

Municipal Bond Market Performance

September 2023



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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 -2.639% in September 2023, consisting of the components displayed in Table 1.

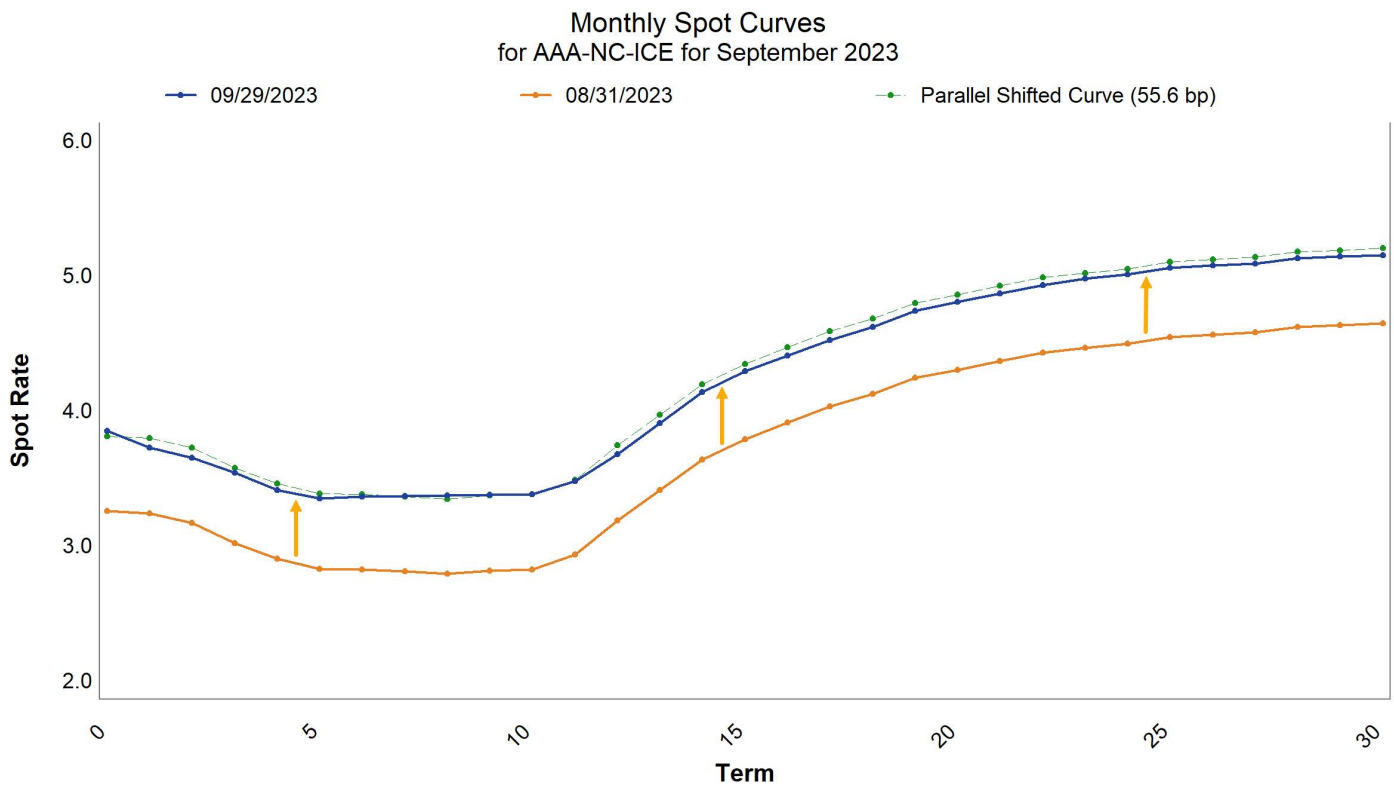
For the first three weeks of September, the municipal yield curve showed little change. Then, it had a near-parallel upward surge, amidst rising CPI rates and government shutdown concerns, with both the municipal and treasury curves again reaching levels not seen in years. At the end of the month, the 6-month term of the ICE Municipal AAA Noncallable yield curve was at its highest point in the twenty-year history of the curve, with the other shorter terms trailing not far behind. As a result, September produced the worst Total Return since *last* September, dragging the overall year-to-date Total Return down into negative territory.

TABLE 1	September	YTD
Total Return	-2.639%	-1.216%
Coupon Return	0.347%	3.217%
Market Amortization Return	-0.047%	-0.574%
Parallel Shift Return	-2.736%	-3.721%
Non-Parallel Shift Return	0.111%	-0.352%
Sector/Quality Return	0.174%	0.861%
Residual Price Return	-0.489%	-0.648%

Interpretation

Figure 1 shows the overall change in the ICE Municipal AAA Noncallable spot curve for September which demonstrated a 55.6 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 -2.736% is calculated from this curve increase, as shown in Table 2.

TABLE 2

Change for 10-Year Spot Rate ^(a)	55.58
Total Key Rate Duration ^(b)	4.9227
Parallel Shift Return ^(-b*a)	-2.736

The Non-Parallel Shift Return was 0.111%, from small divergences at various terms from the parallel shift. 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	0.62	-6.85	-7.30	-3.43	-3.35	0.55	0.00	-5.23	-4.99
Key Rate Duration	0.036	0.131	0.268	0.538	0.749	0.916	1.445	0.744	0.096
Non-Parallel Shift Return	0.000	0.009	0.020	0.018	0.025	-0.005	0.000	0.039	0.005

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 0.174%.

The sectors exhibiting the largest overall tightening in average option-adjusted spread (weighted by both market value and duration) were Tobacco Settlement, Housing, Transportation, and Public Power. By contrast, the Local GO, Prerefunded/ETM, Insured, and Health Care sectors saw overall widening. Lower-rated groupings tightened slightly 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

	AA-rated Local GO	AAA-rated Local GO	AA-rated Insured	A-rated Health Care
Change in Dur-Adj Average OA Spread ^(a)	2.382	1.785	0.916	1.899
Total Key Rate Duration ^(b)	5.198	5.096	5.744	5.455
Sector/Quality Return ^(b*a)	-0.124	-0.091	-0.053	-0.104
Market Value Weight ^(c)	9.803	10.240	5.693	2.809
Contribution to Duration ^(b*c)	0.50963	0.52185	0.32700	0.15323
Contribution to Sector/Quality Return ^(b*c*a)	-0.01214	-0.00931	-0.00300	-0.00291

TABLE 5

	A-rated Transportation	AA-rated Transportation	AA-rated Housing	AA-rated Tax-Supported (Excl. GO's)
Change in Dur-Adj Average OA Spread ^(a)	-12.154	-10.433	-11.682	-3.632
Total Key Rate Duration ^(b)	5.192	5.188	6.317	5.120
Sector/Quality Return ^(b*a)	0.631	0.541	0.738	0.186
Market Value Weight ^(c)	5.132	5.631	2.024	7.819
Contribution to Duration ^(b*c)	0.26650	0.29215	0.12784	0.40037
Contribution to Sector/Quality Return ^(b*c*a)	0.03239	0.03048	0.01493	0.01454

Coupon Return was 0.347%, based on the index's average coupon of 4.335%. The average beginning-of-month market yield was 3.782%, resulting in a Market Amortization Return of -0.047%. These two terms sum to a total income effect of 0.300%.

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 -0.489%, 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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