Investortools

Municipal Bond Market Performance

December 2024

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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 -1.130% in December 2024, consisting of the components displayed in Table 1.

Both the municipal and treasury curves returned to sloping almost entirely upwards in December. This conclusion to the year is the product of many months of curve movement throughout 2024. For the municipal curve, the lessened inversion came from rising yields in intermediate and long terms, particularly mid-month, producing a Parallel Shift Return of -1.624%. The Transportation sector was one bright spot in December; its tightening spreads contributed substantially to the overall positive Sector/Quality Return. Additionally, California bonds tended to outperform the general market after adjusting for non-state-specific factors.

Despite December's negative performance, the index finished 2024 in the green, bolstered by income, yield curve curvature changes, and tightening spreads.

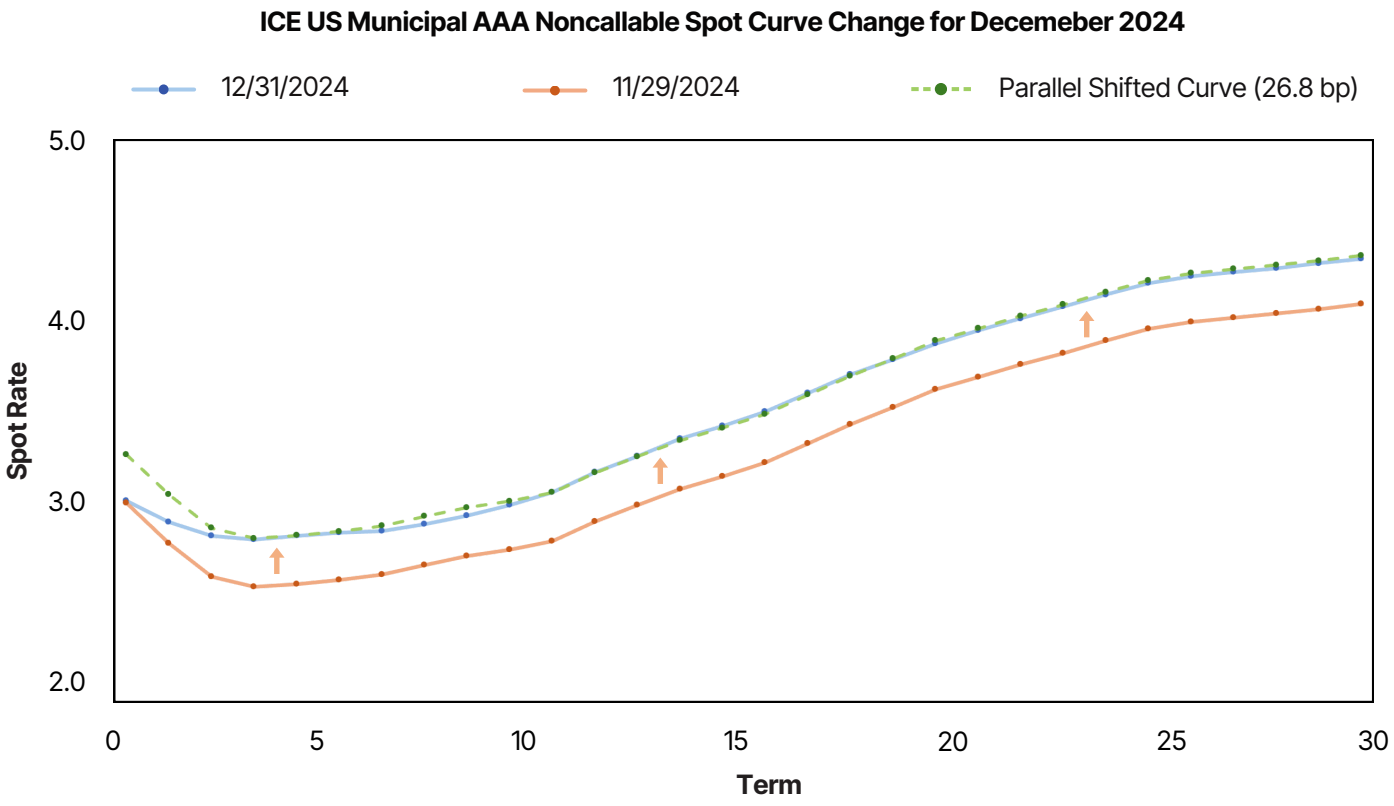
TABLE 1

	December	YTD
Total Return	**-1.130%**	**1.531%**
Coupon Return	0.366%	4.281%
Market Amortization Return	-0.067%	-0.719%
Parallel Shift Return	-1.624%	-4.644%
Non-Parallel Shift Return	0.110%	1.499%
Sector/Quality Return	0.072%	1.111%
Residual Price Return	0.014%	0.004%

Interpretation

Figure 1 shows the overall change in the ICE US Municipal AAA Noncallable spot curve for December. This curve demonstrated a 26.8 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 -1.624% is calculated from this curve increase, as shown in Table 2.

TABLE 2

Change for 10-Year Spot Rate[(a)]	26.84
Total Key Rate Duration[(b)]	6.0503
Parallel Shift Return[(-b*a)]	**-1.624%**

The Non-Parallel Shift Return was 0.110%, since much of the curve rose less than the 10-year term. The short end rose very little compared to the rest of the curve, resulting in a substantial lessening of its continuing inversion. 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	-21.82	-15.09	-4.21	-0.57	-0.63	-4.15	0.00	-1.26	-2.67
Key Rate Duration	0.042	0.116	0.232	0.429	0.643	0.948	1.792	1.522	0.327
Non-Parallel Shift Return	0.009	0.018	0.010	0.002	0.004	0.039	0.000	0.019	0.009

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 0.072%.

The sectors exhibiting the largest overall tightening in average option-adjusted spread (weighted by both market value and duration) were Transportation, Tobacco Settlement, and Public Power. The sectors exhibiting overall widening were IDR / PCR, Local GO, and Health Care. Quality-based groupings exhibited no significant trend.

The sector/quality categories with the biggest positive contributions to Sector/Quality Return, considering both weightings and the groupings' own sector/quality returns, are listed in Table 4. The biggest negative contributors are listed in Table 5.

TABLE 4

	AA-rated Transportation	A-rated Transportation	AA-rated Tax Supported (Excl. GOs)	A-rated State GO
Change in Dur-Adj Average OA Spread [a]	-4.355	-5.383	-1.832	-2.753
OA Spread Duration [b]	5.273	5.629	5.294	4.676
Sector/Quality Return [-b*a]	0.230	0.303	0.097	0.129
Market Value Weight% [c]	6.291	3.853	7.794	5.042
Contribution to Duration [b*c]	0.33177	0.21690	0.41263	0.23578
Contribution to Sector/Quality Return [-b*c*a]	0.01445	0.01168	0.00756	0.00649

TABLE 5

	AAA-rated Local GO	A-rated IDR/PCR	AA-rated IDR/PCR	A-rated Health Care
Change in Dur-Adj Average OA Spread[(a)]	1.394	5.305	4.845	1.449
OA Spread Duration[(b)]	5.138	4.752	4.788	4.992
Sector/Quality Return[(-b*a)]	-0.072	-0.252	-0.232	-0.072
Market Value Weight%[(c)]	10.894	2.733	0.988	2.936
Contribution to Duration[(b*c)]	0.55972	0.12987	0.04733	0.14657
Contribution to Sector/Quality Return[(-b*c*a)]	-0.00780	-0.00689	-0.00229	-0.00212

Table 6 below shows the states and territories with the five best state-specific spread returns while Table 7 shows the states and territories with the five worst state-specific spread returns. This is the portion of return from change in spread after adjusting for the sector/quality composition of the state's bonds, capturing the extent to which the state's bonds' performance differed from the national averages.

Housing bonds in Utah, South Dakota, and Montana bounced back from their relative underperformance in November, outperforming their peers in December and leading their states to above-average state-specific spread returns overall. California outperformed the national average across almost all sectors, while Ohio, North Carolina, and Kansas underperformed the national average across almost all sectors. Nebraska and Arkansas had the worst state-specific spread returns for December, led by above-average widening spreads for Local GO bonds in both states.

TABLE 6

State or Territory	Total Return Weight	Return from Sector/Quality Composition	State-Specific Spread Return	Total Spread Return
Montana	0.09%	0.007%	0.176%	0.183%
California	15.63%	0.066%	0.166%	0.232%
Utah	0.86%	0.121%	0.140%	0.261%
Puerto Rico	0.07%	0.088%	0.117%	0.205%
South Dakota	0.17%	0.133%	0.114%	0.247%

TABLE 7

State or Territory	Total Return Weight	Return from Sector/Quality Composition	State-Specific Spread Return	Total Spread Return
Ohio	2.29%	0.089%	-0.114%	-0.025%
North Carolina	1.53%	0.070%	-0.140%	-0.070%
Kansas	0.46%	0.053%	-0.189%	-0.136%
Nebraska	0.63%	0.084%	-0.202%	-0.118%
Arkansas	0.28%	0.065%	-0.405%	-0.340%

Coupon Return was 0.366%, based on the index's average coupon of 4.422%. The average beginning-of-month market yield was 3.406%, resulting in a Market Amortization Return of -0.067%. These two terms sum to a total income effect of 0.299%.

Note that Coupon Return reflects both interest payments and changes in accrued interest throughout the month. Market Amortization Return is negative due to yields being lower than most coupon rates, producing premium bonds. Premium bond prices, absent any change in yield, naturally decline over time to their redemption price. This decline is called market amortization.

2024 Year in Review

Table 8 contains the 2024 monthly and annual total returns and their breakdowns.

TABLE 8

	Total Return	Coupon Return	Mkt Amort Return	Parallel Shift Return	Non-Parallel Shift Return	Sector/ Quality Return	Residual Price Return
Year	1.531%	4.281%	-0.719%	-4.644%	1.499%	1.111%	0.004%
Dec	-1.130%	0.366%	-0.067%	-1.624%	0.110%	0.072%	0.014%
Nov	1.515%	0.347%	-0.060%	1.420%	-0.201%	0.070%	-0.060%
Oct	-1.318%	0.364%	-0.085%	-2.450%	0.268%	0.507%	0.078%
Sep	0.975%	0.344%	-0.055%	0.484%	-0.018%	0.245%	-0.025%
Aug	0.808%	0.357%	-0.065%	0.560%	0.529%	-0.498%	-0.074%
Jul	0.846%	0.370%	-0.035%	0.494%	0.335%	-0.280%	-0.037%
Jun	1.559%	0.350%	-0.048%	1.361%	0.017%	-0.101%	-0.019%
May	-0.319%	0.371%	-0.048%	-1.593%	0.613%	0.208%	0.130%
Apr	-1.067%	0.343%	-0.022%	-1.784%	0.042%	0.385%	-0.030%
Mar	-0.084%	0.376%	-0.114%	-0.431%	-0.155%	0.187%	0.053%
Feb	0.011%	0.328%	-0.061%	-0.430%	-0.012%	0.211%	-0.026%
Jan	-0.221%	0.350%	-0.055%	-0.580%	-0.031%	0.094%	0.002%

As is often the case, Coupon Return had the largest positive contribution over the course of the year. Parallel Shift Return had the largest negative contribution, as the 10-year term of the curve rose 75 basis points in 2024. However, the rest of the curve rose less, as captured by the positive Non-Parallel Shift Return partially offsetting the Parallel Shift Return. Sector/Quality Return was positive for the year, due to tightening spreads particularly on lower-rated bonds.