

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

Municipal Bond Market Performance

May 2020

Overview

The municipal bond market, as measured by the Standard & Poor's Municipal Bond Investment Grade Index, had a Total Return of 2.958% in May 2020, consisting of the components displayed in Table 1.

If March represented a "flight from munis," April and May represent a strong return to at least high-rated municipals. A month of steady, nearly-perfectly-parallel decline in the spot curve resulted in the largest single-month decline of the 10-year spot rate in this curve's more-than-17-year history and the third highest total return in the index's 21-year history, and its best since 2008, as shown in Table 2. But spread movements demonstrated a "flight to quality" pattern.

TABLE 1

Total Return	2.958%
Coupon Return	0.348%
Market Amortization Return	-0.184%
Parallel Shift Return	3.430%
Non-Parallel Shift Return	0.172%
Sector/Quality Return	-1.278%
Residual Price Return	0.471%

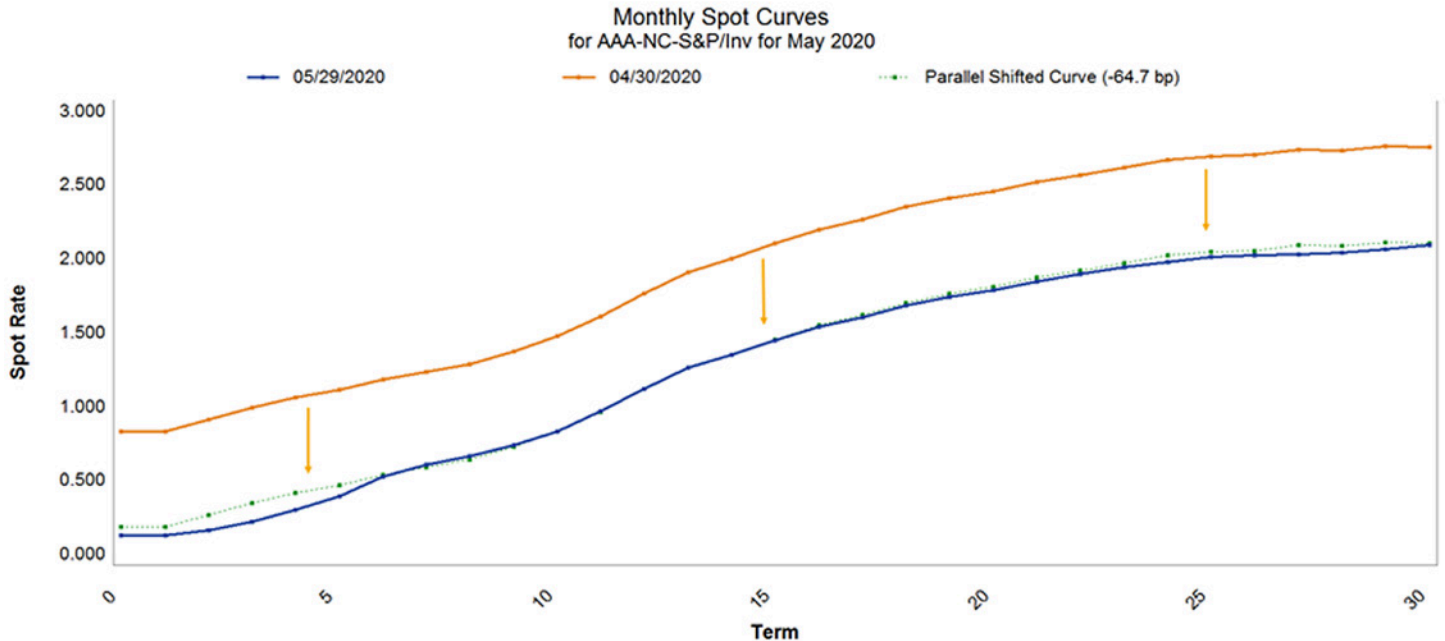
TABLE 2

Month	Total Return	Coupon Return	Market Amortization Return	Remaining Price Return
Jan. 2009	3.972%	0.365%	0.021%	3.586%
Sept. 2009	3.745%	0.351%	-0.033%	3.427%
May 2020	2.958%	0.348%	-0.184%	2.794%
March 2008	2.955%	0.416%	-0.030%	2.569%
Sept. 2003	2.919%	0.459%	-0.094%	2.553%
June 2000	2.530%	0.463%	0.005%	2.062%
Dec. 2000	2.490%	0.457%	-0.047%	2.079%
Jan. 2012	2.401%	0.389%	-0.144%	2.156%

Interpretation

Figure 1 shows the overall net spot curve change for May. The ten-year point decreased by a historically large 64.7 bp, resulting in a Parallel Shift Return of 3.430%, as shown in Table 3.

FIGURE 1



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

TABLE 3

Change in 10-Year Spot Rate ^(a)	-64.71
Total Key Rate Duration ^(b)	5.2999
Parallel Shift Return ^(-b*a)	3.430

The non-parallel shift effect for May was slight by comparison. The short end of the curve dropped 5.3 bp more than the 10-year point did, while the long end dropped only 1.6 bp more. Table 4 shows the non-parallel effect at each key point of the curve.

TABLE 4

	6 Mos	1 Yr	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs	20 Yrs	30 Yrs
Key Rate Duration	0.031	0.109	0.252	0.529	0.907	1.041	1.347	0.921	0.163
Non-Parallel Change	-5.3	-5.3	-10.3	-12.4	-7.4	1.6	0.0	-2.1	-1.6
Non-Parallel Shift Return	0.002	0.006	0.026	0.065	0.068	-0.016	0.000	0.190	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 -1.278%. Once again, the index showed a flight to quality pattern. Sectors with the largest overall spread increases were Housing, Health Care, Education, Transportation and Insured. The Local GO sector, the largest by weight, experienced a comparatively smaller spread widening. The only sector/quality categories to contribute any positive return were BBB State GO (lead by large Illinois State issues) and AA Tobacco (California issues).

The sector/quality categories with the biggest negative contributions to Sector/Quality Return, considering both weight and the groupings' own sector/quality returns, are listed in Table 5. The positive contributors this month are listed in Table 6.

TABLE 5

	AA-rated Local GO	A-rated Transportation	AA-rated Tax Supported	AAA-rated Local GO
Change in Duration-Adjusted Average OA Spread ^(a)	19.191	31.558	23.597	17.961
Total Key Rate Duration ^(b)	5.574	6.094	5.163	5.400
Sector/Quality Return ^(-b*a)	-1.070	-1.923	-1.218	-0.970
Market Value Weight ^(c)	10.319	5.668	7.786	8.853
Contribution to Duration ^(b*c)	0.57522	0.34541	0.40200	0.47805
Contribution to Sector/Quality Return ^(-b*c*a)	-0.11039	-0.10901	-0.09486	-0.08586

TABLE 6	BBB-rated State GO	AA-rated Tobacco
Change in Duration-Adjusted Average OA Spread ^(a)	-0.735	-27.444
Total Key Rate Duration ^(b)	4.906	1.605
Sector/Quality Return ^(-b*a)	0.036	0.441
Market Value Weight ^(c)	0.610	0.004
Contribution to Duration ^(b*c)	0.02993	0.00007
Contribution to Sector/Quality Return ^(-b*c*a)	0.00022	0.00002

The Coupon Return was 0.348%, based on the index's average coupon of 4.427%. The average beginning-of-month market yield was 2.059%, resulting in a Market Amortization Return of -0.184%. These two terms sum to a total income effect of 0.164%.

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.

Finally, the Residual Price Return of 0.471% reflected the positive effects of rolling down the yield curve as well as the effect of convexity, which tends to be more substantial when market changes are more substantial.

CONTACT US

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

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