

## Municipals Weekly

## Hedging difficulties pressures down dealer inventories

Industry Overview

## Key takeaways

- Hedging munis may get more difficult if the downtrend in macro vols continues causing dealer inventories to drop further.
- November elections will also be at the state-level: 55% of state senate seats and 87% of state house seats up.
- US bank balance sheets showed \$109.6bn of HTM munis and \$220.4bn of AFS munis as of 4Q23, per FFIEC data.

## Hedging difficulties may lead to lean dealer inventories

Macro market vols had sizeable increases recently, while muni vols remained quite stable. A resumption of the downtrend in macro vols may make muni hedging somewhat hard to maneuver. We continue to see this environment as good for investors to buy and hold, but difficulties in hedging may lead to lean dealer inventories. Investors likely need to turn to the primary to source bonds.

## 2024's elections are at the state-level too

Elections will be held at the state level too on Election Day, with 55% of the total state senate seats and 87% of the total state house seats up for election. Neither party has a stranglehold on either end of the credit rating scale; it is less party ideology and more stewardship of state economies, fiscal and financial conditions that determines ratings.

## A look at US banks' muni holdings

We review recently released Federal Financial Institutions Examination Council (FFIEC) data as it relates to banks' muni holdings. US bank balance sheets show \$109.6bn of held-to-maturity (HTM) muni bonds on an amortized cost basis and \$220.4bn of available for sale (AFS) munis on a fair value basis as of 4Q23.

## Table(d) SALT

We previously said that we remained guarded on whether that limited SALT increase could pass. The House rejected the rule that would have provided for floor consideration of the SALT Marriage Penalty Elimination Act. Focus now appears aimed at preparing for the current \$10,000 cap's expiration come the end of next year.

## Key figures: issuance, returns, spreads &amp; trade activity

**Supply:** YTD issuance through 21 February totals \$49.5bn, up 22% y/y. YTD issuance is 94% tax-exempt and 5% taxable; 71% is new money and 29% is refundings. **Returns:** The Muni Master index (UOA0) returned -0.12% MTD through 21 Feb, outperforming govies, corporates and taxable munis. The Muni High Yield index (UOHY) returned 0.25% MTD. BBBs' MTD returns strongest at -0.01%, as are the 1-3yr maturities' 0.04%. **Spreads:** For the week ending 21 February, IG spreads were flat w/w at 21bp, while HY spreads widened 3bp to 201bp. **Trade activity:** MTD in February, \$135.6bn of muni par value traded in the secondary, with a daily avg of \$9.7bn. That avg is down 8% m/m and 18% y/y.

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## Recent Municipals Research

[Municipals Educational Series: Market discount taxes 21 February 2024](#)

[Municipals Weekly: Counting votes: General Elections & muni rates, issuance and returns 16 February 2024](#)

[Municipals Weekly: Collapsing vol supports narrowing spreads 09 February 2024](#)

[Municipals Weekly: Muni rally to roll on 02 February 2024](#)

[Municipals Weekly: 4% coupons are wide 26 January 2024](#)

**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

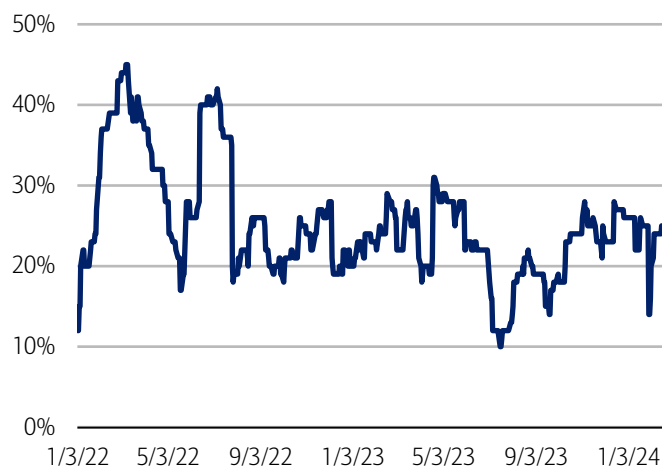
### Hedging difficulty may lead to lean dealer inventories

The economic landscape gradually looks more like a no landing than soft-landing. The Fed's January meeting minutes released on Wednesday further confirmed that sentiment. Most Fed members are concerned about the risk of cutting the Fed Funds rate too soon rather than holding it high for too long. How the macro market responds under such pressure, and the impact on muni market, may be the main theme for 1H24.

Two weeks ago, we lauded collapsing volatilities as the Fed manages the right exit of its tightening cycle. By now, muni market volatilities remain little changed for the past two weeks. However, this week, volatilities in the macro market including rates and equities had some sizeable increases. Muni ratios have collapsed due to stable muni yields and somewhat higher Treasury rates early in the week (Exhibit 2 and Exhibit 3).

**Exhibit 2: 30-day muni AAA volatility**

Little changed since 9 February 2024

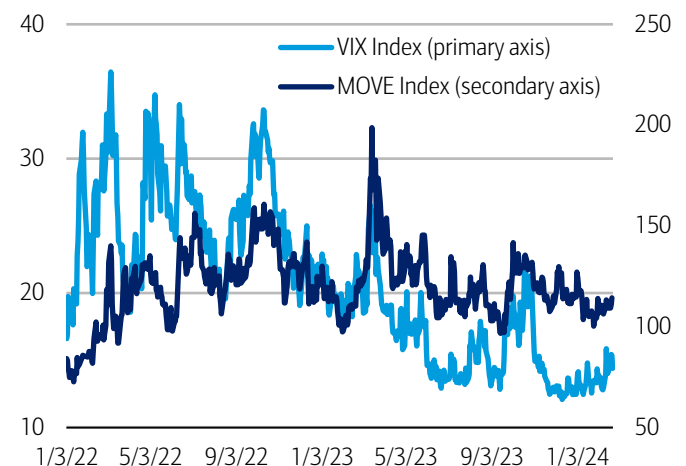


**Source:** Refinitiv

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**Exhibit 3: Down-trend of macro vols should resume**

Both VIX and BofA MOVE Index had sizeable increases recently



**Source:** Bloomberg

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We continue to see the current environment as good for muni investors looking to buy, though market makers, such as dealers on the street, may be less willing to take on large inventories due to hedging difficulties. Indeed, Exhibit 4 shows that dealer holdings of 10+ year munis reached an all-time low of barely \$4bn entering February 2024. This is less likely to change during the coming tax season. Investors need to focus mainly on the primary market for sourcing bonds.

**Exhibit 4: Primary dealer positions in 10+ year munis (\$bn)**

Dealer inventories hit an all-time low entering February 2024



Source: Bloomberg

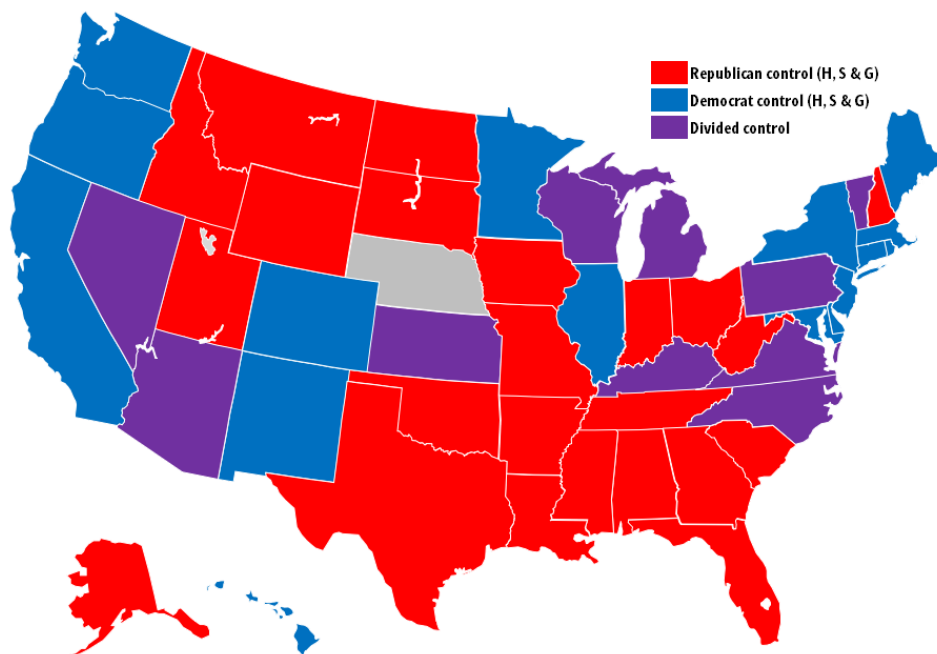
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**A look at 2024's elections are at the state-level too**

Rightfully, much media and investor attention has been paid to federal-level elections come November. All the same, state level elections are also being held on Election Day. As it stands, 23 states are under complete Republican control – meaning Republicans control both houses of a state's legislature and its governorship – while 16 are under complete Democratic control, 10 are under divided control and one – Nebraska – has a unicameral nonpartisan legislature.

**Exhibit 5: Current partisan composition of state government**

Republicans fully control 23 states while Democrats fully control 16 states



Note: As of 1 January 2024. H refers to House of Representatives, S refers to Senate, and G refers to Governor.

Source: National Conference of State Legislatures.

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Per the National Conference of State Legislatures, 1,081 state senate seats (or, 55% of the total state senate seats) and 4,712 state house seats (or, 87% of the total state house seats) are up for election in November. The only states in which no state legislative elections will take place in 2024 are AL, LA, MD, MS, NJ and VA. We can see how partisan control of state legislatures transitioned over time in Exhibit 6 below.

Throughout the 1980s and early 1990s, Democrats controlled legislatures by and large. Control was more evenly spread during the mid-1990s through 2010, before control drastically shifted towards Republicans.

#### Exhibit 6: State legislative control<sup>1</sup> and state GO rating<sup>2</sup>

Neither party has a stranglehold on either end of the rating scale

	1978	1980	1982	1984	1986	1988	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014	2016	2018	2020	2022	2024*
AL	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa3	Aa3	Aa3	Aa3	Aa2	Aa2	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1
AK	A1	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aaa	Aaa	Aaa	Aa2	Aa3	Aa3	Aa3	Aa3
AZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Aa3	Aa3	Aa3	Aa3	Aa3	Aa2	Aa1	Aa1	Aa1	Aa1
AR	-	-	-	-	A1	A1	Aa	Aa	Aa	Aa	Aa3	Aa2	Aa2	Aa2	Aa2	Aa2	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1
CA	-	Aa	Aa	Aa	Aa	Aa	Aaa	Aa	A1	A1	Aa3	Aa3	A1	A3	A1	A1	A1	A1	Aa3	Aa3	Aa3	Aa2	Aa2	Aa2
CO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1
CT	Aa	Aa	Aa	Aa	Aa1	Aa1	Aa	Aa	Aa	Aa	Aa3	Aa3	Aa2	Aa3	Aa3	Aa3	Aa2	Aa3	Aa3	Aa3	A1	A1	Aa3	Aa3
DE	A	A1	Aa	Aa	Aa	Aa	Aa	Aa	Aa1	Aa1	Aa1	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa
FL	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa2	Aa2	Aa2	Aa2	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aaa	Aaa	Aaa	Aaa
GA	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa
HI	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	A1	Aa3	Aa3	Aa3	Aa2	Aa2	Aa1	Aa2	Aa2	Aa1	Aa1	Aa2	Aa2	Aa2
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IL	-	-	-	-	-	-	-	Aa	Aa	A1	Aa2	Aa2	Aa2	Aa3	Aa3	Aa3	A1	A2	A3	Baa2	Baa3	Baa3	Baa1	A3
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KY	-	-	-	-	-	-	-	-	-	-	-	Aa2	Aa2	Aa2	Aa2	Aa2	Aa1	Aa2	Aa2	Aa2	Aa3	Aa3	Aa3	Aa3
LA	Aa	Aa	Aa	Aa	A	Baa1	Baa1	Baa1	Baa1	Baa1	A2	A2	A2	A1	A2	A1	Aa2	Aa2	Aa2	Aa3	Aa3	Aa3	Aa2	Aa2
ME	Aa	Aa	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa	Aa	Aa2	Aa2	Aa2	Aa2	Aa3	Aa3	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2
MD	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa	Aaa
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MS	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa3	Aa3	Aa3	Aa3	Aa3	Aa3	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2
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NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Aa1	Aa1	Aa1	Aa1
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NY	A	A	A	A	A1	A1	A	A	A	A	A2	A2	A2	A1	Aa3	Aa3	Aa2	Aa2	Aa1	Aa1	Aa1	Aa2	Aa1	Aa1
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OR	Aa	Aa	A1	A1	A1	A1	Aa	Aa	Aa	Aa	Aa2	Aa2	Aa2	Aa3	Aa3	Aa2	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1
PA	A	A	A	A	A1	A1	A1	A1	A1	A1	Aa3	Aa2	Aa2	Aa2	Aa2	Aa2	Aa1	Aa2	Aa3	Aa3	Aa3	Aa3	Aa3	Aa3
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WA	-	-	A	A	A1	A1	Aa	Aa	Aa	Aa	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1	Aa1
WV	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	Aa3	Aa3	Aa3	Aa3	Aa3	Aa1	Aa1	Aa1	Aa1	Aa2	Aa2	Aa2	Aa2
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WY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Note:** Blue denotes Democrat control. Red denotes Republican control. Purple denotes divided control. Green denotes a unicameral legislature that is non-partisan. <sup>1</sup>As of January of each year. <sup>2</sup>As of year-end of each year. \*For rating, as of 20 February 2024; for legislative control, as of 28 November 2023.

**Source:** BofA Global Research, National Conference of State Legislatures, Moody's Investors Service

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To be sure, neither party has a stranglehold on either end of the credit rating scale; indeed, while management is a factor in rating agency analysis, it is less party ideology and more so leaders' stewardship of state economies, fiscal and financial conditions that determines ratings. We have seen, however, that gridlock from extreme partisan divide (à la Illinois from 2015-2019) can have serious downward rating consequences.

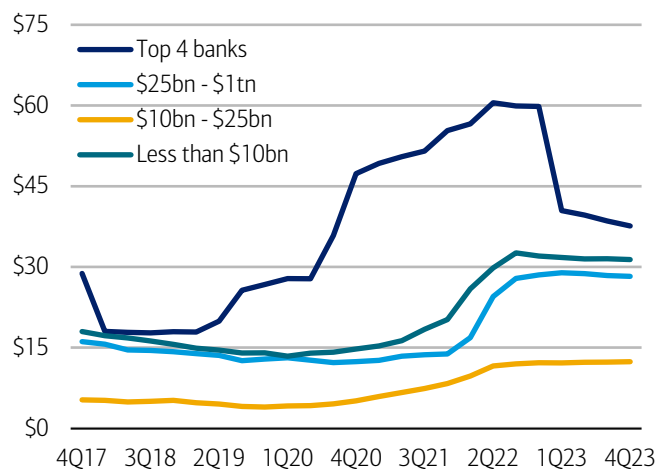
## US banks' muni holdings

US bank balance sheets show \$109.6bn of held-to-maturity (HTM) muni bonds as of 4Q23 on an amortized cost basis, according to recently released Federal Financial Institutions Examination Council (FFIEC) data. That is down 1.1% vs 3Q23 but down 17.3% vs 4Q22. FFIEC data also shows \$220.4bn of available for sale (AFS) munis on a fair value basis as of the 4Q23. That is up 4.0% q/q and 2.5% y/y.

In Exhibit 7, we show the trend in HTM munis among banks grouped by asset size. It is plain to see that while medium-to-small banks' HTM muni holdings have been quite stable (plus or minus 2% y/y in 4Q23), the largest four banks' declined over 37% since 4Q22. Exhibit 8 shows banks' AFS muni holdings, again grouped by bank asset size. It shows that the largest four banks' holdings increased by over 100% on a fair value basis y/y in 4Q23. The net dollar amount nearly matches the decline in HTM holdings of the largest four banks, signaling that this increase in AFS is likely the result of those in HTM holdings that run within a year to maturity and thus shifting from HTM status to AFS status. Exhibit 8 also shows a marked decline versus the 4Q17, the last quarter prior to the effective date of the Tax Cuts and Jobs Act's provisions, including lower the corporate tax rate to 21% from 35% which decreased the attractiveness of munis for corporations, including US banks. Only the smaller banks' AFS muni holdings increased since the end of 4Q17, but they are all down vs 4Q22. This may be partly attributable to somewhat reduced deposits in smaller banks since 4Q22.

### Exhibit 7: US banks' HTM muni holdings (\$bn)

Largest four banks' fell 37% since 4Q22



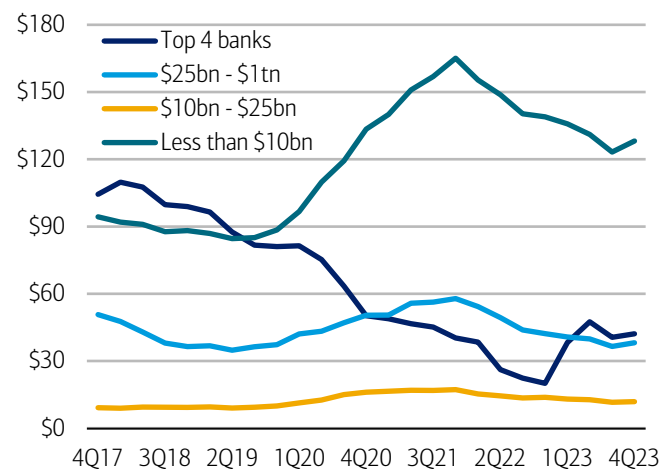
**Note:** Excludes munis held in trading accounts. On an amortized cost basis.

**Source:** BofA Global Research, Federal Financial Institutions Examination Council

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### Exhibit 8: US banks' AFS muni holdings (\$bn)

Largest four banks' grew over 100% y/y in 4Q23, but down 60% since 4Q17



**Note:** Excludes munis held in trading accounts. On a fair value basis.

**Source:** BofA Global Research, Federal Financial Institutions Examination Council

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## Table(d) SALT

In our [2 February Municipals Weekly](#), we discussed efforts by Republican Congressmen from New York to bring up the SALT Marriage Penalty Elimination Act for consideration under a closed rule. We said there that we remained guarded on whether that limited SALT increase could pass given the bill's standalone nature, but also given past opposition from both progressives and conservatives in Congress. The House rejected the rule that would have provided for floor consideration of the bill 195-225 last Wednesday. 18 Republicans and all Democrats voted down the rule.

The four NY Republican Congressmen that pushed the bill are now working on "Plan B" which appears aimed more at preparing for the current \$10,000 cap's expiration come the end of next year than trying to raise the cap before then. As a reminder, while changes to corporate tax provisions were permanent, those to individual taxes, including the SALT cap, sunset at the end of 2025.



# Performance

## Exempt IG still outperforming taxables

For the MTD through 21 February, exempt IG returned -12bp. As Exhibit 9 shows, that is enough to outperform govies by 181bp, corporates by 158bp and taxable munis by 179bp. Still, exempt IG is underperforming HY munis by 37bp for the MTD. Among IG rating brackets, BBBs' returns are strongest MTD, with their -1bp of total returns; AAAs' -22bp are weakest. Note that GOs are modestly underperforming revenue bonds for the MTD by 2bp. We continue to see the shorter maturity indexes outperform: for the MTD, the shortest maturities' index (1-3yr) has the strongest returns at 4bp while the longest maturity indexes returns' (the 22+yr index) are weakest at -28bp.

### Exhibit 9: Municipal total returns (%) monitor, as of 21 February 2024

While underperforming muni HY MTD, exempt IG outperforming govies, corporates & taxable munis

Index	Ticker	1d	1wk	MTD	1mo	3mo	YTD	1yr
Govt Master	GOAO	-0.293	-0.236	-1.927	-0.789	1.819	-2.090	1.846
Corporate Master	COAO	-0.212	0.026	-1.691	-0.520	3.654	-1.545	6.008
<b>IG munis</b>	<b>UOAO</b>	<b>0.045</b>	<b>0.232</b>	<b>-0.116</b>	<b>0.741</b>	<b>3.776</b>	<b>-0.339</b>	<b>5.648</b>
AAA	U0A1	0.026	0.200	-0.221	0.614	3.516	-0.593	5.040
AA	U0A2	0.045	0.223	-0.138	0.703	3.544	-0.401	5.295
A	U0A3	0.046	0.247	-0.038	0.849	4.199	-0.142	6.330
BBB	U0A4	0.084	0.322	-0.011	0.920	4.746	-0.022	7.240
1-3yr	U1A0	0.023	0.095	0.042	0.375	1.307	0.035	3.524
3-7yr	U2A0	0.043	0.159	-0.007	0.528	2.505	-0.280	3.927
7-12yr	U3A0	0.064	0.187	-0.109	0.503	3.568	-0.419	4.438
12-22yr	U4A0	0.049	0.264	-0.110	0.744	4.422	-0.337	6.665
22+yr	U5A0	0.040	0.341	-0.283	1.210	5.324	-0.517	7.464
<b>HY munis</b>	<b>UOHY</b>	<b>0.074</b>	<b>0.401</b>	<b>0.250</b>	<b>1.593</b>	<b>5.574</b>	<b>1.237</b>	<b>6.264</b>
Non-rated	UONR	0.126	0.560	0.397	1.857	5.786	0.963	8.202
<b>General Obligation</b>	<b>UOAG</b>	<b>0.033</b>	<b>0.210</b>	<b>-0.131</b>	<b>0.637</b>	<b>3.360</b>	<b>-0.428</b>	<b>5.040</b>
AAA	UGA1	0.008	0.188	-0.192	0.616	3.382	-0.636	4.732
AA	UGA2	0.040	0.216	-0.127	0.634	3.273	-0.419	4.985
A	UGA3	0.041	0.199	-0.045	0.698	3.957	-0.078	5.217
BBB	UGA4	0.082	0.282	0.118	0.754	3.766	0.245	7.416
State	U0AA	0.043	0.191	-0.089	0.559	3.037	-0.338	4.612
Local	U0AB	0.022	0.232	-0.179	0.729	3.730	-0.533	5.543
<b>Revenue</b>	<b>UOAR</b>	<b>0.049</b>	<b>0.239</b>	<b>-0.112</b>	<b>0.774</b>	<b>3.911</b>	<b>-0.310</b>	<b>5.845</b>
AAA	URA1	0.038	0.208	-0.240	0.612	3.607	-0.564	5.254
AA	URA2	0.047	0.225	-0.143	0.732	3.659	-0.394	5.428
A	URA3	0.047	0.251	-0.037	0.862	4.218	-0.148	6.427
BBB	URA4	0.084	0.325	-0.022	0.934	4.827	-0.043	7.051
Airport	UOAV	0.043	0.235	0.038	0.785	3.852	-0.162	5.897
Education	UOAE	0.057	0.267	-0.166	0.646	4.051	-0.406	5.721
Health	UOHL	0.102	0.402	0.118	1.373	6.731	0.684	8.056
Hospital	UOAH	0.050	0.249	-0.149	1.026	4.801	-0.296	6.536
Industrial Development Rev	UOID	0.053	0.374	0.166	1.129	4.951	0.123	7.242
Leases, COPs & Appropriations	UOAL	0.039	0.235	-0.057	0.706	3.598	-0.328	5.196
Miscellaneous	UOAM	0.035	0.159	-0.390	0.289	3.233	-0.790	4.503
Multi-family Housing	UOAU	0.063	0.233	-0.104	0.751	3.818	-0.463	5.935
Pollution Control	UOAQ	0.041	0.281	0.090	0.742	3.565	-0.047	4.705
Power	UOAP	0.049	0.228	-0.076	0.658	3.356	-0.227	4.871
Single-family Housing	UOAS	0.059	0.233	-0.080	0.714	3.495	-0.459	4.719
Tax Revenue	UOTX	0.042	0.210	-0.255	0.696	3.765	-0.600	5.822
Tobacco	UOTB	0.040	0.186	0.158	0.975	3.890	0.481	5.843
Toll & Turnpike	UOTL	0.070	0.231	-0.079	0.745	3.699	-0.184	5.812
Transportation - other	UOAT	0.042	0.284	-0.010	0.875	4.109	-0.252	6.724
Utilities - other	UOUT	0.060	0.225	-0.040	0.767	3.687	-0.012	5.607
Water & Sewer	UOAW	0.039	0.230	-0.135	0.725	3.500	-0.283	5.324
<b>Taxable</b>	<b>TXMB</b>	<b>-0.374</b>	<b>-0.317</b>	<b>-1.906</b>	<b>-0.299</b>	<b>3.581</b>	<b>-1.629</b>	<b>3.948</b>
Build America Bonds	BABS	-0.483	-0.496	-2.172	-0.526	3.392	-1.793	3.096
<b>VRDOs</b>	<b>VRDO</b>	<b>0.008</b>	<b>0.062</b>	<b>0.181</b>	<b>0.304</b>	<b>0.804</b>	<b>0.429</b>	<b>3.238</b>
Daily reset	VRDD	0.007	0.054	0.155	0.279	0.714	0.351	3.034
Weekly reset	VRDW	0.009	0.067	0.197	0.319	0.857	0.475	3.355

Source: ICE Data Indices, LLC

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## IG spreads flat w/w overall; HY spreads 3bp wider

IG muni spreads were flat w/w overall at 21bp and are sitting at the 12<sup>th</sup> percentile of their 52-week range. Muni HY spreads widened 3bp to 201bp or the 13<sup>th</sup> percentile. Non-rated spreads tightened 1bp w/w to 206bp. Both GO and Revenue Bond spreads were flat w/w. Among IG muni revenue bond sectors, the Airport sector narrowed the most by 4bp. The Tobacco sector saw the most widening at 2bp for the week.

### Exhibit 11: Muni YTW spread monitor as of 21 February 2024

IG muni spreads were flat w/w overall while HY spreads widened 3bp

	52wk				Current 2/21/24	Change from				Current as % of 52wk range	Price	Yield
	Tights	Wides	T-1wk	T-1d		Tights	Wides	T-1wk	T-1d			
<b>Investment Grade</b>	<b>19</b>	<b>35</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>2</b>	<b>-14</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>102</b>	<b>3.52</b>
AA	2	12	4	4	5	3	-7	1	1	30	103	3.36
A	49	77	51	50	50	1	-27	-1	0	4	100	3.81
BBB	94	142	106	105	105	11	-37	-1	0	23	97	4.36
<b>High Yield</b>	<b>178</b>	<b>350</b>	<b>198</b>	<b>200</b>	<b>201</b>	<b>23</b>	<b>-149</b>	<b>3</b>	<b>1</b>	<b>13</b>	<b>95</b>	<b>5.32</b>
Non-rated	174	247	207	206	206	32	-41	-1	0	44	66	5.37
<b>General Obligation</b>	<b>-12</b>	<b>-4</b>	<b>-10</b>	<b>-10</b>	<b>-10</b>	<b>2</b>	<b>-6</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>102</b>	<b>3.21</b>
AA	-19	-9	-16	-16	-16	3	-7	0	0	30	102	3.15
A	-15	29	4	4	4	19	-25	0	0	43	105	3.35
BBB	50	115	78	78	77	27	-38	-1	-1	42	97	4.08
State	-30	-20	-28	-29	-28	2	-8	0	1	20	106	3.03
Local	7	17	11	11	12	5	-5	1	1	50	98	3.43
<b>Revenue</b>	<b>30</b>	<b>49</b>	<b>32</b>	<b>31</b>	<b>32</b>	<b>2</b>	<b>-17</b>	<b>0</b>	<b>1</b>	<b>11</b>	<b>102</b>	<b>3.63</b>
AA	10	22	13	13	13	3	-9	0	0	25	103	3.44
A	53	81	55	54	54	1	-27	-1	0	4	99	3.85
BBB	96	147	108	108	107	11	-40	-1	-1	22	97	4.38
Airport	52	84	59	55	55	3	-29	-4	0	9	104	3.86
Education	9	30	13	13	13	4	-17	0	0	19	104	3.44
Health	135	174	147	147	147	12	-27	0	0	31	95	4.78
Hospital	60	89	62	62	63	3	-26	1	1	10	100	3.94
Industrial Development Rev	67	123	80	78	77	10	-46	-3	-1	18	101	4.08
Leases, COPs & Appropriations	-4	13	1	0	1	5	-12	0	1	29	104	3.32
Miscellaneous	-3	17	16	17	17	20	0	1	0	100	103	3.48
Multi-family Housing	54	89	64	64	64	10	-25	0	0	29	95	3.95
Pollution Control	30	64	59	58	59	29	-5	0	1	85	98	3.90
Power	22	39	24	23	23	1	-16	-1	0	6	105	3.54
Single-family Housing	69	89	87	87	88	19	-1	1	1	95	98	4.19
Tax Revenue	3	16	4	4	4	1	-12	0	0	8	101	3.35
Tobacco	-22	37	-3	-2	-1	21	-38	2	1	36	102	3.30
Toll & Turnpike	23	49	29	29	29	6	-20	0	0	23	98	3.60
Transportation - other	24	51	27	27	28	4	-23	1	1	15	100	3.59
Utilities - other	65	105	69	69	69	4	-36	0	0	10	104	4.00
Water & Sewer	3	20	13	12	13	10	-7	0	1	59	103	3.44

**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 \$49.5bn, up 22% y/y

YTD issuance as of 21 February 2024 totaled \$49.5bn, up 22% y/y. 71% of YTD issuance is new money and 29% is refundings. New money volumes are up 19% y/y while refunding volumes are up 33% y/y.

### Exhibit 12: Issuance summary (\$mn)

YTD-24 issuance of \$49.5bn was up 22% y/y; new money up 19% y/y while refundings up 33% y/y

	Month-to-date			Year-to-date		
	2/21/24	2/21/23	y/y % Δ	2/21/24	2/21/23	y/y % Δ
<b>Total</b>	<b>18,585.7</b>	<b>16,392.6</b>	<b>13%</b>	<b>49,544.3</b>	<b>40,448.7</b>	<b>22%</b>
New Money	14,639.3	12,400.9	18%	35,383.4	29,833.0	19%
Total Refunding	3,946.4	3,991.7	-1%	14,160.9	10,615.6	33%
Advanced refunding	134.0	5.4	-	5,526.2	1,380.9	300%
Unknown refunding	3,522.0	3,897.1	-10%	8,344.3	7,990.8	4%
Current & Forward refunding	290.4	89.1	226%	290.4	1,243.9	-77%





**Exhibit 12: Issuance summary (\$mn)**

YTD-24 issuance of \$49.5bn was up 22% y/y; new money up 19% y/y while refundings up 33% y/y

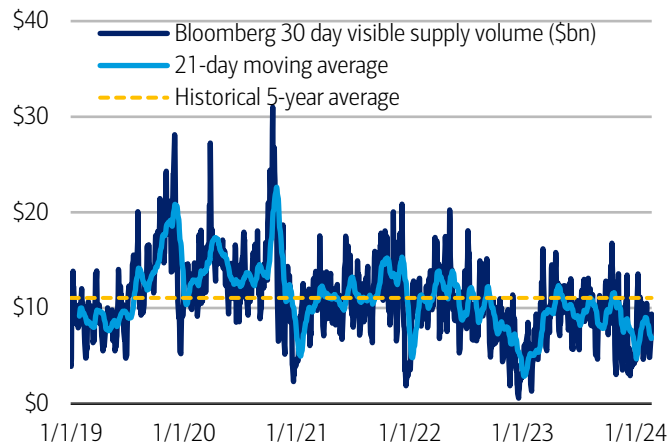
	Month-to-date			Year-to-date		
	2/21/24	2/21/23	y/y % Δ	2/21/24	2/21/23	y/y % Δ
Insured	1,283.5	1,326.5	-3%	3,370.3	3,585.4	-6%
Fixed Rate	15,806.5	13,267.3	19%	42,670.0	34,451.0	24%
Variable Rate Long	1,059.5	2,061.3	-49%	4,329.8	4,333.1	0%
Variable Rate Short	1,085.1	1,055.6	3%	1,616.5	1,588.2	2%
Linked Rate	615.3	0.0	-	615.3	50.0	1131%
Zero Coupon	19.3	8.4	129%	312.7	22.3	1300%
Convertible	0.0	0.0	-	0.0	4.1	-100%
Variable rate no put	0.0	0.0	-	-	-	-
Tax Exempt	17,013.9	14,669.7	16%	46,791.3	34,877.4	34%
Taxable	1,535.8	1,374.6	12%	2,691.2	4,666.3	-42%
Alternate Minimum Tax	36.0	348.2	-90%	61.7	905.0	-93%
Education	6,002.7	6,310.8	-5%	14,271.2	14,712.7	-3%
General Purpose	4,148.7	3,195.5	30%	9,617.9	6,811.0	41%
Utilities	2,882.2	2,249.5	28%	9,228.8	5,565.6	66%
Housing	1,983.3	1,313.1	51%	4,092.8	3,259.1	26%
Transportation	1,969.4	338.3	482%	4,587.3	3,773.6	22%
Development	672.7	485.1	39%	1,114.2	1,203.5	-7%
Healthcare	638.0	876.2	-27%	4,104.8	1,455.9	182%
Electric Power	228.5	1,498.8	-85%	2,204.4	3,144.3	-30%
Public Facilities	60.2	125.5	-52%	287.9	373.1	-23%
Environmental Facilities	0.0	0.0	-	35.1	150.0	-77%
Muni-backed corporates	0.0	88.7	-	0.0	88.7	-100%

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

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**Exhibit 12: Bloomberg 30-day visible supply (\$bn)**

30-day visible supply was \$9.4bn as of 22 February 2024

**Source:** Bloomberg

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**Exhibit 14: 2024 gross issuance, redemption forecasts vs actuals (\$bn)**

Gross issuance forecast of \$400bn vs \$574bn of prin. &amp; cpn. redemptions

Month	Issuance		Prin. & cpn redemptions	
	Forecast	Actual	Forecast	Actual
January	\$26	30	\$46	\$45
February	27	19*	49	
March	32		39	
April <sup>1</sup>	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 21 February 2024.**Source:** BofA Global Research, LSEG, Bloomberg

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## Curve

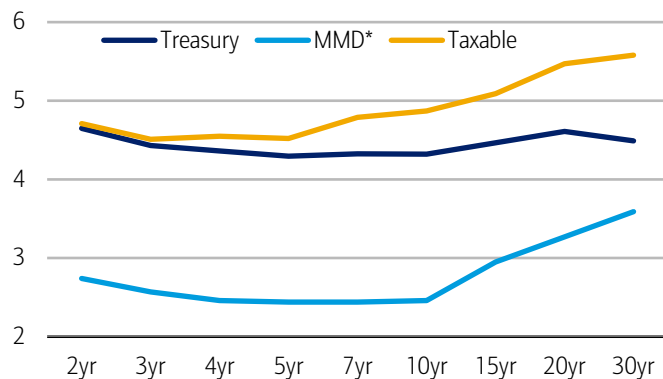
**Curve shifts down 2bp w/w on avg and down 1bp m/m**

The AAA MMD curve richened 2bp w/w on average, and richened 1bp m/m. For the week, the 1s5s slope inverted a further 2bp to -52bp, 4bp more inverted y/y; the 5s10s was unchanged w/w at 2bp, but is 4bp steeper y/y; the 10s20s slope flattened 1bp w/w to 81bp and is unchanged y/y; the 20s30s was unchanged w/w at 32bp but is 12bp steeper y/y. We expect the 1s10s muni AAA curve to stay lightly inverted throughout 2024 unless the Fed's rate cutting becomes more aggressive than currently anticipated. The 10s30s should steepen mildly during the start of the year, and then flatten some when the 30-year AAA yield crosses a key level to alleviate the fear for the long end.



**Exhibit 14: AAA GO muni, Treasury and taxable yield curves (%)**

On average, Tsy and Taxable cheapened while MMD richened w/w



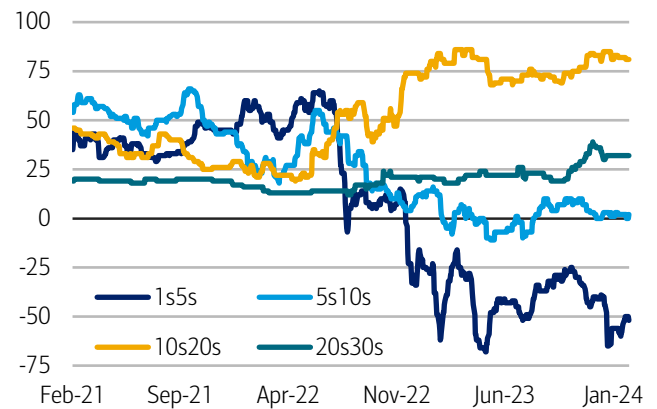
Note: \*MMD AAA GO yield curve. As of 21 February 2024.

Source: BofA Global Research, Refinitiv, Bloomberg

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**Exhibit 15: Curve slope (bp)**

The 5s10s and 20s30s unchanged w/w

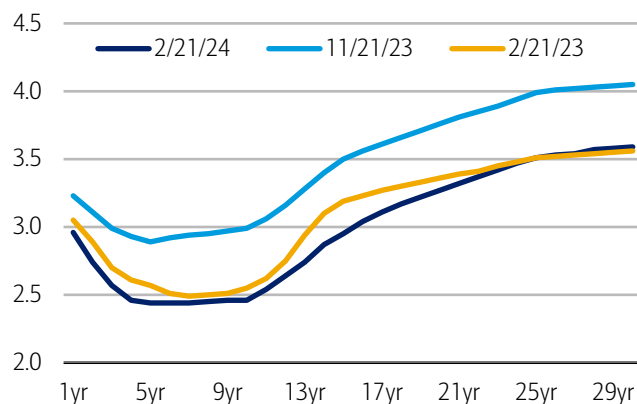


Source: Refinitiv

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**Exhibit 16: AAA GO municipal curve movement (%)**

AAA is richer than three months ago across the curve



Source: Refinitiv

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## Relative value

At 7-12yr maturities, Single-A Power's and Utilities-other's OAS are Very Cheap, while AAA Water & Sewer and AA Higher Education are Cheap. At 22+yr maturities, BBB State GO and Utilities-other are Very Rich, while AAA Local GO and AA Hospital are cheap.

**Exhibit 18: Rich/cheap analysis of 7-12yr indexes' OAS (bp)**

AA Utilities - Other's current OAS of 96bp at 7-12yrs is currently Very Cheap against its 3yr OAS average of 10bp

Sector	Current OAS				Rich/cheap analysis				3yr OAS average			
	AAA	AA	A	BBB	AAA	AA	A	BBB	AAA	AA	A	BBB
Airports		37	31	70		N	N	N		32	30	54
Higher Education	-13	-11	45		N	C	N		-8	-4	39	
GO Local	0	4	50	106	R	N	N	N	-2	7	43	110
GO State	-6	-7	45	0	N	N	N	R	-7	-5	43	94
Health		24	74	116		N	N	N		19	71	107
Hospital		13	38	82		N	N	N		16	37	96
IDR		57	65	86		N	N	N		37	53	79
Leases COPs & Appr.		9	19	120		N	N	N		10	34	110
Pollution Control	-1		103		N		N		-1		73	
Power	-9	-6	104		N	N	VC		-5	-5	27	
Tax Revenues	0	0	57	109	R	R	N	N	2	5	55	115
Tobacco			31				N				48	
Toll & Turnpike		18	16	79		N	N	N		20	17	80
Transportation - Other	0	14	39	68	R	N	N	N	4	12	53	86

**Exhibit 18: Rich/cheap analysis of 7-12yr indexes' OAS (bp)**

AA Utilities - Other's current OAS of 96bp at 7-12yrs is currently Very Cheap against its 3yr OAS average of 10bp

Sector	Current OAS				Rich/cheap analysis				3yr OAS average			
	AAA	AA	A	BBB	AAA	AA	A	BBB	AAA	AA	A	BBB
Utilities - Other	0	96	140		R	VC	VC		-3	10	45	
Water & Sewer	-12	-13	17	8	C	N	N	N	-6	-7	12	102

**Note:** Data as of 20 February 2024. Only includes non-prerefunded bonds. Benchmark is 3-yr avg.**Source:** ICE Data Indices, LLC

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**Exhibit 19: 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 53bp

Sector	Current OAS				Rich/cheap analysis				3yr OAS average			
	AAA	AA	A	BBB	AAA	AA	A	BBB	AAA	AA	A	BBB
Airports		43	35	-4		C	N	N		26	25	10
Higher Education	46	10	28	99	C	N	N	N	25	-8	18	75
GO Local	18	15	22	83	C	N	N	N	-8	2	21	75
GO State	-3	12		0	N	C		VR	-25	-19		80
Health		-28	61	174		N	N	N		-17	38	113
Hospital		25	35	77		C	N	N		7	25	56
IDR			66	82			N	N			54	69
Leases COPs & Appr.	26	12	23	56	C	N	N	N	-5	-5	29	47
Pollution Control			37				N				17	
Power		13	26	44		N	N	N		-5	16	44
Tax Revenues	32	17	65	75	C	N	N	N	8	3	49	72
Tobacco				93				N				85
Toll & Turnpike			20	48			N	N			11	41
Transportation - Other		0	25	76		N	N	C		10	31	49
Utilities - Other		23	39	0		C	N	VR	-8	-7	22	53
Water & Sewer	5	5	15		C	N	N		-18	-14	-3	

**Note:** Data as of 20 February 2024. Only includes non-prerefunded bonds. Benchmark is 3-yr avg.**Source:** ICE Data Indices, LLC

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**MWIs stayed 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 Multi-Family Housing increasing the most. Multi-Family Housing and Tobacco's MWI are the lowest.

**Exhibit 20: MWIs – sector momentum (%) as of 20 February 2024**

Most sectors' MWIs had small decreases over the past week

Sector	MWI	m/m Δ	Sector	MWI	m/m Δ
<b>UOA0 Index</b>	<b>99.4%</b>	<b>-0.1%</b>	Miscellaneous	100.0%	0.0%
ETM	96.5%	-0.1%	Multi-Family Housing	96.0%	2.0%
GO - Local	99.5%	-0.1%	Pollution Control	98.6%	0.1%
GO - State	99.2%	-0.5%	Power	98.4%	-0.3%
Pre-Re	100.0%	0.0%	Single Family Housing	96.7%	0.0%
Airport	99.8%	0.1%	Tax revenue	99.9%	0.1%
Education	99.4%	-0.4%	Tobacco	96.3%	0.0%
Health	100.0%	0.9%	Toll & Turnpike	100.0%	0.1%
Hospitals	99.5%	-0.1%	Transportation	99.6%	-0.2%
Industrial Development Rev	97.9%	-0.7%	Utilities - Other	98.2%	-0.6%
Leasing COPs & Appropriations	99.5%	-0.4%	Water & Sewer	99.7%	0.1%

**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 402207AD6, totaling \$98mn. Those are Gulf Coast Industrial Development Authority revenue bonds



due in 2041. By number trades it was 641279WL4, totaling 421 trades. These are Nevada Housing Division Single-Family Housing mortgage revenue bonds, due in 2054.

#### Exhibit 21: Most actively traded muni CUSIPs over the week ending 21 February 2024

64972JGX0 was the most frequently traded CUSIP. <sup>1</sup>Last trade

CUSIP	Short name	ST	Coupon/Maturity	Yield <sup>1</sup>	Spread	# of trades	Avg Vol (\$mn)
402207AD6	GULF COAST INDL DEV	TX	2.8s of '41	--	-86	23	4.26
37970PLW0	GLOUCESTER CO IMPT	NJ	5s of '54	3.95	30	98	0.73
64972JGV4	NYC TRANSIT FIN-F-1	NY	5s of '49	3.61	4	72	0.95
072024YE6	BAY AREA TOLL AUTH-A	CA	2.95s of '55	--	-105	23	2.87
64966LU25	NYC-F6-ADJ	NY	2.85s of '44	--	-88	24	2.65
64966MSD2	NY CITY-B5-VAR	NY	3.05s of '46	--	-125	17	3.63
65829QCJ1	NORTH CAROLINA ST LTD	NC	3s of '28	3.10	59	147	0.39
445047NE9	HUMBLE ISD	TX	4s of '54	4.21	56	48	1.20
20775DTU6	CT HLTH&EDU FACS AUTH	CT	2.4s of '42	--	-130	13	4.28
544532HW7	LOS ANGELES DEPT WTR	CA	2.9s of '47	--	-138	11	4.69
896035DG4	TRIBOROUGH BRIDGE-A-1	NY	4.125s of '64	4.35	70	179	0.28
20775HL92	CT HSG FIN AUTH -A -R	CT	4.6s of '49	4.64	106	85	0.54
64971XKS6	NYC TRANS FIN AUTH-C4	NY	3.05s of '44	--	-115	12	3.76
60637B8J2	MO HSG DEV COMM-A	MO	5.75s of '55	4.80	115	11	3.84
20775HL84	CT HSG FIN AUTH -A -R	CT	4.45s of '44	4.50	109	107	0.38
13048TGU1	CA MUN FIN-VAR-CHEVRO	CA	2.7s of '35	--	-36	16	2.39
13062RG77	CA VAR-B-SUBSER B-5	CA	2.75s of '40	--	-108	11	3.41
378406PW6	GLENDALE	CA	5s of '54	3.66	1	51	0.71
13063ASX8	CA VAR-A3-KINDERGARTE	CA	2.8s of '34	--	-45	20	1.77
641279WL4	NEVADA HSG DIV-A-REF	NV	4.75s of '54	4.56	91	421	0.08

Source: Bloomberg

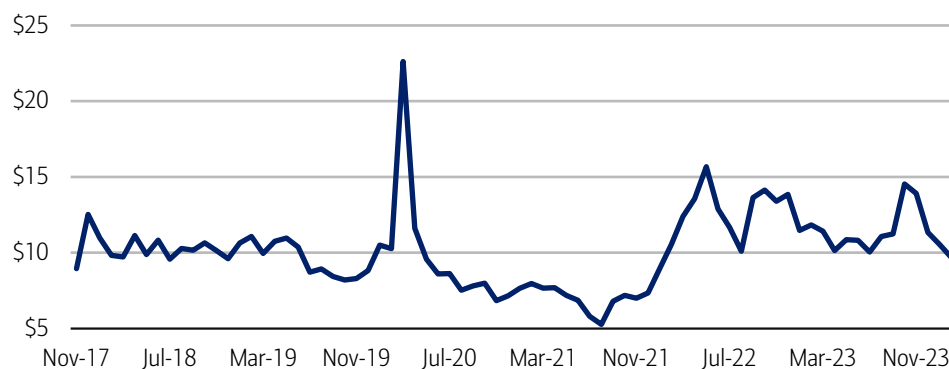
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## Feb-24's avg daily secondary trading at \$9.7bn

Current data shows secondary trading volumes in February remain moderate relative to recent months'. As of 21 February, 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 8% decrease a m/m basis and 18% decrease y/y. Note that, for the MTD, \$135.6bn of muni bond par value traded.

#### Exhibit 21: Daily avg secondary trading volume (\$bn)

Feb-24 daily avg volume of \$9.7bn down roughly 8% m/m



Note: Data as of 21 February 2024.

Source: BofA Global Research, Bloomberg

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## Credit corner

### State and local governments

#### January collection medians hold as more states report

While January's median state collection growth moderated some as more states reported this week, they still held, overall, in positive territory. For the 37 states reporting collections for the month thus far, we see median year-over-year growth of 2.5%. That is coming largely on the back of personal income and sales tax collections, with median growth thus far of 0.6% and 1.6% year-over-year, respectively. Corporate collections



growth medians for these states is weaker at -1.4% on median. Should these medians hold, January's growth would be the strongest since Feb-23's 5.7%.

### **As part of budget, IL gov calls for 100% funded pensions by FY48**

IL's governor released his FY25 budget proposal this week. Within it, he called for increasing the statutory funding goal for the state's pensions to 100% by FY48 from the current 90% by FY45. He also called for increasing annual contributions to the state's pensions when 2017's bill backlog GOs and 2003's pension obligation GOs are paid off; he proposed using half of the revenues being used to pay those debts off as additional pension contributions. In total, he estimated \$5.1bn in taxpayer savings by FY45. Of the governor's proposed \$52.7bn general fund budget for FY25, almost 19% will be spent on the state's pensions; only proposed spending on Human Services and PreK-12 Education is larger. Meanwhile, we note that the governor's budget anticipates net individual income taxes will increase 3.8% y/y in FY25, net corporate income taxes will increase 6.0% and net sales taxes will increase 3.3%. Total state sources are expected to increase 3.1% y/y in FY25.

### **Chicago's outlook revised to stable from positive by S&P**

S&P revised its outlook on Chicago's GO bonds to stable from positive on 22 February while affirming the BBB+ rating on its GOs. Per S&P, the revision to stable reflects the rating agency's expectations that Chicago "will maintain very high reserves, strong pension funding discipline, and manage any economic or revenue disruption without experiencing a deterioration in overall credit quality."

### **NYC's sales taxes up 3.5% y/y in Jan; rest of state's local collections down 2.8%**

NY's comptroller released local sales tax collection data for January this week. Statewide, those collections were up just 0.3% y/y to \$1.9bn (the slowest growth rate since Mar-23's 0.3%). Yet, it was clearly two separate stories: growth in New York City remained relatively strong, growing 3.5% y/y in January to nearly \$873mn, while local collections across the rest of the state fell 2.8%. Per the comptroller, "growth in local sales tax collections has slowed significantly, with a nearly flat increase this January compared to last year when inflation was more than twice as high and New York City's taxable sales were surging...With overall growth having moderated over the course of 2023, local officials should remain cautious in their sales tax revenue projections for 2024."

### **CT OPM keeps FYE surplus estimate effectively flat m/m at \$168mn**

In its 7<sup>th</sup> monthly estimate for FY24, CT's Office of Policy and Management (OPM) projected a \$168mn general fund surplus at fiscal year-end 2024, which, while it is 58% below the level the adopted FY24 budget anticipated, it is up ever-so-slightly vs the \$167mn estimate from last month. On the state's rainy day fund, CT expects a fiscal year-end balance of \$4bn, or, about 18% of FY24's net General Fund appropriations.

### **Judge Swain won't consider motion on PREPA receiver now**

Judge Swain rejected a call from some Puerto Rico Electric Power Authority (PREPA) creditors to consider immediately their motion to appoint a receiver. Rather, she said she would consider the motion in late May. However, as a recent *Bond Buyer* article notes, because PREPA's confirmation hearing is scheduled to end in mid-March, "it is possible Swain will have ruled on the plan before considering the motion, at which point she might rule the request irrelevant or inappropriate." Otherwise, we highlight: (a) a 3.4% y/y increase in Puerto Rico's Economic Activity Index, which while still healthy, is the slowest growth since Jun-23; (b) TSA balances of \$9.3bn as of 9 February that were down \$384mn w/w, but for the YTD are up 33.7% above adopted liquidity plan (LP) estimates; and, (c) FY24 General Fund collections through 9 February of \$8.3bn that were up 8.5% vs collections LP estimates.

## Public sector strikes decline in 2023, but idle roughly 91K workers

Bureau of Labor Statistics data shows eight state and local government work stoppages involving more than 1,000 employees in 2023, down modestly from the 9 in 2022. Of those 8 stoppages, all but two were on the West Coast. In total, 91.1K public workers were involved in 2023's strikes, up from 2022's 68.8K, though materially lower than 2019's 337.6K.

## Rating activity

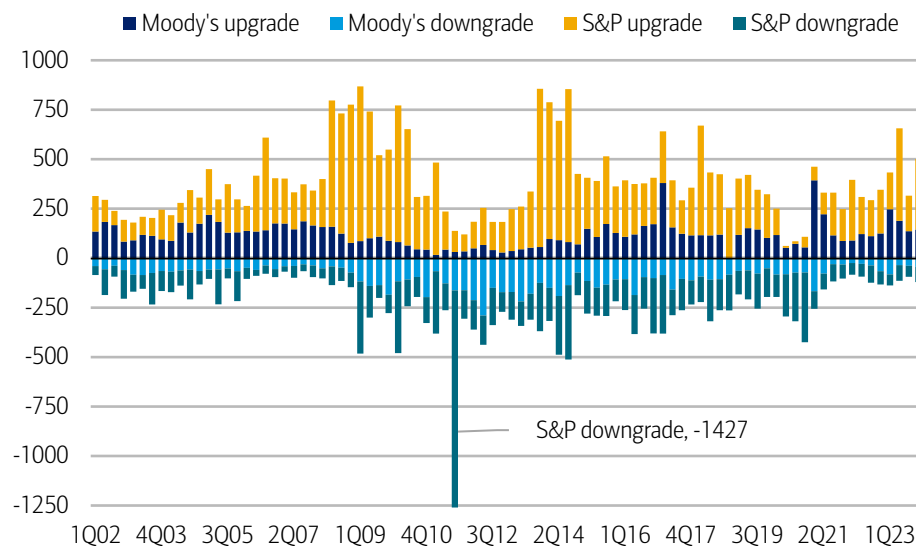
### Combined, Moody's and S&P upgraded 501 ratings in 4Q23 vs 121 downgraded

We now have full quarterly rating activity data from both S&P and Moody's for 4Q23. In total, the two rating agencies upgraded 501 ratings and downgraded just 121, for a quarterly upgrade to downgrade ratio of 4.1 to 1. For full 2023, S&P and Moody's upgraded 1,906 ratings and downgraded 467, also for an upgrade to downgrade ratio of 4.1 to 1, which is about one upgrade stronger than 2022's ratio of 3.1 to 1 and two upgrades stronger than 2021's ratio of 2.2 to 1.

January's S&P rating activity shifted down a gear, though remained positive. And net upgrade rates for the ICE BofA muni sector indexes are well of their peaks by and large. See our [9 February Municipals Weekly](#). This data supports our view, expressed in our [Municipals Year Ahead 2024](#) report, that while 2024 will be a positive rating year, activity will moderate from recent years' levels.

### Exhibit 22: Moody's and S&P's quarterly upgrades and downgrades

In 2023, Moody's and S&P's upgrades outpaced downgrades 4.1 to 1



Source: BofA Global Research, Moody's Investors Service, S&P Global Ratings

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## Defaults, distress & HY

### Tracking: material credit events and Ch. 9 filings

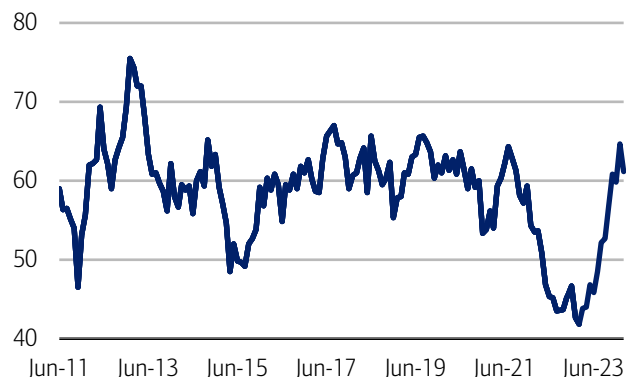
For the week ending 21 February, our tracking of those Moody's-defined material credit events (MCEs) shows 6 postings, down 3 on a w/w basis, with the MTD total of 27 as of 21 February. See Exhibit 24.

There were no new Chapter 9 bankruptcy petitions filed for the week ending on 21 February; it has now been 274 days since the last bankruptcy petition was filed by Hazel Hawkins Memorial Hospital on 23 May 2023 – that is the 3<sup>rd</sup> 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 23: 6-mo mov avg of material credit events posted to EMMA**

Filings posted to EMMA down w/w and continue slow month



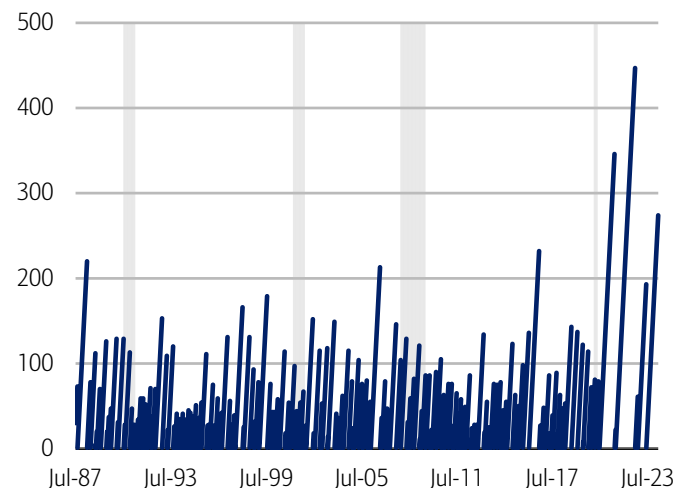
**Note:** Data as of 21 February 2024. Material credit events (MCE) reflect: 1. Bankruptcy, insolvency, receivership or similar event; 2. Financial obligation event reflecting financial difficulties; 3. Nonpayment related default; 4. Principal/interest payment delinquency; 5. Unscheduled draw on credit enhancement reflecting financial difficulties; and 6. Unscheduled draw on debt service reserve reflecting financial difficulties.

Source: EMMA

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**Exhibit 24: Calendar days since last Chapter 9 petition filed**

274 days since Hazel Hawkins Memorial Hosp. filed Ch. 9 petition



Source: BofA Global Research, PACER, US Courts

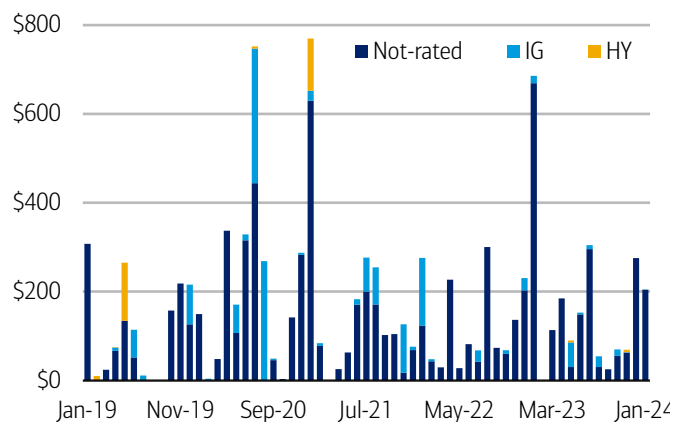
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**YTD default & distress through Jan-24**

As discussed previously report, first-time payment defaults totaled \$205mn in January, down 70% y/y. First-time distressed debt reported in January totaled \$116mn, down 11% y/y; that leaves the YTD total at \$1.84bn, which is up 5.8% 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. As a reminder, total defaults in 2023 were \$2.0bn – hitting our estimate. Our forecast for first time payment defaults in 2024 is \$1.9bn-\$2.3bn. See our [Municipals Year Ahead 2024](#). We expect defaults emanating from this distress to be concentrated in the Nursing Home, Hospital, and Industrial Development sectors.

**Exhibit 25: Monthly first-time defaults (\$mn) by avg rating at issue**

First-time defaults \$205mn in Jan-24, down 70% y/y

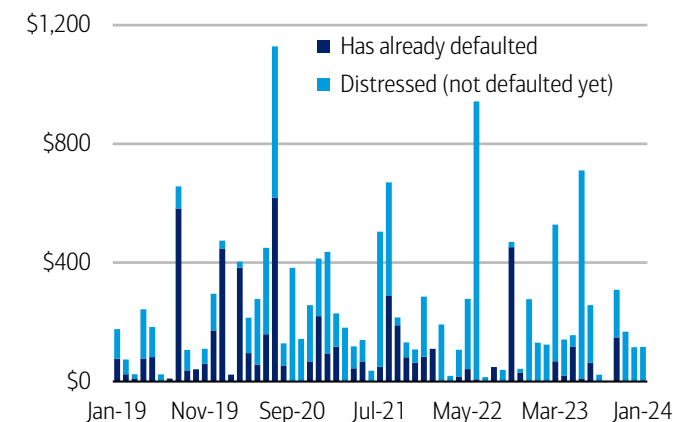
**Note:** We may revise data if Bloomberg revises its data.

Source: BofA Global Research, Bloomberg

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**Exhibit 26: 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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**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 and Spain; 5yr taxable munis are less attractive for Japan and South Korea.

**Exhibit 28: Cross currency equivalent yields as of 22 February 2024**

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

Country	Government bond yield (in investor country's currency)			Cross currency equivalent yield*						Can foreign investors buy?					
	5 yr	10 yr	30 yr	US Treasury			US AAA taxable muni			US Treasury			US AAA taxable muni		
				5 yr (4.330)	10 yr (4.321)	30 yr (4.458)	5 yr (4.52)	10 yr (4.87)	30 yr (5.58)	5 yr	10 yr	30 yr	5 yr	10 yr	30 yr
Canada	3.614	3.533	3.399	3.828	3.840	4.227	4.019	4.388	5.337	Yes	Yes	Yes	Yes	Yes	Yes
United Kingdom	4.149	4.104	4.626	4.141	4.075	4.341	4.335	4.620	5.458				Yes	Yes	Yes
France	2.759	2.912	3.345	2.720	2.786	3.723	2.908	3.331	4.809			Yes	Yes	Yes	Yes
Germany	2.444	2.438	2.553	2.720	2.786	3.723	2.908	3.331	4.809	Yes	Yes	Yes	Yes	Yes	Yes
Italy	3.423	3.907	4.438	2.720	2.786	3.723	2.908	3.331	4.809						Yes
Spain	3.013	3.338	3.852	2.720	2.786	3.723	2.908	3.331	4.809						Yes
Portugal	2.700	3.162	3.538	2.720	2.786	3.723	2.908	3.331	4.809	Yes		Yes	Yes	Yes	Yes
Netherlands	2.618	2.752	2.750	2.720	2.786	3.723	2.908	3.331	4.809	Yes	Yes	Yes	Yes	Yes	Yes
Switzerland	0.779	0.768	0.727	2.720	2.786	3.723	2.908	3.331	4.809	Yes	Yes	Yes	Yes	Yes	Yes
Japan	0.351	0.711	1.705	0.115	0.474	2.638	0.306	1.009	3.672			Yes		Yes	Yes
Australia	3.777	4.153	4.510	4.307	4.710	4.657	4.499	5.285	5.782	Yes	Yes	Yes	Yes	Yes	Yes
South Korea	3.354	3.391	3.343	2.680	4.737	4.019	2.870	3.956	5.113		Yes	Yes		Yes	Yes
China	2.225	2.401	2.586	4.777	4.590	4.586	4.967	5.138	5.709	Yes	Yes	Yes	Yes	Yes	Yes
Taiwan	1.175	1.222	1.525	1.274	2.641	3.653	1.461	3.181	4.721	Yes	Yes	Yes	Yes	Yes	Yes
Singapore	3.020	3.091	2.921	3.730	3.994	4.299	3.920	4.541	5.409	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 28: 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





**Exhibit 28: Common acronyms used in our Municipals reports**

This list is subject to change

Acronym	Definition	Acronym	Definition	Acronym	Definition
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
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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