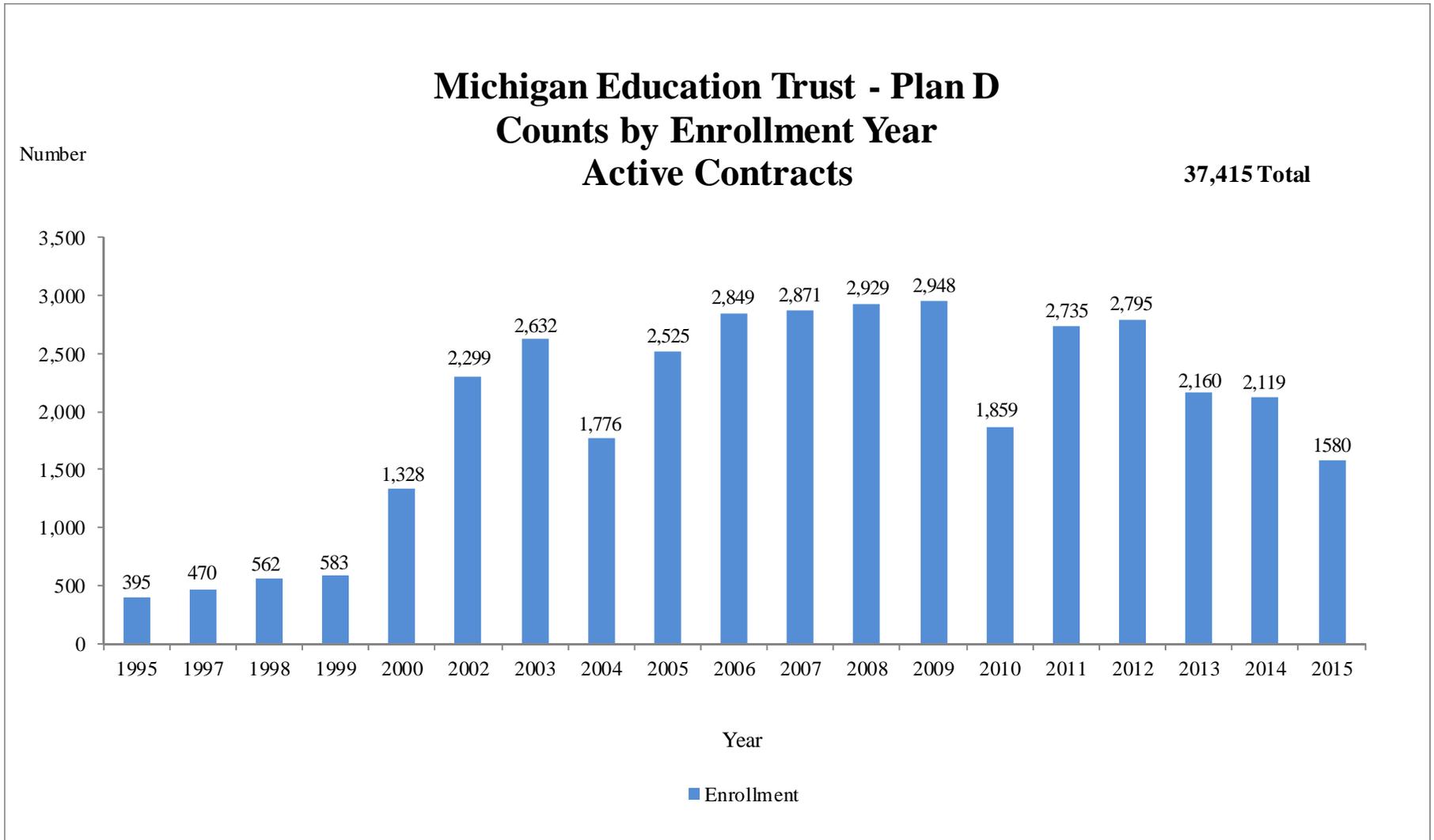
	<b>Full Benefits Contracts</b>	<b>Limited Benefits Contracts</b>	<b>Community College Contracts</b>	<b>Total</b>
<b>3. Terminations in Progress</b>				
Reason:				
Michigan Independent College	331	79	31	441
Out-of-State/Pay College	731	117	23	871
Out-of-State/Pay Refund Designee	29	7	3	39
Full Scholarship	53	14	4	71
Not Attending College	125	49	4	178
Attending Community College with Full/Limited Benefits Contract	50	32	0	82
Attending 4 - year College with Community College Contract	0	0	118	118
Other (Military)	<u>2</u>	<u>3</u>	<u>0</u>	<u>5</u>
<b>Total Terminations in Progress</b>	<b><u>1,321</u></b>	<b><u>301</u></b>	<b><u>183</u></b>	<b><u>1,805</u></b>
<b>4. Inactive Students</b>	<b><u>75</u></b>	<b><u>9</u></b>	<b><u>6</u></b>	<b><u>90</u></b>
<b>Grand Total, Contracts in Payment Status (1.) + (2.) + (3.) + (4.)</b>	<b><u>6,837</u></b>	<b><u>1,661</u></b>	<b><u>643</u></b>	<b><u>9,141</u></b>
<b>5. Not Yet in Payment Status</b>	<b><u>19,126</u></b>	<b><u>5,885</u></b>	<b><u>3,263</u></b>	<b><u>28,274</u></b>
<b>Grand Total, Active Contracts (1.) + (2.) + (3.) + (4.) + (5.)</b>	<b><u>25,963</u></b>	<b><u>7,546</u></b>	<b><u>3,906</u></b>	<b><u>37,415</u></b>

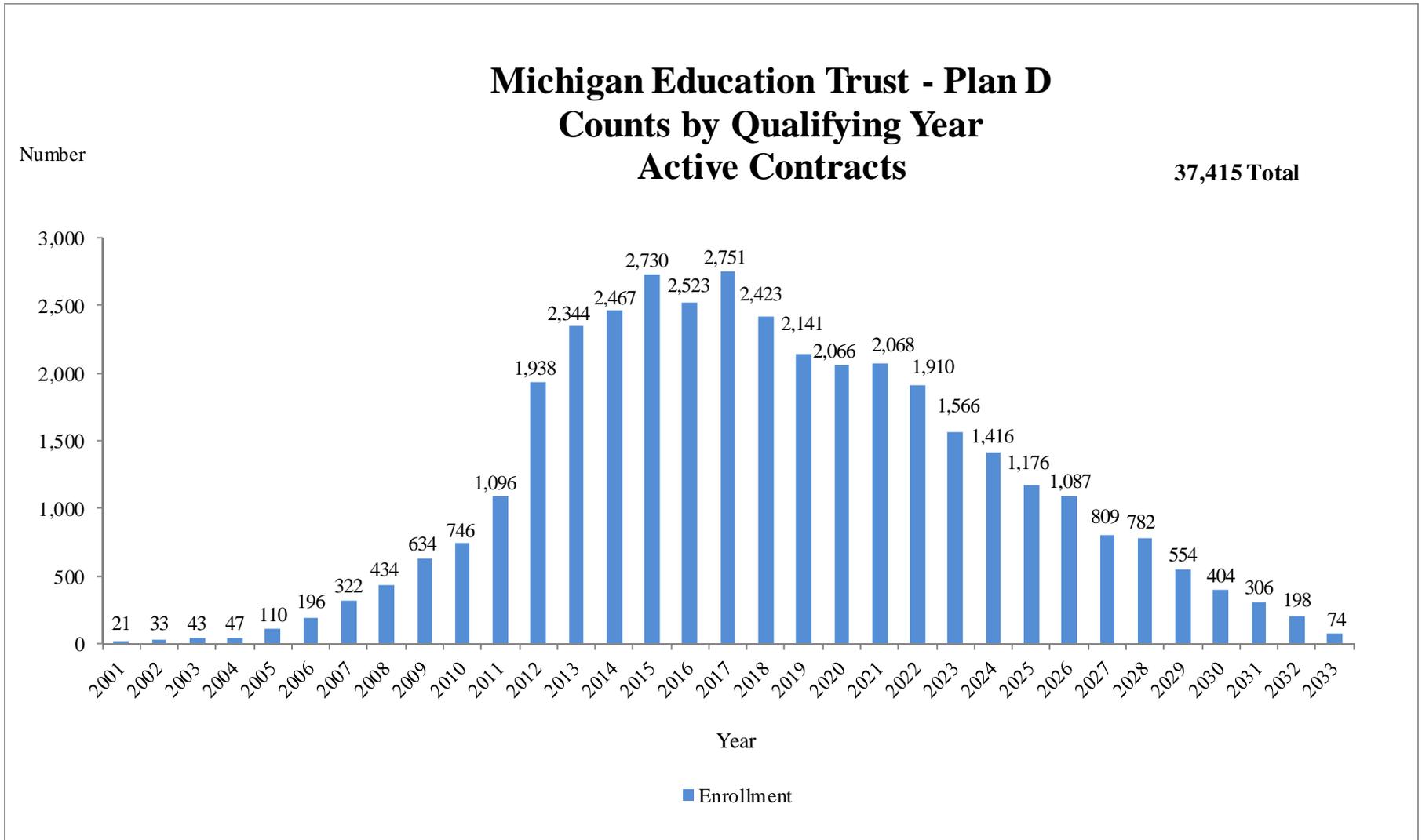
## CONTRACTS PAID IN FULL IN THE YEAR ENDING SEPTEMBER 30, 2015

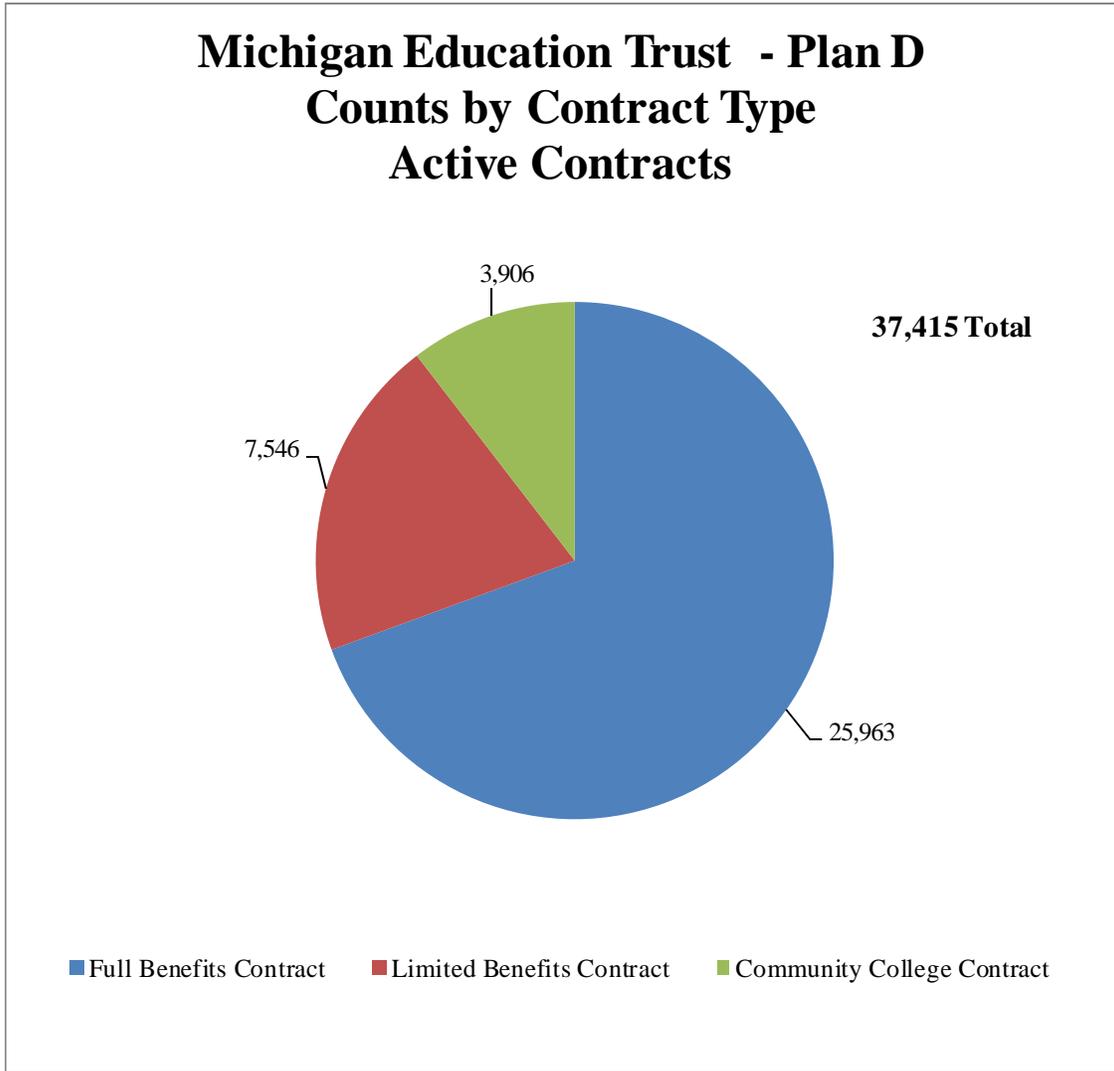
	Lump Sum			Monthly Purchase			Total
	Full Benefits	Limited Benefits	Community College	Full Benefits	Limited Benefits	Community College	
1. Attended Public Colleges	840	251	28	257	89	19	1,484
2. Terminations							
Michigan Independent College	90	37	10	39	7	5	188
Out-of-State/Pay College	111	9	6	53	10	7	196
Out-of-State/Pay Refund Designee	5	6	4	6	4	5	30
Full Scholarship	21	2	1	7	0	2	33
Not Attending College	31	18	8	21	16	14	108
Disability/Death	8	2	0	1	0	1	12
Attending Community College with Full/Limited Benefits Contract	7	6	0	10	1	0	24
Attending 4- year College with Community College Contract	1	0	90	5	3	20	119
Other (Military)	<u>1</u>	<u>2</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>7</u>
Total Terminations	<u>275</u>	<u>82</u>	<u>119</u>	<u>143</u>	<u>42</u>	<u>56</u>	<u>717</u>
<b>Total Contracts Paid in Full</b>	<b><u>1,115</u></b>	<b><u>333</u></b>	<b><u>147</u></b>	<b><u>400</u></b>	<b><u>131</u></b>	<b><u>75</u></b>	<b><u>2,201</u></b>

**ACTIVE MONTHLY PURCHASE CONTRACTS**

	<b><u>Full Benefits</u></b>	<b><u>Limited Benefits</u></b>	<b><u>Community College</u></b>	<b><u>Total</u></b>
Active Purchasers as of 9/30/2014	2,256	975	729	3,960
Adjustment for prior years	(23)	8	0	(15)
Contracts issued in 2015	181	83	112	376
Purchases completed	(347)	(148)	(74)	(569)
Discontinued	<u>(38)</u>	<u>(17)</u>	<u>(5)</u>	<u>(60)</u>
Active Purchasers as of 9/30/2015	<b><u>2,029</u></b>	<b><u>901</u></b>	<b><u>762</u></b>	<b><u>3,692</u></b>







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## **SECTION E**

### **METHODS & ASSUMPTIONS**

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## VALUATION METHODS AND ASSUMPTIONS

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

*Measurement Date*     September 30, 2015

*The net investment return rate*     6.0 percent per annum, compounded annually

### *Weighted Average Tuition and Increases by Contract Type*

	Four Year Public College	Community College
Weighted Average Tuition and Fees	\$12,880	\$3,539
Average Tuition and Fees	\$12,320	\$3,798
Lowest Tuition and Fees	\$9,639	\$2,798
Tuition and Fees Increase Assumption - Years One through Three	7.10%	7.10%
Tuition and Fees Increase Assumption - After Year Three	4.50%	4.50%

The Weighted Average Tuition and Fees used in the actuarial soundness valuation are based on preliminary tuition and fees for 2015/2016.

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.

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 and public relations expenses is equal to \$3,400,902. 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 2015-2016 is \$2,923,285. This amount is assumed to increase by 2.5 percent per year. Furthermore, it is assumed that future contract purchases would cover advertising and public relations expenses. Advertising and public relations expenses for 2015-2016 were budgeted to be \$730,000. This amount is also assumed to increase by 2.5 percent per year.

### *Bias Load*

A load of 10.0 percent was added 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 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 to account for this.

***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:

<b>Years After Qualifying Year</b>	<b>Matriculation and Refund Rate</b>
0	40%
1	55%
2	40%
3	40%
4	25%
5	15%
6	15%
7	15%
8	15%
9	20%
10	20%
11	20%
12	20%
13	20%
14	20%
15	100%

***Probability of Matriculation or Refund upon transition to Payment Status***

<b>Years After Qualifying Year</b>	<b>Matriculation Rate</b>	<b>Refund Rate</b>
0	75%	25%
1	90%	10%
2	90%	10%
3	90%	10%
4	75%	25%
5	75%	25%
6	60%	40%
7	75%	25%
8	75%	25%
9	75%	25%
10	75%	25%
11	75%	25%
12	75%	25%
13	75%	25%
14	75%	25%
15	0%	100%

***Utilization of Benefits (applies only to members that 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:

<b>Distribution of Benefit Utilization</b>				
<b>Number of Years Since Benefit Utilization Begins</b>	<b>Number of Years Purchased</b>			
	<b>0 - 1</b>	<b>1 - 2</b>	<b>2 - 3</b>	<b>More than 3</b>
1	75%	38%	25%	19%
2	17%	34%	25%	19%
3	8%	17%	21%	19%
4		6%	14%	19%
5		6%	8%	13%
6			4%	5%
7			2%	4%
8				2%
9				2%

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

Once a beneficiary has begun using benefits, it is assumed that beneficiaries will utilize 22.5 credits per year until benefits are fully depleted.

**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	\$ 12,880	\$ 3,539	1 - Attend Mich. Independent college direct refund to college	28.0%	34.0%	17.0%
2	Average Tuition*	\$ 12,320	\$ 3,798	2 - Attend out of state college - direct refund to college 4 - Full scholarship	58.0%	35.0%	13.0%
3	Lowest Tuition	\$ 9,639	\$ 2,798	3 - Attend Mich. Independent or out of state college - direct refund to refund designee 5 - Will not attend college 10 - Other (military)	11.0%	22.0%	5.0%
4	Lowest Tuition	\$ 9,639	N/A	7 - Purchase full or limited benefit, but attend community college	3.0%	9.0%	0.0%
5	Community College WAT	N/A	\$ 3,539	8 - Purchase community college, but attend 4-yr public college	0.0%	0.0%	65.0%
6	Lowest Tuition	\$ 9,639	\$ 2,798	6 - Death or disability	0.0%	0.0%	0.0%
<b>Average Refund</b>					<b>\$ 12,101</b>	<b>\$ 11,679</b>	<b>\$ 3,536</b>

\*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 2015/2016.

Refunds are paid out in accordance with the contract provisions over a period of 4 years for full and limited benefit contracts and 2 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.

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**SECTION F**  
PLAN PROVISIONS

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## PLAN PROVISIONS

A. Issue Years: 1995, 1997, 1998, 1999, 2000, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014 and 2015.

### 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.  |

**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.

### 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.

**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.