

COMPARISON REOFFERING YIELDS (Massachusetts) - PAGE 1

October 2018

MUNICIPALITY:	Marion		Topsfield		Minuteman RVTSD		Stoughton		Bedford		Pittsfield	
BANK QUALIFIED:	Yes		Yes		No		No		No		No	
RATING:	AAA		AA+		AA		Aa2		AAA		AA	
AMOUNT:	\$8,015,000		\$3,465,000		\$46,000,000		\$13,745,000		\$11,550,000		\$10,300,000	
SALE DATE:	10/1/2018		10/3/2018		10/9/2018		10/11/2018		10/16/2018		10/16/2018	
TERM:	18		20		30		20		20		25	
TIC:	2.7384%		3.2275%		3.8595%		3.3807%		3.2948%		3.7648%	
INSURANCE:	No		No		No		No		No		No	
TERM BONDS:	Yes		No		Yes		Yes		No		Yes	
TAXABLE:	No		No		No		No		No		No	
BID:	108.5385		102.3617		101.9252		106.7387		107.9454		103.4603	
\$ PREMIUM:	\$ 684,361		\$ 81,833		\$ 885,592		\$ 926,234		\$ 917,694		\$ 356,411	
		Reoffering		Reoffering		Reoffering		Reoffering		Reoffering		Reoffering
	Coupon	Yield	Coupon	Yield	Coupon	Yield	Coupon	Yield	Coupon	Yield	Coupon	Yield
2018												
2019	5.000%	1.890%	5.000%	1.870%	5.000%	1.890%	5.000%	1.910%	5.000%	1.950%	5.000%	2.000%
2020	5.000%	1.970%	5.000%	2.000%	5.000%	2.050%	5.000%	2.080%	5.000%	2.080%	5.000%	2.125%
2021	5.000%	2.040%	5.000%	2.050%	5.000%	2.130%	5.000%	2.140%	5.000%	2.130%	5.000%	2.220%
2022	5.000%	2.100%	5.000%	2.120%	5.000%	2.230%	5.000%	2.240%	5.000%	2.180%	5.000%	2.310%
2023	5.000%	2.190%	3.000%	2.180%	5.000%	2.300%	5.000%	2.340%	5.000%	2.270%	5.000%	2.400%
2024	5.000%	2.270%	3.000%	2.250%	5.000%	2.390%	5.000%	2.440%	5.000%	2.380%	5.000%	2.500%
2025	5.000%	2.350%	3.000%	2.320%	5.000%	2.470%	5.000%	2.540%	5.000%	2.460%	5.000%	2.580%
2026	5.000%	2.440%	5.000%	2.400%	5.000%	2.570%	5.000%	2.650%	5.000%	2.550%	5.000%	2.660%
2027	4.000%	2.560%	4.000%	2.610%	5.000%	2.680%	5.000%	2.750%	5.000%	2.640%	5.000%	2.750%
2028	4.000%	2.630%	4.000%	2.680%	5.000%	2.750%	5.000%	2.900%	4.000%	2.790%	5.000%	2.830%
2029	3.000%	2.900%	3.000%	2.900%	3.000%	3.200%	4.000%	3.080%	4.000%	2.970%	3.125%	3.200%
2030	3.000%	3.000%	3.000%	3.000%	3.125%	3.300%	3.250%	3.380%	4.000%	3.140%	4.000%	3.400%
2031	3.000%	3.100%	3.000%	3.100%	3.250%	3.420%	4.000%	3.480%	4.000%	3.240%	4.000%	3.480%
2032	3.125%	3.200%	3.125%	3.200%	3.375%	3.510%	4.000%	3.620%	4.000%	3.330%	3.500%	3.600%
2033			3.250%	3.350%	4.000%	3.580%	3.625%	3.690%	4.000%	3.400%	4.000%	3.630%
2034	3.250%	3.350%	3.375%	3.450%	4.000%	3.640%	4.000%	3.750%	4.000%	3.470%	4.000%	3.710%
2035			3.500%	3.500%	4.000%	3.700%	4.000%	3.820%	4.000%	3.550%	4.000%	3.800%
2036	3.375%	3.450%	3.500%	3.550%	4.000%	3.800%	4.000%	3.900%	4.000%	3.600%	4.000%	3.850%
2037			3.500%	3.600%	4.000%	3.850%			4.000%	3.630%		
2038			3.500%	3.650%	4.000%	3.890%	4.000%	4.000%	4.000%	3.670%	4.000%	4.000%
2039					4.000%	3.920%						
2040					4.000%	3.950%					4.000%	4.020%
2041												
2042					4.000%	4.000%						
2043											4.000%	4.040%
2044					4.000%	4.030%						
2045												
2046					4.000%	4.050%						
2047												
2048					4.000%	4.070%						
	Callable Oct 15, 2026		Callable Oct 15, 2026		Callable Oct 15, 2026		Callable Oct 15, 2027		Callable Nov 1, 2027		Callable Sep 1, 2027	

COMPARISON REOFFERING YIELDS (Massachusetts) - PAGE 2

October 2018

MUNICIPALITY:	Berlin		Cape Cod Regional Technical High School District		Douglas		Eastham		Millis		Nantucket	
BANK QUALIFIED:	Yes		No		No		Yes		No		No	
RATING:	AA+		AA		Aa3		AA+		Aa3		Aaa	
AMOUNT:	\$3,800,000		\$75,000,000		\$12,825,000		\$3,105,000		\$26,360,000		\$20,495,000	
SALE DATE:	10/17/2018		10/18/2018		10/22/2018		10/24/2018		10/24/2018		10/30/2018	
TERM:	20		20		13		20		25		20	
TIC:	3.4042%		3.3199%		3.1269%		3.2366%		3.5479%		3.2880%	
INSURANCE:	No		No		No		No		No		No	
TERM BONDS:	Yes		No		No		Yes		Yes		No	
TAXABLE:	No		No		No		No		No		No	
BID:	101.8077		109.0757		109.8443		103.9988		106.2637		106.0151	
\$ PREMIUM:	\$ 68,693		\$ 6,806,775		\$ 1,262,531		\$ 124,163		\$ 1,651,111		\$ 1,232,795	
		Reoffering		Reoffering		Reoffering		Reoffering		Reoffering		Reoffering
	Coupon	Yield	Coupon	Yield	Coupon	Yield	Coupon	Yield	Coupon	Yield	Coupon	Yield
2018												
2019	5.000%	1.950%	5.000%	1.900%			5.000%	1.940%	5.000%	1.920%	5.000%	1.850%
2020	5.000%	2.100%	5.000%	2.040%	5.000%	2.030%	5.000%	2.080%	5.000%	2.070%	5.000%	1.950%
2021	5.000%	2.170%	5.000%	2.110%	5.000%	2.080%	5.000%	2.150%	5.000%	2.150%	3.000%	2.030%
2022	5.000%	2.260%	5.000%	2.190%	5.000%	2.180%	5.000%	2.230%	5.000%	2.230%	5.000%	2.110%
2023	3.000%	2.350%	5.000%	2.280%	5.000%	2.260%	5.000%	2.320%	5.000%	2.330%	5.000%	2.190%
2024	3.000%	2.450%	5.000%	2.370%	5.000%	2.360%	5.000%	2.400%	5.000%	2.400%	5.000%	2.290%
2025	3.000%	2.600%	5.000%	2.450%	5.000%	2.450%	3.000%	2.600%	5.000%	2.500%	5.000%	2.380%
2026	3.000%	2.750%	5.000%	2.530%	5.000%	2.560%	3.000%	2.750%	5.000%	2.580%	5.000%	2.480%
2027	3.000%	2.900%	5.000%	2.650%	5.000%	2.670%	3.000%	2.900%	5.000%	2.660%	5.000%	2.580%
2028	3.000%	3.000%	5.000%	2.750%	5.000%	2.760%	3.000%	3.000%	5.000%	2.750%	5.000%	2.660%
2029			5.000%	2.840%	5.000%	2.850%	3.000%	3.100%	4.000%	2.900%	3.000%	3.000%
2030	3.125%	3.200%	5.000%	2.950%	4.000%	3.200%	3.125%	3.200%	4.000%	3.100%	3.150%	3.150%
2031			4.000%	3.280%	4.000%	3.310%	3.250%	3.300%	4.000%	3.200%	3.300%	3.300%
2032			4.000%	3.370%	4.000%	3.430%	3.250%	3.350%	4.000%	3.300%	3.400%	3.400%
2033	3.500%	3.550%	4.000%	3.470%			3.375%	3.400%	4.000%	3.400%	3.450%	3.450%
2034			4.000%	3.580%					4.000%	3.500%	4.000%	3.500%
2035			4.000%	3.660%			4.000%	3.250%	4.000%	3.600%	4.000%	3.550%
2036	4.000%	3.450%	4.000%	3.720%					4.000%	3.700%	4.000%	3.600%
2037			4.000%	3.770%					4.000%	3.800%	4.000%	3.650%
2038	4.000%	3.500%	4.000%	3.800%			4.000%	3.400%	4.000%	3.900%	4.000%	3.700%
2039												
2040												
2041												
2042												
2043									4.000%	4.000%		
	Callable Oct 15, 2025		Callable Nov 15, 2027		Callable Feb 15, 2026		Callable Nov 1, 2027		Callable Nov 1, 2027		Callable Jul 15, 2027	

COMPARISON REOFFERING YIELDS (Connecticut and Maine) - PAGE 3

October 2018

MUNICIPALITY:	Colchester, CT		Plymouth, CT		Bristol, CT		Bristol, CT		Watertown, CT	
BANK QUALIFIED:	No		Yes		No		No		No	
RATING:	AA+		AA		AA+		AA+		AA+	
AMOUNT:	\$12,000,000		\$6,950,000		\$22,500,000		\$7,900,000		\$11,000,000	
SALE DATE:	10/3/2018		10/10/2018		10/11/2018		10/11/2018		10/16/2018	
TERM:	26		19		20		20		19	
TIC:	3.5275%		3.6577%		3.3374%		3.9177%		3.5383%	
INSURANCE:	No		Yes		No		No		No	
TERM BONDS:	No		No		No		No		No	
TAXABLE:	No		No		No		Yes		No	
BID:	101.1652		101.4524		100.4136		100.1017		104.9271	
\$ PREMIUM:	\$ 139,824		\$ 100,942		\$ 93,060		\$ 8,034		\$ 541,981	
	<u>Coupon</u>	<u>Reoffering Yield</u>	<u>Coupon</u>	<u>Reoffering Yield</u>	<u>Coupon</u>	<u>Reoffering Yield</u>	<u>Coupon</u>	<u>Reoffering Yield</u>	<u>Coupon</u>	<u>Reoffering Yield</u>
2018										
2019					5.000%	1.820%	4.000%	2.800%		
2020	5.000%	1.880%	4.000%	2.200%	5.000%	1.960%	4.000%	2.950%	5.000%	1.950%
2021	5.000%	1.950%	4.000%	2.300%	5.000%	2.030%	4.000%	3.050%	5.000%	2.060%
2022	5.000%	2.030%	4.000%	2.400%	5.000%	2.120%	4.000%	3.150%	5.000%	2.150%
2023	5.000%	2.120%	4.000%	2.500%	5.000%	2.210%	4.000%	3.250%	5.000%	2.260%
2024	5.000%	2.200%	4.000%	2.650%	3.000%	2.450%	4.000%	3.350%	5.000%	2.400%
2025	5.000%	2.280%	3.000%	2.800%	2.500%	2.560%	4.000%	3.450%	4.000%	2.580%
2026	4.000%	2.390%	3.000%	2.900%	3.000%	2.730%	4.000%	3.500%	4.000%	2.710%
2027	4.000%	2.480%	3.000%	3.000%	3.000%	2.870%	4.000%	3.600%	4.000%	2.850%
2028	4.000%	2.560%	3.000%	3.100%	3.000%	3.000%	3.650%	3.650%	4.000%	3.030%
2029	3.000%	3.000%	4.000%	3.100%	3.000%	3.130%	3.700%	3.700%	4.000%	3.160%
2030	3.000%	3.110%	4.000%	3.200%	3.000%	3.250%	3.750%	3.750%	4.000%	3.280%
2031	3.125%	3.210%	4.000%	3.300%	3.125%	3.360%	3.800%	3.800%	4.000%	3.380%
2032	3.125%	3.300%	4.000%	3.400%	3.250%	3.430%	3.850%	3.850%	4.000%	3.480%
2033	3.250%	3.400%	4.000%	3.500%	3.250%	3.500%	3.900%	3.900%	4.000%	3.530%
2034	3.375%	3.470%	4.000%	3.600%	3.375%	3.580%	3.950%	3.950%	4.000%	3.640%
2035	3.375%	3.530%	4.000%	3.700%	3.500%	3.650%	4.000%	4.000%	4.000%	3.700%
2036	3.500%	3.590%	4.000%	3.800%	3.500%	3.710%	4.050%	4.050%	4.000%	3.750%
2037	3.500%	3.650%	4.000%	3.950%	3.500%	3.760%	4.050%	4.080%	4.000%	3.780%
2038	3.625%	3.700%	4.000%	4.000%	3.750%	3.750%	4.050%	4.100%	4.000%	3.820%
2039	3.625%	3.730%								
2040	3.625%	3.760%								
2041	3.625%	3.780%								
2042	3.625%	3.800%								
2043	3.625%	3.810%								
2044	3.750%	3.820%								
2045	3.750%	3.830%								
	Callable Oct 15, 2024		Callable Oct 15, 2024		Callable Oct 15, 2023		Callable Oct 15, 2026		Callable Oct 15, 2024	

COMPARISON REOFFERING YIELDS (Connecticut and Maine) - PAGE 4

October 2018

MUNICIPALITY:	Watertown, CT		North Yarmouth, ME		Derby, CT		East Hartford, CT		Stonington, CT	
BANK QUALIFIED:	No		Yes		No		No		No	
RATING:	AA+		AA+		AA-		AA		AA+	
AMOUNT:	\$5,810,000		\$3,430,000		\$12,580,000		\$14,600,000		\$7,000,000	
SALE DATE:	10/16/2018		10/16/2018		10/17/2018		10/17/2018		10/18/2018	
TERM:	20		20		20		9		20	
TIC:	4.2056%		3.4457%		3.5887%		2.8312%		3.4913%	
INSURANCE:	No		No		No		No		No	
TERM BONDS:	No		No		No		No		No	
TAXABLE:	Yes		No		No		No		No	
BID:	100.3757		100.2787		102.0161		106.4758		101.8683	
\$ PREMIUM:	\$	21,828	\$	9,559	\$	253,625	\$	945,467	\$	130,781
		Reoffering		Reoffering		Reoffering		Reoffering		Reoffering
	Coupon	Yield	Coupon	Yield	Coupon	Yield	Coupon	Yield	Coupon	Yield
2018										
2019	5.000%	2.850%	3.000%	1.850%	5.000%	1.950%			5.000%	1.800%
2020	5.000%	3.100%	3.000%	2.000%	5.000%	2.100%	5.000%	2.080%	5.000%	2.000%
2021	5.000%	3.250%	3.000%	2.070%	5.000%	2.170%	5.000%	2.150%	5.000%	2.090%
2022	5.000%	3.350%	3.000%	2.160%	5.000%	2.260%	5.000%	2.250%	5.000%	2.150%
2023	5.000%	3.450%	3.000%	2.250%	5.000%	2.350%	5.000%	2.350%	5.000%	2.250%
2024	4.000%	3.500%	3.000%	2.350%	4.000%	2.450%	5.000%	2.470%	4.000%	2.350%
2025	4.000%	3.600%	3.000%	2.500%	3.000%	2.700%	4.000%	2.620%	4.000%	2.460%
2026	4.000%	3.700%	3.000%	2.650%	3.000%	2.850%	4.000%	2.720%	3.000%	2.700%
2027	4.000%	3.800%	3.000%	2.800%	3.000%	3.050%	3.000%	3.080%	3.000%	2.850%
2028	4.000%	3.900%	3.000%	3.000%	3.125%	3.200%	3.000%	3.160%	3.000%	3.000%
2029	4.000%	4.000%	3.000%	3.150%	3.250%	3.300%			3.250%	3.250%
2030	4.050%	4.050%	3.125%	3.250%	3.375%	3.450%			3.375%	3.375%
2031	4.100%	4.100%	3.250%	3.350%	4.000%	3.400%			3.500%	3.500%
2032	4.150%	4.150%	3.375%	3.450%	4.000%	3.500%			3.500%	3.560%
2033	4.200%	4.200%	3.500%	3.550%	4.000%	3.600%			3.625%	3.625%
2034	4.250%	4.250%	4.000%	3.540%	4.000%	3.700%			3.750%	3.700%
2035	4.300%	4.300%	4.000%	3.600%	4.000%	3.800%			3.750%	3.750%
2036	4.350%	4.350%	4.000%	3.650%	4.000%	3.900%			3.750%	3.800%
2037	4.400%	4.400%	4.000%	3.680%	4.000%	3.950%			4.000%	3.720%
2038	4.450%	4.450%	4.000%	3.720%	4.000%	4.000%			4.000%	3.750%
	Callable Oct 15, 2023		Callable Nov 1, 2028		Callable Oct 15, 2023		Callable Oct 15, 2024		Callable Oct 15, 2023	

COMPARISON REOFFERING YIELDS (Connecticut and Maine) - PAGE 5

Ocotber 2018

MUNICIPALITY:	Long Hill Fire District, CT		North Haven, CT		Auburn, ME		Milford, CT	
BANK QUALIFIED:	Yes		No		Yes		No	
RATING:	AA+		AAA		Aa3/AA-		AA+	
AMOUNT:	\$7,000,000		\$7,500,000		\$7,655,000		\$21,045,000	
SALE DATE:	10/23/2018		10/24/2018		10/24/2018		10/24/2018	
TERM:	20		18		10		20	
TIC:	3.4510%		3.3812%		2.6358%		3.4814%	
INSURANCE:	No		No		No		No	
TERM BONDS:	No		No		No		No	
TAXABLE:	No		No		No		No	
BID:	100.6576		100.6256		110.3644		103.8322	
\$ PREMIUM:	\$	46,032	\$	46,920	\$	793,395	\$	806,486
		Reoffering		Reoffering		Reoffering		Reoffering
	<u>Coupon</u>	<u>Yield</u>	<u>Coupon</u>	<u>Yield</u>	<u>Coupon</u>	<u>Yield</u>	<u>Coupon</u>	<u>Yield</u>
2018								
2019	5.000%	1.950%			3.000%	1.930%	5.000%	1.850%
2020	5.000%	2.090%			3.000%	2.060%	5.000%	1.990%
2021	5.000%	2.160%	5.000%	2.030%	3.000%	2.120%	5.000%	2.060%
2022	5.000%	2.250%	5.000%	2.120%	5.000%	2.230%	5.000%	2.140%
2023	5.000%	2.340%	5.000%	2.220%	5.000%	2.320%	5.000%	2.250%
2024	3.000%	2.550%	2.250%	2.370%	5.000%	2.400%	5.000%	2.400%
2025	3.000%	2.700%	2.500%	2.500%	5.000%	2.500%	3.000%	2.600%
2026	3.000%	2.800%	3.000%	2.640%	5.000%	2.600%	3.000%	2.800%
2027	3.000%	2.900%	3.000%	2.780%	5.000%	2.700%	3.000%	3.000%
2028	3.000%	3.000%	3.000%	2.910%	5.000%	2.800%	3.000%	3.050%
2029	3.000%	3.100%	3.000%	3.080%			4.000%	2.900%
2030	3.125%	3.200%	3.000%	3.190%			4.000%	3.000%
2031	3.250%	3.300%	3.000%	3.260%			4.000%	3.100%
2032	3.375%	3.400%	3.000%	3.320%			4.000%	3.200%
2033	3.500%	3.500%	3.250%	3.410%			4.000%	3.300%
2034	3.625%	3.650%	4.000%	3.340%			4.000%	3.400%
2035	3.625%	3.700%	4.000%	3.430%			4.000%	3.450%
2036	3.750%	3.750%	4.000%	3.510%			4.000%	3.500%
2037	3.750%	3.800%	4.000%	3.570%			4.000%	3.550%
2038	3.750%	3.850%	3.500%	3.710%			4.000%	3.600%
	Callable Nov 1, 2023		Callable Nov 1, 2023		Non-callable		Callable Nov 1, 2024	