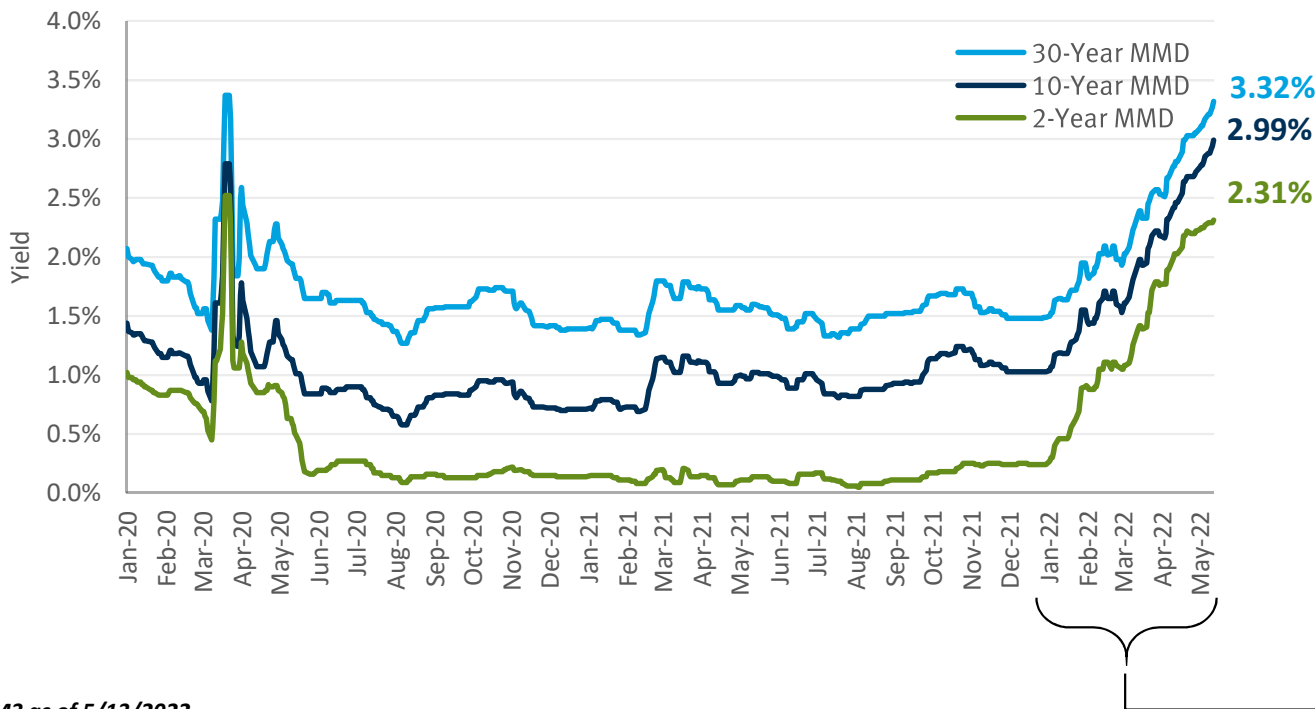


MMD (January 1, 2020 – present)

- What is the MMD triple-A (general obligation or “GO”) tax-exempt yield curve and what does it have to do with the County’s cost of funds on its double-A rated, tax-exempt water/sewer enterprise system revenue bonds (i.e., the first leg in the pricing stool)?
- Since the beginning of this year (2022), MMD yields have continued to rise:

Comparing 2, 10 and 30-Year AAA MMD since January 1, 2020

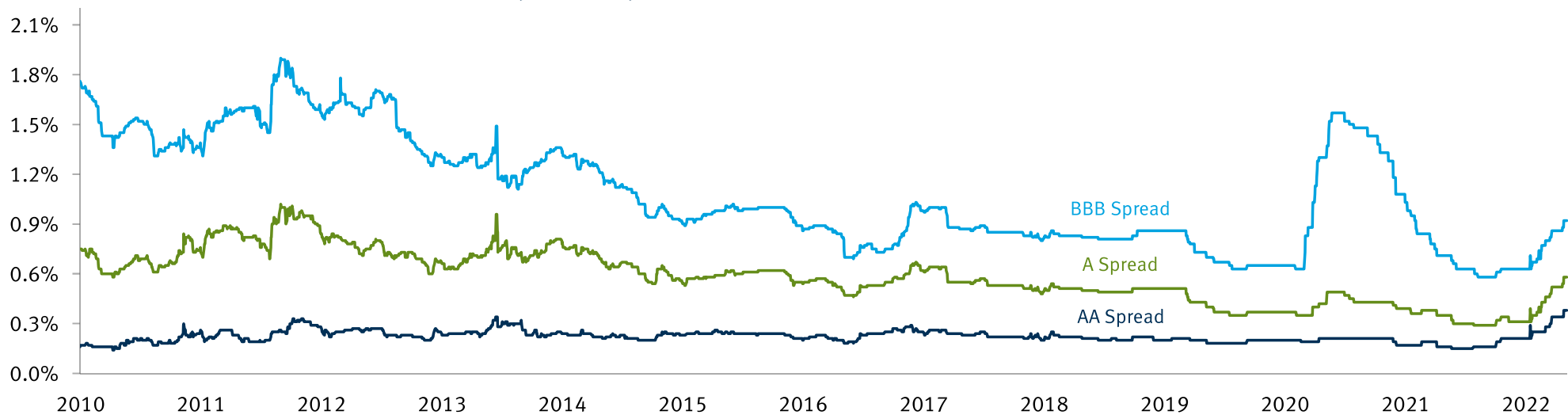


Source: TM3 as of 5/13/2022

Credit Spreads (January 1, 2010 – present)

- What are credit spreads and how do they impact the cost of funds on tax-exempt revenue bonds (i.e., the next leg in the pricing stool)?

Tax-Exempt Credit Spreads over the AAA MMD Index Since 2010



- The credit spread history above is for GO indebtedness. Where lower rated issuers are subject to higher credit spreads than their better rated peers, security structures perceived by investors as being weaker may be subject to an additional spread (e.g., GO vs. water/sewer revenue bonds ... water/sewer revenue bonds vs. parking revenue bonds, etc.).

Tax-Exempt Revenue Bond Rates (MMD + credit spread): Triple-A vs. Double-A

Market Close: May 18, 2022

Years to Maturity	MMD	Spread		Spread	
		Triple-A Revenue Bond	Over/(Under) MMD	Double-A Revenue Bond	Over/(Under) MMD
1	1.99%	1.99%	-	2.16%	0.17%
2	2.31%	2.31%	-	2.48%	0.17%
3	2.48%	2.48%	-	2.67%	0.19%
4	2.51%	2.51%	-	2.70%	0.19%
5	2.60%	2.60%	-	2.82%	0.22%
6	2.73%	2.73%	-	3.00%	0.27%
7	2.85%	2.85%	-	3.12%	0.27%
8	2.91%	2.91%	-	3.20%	0.29%
9	2.96%	2.96%	-	3.25%	0.29%
10	3.02%	3.02%	-	3.31%	0.29%
11	3.08%	3.08%	-	3.37%	0.29%
12	3.10%	3.10%	-	3.40%	0.30%
13	3.12%	3.12%	-	3.42%	0.30%
14	3.14%	3.14%	-	3.45%	0.31%
15	3.16%	3.16%	-	3.49%	0.33%
16	3.18%	3.18%	-	3.51%	0.33%
17	3.20%	3.20%	-	3.53%	0.33%
18	3.21%	3.21%	-	3.54%	0.33%
19	3.22%	3.22%	-	3.57%	0.35%
20	3.24%	3.24%	-	3.61%	0.37%
21	3.26%	3.26%	-	3.63%	0.37%
22	3.28%	3.28%	-	3.65%	0.37%
23	3.30%	3.30%	-	3.67%	0.37%
24	3.31%	3.31%	-	3.68%	0.37%
25	3.32%	3.32%	-	3.70%	0.38%
26	3.33%	3.33%	-	3.71%	0.38%
27	3.34%	3.34%	-	3.72%	0.38%
28	3.35%	3.35%	-	3.73%	0.38%
29	3.36%	3.36%	-	3.74%	0.38%
30	3.37%	3.37%	-	3.75%	0.38%

The rates shown here are an estimate of how a municipal issue could have priced for the day indicated. Actual pricing results would likely have varied based on a variety of other factors (i.e., other legs in the pricing stool) including but not limited to:

- Overall market volume
- Market volatility
- Name recognition of the issuer
- Tax status (e.g., BQ, taxable, tax-exempt)
- Comparable issues pricing the same day
- Size of the transaction / block sizes
- Optional/special redemption provisions
- Revenue pledge (e.g., W&S vs. parking)
- Use of proceeds and project essentiality



Source: TM3 as of 5/18/2022

Triple-A vs. Double-A Revenue Bond Debt Service (May 18, 2022 Market Close)

	Triple-A Rated Revenue Bonds				Double-A Rated Revenue Bonds				
	Principal	Rate	Interest	Debt Service	Principal	Rate	Interest	Debt Service	Difference
6/1/2023	2,140,000	1.99%	3,115,581	5,255,581	2,045,000	2.16%	3,451,199	5,496,199	240,618
6/1/2024	2,185,000	2.31%	3,072,995	5,257,995	2,090,000	2.48%	3,407,027	5,497,027	239,032
6/1/2025	2,235,000	2.48%	3,022,522	5,257,522	2,140,000	2.67%	3,355,195	5,495,195	237,674
6/1/2026	2,290,000	2.51%	2,967,094	5,257,094	2,195,000	2.70%	3,298,057	5,493,057	235,964
6/1/2027	2,345,000	2.60%	2,909,615	5,254,615	2,255,000	2.82%	3,238,792	5,493,792	239,178
6/1/2028	2,405,000	2.73%	2,848,645	5,253,645	2,320,000	3.00%	3,175,201	5,495,201	241,557
6/1/2029	2,475,000	2.85%	2,782,988	5,257,988	2,390,000	3.12%	3,105,601	5,495,601	237,613
6/1/2030	2,545,000	2.91%	2,712,451	5,257,451	2,465,000	3.20%	3,031,033	5,496,033	238,583
6/1/2031	2,615,000	2.96%	2,638,391	5,253,391	2,545,000	3.25%	2,952,153	5,497,153	243,762
6/1/2032	2,695,000	3.02%	2,560,987	5,255,987	2,625,000	3.31%	2,869,441	5,494,441	238,454
6/1/2033	2,775,000	3.08%	2,479,598	5,254,598	2,710,000	3.37%	2,782,553	5,492,553	237,955
6/1/2034	2,860,000	3.10%	2,394,128	5,254,128	2,805,000	3.40%	2,691,226	5,496,226	242,098
6/1/2035	2,950,000	3.12%	2,305,468	5,255,468	2,900,000	3.42%	2,595,856	5,495,856	240,388
6/1/2036	3,040,000	3.14%	2,213,428	5,253,428	3,000,000	3.45%	2,496,676	5,496,676	243,248
6/1/2037	3,140,000	3.16%	2,117,972	5,257,972	3,100,000	3.49%	2,393,176	5,493,176	235,204
6/1/2038	3,235,000	3.18%	2,018,748	5,253,748	3,210,000	3.51%	2,284,986	5,494,986	241,238
6/1/2039	3,340,000	3.20%	1,915,875	5,255,875	3,325,000	3.53%	2,172,315	5,497,315	241,440
6/1/2040	3,445,000	3.21%	1,808,995	5,253,995	3,440,000	3.54%	2,054,943	5,494,943	240,948
6/1/2041	3,555,000	3.22%	1,698,411	5,253,411	3,560,000	3.57%	1,933,167	5,493,167	239,756
6/1/2042	3,670,000	3.24%	1,583,940	5,253,940	3,690,000	3.61%	1,806,075	5,496,075	242,135
6/1/2043	3,790,000	3.26%	1,465,032	5,255,032	3,820,000	3.63%	1,672,866	5,492,866	237,834
6/1/2044	3,915,000	3.28%	1,341,478	5,256,478	3,960,000	3.65%	1,534,200	5,494,200	237,722
6/1/2045	4,040,000	3.30%	1,213,066	5,253,066	4,105,000	3.67%	1,389,660	5,494,660	241,594
6/1/2046	4,175,000	3.31%	1,079,746	5,254,746	4,255,000	3.68%	1,239,006	5,494,006	239,261
6/1/2047	4,315,000	3.32%	941,553	5,256,553	4,410,000	3.70%	1,082,422	5,492,422	235,869
6/1/2048	4,455,000	3.33%	798,295	5,253,295	4,575,000	3.71%	919,252	5,494,252	240,957
6/1/2049	4,605,000	3.34%	649,944	5,254,944	4,745,000	3.72%	749,520	5,494,520	239,576
6/1/2050	4,760,000	3.35%	496,137	5,256,137	4,920,000	3.73%	573,006	5,493,006	236,869
6/1/2051	4,920,000	3.36%	336,677	5,256,677	5,105,000	3.74%	389,490	5,494,490	237,813
6/1/2052	5,085,000	3.37%	171,365	5,256,365	5,295,000	3.75%	198,563	5,493,563	237,198
	100,000,000		57,661,118	157,661,118	100,000,000		64,842,652	164,842,652	7,181,534

Rating Agency Commentary re: System Strengths and Weaknesses

Moody's

Strengths	<ul style="list-style-type: none"> • Large, growing service area that benefits from proximity to Charlotte. • Ample liquidity • Demonstrated willingness to raise rates
Challenges	<ul style="list-style-type: none"> • Elevated debt position • Projected declines in debt service coverage beginning FY 2023
Factors that could lead to an upgrade	<ul style="list-style-type: none"> • Decline in debt burden • Increased debt service coverage
Factors that could lead to a downgrade	<ul style="list-style-type: none"> • Further declines in coverage beyond current projections • Additional debt or capital needs • Decline in liquidity

S&P

Upside scenario	<ul style="list-style-type: none"> • Given the system's increased debt profile and additional borrowing needs, we don't expect to raise the rating during the two-year outlook horizon. In the long run, we could do so if the county successfully completes the Yadkin River water supply and treatment project and maintains extremely strong financial metrics as it progresses through its CIP.
Downside scenario	<ul style="list-style-type: none"> • If the utility produces coverage metrics materially below projected levels due to lower-than-anticipated growth-related development fees or higher-than-expected costs, which we believe to be likely sustainable, we could lower the rating.

Fitch

Factors that could, individually or collectively, lead to positive rating action/upgrade	<ul style="list-style-type: none"> • Leverage sustained at below 5.0x
Factors that could, individually or collectively, lead to negative rating action/downgrade	<ul style="list-style-type: none"> • Sustained leverage above 9x in Fitch's base and rating case

Source: Moody's report on the System dated February 19, 2021; S&P report on the System dated February 22, 2021; Fitch report on the System dated February 24, 2021