Michigan Education Trust Plan D

Financial Report
with Supplemental Information
September 30, 2018

Contents

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Independent Auditor's Report

To the Board of Directors and
Mr. Doug A. Ringler, CPA, CIA,
Auditor General, State of Michigan
Michigan Education Trust Plan D

Report on the Financial Statements

We have audited the accompanying financial statements of Michigan Education Trust Plan D, a discretely presented component unit of the State of Michigan, as of and for the years ended September 30, 2018 and 2017 and the related notes to the financial statements, which collectively comprise Michigan Education Trust Plan D's basic financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the basic financial statements referred to above present fairly, in all material respects, the respective financial position of Michigan Education Trust Plan D as of September 30, 2018 and 2017 and the respective changes in its financial position and cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

As described in Note 10 to the financial statements, Michigan Education Trust Plan D adopted the provisions of Governmental Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other than Pensions*, which established accounting and financial reporting standards for defined benefit OPEB plans provided to the employees of governmental employers. Our opinion is not modified with respect to this matter.

To the Board of Directors and
Mr. Doug A. Ringler, CPA, CIA,
Auditor General, State of Michigan
Michigan Education Trust Plan D

As described in Note 4 to the financial statements, Michigan Education Trust Plan D holds investments valued at approximately $422.7 million (41.7 percent of assets) at September 30, 2018 and $355.5 million (35.5 percent of assets) at September 30, 2017, whose fair values have been estimated by management in the absence of readily determinable market values. Management's estimates are based on information provided by the fund managers of the limited partnerships. Our opinion is not modified with respect to this matter.

As described in Note 1 to the financial statements, the financial statements present only Michigan Education Trust Plan D. Accordingly, these financial statements do not purport to, and do not, present fairly the financial position and changes in financial position and, where applicable, cash flows of the State of Michigan or its component units, Michigan Education Trust as a whole, or Michigan Education Trust Plans B & C as of and for the years ended September 30, 2018 and 2017 in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Required Supplemental Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the schedule of the trust's proportionate share of net pension liability, the schedule of the trust's contributions, the schedule of the trust's proportionate share of the net OPEB liability related to life insurance, the schedule of the trust's proportionate share of the net OPEB liability related to healthcare, the schedule of the trust's proportionate share of the total OPEB liability, and the note to the required supplemental information, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplemental information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated January 15, 2019 on our consideration of Michigan Education Trust Plan D's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Michigan Education Trust Plan D's internal control over financial reporting and compliance.

Plante & Moran, PLLC

January 15, 2019

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Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

Independent Auditor's Report

To Management, the Board of Directors, and
Mr. Doug A. Ringler, CPA, CIA,
Auditor General, State of Michigan
Michigan Education Trust Plan D

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Michigan Education Trust Plan D, a discretely presented component unit of the State of Michigan, as of and for the year ended September 30, 2018, which collectively comprise Michigan Education Trust Plan D's basic financial statements, and have issued our report thereon dated January 15, 2019.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered Michigan Education Trust Plan D's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Michigan Education Trust Plan D's internal control. Accordingly, we do not express an opinion on the effectiveness of Michigan Education Trust Plan D's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of Michigan Education Trust Plan D's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether Michigan Education Trust Plan D's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards.*

To Management, the Board of Directors, and
Mr. Doug A. Ringler, CPA, CIA,
Auditor General, State of Michigan
Michigan Education Trust Plan D

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of Michigan Education Trust Plan D's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Michigan Education Trust Plan D's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Plante & Moran, PLLC

January 15, 2019

Management's Discussion & Analysis

This is a discussion and analysis of the financial performance of the Michigan Education Trust (MET) Plan D for the fiscal years ended September 30, 2018 and September 30, 2017. MET is an Internal Revenue Code Section 529 qualified tuition program and is a discretely presented component unit of the State of Michigan, administratively located within the Department of Treasury. MET's management is responsible for the financial statements, notes to the financial statements, and this discussion.

Using the Financial Report

This financial report includes the report of independent auditors, management's discussion and analysis, the basic financial statements, and notes to the financial statements.

Generally accepted accounting principles applicable to governments require a statement of net position; a statement of revenues, expenses, and changes in net position; and a statement of cash flows. These financial statements are interrelated and represent the financial status of MET Plan D.

The statement of net position includes the assets, deferred outflows of resources related to pensions, liabilities, deferred inflows of resources related to pensions, and net position at the end of the fiscal year. The statement of revenues, expenses, and changes in net position presents the revenues earned and expenses incurred during the fiscal year. The statement of cash flows presents information related to cash inflows and outflows summarized by operating and investing activities.

Financial Analysis of MET Plan D

The MET Board of Directors approves an annual budget and the investment portfolio allocation. The Bureau of Investments, Department of Treasury, under the direction of the MET Board of Directors, is responsible for short-term and long-term investment of MET funds. The MET portfolio for Plan D may be invested up to 75% in equities with the remainder invested in short-term investments, U.S. government securities and corporate bonds.

MET funds are invested to coincide with the students' expected years of high school graduation. Once students activate their contracts, colleges and universities submit invoices to MET every semester for tuition and mandatory fees. In 2006, the MET Board of Directors approved an amendment allowing students 15 years from the expected year of high school graduation to completely use MET contract benefits. Before that change, students had 9 years to use MET contract benefits.

Annually, the actuary determines the actuarial soundness of each MET plan. Key factors used in the soundness analysis are tuition increases (short-term and long-term), investment performance, and college selection by students and purchasers.

MET Plan D received 1,504 new contracts and $23.5 million in prepaid tuition amounts related to new contracts during fiscal year 2017-18. In fiscal year 2016-17, MET received 1,848 new contracts and $29 million in prepaid tuition amounts related to new contracts.

Comparison of Current Year and Prior Year Results

Condensed Financial Information

From the Statement of Net Position

As of September 30

(In Thousands)

	2018	2017	2016
Current assets	$ 76,895	$ 103,375	$ 69,572
Noncurrent assets	936,010	899,289	870,117
Total assets	$ 1,012,905	$ 1,002,664	$ 939,689
Deferred Outflow Related to Pensions, OPEB Life and Health insurance	$ 474	$ 68	$ 60
Total assets and Deferred Outflows of Resources	$ 1,013,378	$ 1,002,732	$ 939,749
Current liabilities	$ 64,995	$ 72,920	$ 74,449
Noncurrent liabilities	753,238	793,210	806,414
Total liabilities	818,233	866,130	880,863
Deferred Inflows Related to Pensions' OPEB Life and Health insurance	179	(3)	(3)
Total Liabilities and Deferred Inflows	818,412	866,127	880,860
Total net position - Restricted	$ 194,965	$ 136,605	$ 58,890

Total net position increased by $58.4 million in fiscal year 2017-18 and increased by $77.7 million in fiscal year 2016-17.

Total assets increased by $10.3 million in fiscal year 2017-18 and increased by $63 million in fiscal year 2016-17. The increases resulted from favorable investment performance.

Condensed Financial Information

From the Statement of Revenues, Expenses, and Changes in Net Position

Fiscal Years Ended September 30

(In Thousands)

	2018	2017	2016
Operating revenues			
Interest and dividends income	$ 28,925	$ 31,016	$ 28,127
Net increase (decrease) in the fair value of investments	26,730	68,607	55,374
Other miscellaneous income	478	618	598
Total operating revenues	$ 56,133	$ 100,241	$ 84,099
Operating expenses			
Salaries and other administrative expenses	$ 3,594	$ 3,314	$ 3,903
Net increase (decrease) in the present value of tuition benefits payable	(8,695)	19,212	26,484
Total operating expenses	$ (5,101)	$ 22,526	$ 30,387
Operating income (loss)	$ 61,234	$ 77,715	$ 53,711
Change in Net Position	$ 61,234	$ 77,715	$ 53,711
Net position - Beginning of year	136,605	58,890	5,178
Cumulative effect of a change in accounting principle (Note 10)	(2,873)	-	-
Net position - Beginning of year - restated	133,731	58,890	5,178
Net position - End of year	$ 194,965	$ 136,605	$ 58,890

The net position - end of fiscal year increased by $58.4 million in fiscal year 2017-18 and increased by $77.7 million in fiscal year 2016-17. The increase in both fiscal years resulted due to favorable investment returns and lower than expected tuition increases.

Condensed Financial Information
From the Statement of Cash Flows
Fiscal Years Ended September 30
(In Thousands)

	2018	2017	2016
Net cash provided (used) by:			
Operating activities	$ (39,523)	$ (33,577)	$ (24,579)
Investing activities	14,887	65,537	(998)
Net cash provided (used) - All activities	$ (24,636)	$ 31,960	$ (25,577)
Cash and cash equivalents - Beginning of fiscal year	86,510	54,550	80,126
Cash and cash equivalents - End of fiscal year	$ 61,874	$ 86,510	$ 54,549

The **net cash provided by investing activities** decreased by $50.7 million in fiscal year 2017-18 because of a decrease in investment purchased and increased by $66.5 million in fiscal year 2016-17 because of the increased amount of cash available for investment purposes.

Factors Impacting Future Periods

Prepaid tuition receipts translate into an increase in the tuition liability; however, the actuarial soundness of MET is based, in part, on new contracts being purchased, market performance of investments, and factors affecting estimates of future tuition benefits. As of September 30, 2018, MET Plan D is 124.0% funded and is expected to pay all contracted benefits. The MET Plan D actuary's cash flow report expects tuition payments to students activating their contracts to be:

Fiscal Years Ending	Expected Gross Tuition Payments	Expected Number of Contracts
2019 – 2021	$209,217	6,928
2022 – 2024	$237,147	5,894
2025 – 2027	$237,920	4,024
2028 - 2030	$202,379	2,700
After 2030	$387,136	2,343

The enrollment period for 2018 was from December 1, 2017 through September 30, 2018. New enrollment contract prices are adjusted annually to reflect estimated changes in tuition costs and investment earnings and will increase cash, future tuition benefits payable, and the asset base of MET Plan D.

The MET Board of Directors reviews asset allocation and investment performance on a quarterly basis to balance investment risk and maximize rates of return. At the beginning of fiscal year 2007-08, the MET Board of Directors changed the long-term investment portfolio strategy to address the unfunded liability issue. The MET Plan D target portfolio for investment is 75% in equities (mutual funds and alternative investments) and 25% in fixed income securities (short-term investments, U.S. government securities, and corporate bonds).

It is expected that Michigan public universities will continue to adopt higher tuition rates in subsequent years as State-appropriated funds remain flat. The average yearly tuition increase over the last 23 years has been 5.8% for four-year universities and 4.2% for two-year community colleges, compared to the actuarial assumption of 6.0% for the first, 5.5% for year 2, 5.0% for year 3 and 4.5% for year 4 and beyond.

Financial information can be obtained on the MET website at www.SETwithMET.com or by mail at Michigan Education Trust, P.O. Box 30198, Lansing, Michigan 48909, phone 517-335-4767.

Statement of Net Position

September 30, 2018 and 2017

	2018	2017
Assets		
Current assets:		
Cash and cash equivalents (Note 3)	$ 61,873,861	$ 86,509,781
Receivables:		
Tuition contracts receivable - Current portion (Note 5)	9,320,249	10,253,966
Amounts due from contract purchaser	1,137,136	1,861,708
Amounts due from others	119,950	97,408
Amounts due from MET Program (Plans B & C)	463,320	403,088
Interest and dividends receivable	1,524,497	1,292,723
Amounts due from primary government	2,455,570	2,956,593
Total current assets	76,894,583	103,375,267
Noncurrent assets:		
Investments (Notes 3 and 4)	904,536,253	863,768,466
Tuition contracts receivable - Net of current portion (Note 5)	31,473,419	35,519,911
Total noncurrent assets	936,009,672	899,288,377
Total assets	1,012,904,255	1,002,663,644
Deferred Outflows of Resources		
Deferred outflows related to pensions (Note 9)	235,098	67,878
Deferred outflows related to OPEB - Life insurance (Note 11)	10,546	-
Deferred outflows related to OPEB - Health insurance (Note 11)	228,303	-
Total deferred outflows of resources	473,947	67,878
Liabilities		
Current liabilities - Tuition benefits payable - Current portion (Note 6)	64,995,413	72,920,175
Noncurrent liabilities:		
Net pension liability (Note 9)	1,640,061	1,685,545
Net OPEB liability - Life insurance (Note 11)	383,266	-
Net OPEB liability - Health insurance (Note 11)	2,647,154	-
Tuition benefits payable - Net of current portion (Note 6)	748,567,575	791,524,171
Total noncurrent liabilities	753,238,056	793,209,716
Total liabilities	818,233,469	866,129,891
Deferred Inflows of Resources		
Deferred inflows related to pension (Note 9)	100,560	(2,983)
Deferred inflows related to OPEB - Life insurance (Note 11)	20,899	-
Deferred inflows related to OPEB - Health insurance (Note 11)	57,855	-
Total deferred inflows of resources	179,314	(2,983)
Net Position - Restricted for prepaid tuition contractual obligations	**$ 194,965,419**	**$ 136,604,614**

See notes to financial statements.

Statement of Revenue, Expenses, and Changes in Net Position

Years Ended September 30, 2018 and 2017

	2018	2017
Operating Revenue		
Interest and dividends income	$ 28,924,804	$ 31,015,871
Net increase in the fair value of investments	26,730,074	68,607,297
Other miscellaneous income	477,547	617,503
Total operating revenue	56,132,425	100,240,671
Operating Expenses		
Salaries and other administrative expenses	3,593,587	3,313,992
Net (decrease) increase in the present value of tuition benefits payable	(8,695,085)	19,211,680
Total operating (recovery) expense	(5,101,498)	22,525,672
Change in Net Position	61,233,923	77,714,999
Net Position - Beginning of year, as previously reported	136,604,614	58,889,615
Cumulative Effect of Change in Accounting (Note 10)	(2,873,118)	-
Net Position - Beginning of year, as restated	133,731,496	58,889,615
Net Position - End of year	**$ 194,965,419**	**$ 136,604,614**

See notes to financial statements.

Michigan Education Trust Plan D

Statement of Cash Flows

Years Ended September 30, 2018 and 2017

	2018	2017
Cash Flows from Operating Activities		
Contract receipts	$ 37,498,587	$ 41,547,523
Benefits paid	(73,925,816)	(71,835,928)
Administrative and other expenses paid	(3,752,910)	(3,979,031)
Application and other fees collected	657,128	690,873
Net cash and cash equivalents used in operating activities	(39,523,011)	(33,576,563)
Cash Flows from Investing Activities		
Purchase of investment securities	(193,943,261)	(337,846,926)
Interest and dividends received	28,924,804	31,015,871
Proceeds from sale and maturities of investment securities	179,905,548	372,368,484
Net cash and cash equivalents provided by investing activities	14,887,091	65,537,429
Net (Decrease) Increase in Cash and Cash Equivalents	(24,635,920)	31,960,866
Cash and Cash Equivalents - Beginning of year	86,509,781	54,548,915
Cash and Cash Equivalents - End of year	**$ 61,873,861**	**$ 86,509,781**
Reconciliation of Operating Income to Net Cash from Operating Activities		
Operating income	$ 61,233,923	$ 77,714,999
Adjustments to reconcile operating income to net cash from operating activities:		
Unrealized and realized gains	(26,730,074)	(68,607,297)
Investment income	(28,924,804)	(31,015,871)
Changes in assets and liabilities:		
Amounts due to/from MET Programs (Plans B & C)	(60,232)	(4,023,428)
Amounts due from primary government	501,023	(2,956,593)
Amount due from others	(22,542)	(24,158)
Amount due from contract purchaser	724,572	166,725
Interest and dividends receivable	(231,774)	(6,468)
Tuition contracts receivable	4,980,209	6,295,234
Pension liability and related deferrals	(109,161)	(42,980)
OPEB liability and related deferrals - Life insurance	(12,832)	-
OPEB liability and related deferrals - Health insurance	10,039	-
Tuition benefit payable	(50,881,358)	(11,076,726)
Total adjustments	(100,756,934)	(111,291,562)
Net cash and cash equivalents used in operating activities	**$ (39,523,011)**	**$ (33,576,563)**

See notes to financial statements.

Note 1 - Nature of Business

Reporting Entity

Michigan Education Trust (MET) was created under Act 316, P.A. 1986 (Sections 390.1421 - 390.1444 of the Michigan Compiled Laws) to operate a prepaid college tuition program. MET is governed by a nine-member board of directors that consists of one ex officio member (the state treasurer, acting as chair) and eight public members who are appointed by the governor with the advice and consent of the Senate. MET is administratively located within the Department of Treasury. The state treasurer, as MET's agent, may not commingle funds and must maintain a separate bank account for MET. MET is a proprietary component unit of the State of Michigan and is reported as such in the State of Michigan Comprehensive Annual Financial Report. The accompanying financial statements present only MET Plan D. Accordingly, they do not purport to, and do not, present fairly the financial position and changes in financial position and cash flows of the State of Michigan or its component units, MET as a whole, or Michigan Education Trust Plans B & C in accordance with accounting principles generally accepted in the United States of America as applicable to governmental units.

Act 316, P.A. 1986 (the "Act"), as amended, empowers MET, on behalf of itself and the State of Michigan, to enter into a contract with a purchaser that provides that, in return for a specified actuarially determined payment, MET will provide a Michigan child's undergraduate tuition at any Michigan public university or community college. The purchase amount is based on several factors, including tuition costs, anticipated investment earnings, anticipated tuition rate increases, and the type of contract purchased.

MET offers a full benefits contract, a limited benefits contract, and a community college contract. MET's property, income, and operations have been statutorily exempted from all taxation by the State and its political subdivisions. The Act and the contracts specifically provide that the State is not liable if MET becomes actuarially unsound. In that event, the contracts provide for refunds to participants based on a proportion of the remaining assets. In May 1997, MET submitted a request for ruling to the Internal Revenue Service (IRS) for verification that MET is in compliance with the Small Business Job Protection Act of 1996 (known as the 1996 Tax Act). On December 23, 1997, the IRS issued a favorable ruling, which confirms that MET meets the requirements for exemption from federal income tax as a state qualified tuition program described in Section 529 of the Internal Revenue Code.

As of September 30, 2018, there have been 26 enrollment periods over 30 years for MET. The 1988, 1989, and 1990 enrollments are known as Plans B & C. The 1995, 1997, 1998, 1999, 2000, 2002, 2003, 2004, 2005, 2006, 2007 (two enrollment periods), 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, and 2018 enrollments are known as Plan D. The Plan D enrollments are accounted for and reported separately from the Plans B & C enrollments. These financial statements report only Plan D enrollments. Separate financial statements and actuarial valuation of Plans B & C enrollments are available from the MET office at P.O. Box 30198, Lansing, MI 48909.

Note 2 - Significant Accounting Policies

Accounting and Reporting Principles

Michigan Education Trust Plan D follows accounting principles generally accepted in the United States of America (GAAP), as applicable to governmental units. Accounting and financial reporting pronouncements are promulgated by the Governmental Accounting Standards Board (GASB).

Basis of Accounting

Michigan Education Trust Plan D uses the economic resources measurement focus and the full accrual basis of accounting. Revenue is recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows.

Note 2 - Significant Accounting Policies (Continued)

Cash and Cash Equivalents

Cash and cash equivalents include cash and balances with financial institutions and short-term investments with original maturities that are generally less than three months used for cash management rather than investing activities.

Investments

MET's deposits and investments are held in a fiduciary capacity by the state treasurer. Act 316, P.A. 1986, as amended, authorizes the MET board of directors to invest MET's assets in any instrument, obligation, security, or property that it considers to be appropriate. The Act also authorizes the pooling of MET's investments with investments of the State, such as the pension funds, for investment purposes. Investments are carried at fair value (see Note 4). Corporate bonds not traded on a national or international exchange are based on equivalent values of comparable securities with similar yield and risk. The fair value of private investments is based on the net asset value reported in the financial statements of the respective investment entity. The net asset value is determined in accordance with governing documents of the investment entity and is subject to an independent annual audit. Other investments not having an established market value are recorded at estimated fair value.

Tuition Contracts Receivable

The present value of the future monthly purchase contract payments is recorded as a current and noncurrent asset of MET. For the years ended September 30, 2018 and 2017, the discount rate applied to expected future cash flows to determine present value was 5.50 and 6.00 percent, respectively.

Liabilities

The actuarial present value of the future tuition benefits obligation is recorded as a current and noncurrent liability of MET (see Note 6).

Net Position

MET's net position represents the investment appreciation and the investment revenue in excess of the actuarial present value of the future tuition benefits obligation and expenses (see Note 6). Net position is restricted because of the contractual obligations to which MET must adhere on behalf of the purchasers and beneficiaries for which prepaid tuition was collected and invested. Section 17 of Act 316, P.A. 1986, as amended, indicates that the assets of MET shall be preserved, invested, and expended solely pursuant to and for the purposes set forth in the Act and shall not be loaned or otherwise transferred or used by the State for any purpose other than the purposes of the Act.

Note 3 - Deposits and Investments

In accordance with GASB Statement No. 40, *Deposit and Investment Risk Disclosures*, MET's cash and investments are subject to several types of risk, which are examined in more detail below:

Deposits

Custodial Credit Risk for Deposits

Custodial credit risk for deposits is the risk that, in the event of the failure of the depository financial institution, MET will not be able to recover the value of its deposits or collateral securities that are in the possession of an outside party. MET does not have a policy for custodial credit risk. As of September 30, 2018 and 2017, MET's deposits for Plan D and the amounts reflected in the accounts of the banks were $31,932,389 and $20,546,997, respectively. The September 30, 2018 and 2017 balances were covered by federal depository insurance or collateral held with MET's agent in MET's name and, therefore, were not exposed to custodial credit risk. MET does not have an investment policy for custodial credit risk for deposits.

Foreign Currency Risk for Deposits

Foreign currency risk for deposits is the risk that a deposit denominated in the currency of a foreign country could reduce its U.S. dollar value as a result of changes in foreign currency exchange rates. As of September 30, 2018 and 2017, MET had no foreign deposits.

Investments

Interest Rate Risk

Interest rate risk is the risk that the value of investments will decrease as a result of a rise in interest rates. MET does not have a policy to restrict interest rate risk for long-term investments.

At September 30, 2018, MET had the following investments and maturities:

	2018				
Primary Government	Fair Value	Less Than 1 Year	1-5 Years	6-10 Years	More Than 10 Years
Commercial paper	$ 29,983,122	$ 29,983,122	$ -	$ -	$ -
U.S. Treasury securities	37,985,547	-	19,422,656	18,562,891	-
U.S. agencies - Backed securities	2,910,467	-	-	-	2,910,467
U.S. agencies - Sponsored securities	11,298,517	-	-	-	11,298,517
Corporate bonds and notes	132,803,901	-	48,242,423	62,489,281	22,072,197
Mutual funds	296,887,181	-	-	-	-
Alternative investments	422,650,640	-	-	-	-
Total	$ 934,519,375	$ 29,983,122	$ 67,665,079	$ 81,052,172	$ 36,281,181
Less investments reported as "cash equivalents" on statement of net position	(29,983,122)				
Total investments	$ 904,536,253				

Mutual funds and alternative investments have no fixed income or duration and, therefore, are not segmented for time.

Note 3 - Deposits and Investments (Continued)

At September 30, 2017, MET had the following investments (approximated) and maturities:

	2017				
Primary Government	Fair Value	Less Than 1 Year	1-5 Years	6-10 Years	More Than 10 Years
Commercial paper	$ 65,970,122	$ 65,970,122	$ -	$ -	$ -
U.S. Treasury securities	46,920,665	-	7,019,688	39,900,977	-
U.S. agencies - Backed securities	3,387,188	-	-	-	3,387,188
U.S. agencies - Sponsored securities	3,555,754	-	-	-	3,555,754
Corporate bonds and notes	129,443,412	-	39,611,987	73,742,247	16,089,178
Mutual funds	324,928,921	-	-	-	-
Alternative investments	355,532,526	-	-	-	-
Total	$ 929,738,588	$ 65,970,122	$ 46,631,675	$ 113,643,224	$ 23,032,120
Less investments reported as "cash equivalents" on statement of net position	(65,970,122)				
Total investments	$ 863,768,466				

Mutual funds and alternative investments have no fixed income or duration and, therefore, are not segmented for time.

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. State law limits investments in commercial paper to the top two ratings issued by nationally recognized statistical rating organizations. MET limits investments in commercial paper, at the time of purchase, to the top two ratings issued by two national rating services: ratings of A-1 and A-2 from Standard & Poor's and ratings of P-1 and P-2 from Moody's Investors Service. MET's policy also limits investments in corporate bonds, at the time of purchase, to the top four ratings of the two rating services: ratings of AAA, AA, A, and BBB from Standard & Poor's and ratings of Aaa, Aa, A, and Baa from Moody's Investors Service.

	2018			2017		
Investment	Fair Value	Standard & Poor's	Moody's Investors Service	Fair Value	Standard & Poor's	Moody's Investors Service
ABBOTT LABS	$ 2,976,196	BBB	Baa1	$ 3,063,717	BBB	Baa3
ALIDADE CAPITAL FD	3,647,409	Not Rated	Not Rated	-		
AM AIRLIN 16-3 A	1,777,898	A+	A2	1,977,600	A+	A2
AM AIRLN 17-2 A PT	2,866,340	Not Rated	A2	3,045,000	Not Rated	A2
AMERICAN TOWER COR	2,803,376	BBB-	Baa3	2,980,744	BBB-	Baa3
AMGEN INC	1,435,627	A	Baa1	1,510,831	A	Baa1
ANHEUSER-BUSCH	4,928,368	A-	A3	-		
ANTHEM INC	2,013,301	A	Baa2	2,085,962	A	Baa2
APPLE INC	2,884,252	AA+	Aa1	4,990,512	AA+	Aa1
AT&T INC	2,456,175	BBB	Baa2	2,524,341	BBB+	Baa1
AUTOZONE INC	2,897,272	BBB	Baa1	3,027,898	BBB	Baa1
BANK OF AMERICA CO	5,775,500	A-	A3	6,094,652	BBB+	Baa1
BERKSHIRE HATHAWAY	-			2,117,087	AA	Aa2
BHMS 2018-ATLS A	3,003,013	Not Rated	Not Rated	-		
BX 2018-BIOA B	2,999,075	Not Rated	Not Rated	-		
CAMPBELL SOUP CO	2,900,388	BBB-	Baa2	-		

Note 3 - Deposits and Investments (Continued)

	2018			2017		
Investment	Fair Value	Standard & Poor's	Moody's Investors Service	Fair Value	Standard & Poor's	Moody's Investors Service
CAPITAL ONE FINL	$ 1,887,865	BBB	Baa1	$ 2,021,985	BBB	Baa1
CELGENE CORP	3,945,245	BBB+	Baa2	4,128,173	BBB+	Baa2
CITIGROUP INC (public)	2,000,333	BBB	Baa3	2,105,501	BBB	Baa3
CITIGROUP INC (foreign)	4,401,616	BBB+	Baa1	4,409,962	BBB+	Baa1
CRESCENT DIRECT LENDING FUND, LP	27,016,671	Not Rated	Not Rated	29,894,641	Not Rated	Not Rated
DODGE & COX	73,293,410	Backed*	Backed*	87,785,783	Backed*	Backed*
DOMAIN PREFERRED ONE, LLC	12,765,536	Not Rated	Not Rated	7,596,550	Not Rated	Not Rated
DR PEPPER SNAPPLE	2,859,386	BBB	Baa2	3,051,945	BBB+	Baa1
FORD MOTOR CO	4,705,714	BBB	Baa3	5,197,881	BBB	Baa2
GENERAL ELEC CAP C	6,044,970	A	A2	6,144,889	AA-	A1
GILEAD SCIENCES IN	3,929,843	A	A3	4,165,621	A	A3
GNMA	-			140,634	Backed*	Backed*
GNMA PO(677205	-			231,831	Backed*	Backed*
G2 MA07(MA0774	1,769,085	Backed*	Backed*	2,068,213	Backed*	Backed*
GNR 201(GNR 201	817,796	Backed*	Backed*	946,511	Backed*	Backed*
GNR 201(2017-19	2,766,780	Backed*	Backed*	-		
GNR 2018-35 AC	1,877,078	Backed*	Backed*	-		
GNR 2018-109 AB	4,067,778	Backed*	Backed*	-		
GOLDMAN SACHS GROUP	2,956,071	BBB+	A3	6,151,746	BBB+	A3
GOLDMAN SACHS GP (New)	3,124,174	BBB+	A3	-		
HEITMAN CREDIT DCT	10,828,913	Not Rated	Not Rated	-		
JM IV LP	42,324,854	Not Rated	Not Rated	33,110,747	Not Rated	Not Rated
JPMORGAN CHASE & C	1,916,480	A-	A3	5,101,920	A-	A3
JPMORGAN CHASE & C (New)	3,079,610	A-	A3	-		
KELLOGG CO	3,972,569	BBB	Baa2	-		
LAB CORPORATION OF AMERICA	-			3,013,064	BBB	Baa2
MONDELEZ INTERNATI	1,877,473	BBB	Baa1	-		
MORGAN STANLEY (public)	3,107,061	BBB	Baa2	3,287,924	BBB-	Baa2
MORGAN STANLEY (foreign)	3,036,090	BBB+	A3	3,046,274	BBB+	A3
MSCBB 2016-MART A	2,898,381	AAA	Not Rated	2,971,307	AAA	Not Rated
NAPIER PARK AIRCO	989,080	Not Rated	Not Rated	1,701,379	Not Rated	Not Rated
NAPIER PARK AIRCRAFT LEASING VEHICLE I, LLC	4,831,757	Not Rated	Not Rated	4,814,090	Not Rated	Not Rated
NAPIER PARK STRAT	16,350,319	Not Rated	Not Rated	9,965,878	Not Rated	Not Rated
NAPIER PARK ABS INCOME FUND LP	51,314,326	Not Rated	Not Rated	47,500,742	Not Rated	Not Rated
NEPTUNE CAPITAL AD	24,890,263	Not Rated	Not Rated	-		
NORDSTROM INC	3,045,845	BBB+	Baa1	3,074,143	BBB+	Baa1
NORTHROP GRUMMAN	1,880,644	BBB	Baa2	-		
ORACLE CORP	7,657,255	AA-	A1	4,971,690	AA-	A1
PARAMETRIC DEFENSE	89,968,155	Not Rated	Not Rated	82,409,094	Not Rated	Not Rated
PFIZER INC	-			2,058,614	AA	A1
PLOUTOS CAPITAL DC	24,307,782	Not Rated	Not Rated	24,413,787	Not Rated	Not Rated
PRK 2017-280P A	2,001,240	Not Rated	Not Rated	2,000,619	Not Rated	Not Rated
PRUDENTIAL HIGH YIELD	42,057,316	Not Rated	Ba	40,613,097	Not Rated	Ba
RIALTO DCTA	23,765,830	Not Rated	Not Rated	24,360,717	Not Rated	Not Rated
SBAP 2012-20G 1	1,448,284	Backed*	Backed*	1,776,076	Backed*	Backed*
SBAP 2013-20G 1	1,462,183	Backed*	Backed*	1,779,678	Backed*	Backed*
SCHLUMBERGER INVES	-			2,586,416	AA-	A1
TAHQUAMENON LP-DCT	89,649,748	Not Rated	Not Rated	89,764,907	Not Rated	Not Rated
TEVA PHARM FIN IV	-			3,626,682	BBB-	Baa3
THERMO FISHER SCIE	-			2,087,225	BBB	Baa2
TYSON FOODS INC	2,992,914	BBB	Baa2	3,155,834	BBB	Baa2
UNTD AIR 18-1 AA	2,891,901	Not Rated	Aa3	-		

Note 3 - Deposits and Investments (Continued)

Investment	2018 Fair Value	2018 Standard & Poor's	2018 Moody's Investors Service	2017 Fair Value	2017 Standard & Poor's	2017 Moody's Investors Service
US TREASURY N/B	$ 37,985,547	Backed*	Backed*	$ 46,920,664	Backed*	Backed*
THE VANGUARD GROUP, INC.	81,536,452	Not Rated	Not Rated	96,530,033	Not Rated	Not Rated
VERIZON COMM INC	6,027,356	BBB+	Baa1	6,260,481	BBB+	Baa1
VOLKSWAGEN INTL FI	-			2,092,251	BBB+	A3
WELLS FARGO CO	3,068,205	A-	A2	3,093,210	A	A2
WHIRLPOOL CORP	5,778,879	BBB	Baa1	6,219,713	BBB	Baa1
Total	$104,536,253			$163,768,466		

*Backed by the full faith and credit of the United States government.

Concentration of Credit Risk

MET places no limit on the amount it may invest in any one issuer. As of September 30, 2018 and 2017, MET held the following investments that represented 5.00 percent or more of total investments:

	2018	2017
Dodge & Cox	$ 73,293,410	$ 87,785,783
Napier Park ABS Income Fund LP	51,314,326	47,500,742
Parametric Defense	89,968,155	82,409,094
Tahquamenon LP-DCT	89,649,748	89,764,907
The Vanguard Group	181,536,452	196,530,033

None of these investments were rated by either Standard & Poor's or Moody's Investors Service at September 30, 2018 and 2017.

Custodial Credit Risk

Custodial credit risk for investments is the risk that, in the event of the failure of a counterparty to a transaction, MET will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. MET's investments are registered in its name and, therefore, are not subject to custodial credit risk. MET does not have an investment policy for custodial credit risk.

Foreign Currency Risk

Foreign currency risk is the risk that an investment denominated in the currency of a foreign country could reduce its U.S. dollar value as a result of changes in foreign currency exchange rates. As of September 30, 2018 and 2017, MET had no foreign investments.

Note 4 - Fair Value Measurements

Accounting standards require certain assets and liabilities be reported at fair value in the financial statements and provide a framework for establishing that fair value. The framework for determining fair value is based on a hierarchy that prioritizes the inputs and valuation techniques used to measure fair value.

The following tables present information about MET’s assets measured at fair value on a recurring basis at September 30, 2018 and 2017 and the valuation techniques used by MET to determine those fair values.

Fair values determined by Level 1 inputs use quoted prices in active markets for identical assets that MET has the ability to access.

Note 4 - Fair Value Measurements (Continued)

Fair values determined by Level 2 inputs use other inputs that are observable, either directly or indirectly. These Level 2 inputs include quoted prices for similar assets in active markets and other inputs, such as interest rates and yield curves, that are observable at commonly quoted intervals.

Level 3 inputs are unobservable inputs, including inputs that are available in situations where there is little, if any, market activity for the related asset. These Level 3 fair value measurements are based primarily on management's own estimates using pricing models, discounted cash flow methodologies, or similar techniques taking into account the characteristics of the asset.

In instances whereby inputs used to measure fair value fall into different levels in the above fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. MET's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset.

The following tables summarize the fair value measurements of investments as of September 30, 2018 and 2017:

	Assets Measured at Fair Value on a Recurring Basis at September 30, 2018			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Investments Measured at NAV	Balance at September 30, 2018
Debt securities:				
U.S. Treasury securities	$ 37,985,547	$ -	$ -	$ 37,985,547
U.S. agencies - Backed securities	-	2,910,467	-	2,910,467
Corporate bonds and notes	-	132,803,901	-	132,803,901
U.S. agencies - Sponsored securities	-	11,298,517	-	11,298,517
Total debt securities	37,985,547	147,012,885	-	184,998,432
Equity securities - Mutual funds	296,887,181	-	-	296,887,181
Investments measured at net asset value (NAV):				
Private equity funds	-	-	149,700,197	149,700,197
Real estate funds	-	-	51,007,688	51,007,688
Multistrategy hedge funds	-	-	179,617,901	179,617,901
Event-driven hedge fund	-	-	42,324,854	42,324,854
Total investments measured at net asset value (NAV)	-	-	422,650,640	422,650,640
Total assets	$ 334,872,728	$ 147,012,885	$ 422,650,640	$ 904,536,253

Note 4 - Fair Value Measurements (Continued)

	Assets Measured at Fair Value on a Recurring Basis at September 30, 2017			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Investments Measured at NAV	Balance at September 30, 2017
Debt securities:				
U.S. Treasury securities	$ 46,920,665	$ -	$ -	$ 46,920,665
U.S. agencies - Backed securities	-	3,387,188	-	3,387,188
Corporate bonds and notes	-	129,443,412	-	129,443,412
U.S. agencies - Sponsored securities	-	3,555,754	-	3,555,754
Total debt securities	46,920,665	136,386,354	-	183,307,019
Equity securities - Mutual funds	324,928,921	-	-	324,928,921
Investments measured at net asset value (NAV):				
Private equity funds	-	-	118,290,517	118,290,517
Real estate funds	-	-	31,957,261	31,957,261
Multistrategy hedge funds	-	-	172,174,001	172,174,001
Event-driven hedge fund	-	-	33,110,747	33,110,747
Total investments measured at net asset value (NAV)	-	-	355,532,526	355,532,526
Total assets	$ 371,849,586	$ 136,386,354	$ 355,532,526	$ 863,768,466

Debt securities classified as Level 1 in the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt securities classified in Level 2 in the fair value hierarchy are valued using a matrix pricing technique.

Additional disclosures for fair value measurements of investments in certain entities that calculate the net asset value per share are as follows:

Private Equity Funds

This type of investment includes investments in seven partnerships and six partnerships as of September 30, 2018 and 2017, respectively, that invest in various credit strategies, real assets, and other investments. These types of investments can never be redeemed with the funds, but distributions are received through the liquidation of the underlying assets of the fund. It is expected that the underlying assets of the fund are liquidated over a period of five to eight years.

The total market value and unfunded commitments of these investments as of September 30, 2018 are approximately $149.7 million and $50.4 million, respectively. The total market value and unfunded commitments of these investments as of September 30, 2017 are approximately $118.3 million and $31.8 million, respectively. However, it is probable that all of the investments in this type will be sold at an amount different from NAV per share of the plan’s ownership interest in partners' capital. Therefore, the fair values of the investments in this type have been determined using MET’s equity contributions, less any distributions or dividends received, adjusted for any gains or losses in the investment allocated to MET.

Note 4 - Fair Value Measurements (Continued)

Real Estate

This type of investment includes investments in five partnerships and one partnership as of September 30, 2018 and 2017, respectively, that invest primarily in multifamily preferred equity structure in the United States. This type of investment can never be redeemed with the funds, but distributions are received through the liquidation of the underlying assets of the fund. It is expected that the underlying assets of the fund are liquidated over a period of 10 to 12 years.

This type of investment also includes an investment in one partnership that invested in a commercial real estate-related debt structure in the U.S. This type of investment cannot be redeemed with the funds. Distributions from this fund will be received as the underlying investments are paid down or otherwise liquidated over time. It is expected that the underlying assets of the fund are paid down or otherwise liquidated over a period of two to five years.

The total market value and unfunded commitment of this investment as of September 30, 2018 are approximately $51.0 million and $26.6 million, respectively. The total market value and unfunded commitment of this investment as of September 30, 2017 are approximately $32.0 million and $12.5 million, respectively. However, it is probable that all of the investments in this type will be sold at an amount different from NAV per share of the plan’s ownership interest in partners' capital. Therefore, the fair values of the investments in this type have been determined using MET’s equity contributions, less any distributions or dividends received, adjusted for any gains or losses in the investment allocated to MET.

Multistrategy Hedge Funds

This type of investment includes investments in two funds as of September 30, 2018 and 2017 that pursue multiple strategies to diversify risks and reduce volatility. One fund is organized for the primary purpose of developing and actively managing an investment portfolio of nontraditional portfolio managers. This is an open-ended fund that invests in equities, credit-driven, global macro, relative value, interest rate-driven, commodities, managed-futures, and event-driven, with redemption restriction terms ranging from 0 to 96 months. The other fund seeks to provide favorable risk-adjusted performance relative to index funds. This fund employs an options-based strategy that utilizes a fully covered option strangle.

The first fund offers limited partnership “Class A” interests, as well as strategic interests. Generally, the limited partner may withdraw all or any portion of its Class A and strategic interests capital account at any time upon not less than 95 days’ prior written notice to the fund. The general partner will submit withdrawal requests with respect to the fund’s investments. Payment of the withdrawal proceeds will be made promptly after the fund receives withdrawal proceeds from such investments.

The second fund offers nonmanaging membership interest. Nonmanaging members may, with five days of notice given to the managing member, withdraw all or any of their portion of the capital account as of the last day of the calendar month.

The fair value of investments in limited partnerships and investment funds and affiliated limited partnerships and investment funds is generally determined using the reported net asset value per share of the investee fund as a practical expedient for fair value.

The total market value of these investments as of September 30, 2018 and 2017 is approximately $179.6 million and $172.2 million, respectively. There were no remaining commitments associated with these funds as of September 30, 2018 or 2017. Due to the inherent uncertainty of these estimates, these values may differ from the values that would have been used had a ready market for these investments existed, and the differences could be material.

Note 4 - Fair Value Measurements (Continued)

Event-driven Hedge Funds

This type includes one investment at September 30, 2018 and 2017 specializing in event-driven investing. It typically applies a fundamental value discipline to identify undervalued companies that have one or more specific catalysts to unlock value. It focuses on “active shareholder engagement” and invests both long and short and across the capital structure, including equity and debt.

These types of investments can never be redeemed with the funds, but distributions are received through the liquidation of the underlying assets of the fund. Distribution proceeds from the sale of partnership investments, dividends, or interest must be returned to the limited partners within 90 days following receipt by the partnership. Such distributable amounts shall increase the unfunded portion of the limited partner commitment and may be called again for contribution to the partnership by the general partner.

It is expected that the underlying assets of the fund are liquidated over a period of three to six years. The total market value and unfunded commitments of these investments as of September 30, 2018 are approximately $42.3 million and $12.1 million, respectively. The total market value and unfunded commitments of these investments as of September 30, 2017 are approximately $33.1 million and $7.9 million, respectively. Market price observability is impacted by a number of factors, including the type of investment and characteristics specific to the investment.

Note 5 - Tuition Contracts Receivable

The future monthly purchase contract receipts are actuarially calculated based on the present value of future receipts and projected investment performance. The following table summarizes tuition contracts receivable for monthly purchase contracts as of September 30, 2018 and 2017:

	2018	2017
Long-term tuition contracts receivable	$ 31,473,419	$ 35,519,911
Current tuition contracts receivable	9,320,249	10,253,966
Total tuition contracts receivable	$ 40,793,668	$ 45,773,877

Note 6 - Tuition Benefits Payable and Net Position

The standardized measurement of the total tuition benefits obligation of MET is the actuarial present value of the future tuition benefits obligation that will be paid in future years. The tuition benefits obligation is actuarially calculated by projecting the weighted-average tuition cost, including mandatory fees, at the assumed annual rate of increase and then calculating the expected present value of the future distributions from MET based on the investment income, discount rate assumptions, and outstanding contracts. The following table shows the approximate net value of total assets and deferred outflows of resources, less nontuition liabilities and deferred inflows of resources, the present value of total tuition benefits obligation, and the net position of Michigan Education Trust Plan D as of September 30:

	2018	2017
Net value of total assets and deferred outflows of resources - Less nontuition liabilities and deferred inflows of resources	$ 1,008,528,407	$ 1,001,048,960
Present value of total tuition benefits obligation	(813,562,988)	(864,444,346)
Total net position	$ 194,965,419	$ 136,604,614

The value of assets as a percentage of total actuarial liabilities (present value of tuition payments, fees, and administrative expenses) (i.e., the funded ratio) was 124.0 percent and 115.8 percent at September 30, 2018 and 2017, respectively.

Note 6 - Tuition Benefits Payable and Net Position (Continued)

The surplus in net assets for the years ended September 30, 2018 and 2017 is the direct result of the value of assets exceeding the future tuition benefits obligation. Differences between future assumptions related to actual investment returns and actual tuition increases will affect the net assets or unfunded tuition liability.

The most important assumptions used in the actuarial valuations include the following:

(1) The investment yield that is applied to expected future cash flows to determine present value was 6.00 percent as of September 30, 2018 and 2017. The investment yield assumption is based on the earnings of MET's investment portfolio together with estimates of the yields that will be available on reinvestment of income.

(2) For the year ended September 30, 2018, the MET board of directors considered the relationship of tuition increases to the Consumer Price Index in determining the tuition increase assumption of 6.00 percent for year one, 5.50 percent for year two, 5.00 percent for year three, and 4.50 percent for year four and beyond.

For the year ended September 30, 2017, the MET board of directors considered the relationship of tuition increases to the Consumer Price Index in determining the tuition increase assumption of 7.10 percent for year one, 5.75 percent for year two, 5.00 percent for year three, and 4.50 percent for year four and beyond.

(3) There was no tax effect from federal income tax.

(4) MET will pay 105 percent of the MET weighted-average tuition in benefits and refunds.

The key tuition increase assumptions used in the actuarial valuations for Plan D are as follows for the years ended September 30:

	2018	2017	2016	2014	2013
Year 1	6.00 %	7.10 %	- %	- %	- %
Years 1 through 2	-	-	7.10	-	-
Years 1 through 3	-	-	-	7.10	7.10
Year 2	5.50	5.75	-	-	-
Year 3	5.00	5.00	5.75	-	-
Year 4	-	-	5.00	-	-
Year 4 and beyond	4.50	4.50	-	4.50	4.50
Year 5 and beyond	-	-	4.50	-	-
Present value discount rate	5.50	6.00	6.00	6.00	6.00

The following summarizes the approximate tuition benefits payable as of and for the years ended September 30, 2018 and 2017:

	2018	2017
Balance - Beginning of year	$ 864,444,346	$ 875,521,071
Tuition benefit expense provision	25,917,576	60,759,203
Payments	(76,798,934)	(71,835,928)
Total benefits payable	$ 813,562,988	$ 864,444,346

The amounts due within one year for tuition benefits payable for the years ended September 30, 2018 and 2017 are $64,995,413 and $72,920,175, respectively. The actuarial assumptions described in this note have a significant impact on the tuition benefit liability. Actual results may differ from the assumptions utilized.

Note 7 - Risk Management

MET participates in the State of Michigan's (primary government) risk management program. The State is self-insured for most general liability and property losses; portions of its employee insurance benefit and bonding programs; and automobile liability, workers' compensation, and unemployment claims. The State Sponsored Group Insurance Fund and Risk Management Fund (internal service funds) have been established by the State to account for these self-insured risk management programs. As a participant, MET recognizes expenses for payments made to the State in a manner similar to purchasing commercial insurance. Charges to finance the self-insured programs are based on estimates of amounts needed to pay prior and current year claims, as determined annually by the Department of Technology, Management, and Budget. There were no settlements exceeding coverage provided through MET's risk management program during the years ended September 30, 2018, 2017, and 2016.

Note 8 - Undistributed Charitable Tuition

Since the year ended September 30, 2012, MET has hosted numerous fundraisers throughout the year to help eligible foster care students attend college through the MET Charitable Tuition Program. In 2015, the Michigan Legislature established the Fostering Futures Scholarship Trust Fund within the Treasury. The distribution of scholarships was moved to the Student Scholarships and Grants office (SSG). SSG disburses the charitable tuition donations to colleges for students who submitted applications during the application period.

Note 9 - General Information on Employee Pension Plans

Plan Description

The Michigan State Employees' Retirement System (the "System" or SERS) is a single-employer, statewide, defined benefit public employee retirement plan governed by the State of Michigan (the "State") and created under Public Act 240 of 1943, as amended. Section 2 of this act established the board's authority to promulgate or amend the provisions of the System. Executive Order 2015-13, signed by the governor on October 27, 2015, established the State of Michigan Retirement Board. The board consists of nine members - five appointed by the governor, which consist of two members of the State Employees' Retirement System, at least one of whom is a retirant; one member of the Judges Retirement System; one current or former officer or enlisted person in the Michigan Military Establishment who is a member or retirant under the Military Retirement Provisions; one member of the general public; and the attorney general, state treasurer, legislative auditor general, and state personnel director, who serves as an ex officio member.

The Michigan State Employees' Retirement System is accounted for in a separate pension trust and issues a publicly available financial report that includes financial statements and required supplemental information. That report is available on the web at http://www.michigan.gov/ors, or by calling the Office of Retirement System (ORS) at (517) 322-5103 or (800) 381-5111.

Benefits Provided

Benefit provisions of the defined benefit (DB) pension plan are established by state statute, which may be amended. Public Act 240 of 1943, State Employees' Retirement Act, as amended, establishes eligibility and benefit provisions for the defined benefit plan. Retirement benefits are determined by final average compensation and years of service. Members are eligible to receive a monthly benefit when they meet certain age and service requirements. The System also provides duty disability, nonduty disability, and survivor benefits.

A member who has separated from employment may request a refund of his or her member contribution account. A refund may cancel a former member's rights to future benefits. However, former members who return to employment and who previously received a refund of their contributions may reinstate their service through repayment of the refund upon satisfaction of certain requirements.

Note 9 - General Information on Employee Pension Plans (Continued)

Effective March 31, 1997, Public Act 487 of 1996 (the "Public Act") closed the plan to new entrants. All new employees become members of the defined contribution plan. The Public Act allows returning employees and members who left state employment on or before March 31, 1997 to elect the defined benefit plan instead of the defined contribution plan.

Public Act 185 of 2010 established a pension supplement. Members who retired under the retirement incentive of the legislation agreed to forfeit accumulated leave balances, excluding banked leave time; in exchange, they receive a pension supplement for 60 months to their retirement allowance payments equal to 1/60 of the amount forfeited from funds, beginning on January 1, 2011.

Pension Reform of 2012

On December 15, 2011, the governor signed Public Act 264 of 2011 into law. The legislation granted members a choice regarding their future retirement plan. They had the following options:

Option 1: DB Classified. Members voluntarily elected to remain in the DB plan for future service and contribute 4 percent of their annual compensation to the pension fund until they terminate state employment. The 4 percent contribution began on April 1, 2012.

Option 2: DB 30. Members voluntarily elected to remain in the DB plan for future service and contribute 4 percent of pay until they reach 30 years of service. When they reach 30 years of service, they will switch to the State's DC plan. The 4 percent contribution began on April 1, 2012, and continues until they switch to the DC plan or terminate employment, whichever comes first.

Option 3: DB/DC Blend. Members voluntarily elected not to pay the 4 percent and, therefore, became participants in the DC plan for future service beginning on April 1, 2012. As a DC plan participant, they receive a 4 percent employer contribution to their 401(k) account and are eligible for an additional dollar-for-dollar employer match of up to 3 percent of pay to the plan.

Deferred members of the DB plan (with 10 or more years of service) who are re-employed by the State on or after January 1, 2012 become participants in the DC plan. Their pension calculation is determined by their final average compensation (FAC) and years of service as of March 31, 2012. They retain their eligibility for the retiree health insurance premium subsidy offered by the State.

Former nonvested members of the DB plan (with less than 10 years of service) who are re-employed by the State on or after January 1, 2012 and before January 1, 2014 become participants in the DC plan. When they have earned sufficient service credit for vesting (10 years) they would be eligible for a pension based on their FAC and years of service in the DB plan as of March 31, 2012. They retain their eligibility for the retiree health insurance premium subsidy offered by the State.

Former nonvested members (with less than 10 years of service) of the DB plan who are re-employed by the State on or after January 1, 2014 become members of the DC plan. Any service credit previously earned would count toward vesting for the DC plan. They will not be eligible for any pension or retiree health insurance coverage premium, but will become a participant in the Personal Healthcare Fund where they will contribute up to 2 percent of their compensation to a 401(k) or 457 account, earning a matching 2 percent employer contribution. They will also receive a credit into a health reimbursement account (HRA) at termination if they terminate employment with at least 10 years of service. The credit will be $2,000 for participants who are at least 60 years old or $1,000 for participants who are less than 60 years old at termination.

Regular Retirement

The retirement benefit is based on a member's years of credited service (employment) and FAC. The normal benefit equals 1.5 percent of a member's FAC multiplied by the years and partial year of credited service and is payable monthly over the member's lifetime.

Note 9 - General Information on Employee Pension Plans (Continued)

Under PA 264 of 2011, the FAC is initially determined as the annual average of the highest three years of compensation (including overtime paid before January 1, 2012, but excluding overtime paid after December 31, 2011). If the end date for the initial FAC calculation is between January 1, 2012 and January 1, 2015, then a prorated amount of post-2008 average overtime will be added to the initial FAC calculation. If the end date for the initial FAC calculation is January 1, 2015 or later, then an annual average of overtime - for the six-year period ending on the FAC calculation date - will be added to that initial FAC calculation to get the final FAC number.

For members who switch to the DC plan for future service, the pension calculation FAC times 1.5 percent times years of service will be determined as of the point the member switches to the DC plan. If the FAC period includes the date of the switch to the DC plan, then the FAC will include up to 240 hours of accrued annual leave multiplied by the rate of pay as of the date of the switch. The hours will be paid at separation. A member may retire and receive a monthly benefit after attaining:

(1) Age 60 with 10 or more years of credited service

(2) Age 55 with 30 or more years of credited service

(3) Age 55 with at least 15 but less than 30 years of credited service. The benefit allowance is permanently reduced 0.5 percent for each month from the member's age on the effective date of retirement to the date the member will attain age 60.

Employees in covered positions are eligible for supplemental benefits and may retire after attaining the following:

(1) Age 51 with 25 or more years in a covered position

(2) Age 56 with 10 or more years in a covered position

In either case, the three years immediately preceding retirement must have been in a covered position. Employees in covered positions are responsible for the custody and supervision of incarcerated prisoners.

Deferred Retirement

Any member with 10 or more years of credited service who terminates employment but has not reached the age of retirement is a deferred member and is entitled to receive a monthly pension upon reaching age 60, provided the member's accumulated contributions have not been refunded. Deferred retirement is available after five years of service for state employees occupying unclassified positions in the executive and legislative branches and certain Department of Health and Human Services employees subject to reduction in force lay-offs by reason of deinstitutionalization.

Nonduty Disability Benefit

A member with 10 or more years of credited service who becomes totally and permanently disabled not due to performing duties as a state employee is eligible for a nonduty disability pension. The nonduty disability benefit is computed in the same manner as an age and service allowance based upon service and salary at the time of disability.

Duty Disability Benefit

A member who becomes totally and permanently disabled from performing duties as a state employee as a direct result of state employment and who has not met the age and service requirement for a regular pension is eligible for a duty disability pension. Public Act 109 of 2004 amended the State Employees' Retirement Act to change the calculation of the pension benefit and increase the minimum annual payment. If the member is under age 60, the duty disability allowance is now a minimum of $6,000 payable annually. At age 60, the benefit is recomputed under service retirement.

Note 9 - General Information on Employee Pension Plans (Continued)

Survivor Benefit

Upon the death of a member who was vested, the surviving spouse shall receive a benefit calculated as if the member had retired the day before the date of death and selected a survivor pension. Certain designated beneficiaries can be named to receive a survivor benefit. Public Act 109 of 2004 amended the State Employees' Retirement Act to change the calculation of duty death benefits and redefined eligibility for deceased members' survivors. The new minimum duty-related death benefit has been increased to $6,000.

Pension Payment Options

When applying for retirement, an employee may name a person other than his or her spouse as a beneficiary if the spouse waives this right. If a beneficiary is named, the employee must choose whether the beneficiary will receive 100 percent, 75 percent, or 50 percent of the retiree's pension benefit after the retiree's death. The decision is irrevocable. A description of the options follows:

Regular Pension

The pension benefit is computed with no beneficiary rights. If the retiree made contributions while an employee and has not received the total accumulated contributions before death, a refund of the balance of the contributions is made to the beneficiary of record. If the retiree did not make any contributions, there will not be payments to beneficiaries.

100 Percent Survivor Pension

Under this option, after the retiree's death, the beneficiary will receive 100 percent of the pension for the remainder of the beneficiary's lifetime. If this option is elected, the normal retirement benefit is reduced by a factor based upon the ages of the retiree and of the beneficiary. If the beneficiary predeceases the retiree, the pension "pops up" to the regular pension amount; another beneficiary cannot be named.

75 Percent Survivor Pension

Under this option, after the retiree's death, the beneficiary will receive 75 percent of the pension for the remainder of the beneficiary's lifetime. If this option is elected, the normal retirement benefit is reduced by a factor based upon the ages of the retiree and of the beneficiary. The reduction factor is lower than the factor used in the 100 percent option previously described. If the beneficiary predeceases the retiree, the pension "pops up" to the regular pension amount; another beneficiary cannot be named.

50 Percent Survivor Pension

Under this option, after the retiree's death, the beneficiary will receive 50 percent of the pension for the remainder of the beneficiary's lifetime. If this option is elected, the normal retirement benefit is reduced by a factor based upon the ages of the retiree and of the beneficiary. The reduction factor is lower than the factor used in the 100 percent or 75 percent option previously described. If the beneficiary predeceases the retiree, the pension "pops-up" to the regular pension amount; another beneficiary cannot be named.

Equated Pension

An equated pension may be chosen by any member under age 65 except a disability retiree and an early supplemental retiree. Equated pensions provide an additional amount until age 65 and may be combined with the regular, 100 percent, 75 percent, or 50 percent option. At age 65, the monthly amount is permanently reduced. The initial and reduced amounts are based on an estimate of Social Security benefits at age 65, provided by the Social Security Administration Office. In order to calculate this benefit, members choosing this option must provide ORS with an estimate from the Social Security Administration Office. The actual amount received from Social Security may vary from the estimate.

Note 9 - General Information on Employee Pension Plans (Continued)

Postretirement Adjustments

One-time upward benefit adjustments were made in 1972, 1974, 1976, 1977, and 1987. Beginning October 1, 1988, a 3 percent noncompounding increase, up to a maximum of $25 monthly, is paid each October to recipients who have been retired 12 full months. Beginning in 1983, eligible benefit recipients share in a distribution of investment income earned in excess of 8 percent annually. This distribution is known as the supplemental payment. The supplemental payment is offset by one year's cumulative increases received after the implementation of the annual 3 percent increase in benefits. These adjustment payments were not issued during fiscal years 1991 through 1994. Members who retired on or after October 1, 1987 are not eligible for the supplemental payment.

Contributions

Under Public Act 264 of 2011, members who voluntarily elected to remain in the DB plan contribute 4 percent of compensation to the retirement system. In addition, members may voluntarily contribute to the System for the purchase of creditable service, such as military service or maternity leave, or a universal buy-in. If a member terminates employment before a retirement benefit is payable, the member's contribution and interest on deposit may be refunded. If the member dies before being vested, the member's contribution and interest are refunded to the designated beneficiaries.

The statute requires the employer to contribute to finance the benefits of plan members. These employer contributions are determined annually by the System's actuary and are based upon level-dollar value funding principles, so the contribution rates do not have to increase over time. For fiscal year 2018, the component unit's contribution rate was 24.60 percent for the defined benefit employee wages and 19.73 percent of the defined contribution wages. For fiscal year 2017, the component unit's contribution rate was 25.50 percent of the defined benefit employee wages and 22.24 percent of the defined contribution employee wages. Michigan Education Trust's contributions to SERS for the years ended September 30, 2018 and 2017 were $221,349 and $224,863, respectively.

Net Pension Liability

At September 30, 2018 and 2017, MET reported a liability of $1,640,061 and $1,685,545, respectively, for its proportionate share of the net pension liability. The net pension liability was measured as of September 30, 2017, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of September 30, 2016, which used updated procedures to roll forward the estimated liability to September 30, 2017. MET's proportion of the net pension liability was based on a projection of its long-term share of contributions to the pension plan relative to the projected contributions of all participating reporting units, actuarially determined. At September 30, 2017 and 2016, MET's proportion was 0.032 percent and 0.031 percent, respectively.

Note 9 - General Information on Employee Pension Plans (Continued)

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the years ended September 30, 2018 and 2017, MET recognized pension recovery of $(109,161) and $(42,980), respectively. At September 30, 2018 and 2017, MET reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	2018		2017	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	$ 383	$ -	$ 199	$ -
Net difference between projected and actual investment earnings	-	99,833	37,409	-
Change in proportion and difference between actual contributions and proportionate share of contributions	76	727	5,857	(2,983)
Changes in assumption	13,726	-	-	-
The MET's contributions to the plan subsequent to the measurement date	220,913	-	-	-
Other	-	-	24,413	-
Total	$ 235,098	$ 100,560	$ 67,878	$ (2,983)

Amounts reported as deferred outflows of resources related to pensions resulting from MET's contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ending September 30, 2019. Other amounts reported as deferred outflows and inflows of resources related to pensions at September 30, 2018 will be recognized in pension expense as follows:

Years Ending	Amount
2019	$ (26,887)
2020	8,123
2021	(32,121)
2022	(35,490)
Total	$ (86,375)

Actuarial Assumptions

Michigan Education Trust Plan D's net pension liability was measured as of September 30, 2017, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of September 30, 2016, and rolled forward using generally accepted actuarial procedures. The total pension liability was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Wage inflation rate	3.50 percent
Projected salary increase	3.5 - 12.5 percent, including wage inflation at 3.5 percent
Investment rate of return	7.5 percent at September 30, 2017 and 8.0 percent at September 30, 2016
Cost of living pension adjustment	3 percent annual noncompounded with maximum annual increases of $300 for those eligible

Note 9 - General Information on Employee Pension Plans (Continued)

Mortality rates were based on RP-2000 Male and Female Combined Healthy Life Mortality Tables, adjusted for mortality improvements to 2015 projections scale BB. For retirees, 100 percent of the table rates was used. For active members, 50 percent of the table rates was used for males and females.

Significant actuarial assumptions were based on the April 2014 experience study covering the period from October 1, 2007 to September 30, 2012. The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Discount Rate

The discount rate used to measure the total pension liability was 7.50 percent. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate and that plan member contributions will be made at statutorily required rates.

Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Best estimates of arithmetic real rates of return for each major asset class included in the pension plan’s target asset allocation as of September 30, 2017 and 2016 are summarized in the following table:

	2017	
Asset Class	Target Allocation	Long-term Expected Real Rate of Return
Domestic equity pools	28.00 %	5.60 %
Private equity pools	18.00	8.70
International equity pools	16.00	7.20
Fixed-income pools	10.50	(0.10)
Real estate and infrastructure pools	10.00	4.20
Absolute return pools	15.50	5.00
Short-term investment pools	2.00	(0.90)

Rate of returns are net of administrative expenses and 2.30 percent inflation.

	2016	
Asset Class	Target Allocation	Long-term Expected Real Rate of Return
Domestic equity pools	28.00 %	5.90 %
Private equity pools	18.00	9.20
International equity pools	16.00	7.20
Fixed-income pools	10.50	0.90
Real estate and infrastructure pools	10.00	4.30
Absolute return pools	15.50	6.00
Short-term investment pools	2.00	-

Rate of returns are net of administrative expenses and 2.10 percent inflation.

Note 9 - General Information on Employee Pension Plans (Continued)

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of MET, calculated using the discount rate of 7.50 percent, depending on the plan option. The following also reflects what MET's net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower or 1 percentage point higher than the current discount rate:

	2018		
	1 Percent Decrease (6.50%)	Current Discount Rate (7.50%)	1 Percent Increase (8.50%)
Net pension liability of MET	$ 2,142,660	$ 1,640,061	$ 1,206,895

	2017		
	1 Percent Decrease (7.00%)	Current Discount Rate (8.00%)	1 Percent Increase (9.00%)
Net pension liability of MET	$ 2,137,984	$ 1,685,545	$ 1,257,037

Pension Plan Fiduciary Net Position

The SERS plan fiduciary net position has been determined using SERS' accrual basis of accounting. Benefit payment and refunds are recognized when due and payable in accordance with the terms of the System. Detailed information about the pension plan's fiduciary net position is available in the SERS Comprehensive Annual Financial Report that may be obtained by visiting www.michigan.gov/ors.

Defined Contribution Plan

MET participates in the State of Michigan’s defined contribution plan system. MET is required to contribute to the defined contribution plan 4.0 percent of payroll with an additional match of up to 3.0 percent. The contribution requirements of plan members and MET are established and may be amended by the state Legislature. The state Legislature establishes the extent to which the employer and employees are required to make contributions and establishes the benefit provisions for the plan. MET’s contributions to the plan were $102,288 and $87,900 for the years ended September 30, 2018 and 2017, respectively, and are recorded in salaries and benefits expense.

Note 10 - Change in Accounting Principle

During the current year, MET adopted Governmental Accounting Standards Board (GASB) Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other than Pensions*. As a result, the financial statements now include a net other postemployment benefit (OPEB) liability for MET's unfunded postemployment benefit plan legacy costs. Some of the changes in this net OPEB liability each year will be recognized immediately as part of the OPEB expense measurement, and part will be deferred and recognized over future years. Refer to Note 11 for further details. As a result of implementing this statement, the net position of MET as of October 1, 2017 has been restated by $(2,873,118) to $133,731,496. Of the $(2,873,118) restatement, $(3,087,148) was related to the beginning of year net OPEB liability and $214,030 was related to the beginning of year deferred outflows for employer contributions made subsequent to the measurement date. The impact on the prior year changes in net position could not be determined.

Note 11 - Other Postemployment Benefit (OPEB) Plan

Defined Benefit OPEB Plan - Healthcare

Plan Description

The Michigan State Employees' Retirement System (the "System" or SERS) is a single-employer, statewide, defined benefit public employee retirement plan governed by the State of Michigan and created under Public Act 240 of 1943, as amended. Section 2 of this act established the board's authority to promulgate or amend the provisions of the System. Executive Order 2015-13, signed by the governor on October 27, 2016, established the State of Michigan Retirement Board. The board consists of nine members - five appointed by the governor, which consist of two members of the State Employees' Retirement System, at least one of whom is a retirant; one member of the Judges Retirement System; one current or former officer or enlisted person in the Michigan Military Establishment who is a member or retirant under the Military Retirement Provisions; one member of the general public; and the attorney general, state treasurer, legislative auditor general, and state personnel director, who serves as an ex officio member. The System's OPEB plan provides all retirees with the option of receiving health, dental, and vision coverage under the Michigan State Employees' Retirement Act.

The Michigan State Employees' Retirement System is accounted for in a separate OPEB trust fund and also issues a publicly available financial report that includes financial statements and required supplementary information. That reports may be obtained by visiting www.michigan.gov/ors or by calling the Customer Information Center at (517) 322-5103 or (800) 381-5111.

Benefits Provided

Benefit provisions of the other postemployment benefit (OPEB) plan are established by state statute, which may be amended. Public Act 240 of 1943, as amended, establishes eligibility and benefit provisions for the OPEB plan. Defined benefit (Tier 1) members are eligible to receive health, prescription drug, dental, and vision coverage on the first day they start receiving pension benefits. Defined contribution (Tier 2) participants who elected to retain the graded premium subsidy benefit under the reform elections of Public Act 264 of 2011 are also eligible to receive subsidized health prescription drug, dental, and vision coverage after terminating employment, if they meet eligibility requirements. Retirees with the premium subsidy benefit contribute 20 percent of the monthly premium amount for the health (including prescription coverage), dental, and vision coverage. Retirees with a graded premium subsidy benefit accrue credit towards insurance premiums in retirement, earning a 30 percent subsidy with 10 years of service, with an additional 3 percent subsidy for each year of service thereafter, not to exceed the maximum allowed by statute or 80 percent. There is no provision for ad hoc or automatic increases. The State Employees' Retirement Act requires joint authorization by DTMB and the Civil Service Commission to make changes to retiree medical benefit plans. Defined contribution (Tier 2) participants who elected the Personal Healthcare Fund under Public Act 264 of 2011 and those hired on or after January 1, 2012 are not eligible for any subsidized health, prescription drug, dental, or vision coverage in retirement, but may purchase it at their own expense (certain conditions apply).

Former nonvested members of the DB plan who are re-employed by the State on or after January 1, 2014 are not eligible for retiree health insurance coverage premium subsidy, but will become a participant in the Personal Healthcare Fund.

This plan is closed to new hires.

Note 11 - Other Postemployment Benefit (OPEB) Plan (Continued)

Contributions

The statute requires the employer to contribute to finance the benefits of plan members. These employer contributions are determined annually by the System's actuary and are based upon level percent of payroll value funding principles so the contribution rates do not have to increase over time. For fiscal year 2018, MET's contribution rate was 22.14 percent of the defined benefit employee wages and 22.14 percent of the defined contribution employee wages. MET's contribution to SERS for the fiscal year ended September 30, 2018 was $205,890. Active employees are not required to contribute to SERS OPEB.

For fiscal year 2017, MET's contribution rate ranged from 20.6 to 21.1 percent of the defined benefit employee wages and 20.6 to 21.1 percent of the defined contribution employee wages. MET's contribution to SERS for the fiscal year ended September 30, 2017 was $187,861.

Net OPEB Liability

At September 30, 2018, MET reported a liability of $2,647,154 for its proportionate share of SERS' net OPEB liability. The net OPEB liability was measured as of September 30, 2017, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of September 30, 2016 and rolled forward using generally accepted actuarial procedures. MET's proportion of the net OPEB liability was based on MET's required OPEB contributions received by SERS during the measurement period from October 1, 2016 through September 30, 2017, relative to the total required employer contributions from all of SERS' participating employers. At September 30, 2017, MET's proportion was 0.030 percent.

The investment return assumption was updated beginning with the September 30, 2016 valuation to reflect reductions in capital market assumptions for the asset classes in which the System invests. The investment return assumption was updated again beginning with the September 30, 2017 valuation in accordance with the dedicated gains policy adopted by the board of trustees. This assumption change will increase the computed liabilities.

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the year ended September 30, 2018, MET recognized OPEB expense of $67,599.

At September 30, 2018, MET reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	$ -	$ 19,197
Net difference between projected and actual earnings on OPEB plan investments	-	22,920
Changes in proportionate share, or difference between amount contributed and proportionate share of contributions	-	15,738
Employer contributions to the plan subsequent to the measurement date	228,303	-
Total	$ 228,303	$ 57,855

Note 11 - Other Postemployment Benefit (OPEB) Plan (Continued)

Amounts reported as deferred outflows of resources related to OPEB resulting from MET's contributions subsequent to the measurement date will be recognized as a reduction of the net OPEB liability in the year ending September 30, 2019. Other amounts reported as deferred outflows and inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Years Ending September 30	Amount
2019	$ 12,856
2020	12,856
2021	12,856
2022	12,856
2023	6,431
Total	$ 57,855

Actuarial Assumptions

MET's net OPEB liability was measured as of September 30, 2017, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of September 30, 2016 and rolled forward using generally accepted actuarial procedures.

The total OPEB liability in the previous actuarial valuations was determined using the following actuarial assumptions applied to all periods included in the measurement:

Wage inflation rate	3.5 percent
Investment rate of return	7.5 percent
Projected salary increases	3.5 - 12.5 percent
Healthcare cost trend rate	9.0 percent Year 1 graded to 3.5 percent Year 10
Mortality	RP-2000 Combined Healthy Life Mortality Table, adjusted for mortality improvements. For active members, 50 percent of the male table rates were used. For women, 50 percent of the female table rates were used.

The actuarial assumptions were based upon the results of an experience study covering the period from October 1, 2007 through September 30, 2012.

Discount Rate

A single discount rate of 7.5 percent was used to measure the total OPEB liability. This single discount rate was based on the expected rate of return on OPEB plan investments of 7.5 percent. The projection of cash flows used to determine this single discount rate assumed that, in the future, plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member (retiree) rate. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

Note 11 - Other Postemployment Benefit (OPEB) Plan (Continued)

Investment Rate of Return

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the OPEB plan's target asset allocation as of September 30, 2017 are summarized in the following table:

Asset Class	Target Allocation	Long-term Expected Real Rate of Return
Domestic equity	28.00 %	5.60 %
International equity	16.00	7.20
Private equity	18.00	8.70
Real estate and infrastructure	10.00	4.20
Fixed-income	10.50	(0.10)
Absolute return	15.50	5.00
Short-term investment	2.00	(0.90)

*Long-term rates of return are net of administrative expenses and 2.3 percent inflation

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate

The following presents the net OPEB liability of MET, calculated using the discount rate of 7.5 percent, as well as what MET's net OPEB liability would be if it were calculated using a discount rate that is 1 percentage point lower or 1 percentage point higher than the current rate:

	1 Percent Decrease (6.5%)	Current Discount Rate (7.5%)	1 Percent Increase (8.5%)
MET's proportionate share of the net OPEB liability	$ 3,013,721	$ 2,647,154	$ 2,336,534

Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rate

The following presents MET's proportionate share of the net OPEB liability calculated using the assumed trend rate, as well as what the proportionate share of the net OPEB liability would be if it were calculated using a trend rate that is 1 percentage point lower or 1 percentage point higher than the current trend rate:

	1 Percent Decrease (8.0% to 2.5%)	Current Healthcare Cost Trend Rate (9.0% to 3.5%)	1 Percent Increase (10.0% to 4.5%)
MET's proportionate share of the net OPEB liability	$ 2,318,462	$ 2,647,154	$ 3,024,121

OPEB Plan Fiduciary Net Position

Detailed information about the OPEB plan's fiduciary net position is available in the SERS Comprehensive Annual Financial Report that may be obtained by visiting (www.michigan.gov/ors).

Note 11 - Other Postemployment Benefit (OPEB) Plan (Continued)

Postemployment Life Insurance Benefits

Plan Description

The State of Michigan provides postemployment life insurance benefits (the "Plan") to eligible individuals upon retirement from state employment. Members of the State Employees' Retirement System (SERS), the State Police Retirement System (SPRS), the Judges' Retirement System (JRS), and certain members of the Military Retirement Provisions (MMRP) may receive a life insurance benefit if they meet the benefit eligibility requirements. The Plan is a single-employer, statewide, defined benefit other postemployment benefits (OPEB) plan. The State contracts with Minnesota Life to administer the payout of life insurance benefits. The Plan is administered by the Michigan Civil Service Commission under Article XI, Section 5 of the Michigan Constitution of 1963 and Michigan Civil Service Commission Rule 5-11.

Activity of the Plan is accounted for in the State Sponsored Group Insurance Fund (Fund), an internal service fund in the State of Michigan Comprehensive Annual Financial Report (SOMCAFR). The Fund was administratively established to account for employee insurance benefit programs, which are largely self-funded. Five group insurance programs are offered to state employees: health, dental, vision, long-term disability, and life.

The Plan is not a trust and has no assets.

Benefits Provided

The State's group policy with Minnesota Life includes any active employee in the category of classified State service with an appointment of at least 720 hours duration, but excluding employees with noncareer appointments and those working less than 40 percent of full time; any active official or active unclassified employee of the State who has been approved for coverage by the Civil Service Commission; any retired employee or official who was insured under this policy or the prior policies it replaced prior to entry into a State Retirement System; and Wayne County employees who (a) were State Judicial Council employees on October 1, 1996 and whose employment was transferred to the Recorder's Court on October 1, 1996 and (b) whose employer subsequently became the Wayne County Clerk's Office.

Eligible retirees are provided with life insurance coverage equal to 25 percent of the active life insurance coverage (which amount is rounded to the next higher $100 provided the retiree retired after July 1, 1974), $1,000 for spouse, and $1,000 for each dependent under age 23.

The active life insurance amount is either (a) two times the employee's basic annual salary, the result rounded to the next higher $1,000 if not already a multiple thereof, with a minimum of $10,000 and a maximum of $200,000 or (b) one times the employee's basic annual salary, the result rounded to the next higher $1,000 if not already a multiple thereof, with a minimum of $10,000 and a maximum of $50,000.

Contributions

The State contributes 100 percent of the premiums for employee and retiree life insurance coverage. The premium rate for FY 2018 was $0.24 for each $1,000 of coverage through October 8, 2017. It was then updated to $0.28 for each $1,000 of coverage for the remainder of the fiscal year. The employee contributes 100 percent of the premiums for dependent life coverage, and an employee must have been enrolled in dependent life insurance to maintain eligibility for dependent coverage as a retiree. The State is liable for benefit payments that exceed premiums paid. The Michigan Civil Service Commission is responsible for establishing and amending funding policies.

More specific information concerning eligibility requirements, benefit level, and funding policies is included in employee collective bargaining agreements, benefit plan booklets, and rules and regulations issued by the Michigan Civil Service Commission.

Note 11 - Other Postemployment Benefit (OPEB) Plan (Continued)

Actuarial Valuations and Assumptions

MET's total OPEB liability for the year ended September 30, 2018 was measured as of September 30, 2017 and is based on an actuarial valuation performed as of that date.

Projections of benefits for financial reporting purposes are based on the substantive plan (the Plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities consistent with the long-term perspective of the calculations.

The normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an individual entry age actuarial cost method with these characteristics: (a) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and (b) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

The total OPEB liability was measured using the following actuarial assumptions:

Wage Inflation Rate:	3.5 percent
Investment Rate of Return (discount rate):	3.5 percent per year

Mortality: Healthy Life and Disabled Life Mortality, with 115 percent of the male rates and 121 percent of the female rates used in the pension valuations for SERS plan members.

IBNR: A liability equal to 25 percent of expected first year cash flow was held for postemployment life insurance benefits claims incurred but not reported (IBNR).

Spouse Benefits for Future Retirees: The liabilities for active members were loaded to account for potential postemployment life insurance benefits payable to spouses of future retirees at 3 percent for SERS retirees.

Spouse Benefits for Current Retirees: Data regarding postemployment life insurance benefits coverage for spouses of current retirees was not available. Liabilities for retired members were loaded to account for postemployment life insurance benefits payable to the spouses of current retirees at 4 percent for SERS retirees.

Compensation: For some SERS retirees, FAC was not reported. The FAC for these members was assumed to be $51,045 (the average of all SERS retiree records reported with FAC).

For the purpose of valuing the postemployment life insurance benefit policies for retirees, base wage at retirement was not available and was approximated by applying a factor to the reported FAC at retirement. The factor used to convert a FAC to a base wage is based on the length of the FAC period for each group. The factor used for SERS was 0.983092 (two-year FAC) for conservation and 0.966565 (three-year FAC) for corrections and all others.

For SERS DC plan retirees, compensation at retirement and other information was not provided to the actuary. The postemployment life insurance benefit policies for this group were assumed to have the same average value as the policies for retirees in the SERS DB plan.

Note 11 - Other Postemployment Benefit (OPEB) Plan (Continued)

Other: The face values of the plan policies currently in force were requested by the actuary but were not available for use in this valuation. The actuary estimated the value of the postemployment life insurance benefit policies for retirees as follows:

Individuals retired after July 1974: 50 percent times compensation at retirement (compensation reported for the 2017 retirement system valuations):

Spousal benefits: $1,000

Individuals retired on or before July 1974: $3,000

Spousal benefits: $1,000

Data for current retiree members of the Plan was not available for use in this valuation. All current retiree members of the retirement plans deemed eligible for postemployment life insurance benefits and reported in connection with the 2017 retirement valuations were included in this valuation of the Plan.

Discount Rate

A discount rate of 3.50 percent was used to measure the ending total OPEB liability for postemployment life insurance benefits as of September 30, 2017. This discount rate was based on the tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date since the Plan has no assets. The municipal bond rate of 3.1 percent was used for determining the beginning total OPEB liability for postemployment life insurance benefits as of September 30, 2016.

Total OPEB Liability for Postemployment Life Insurance Benefits

As of September 30, 2017, MET reported a liability of $383,266 for its proportionate share of the State's postemployment life insurance benefit's total OPEB liability. The total OPEB liability was measured as of September 30, 2017 based on an actuarial valuation as of that date. MET's proportion of the total OPEB liability was determined by dividing MET's actual contributions to the Plan during the measurement period from October 1, 2016 through September 30, 2017 by the percent of OPEB actual contributions received from all applicable employers. At September 30, 2017, MET's proportion was 0.02837 percent.

Sensitivity of the Total OPEB Liability for Postemployment Life Insurance

The following presents MET's proportionate share of the total OPEB liability calculated using the discount rate, as well as what the proportionate share of the total OPEB liability would be if it were calculated using a discount rate that is 1 percentage point lower or 1 percentage point higher than the current discount:

	1 Percent Decrease (2.5%)	Current Discount Rate (3.5%)	1 Percent Increase (4.5%)
MET's proportionate share of the net OPEB liability	$ 450,491	$ 383,266	$ 329,679

Note 11 - Other Postemployment Benefit (OPEB) Plan (Continued)

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB for Postemployment Life Insurance Benefits

For the year ended September 30, 2018, MET recognized OPEB recovery of $(70,391). At September 30, 2018, MET reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 324	$ -
Changes of assumptions	-	20,899
MET's contributions subsequent to the measurement date	10,222	-
Total	$ 10,546	$ 20,899

Amounts reported as deferred outflows of resources related to OPEB resulting from MET's contributions subsequent to the measurement date will be recognized as a reduction of the total OPEB liability in the year ending September 30, 2019. Other amounts reported as deferred outflows and inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Years Ending	Amount
2019	$ 4,222
2020	4,222
2021	4,222
2022	4,222
2023	3,687
Total	$ 20,575

Defined Contribution OPEB Plan

Employees hired on or after January 1, 2012 will not be eligible for any retiree health insurance coverage, but will become participants in the Personal Healthcare Fund wherein they will contribute up to 2 percent of their compensation into a 401(k) or 457 account, earning a matching 2 percent employer contribution. Also, the employee will receive a credit into a health reimbursement at termination of employment if he or she has at least 10 years of service at termination. The credit will be $2,000 for participants who are at least 60 years old or $1,000 for participants who are less than 60 years old at termination.

Required Supplemental Information

Required Supplemental Information
Schedule of Michigan Education Trust's Proportionate Share of Net Pension Liability
State Employees' Retirement System

Last Four Fiscal Years

Plan Years Ended September 30

	2018	2017	2016	2015
MET's proportion of the net pension liability	0.03675 %	0.03147 %	0.03128 %	0.03022 %
MET's proportionate share of the net pension liability	$ 1,640,061	$ 1,685,545	$ 1,721,115	$ 1,555,317
MET's covered payroll	$ 1,055,453	$ 935,614	$ 896,058	$ 1,319,430
MET's proportionate share of the net pension liability as a percentage of its covered payroll	155.39 %	180.15 %	192.08 %	117.88 %
Plan fiduciary net position as a percentage of total pension liability	69.45 %	67.48 %	66.10 %	68.07 %

The amounts presented for each fiscal year were determined as of the measurement date of September 30 of the previous year. This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, MET presents information for those years for which information is available.

See note to pension required supplemental information.

Required Supplemental Information
Schedule of Michigan Education Trust's Pension Contributions
State Employees' Retirement System

Last Four Fiscal Years

Years Ended September 30

	2018	2017	2016	2015
Statutorily required contribution	$ 221,349	$ 224,863	$ 216,757	$ 427,405
Contributions in relation to the statutorily required contribution	221,349	224,863	216,578	427,405
Contribution Deficiency	**$ -**	**$ -**	**$ 179**	$ -
MET's Covered Payroll	$ 1,055,453	$ 935,614	$ 896,058	$ 1,319,430
Contributions as a Percentage of Covered Payroll	20.97 %	24.03 %	24.17 %	32.39 %

See note to pension required supplemental information.

Pension Information

Actuarial valuation information relative to the determination of contributions for the year ended September 30, 2017 is as follows:

Valuation date	Actuarially determined contribution amounts are calculated as of September 30 each year, which is one day prior to the beginning of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry age, normal
Amortization method	Level dollar, closed
Remaining amortization period	20 years
Asset valuation method	Five-year smoothed fair value
Inflation	2.5 percent
Salary increase	3.5 wage inflation
Investment rate of return	8 percent, net of pension plan investment expenses, including inflation
Retirement age	Experience-based table of rates that are specific to the type of eligibility condition
Mortality	RP-2000 Combined Healthy Mortality Table, adjusted for mortality improvements to 2015 using projection scale BB. For retirees, 100 percent of the table was used. For active members, 50 percent of the table rates was used for males and females.

The comparability of trend information is affected by changes in actuarial assumptions, benefit provisions, actuarial funding methods, accounting policies, and other changes. Those changes usually affect trends in contribution requirements and in ratios that use the pension and other postemployment benefit obligations as a factor.

The schedule of contributions is presented to show the responsibility of the employer in meeting the actuarial requirements to maintain the System on a sound financial basis.

The schedule of the proportionate share of the net pension liability and schedule of contributions are schedules that are required in implementing GASB Statement No. 68. The schedule of the proportionate share of the net pension liability represents, in actuarial terms, the accrued liability less the market value of assets. The schedule of contributions is a comparison of the employer’s contributions to the actuarially determined contributions.

The information presented in the schedule of contributions was used in the actuarial valuation for the purpose of determining the actuarially determined contribution rate.

Required Supplemental Information
Schedule of MET's Proportionate Share of the Net OPEB Liability
Healthcare
State Employees' Retirement System

Last Fiscal Year

Plan Year Ended September 30

	2018
MET's proportion of the net OPEB liability	0.02837 %
MET's proportionate share of the net OPEB liability	$ 2,647,154
MET's covered payroll	$ 1,055,453
MET's proportionate share of the net OPEB liability as a percentage of its covered payroll	250.81 %
Plan fiduciary net position as a percentage of total OPEB liability	19.89 %

The amounts presented for each fiscal year were determined as of the measurement date of September 30 of the previous year. This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, the MET presents information for those years for which information is available.

See note to pension required supplemental information.

Required Supplemental Information
Schedule of MET's OPEB Contributions
State Employees' Retirement System

Last Fiscal Year

Year Ended September 30

	2018
Statutorily required contribution	$ 205,890
Contributions in relation to the statutorily required contribution	205,890
Contribution Deficiency	**$ -**
MET's Covered Payroll	$ 1,055,453
Contributions as a Percentage of Covered Payroll	19.51 %

Notes to Schedule of Contributions

Actuarial valuation information relative to the determination of contributions:

Valuation date	Actuarially determined contribution amounts are calculated as of September 30 each year, which is one day prior to the beginning of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry age, normal
Amortization method	Level percent of payroll, closed
Remaining amortization period	20 years
Asset valuation method	Fair value
Healthcare cost trend rates	9.0 percent year 1 graded to 3.5 percent year 10
Salary increase	3.5 - 12.5 percent
Investment rate of return	7.5 percent net of investment and administrative expenses
Retirement age	Experience-based table of rates that are specific to the type of eligibility condition
Mortality	RP-2000 Combined Healthy Mortality Table, adjusted for mortality improvements to 2015 using projection scale BB. For retirees, 100 percent of the table was used. For active members, 50 percent of the table rates was used for males and females.

See note to pension required supplemental information.

Required Supplemental Information
Schedule of MET's Proportionate Share of the Net OPEB Liability
Postemployment Life Insurance Benefit

Last Fiscal Year

Plan Year Ended September 30

	2018
MET's proportion of the net OPEB liability	0.03338 %
MET's proportionate share of the net OPEB liability	$ 383,266
MET's covered payroll	$ 1,055,453
MET's proportionate share of the net OPEB liability as a percentage of its covered payroll	36.31 %

The amounts presented for each fiscal year were determined as of the measurement date of September 30 of the previous year. This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, MET presents information for those years for which information is available.

The Plan is not a trust and has no assets.

See note to pension required supplemental information.