

Municipal Bond Market Performance

March 2023



Joel A. Buursma, CIPM
Vice President, Senior Software Architect



Mark Pinson
Index Production and Analysis

The municipal bond market, as measured by the Standard & Poor's Municipal Bond Investment Grade Index, had a Total Return of 2.146% in March 2023, consisting of the components displayed in Table 1.

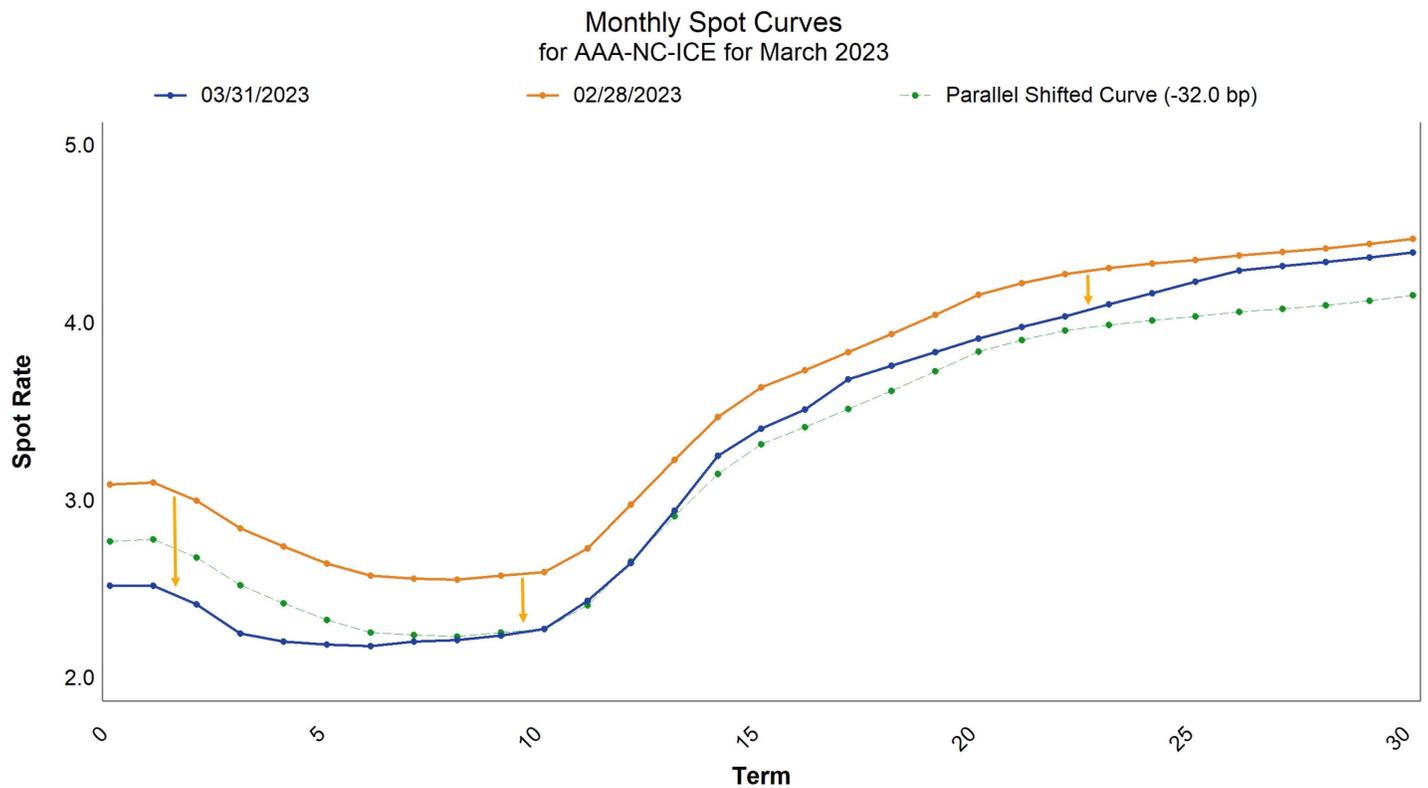
March once again saw substantial changes in the level of the municipal yield curve. The 10-year yield started the month off stable but fell quickly as the banking crisis unfolded mid-month. While the long end of the curve dropped much less than the short end, all terms ended up lower over the course of the month. This steepening of the curve reduced (but failed to eliminate) the inversion between the 2-year and 10-year points.

	March	YTD
Total Return	2.146%	2.506%
Coupon Return	0.391%	1.065%
Market Amortization Return	-0.085%	-0.213%
Parallel Shift Return	1.565%	1.808%
Non-Parallel Shift Return	0.324%	-0.286%
Sector/Quality Return	-0.176%	-0.056%
Residual Price Return	0.127%	0.187%

Interpretation

Figure 1 shows the overall change in the ICE Municipal AAA Rated Noncallable spot curve for March which demonstrated a 32.0 bp decrease in overall level as measured at the ten-year point.

FIGURE 1



The green dotted line depicts the parallel shift implied by the ten-year point's spot curve change.

The Parallel Shift Return of 1.565% is calculated from this decrease, as shown in Table 2.

TABLE 2

Change for 10-Year Spot Rate ^(a)	-31.96
Total Key Rate Duration ^(b)	4.896
Parallel Shift Return ^(-b*a)	1.565

The Non-Parallel Shift Return was 0.324%, driven by shorter terms falling more than the 10-year term. See Table 3 for the full calculations for this term.

TABLE 3

	6 Mos	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs	20 Yrs	30 Yrs
Non-Parallel Change	-25.44	-26.25	-26.51	-27.25	-13.78	-3.67	0.00	7.45	24.06
Key Rate Duration	0.039	0.126	0.271	0.552	0.775	0.879	1.403	0.749	0.103
Non-Parallel Shift Return	0.010	0.033	0.072	0.150	0.107	0.032	0.000	-0.056	-0.025

Each value in the Non-Parallel Shift Return row is calculated by multiplying together the two cells above it, dividing by 100 and reversing the sign

Sector/Quality Return captures return from changes in average option-adjusted spread (adjusted by duration) for sector/quality groupings. The index's overall Sector/Quality Return was -0.176%.

The only sectors exhibiting overall tightening in average option-adjusted spread (weighted by both market value and duration) were the Insured and Prerefunded/ETM sectors. The sectors exhibiting the largest overall widening were Tobacco Settlement and IDR / PCR; spreads on both sectors widened by over 20 basis points overall. Quality-based groupings exhibited an overall flight to quality with BBB spreads widening considerably compared to higher-rated groupings.

The sector/quality categories with the biggest negative contributions to Sector/Quality Return, considering both weightings and the groupings' own sector/quality returns, are listed in Table 4. The biggest positive contributors are listed in Table 5.

TABLE 4

	A-rated IDR / PCR	AA-rated Tax-supported (Excl. GOs)	AA-rated Transportation	A-rated Transportation
Change in Dur-Adj Average OA Spread ^(a)	26.466	3.692	5.321	4.704
Total Key Rate Duration ^(b)	4.393	5.217	5.235	5.407
Sector/Quality Return ^(b*a)	-1.163	-0.193	-0.279	-0.254
Market Value Weight ^(c)	2.227	7.901	5.280	5.324
Contribution to Duration ^(b*c)	0.09782	0.41217	0.27639	0.28785
Contribution to Sector/Quality Return ^(b*c*a)	-0.02589	-0.01522	-0.01471	-0.01354

TABLE 5

	A-rated State GO	AA-rated State Local GO	AA-rated Insured	A-rated Insured
Total Key Rate Duration ^(b)	4.118	5.143	5.718	4.720
Sector/Quality Return ^(b*a)	0.916	0.049	0.072	0.193
Market Value Weight ^(e)	0.929	9.594	5.489	0.410
Contribution to Duration ^(b*c)	0.03826	0.49339	0.31384	0.01935
Contribution to Sector/Quality Return ^(b*c*a)	0.00851	0.00469	0.00394	0.00079

Coupon Return was 0.391%, based on the index's average coupon of 4.307%. The average beginning-of-month market yield was 3.601%, resulting in a Market Amortization Return of -0.085%. These two terms sum to a total income effect of 0.306%.

Note that Coupon Return reflects both interest payments and changes in accrued interest throughout the month. Market Amortization Return is negative because of the large number of premium bonds in the index due to yields being lower than most coupon rates. Premium bond prices, absent any change in yield, naturally decline over time to their redemption price. This decline is called market amortization.

Finally, the Residual Price Return was 0.127%, reflecting the positive effects of rolling down the yield curve as well as the effects of convexity.

CONTACT US

All table data and figures in this report were produced using Investortools, Inc.'s **Custom Index Manager™** product.

For more information about Investortools, please visit www.invtools.com or [click here to contact us](#).

To request a product demonstration, please contact sales@invtools.com.

For more information about **Custom Index Manager**, please [click here](#).