

# Municipal Bond Market Performance

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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 -0.781% in May 2023, consisting of the components displayed in Table 1.

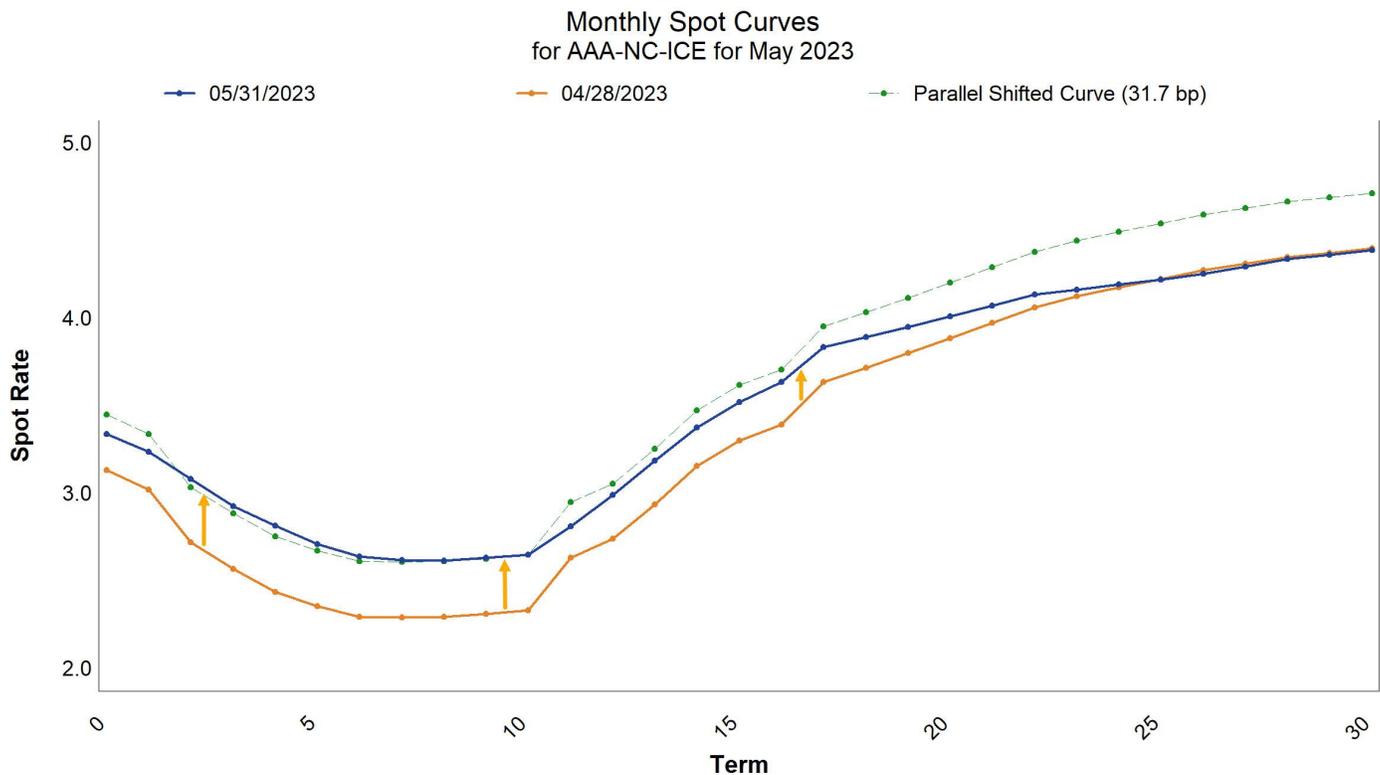
May ended with the House of Representatives passing a bill to suspend the debt ceiling, and short-term treasury yields climbing higher than they've been since January 2001. Short-term municipal yields also climbed to highs not seen in many years, resulting in the most severe inversion between the 2-year and 10-year points in the history of the ICE Municipal AAA Rated Noncallable yield curve. With the overall level of the yield curve rising, May saw a Parallel Shift Return of -1.548%. The Tax-Supported (Excl. GO's), Local GO, and Transportation sectors were bright spots, however, all contributing substantially to the Sector/Quality Return of 0.410%.

<b>TABLE 1</b>	<b>May</b>	<b>YTD</b>
Total Return	<b>-0.781%</b>	<b>1.517%</b>
Coupon Return	0.362%	1.782%
Market Amortization Return	-0.056%	-0.364%
Parallel Shift Return	-1.548%	-0.045%
Non-Parallel Shift Return	0.126%	-0.501%
Sector/Quality Return	0.410%	0.422%
Residual Price Return	-0.075%	0.223%

## Interpretation

Figure 1 shows the overall change in the ICE Municipal AAA Rated Noncallable spot curve for May which demonstrated a 31.7 bp increase 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 -1.548% is calculated from this curve increase, as shown in Table 2.

**TABLE 2**

Change for 10-Year Spot Rate <sup>(a)</sup>	31.72
Total Key Rate Duration <sup>(b)</sup>	4.881
Parallel Shift Return <sup>(-b*a)</sup>	-1.548

The curve shift was mostly parallel, but longer terms finished near where they started the month, resulting in overall flattening. This flattening in the longer terms was the primary source of the Non-Parallel Shift Return of 0.126%. 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	-9.42	-10.13	4.55	4.13	3.63	0.84	0.00	-19.31	-32.66
Key Rate Duration	0.037	0.128	0.269	0.551	0.761	0.874	1.404	0.755	0.103
Non-Parallel Shift Return	0.003	0.013	-0.012	-0.023	-0.028	-0.007	0.000	0.146	0.034

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 0.410%.

The sectors exhibiting the largest overall tightening in average option-adjusted spread (weighted by both market value and duration) were Tobacco Settlement, Other Utility, Transportation, IDR / PCR, and Public Power. On the other end of the spectrum were the Prere/ETM and Housing sectors. Quality-based groupings exhibited no significant trend.

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**

	BBB-rated Housing	AAA-rated IDR / PCR
Change in Dur-Adj Average OA Spread <sup>(a)</sup>	0.801	1.359
Total Key Rate Duration <sup>(b)</sup>	7.505	2.759
Sector/Quality Return <sup>(b*a)</sup>	-0.060	-0.037
Market Value Weight <sup>(c)</sup>	0.148	0.122
Contribution to Duration <sup>(b*c)</sup>	0.01112	0.00337
Contribution to Sector/Quality Return <sup>(b*c*a)</sup>	-0.00009	-0.00005

**TABLE 5**

	AA-rated Tax-Supported (Excl. GO's)	A-rated Transportation	AAA-rated Local Go	AA-rated Local Go
Change in Dur-Adj Average OA Spread <sup>(a)</sup>	-9.299	-13.029	-6.502	-6.176
Total Key Rate Duration <sup>(b)</sup>	5.185	5.284	5.015	5.134
Sector/Quality Return <sup>(b*a)</sup>	0.482	0.688	0.326	0.317
Market Value Weight <sup>(c)</sup>	7.556	5.198	9.887	9.738
Contribution to Duration <sup>(b*c)</sup>	0.39173	0.27469	0.49587	0.49999
Contribution to Sector/Quality Return <sup>(b*c*a)</sup>	0.03643	0.03579	0.03224	0.03088

Coupon Return was 0.362%, based on the index's average coupon of 4.312%. The average beginning-of-month market yield was 3.387%, resulting in a Market Amortization Return of -0.056%. 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.*

## CONTACT US

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

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