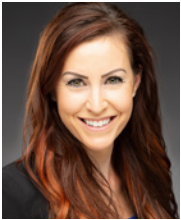




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Municipal Bond Market Performance

August 2020

Overview

The municipal bond market, as measured by the Standard & Poor's Municipal Bond Investment Grade Index, had a Total Return of -0.288% in August 2020, consisting of the components displayed in Table 1.

The month of August posted a modest negative total return, largely from the 16-point increase in the spot curve level. Credit spreads for lower-rated bonds remained in a tightening trend. In the last few days of the month, 10- and 30-year Treasury yields rose to their highest levels since mid-June, contributing to the month's curve steepening; this move coincided with the Federal Reserve's announcement of changes to its monetary policy strategy stating, "following periods when inflation has been running persistently below 2 percent, appropriate monetary policy will likely aim to achieve inflation moderately *above* 2 percent for some time" (italics added).

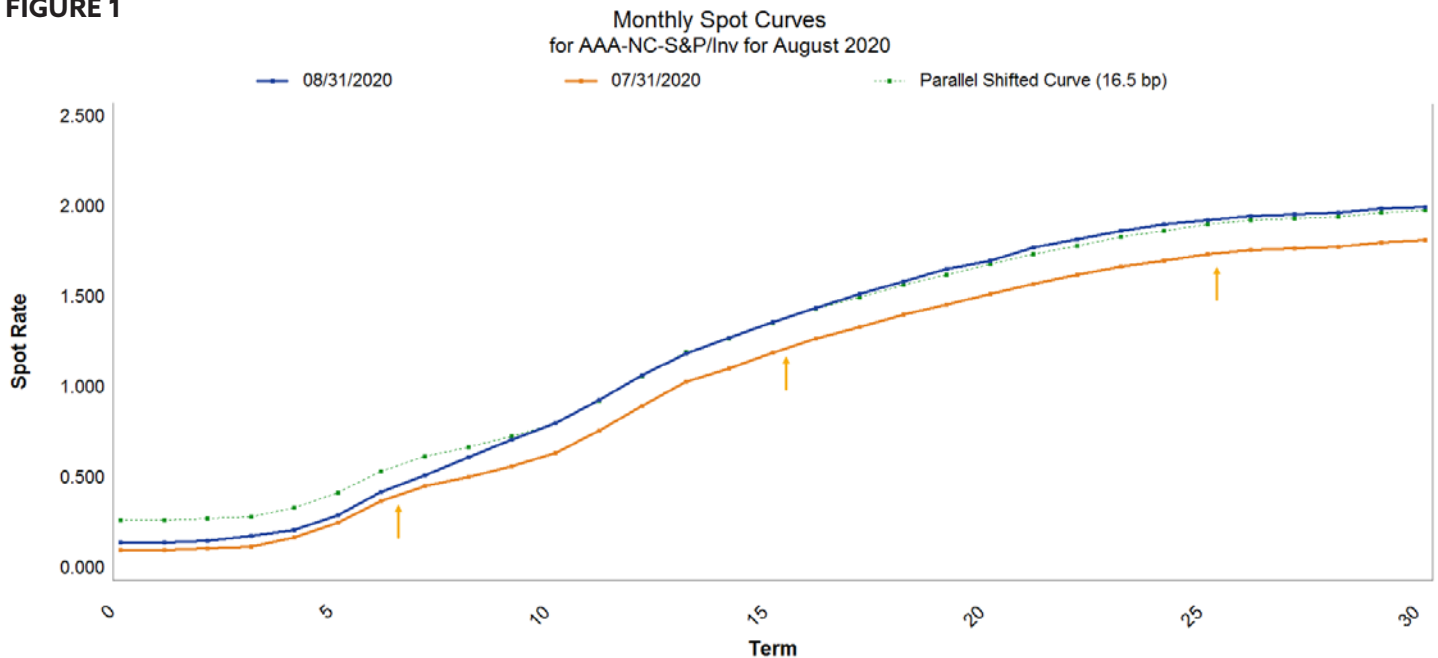
TABLE 1

Total Return	-0.288%
Coupon Return	0.322%
Market Amortization Return	-0.227%
Parallel Shift Return	-0.849%
Non-Parallel Shift Return	0.331%
Sector/Quality Return	0.217%
Residual Price Return	-0.082%

Interpretation

Figure 1 shows the overall change in the muni AAA non-callable spot curve for August. The ten-year point increased by 16.5 bp, resulting in a Parallel Shift Return of -0.849%, as shown in Table 2.

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 ^(a)	16.49
Total Key Rate Duration ^(b)	5.1496
Parallel Shift Return ^(-b*a)	-0.849

The Non-Parallel Shift Return reflected a steepening in the spot curve: the curve remained low at the short end while the rest of the curve rose more substantially. More specifically, spot rates in the 0- to 7-year maturity range increased 10.4 to 12.5 bp less than the ten-year point did, while the long end increased 2.1 bps more than the ten-year point. See Table 3 for the full calculations.

TABLE 3

	6 Mos	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs	20 Yrs	30 Yrs
Key Rate Duration	0.030	0.111	0.254	0.546	0.997	1.142	1.131	0.781	0.16
Non-Parallel Change	-12.5	-12.5	-12.5	-10.5	-12.5	-10.4	0.00	2.0	2.1
Non-Parallel Shift Return	0.004	0.014	0.032	0.057	0.124	0.119	0.000	-0.015	-0.003

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 0.217%. The AA rating category, which composes over half of the market value of the Investment Grade Index, contributed 42% of this return with a small overall spread tightening. Health Care and Transportation sectors were the biggest contributing sectors due to their larger-than-average spread tightening.

The sectors experiencing the largest overall tightening in option-adjusted spread (weighting by both market value and duration) were Tobacco and Health Care. No sector experienced an overall widening of option-adjusted spread. Repeating July's trend, BBB-rated bonds experienced a greater overall spread tightening than higher rating categories.

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

	AAA-rated Education	BBB-rated State GO	AAA-rated Tax-Supported	AAA-rated IDR / PCR
Change in Duration-Adjusted Average OA Spread ^(a)	4.021	7.325	0.411	2.391
Total Key Rate Duration ^(b)	6.653	4.394	5.016	1.773
Sector/Quality Return ^(-b*a)	-0.268	-0.322	-0.021	-0.042
Market Value Weight ^{%(c)}	1.272	0.680	2.592	0.068
Contribution to Duration ^(b*c)	0.08465	0.02988	0.13000	0.00120
Contribution to Sector/Quality Return ^(-b*c*a)	-0.00340	-0.00219	-0.00053	-0.00003

TABLE 5

	A-rated Health Care	A-rated Transportation	AA-rated Health Care	AA-rated Insured
Change in Duration-Adjusted Average OA Spread ^(a)	-12.186	-6.453	-8.477	-4.635
Total Key Rate Duration ^(b)	6.199	5.784	6.061	6.058
Sector/Quality Return ^(b*a)	0.755	0.373	0.514	0.281
Market Value Weight ^(c)	2.977	5.536	3.698	5.033
Contribution to Duration ^(b*c)	0.18453	0.32022	0.22413	0.30492
Contribution to Sector/Quality Return ^(b*c*a)	0.02249	0.02066	0.01900	0.01413

Finally, the Coupon Return was 0.322%, based on the index's average coupon of 4.414%. The average beginning-of-month market yield was 1.120%, resulting in a Market Amortization Return of -0.227%. 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. 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.

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