

Municipal Bond Market Performance

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Index Production and Analysis

Overview

The municipal bond market, as measured by the Standard & Poor's Municipal Bond Investment Grade Index, had a Total Return of -1.116% in August 2023, consisting of the components displayed in Table 1.

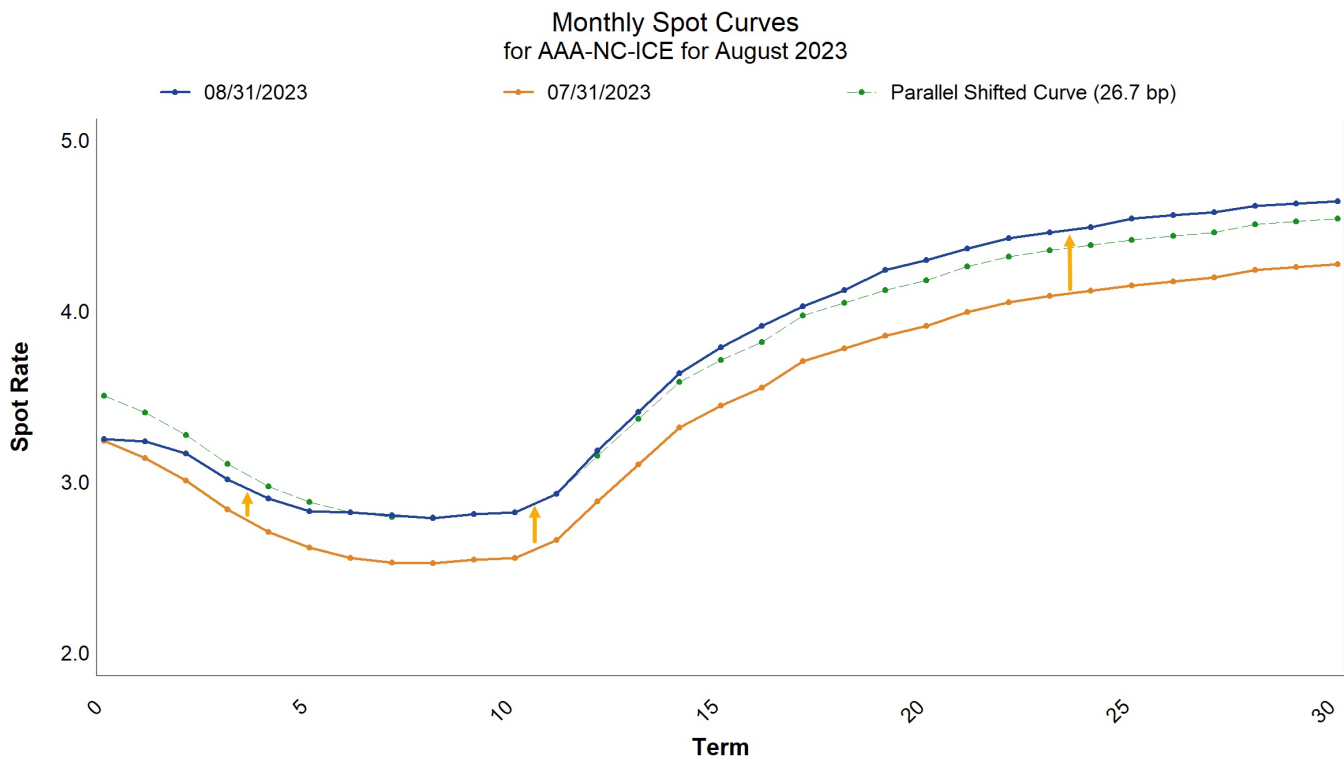
August saw a widespread increase in yields, with both the municipal curve and treasury curve reaching highs not seen in many years. Amidst a decreasing inversion, the two-year term of the municipal curve hit highs not seen since 2007. Almost all terms of the treasury curve hit highs not seen since 2011 or earlier, with the shortest terms even hitting highs not seen since 2000. The negative Parallel Shift Return of -1.312% demonstrates the effect of this yield increase on the index. Despite August's poor return, the year-to-date return remains positive at 1.462%.

TABLE 1	August	YTD
Total Return	-1.116%	1.462%
Coupon Return	0.353%	2.865%
Market Amortization Return	-0.051%	-0.527%
Parallel Shift Return	-1.312%	-0.945%
Non-Parallel Shift Return	0.042%	-0.464%
Sector/Quality Return	0.279%	0.684%
Residual Price Return	-0.428%	-0.152%

Interpretation

Figure 1 shows the overall change in the ICE Municipal AAA Noncallable spot curve for August which demonstrated a 26.7 bp increase in overall level as measured at the ten-year point.

TABLE 1



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

The Parallel Shift Return of -1.312% is calculated from this curve decrease, as shown in Table 2.

TABLE 2

Change for 10-Year Spot Rate ^(a)	26.65
Total Key Rate Duration ^(b)	4.9207
Parallel Shift Return ^(-b*a)	-1.312

The long end of the curve rose substantially more than the short end of the curve, lessening the overall inversion of the curve. Despite this non-parallel movement on both ends of the curve (known as a "twist" effect), the Non-Parallel Shift Return was negligible at 0.042%. 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	-22.35	-16.81	-10.77	-9.08	-5.43	0.96	0.00	11.85	10.21
Key Rate Duration	0.035	0.131	0.271	0.550	0.758	0.903	1.424	0.749	0.100
Non-Parallel Shift Return	0.008	0.022	0.029	0.050	0.041	-0.009	0.000	-0.089	-0.010

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 0.279%.

In sector-related trends, the Tobacco Settlement sector was a major standout, seeing more than 20 basis points of tightening in average option-adjusted spread (weighted by both market value and duration). Transportation, Housing, Resource Recovery and Public Power also had substantial overall tightening (around 10 basis points).

Lower-quality groupings saw spreads tighten slightly, in general. This trend varied by sector, but was particularly noticeable in the Tobacco Settlement, Public Power, Resource Recovery and Transportation sectors. The Prerefunded sector was a notable exception, as its lower-quality groupings (due to lower-quality escrow funds) widened and underperformed its higher-quality counterparts.

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	A-rated Local GO	Sub B-rated Prerefunded/ ETM	BBB-rated Prerefunded/ ETM
Change in Dur-Adj Average OA Spread ^(a)	0.803	1.469	2.052	22.313
Total Key Rate Duration ^(b)	4.307	4.350	1.833	0.672
Sector/Quality Return ^(b*a)	-0.035	-0.064	-0.038	-0.150
Market Value Weight ^(c)	2.342	0.469	0.728	0.050
Contribution to Duration ^(b*c)	0.10089	0.02040	0.01335	0.00034
Contribution to Sector/Quality Return ^(b*c*a)	-0.00081	-0.00030	-0.00027	-0.00008

TABLE 5

	A-rated Transportation	AA-rated Transportation	AA-rated Tax Supported (Excl. GO's)	AA-rated State GO
Change in Dur-Adj Average OA Spread ^(a)	-11.835	-9.843	-6.097	-8.473
Total Key Rate Duration ^(b)	5.197	5.150	5.108	4.407
Sector/Quality Return ^(b*a)	0.615	0.507	0.311	0.373
Market Value Weight ^(c)	5.157	5.534	7.421	5.381
Contribution to Duration ^(b*c)	0.26802	0.28498	0.37903	0.23714
Contribution to Sector/Quality Return ^(b*c*a)	0.03172	0.02805	0.02311	0.02009

Coupon Return was 0.353%, based on the index's average coupon of 4.325%. The average beginning-of-month market yield was 3.558%, resulting in a Market Amortization Return of -0.051%. These two terms sum to a total income effect of 0.302%.

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.

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Finally, the Residual Price Return was -0.428%, reflecting the positive effects of rolling down the yield curve as well as the more substantial effects of convexity.

CONTACT US

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

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