

BLACKROCK MASSACHUSETTS TAX-EXEMPT TRUST
Form N-Q
July 27, 2016

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM N-Q

**QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED
MANAGEMENT INVESTMENT COMPANY**

Investment Company Act file number: 811-07660

Name of Fund: BlackRock Massachusetts Tax-Exempt Trust (MHE)

Fund Address: 100 Bellevue Parkway, Wilmington, DE 19809

Name and address of agent for service: John M. Perlowski, Chief Executive Officer, BlackRock Massachusetts
Tax-Exempt Trust, 55 East 52nd Street, New York, NY 10055

Registrant's telephone number, including area code: (800) 882-0052, Option 4

Date of fiscal year end: 08/31/2016

Date of reporting period: 05/31/2016

Item 1 Schedule of Investments

Schedule of Investments May 31, 2016 (Unaudited)

BlackRock Massachusetts Tax-Exempt Trust (MHE)

(Percentages shown are based on Net Assets)

	Par	
	(000)	Value
Municipal Bonds		
Massachusetts 149.9%		
County/City/Special District/School District 3.5%		
Town of Holyoke Massachusetts, GO, Refunding, 5.00%, 9/01/26	\$ 1,000	\$ 1,192,240
Education 62.7%		
Massachusetts Development Finance Agency, RB:		
Foxborough Regional Charter School, Series A, 7.00%, 7/01/42	250	285,365
Mount Holyoke College, Series B, 5.00%, 7/01/41	500	572,680
Wellesley College, Series J, 5.00%, 7/01/42	1,950	2,288,364
WGBH Educational Foundation, Series A (AMBAC), 5.75%, 1/01/42	650	860,405
Massachusetts Development Finance Agency, Refunding RB:		
Boston University, Series P, 5.45%, 5/15/59	1,500	1,878,255
Emerson College, 5.00%, 1/01/41	500	567,470
Emerson College, Series A, 5.00%, 1/01/40	200	216,246
International Charter School, 5.00%, 4/15/40	1,000	1,100,690
Trustees of Deerfield Academy, 5.00%, 10/01/40	1,675	1,932,598
Wheelock College, Series C, 5.25%, 10/01/37	1,000	1,048,280
Worcester Polytechnic Institute (NPFGC), 5.00%, 9/01/27	1,985	2,075,992
Massachusetts Educational Financing Authority, RB, Education Loan, Issue I, AMT, 5.00%, 1/01/27	1,000	1,167,630
Massachusetts Educational Financing Authority, Refunding RB, Issue J, AMT, 3.50%, 7/01/33 (a)	250	247,148
Massachusetts Health & Educational Facilities Authority, RB:		
Northeastern University, Series R, 5.00%, 10/01/33	225	244,096
Tufts University, Series O, 5.38%, 8/15/18 (b)	1,000	1,099,990
Massachusetts Health & Educational Facilities Authority, Refunding RB:		
Berklee College of Music, Series A, 5.00%, 10/01/37	1,000	1,053,040
	Par	
	(000)	Value
Municipal Bonds		
Massachusetts (continued)		
Education (continued)		
Massachusetts Health & Educational Facilities Authority, Refunding RB (continued):		
Harvard University, Series A, 5.50%, 11/15/36	\$ 100	\$ 111,685
Harvard University, Series B, 5.00%, 10/01/38	400	423,032
Northeastern University, Series T-2, 5.00%, 10/01/32	500	583,615
Springfield College, 5.63%, 10/15/40	500	550,100
Tufts University, Series M, 5.50%, 2/15/27	1,000	1,310,980
University of Massachusetts Building Authority, RB, Senior-Series 2, 5.00%, 11/01/39	500	592,210
University of Massachusetts Building Authority, Refunding RB, Series 1, 5.00%, 11/01/40	1,000	1,203,000
		21,412,871
Health 23.1%		
Massachusetts Development Finance Agency, Refunding RB:		
Carleton-Willard Village, 5.63%, 12/01/30	500	562,795
Partners Healthcare System, Series L, 5.00%, 7/01/36	1,000	1,158,980
South Shore Hospital Issue, Series I, 4.00%, 7/01/36	500	537,805
Massachusetts Health & Educational Facilities Authority, RB:		
Cape Cod Healthcare Obligated Group, Series D (AGC), 5.00%, 11/15/31	1,000	1,126,790
Caregroup, Series E-1, 5.00%, 7/01/18 (b)	500	542,645
Children s Hospital, Series M, 5.25%, 12/01/39	600	675,762
Children s Hospital, Series M, 5.50%, 12/01/39	500	566,465
Lahey Clinic Medical Center, Series D, 5.25%, 8/15/17 (b)	1,000	1,055,050

Schedule of Investments (continued)

BlackRock Massachusetts Tax-Exempt Trust
(MHE)

	Par	
	(000)	Value
Municipal Bonds		
Massachusetts (continued)		
Health (continued)		
Massachusetts Health & Educational Facilities Authority, RB (continued):		
Southcoast Health Obligation Group, Series D, 5.00%, 7/01/39	\$ 500	\$ 539,795
Massachusetts Health & Educational Facilities Authority, Refunding RB, Winchester Hospital, Series H, 5.25%, 7/01/38	1,000	1,125,130
		7,891,217
Housing 10.9%		
Massachusetts HFA, RB, M/F Housing, Series A (FHA), 5.25%, 12/01/35	185	203,707
Massachusetts HFA, Refunding RB, AMT:		
Series C, 5.00%, 12/01/30	490	517,229
Series C, 5.35%, 12/01/42	2,000	2,107,720
Series F, 5.70%, 6/01/40	870	916,928
		3,745,584
State 24.8%		
Commonwealth of Massachusetts, GO, Series C, 5.00%, 7/01/45	1,000	1,198,410
Massachusetts Bay Transportation Authority, RB, Series A, 5.00%, 7/01/45	500	597,860
Massachusetts Bay Transportation Authority, Refunding RB, Senior Series A, 5.25%, 7/01/29	730	979,463
Massachusetts School Building Authority, RB:		
Dedicated Sales Tax, Senior Series A, 5.00%, 5/15/43	500	588,070
Senior Series B, 5.00%, 10/15/41	1,000	1,174,170
Massachusetts State College Building Authority, RB, Series A, 5.50%, 5/01/19 (b)	2,500	2,831,075
Massachusetts State College Building Authority, Refunding RB, Series B (Syncora), 5.50%, 5/01/39	825	1,120,837
		8,489,885
Transportation 24.9%		
Commonwealth of Massachusetts, RB, Series A, 5.00%, 6/15/27	1,000	1,201,170
	Par	
	(000)	Value
Municipal Bonds		
Massachusetts (continued)		
Transportation (continued)		
Commonwealth of Massachusetts, Refunding RB, Series A, 5.00%, 6/01/38	\$ 500	\$ 582,080
Massachusetts Department of Transportation, Refunding RB, Senior Series B:		
5.00%, 1/01/32	1,120	1,264,614
5.00%, 1/01/37	1,000	1,119,420
Massachusetts Port Authority, RB, AMT:		
Series A, 5.00%, 7/01/42	1,000	1,132,410
Series B, 5.00%, 7/01/45	1,750	2,029,458
Metropolitan Boston Transit Parking Corp., Refunding RB, 5.25%, 7/01/36	1,000	1,171,110
		8,500,262
Total Municipal Bonds in Massachusetts		51,232,059
Puerto Rico 1.4%		
Tobacco 1.4%		
Children's Trust Fund Tobacco Settlement, Refunding RB, Asset-Backed:		
5.50%, 5/15/39	95	94,850
5.63%, 5/15/43	380	379,046
Total Municipal Bonds in Puerto Rico		473,896
Total Municipal Bonds 151.3%		51,705,955

Municipal Bonds Transferred to

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Tender Option Bond Trusts (c)

Massachusetts	3.4%		
Housing	3.4%		
Commonwealth of Massachusetts, GO, Series A, 5.00%, 3/01/46		1,001	1,185,405
Total Long-Term Investments			
(Cost \$47,685,171)	154.7%		52,891,360

Schedule of Investments (continued)

BlackRock Massachusetts Tax-Exempt Trust
(MHE)

Short-Term Securities	Shares	Value
BIF Massachusetts Municipal Money Fund, 0.00% (d)(e)	3	\$ 3
BlackRock Liquidity Funds, MuniCash, 0.21% (d)(e)	160,549	160,549
Total Short-Term Securities		
(Cost \$160,552) 0.5%		160,552
Total Investments (Cost \$47,845,723*) 155.2%		53,051,912
Other Assets Less Liabilities 1.1%		376,475
Liability for TOB Trust Certificates, Including Interest		
Expense and Fees Payable (2.2)%		(751,478)
VRDP Shares, at Liquidation Value (54.1)%		(18,500,000)
Net Assets Applicable to Common Shares 100.0%		\$ 34,176,909

* As of May 31, 2016, gross unrealized appreciation and depreciation based on cost for federal income tax purposes were as follows:

Tax cost	\$ 47,085,297
Gross unrealized appreciation	\$ 5,206,879
Gross unrealized depreciation	(8,878)
Net unrealized appreciation	\$ 5,215,757

Notes to Schedule of Investments

- (a) When-issued security.
- (b) U.S. Government securities, held in escrow, are used to pay interest on this security, as well as to retire the bond in full at the date indicated, typically at a premium to par.
- (c) Represent bonds transferred to a TOB Trust in exchange of cash and residual certificates received by the Trust. These bonds serve as collateral in a secured borrowing.
- (d) During the period ended May 31, 2016, investments in issuers considered to be affiliates of the Trust for purposes of Section 2(a)(3) of the Investment Company Act of 1940, as amended, were as follows:

Affiliate	Shares Held at August 31, 2015	Net Activity	Shares Held at May 31, 2016	Value at May 31, 2016	Income
BIF Massachusetts Municipal Money Fund	254,118	(254,115)	3	\$ 3	
BlackRock Liquidity Funds, MuniCash		160,549	160,549	160,549	\$ 13
Total				\$ 160,552	\$ 13

- (e) Current yield as of period end.

Schedule of Investments (continued)

BlackRock Massachusetts Tax-Exempt Trust
(MHE)

For Trust compliance purposes, the Trust's sector classifications refer to any one or more of the sector sub-classifications used by one or more widely recognized market indexes or rating group indexes, and/or as defined by the investment advisor. These definitions may not apply for purposes of this report, which may combine such sector sub-classifications for reporting ease.

Derivative Financial Instruments Outstanding as of Period End

Futures Contracts

Contracts Short	Issue	Expiration	Notional Value	Unrealized Depreciation
(5)	5-Year U.S. Treasury Note	September 2016	\$600,586	\$ (553)
(7)	10-Year U.S. Treasury Note	September 2016	\$907,813	(886)
(3)	Long U.S. Treasury Bond	September 2016	\$489,937	(4,317)
(1)	Ultra U.S. Treasury Bond	September 2016	\$175,125	(798)
Total				\$ (6,554)

Portfolio Abbreviations

AGC	Assured Guarantee Corp.
AMBAC	American Municipal Bond Assurance Corp.
AMT	Alternative Minimum Tax (subject to)
FHA	Federal Housing Administration
GO	General Obligation Bonds
HFA	Housing Finance Agency
M/F	Multi-Family
NPFGC	National Public Finance Guarantee Corp.
RB	Revenue Bonds
Syncora	Syncora Guarantee

Schedule of Investments (continued)

BlackRock Massachusetts Tax-Exempt Trust
(MHE)**Fair Value Hierarchy as of Period End**

Various inputs are used in determining the fair value of investments and derivative financial instruments. These inputs to valuation techniques are categorized into a fair value hierarchy consisting of three broad levels for financial reporting purposes as follows:

Level 1 unadjusted price quotations in active markets/exchanges for identical assets or liabilities that the Trust has the ability to access

Level 2 other observable inputs (including, but not limited to, quoted prices for similar assets or liabilities in markets that are active, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the assets or liabilities (such as interest rates, yield curves, volatilities, prepayment speeds, loss severities, credit risks and default rates) or other market-corroborated inputs)

Level 3 unobservable inputs based on the best information available in the circumstances, to the extent observable inputs are not available (including the Trust's own assumptions used in determining the fair value of investments and derivative financial instruments)

The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). Accordingly, the degree of judgment exercised in determining fair value is greatest for instruments categorized in Level 3. The inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for disclosure purposes, the fair value hierarchy classification is determined based on the lowest level input that is significant to the fair value measurement in its entirety. The significant unobservable inputs used by the Global Valuation Committee in determining the price for Fair Valued Investments are typically categorized as level 3.

Changes in valuation techniques may result in transfers into or out of an assigned level within the hierarchy. In accordance with the Trust's policy, transfers between different levels of the fair value hierarchy are deemed to have occurred as of the beginning of the reporting period. The categorization of a value determined for investments and derivative financial instruments is based on the pricing transparency of the investments and derivative financial instruments and is not necessarily an indication of the risks associated with investing in those securities. For information about the Trust's policy regarding valuation of investments and derivative financial instruments, refer to the Trust's most recent financial statements as contained in its semi-annual report.

The following tables summarize the Trust's investments and derivative financial instruments categorized in the disclosure hierarchy:

	Level 1	Level 2	Level 3	Total
Assets:				
Investments:				
Long-Term Investments ¹		\$ 52,891,360		\$ 52,891,360
Short-Term Securities	\$ 160,552			160,552
Total	\$ 160,552	\$ 52,891,360		\$ 53,051,912
Derivative Financial Instruments²				
Liabilities:				
Interest rate contracts	\$ (6,554)			\$ (6,554)

¹ See above Schedule of Investments for values in each sector.

² Derivative financial instruments are futures contracts, which are valued at the unrealized appreciation (depreciation) on the instrument.

Schedule of Investments (concluded)

BlackRock Massachusetts Tax-Exempt Trust
(MHE)

The Trust may hold assets and/or liabilities in which the fair value approximates the carrying amount for financial reporting purposes. As of period end, such assets and/or liabilities are categorized within the disclosure hierarchy as follows:

	Level 1	Level 2	Level 3	Total
Assets:				
Cash pledged for futures contracts	\$ 29,050			\$ 29,050
Liabilities:				
TOB Trust Certificates		\$ (750,858)		(750,858)
VRDP Shares		(18,500,000)		(18,500,000)
Total	\$ 29,050	\$ (19,250,858)		\$ (19,221,808)

During the period ended May 31, 2016, there were no transfers between levels.

Item 2 Controls and Procedures

- 2(a) The registrant's principal executive and principal financial officers, or persons performing similar functions, have concluded that the registrant's disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940, as amended (the 1940 Act)) are effective as of a date within 90 days of the filing of this report based on the evaluation of these controls and procedures required by Rule 30a-3(b) under the 1940 Act and Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended.
- 2(b) There were no changes in the registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under the 1940 Act) that occurred during the registrant's last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the registrant's internal control over financial reporting.

Item 3 Exhibits

Certifications Attached hereto

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BlackRock Massachusetts Tax-Exempt Trust

By: /s/ John M. Perlowski

John M. Perlowski

Chief Executive Officer (principal executive officer) of

BlackRock Massachusetts Tax-Exempt Trust

Date: July 22, 2016

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By: /s/ John M. Perlowski

John M. Perlowski

Chief Executive Officer (principal executive officer) of

BlackRock Massachusetts Tax-Exempt Trust

Date: July 22, 2016

By: /s/ Neal J. Andrews

Neal J. Andrews

Chief Financial Officer (principal financial officer) of

BlackRock Massachusetts Tax-Exempt Trust

Date: July 22, 2016