

EATON VANCE MASSACHUSETTS MUNICIPAL INCOME TRUST
Form N-CSR
January 27, 2014

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form N-CSR

CERTIFIED SHAREHOLDER REPORT OF REGISTERED
MANAGEMENT INVESTMENT COMPANIES
Investment Company Act File Number: 811-09147

Eaton Vance Massachusetts Municipal Income Trust
(Exact Name of Registrant as Specified in Charter)

Two International Place, Boston, Massachusetts 02110
(Address of Principal Executive Offices)

Maureen A. Gemma

Two International Place, Boston, Massachusetts 02110

(Name and Address of Agent for Services)

(617) 482-8260

(Registrant's Telephone Number)

November 30

Date of Fiscal Year End

November 30, 2013

Date of Reporting Period

Item 1. Reports to Stockholders

Eaton Vance

Municipal Income Trusts

Annual Report

November 30, 2013

California (CEV)

Massachusetts (MMV)

Michigan (EMI)

New Jersey (EVJ)

New York (EVY)

Ohio (EVO)

Pennsylvania (EVP)

Commodity Futures Trading Commission Registration. Effective December 31, 2012, the Commodity Futures Trading Commission (CFTC) adopted certain regulatory changes that subject registered investment companies and advisers to regulation by the CFTC if a fund invests more than a prescribed level of its assets in certain CFTC-regulated instruments (including futures, certain options and swap agreements) or markets itself as providing investment exposure to such instruments. Each Fund has claimed an exclusion from the definition of the term commodity pool operator under the Commodity Exchange Act and is not subject to the CFTC regulation. Because of its management of other strategies, each Fund s adviser is registered with the CFTC as a commodity pool operator and a commodity trading advisor.

Fund shares are not insured by the FDIC and are not deposits or other obligations of, or guaranteed by, any depository institution. Shares are subject to investment risks, including possible loss of principal invested.

Annual Report November 30, 2013

Eaton Vance

Municipal Income Trusts

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Eaton Vance

Municipal Income Trusts

November 30, 2013

Management's Discussion of Fund Performance

Economic and Market Conditions

During the first five months of the fiscal year ended November 30, 2013, interest rates declined to historic lows, driven by highly accommodative monetary policies instituted by central banks around the world. In December 2012, the U.S. Federal Reserve (the Fed) replaced Operation Twist, the central bank's swapping of its short-term holdings for long-term Treasury bonds, with outright purchases of \$45 billion of Treasuries each month. This was in addition to the monthly purchase of approximately \$40 billion of agency mortgage-backed securities that it had begun in September 2012. These actions combined to put continuing downward pressure on long-term bond yields, driving investors to look for other sources of income. One beneficiary was the municipal bond market, which rallied during the first five months of the period in response to strong investor demand.

In late May 2013, however, Fed Chairman Ben Bernanke surprised the markets by indicating that the Fed's \$85 billion in monthly asset purchases, known collectively as quantitative easing (QE), could be tapered sooner than most investors had expected. The negative effect on the bond market was swift and dramatic. Investors rushed to sell fixed-income assets in anticipation of rising interest rates, causing nearly every fixed-income asset class to decline in value.

Outflows had a particularly significant effect on the municipal bond market because, unlike other domestic fixed-income asset classes, the municipal market is primarily retail-based and is generally impacted more by the actions of small individual investors than other fixed-income asset classes. Even after the Fed tried to temper its comments and calm the markets, moderating the outflows in other fixed-income classes, heavy selling in municipals continued through August 2013, causing a significant increase in municipal bond yields. The selling abated somewhat in September 2013, after the Fed surprised the markets again by postponing its tapering of QE that many investors had thought was imminent. Municipal markets, however, continued to experience net outflows through the end of the period on November 30, 2013. The Barclays Municipal Bond Index²—an unmanaged broad index of municipal bonds traded in the United States—declined 3.51% for the one-year period.

During the period, additional pressure on the municipal market came from the City of Detroit's bankruptcy filing on July 18, 2013 and heightened attention to Puerto

Rico's fiscal woes throughout September 2013. Although Detroit's bankruptcy was not a surprise, because the city's fiscal problems had been well documented for many years, the bankruptcy's negative headlines injected additional fear into the municipal bond market. That fear, combined with Puerto Rico's well-publicized fiscal challenges, drove both institutional and retail investors to sell Puerto Rico bonds, exerting additional downward pressure on the market value of the bonds in late August and September 2013. Prices of Puerto Rico bonds remained at depressed levels through the end of the period on November 30, 2013.

Fund Performance

For the fiscal year ending November 30, 2013, Eaton Vance New Jersey Municipal Income Trust shares at net asset value (NAV) outperformed the -7.18% return of the Barclays Long (22+) Year Municipal Bond Index (the Index). All of the other Funds' shares at NAV underperformed the Index.

The Funds' overall strategy is to invest primarily in bonds with maturities of 10 years or more in order to capture their generally higher yields and a greater income stream. Management hedges to various degrees against the greater potential risk of volatility at the long end of the yield curve by using Treasury futures in seeking to provide downside protection.

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In managing the Funds, management employs leverage⁶ to seek to enhance the Funds' tax-exempt income. The use of leverage has the effect of achieving additional exposure to the municipal market. While increasing the Funds' distributions to shareholders, leverage magnifies the Funds' exposure to their underlying investments in both up and down markets. For all of the Funds, leverage was the most significant detractor from the Funds' performance relative to the unleveraged Index during this period of negative performance by municipal bonds.

In contrast, the Funds' hedging strategy aided the Funds' performance versus the Index for all Funds during the period. As a risk management tactic within the overall Fund strategy mentioned above, interest-rate hedging is intended to moderate the Funds' performance on both the upside and the downside of the market. Although municipal bonds underperformed Treasuries during the period, the Funds' Treasury hedges moderated a portion of the Funds' negative performance.

See Endnotes and Additional Disclosures in this report.

Past performance is no guarantee of future results. Returns are historical and are calculated by determining the percentage change in net asset value (NAV) or market price (as applicable) with all distributions reinvested and includes management fees and other expenses. Fund performance at market price will differ from its results at NAV due to factors such as changing perceptions about the Fund, market conditions, fluctuations in supply and demand for Fund shares, or changes in Fund distributions. Investment return and principal value will fluctuate so that shares, when sold, may be worth more or less than their original cost. Performance less than one year is cumulative. Performance is for the stated time period only; due to market volatility, current Fund performance may be lower or higher than the quoted return. For performance as of the most recent month end, please refer to eatonvance.com.

Eaton Vance

Municipal Income Trusts

November 30, 2013

Management's Discussion of Fund Performance continued

State-specific Results

Eaton Vance California Municipal Income Trust shares at NAV returned -8.69%, underperforming the -7.18% return of the Index. Leverage was the major detractor from the Fund's performance versus the Index. Contributors to the Fund's performance relative to the Index included the Fund's hedging strategy, security selection in BBB-rated bonds, and an underweighting and security selection in Puerto Rico bonds.

Eaton Vance Massachusetts Municipal Income Trust shares at NAV returned -10.34%, trailing the -7.18% return of the Index. Detractors from the Fund's performance versus the Index included leverage, security selection in AA-rated issues, and an overweight and security selection in education sector bonds. The Fund's hedging strategy was a key contributor to the Fund's performance versus the Index, along with an underweight in Puerto Rico bonds and security selection in BBB-rated issues.

Eaton Vance Michigan Municipal Income Trust shares at NAV returned -10.49%, underperforming the -7.18% return of the Index. Leverage was a key detractor from the Fund's performance relative to the Index. An overweight in Michigan local government general obligation (GO) bonds relative to the Index, which, unlike the Fund, is not Michigan-centric hurt relative results versus the Index as well because bonds of many Michigan municipalities sold off in the wake of Detroit's bankruptcy filing. In contrast, the Fund's performance versus the Index was helped by the Fund's hedging strategy, security selection in BBB-rated bonds and an underweight in Puerto Rico bonds.

Eaton Vance New Jersey Municipal Income Trust shares at NAV returned -6.96%, outperforming the -7.18% return of the Index. The Fund's relative outperformance versus the Index was driven by the Fund's hedging strategy, an underweight in Puerto Rico bonds and security selection in BBB-rated issues. Primary detractors from the Fund's performance versus the Index included leverage, security selection in AAA-rated bonds and an overweight in zero-coupon bonds which were among the worst-performing issues during the period due to their high sensitivity to rising interest rates.

Eaton Vance New York Municipal Income Trust shares at NAV returned -8.99%, lagging the -7.18% return of the Index. Leverage hurt the Fund's performance relative to the

Index, as did an overweight in zero-coupon bonds and security selection in bonds with 30 or more years remaining to maturity. Contributors to the Fund's performance versus the Index included the Fund's hedging strategy, an underweight in Puerto Rico bonds, and security selection in A-rated and BBB-rated bonds.

Eaton Vance Ohio Municipal Income Trust shares at NAV returned -10.01%, underperforming the -7.18% return of the Index. Detractors from the Fund's performance results versus the Index included leverage, an overweight in zero-coupon bonds and an overweight in GO bonds. The Fund's performance versus the Index was helped by the Fund's hedging strategy, an underweight in Puerto Rico bonds and security selection in BBB-rated bonds.

Eaton Vance Pennsylvania Municipal Income Trust shares at NAV returned -8.07%, trailing the -7.18% return of the Index. Leverage, security selection in BBB-rated bonds and security selection in the special tax sector detracted from the Fund's performance versus the Index. Contributors to the Fund's performance relative to the Index included the Fund's hedging strategy and an overweight in prerefunded bonds. And while selection in BBB bonds hurt the Fund's performance versus the Index, a relative underweight in the same area, BBB-rated bonds, aided relative results versus the Index.

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Eaton Vance

California Municipal Income Trust

November 30, 2013

Performance^{2,3}

Portfolio Manager Craig R. Brandon, CFA

| % Average Annual Total Returns | Inception Date | One Year | Five Years | Ten Years |
|---|-----------------------|-----------------|-------------------|------------------|
| Fund at NAV | 01/29/1999 | 8.69% | 12.35% | 4.34% |
| Fund at Market Price | | 19.84 | 11.21 | 3.26 |
| Barclays Long (22+) Year Municipal Bond Index | | 7.18% | 8.69% | 4.74% |

| | |
|--|--------|
| % Premium/Discount to NAV⁴ | 12.08% |
|--|--------|

Distributions⁵

| | |
|--|----------|
| Total Distributions per share for the period | \$ 0.796 |
| Distribution Rate at NAV | 6.25% |
| Taxable-Equivalent Distribution Rate at NAV | 12.74% |
| Distribution Rate at Market Price | 7.11% |
| Taxable-Equivalent Distribution Rate at Market Price | 14.49% |

% Total Leverage⁶

| | |
|--------------------------------|--------|
| Auction Preferred Shares (APS) | 32.04% |
| Residual Interest Bond (RIB) | 9.41 |

Fund Profile

The above chart includes the ratings of securities held by special purpose vehicles established in connection with the RIB financing.⁶ Absent such securities, credit quality (% of total investments) is as follows:⁷

| | | | |
|-----|------|-----------|-------|
| AAA | 5.7% | BBB | 10.4% |
| AA | 57.6 | BB | 0.7 |
| A | 22.5 | Not Rated | 3.1 |

See Endnotes and Additional Disclosures in this report.

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Eaton Vance

Massachusetts Municipal Income Trust

November 30, 2013

Performance^{2,3}

Portfolio Manager Craig R. Brandon, CFA

| % Average Annual Total Returns | Inception Date | One Year | Five Years | Ten Years |
|---|-----------------------|-----------------|-------------------|------------------|
| Fund at NAV | 01/29/1999 | 10.34% | 13.00% | 4.74% |
| Fund at Market Price | | 22.55 | 12.80 | 3.30 |
| Barclays Long (22+) Year Municipal Bond Index | | 7.18% | 8.69% | 4.74% |

% Premium/Discount to NAV⁴

12.82%

Distributions⁵

| | |
|--|----------|
| Total Distributions per share for the period | \$ 0.776 |
| Distribution Rate at NAV | 5.36% |
| Taxable-Equivalent Distribution Rate at NAV | 9.99% |
| Distribution Rate at Market Price | 6.15% |
| Taxable-Equivalent Distribution Rate at Market Price | 11.47% |

% Total Leverage⁶

| | |
|-----|--------|
| APS | 32.76% |
| RIB | 5.53 |

Fund Profile

The above chart includes the ratings of securities held by special purpose vehicles established in connection with the RIB financing.⁶ Absent such securities, credit quality (% of total investments) is as follows:⁷

| | | | |
|-----|-------|-----------|------|
| AAA | 18.7% | BB | 1.3% |
| AA | 44.2 | B | 1.4 |
| A | 23.6 | Not Rated | 0.9 |
| BBB | 9.9 | | |

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Eaton Vance

Michigan Municipal Income Trust

November 30, 2013

Performance^{2,3}**Portfolio Manager** William H. Ahern, Jr., CFA

| % Average Annual Total Returns | Inception Date | One Year | Five Years | Ten Years |
|---|-----------------------|-----------------|-------------------|------------------|
| Fund at NAV | 01/29/1999 | 10.49% | 10.52% | 4.47% |
| Fund at Market Price | | 20.51 | 14.01 | 2.55 |
| Barclays Long (22+) Year Municipal Bond Index | | 7.18% | 8.69% | 4.74% |

% Premium/Discount to NAV⁴

14.79%

Distributions⁵

| | |
|--|----------|
| Total Distributions per share for the period | \$ 0.749 |
| Distribution Rate at NAV | 5.49% |
| Taxable-Equivalent Distribution Rate at NAV | 10.13% |
| Distribution Rate at Market Price | 6.45% |
| Taxable-Equivalent Distribution Rate at Market Price | 11.90% |

% Total Leverage⁶

APS 39.04%

Fund Profile

See Endnotes and Additional Disclosures in this report.

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Eaton Vance

New Jersey Municipal Income Trust

November 30, 2013

Performance^{2,3}

Portfolio Manager Adam Weigold, CFA

| % Average Annual Total Returns | Inception Date | One Year | Five Years | Ten Years |
|---|-----------------------|-----------------|-------------------|------------------|
| Fund at NAV | 01/29/1999 | 6.96% | 13.93% | 4.62% |
| Fund at Market Price | | 25.85 | 13.39 | 3.17 |
| Barclays Long (22+) Year Municipal Bond Index | | 7.18% | 8.69% | 4.74% |

| | | | | |
|--|--|--|--|--------|
| % Premium/Discount to NAV⁴ | | | | 11.73% |
|--|--|--|--|--------|

Distributions⁵