

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 5.828% in November 2023, consisting of the components displayed in Table 1.

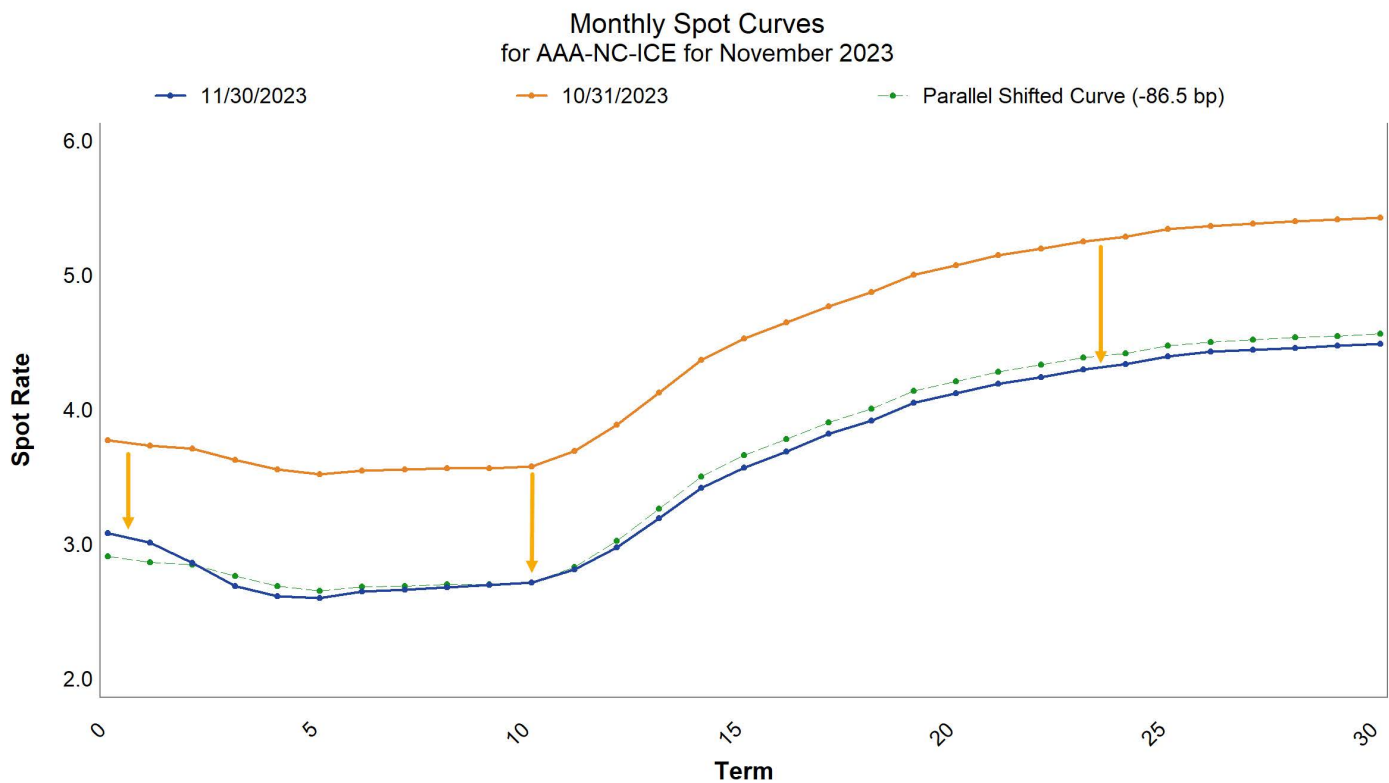
This was by far the best single-month total return the index has seen in its nearly 25-year history. This was driven primarily by a huge drop in municipal yields, with almost all terms of the ICE Municipal AAA Noncallable yield curve experiencing the largest monthly change in the curve's twenty-year history. This extraordinary month snapped a three-month slide in the index's return and was even enough to pull the year-to-date return back into positive territory.

TABLE 1	November	YTD
Total Return	5.828%	3.441%
Coupon Return	0.363%	3.949%
Market Amortization Return	0.007%	-0.572%
Parallel Shift Return	4.271%	-0.532%
Non-Parallel Shift Return	0.146%	-0.099%
Sector/Quality Return	-0.114%	0.552%
Residual Price Return	1.155%	0.143%

Interpretation

Figure 1 shows the overall change in the ICE Municipal AAA Noncallable spot curve for November which demonstrated an 86.5 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 4.271% is calculated from this curve increase, as shown in Table 2.

TABLE 2

Change for 10-Year Spot Rate ^(a)	-86.50
Total Key Rate Duration ^(b)	4.9377
Parallel Shift Return ^(-b*a)	4.271

The Non-Parallel Shift Return was 0.146%, due to most of the curve decreasing slightly less 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	16.20	14.30	1.43	-7.36	-5.20	-2.63	0.00	-8.92	-7.47
Key Rate Duration	0.037	0.130	0.263	0.521	0.744	0.937	1.478	0.736	0.092
Non-Parallel Shift Return	-0.006	-0.019	-0.004	0.038	0.039	0.025	0.000	0.066	0.007

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 -0.114%.

The sectors exhibiting overall tightening in average option-adjusted spread (weighted by both market value and duration) were Health Care, Local GO, and Insured. The sectors exhibiting the largest overall widening were Tobacco Settlement, Housing, and Public Power. Most quality-based groupings exhibited little change, but some lower-rated groupings exhibited marked widening (especially for non-callable securities).

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

	AA-rated Transportation	A-rated Housing	AA-rated Tax-Supported (Excl. GO's)	AA-rated State GO
Change in Dur-Adj Average OA Spread ^(a)	10.457	22.052	5.201	8.250
Total Key Rate Duration ^(b)	5.241	6.215	5.188	4.562
Sector/Quality Return ^(b*a)	-0.548	-1.371	-0.270	-0.376
Market Value Weight ^(c)	5.595	2.064	7.924	5.370
Contribution to Duration ^(b*c)	0.29322	0.12827	0.41105	0.24499
Contribution to Sector/Quality Return ^(-b*c*a)	-0.03066	-0.02829	-0.02138	-0.02021

TABLE 5

	AAA-rated Local GO	AA-rated Local GO	AA-rated Insured	A-rated Health Care
Change in Dur-Adj Average OA Spread ^(a)	-5.389	-5.329	-4.568	-9.344
Total Key Rate Duration ^(b)	5.075	5.158	5.733	5.577
Sector/Quality Return ^(b*a)	0.273	0.275	0.262	0.521
Market Value Weight ^(c)	10.259	9.792	5.729	2.796
Contribution to Duration ^(b*c)	0.52063	0.50507	0.32845	0.15593
Contribution to Sector/Quality Return ^(b*c*a)	0.02806	0.02691	0.01500	0.01457

Coupon Return was 0.363%, based on the index's average coupon of 4.347%. The average beginning-of-month market yield was 4.495%, resulting in a Market Amortization Return of 0.007%. These two terms sum to a total income effect of 0.370%.

Note that Coupon Return reflects both interest payments and changes in accrued interest throughout the month. Market Amortization Return was positive because yield levels were higher than the index's average coupon at the beginning of November.

Finally, the Residual Price Return was 1.155%, 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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