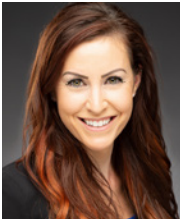




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# Municipal Bond Market Performance

September 2020

## Overview

The municipal bond market, as measured by the Standard & Poor's Municipal Bond Investment Grade Index, had a Total Return of 0.010% in September 2020, consisting of the components displayed in Table 1.

September was a month of modest income mostly eroded by minor market movements. Coupon Return and Market Amortization Return together were 9.8 bps. But, although the yield curve hardly moved at all, it went up just enough (combined with minor spread movements) to bring the overall monthly Total Return down as close to zero as we've seen since June 2014.

**TABLE 1**

Total Return	0.010%
Coupon Return	0.312%
Market Amortization Return	-0.215%
Parallel Shift Return	-0.216%
Non-Parallel Shift Return	0.114%
Sector/Quality Return	0.023%
Residual Price Return	-0.008%

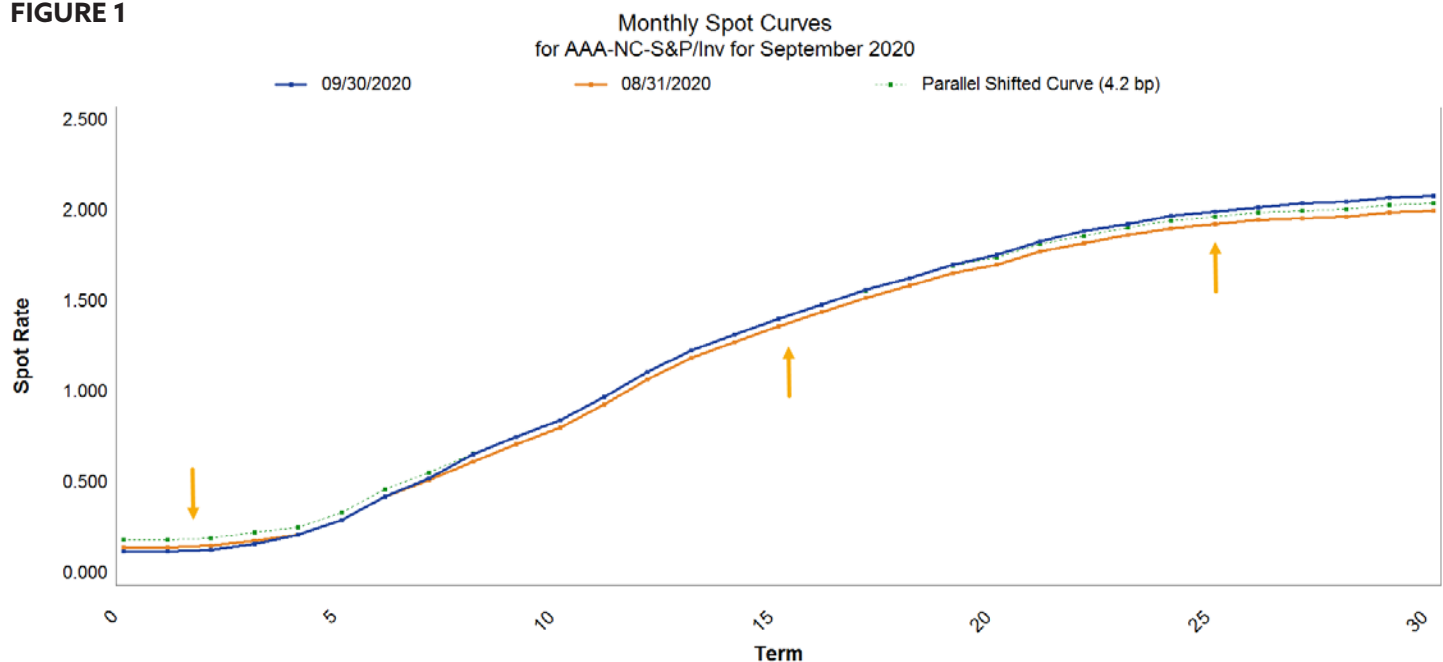
## Interpretation

The biggest contributor to Total Return was Coupon Return, which was 0.312%, based on the index's average coupon of 4.407%. The average beginning-of-month market yield was 1.188%, resulting in a Market Amortization Return of -0.215%. These two terms sum to a total income effect of 0.098%.

*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.*

Figure 1 shows the overall change in the muni AAA non-callable spot curve for September. The ten-year point increased by 4.2 bp, resulting in a Parallel Shift Return of -0.216%, 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 <sup>(a)</sup>	4.17
Total Key Rate Duration <sup>(b)</sup>	5.1940
Parallel Shift Return <sup>(-b*a)</sup>	-0.216

The Non-Parallel Shift Return resulted from a steepening in the spot curve: points in the 6-month to 3-year range fell, while the 30-year point increased 4.18 bp more than the ten-year point did. These movements resulted in a very minimal non-parallel shift return of 0.114. See Table 3 for the full calculations.

	6 Mos	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs	20 Yrs	30 Yrs
Non-Parallel Change	-6.17	-6.17	-6.17	-6.17	-4.16	-3.13	0.00	1.45	4.18
Key Rate Duration	0.0309	0.1123	0.2536	0.5441	0.9733	1.0865	1.2036	0.8289	0.1608
Non-Parallel Shift Return	0.002	0.007	0.016	0.034	0.040	0.034	0.000	-0.012	-0.007

*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 0.023%. The sectors experiencing the largest overall widening in option-adjusted spread (weighting by both market value and duration) were Transportation and State GO. The sectors with the largest overall tightening were Health Care, Housing, and Resource Recovery.

There was some flight to quality in September. BBB-rated bonds experiencing the largest change in overall option-adjusted spread of any ratings group (a widening, particularly in the State & Local GO sectors). The AAA- and AA-rated categories modestly tightened.

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.

	A-rated Transportation	BBB-rated State GO	BBB-rated Local GO	BBB-rated Transportation
Change in Duration-Adjusted Average OA Spread <sup>(a)</sup>	6.566	63.865	60.976	9.116
Total Key Rate Duration <sup>(b)</sup>	5.868	4.395	5.804	6.515
Sector/Quality Return <sup>(-b*a)</sup>	-0.385	-2.807	-3.539	-0.594
Market Value Weight <sup>%(c)</sup>	5.441	0.675	0.192	1.037
Contribution to Duration <sup>(b*c)</sup>	0.31928	0.02965	0.01112	0.06755
Contribution to Sector/Quality Return <sup>(-b*c*a)</sup>	-0.02097	-0.01894	-0.00678	-0.00616

**TABLE 5**

	AAA-rated Local GO	A-rated Health Care	AA-rated Health Care	AA-rated Local GO
Change in Duration-Adjusted Average OA Spread <sup>(a)</sup>	-2.013	-4.337	-3.061	-1.238
Total Key Rate Duration <sup>(b)</sup>	5.428	6.284	6.120	5.526
Sector/Quality Return <sup>(-b*a)</sup>	0.109	0.273	0.187	0.068
Market Value Weight <sup>%(c)</sup>	9.218	2.983	3.669	9.742
Contribution to Duration <sup>(b*c)</sup>	0.50035	0.18748	0.22457	0.53834
Contribution to Sector/Quality Return <sup>(-b*c*a)</sup>	0.01007	0.00813	0.00687	0.00666

## CONTACT US

All table data and figures in this report were produced using Investortools, Inc.'s **Custom Index Manager** product.

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