



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



Denise Wilson
Index Operations Manager

Municipal Bond Market Performance

November 2021

Overview

The municipal bond market, as measured by the Standard & Poor's Municipal Bond Investment Grade Index, had a Total Return of 0.694% in November 2021, consisting of the components displayed in Table 1. The muni curve, like the treasury curve, saw little to no change on the short end, but a modest drop for intermediate and long terms.

Table 1 also displays a breakdown of year-to-date returns; the YTD Total Return was 1.266%.

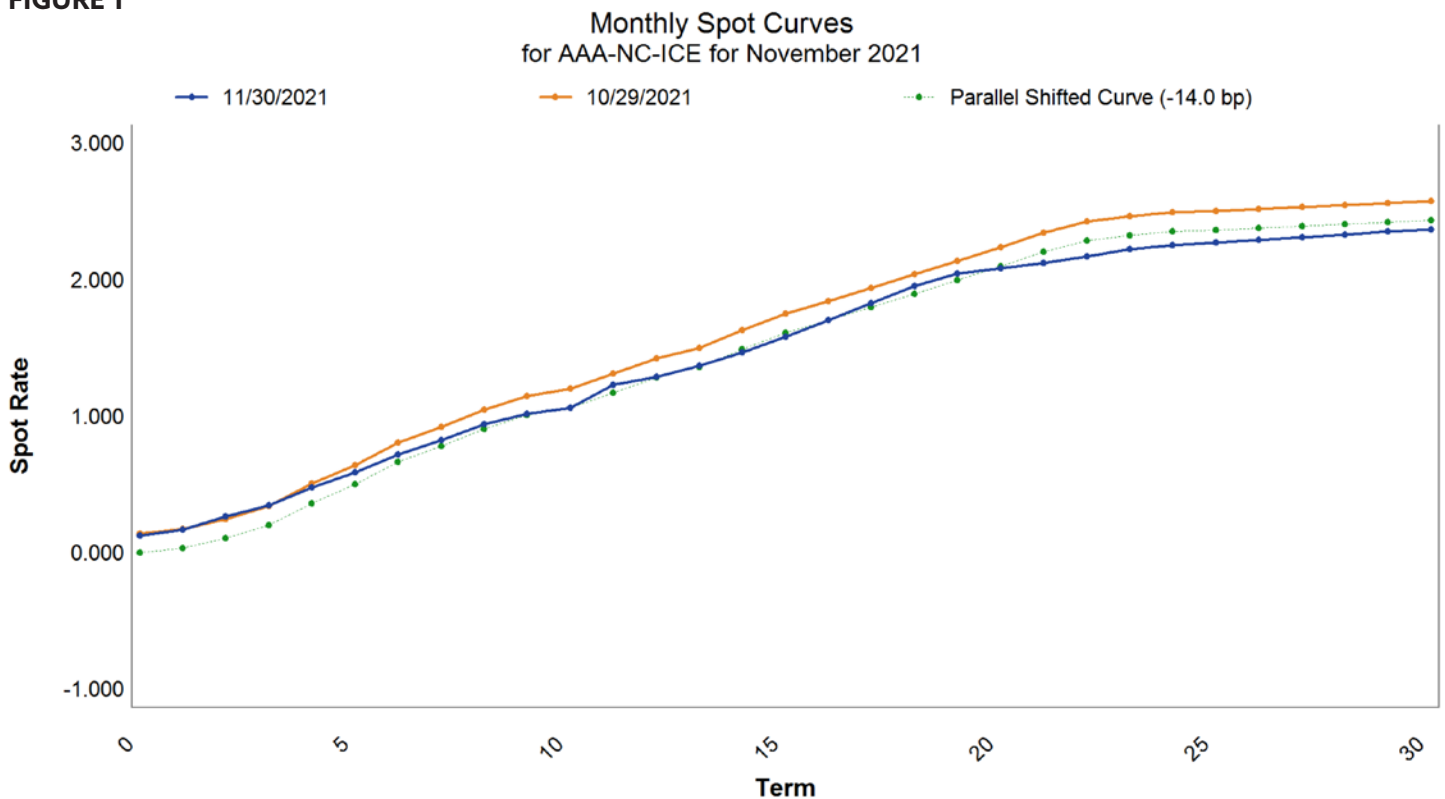
TABLE 1

	NOVEMBER	YTD
Total Return	0.694%	1.266%
Coupon Return	0.307%	3.510%
Market Amortization Return	-0.212%	-2.603%
Parallel Shift Return	0.593%	-1.622%
Non-Parallel Shift Return	-0.285%	0.062%
Sector/Quality Return	-0.223%	2.748%
Residual Price Return	0.513%	-0.828%

Interpretation

Figure 1 shows the overall change in the municipal AAA non-callable spot curve for November. As depicted, the curve declined at almost all term points, most notably at intermediate- and long-term points. The muni curve, like the treasury curve, saw a flattening effect combined with a modest overall drop in yield levels.

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 0.593% is calculated from the 14 bp decrease in the ten-year point of the spot curve, as shown in Table 2.

TABLE 2

Change for 10-Year Spot Rate ^(a)	-14.04
Total Key Rate Duration ^(b)	4.228
Parallel Shift Return ^(-b*a)	0.593

The Non-Parallel Shift Return was -0.285%. As seen, all points shorter than the ten-year point fell less than the ten-year point did (if they fell at all), resulting in positive Non-Parallel Changes and a negative Non-Parallel Shift Return for those points. 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	12.74	13.54	16.04	14.84	9.06	4.49	0.00	-1.54	-6.90
Key Rate Duration	0.038	0.135	0.282	0.645	0.961	0.911	0.922	0.302	0.032
Non-Parallel Shift Return	-0.005	-0.018	-0.045	-0.096	-0.087	-0.041	0.000	0.005	0.002

Each value in the Non-Parallel Shift Return row is calculated by multiplying together the two cells above it 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 -0.223%.

The sectors exhibiting the largest widening in average option-adjusted spread (weighted by both market value and duration) was Housing (with a 15.8 basis point increase in overall OAS), Water / Sewer, and Public Power. The only sector exhibiting any tightening in average option-adjusted spread (weighted by both market value and duration) was Tobacco Settlement (with a 6.8 basis point decrease in overall OAS). Quality-based groupings did not exhibit any strong trends this month. Spread widening tended to be more pronounced in callable bonds.

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 Water/Sewer	AAA-rated Local GO	AA-rated State GO	AA-rated Local GO
Change in Duration-Adjusted Average OA Spread ^(a)	10.757	5.281	8.095	3.622
Total Key Rate Duration ^(b)	4.541	4.440	4.111	4.485
Sector/Quality Return ^(-b*a)	-0.488	-0.234	-0.333	-0.162
Market Value Weight ^(c)	4.367	8.960	5.681	9.547
Contribution to Duration ^(b*c)	0.19829	0.39777	0.23356	0.42812
Contribution to Sector/Quality Return ^(-b*c*a)	-0.02133	-0.02101	-0.01891	-0.01551

TABLE 5

	BBB-rated State GO	BBB-rated Local GO	A-rated Tobacco Settlement	A-rated State GO
Change in Duration-Adjusted Average OA Spread ^(a)	-13.476	-23.863	-7.316	-5.517
Total Key Rate Duration ^(b)	3.733	4.516	4.204	4.564
Sector/Quality Return ^(b*a)	0.503	1.078	0.308	0.252
Market Value Weight ^(c)	0.693	0.184	0.236	0.250
Contribution to Duration ^(b*c)	0.02585	0.00831	0.00993	0.01141
Contribution to Sector/Quality Return ^(b*c*a)	0.00348	0.00198	0.00073	0.00063

Coupon Return was 0.307%, based on the index's average coupon of 4.314%. The average beginning-of-month market yield was 1.090%, resulting in a Market Amortization Return of -0.212%. These two terms sum to a total income effect of 0.095%.

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 the low yield curve environment. Premium bond prices, absent any change in yield, naturally decline over time to their redemption price. This decline is called market amortization.

Finally, Residual Price Return reflects the positive effect of rolling down the yield curve as well as the effect 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](#).