

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

# Municipal Bond Market Performance

July 2020

## Overview

The municipal bond market, as measured by the Standard & Poor's Municipal Bond Investment Grade Index, had a Total Return of 1.355% in July 2020, consisting of the components displayed in Table 1.

After June's minimal yield curve movement and modest return, July marked a return to the falling yield curve. Almost every point of the municipal spot curve hit new all-time lows (based on 17 ½ years of history) in July, as the US treasury curve also fell and hit record lows at the 2-, 3-, 5-, and 7-year maturities. Additionally, the curve experienced some flattening, and BBB-rated bonds overall saw a tightening of option-adjusted spread.

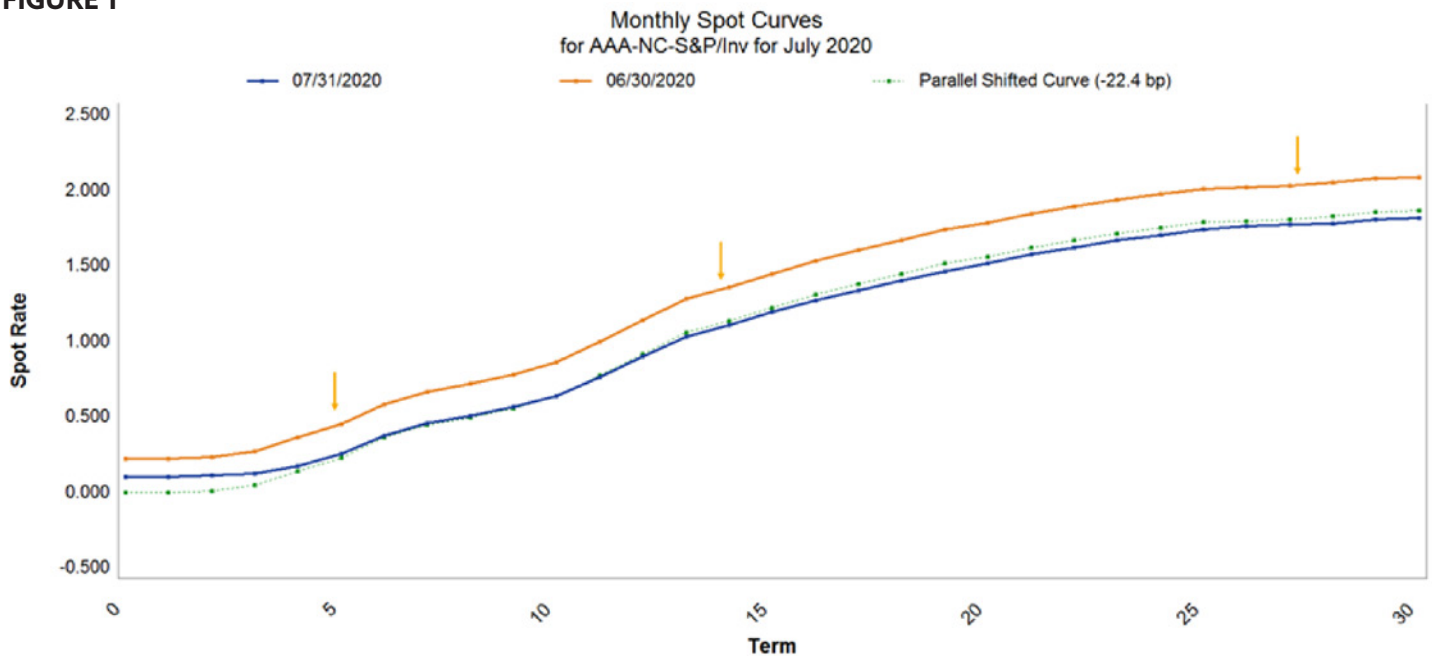
**TABLE 1**

Total Return	1.355%
Coupon Return	0.337%
Market Amortization Return	-0.220%
Parallel Shift Return	1.162%
Non-Parallel Shift Return	-0.067%
Sector/Quality Return	-0.023%
Residual Price Return	0.166%

## Interpretation

The biggest story for the month was the overall decline in the spot curve, as depicted in Figure 1. The Parallel Shift Return of 1.162% can be approximately calculated from the 22.4 bp decrease in the ten-year point of the spot curve, as shown in Table 2. (Note: this value is slightly lower than the 1.165% shown in Table 2 because the actual calculation applies a floor to the parallel-shifted curve.)

**FIGURE 1**



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

**TABLE 2**

Change in 10-Year Spot Rate <sup>(a)</sup>	-22.35
Total Key Rate Duration <sup>(b)</sup>	5.2121
Parallel Shift Return <sup>(-b*a)</sup>	1.165

The Non-Parallel Shift Return reflects a flattening of the curve; the short end of the curve fell 10.4 bp less than the 10-year point did, while the long end fell 4.9 bp more. See Table 3 for the calculations.

**TABLE 3**

	6 Mos	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs	20 Yrs	30 Yrs
Key Rate Duration	0.029	0.111	0.255	0.540	0.962	1.105	1.205	0.843	0.162
Non-Parallel Change	9.0	9.0	10	7.3	2.3	1.2	0.0	-4.4	-4.9
Non-Parallel Shift Return	-0.003	-0.010	-0.026	-0.040	-0.022	-0.013	0.000	0.037	0.008

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

The overall Sector/Quality Return was small at -0.023%. The IDR/PCR and State GO sectors experienced the largest overall tightening in option-adjusted spread (weighting by both market value and duration), while the Housing sector was a standout for overall OA spread widening. Additionally, BBB-rated bonds overall experienced a substantial tightening in option-adjusted spread.

The sector/quality categories with the biggest negative contributions, considering both weight and the groupings' own sector/quality returns, are listed in Table 4. The biggest positive contributors this month are listed in Table 5.

**TABLE 4**

	AA-rated Housing	AAA-rated Local GO	AA-rated Local GO	A-rated Transportation
Change in Duration-Adjusted Average OA Spread <sup>(a)</sup>	12.680	3.060	2.523	3.891
Total Key Rate Duration <sup>(b)</sup>	7.109	5.322	5.475	5.891
Sector/Quality Return <sup>(-b*a)</sup>	-0.901	-0.163	-0.138	-0.229
Market Value Weight <sup>%(c)</sup>	1.746	9.324	9.907	5.552
Contribution to Duration <sup>(b*c)</sup>	0.12411	0.49620	0.54234	0.32705
Contribution to Sector/Quality Return <sup>(-b*c*a)</sup>	-0.01574	-0.01518	-0.01368	-0.01272

**TABLE 5**

	BBB-rated State GO	BBB-rated Transportation	A-rated IDR/PCR	AA-rated State GO
Change in Duration-Adjusted Average OA Spread <sup>(a)</sup>	-55.483	-24.492	-13.151	-2.633
Total Key Rate Duration <sup>(b)</sup>	4.610	6.829	4.980	4.676
Sector/Quality Return <sup>(b*a)</sup>	2.558	1.673	0.655	0.123
Market Value Weight <sup>(c)</sup>	0.669	0.985	1.756	5.565
Contribution to Duration <sup>(b*c)</sup>	0.03086	0.06724	0.08746	0.26018
Contribution to Sector/Quality Return <sup>(b*c*a)</sup>	0.01712	0.01647	0.01150	0.00685

Finally, the Coupon Return was 0.337%, based on the index's average coupon of 4.418%. The average beginning-of-month market yield was 1.372%, resulting in a Market Amortization Return of -0.220%. These two terms sum to a total income effect of 0.117%.

*Note that Coupon Return reflects both interest payments and changes in accrued interest throughout the month. And 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.*

## 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](http://www.invtools.com) or [click here to contact us](#).

To request a product demonstration, please contact [sales@invtools.com](mailto:sales@invtools.com).

For more information about **Custom Index Manager**, please [click here](#).