

February 10, 2017

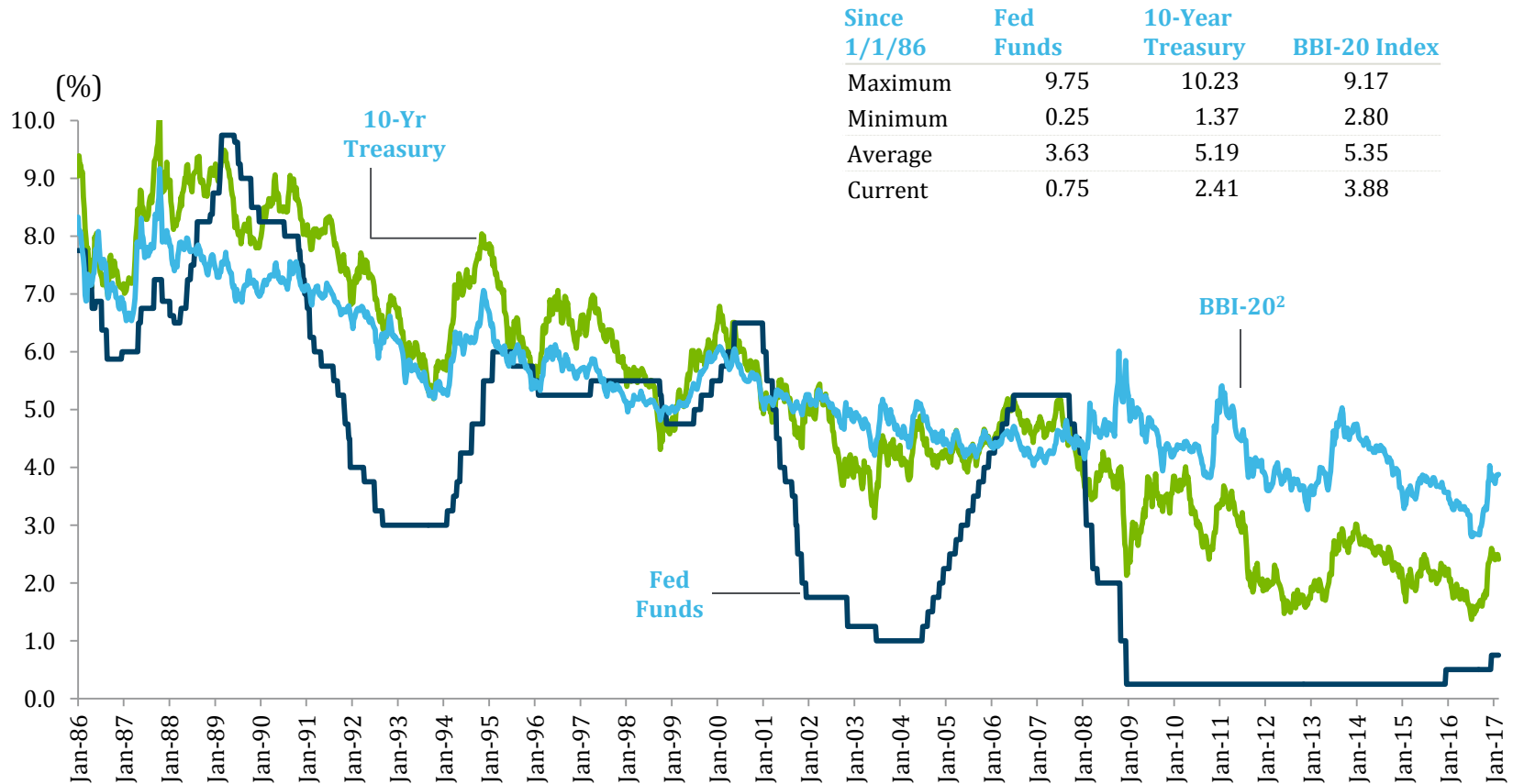
Weekly Market Update

Municipal Market Indices and Indicators

William Blair

Historical Rate Comparison

Fed Funds, 10-Year Treasury, and BBI-20 Since 1986¹



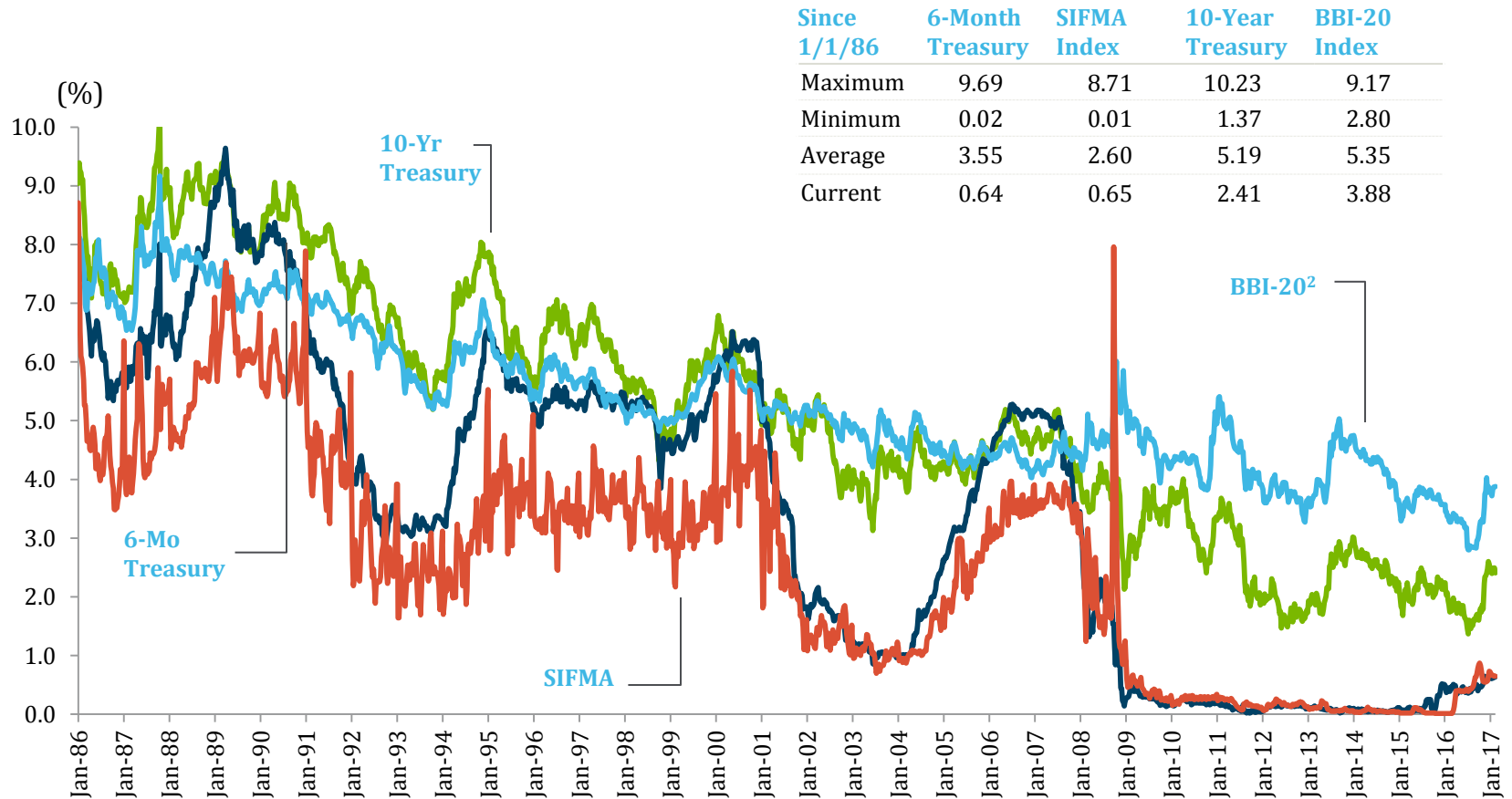
(1) Reflects market conditions as of February 10, 2017

(2) The 20-year Bond-Buyer Index (BBI-20) is based on the average yields of 20-year bonds issued by 20 different general obligation bond issuers. These issuers are all rated Aa2 by Moody's

Source: Bloomberg Information Systems

Historical Rate Comparison

Municipal Versus Taxable Market Yields Since 1986¹



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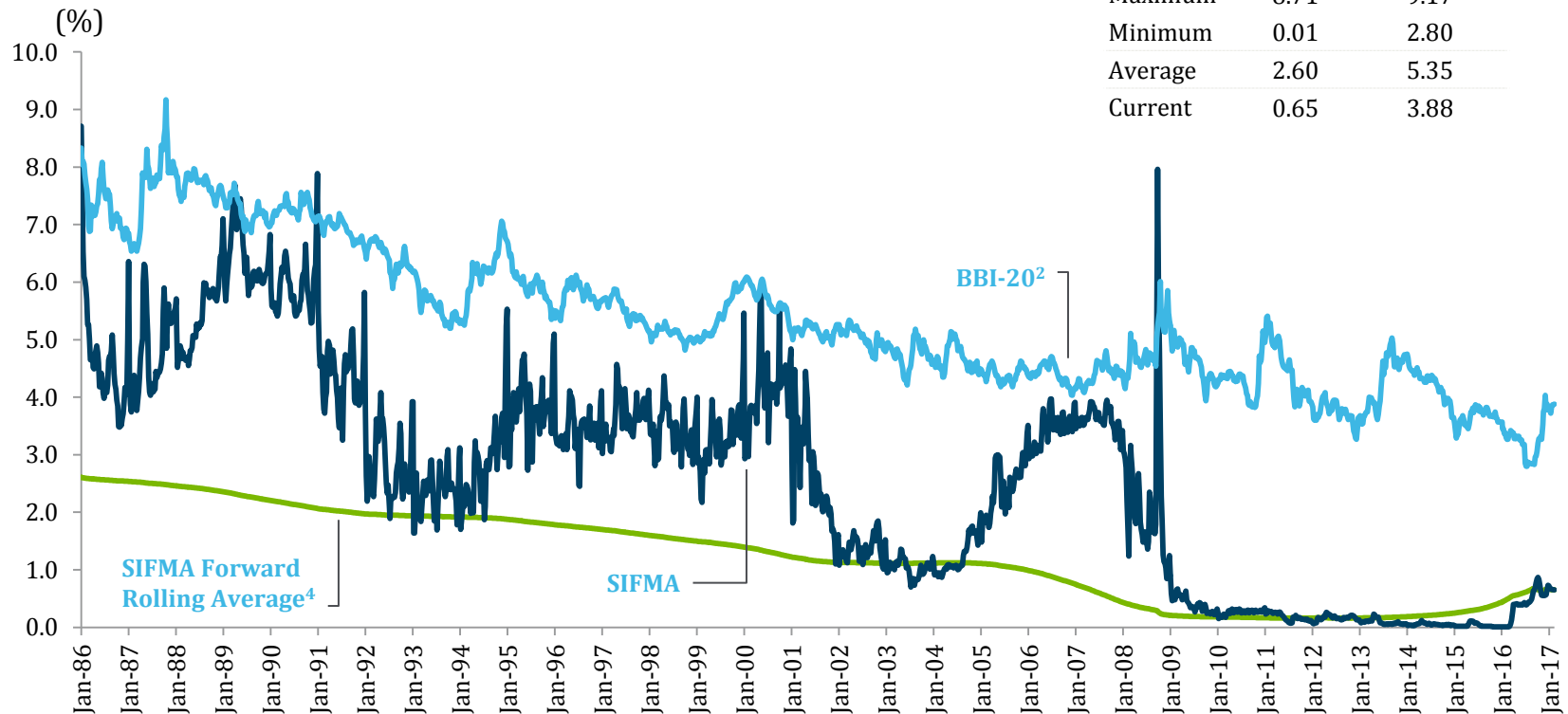
(3) The Securities Industry and Financial Markets Association (SIFMA) Index (formerly Bond Market Association, or "BMA") is calculated by taking the weighted average of the clearing rates for a pool of high-grade tax-exempt short-term issues with weekly resets. The SIFMA Index is a widely used proxy for high-grade weekly bonds

Source: Bloomberg Information Systems

Historical Rate Comparison—Municipal General Obligation

SIFMA Versus BBI-20 Since 1986¹

Since 1/1/86	SIFMA Index	BBI-20 Index
Maximum	8.71	9.17
Minimum	0.01	2.80
Average	2.60	5.35
Current	0.65	3.88



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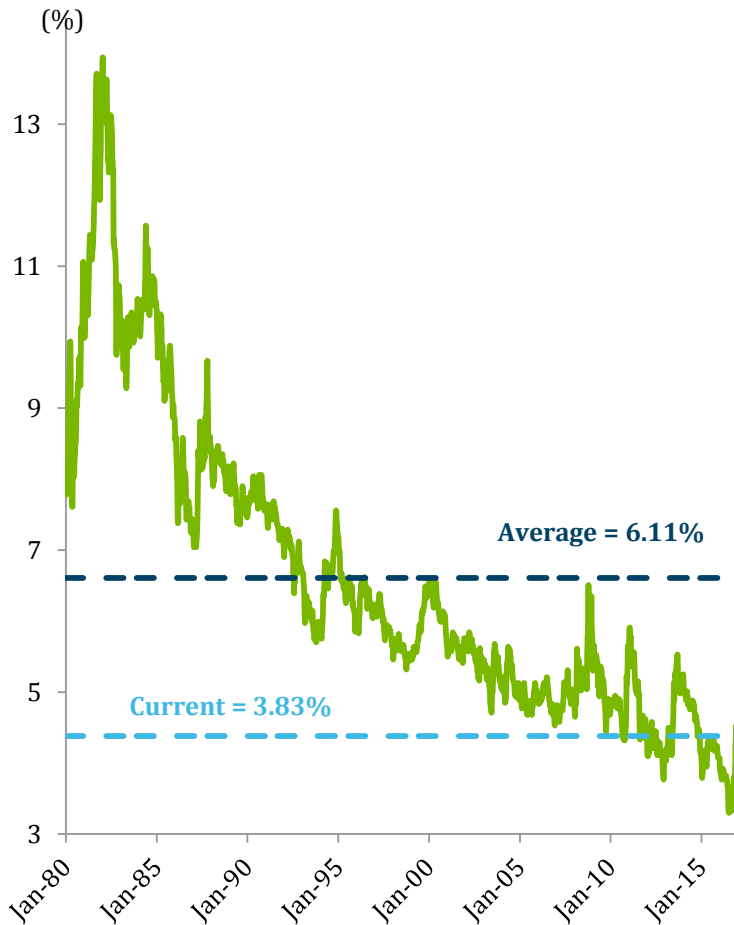
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(4) SIFMA forward rolling average represents average variable rate cost of capital from a specific point in time to present

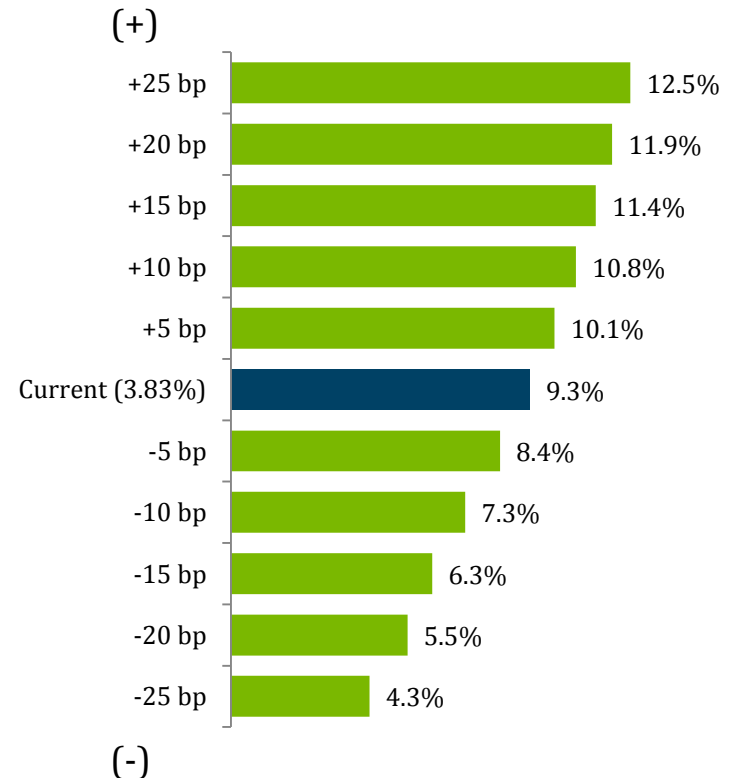
Source: Bloomberg Information Systems

Municipal G.O. Interest Rates at Historical Lows

Historical BBI-20 Index¹



Percentage of Time BBI-20 Has Been At or Below Specified Level Since 1980

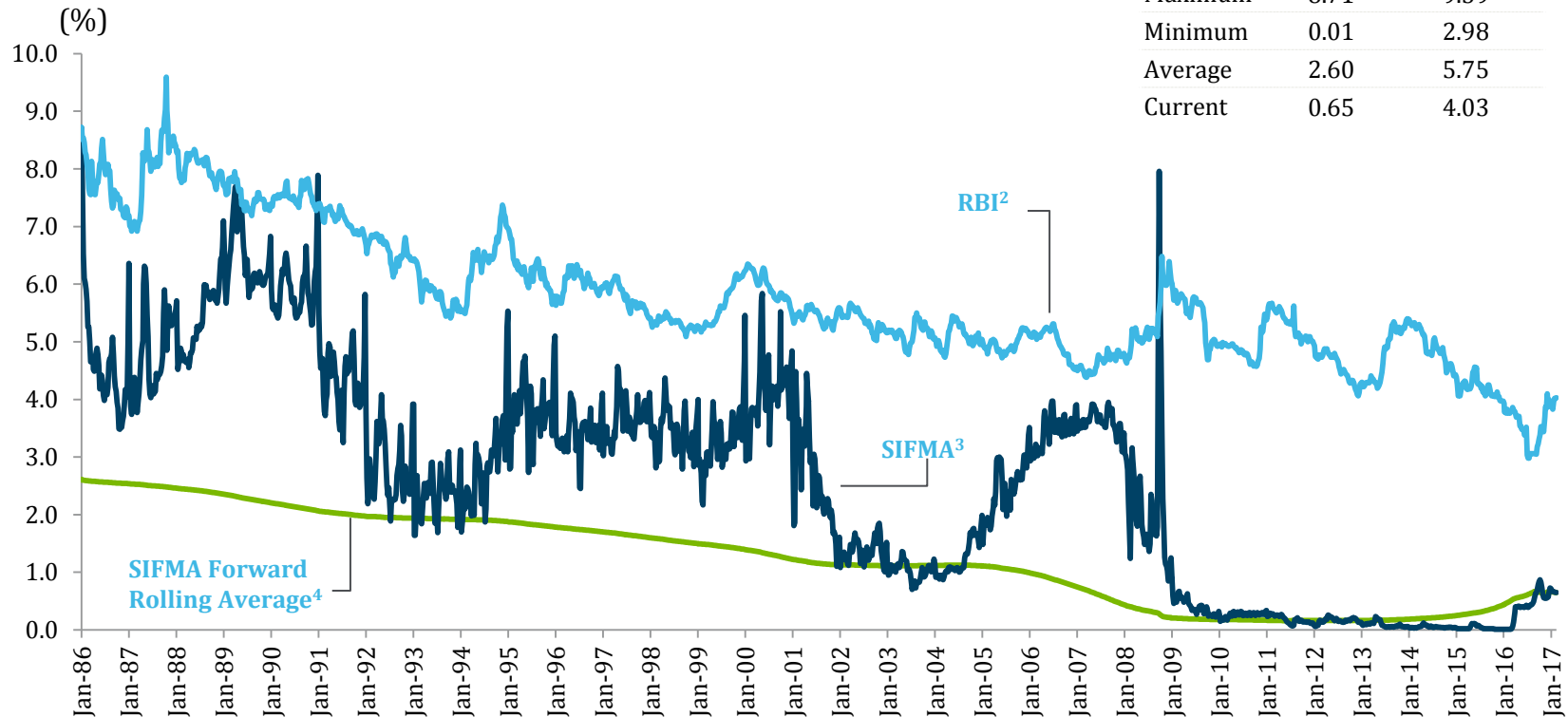


(1) Reflects market conditions as of February 10, 2017, The 20-year Bond-Buyer Index (BBI-20) is based on the average yields of 20-year bonds issued by 20 different general obligation bond issuers; these issuers are all rated Aa2 by Moody's
Source: Bloomberg Information Systems

Historical Rate Comparison—Municipal Revenue

SIFMA Versus RBI Since 1986¹

Since 1/1/86	SIFMA Index	RBI Index
Maximum	8.71	9.59
Minimum	0.01	2.98
Average	2.60	5.75
Current	0.65	4.03



(1) Reflects market conditions as of February 10, 2017

(2) The Revenue Bond Index (RBI) is based on the average yields of 30-year bonds issued by 25 different revenue bond issuers. The average rating is roughly equivalent to Moody's A1 and S&P A+

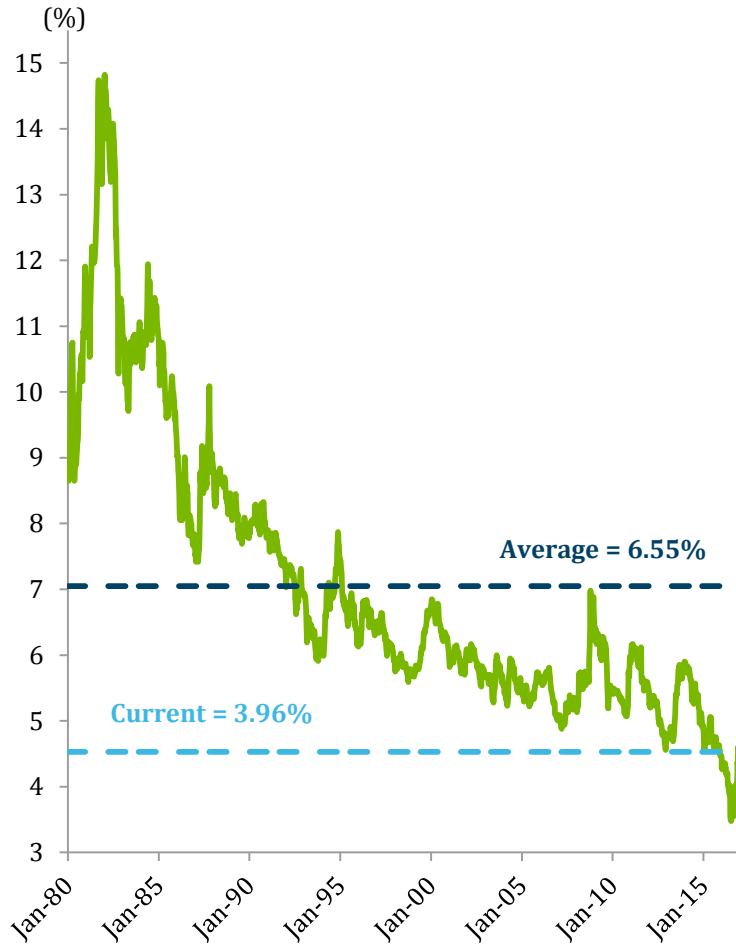
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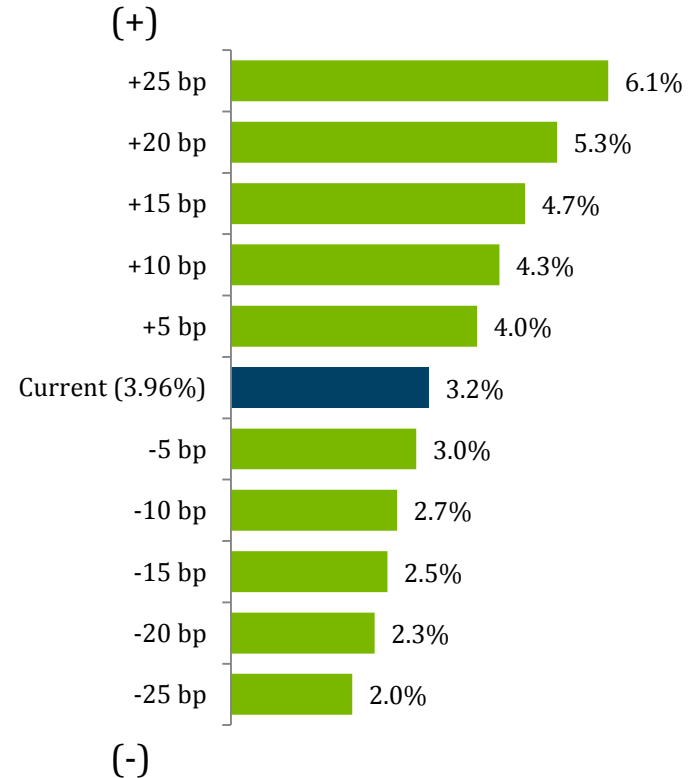
Source: Bloomberg Information Systems

Municipal Revenue Interest Rates at Historical Lows

Historical Revenue Bond Index (RBI)¹



Percentage of Time RBI has been at or Below Specified Level Since 1980

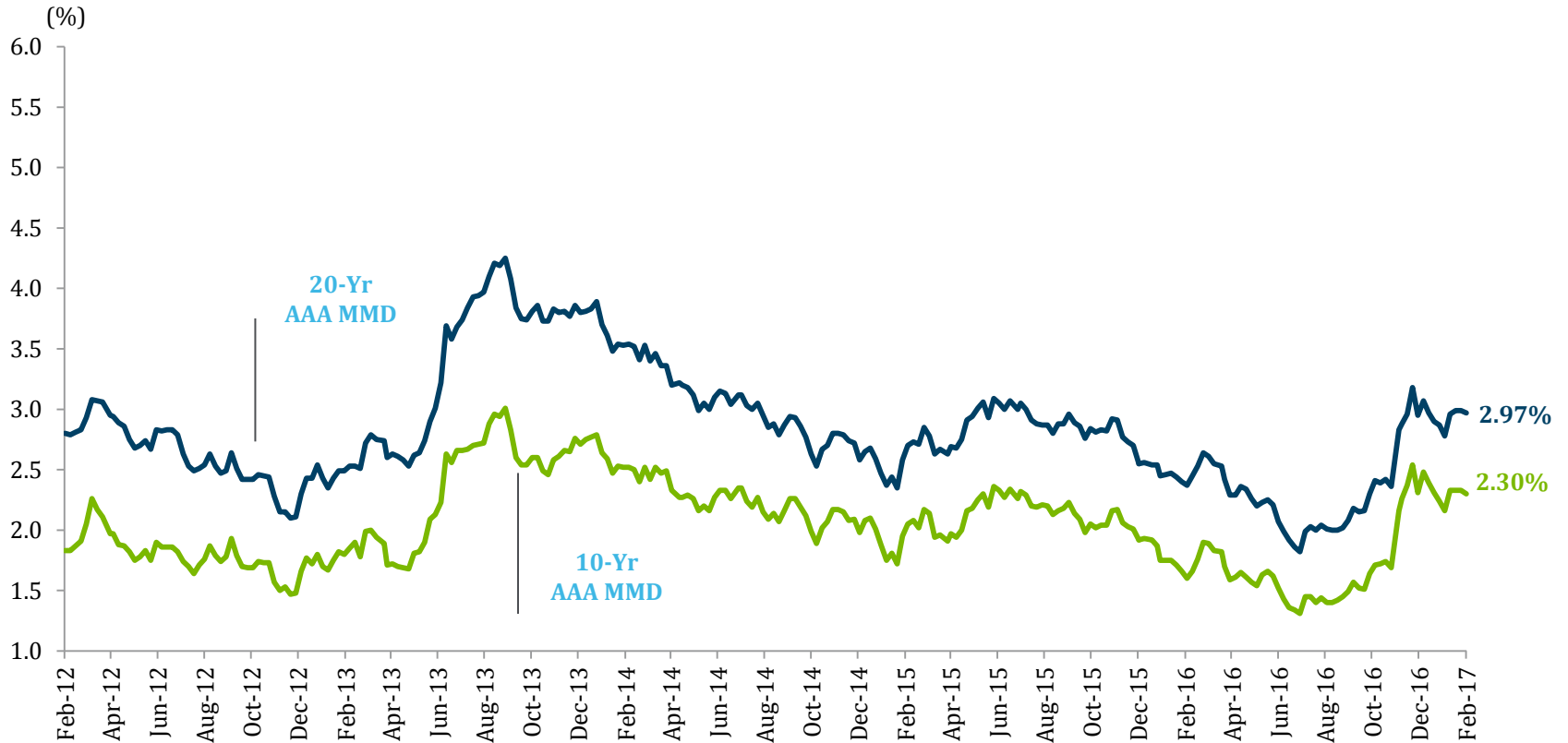


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Source: Bloomberg Information Systems

Historical AAA MMD Interest Rates

AAA Municipal Market Data (“MMD”) During the Past Five Years

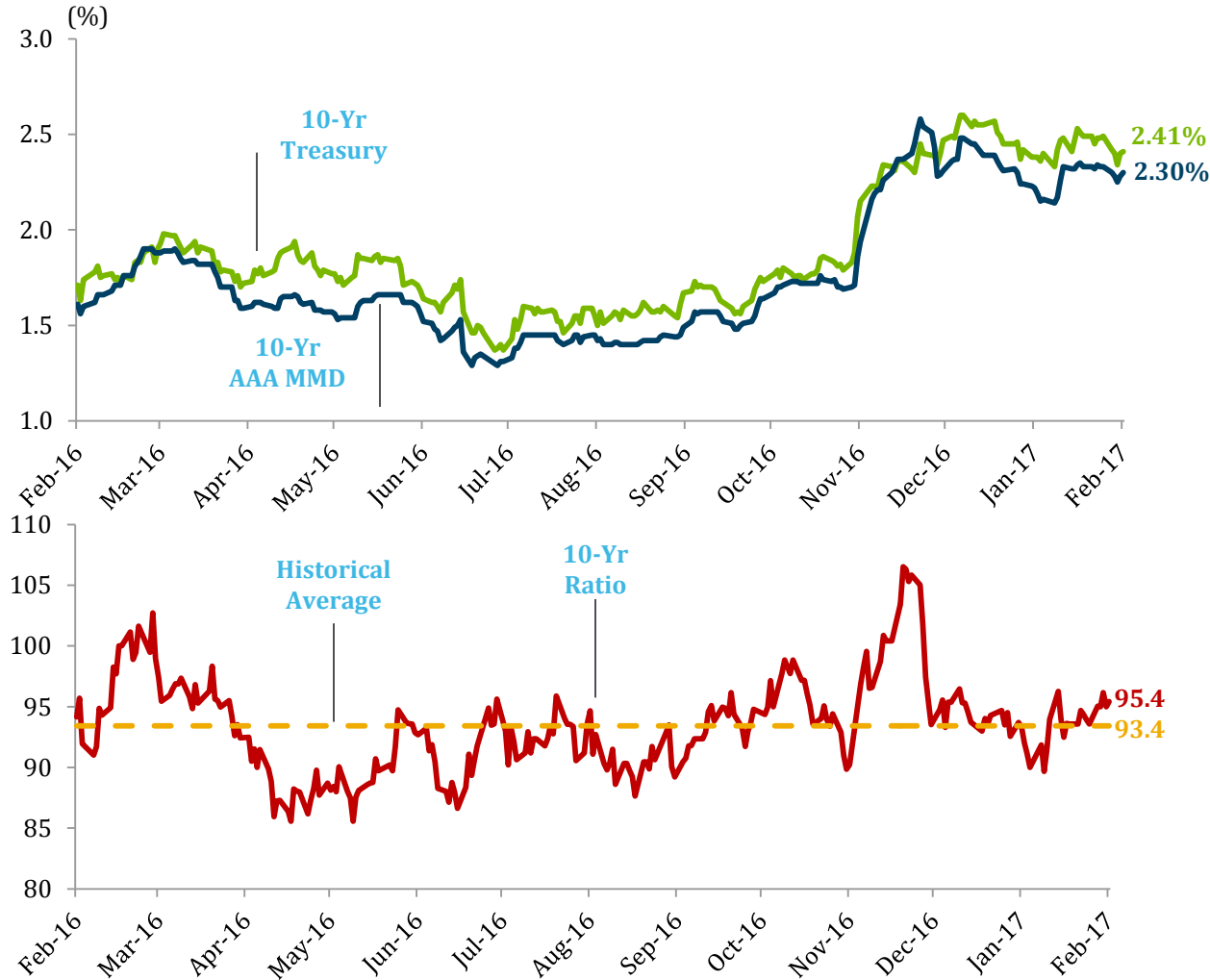


Note: Reflects market conditions as of February 10, 2017

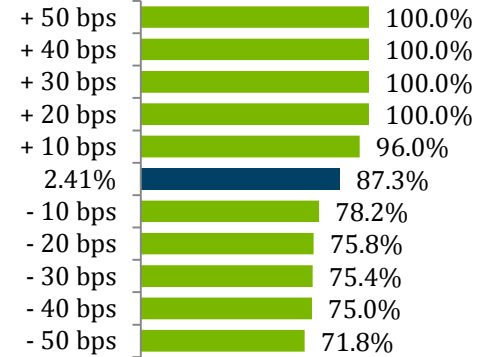
Source: Thomson Financial

Municipal to Treasury Yield Ratios

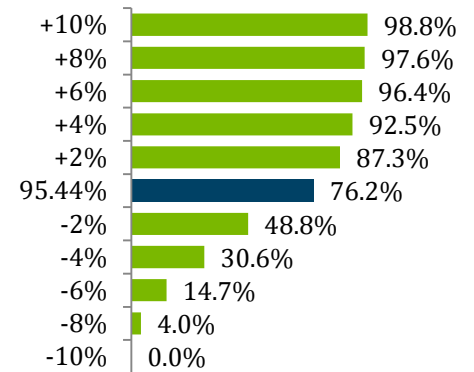
10-Year Maturity Over the Previous 12 Months



%Time 10 Year Treasury Yield Lower



%Time 10 Year Maturity Ratio Lower



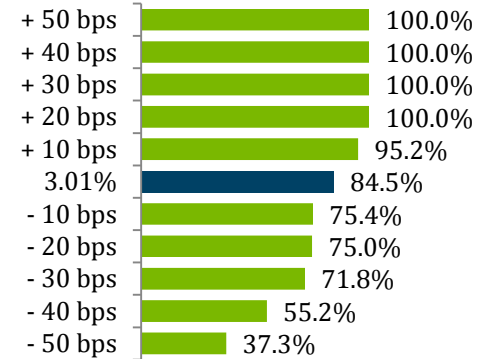
Note: Reflects market conditions as of February 10, 2017
 Source: Municipal Market Data and Bloomberg Information Systems

Municipal to Treasury Yield Ratios

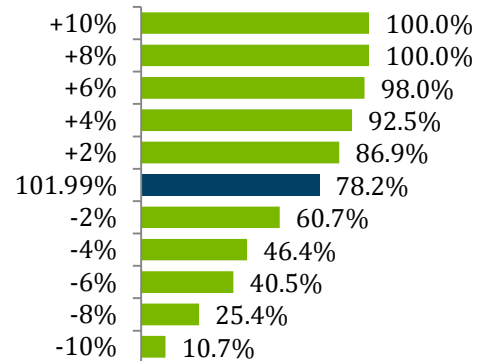
30-Year Maturity Over the Previous 12 Months



% Time 30 Year Treasury Yield Lower



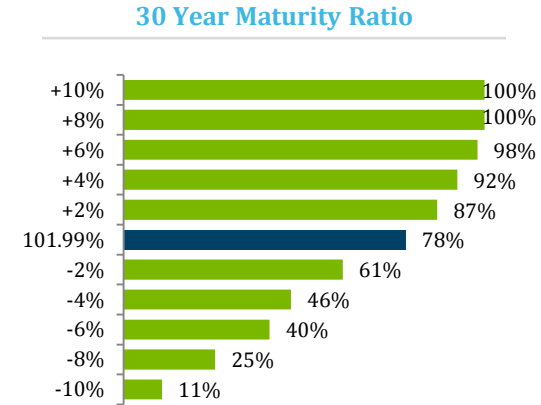
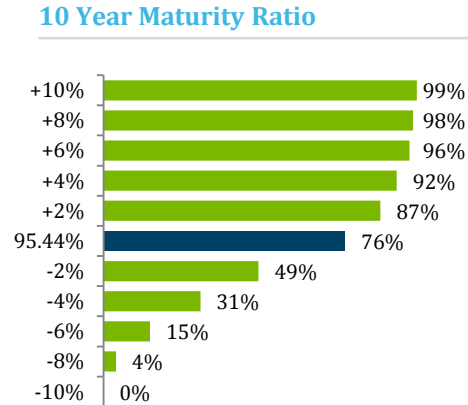
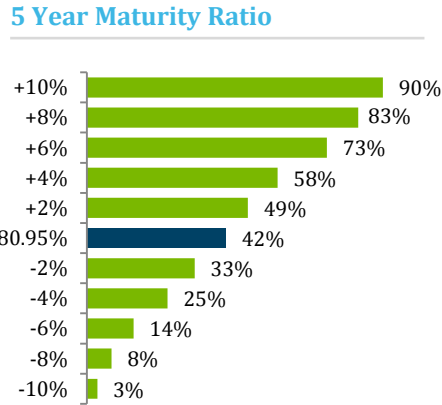
% Time 30 Year Maturity Ratio Lower



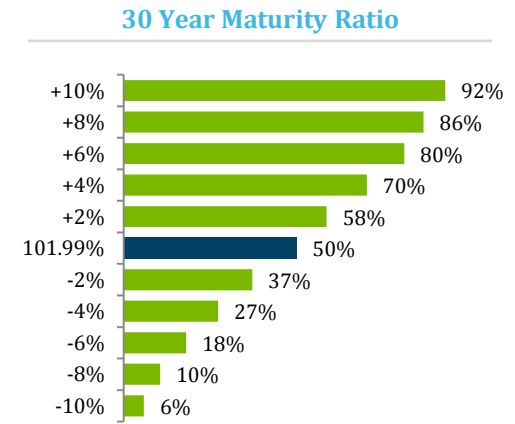
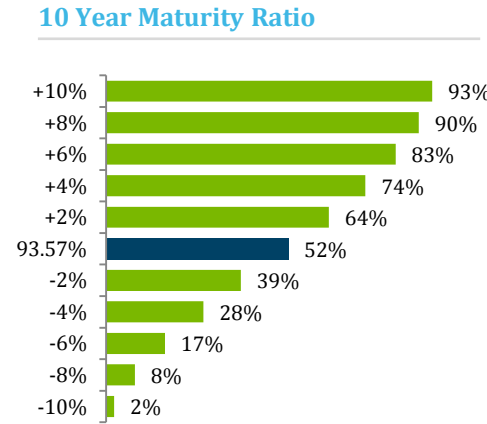
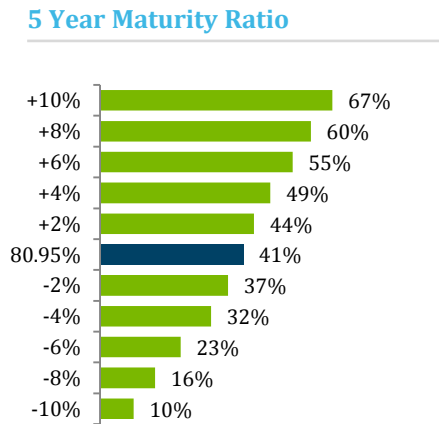
Note: Reflects market conditions as of February 10, 2017
 Source: Municipal Market Data and Bloomberg Information Systems

Municipal to Treasury Yield Ratios - % Time Statistics⁽¹⁾

Muni-to-Treasury Ratio, Percent of time higher/lower than current market; 1 year Horizon



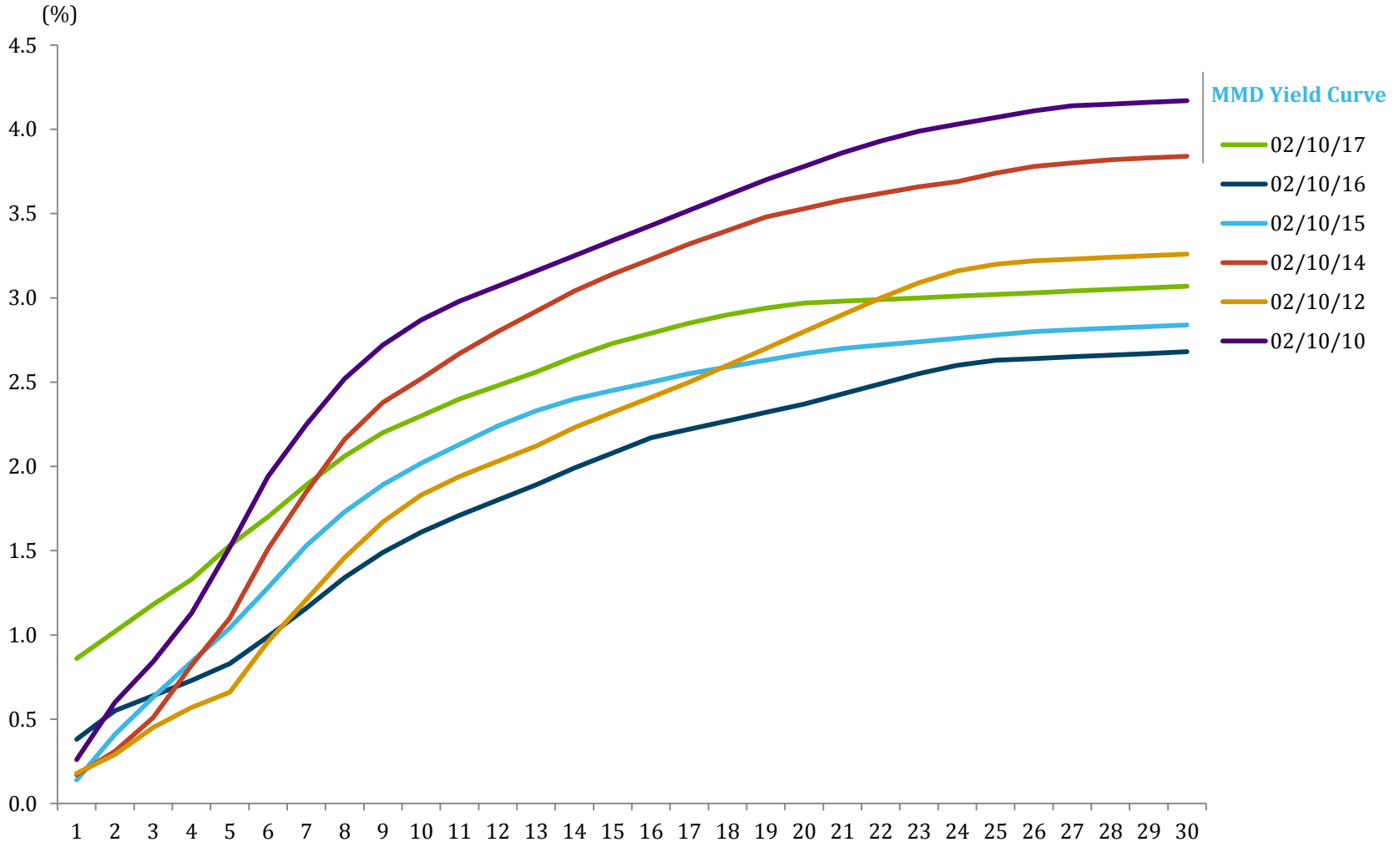
Muni-to-Treasury Ratio, Percent of time higher/lower than current market; 5 year Horizon



(1) Reflects market conditions as of February 10, 2017
Source: Bloomberg Information Systems

Municipal Yield Curve Comparison

AAA MMD Curves During the Past Seven Years



Note: Reflects market conditions as of February 10, 2017
 Source: Thomson Financial

Tax-Exempt and Taxable Fixed Income Indices

	SIFMA Index	RBI Index	BBI-20 Index	BBI-40 Index	Fed Funds	1-month LIBOR	3-month LIBOR	1-mo Treasury	3-mo Treasury	6-mo Treasury	1-year Treasury	2-year Treasury	3-year Treasury	5-year Treasury	7-year Treasury	10-year Treasury	30-year Treasury
1-YEAR																	
Max	0.87	4.10	4.03	3.58	0.75	0.78	1.04	0.52	0.55	0.66	0.92	1.29	1.61	2.10	2.42	2.60	3.19
Min	0.01	2.98	2.80	2.39	0.50	0.43	0.62	0.09	0.18	0.34	0.44	0.56	0.66	0.94	1.19	1.37	2.11
Average	0.49	3.55	3.31	2.86	0.54	0.54	0.79	0.29	0.35	0.48	0.65	0.88	1.05	1.39	1.69	1.89	2.63
Current	0.65	4.03	3.88	3.38	0.75	0.77	1.04	0.51	0.55	0.64	0.81	1.20	1.47	1.89	2.22	2.41	3.01
3-YEAR																	
Max	0.87	5.33	4.51	4.22	0.75	0.78	1.04	0.52	0.55	0.66	0.92	1.29	1.61	2.10	2.42	2.82	3.73
Min	0.01	2.98	2.80	2.39	0.25	0.15	0.22	0.00	0.00	0.03	0.09	0.31	0.66	0.94	1.19	1.37	2.11
Average	0.19	4.17	3.69	3.34	0.36	0.31	0.46	0.12	0.15	0.25	0.38	0.69	1.00	1.52	1.89	2.16	2.90
Current	0.65	4.03	3.88	3.38	0.75	0.77	1.04	0.51	0.55	0.64	0.81	1.20	1.47	1.89	2.22	2.41	3.01
5-YEAR																	
Max	0.87	5.40	5.03	4.75	0.75	0.78	1.04	0.52	0.55	0.66	0.92	1.29	1.61	2.10	2.45	3.04	3.96
Min	0.01	2.98	2.80	2.39	0.25	0.15	0.22	0.00	0.00	0.02	0.09	0.20	0.28	0.56	0.91	1.37	2.11
Average	0.16	4.38	3.83	3.53	0.32	0.27	0.41	0.10	0.12	0.20	0.29	0.54	0.80	1.31	1.75	2.15	3.03
Current	0.65	4.03	3.88	3.38	0.75	0.77	1.04	0.51	0.55	0.64	0.81	1.20	1.47	1.89	2.22	2.41	3.01
10-YEAR																	
Max	7.96	6.48	6.01	5.89	5.25	5.82	5.73	5.27	5.19	5.18	5.10	5.10	5.13	5.18	5.21	5.26	5.35
Min	0.01	2.98	2.80	2.39	0.25	0.15	0.22	0.00	0.00	0.02	0.08	0.16	0.28	0.56	0.91	1.37	2.11
Average	0.71	4.75	4.18	3.93	0.89	0.95	1.11	0.59	0.62	0.72	0.82	1.06	1.33	1.90	2.36	2.80	3.63
Current	0.65	4.03	3.88	3.38	0.75	0.77	1.04	0.51	0.55	0.64	0.81	1.20	1.47	1.89	2.22	2.41	3.01
20-YEAR																	
Max	7.96	6.48	6.09	6.02	6.50	6.82	6.87	5.27	6.42	6.55	6.44	6.93	6.88	6.86	6.95	6.98	7.17
Min	0.01	2.98	2.80	2.39	0.25	0.15	0.22	0.00	0.00	0.02	0.08	0.16	0.28	0.56	0.91	1.37	2.11
Average	1.69	5.05	4.59	4.43	2.36	2.46	2.57	1.23	2.14	2.26	2.36	2.62	2.85	3.27	3.62	3.90	4.51
Current	0.65	4.03	3.88	3.38	0.75	0.77	1.04	0.51	0.55	0.64	0.81	1.20	1.47	1.89	2.22	2.41	3.01
INCEPTION OR 1/2/1962																	
	09/15/81	09/20/79			01/01/71	12/06/84	12/06/84	07/31/01	01/04/82	01/04/82		06/01/76			07/01/69		02/15/77
Max	9.14	14.32	13.44	13.05	20.00	10.31	10.63	5.27	15.49	15.67	17.31	16.95	16.59	16.27	16.05	15.84	15.21
Min	0.01	2.98	2.80	2.39	0.25	0.15	0.22	0.00	0.00	0.02	0.08	0.16	0.28	0.56	0.91	1.37	2.11
Average	3.00	6.56	5.77	5.59	5.34	3.93	4.04	1.23	4.08	4.27	5.27	5.51	5.70	5.97	6.41	6.31	6.83
Current	0.65	4.03	3.88	3.38	0.75	0.77	1.04	0.51	0.55	0.64	0.81	1.20	1.47	1.89	2.22	2.41	3.01

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William Blair

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