Municipals Weekly

Muni rally to roll on

Industry Overview

02 February 2024

Municipals
United States

Key takeaways

- Fed takes March rate cut off the table; muni rally has started, but more dependent on Treasuries going forward.
- Soft landing environment has made taxable and HY munis gradually more attractive to corporates.
- SALT Marriage Penalty Elimination Act to be considered by the House, but we remain guarded.

Fed rules out March rate cut

The Fed turned dovish but ruled out a March rate cut on Wednesday. We believe the muni rates rally has resumed since last week. Due to the postponed first Fed rate cut and tight muni/Treasury ratios, the new rally likely will be more dependent on Treasury rates and may prove to be slow in February.

Muni/corp cheapening and soft landing

The soft landing environment has led to some cheapening of taxable munis to corporates, and HY munis to HY corporates, thus making taxable munis and HY munis gradually more attractive. Taxable muni investors can look at 16-year and 6-year maturities for better curve rolls. Investors holding HY munis have superior taxable equivalent yields than HY corporates.

NY GOP reps: pass the SALT, please

After briefly gumming up legislative progress in the House briefly over the bipartisan tax package's exclusion of SALT cap changes, four GOP representatives from NY notched a win as the SALT Marriage Penalty Elimination Act will be considered by the House. We remain guarded on whether a SALT increase can pass given the bill's standalone nature, but also given past opposition from both progressives and conservatives.

Shooting for (yield) bogey

We show at which maturity and which rating investors with specific yield bogeys can find their desired bonds using the ICE BofA Muni Master (U0A0) and ICE US High Yield & Non-Rated Municipal Securities (MUHY) indexes as a proxy for the muni market broadly.

Key figures: issuance, returns, spreads & trade activity

Supply: YTD issuance through 31 January totals $30bn, up 25% y/y. YTD issuance is 96% tax-exempt and 4% taxable; 78% is new money and 22% is refundings. **Returns:** The Muni Master index (U0A0) returned -0.22% in January, underperforming govies, corporates, taxable munis and HY munis. The Muni High Yield index (U0HY) returned 0.98% in January. BBBs' January returns strongest at -0.01%, as were the 1-3yr maturities' -0.01%. **Spreads:** For the week ending 31 January, IG spreads were 1bp wider w/w at 23bp, while HY spreads narrowed 4bp to 204bp. **Trade activity:** In January, $203.4bn of muni par value traded in the secondary, with a daily avg of $9.7bn. That avg is down 15% m/m and 16% y/y.

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Exhibit 1: Strategic and tactical views & key forecasts
Buy long duration high grade bonds, especially 4% coupons

Strategic views
• (1) 15-30yr part of the curve, particularly 4% coupon bonds; (2) AMT bonds*: overweight
• BBBs and high yield: neutral
• (1) Territories; (2) small private colleges; (3) rural, single-facility hospitals: underweight
Tactical views
• Position for ratios to reach historically-rich levels
• 4% coupon bracket to benefit more in a rally
• Swap long-end muni taxables for long-end tax-exempts
Key forecasts
• 2024 issuance to total $400bn; $300bn of new money and $100bn of refundings
• 2024 principal redemptions to total $416bn and coupon payments $158bn. Cumulative fund inflows positive
• 1s10s slope to stay inverted in 2024; 10s30s to steepen, then flatten; 10s30s max slope of 110bp in 2024
• 10yr muni/Tsy ratio range of 55%-80% and 30yr 75%-92%
• Stable credit spreads in 2024 given non-recessionary environment; any material widening is an opportunity

Note: *If the holder is certain they are not subject to the AMT under current tax law.
Source: BofA Global Research

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Market views & strategies

Fed turned dovish but rules out March rate cut

The Fed removed the hawkish bias and talked more about conditions needed for rate cuts on Wednesday. However, it ruled out the possibility of a rate cut at its March meeting, and instead signaled it would start discussing slowing its balance sheet reduction. The Treasury market rallied strongly in a bull steepening move, and so did munis, keeping muni/Treasury ratios tight.

Although the overall Fed message is dovish, it continues to suggest a more data dependent approach going forward. BofA economists are now calling for the first Fed rate cut to be in June, and easing to be at a faster pace. The magnitude of the decline in muni rates this week suggests that the new rally has likely resumed. However, due to a postponed first Fed rate cut and tight muni/Treasury ratios, the new rally is more dependent on Treasury rates and may prove to be slow in February.

TXMB/C0A0, HY muni/HY corp cheapening & soft landing

In 2022, we expressed the view that the yield-to-worst spread of the ICE BofA Broad US Taxable Municipal Securities Index (TXMB) to the ICE BofA US Corporate Index (C0A0) would richen to -70bp given the recessionary economic outlook that prevailed at the time. Indeed, by September 2022, the spread richened to -63bp.

As economists and the market gained more confidence in a soft landing scenario, however, the spread cheapened. As Exhibit 2 shows, the spread as of 31 January is -22bp, or at the 88th percentile of its last 12-month range. This year, we expect the spread to cheapen further as muni market credit conditions overall are benign and, in the corporate market, credit spreads' continue to narrow and equity market volatility abates.

We believe a likely scenario for relative taxable muni/corporate performance should mimic 2019's behavior. Exhibit 2 shows that when the Fed embarked on its easing cycle in 2019, the TXMB/C0A0 spread cheapened some 50bp, ultimately ending the year in positive territory. However, that level of cheapening may be too extreme for 2024, barring any unforeseen changes in macro conditions. The current cheapening should increase the relative attractiveness of taxable munis; but, significant labor market weakening down the road may halt the relative cheapening process.

At this point, taxable muni investors may find the 16yr maturity on the curve is particularly attractive from a roll perspective as it offers 37bp more than the 15yr maturity. The Another attractive point on the curve is the 6yr maturity, as it offers 18bp more than the 5yr maturity.

Exhibit 2: TXMB/COA0 spread (bp)

We expect spread behavior in 2024 to mimic 2019's, but to a lesser degree

Source: BofA Global Research, ICE Data Indices, LLC

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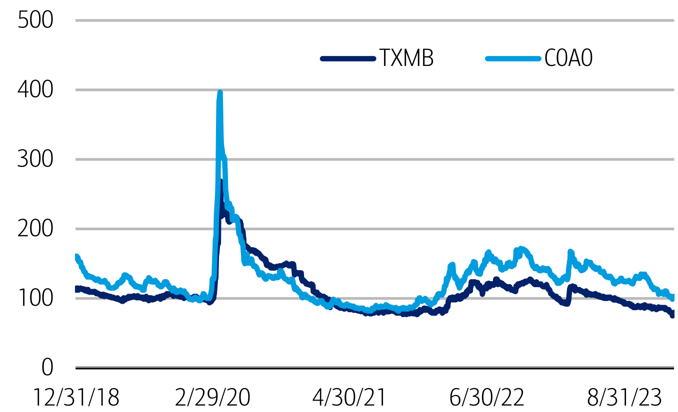
Exhibit 3: TXMB and COA0 spread to worst

Since Halloween, COA0's narrowed 31bp while TXMB's narrowed just 6bp



Source: BofA Global Research, ICE Data Indices, LLC

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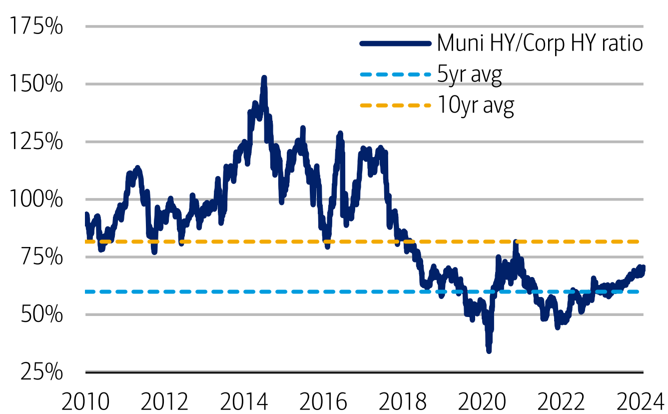
Similarly, the trend in the yield-to-worst ratio shows that high yield munis (U0HY, ICE BofA US Municipal High Yield Securities Index) are becoming more attractive versus HY corporates (H0A0, ICE BofA US High Yield Index) due to the soft landing environment. As of 30 January, the ratio was 70%, above the 5yr average of 60% and heading towards the 10yr average of 82%. The ratio is near its highest level since the first weeks of 2021. With a yield-to-worst of 5.42%, high yield munis are currently providing a taxable equivalent yield of 9.16% versus the 7.77% offered by high yield corporates. High yield munis also have a much lower default rate. Moody's default study shows a 5yr horizon cumulative default rate of 4.63% for speculative grade munis versus 18.71% for speculative grade corporates over the period of 1970-2022. Over the last decade (2013-2022), those numbers were 3.97% and 17.71%, respectively.

Exhibit 4: YTW ratio of HY munis to HY corporates

Ratio of 70%, above 5yr avg of 60% and heading towards 10yr avg



Note: Data as of 30 January 2024.

Source: BofA Global Research, ICE Data Indices, LLC

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Exhibit 5: YTW spread of HY munis to IG munis (bp)

190bp spread is up from 98bp since the start of 2022

Note: Data as of 30 January 2024.

Source: BofA Global Research, ICE Data Indices, LLC

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Muni investors are also getting paid more to hold high yield paper versus investment grade compared to two years ago. As shown in Exhibit 5, the yield-to-worst spread of high yield munis to investment grade munis (U0A0, ICE BofA US Municipal Securities Index) was 190bp as of 30 January. That is up from 169bp at the start of 2023 and 98bp at the start of 2022. As always, we recommend that investors conduct thorough credit analysis and to be very selective in sector and name.

NY GOP reps: Pass the SALT, please

House Republican leadership's legislative activity nearly grinded to a halt earlier this week as a group of four New York Republicans initially joined Democrats to block a procedural rule on four immigration policy measures in protest of the $78bn bipartisan tax package – which passed the House in a 357-70 vote on Wednesday – not including an increase to the $10,000 State and Local Tax (SALT) deduction cap enacted as part of 2017's Tax Cuts and Jobs Act (TCJA).

After a discussion with leadership, those four Republicans changed their votes. While Speaker Johnson did not say the $78bn package will change, Rep. Nick LaLota told reporters that "[w]e've agreed only to talk, to either explore one of two mechanisms — either to put it in the overall big tax bill, or to have a stand-alone thing that goes in parallel to that big tax bill."

By Wednesday, *The Hill* reported those New York Republicans and House GOP leaders agreed that the House will "move on a SALT-related bill in the coming days" under a closed rule. On Thursday, *The Hill* reported that the House Rules Committee "reported out a rule to allow for consideration of Rep. Mike Lawler's (R-N.Y.) SALT Marriage Penalty Elimination Act in an 8-5 vote, teeing up the bill for consideration on the House floor." The SALT Marriage Penalty Elimination Act would increase the cap to $20,000 for those filing jointly.

Raising the SALT cap has been a priority for New York Republicans representing swing districts that helped deliver Republicans in the House a majority. For those blue state Republicans representing wealthier districts, the SALT cap remains a political vulnerability; Democrats vying for their seats in the upcoming 2024 election have hit the Congressmen and Republicans more broadly for raising resident's taxes under the TCJA.

As discussed in previously Weeklies, higher income taxpayers in higher tax locations (like in California and New York) were most impacted by the SALT cap. The benefits of an increase in the SALT cap would flow to those taxpayers as well.

We remain guarded on whether a SALT increase can pass given the bill's standalone nature, but also given past and current opposition from both progressives (they see raising the cap as a handout to the rich) and conservatives (they see raising the cap as incentivizing states, particularly Democrat-run states, to raise taxes). Time will tell whether the SALT cap increase can pass, but for now, we are not holding our breath.

Shooting for (yield) bogey

Per the *Bond Buyer's* recently released survey results, market participants believe changes in rates will be the most important factor impacting the muni market in 2024, followed by market volatility and the 2024 elections. As a reminder, our 10yr AAA rates target for 2024 is 1.80%. To be sure, after a very strong rally to end 2023, a retracement in January and a likely sideways rates market in February, rates expectations and investors' yield targets have shifted.

To that end, in Exhibit 6, we use the ICE BofA US Municipal Securities Index (U0A0, investment grade) and the ICE US High Yield & Non-Rated Municipal Securities Index (MUHY) as a proxy for the municipal market broadly to identify the full market value by yield-to-worst brackets at the various maturities and ratings. Investors with specific yield bogeys can use Exhibit 6 as a map to narrow their search for bonds.

For example, if an investor is specifically targeting bonds with a yield bogey from 4.0% to 4.5%, Exhibit 6 shows that those bonds are most abundant in 20-25yr maturities at a AA rating. It also shows that an investor with a yield bogey at or above 5.5% should focus their attention on longer maturities and the unrated space.

Exhibit 6: Percent (%) of full market value by YTW bracket of combined U0A0 and MUHY, by maturity and rating
Investors with specific yield bogeys can use this Exhibit to narrow their search for bonds

		Yield-to-worst											
Maturity	**Rating**	**<2%**	**2%-2.5%**	**2.5%-3%**	**3%-3.5%**	**3.5%-4%**	**4%-4.5%**	**4.5%-5%**	**5%-5.5%**	**5.5%-6%**	**6%-6.5%**	**6.5%-7%**	**>=7%**
1-5yr	AAA	-	2.8	9.5	3.2	1.7	0.3	0.1	0.2	-	-	-	-
	AA	13.6	16.4	33.8	11.2	3.8	0.7	1.5	0.7	-	-	-	-
	A	-	0.2	5.1	10.5	5.4	4.9	0.8	1.5	-	0.6	-	0.3
	BBB	0.8	-	-	0.5	1.4	0.6	1.6	3.4	0.4	0.1	0.4	-
	HY-rated	-	0.0	-	0.0	0.3	0.5	1.2	1.6	0.8	1.1	0.4	2.5
	Unrated	2.1	0.0	0.1	0.1	0.9	0.3	0.7	2.3	3.3	2.8	10.3	3.7
5-10yr	AAA	-	20.5	4.6	1.8	0.3	0.0	-	-	-	-	-	-
	AA	12.1	51.2	23.8	10.8	3.5	0.2	0.8	0.4	-	-	-	-
	A	2.7	1.1	4.0	8.7	5.7	4.3	0.4	-	-	-	-	-
	BBB	2.0	-	0.0	0.2	1.4	1.4	1.8	0.5	1.1	1.0	-	-
	HY-rated	6.6	0.0	0.0	0.0	0.4	0.8	2.2	2.3	2.5	1.0	0.9	3.6
	Unrated	0.8	0.0	0.2	0.1	0.8	1.1	2.3	4.4	6.3	7.1	15.1	6.5
10-15yr	AAA	-	0.9	3.2	3.6	1.2	0.2	0.3	-	-	-	-	-
	AA	7.1	6.4	12.8	16.0	5.8	0.8	0.2	-	-	-	-	-
	A	12.0	0.3	0.9	5.6	4.9	1.9	1.0	0.3	-	-	-	-
	BBB	1.3	-	-	0.1	1.0	2.4	1.0	0.5	-	-	-	-
	HY-rated	-	0.0	-	-	0.1	0.9	1.2	3.3	4.1	2.5	1.3	2.6
	Unrated	2.8	-	0.0	0.0	0.2	0.4	3.4	5.8	5.4	5.6	8.0	8.5
15-20yr	AAA	0.5	-	0.2	3.8	2.8	1.4	0.5	-	0.2	-	-	-
	AA	8.7	0.1	1.1	14.1	14.3	6.4	1.6	0.1	-	-	-	0.8
	A	14.2	-	0.2	0.9	4.3	6.1	2.4	0.3	-	-	-	-
	BBB	8.0	-	-	-	0.1	1.6	3.7	1.7	0.5	-	0.5	-
	HY-rated	0.1	0.0	0.0	-	-	0.4	1.9	6.4	5.7	4.5	4.0	3.5
	Unrated	3.1	0.0	0.0	0.0	0.1	0.3	6.0	7.8	10.4	10.5	9.9	14.4
20-25yr	AAA	-	-	0.1	1.2	4.3	3.2	1.8	0.1	-	-	-	-
	AA	0.9	-	0.0	5.2	17.5	17.4	6.0	0.3	-	-	-	-
	A	-	-	-	0.1	3.5	13.0	11.0	0.6	-	-	-	-
	BBB	-	-	-	-	0.1	1.2	7.9	7.1	1.5	0.2	0.4	0.5
	HY-rated	0.1	-	-	-	-	-	2.8	7.7	9.7	5.9	3.7	2.6
	Unrated	0.4	-	0.0	0.0	0.0	0.5	4.2	14.0	15.9	17.2	11.9	11.6
25-30yr	AAA	-	-	0.1	0.1	2.7	3.5	2.8	0.1	-	-	-	-
	AA	-	-	0.1	2.0	9.6	13.5	9.2	0.8	-	-	-	-
	A	-	-	-	-	1.3	9.0	9.1	2.6	0.5	-	-	-
	BBB	-	-	-	-	0.1	0.9	4.7	6.5	1.5	0.2	-	0.6
	HY-rated	-	-	-	-	-	-	1.2	5.2	7.6	5.3	4.1	5.3
	Unrated	-	-	0.1	-	-	0.1	2.9	11.7	22.5	34.3	29.1	33.0
Full market value $bn		**5.6**	**50.1**	**273.1**	**215.0**	**253.9**	**260.9**	**91.5**	**30.5**	**20.9**	**12.6**	**8.2**	**15.2**

Note: To be read vertically. For example, of the nearly $261bn by full market value of bonds with a YTW of 4%-4.5%, 17.4% fall into the AA rated, 20-25yr maturity bracket.
Source: BofA Global Research, ICE Data Indices, LLC

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Performance

Exempt IG underperforms taxables in January

Exempt IG returned -22bp in January 2024 – one of only 9 Januarys since 1989 with negative total returns for the month. As Exhibit 7 shows, exempt IG underperformed govies for the month by 6bp, corporates by 37bp, taxable munis by 51bp and HY munis by 121bp. Thus far in 2024, BBBs' returns are strongest, with their -1bp of total returns while AAAs' -37bp are weakest. Note that GOs' performance is lagging revenue bonds' by 10bp, though both single-A and BBB GOs are outperforming their revenue counterparts. Among the maturity indexes, the intermediate maturities' (7-12yr) have the weakest returns YTD, returning -31bp while the shortest maturity indexes returns (the 1-3yr index) are strongest at -1bp.

Exhibit 7: Municipal total returns (%) monitor, as of 31 January 2024
Exempt IG munis turn in a negative January, underperforming govies, corporates and taxable munis

Index	Ticker	1d	1wk	MTD	1mo	3mo	YTD	1yr
Govt Master	G0A0	0.550	1.365	-0.166	-0.166	6.899	-0.166	1.122
Corporate Master	C0A0	0.451	1.325	0.148	0.148	10.076	0.148	4.495
IG munis	**U0A0**	**0.331**	**0.897**	**-0.223**	**-0.223**	**8.741**	**-0.223**	**3.091**
AAA	U0A1	0.341	0.904	-0.373	-0.373	8.675	-0.373	2.455

Exhibit 7: Municipal total returns (%) monitor, as of 31 January 2024

Exempt IG munis turn in a negative January, underperforming govies, corporates and taxable munis

Index	Ticker	1d	1wk	MTD	1mo	3mo	YTD	1yr
AA	U0A2	0.322	0.862	-0.264	-0.264	8.400	-0.264	2.703
A	U0A3	0.336	0.935	-0.105	-0.105	9.118	-0.105	3.841
BBB	U0A4	0.378	1.044	-0.010	-0.010	10.480	-0.010	4.741
1-3yr	U1A0	0.144	0.293	-0.008	-0.008	2.540	-0.008	2.294
3-7yr	U2A0	0.208	0.507	-0.273	-0.273	5.272	-0.273	1.892
7-12yr	U3A0	0.284	0.667	-0.310	-0.310	7.581	-0.310	2.252
12-22yr	U4A0	0.329	0.957	-0.227	-0.227	10.580	-0.227	4.041
22+yr	U5A0	0.539	1.545	-0.235	-0.235	13.304	-0.235	3.645
HY munis	**U0HY**	**0.369**	**1.333**	**0.984**	**0.984**	**9.552**	**0.984**	**3.905**
Non-rated	U0NR	0.493	1.564	0.564	0.564	10.362	0.564	5.083
General Obligation	**U0AG**	**0.311**	**0.815**	**-0.298**	**-0.298**	**7.980**	**-0.298**	**2.572**
AAA	UGA1	0.351	0.906	-0.444	-0.444	8.540	-0.444	2.132
AA	UGA2	0.304	0.794	-0.293	-0.293	7.914	-0.293	2.499
A	UGA3	0.281	0.775	-0.032	-0.032	7.326	-0.032	2.812
BBB	UGA4	0.230	0.668	0.127	0.127	6.754	0.127	5.433
State	U0AA	0.277	0.690	-0.249	-0.249	6.730	-0.249	2.436
Local	U0AB	0.351	0.961	-0.355	-0.355	9.442	-0.355	2.708
Revenue	**U0AR**	**0.338**	**0.923**	**-0.199**	**-0.199**	**8.989**	**-0.199**	**3.259**
AAA	URA1	0.334	0.902	-0.324	-0.324	8.763	-0.324	2.680
AA	URA2	0.329	0.891	-0.251	-0.251	8.607	-0.251	2.787
A	URA3	0.341	0.949	-0.111	-0.111	9.275	-0.111	3.934
BBB	URA4	0.390	1.074	-0.022	-0.022	10.792	-0.022	4.388
Airport	U0AV	0.311	0.894	-0.200	-0.200	8.911	-0.200	3.504
Education	U0AE	0.351	0.921	-0.241	-0.241	9.436	-0.241	2.894
Health	U0HL	0.439	1.367	0.565	0.565	12.707	0.565	4.422
Hospital	U0AH	0.423	1.211	-0.147	-0.147	11.439	-0.147	3.325
Industrial Development Rev	U0ID	0.413	1.175	-0.043	-0.043	9.880	-0.043	4.985
Leases, COPs & Appropriations	U0AL	0.293	0.793	-0.271	-0.271	7.882	-0.271	2.687
Miscellaneous	U0AM	0.297	0.778	-0.401	-0.401	8.302	-0.401	2.188
Multi-family Housing	U0AU	0.367	0.892	-0.359	-0.359	8.600	-0.359	2.756
Pollution Control	U0AQ	0.317	0.670	-0.137	-0.137	6.919	-0.137	2.352
Power	U0AP	0.297	0.748	-0.151	-0.151	7.355	-0.151	2.699
Single-family Housing	U0AS	0.319	0.832	-0.379	-0.379	7.665	-0.379	1.832
Tax Revenue	U0TX	0.329	0.924	-0.346	-0.346	9.183	-0.346	3.253
Tobacco	U0TB	0.351	0.782	0.322	0.322	6.875	0.322	3.800
Toll & Turnpike	U0TL	0.315	0.840	-0.105	-0.105	8.638	-0.105	3.194
Transportation - other	U0AT	0.345	0.922	-0.241	-0.241	8.940	-0.241	4.103
Utilities - other	U0UT	0.293	0.855	0.027	0.027	7.350	0.027	3.986
Water & Sewer	U0AW	0.323	0.872	-0.149	-0.149	8.611	-0.149	2.833
Taxable	**TXMB**	**0.470**	**1.823**	**0.282**	**0.282**	**9.863**	**0.282**	**3.307**
Build America Bonds	BABS	0.472	1.869	0.388	0.388	10.063	0.388	2.570
VRDOs	**VRDO**	**0.010**	**0.082**	**0.247**	**0.247**	**0.806**	**0.247**	**3.233**
Daily reset	VRDD	0.009	0.076	0.195	0.195	0.720	0.195	3.060
Weekly reset	VRDW	0.011	0.085	0.278	0.278	0.857	0.278	3.333

Source: ICE Data Indices, LLC

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IG spreads 1bp wider w/w overall; HY spreads 4bp tighter

IG muni spreads widened 1bp w/w overall to 23bp and are sitting at the 25th percentile of their 52-week range. Muni HY spreads tightened 4bp to 204bp or the 53rd percentile. Non-rated spreads widened 1bp w/w to 223bp. GO spreads tightened 1bp w/w as Revenue bond spreads widened 1bp. Among IG muni revenue bond sectors, the Industrial Development Rev sector narrowed the most by 5bp. The Miscellaneous sector saw the most widening at 11bp for the week.

Exhibit 8: Muni YTW spread monitor as of 31 January 2024

IG muni spreads widened 1bp w/w overall while HY spreads tightened 4bp

	52wk				Current	Change from				Current as %		
	Tights	Wides	T-1wk	T-1d	1/31/24	Tights	Wides	T-1wk	T-1d	of 52wk range	Price	Yield
Investment Grade	**19**	**35**	**22**	**21**	**23**	**4**	**-12**	**1**	**2**	**25**	**102**	**3.48**
AA	2	12	4	4	5	3	-7	1	1	30	103	3.30
A	49	77	53	51	54	5	-23	1	3	18	100	3.79

Exhibit 8: Muni YTW spread monitor as of 31 January 2024

IG muni spreads widened 1bp w/w overall while HY spreads tightened 4bp

BBB	94	142	111	108	108	14	-34	-3	0	29	97	4.33
High Yield	**176**	**229**	**208**	**211**	**204**	**28**	**-25**	**-4**	**-7**	**53**	**95**	**5.29**
Non-rated	174	247	222	219	223	49	-24	1	4	67	65	5.48
General Obligation	**-12**	**-4**	**-8**	**-9**	**-9**	**3**	**-5**	**-1**	**0**	**38**	**103**	**3.16**
AA	-19	-9	-14	-15	-15	4	-6	-1	0	40	103	3.10
A	-15	29	7	4	4	19	-25	-3	0	43	105	3.29
BBB	50	115	73	73	81	31	-34	8	8	48	97	4.06
State	-30	-20	-26	-28	-27	3	-7	-1	1	30	106	2.98
Local	7	17	13	13	13	6	-4	0	0	60	99	3.38
Revenue	**30**	**49**	**32**	**31**	**33**	**3**	**-16**	**1**	**2**	**16**	**102**	**3.58**
AA	10	22	12	12	14	4	-8	2	2	33	103	3.39
A	53	81	57	55	58	5	-23	1	3	18	99	3.83
BBB	96	147	114	111	110	14	-37	-4	-1	27	97	4.35
Airport	52	84	60	58	63	11	-21	3	5	34	104	3.88
Education	9	32	13	12	13	4	-19	0	1	17	105	3.38
Health	135	174	152	149	150	15	-24	-2	1	38	95	4.75
Hospital	60	89	67	65	65	5	-24	-2	0	17	100	3.90
Industrial Development Rev	67	123	89	86	84	17	-39	-5	-2	30	101	4.09
Leases, COPs & Appropriations	-4	13	-2	-2	2	6	-11	4	4	35	104	3.27
Miscellaneous	-3	16	5	6	16	19	0	11	10	100	103	3.41
Multi-family Housing	54	89	64	65	66	12	-23	2	1	34	95	3.91
Pollution Control	30	64	60	60	60	30	-4	0	0	88	98	3.85
Power	22	39	23	22	25	3	-14	2	3	18	105	3.50
Single-family Housing	69	89	87	88	89	20	0	2	1	100	98	4.14
Tax Revenue	3	16	4	3	4	1	-12	0	1	8	102	3.29
Tobacco	-22	37	4	3	4	26	-33	0	1	44	102	3.29
Toll & Turnpike	23	49	25	24	31	8	-18	6	7	31	99	3.56
Transportation - other	24	55	25	24	30	6	-25	5	6	19	100	3.55
Utilities - other	67	105	73	69	70	3	-35	-3	1	8	104	3.95
Water & Sewer	3	20	13	12	13	10	-7	0	1	59	104	3.38

Note: YTW spread to the ICE BofA AAA US Municipal Securities Index (U0A1).
Source: BofA Global Research, ICE Data Indices, LLC

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Supply & demand

YTD issuance totals $30bn, up 25% y/y

YTD issuance as of 31 January 2024 totaled $30bn, up 25% y/y. 78% of YTD issuance is new money and 22% is refundings. New money volumes are up 34% y/y while refunding volumes flat.

Exhibit 9: Issuance summary ($mn)

YTD-24 issuance of $30bn was up 25% y/y; new money up 34% y/y but refundings flat y/y

	Month-to-date			Annual, 2023 vs 2022		
	1/31/24	1/31/23	y/y % Δ	2023	2022	y/y % Δ
Total	**29,993.0**	**24,056.1**	**25%**	**380,361.0**	**391,298.2**	**-3%**
New Money	23,359.2	17,432.1	34%	294,914.4	309,852.5	-5%
Total Refunding	6,633.8	6,624.0	0%	85,446.6	81,445.7	5%
Advanced refunding	0.0	1,375.5	-100%	1,380.9	2,155.9	-36%
Unknown refunding	6,633.8	4,093.7	62%	79,314.2	71,802.7	10%
Current & Forward refunding	0.0	1,154.8	-100%	4,751.5	7,487.2	-37%
Insured	2,066.1	2,258.9	-9%	31,855.9	28,884.3	10%
Fixed Rate	26,198.2	21,183.7	24%	336,132.2	358,785.9	-6%
Variable Rate Long	3,195.3	2,271.7	41%	29,619.6	16,219.9	83%
Variable Rate Short	293.9	532.6	-45%	12,449.7	11,532.8	8%
Linked Rate	0.0	50.0	-100%	1,573.3	2,869.4	-45%
Zero Coupon	305.5	13.9	2100%	435.6	1,283.0	-66%
Convertible	0.0	4.1	-100%	150.6	607.2	-75%
Variable rate no put	0.0	0.0	-	-	-	-
Tax Exempt	28,837.5	20,207.7	43%	326,209.2	315,316.7	3%
Taxable	1,129.8	3,291.7	-66%	37,443.5	54,279.5	-31%
Alternate Minimum Tax	25.7	556.7	-95%	16,708.3	21,702.1	-23%
General Purpose	5,271.7	3,615.6	46%	96,613.4	103,670.2	-7%
Education	8,246.3	8,401.9	-2%	94,850.5	91,631.7	4%
Housing	1,971.1	1,946.0	1%	40,259.2	31,898.8	26%

Exhibit 9: Issuance summary ($mn)
YTD-24 issuance of $30bn was up 25% y/y; new money up 34% y/y but refundings flat y/y

	Month-to-date			Annual, 2023 vs 2022		
	1/31/24	1/31/23	y/y % Δ	2023	2022	y/y % Δ
Transportation	2,632.0	3,435.3	-23%	45,325.1	56,888.2	-20%
Healthcare	2,930.2	579.7	405%	16,752.4	27,905.3	-40%
Utilities	6,305.6	3,316.1	90%	47,480.7	48,187.0	-1%
Electric Power	1,975.9	1,645.5	20%	17,680.2	12,251.1	44%
Development	408.9	718.5	-43%	10,069.0	10,193.9	-1%
Environmental Facilities	35.1	150.0	-77%	3,636.7	3,007.6	21%
Public Facilities	216.2	247.6	-13%	7,693.7	5,664.5	36%
Muni-backed corporates	0.0	0.0	-	4,051.8	15,088.8	-73%

Note: Long-term bonds only. Reflects any data revisions by LSEG or Bloomberg.
Source: BofA Global Research, LSEG, Bloomberg

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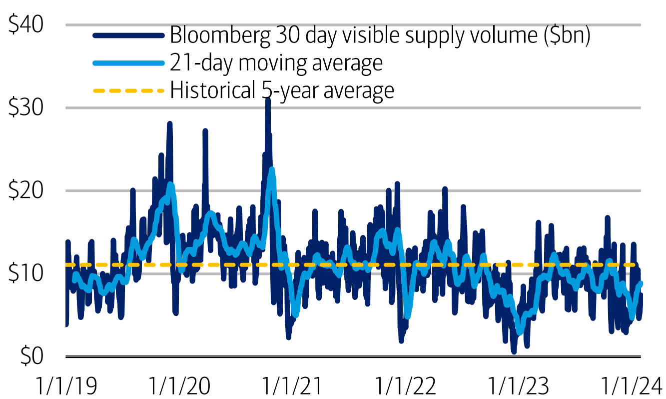
Exhibit 10: Bloomberg 30-day visible supply ($bn)
30-day visible supply was $7.4bn as of 1 February 2024



Source: Bloomberg

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Exhibit 11: 2024 gross issuance, redemption forecasts vs actuals ($bn)
Gross issuance forecast of $400bn vs $574bn of prin. & cpn. redemptions

	Issuance		Prin. & cpn redemptions	
Month	Forecast	Actual	Forecast	Actual
January	$26	30	$46	$45
February	27		49	
March	32		39	
April[1]	31		31	
May	32		39	
June	39		63	
July	30		63	
August	38		66	
September	34		37	
October	42		45	
November	33		43	
December	36		52	

Note: Totals may not add up due to rounding. Data as of 31 January 2024.
Source: BofA Global Research, LSEG, Bloomberg

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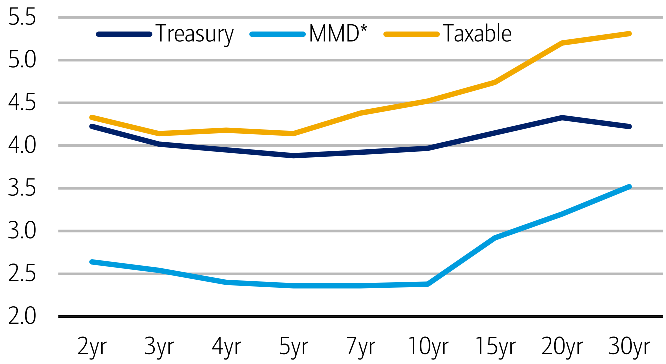
Curve

Curve shifts down 9bp w/w on avg and up 12bp m/m

The AAA MMD curve richened 9bp w/w on average, and cheapened by 12bp m/m. For the week, the 1s5s slope was flat at -56bp, 33bp flatter than one year ago; the 5s10s steepened 1bp w/w to 2bp and is 12bp flatter than it was one year ago; the 10s20s slope flattened 1bp w/w to 82bp and is 2bp steeper than one year ago, the 20s30s was flat w/w at 32bp and is 11bp steeper than it was one year ago. Investors should continue to position for a flattener led by the back end.

Exhibit 12: AAA GO muni, Treasury and taxable yield curves (%)
On average Tsy, MMD and Taxable richened w/w



Note: *MMD AAA GO yield curve. As of 31 January 2024.
Source: BofA Global Research, Refinitiv, Bloomberg

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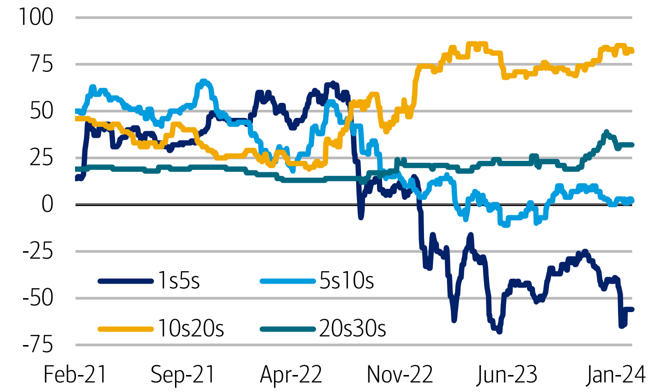
Exhibit 13: Curve slope (bp)
The 1s5s and 20s30s stayed flat w/w



Source: Refinitiv

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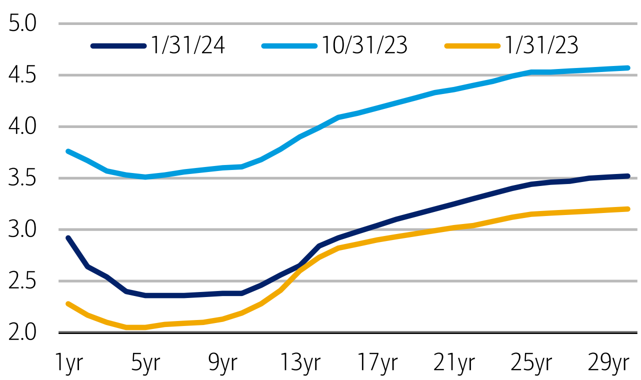
Exhibit 14: AAA GO municipal curve movement (%)
AAA is richer than three months ago across the curve



Source: Refinitiv

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Relative value

Ratios mostly neutral while slopes mostly flat

We screen the muni market for parts of the curve, sectors and ratings that are rich or cheap. Muni/Treasury ratios are mostly Neutral on a short-term and long-term basis. Meanwhile, curve slopes are mostly flat on both a short-term and long-term basis.

Exhibit 15: Rich/cheap analysis of MMD*/Treasury ratios as of 31 January 2024
The muni market is mostly Neutral on both a ST and LT basis

Maturity	Current Tsy	Muni/Tsy	MMD R/C (short-term)	3 mo. max	3 mo. min	3 mo. avg	MMD R/C (long-term)	3 year max	3 year min	3 year avg
3yr	4.016%	63.2%	**Neutral**	74.1%	57.1%	63.1%	**Neutral**	130.7%	26.7%	61.7%
5yr	3.882%	60.8%	**Neutral**	74.3%	56.2%	62.5%	**Neutral**	92.0%	39.3%	63.4%
10yr	3.969%	60.0%	**Neutral**	74.9%	56.4%	63.1%	**Rich**	105.3%	54.7%	72.3%
30yr	4.222%	83.4%	**Neutral**	92.3%	80.7%	86.3%	**Neutral**	110.0%	63.5%	86.8%

Note: *MMD AAA GO yield curve. R/C = Rich/Cheap Note the benchmark for short-term is the 3-month average and for long-term is the 3-year average. Rich/cheap is based on z-scores: if z-score is >2, then "Very Cheap"; if >1 but <2, then "Cheap"; if between -1 and 1, then "Neutral"; if <-1 but >-2, then "Rich"; if <-2, then "Very Rich".
Source: BofA Global Research, Refinitiv, Bloomberg

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Exhibit 16: Rich/cheap analysis of MMD* slopes (bp) as of 31 January 2024
The slopes are mostly Flat on both a ST and LT basis

Slope	Current slope	Slope S/F (short-term)	3 mo. max	3 mo. min	3 mo. avg	Slope S/F (long-term)	3 year max	3 year min	3 year avg
1s5s	-56	**Flat**	-25	-65	-42	**Flat**	65	-68	8

Exhibit 16: Rich/cheap analysis of MMD* slopes (bp) as of 31 January 2024
The slopes are mostly Flat on both a ST and LT basis

Slope	Current slope	Slope S/F (short-term)	3 mo. max	3 mo. min	3 mo. avg	Slope S/F (long-term)	3 year max	3 year min	3 year avg
1s10s	-53	Flat	-15	-63	-37	Flat	120	-74	34
10s30s	115	Neutral	123	96	112	Steep	123	32	71
1s30s	62	Flat	84	54	75	Flat	170	26	106

Note: See note in Exhibit 15 above.
Source: BofA Global Research, Refinitiv, Bloomberg

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OAS rich/cheap analysis

At 7-12yr maturities, AA Utilities - Other's OAS are Very Cheap, while AA Higher Education and Single-A Power are Cheap, among others. AAA Local GO, Pollution Control and Tax Revenue are Very Rich. At 22+yr maturities, BBB State GO and Utilities - Other are Very Rich, while AA Hospital and AAA State & Local GOs are cheap among others.

Exhibit 17: Rich/cheap analysis of 7-12yr indexes' OAS (bp)
AA Utilities – Other's current OAS of 45bp at 7-12yrs is currently Very Cheap against its 3yr OAS average of 9bp

	Current OAS				Rich/cheap analysis				3yr OAS average			
Sector	**AAA**	**AA**	**A**	**BBB**	**AAA**	**AA**	**A**	**BBB**	**AAA**	**AA**	**A**	**BBB**
Airports		38	36	66		N	N	N		32	31	57
Higher Education	-14	-8	47		N	C	N		-8	-3	40	
GO Local	5	3	49	105	VR	N	N	N	-2	8	44	114
GO State	-4	-5	51	0	N	N	N	R	-6	-4	43	100
Health		22	75	129		N	N	N		20	71	108
Hospital		9	41	87		N	N	N		17	39	97
IDR		58	73	87		N	N	N		37	53	80
Leases COPs & Appr.		11	23	137		N	N	N		10	35	111
Pollution Control	3		102		VR		N		-1		73	
Power	-4	-5	71		N	N	C		-4	-4	27	
Tax Revenues	-4	3	62	108	VR	N	N	N	3	6	55	117
Tobacco			38				N				48	
Toll & Turnpike		19	16	83		N	N	N		21	18	81
Transportation - Other	0	14	44	0	R	N	N	R	5	13	56	88
Utilities - Other	0	45	110		R	VC	C		-2	9	44	
Water & Sewer	-9	-12	14	9	N	N	N	N	-5	-6	13	105

Note: Data as of 30 January 2024. Only includes non-prerefunded bonds. Benchmark is 3-yr avg.
Source: ICE Data Indices, LLC

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Exhibit 18: Rich/cheap analysis of 22yr+ indexes' OAS (bp)
BBB Utilities – Other's current OAS of 0bp at 22yr+ is currently Very Rich against its 3yr OAS average of 57bp

	Current OAS				Rich/cheap analysis				3yr OAS average			
Sector	**AAA**	**AA**	**A**	**BBB**	**AAA**	**AA**	**A**	**BBB**	**AAA**	**AA**	**A**	**BBB**
Airports		42	37	-13		N	N	N		27	26	14
Higher Education	39	10	27	94	N	N	N	N	25	-8	20	76
GO Local	15	13	22	94	C	N	N	N	-9	2	22	77
GO State	4	3		0	C	C		VR	-25	-19		83
Health		-28	56	184		N	N	C		-16	38	111
Hospital		24	34	76		C	N	N		7	25	57
IDR			69	81			N	N			54	70
Leases COPs & Appr.	25	6	29	64	C	N	N	N	-5	-5	31	49
Pollution Control			36				N				17	
Power		11	25	43		N	N	N		-5	17	44
Tax Revenues	24	12	65	70	C	N	N	N	8	4	50	74
Tobacco				99				N				85
Toll & Turnpike			18	44			N	N			12	42
Transportation - Other		0	27	74		N	N	N		11	33	50
Utilities - Other		20	38	0		C	N	VR	-7	-7	23	57
Water & Sewer	5	3	4		C	N	N		-18	-13	-2	

Note: Data as of 30 January 2024. Only includes non-prerefunded bonds. Benchmark is 3-yr avg.
Source: ICE Data Indices, LLC

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MWIs relatively stable in the overpriced space

Our market width indicator (MWI) – which measures muni sectors' recent market momentum by calculating the percentage of a sectors' CUSIPs whose current YTW are below their moving 20-week average – shows that most sectors' MWIs stayed relatively stable in the overpriced space w/w, with the Muti-Family Housing decreasing the most. Multi-Family Housing's MWI is also the lowest.

Exhibit 19: MWIs – sector momentum (%) as of 30 January 2024
Most sectors' MWIs relatively stable over the past week

Sector	MWI	m/m Δ	Sector	MWI	m/m Δ
U0A0 Index	99.5%	0.1%	Miscellaneous	100.0%	0.0%
ETM	96.6%	0.0%	Multi-Family Housing	94.0%	-3.0%
GO - Local	99.6%	-0.1%	Pollution Control	98.5%	-0.7%
GO - State	99.7%	0.0%	Power	98.7%	0.4%
Pre-Re	100.0%	0.0%	Single Family Housing	96.7%	-0.3%
Airport	99.7%	1.0%	Tax revenue	99.8%	-0.1%
Education	99.8%	-0.1%	Tobacco	96.3%	-1.3%
Health	99.1%	-0.9%	Toll & Turnpike	99.9%	0.7%
Hospitals	99.6%	-0.1%	Transportation	99.8%	-0.1%
Industrial Development Rev	98.6%	2.1%	Utilities - Other	98.8%	1.8%
Leasing COPS & Appropriations	99.9%	1.0%	Water & Sewer	99.5%	0.6%

Source: BofA Global Research, ICE Data Indices, LLC

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Trade activity

Most actively traded CUSIPs for the week

The most actively traded CUSIP over the last week by total volume was 250375NC2, totaling $131.9mn. Those are newly issued California Desert Community College District general obligation bonds due in 2051. By number trades it was 63968M4S5, totaling 524 trades. These are Nebraska single family housing revenue bonds due in 2054.

Exhibit 20: Most actively traded muni CUSIPs over the week ending 31 January 2024
63968M4S5 was the most frequently traded CUSIP. [1]Last trade

CUSIP	Short name	ST	Coupon/Maturity	Yield[1]	Spread	# of trades	Avg Vol ($mn)
250375NC2	DESERT CCD	CA	4s of '51	4.00	47	123	1.07
57585BAA6	MASSACHUSETTS ST DE-T	MA	5s of '34	2.71	26	50	2.62
67920Q3Y2	OK WTR RES BRD-A	OK	4.125s of '53	4.15	60	327	0.39
772249SF6	ROCK HILL-A-REV	SC	4.25s of '59	4.26	70	250	0.49
6500092J1	NY ST TWY AUTH-P-REV	NY	5.25s of '54	3.89	33	96	1.11
34115PDB8	FL ST DEPT TRANSPRN-A	FL	4.125s of '53	4.13	57	442	0.22
772249SG4	ROCK HILL-A-REV	SC	5s of '64	4.16	60	57	1.72
13013JDR4	CA CMNTY CHOICE FING	CA	5s of '54	--	148	29	3.30
74529JPX7	PR SALES TAX FING-A1	PR	5s of '58	5.15	160	87	1.09
45505TT68	INDIANA HSG&CMNTY-A-1	IN	4.75s of '54	4.79	123	373	0.25
63968M4S5	NE INVESTMENT FIN-A	NE	4.8s of '54	4.40	84	524	0.17
74448GAA7	PUB FIN AUTH-1	WI	5.75s of '62	5.27	171	504	0.16
414009PV6	HARRIS ED-VAR-B-REF	TX	4.45s of '59	--	-358	32	2.48
402207AD6	GULF COAST INDL DEV	TX	4.4s of '41	--	-318	27	2.71
6500092H5	NY ST TWY AUTH-P-REV	NY	5s of '49	3.82	34	68	0.98
772249SD1	ROCK HILL-A-REV	SC	4s of '49	4.00	52	147	0.45
57585BAC2	MASSACHUSETTS ST DE-T	MA	4s of '54	4.05	49	67	0.98
650009Z55	NY ST TWY AUTH-P-REV	NY	5s of '34	2.69	25	59	1.11
650009Y56	NY ST TWY AUTH-P-REV	NY	5s of '26	2.84	12	43	1.43
650009Z48	NY ST TWY AUTH-P-REV	NY	5s of '33	2.70	31	49	1.09

Source: Bloomberg

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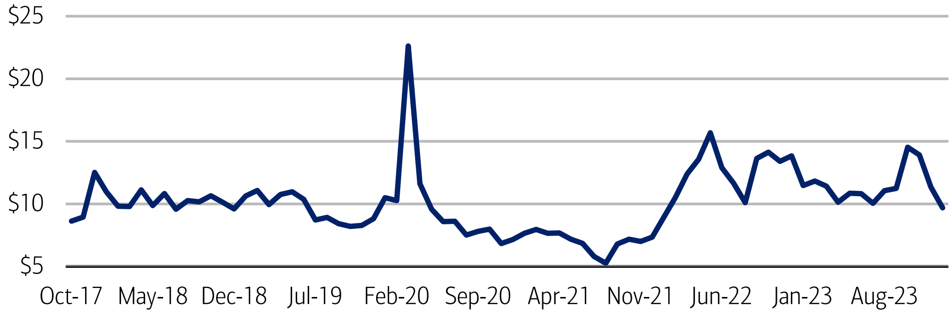
Jan-24's avg daily secondary trading at $9.7bn

Current data shows secondary trading volumes in January remain moderate relative to recent months'. As of 31 January, we see an average daily secondary trading volume of just $9.7bn. While daily trading data is subject to revision over the course of the month, it currently represents a roughly 15% decrease a m/m basis and 16% decrease y/y. Note that, for the MTD, $203.4bn of muni bond par value traded.

Exhibit 21: Daily avg secondary trading volume ($bn)
Jan-24 daily avg volume of $9.7bn down roughly 15% m/m



Note: Data as of 31 January 2024.
Source: BofA Global Research, Bloomberg

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Credit corner

State and local governments

Year-over-year state collection growth -0.4% on median in Dec-23

40 states we survey for monthly collection data reported collections for the month of December. For these 40 states, we see median y/y total collection growth of -0.4%, with median personal income collections effectively flat y/y on median. Meanwhile, corporate collections declined 2.6% y/y on median, but sales tax collections grew 1.8% on median. For the month, aggregate regional collections climbed the most y/y in the Plains region and fell the most in the Far West among those 40 states that have reported.

Four state fiscal issues to watch this year – Pew Trusts

With the estimated $800bn in pandemic-era aid programs ended or ending, “state policymakers throughout the country will have tough decisions to make in the upcoming legislative session,” per Pew Charitable Trusts (PCT). In its 29 January report, PCT focuses on four areas: Medicaid, child care, transit and public education. On Medicaid, PTC highlights projected state spending increases on fewer individuals following state disenrollments. On child care, federal funding dried up in 2023, so states will have to decide how to stem closures, price hikes and resignations. On transit, with ridership remaining depressed, agencies have turned to the states to avoid fiscal cliffs. And, on public education, school districts across the country are finding planning difficult, and with ESSER’s needs-based formula, PTC warns “low-income districts face a steeper fiscal cliff than their more well-to-do counterparts.” A recent *Axios* article highlighted the Philadelphia School District’s superintendent warning of a $407mn budget gap and his view that the district is “worthy of additional investment” from Pennsylvania and Philadelphia alike.

Public pension funded ratio tops 78% in December – Milliman

Milliman’s most recent PPFI report shows the funded ratio for the 100-largest US public pension plans increased 2.3ppt m/m to 78.2% in December – the highest level since May-22’s 78.4%. Milliman also projects that should plans’ investment returns match their assumptions, they should end 2024 with a 79.5% funded ratio; better returns could result in a funded ratio on the order of 85% by the end of the year, while weaker returns could result in funded ratios declining back to around 74%, or roughly where they were in September of 2023. Per Milliman’s data, unfunded liabilities (the deficit between assets and liabilities) decreased roughly $139bn from the end of November to the end of December to $1.36tn. This is largely the result of positive market performance, with Milliman estimating a 3.3% aggregate investment return for the month following a 5.2% return in November. Of the 100 plans, 45 have funded ratios at or above 80%, but just 8 are fully funded or better (only 31 plans were funded above 80% and just three plans were fully funded or better as of the end of October 2023).

Wilshire, for its part, reported that state pension plans' funded ratio as of the end of 4Q23 was 81.3%, or 6.1ppt higher than at the end of 3Q23 and 7.7ppt increase versus 4Q22. Per Wilshire, the increase was "primarily due to positive performance across nearly all asset classes during November and December." Wilshire estimated that asset values increased 9.0% in 4Q23, while liabilities increased 0.8%.

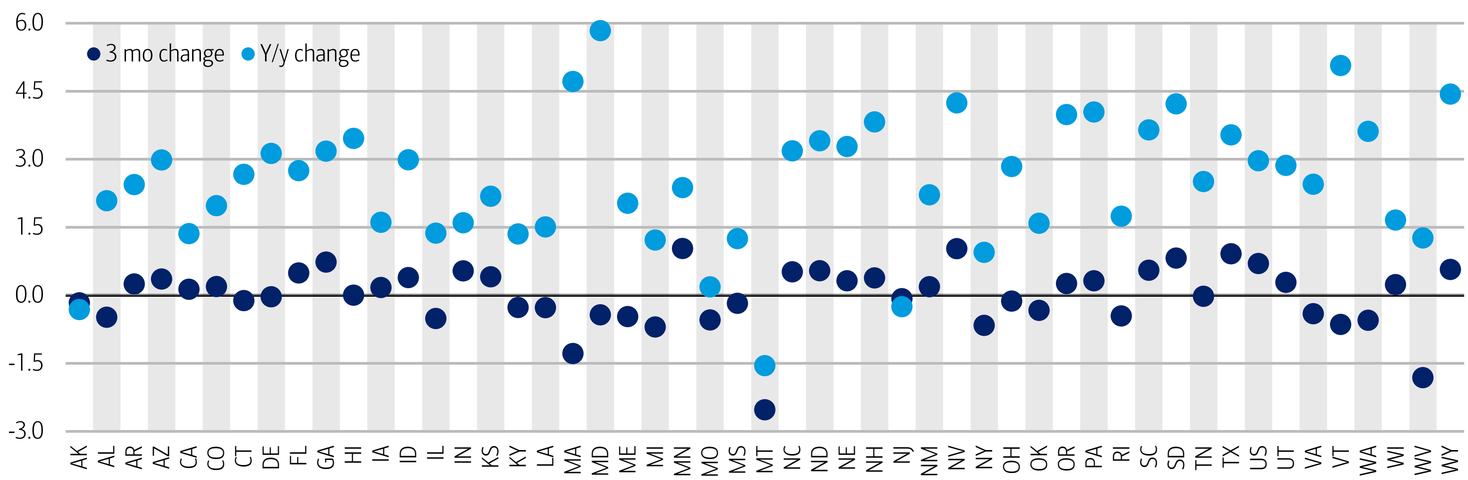
Meanwhile, for fiscal year-end 2024 (which is the end of Jun-24), S&P projects a funded ratio of 79%, with a range of 77% to 81%, per a 29 January report. The rating agency also highlights four other points to watch for pensions this year: asset allocation risk given increases in private equity and "other opaque alternative investments"; inflation and the risk to funding deterioration; the possibility that Pension Obligation Bond (POB) issuance may come back if rates fall; and, negative demographic shifts post-pandemic that increase budget stress for state and local governments.

22 states' coincident index levels down over the last 3 months – Philly Fed

The Philadelphia Fed released state coincident index levels for December last Friday. The data shows that 22 states' index levels declined over the last three months, led by MT's -2.52%. MT was followed by WV (-1.82%) and MA (-1.28%). Meanwhile, of the 25 states that saw their index level increase since the end of September, MN's and NV's 1.03% increases were largest, followed by TX's 0.91% and SD's 0.82%. The US' index increased 0.70% over the past three months. On a y/y basis, MD's 5.84% improvement was largest, followed by VT's 5.07% and MA's 4.72%. Only three states' saw a decline: MT (-1.55%), AK (-0.31%) and NJ (-0.25%).

Exhibit 22: Percent change in Philadelphia Fed's December 2023 state coincident indexes vs Sep-23 and Dec-22

22 states' index levels decline over the last 3 months per the Philadelphia Fed; just 3 declined y/y



Source: BofA Global Research, Philadelphia Federal Reserve

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Notable upgrades: San Bernardino, CA and Yonkers, NY

Fitch upgraded San Bernardino, CA's issuer default rating to A- from BBB+, with a positive outlook, on 29 January. Per the rating agency, the upgrade reflects San Bernardino's "improved financial resilience supported by a new sales tax, improved spending flexibility, and an improved long-term liability burden due to lower pension liabilities and higher personal income." Fitch sees "solid revenue growth prospects" and "fiscal stability supported by post-bankruptcy financial reforms." As a reminder, San Bernardino filed for Chapter 9 bankruptcy protection in August 2012 and was officially discharged in September 2022. Meanwhile, Moody's upgraded Yonkers, NY's issuer and limited tax GO ratings to A2 from A3 on 29 January. Moody's pointed to Yonkers' "maintenance of improved liquidity and reserves over the past two years despite the various economic pressures it has faced."

FOMB and PREPA creditors square off at oral argument at First Circuit

PREPA creditors and the FOMB squared off in oral argument before the First Circuit in Boston this week, with creditors arguing they have a claim on current and future revenues of PREPA and the FOMB arguing they have a claim only on amounts in certain accounts. Creditors' position is supported by a group of 14 state attorney generals, which urge the appellate court to consider the implications of its ruling on the municipal market more broadly. One attorney for creditors argued that "[t]he entire foundation of municipal finance rests on the answer" in this case, per a recent *Bloomberg* article. While we await the outcome of the court's decision as important, we caution against painting with too broadly a brush; for one, the impact from a strictly legal sense would only be binding in First Circuit jurisdictions (though, of course, persuasive in other circuits), but arguably more importantly, PREPA's trust agreement is an old document, and decisions from the courts thus far have been specific to its language. That said, of course it behooves investors to know exactly what they own. Otherwise, we highlight: (a) Puerto Rico's Dec-23 unemployment rate of 5.7%, which matches Nov-23's all-time low, per Bureau of Labor Statistics data; (b) TSA balances of $9.4bn as of 19 January that were up $350mn w/w, and for the YTD are up 30.0% above adopted liquidity plan (LP) estimates; and (c) FY24 General Fund collections through 19 January of $7.6bn that were up 9.5% vs collections LP estimates..

Mass transit

Fare evasion in NYC takes front row at monthly MTA meeting

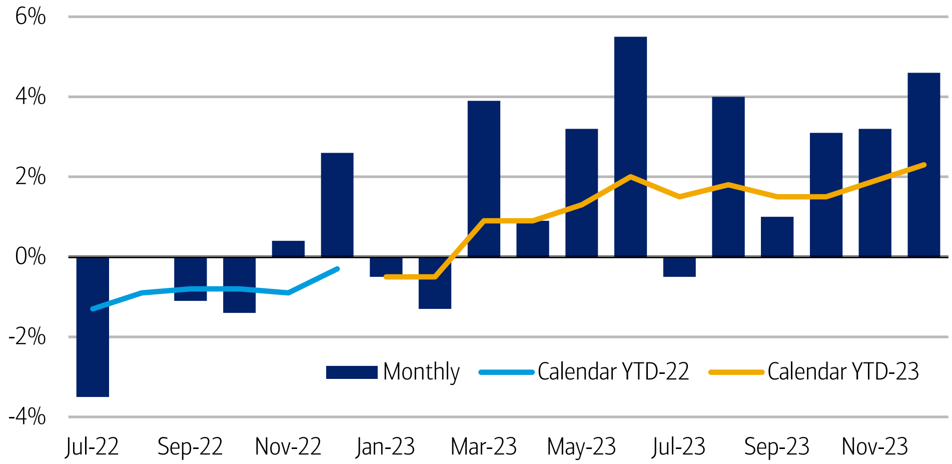
At the NYC MTA's most recent board meeting, data showed that just 65% of transit system trips in December were paid fares, off 5ppt from the MTA's 70% target. Subway ridership had paid fares of 68.4% while buses saw just 56% of riders pay the fare. Future fare revenues could be impacted should this trend continue, with the MTA cutting estimates on bus fare revenue in 2024 by $100mn due to continued fare evasion trends. Fare evasion costs the MTA nearly $700mn a year, up drastically from pre pandemic levels. Ridership levels remain depressed, however, December saw the subway post a new monthly high in ridership at 67.4% of pre-pandemic ridership.

Healthcare

The 2023 median hospital operating finished the year at 2.3%

Kaufman Hall's (KH) latest National Hospital Flash report showed more improvement in the 2023 median hospital operating margin, ending the year at 2.3% in December, up from 1.9% in November and reaching a high for the year. The median change in operating margin was 5% m/m and 14% y/y. Net operating revenue per calendar day was down 2% m/m and in line with the 2% m/m decline in total expense per calendar day. Revenues for 2023 came in 20% above 2022 and matched a 20% increase in total expense. Over that same period, inpatient revenue was up 15% and outpatient 43%, as labor expense was up 20% and non-labor expense 20%. KH noted that the growth in outpatient revenue "is being driven by the shift towards outpatient care settings due to reimbursement changes, patient preference, increased ability for care to be delivered in these settings, and further digitization." While hospitals have certainly improved their operating margins from pandemic lows, they remain below the 3% level that is generally viewed as essential to long-term sustainability.

Exhibit 23: Kaufman Hall's operating margin index, monthly and YTD medians
YTD-23 operating margin improved to 2.3% to end the year, up from 1.9% in November



Note: Figures are medians. Reflects any changes to historical data by the source.
Source: Kaufman Hall & Associates

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Toll roads

Lee County, FL Toll Facility outlook revised to stable from negative by Moody's

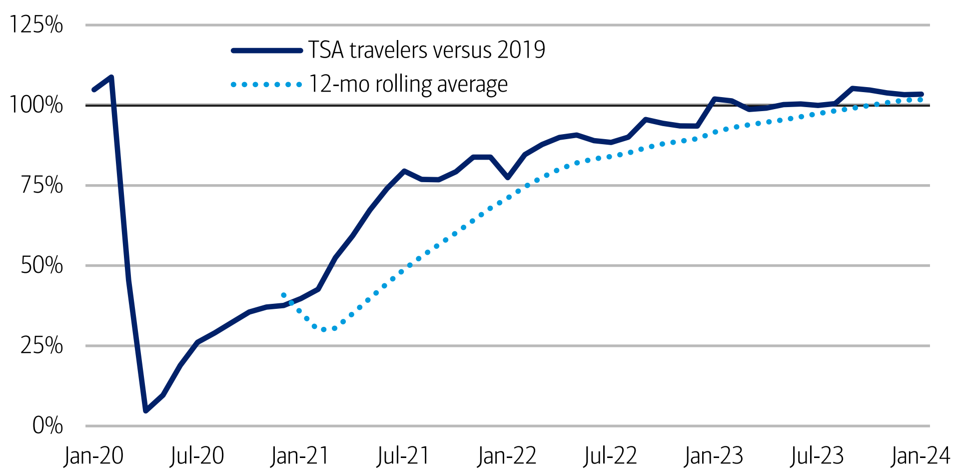
On 26 January, Moody's revised the outlook on Lee County, FL Toll Facility Enterprise to stable from negative and affirmed its A2 rating. The outlook revision come after the Toll Facility enterprise's "strong traffic and revenue recovery and maintenance of sound liquidity following the impact from Hurricane Ian." S&P revised the credit's outlook to stable from negative back in July.

Airports

Air travel passenger recovery was 103.5% in January

The air travel recovery had a strong month in January to kick off the year, with the number of passengers coming in at 103.5% of 2019 levels. January saw 64.4 million travelers versus 59.4 million travelers in January 2019. With 60.5 million travelers in January 2023, the number of travelers was up 6.4% y/y. Checkpoint growth was down 11.1% m/m while the 12-month rolling average recovery level was stable at 102%. Pre-pandemic level recovery has remained above 100% since May 2023.

Exhibit 24: Monthly TSA checkpoint travel numbers versus 2019
January 2024 air travel recovery was 103.5%; 12-month rolling average of 102%



Source: Transportation Security Administration

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Power

Moody's upgrades Sacramento Municipal Utility District to Aa2

This week, Moody's upgraded Sacramento Municipal Utility District, CA's (SMUD) revenue bonds to Aa2 from Aa3 and assigned a stable outlook. The upgrade reflects SMUD's "long history of consistently strong financial performance including stable and healthy fixed obligation coverage levels and strong liquidity." SMUD's coverage of fixed obligations has averaged near 2.0x over the past three fiscal years. It also averaged 205 days cash on hand over the same period.

Ports

West Coast ports end 2023 on a positive note with eyes set on 2024

The Port of Los Angeles and the Port of Long Beach both posted y/y increases in cargo volume in December 2023. The Port of Los Angeles processed 747K TEUs, up 2.5% on December 2022, and the fifth consecutive month of y/y increases to cargo volume. For the year, 2023 saw the port process 8.6mn TEUs, down 12.9% from 2022's 9.9mn TEUs. The Port of Long Beach looks towards 2024 where investments will be made in the port infrastructure and technological advancement. The Port of Los Angeles leadership noted 2023 trade declining "in most categories at ports worldwide yet the Port of Los Angeles retained its position as the nation's busiest container port for the 24th consecutive year." The Port of Long Beach processed 710K TEUs, up 30.5% y/y. 2023 yearly total TEU processing for the Port of Long Beach came in at 8.0mn TEUs, down 12.2% from 2022 annual totals.

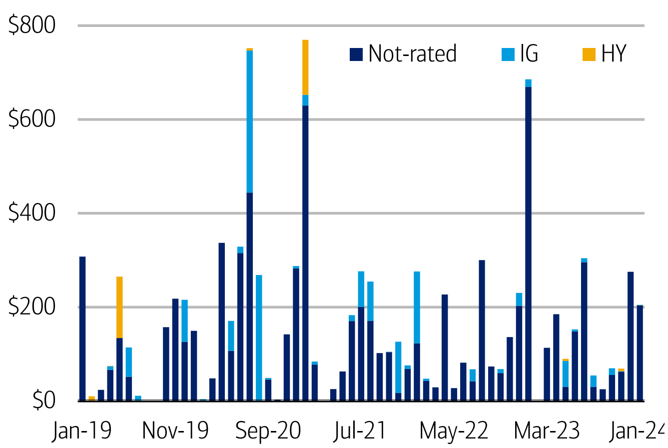
Defaults, distress & HY

January 2024 default & distress

$205mn of first-time payment defaults in Jan-24, down 70%

First-time payment defaults totaled $205mn in January, coming from five borrowers: Bridgewater Castle Rock ALF LLC, Canterbury Healthcare Obligated Group, Great Lakes Senior Living Communities LLC, Maryland Proton Treatment Center LLC and White Horse HMT Urban Renewal LLC. The defaults were nearly evenly divided between the Nursing Home/Senior Living sector and the Hospital sector. See Exhibit 26. 99% of defaults were in the unrated space. 42% of Jan-24's defaults are within 2 years from when the first-time distress event was reported.

Exhibit 25: Monthly first-time defaults ($mn) by avg rating at issue
First-time defaults $205mn in Jan-24, down 70% y/y



Note: We may revise data if Bloomberg revises its data.
Source: BofA Global Research, Bloomberg

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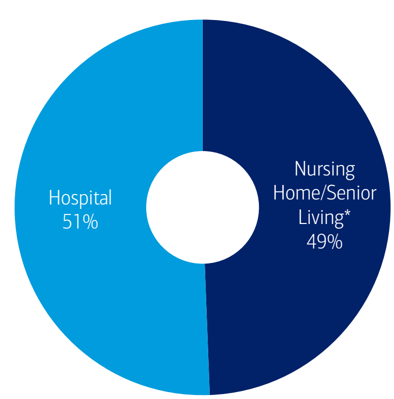
Exhibit 26: YTD-24 total first-time defaults by sector
Jan-24's defaults are from the Nursing Home/Snr Living and Hospital sectors



Note: *Nursing Home/Senior Living includes CCRC, ASST Living, Nursing Home, and Independent Living Facilities.
Source: BofA Global Research, Bloomberg

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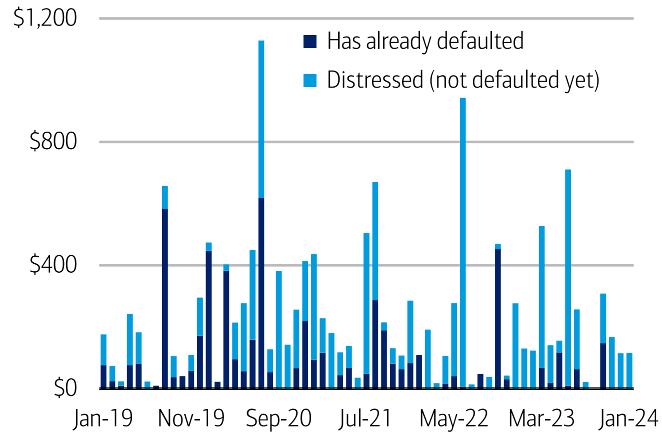
First-time distressed debt $116mn in Jan, down 11% y/y

First-time distressed debt (when the first distressed event that is not a payment default occurs) totaled $116mn in Jan-24, down 11% y/y. The total cumulative first-time distressed debt since 2019 totals $14.6bn; of that, 37.6% defaulted while 6% exited distressed status and 5% is no longer outstanding.

Exhibit 27: Monthly first-time distressed debt ($mn)
First-time distress totaled $116mn in Jan-24, down 11% y/y



Note: We may revise data if Bloomberg revises its data.
Source: BofA Global Research, Bloomberg

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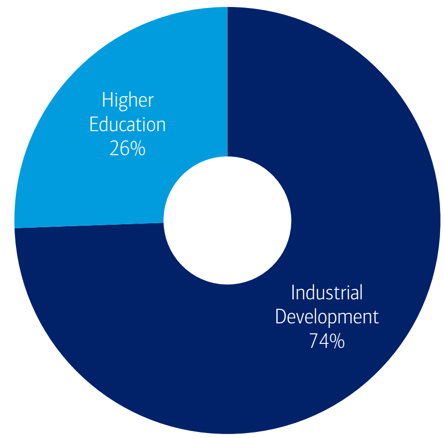
Exhibit 28: YTD-24 total first-time distressed debt by sector
Jan-24's distress from the Industrial Dev and Higher Education sectors



Source: BofA Global Research, Bloomberg

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As a reminder, total defaults in 2023 were $2.0bn – hitting our estimate. As we discussed in our Municipals Year Ahead 2024, our forecast for first time payment defaults in 2024 is $1.9bn-$2.3bn. We expect defaults emanating from this distress to be concentrated in the Nursing Home, Hospital, and Industrial Development sectors.

Rising star vs fallen angel potential screen

Here, we again screen for S&P rated bonds that we view as having rising star (rated BB or BB+ with a positive outlook, or on CreditWatch positive) or fallen angel (BBB or BBB- with a negative outlook, or CreditWatch negative) potential. Our current screen results in $1.4bn of rising star potential vs $5.2bn of fallen angel potential. Exhibit 29 shows the aggregate outstanding debt on CUSIPs we see with fallen angel or rising star potential by borrower, but is limited to the largest 20. Note that our criteria includes current outlooks; so, if S&P revises its outlook on either a potential rising star or fallen angel to stable, for example, it would fall off our screen. We caution that Exhibit 29 should not be read that a borrower's CUSIPs will become a fallen angel nor a rising star; it is also not a recommendation to buy or sell a particular borrower, or the group as a whole.

Exhibit 29: Borrowers with the largest amount of CUSIP aggregate debt outstanding we identified as having fallen angel or rising star potential
Fallen angel potential dominated by healthcare/hospital and higher education borrowers

Rising star potential

Borrower	Amt out	Rating	Outlook/ watch
City of Detroit MI	437.7	BB+	Pos
Mater Academy of Nevada Obl. Grp.	28.4	BB	Pos
TLC Academy	35.9	BB	Pos
Arizona Autism Charter Schools Obl. Grp.	25.7	BB	Pos
West Village & Millennium Hall Stdnt Hsing at Towson Univ.	32.4	BB+	Pos
Legacy Traditional School Obl. Grp.	368.9	BB+	Pos
CHF-Collegiate Housing College Station I LLC	37.7	BB+	Pos
Sweet Briar Institute	8.5	BB	Pos
County of Winkler TX	5.1	BB+	Pos
CCSA Foundation	22.4	BB+	Pos
Playhouse Square Foundation	71.3	BB+	Pos
NCCD-Orange Coast Properties LLC	119.0	BB+	Pos
Wayside Schools	32.7	BB	Pos
Paterson Charter School for Science and Technology Inc	14.9	BB	Pos
City of Atlantic City NJ	21.2	BB	Pos

Fallen angel potential

Borrower	Amt out	Rating	Outlook/ watch
Nuvance Health Obl. Grp.	795.7	BBB	Neg
Montefiore Obl. Grp.	640.5	BBB-	Neg
Tufts Medicine Obl. Grp.	383.5	BBB-	Neg
University Health System Obl. Grp.	267.5	BBB	Neg
Longwood Housing Foundation LLC	260.5	BBB-	Neg
Northbay Healthcare Group Obl. Grp.	244.0	BBB-	Neg
Norman Regional Hospital Authority Obl. Grp.	236.7	BBB-	Neg
Methodist Hospital of Southern California Obl. Grp.	232.9	BBB-	Neg
Southeast Georgia Health System Obl. Grp.	206.8	BBB	Neg
Simmons University	190.5	BBB-	Neg
Northern Light Health Obl. Grp.	170.8	BBB	Neg
Franklin Cnty Conv. Fac. Auth. Hotel Project Rev	151.8	BBB-	Neg
Appalachian Regional Healthcare System Obl. Grp.	114.5	BBB-	Neg
Antelope Valley Healthcare District Obl. Grp.	110.8	BBB	Neg
BSLC Obl. Grp.	106.0	BBB-	Neg

Exhibit 29: Borrowers with the largest amount of CUSIP aggregate debt outstanding we identified as having fallen angel or rising star potential
Fallen angel potential dominated by healthcare/hospital and higher education borrowers

Rising star potential				Fallen angel potential			
Borrower	Amt out	Rating	Outlook/ watch	Borrower	Amt out	Rating	Outlook/ watch
American Charter Schools Foundation	66.8	BB+	Pos	Springfield College	104.5	BBB	Neg
Skyview Academy	26.1	BB	Pos	State of NJ Motor Vehicle Surcharge Rev.	104.3	BBB	Neg
Maryland Econ. Dev.t Corp Baltimore City Garages	13.8	BB+	Pos	Lesley University	97.3	BBB	Neg
Aspen Ridge Preparatory School Inc	9.8	BB	Pos	St Edward's University Inc	76.2	BBB	Neg
Railway Avenue Properties LLC	10.0	BB	Pos	Seattle Pacific University	69.7	BBB	Neg
Other*	29.2	BB	Pos	Other*	651.5	BBB	Neg

Note: Data as of 30 January 2024. *Weighted average rating by par amount outstanding.
Source: BofA Global Research, S&P Global Ratings, Bloomberg

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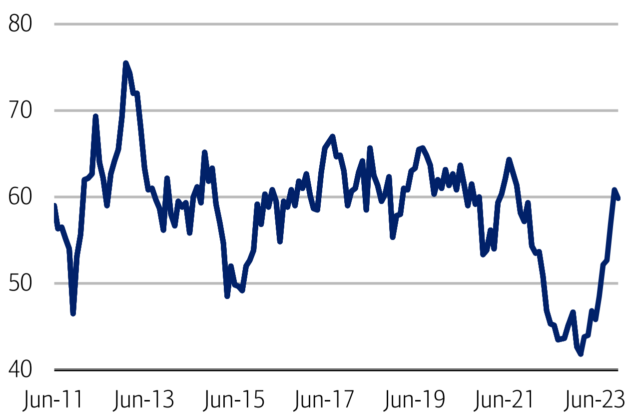
Tracking: material credit events and Ch. 9 filings

For the week ending 31 January, our tracking of those Moody's-defined material credit events (MCEs) shows 18 postings, down 6 on a w/w basis, with the MTD total of 70 as of 31 January. See Exhibit 30. There were no new Chapter 9 bankruptcy petitions filed for the week ending on 31 January; it has now been 253 days since the last bankruptcy petition was filed by Hazel Hawkins Memorial Hospital on 23 May 2023 – that is the 3rd longest period since July 1987 between Chapter 9 filings. Note that the only longer periods – 346 days and 447 days – began in the post-pandemic period.

Exhibit 30: 6-mo mov avg of material credit events posted to EMMA
Filings posted to EMMA in January up 10 from December



Note: Data as of 31 January 2024. Material credit events (MCE) reflect: 1. Bankruptcy, insolvency, receivership or similar event, 2. Financial obligation-event reflecting financial difficulties, 3. Nonpayment related default, 4. Principal/interest payment delinquency, 5. Unscheduled draw on credit enhancement reflecting financial difficulties, and 6. Unscheduled draw on debt service reserve reflecting financial difficulties.
Source: EMMA

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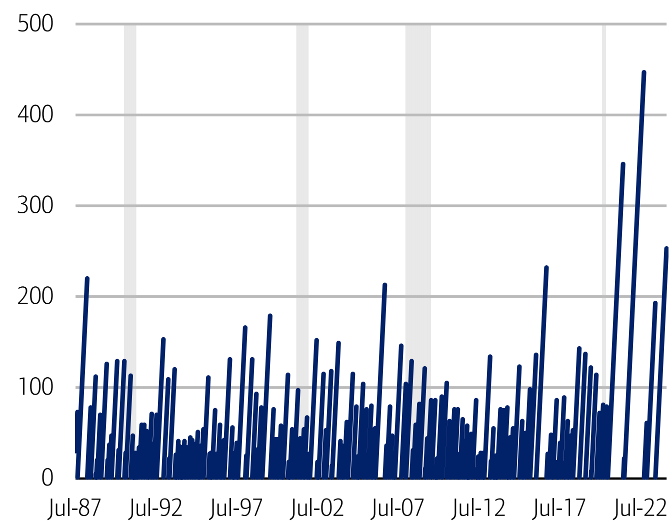
Exhibit 31: Calendar days since last Chapter 9 petition filed
253 days since Hazel Hawkins Memorial Hosp. filed Ch. 9 petition



Source: BofA Global Research, PACER, US Courts

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Cross currency equivalent yields

Taxable munis look attractive for most countries on a cross-currency equivalent basis, with only a few exceptions: 5yr and 10yr taxable munis are less attractive for Italy; 5yr taxable munis are less attractive for Spain, South Korea and Taiwan.

Exhibit 32: Cross currency equivalent yields as of 1 February 2024
Taxable munis are generally attractive for foreign investors with a few exceptions

	Government bond yield (in investor country's currency)			Cross currency equivalent yield*						Can foreign investors buy?					
				US Treasury			US AAA taxable muni			US Treasury			US AAA taxable muni		
Country	5 yr	10 yr	30 yr	5 yr (3.802)	10 yr (3.861)	30 yr (4.099)	5 yr (4.14)	10 yr (4.52)	30 yr (5.31)	5 yr	10 yr	30 yr	5 yr	10 yr	30 yr
Canada	3.316	3.257	3.181	3.490	3.550	3.947	3.827	4.207	5.151	Yes	Yes	Yes	Yes	Yes	Yes
United Kingdom	3.689	3.741	4.411	3.683	3.722	4.031	4.019	4.378	5.924				Yes	Yes	Yes
France	2.398	2.654	3.221	2.368	2.520	3.452	2.701	3.174	4.629			Yes	Yes	Yes	Yes
Germany	2.046	2.144	2.366	2.368	2.520	3.452	2.701	3.174	4.629	Yes	Yes	Yes	Yes	Yes	Yes

Exhibit 32: Cross currency equivalent yields as of 1 February 2024

Taxable munis are generally attractive for foreign investors with a few exceptions

	Government bond yield (in investor country's currency)			Cross currency equivalent yield*						Can foreign investors buy?					
				US Treasury			US AAA taxable muni			US Treasury			US AAA taxable muni		
Country	5 yr	10 yr	30 yr	5 yr (3.802)	10 yr (3.861)	30 yr (4.099)	5 yr (4.14)	10 yr (4.52)	30 yr (5.31)	5 yr	10 yr	30 yr	5 yr	10 yr	30 yr
Italy	3.129	3.715	4.381	2.368	2.520	3.452	2.701	3.174	4.629						Yes
Spain	2.706	3.078	3.779	2.368	2.520	3.452	2.701	3.174	4.629					Yes	Yes
Portugal	2.374	2.948	3.442	2.368	2.520	3.452	2.701	3.174	4.629			Yes	Yes	Yes	Yes
Netherlands	2.243	2.422	2.574	2.368	2.520	3.452	2.701	3.174	4.629	Yes	Yes	Yes	Yes	Yes	Yes
Switzerland	0.693	0.709	0.744	2.368	2.520	3.452	2.701	3.174	4.629	Yes	Yes	Yes	Yes	Yes	Yes
Japan	0.275	0.688	1.778	0.017	0.396	2.451	0.347	1.044	3.575			Yes	Yes	Yes	Yes
Australia	3.607	4.009	4.393	4.039	4.499	4.415	4.379	5.157	5.636	Yes	Yes	Yes	Yes	Yes	Yes
South Korea	3.258	3.306	3.272	2.215	2.966	3.674	2.550	3.620	4.857			Yes		Yes	Yes
China	2.290	2.431	2.639	3.676	3.785	4.062	4.012	4.441	5.266	Yes	Yes	Yes	Yes	Yes	Yes
Taiwan	1.159	1.197	1.510	0.728	2.126	3.281	1.060	2.773	4.435		Yes	Yes		Yes	Yes
Singapore	2.804	2.869	2.743	3.277	3.564	3.957	3.613	4.220	5.156	Yes	Yes	Yes	Yes	Yes	Yes

Note: Cross currency equivalent yield is the yield for an international buyer to purchase US bond in dollar and convert back to its own country's currency.

Source: BofA Global Research, Bloomberg

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Acronyms

Exhibit 33: Common acronyms used in our Municipals reports

This list is subject to change

Acronym	Definition	Acronym	Definition	Acronym	Definition
1Q	First Quarter	HOSP	Hospital	PA	Pennsylvania
2Q	Second Quarter	HY	High Yield	PC	Pollution Control
3Q	Third Quarter	IA	Iowa	PL	Plains
4Q	Fourth Quarter	ICE	Intercontinental Exchange	PPFI	Milliman's Public Pension Funding Index
AIR	Airport	ICMA	International Capital Market Association	Ppt	Percentage point
AK	Alaska	ID	Idaho	PR	Puerto Rico
AL	Alabama	IDR	Industrial Development Revenue	PRE-RE	Pre-refunded
AMT	Alternative Minimum Tax	IG	Investment Grade	PREPA	Puerto Rico Electric Power Authority
Apr	April	IL	Illinois	PROMESA	Puerto Rico Oversight, Management, and Economic Stability Act
AR	Arkansas	IN	Indiana	PWR	Power
ARPA	American Rescue Plan Act	INT	Intermediate term	Q/Q	Quarter-over-quarter
Aug	August	Jan	January	QTD	Quarter-to-date
Avg	Average	Jun	June	R	Rich
AZ	Arizona	KS	Kansas	RI	Rhode Island
BEA	Bureau of Economic Analysis	KY	Kentucky	RM	Rocky Mountain
BLS	Bureau of Labor Statistics	LA	Louisiana	S&L	State and Local
BofA	Bank of America	LCA	Leases, COPs & Appropriations	S&P	Standard & Poor's
Bp	Basis points	LT	Long term	SC	South Carolina
BTN	Back-to-Normal Index	M	Mideast	SD	South Dakota
C	Cheap	M/M	Month-over-month	SE	Southeast
CA	California	MA	Massachusetts	Sep	September
CARES	Coronavirus Aid, Relief, and Economic Security Act	Mar	March	SFH	Single Family Housing
CB	Census Bureau	MD	Maryland	ST	Short term
CO	Colorado	ME	Maine	SA	Seasonally adjusted
COPs	Certificates of Participation	MFH	Multi-Family Housing	T&T	Toll & Turnpike
CPI	Consumer Price Index	MI	Michigan	TAX	Tax Revenue
CT	Connecticut	MISC	Miscellaneous	TBCO	Tobacco
CUSIP	Committee on Uniform Security Identification Procedures	MMD	Municipal Market Data	TEU	Twenty-Foot Equivalent Units
DC	District of Columbia	MN	Minnesota	TN	Tennessee
DE	Delaware	MO	Missouri	TRAN	Transportation - other
Dec	December	MS	Mississippi	TSA	For Puerto Rico, Treasury Single Account; otherwise, Transportation Security Administration
EAI	Puerto Rico Economic Activity Index	MSA	Metropolitan Statistical Area	TX	Texas
EDU	Education	MT	Montana	US	United States
ESG	Environmental, Social, Governance	MTD	Month-to-date	USVI	US Virgin Islands
ETF	Exchange Traded Fund	N	Neutral	UT	Utah
ETM	Escrowed to Maturity	NASBO	National Association of State Budget Officers	UTL	Utilities - other
Feb	February	NC	North Carolina	VA	Virginia

Exhibit 33: Common acronyms used in our Municipals reports

This list is subject to change

Acronym	Definition	Acronym	Definition	Acronym	Definition
Fed	Federal Reserve	ND	North Dakota	VC	Very Cheap
FEMA	Federal Emergency Management Agency	NE	Nebraska	VPIP	Value of construction put in place
FL	Florida	NED	New England	VR	Very Rich
FOMB	Financial Oversight & Management Board for Puerto Rico	NH	New Hampshire	VRDO	Variable Rate Demand Obligation
FW	Far West	NJ	New Jersey	VT	Vermont
FY	Fiscal year	NM	New Mexico	W&S	Water & Sewer
GA	Georgia	Nov	November	W/W	Week-over-week
GDP	Gross Domestic Product	NV	Nevada	WA	Washington
GL	Great Lakes	NY	New York	WI	Wisconsin
GO	General Obligation	OAS	Option Adjusted Spread	WV	West Virginia
GO-L	Local GO	Oct	October	WY	Wyoming
GO-S	State GO	OH	Ohio	Y/Y	Year-over-year
Govt	Government	OK	Oklahoma	YTD	Year-to-date
HI	Hawaii	OR	Oregon	YTM	Yield to Maturity
HLTH	Healthcare	P&C	Property & Casualty insurance company	YTW	Yield to Worst

Source: BofA Global Research

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