

## Municipals Weekly

## 4% coupons are wide

## Industry Overview

## Key takeaways

- Sideways market may extend through February: tight ratios and narrower credit spreads should prevail.
- Current 4% coupon spreads are wide, especially in the 15+yr part of the curve, which should compress in a rally.
- BEA data shows state and local govt PIT receipts down 5.5% y/y in 4Q23; sales taxes up 2.4%.

## Sideways market may extend through February

The muni market may stay in sideways mode through February as preliminary January data supports a soft landing scenario. Tight ratios and narrower credit spreads should prevail, we think. The 1s10s muni AAA curve inverted back below -50bp, while the 10s30s AAA curve remains steep. Demand will continue to overwhelm supply, in our view.

## Current 4% coupon spreads are wide

Current 4% coupon spreads widened significantly over the past few weeks, and are the widest since March 2022, especially in 15+ year part of the curve. 4% coupon spreads inside the 10-year appear to stay given constrained Fed rate cutting program in the next 2-3 years. 15+ years should compress when the market rally resumes.

For 5-10yrs, only 4s in the airport, power and utilities-other sectors have a price below par. Between 10-15yrs, only industrial development revenue and multi-family housing bonds 4s do. Between 15-20 years, 12 of the 19 sectors' bonds 4s are priced below par. Beyond 20 years, only single family housing bonds' 4s price above par.

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

**Supply:** YTD issuance through 24 January totals \$23.8bn, up 24% y/y. YTD issuance is 96% tax-exempt and 4% taxable; 74% is new money and 26% is refundings.

**Returns:** The Muni Master index (U0A0) returned -1.11% for the MTD through 24 January, outperforming govies, corporates and taxable munis. The Muni High Yield index (U0HY) returned -0.34%. MTD, single-As' returns strongest at -1.03%, as are the 1-3yr maturities' -0.30%.

**Spreads:** For the week ending 24 January, IG spreads widened 1bp w/w to 22bp, while HY spreads tightened 1bp to 208bp.

**Trade activity:** MTD through 24 January, \$145.0bn of muni par value traded in the secondary, with a daily avg of \$9.1bn. That avg is down 20% m/m and 21% y/y.

## Credit corner

BEA releases state and local tax receipts data through 4Q23, Guam is upgraded, NY's tax collections are beating estimates but down y/y, senior housing occupancy rates climb again in 4Q23 and undergraduate enrollments improve, but still below pre-COVID levels.

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**Yingchen Li**  
Municipal Research Strategist  
BofAS  
yingchen.li@bofa.com

**Ian Rogow**  
Municipal Research Strategist  
BofAS  
ian.rogow@bofa.com

**John Lombardi**  
Municipal Research Strategist  
BofAS  
jlombardi3@bofa.com

**Sophie Yan**  
Municipal Research Strategist  
BofAS  
sophie.yan@bofa.com

**John Reilly**  
Municipal Research Strategist  
BofAS  
john.reilly2@bofa.com

See Team Page for List of Analysts

## Recent Municipals Research

[Monthly Municipal ESG Monitor: December 2023 19 January 2024](#)

[Municipals Educational Series: Primer on make-whole calls 17 January 2024](#)

[Municipals Weekly: More credit spread compression ahead 12 January 2024](#)

[Municipals Weekly: March's gravitational pull is strong 05 January 2024](#)

[Municipals Quarterly: 4Q23 in review 03 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

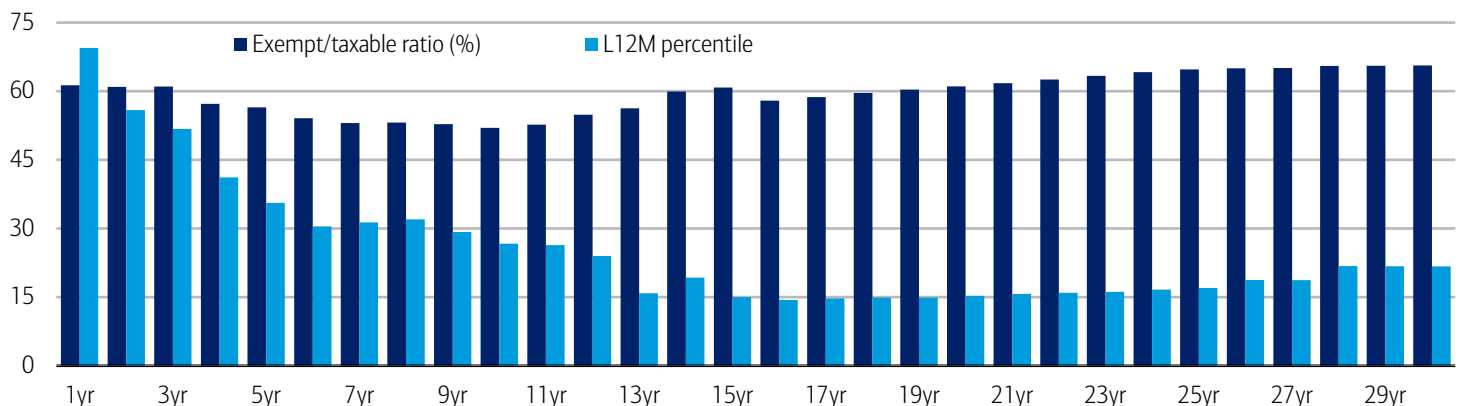
### Sideways market may extend through February

It is now clear that the US economy fell off a small cliff in October 2023, leveled off in November/December, and has firmed in January. Preliminary economic data for January reported over the past two weeks supports a soft landing scenario, causing the Treasury yield curve to bear steepen. Good PMI data for services and manufacturing for January are not supporting any meaningful weakening in the labor market, which may extend the current Treasury yield backup process to mid-February when the next CPI report is delivered. Surely, as the Fed shifted the focus to the timing of the first rate cut, and the short end of the curves are more-or-less anchored to the Fed DOTs Plot, the yield backup process should remain controlled with a steepening bias.

Unlike Treasuries, the 1s10s tax-exempt muni curve bear flattened while the 10s30s AAA curve remained steep. The 1s10s curve inverted back below -50bp, supporting our view that the 1s10s curve may remain inverted for all of 2024. Muni/Treasury ratios remained tight, though cheapened some. The story for exempt AAA to taxable muni AAA ratios is similar: they range from a low of 52.0% at the 10yr, according to Refinitiv data, to a high of 65.6% at the 29 and 30yr. But, even at the 29yr and 30yr, those ratios are just below the 22<sup>nd</sup> percentile of their last 12-month range. In fact, only ratios 11yrs and in are above the 25<sup>th</sup> percentile, and only above the 50<sup>th</sup> percentile 3yrs and in. This data all goes to show the compressed relative value in exempts currently.

**Exhibit 2: Current AAA exempt/taxable ratios (%), and their last 12-month (L12M) percentile**

Ratios are rich across the curve

**Source:** BofA Global Research, Refinitiv

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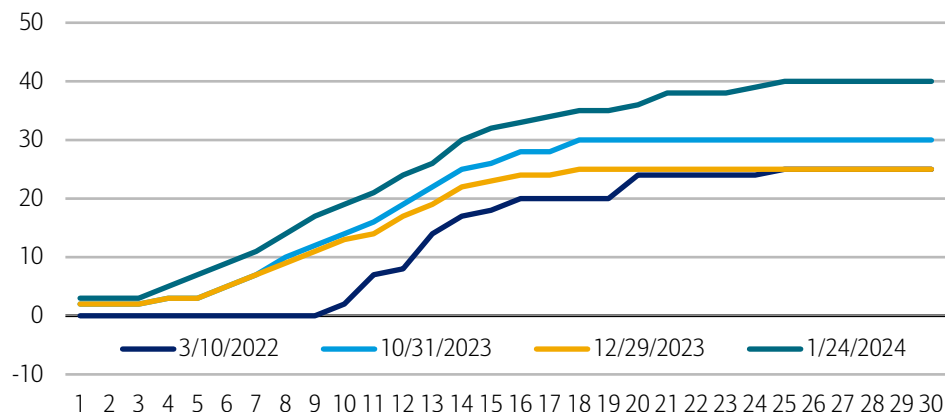
This state of affairs likely will continue in February, with yields moving up and credit spreads narrowing in a slow and gentle fashion. A few weeks ago, we suggested that if the 10-year AAA yield rises 30+bp, good entry points should be near. YTD, the 10-year AAA has risen 18bp. We expect \$27bn of new issuance in February, \$33bn of principal redemption and \$16bn of coupon payments. Demand will again overwhelm supply.

## Current 4% coupon spreads are wide

Slowly rising yields are beginning to affect coupon performance. During the November-December rally, 4% coupon brackets outperformed 5%+ coupons by almost 100%. Now in January, the opposite is true. Exhibit 3 shows the current 4% coupon spread curve using Refinitiv data, as well as on 10 March 2022 right before the first Fed rate hike, 31 October 2023 when muni yields peaked and 2023 year end.

### Exhibit 3: 4% coupon spread curves at various junctures during the past two years

Current 4% coupon spreads are much wider



Source: Refinitiv

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Note that on 10 March 2022, the 10-year AAA stood at 1.81%, nearly the same level as our newer target for 2024. One can see that during the bear market, the 4% coupon spread curve steepened inside the 10-year area but flattened slightly in 20+ years, showing that negative convexity and market discount risks were priced in very early for the 20+ year part of the curve in the bear market cycle. For maturities inside 15-years, these risks were priced in in a more gradual fashion; in 10-15 years, it was faster than inside the 10-year.

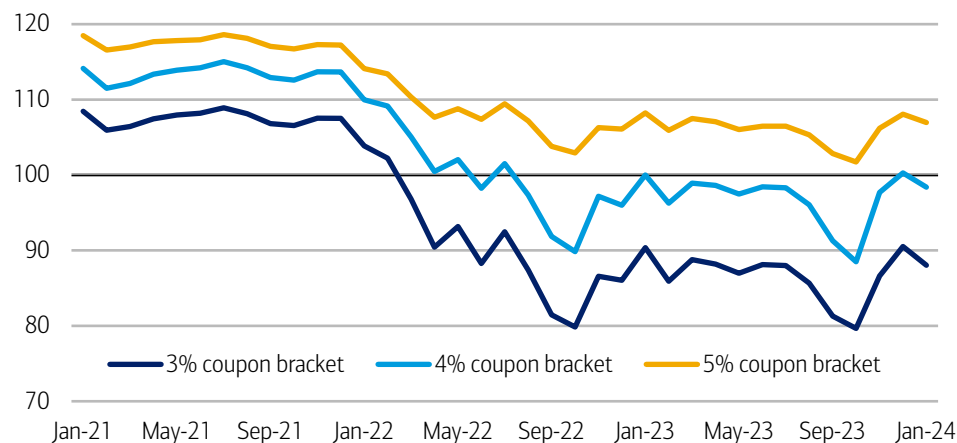
During the strong rally in the final two months of 2023, 20+ year 4% coupon spreads completely recovered to the same levels as of 10 March 2022, while inside 15-years, 4% coupon spreads remained little changed. This is likely due to the constrained rate cutting program ahead as indicated in the Fed's DOTs Plot due to a different inflationary framework. Also, it shows investors' behavior during the rally was bifurcated, with the rally inside the 15-year exclusively about 5% AAA coupon rates, while at 20+ years risk takers liked the beaten up 4% coupons and large discount prices. Again, **for investors who are afraid of long end rates, we like to remind them that in an elevated inflation environment such as the 1970s and 1980s, Fed rate cuts were constrained, 10s30s Treasuries traded around 0bp all the time and 10s30s munis were very flat. As such, if one is not afraid of the 10-year AAA, the 30-year AAA should be well within the scope of consideration as well.**

The January yield backup process is now getting more meaningful for munis, especially after mid-month. Investors' sensitivity about 4% coupons are reflected in the recent widening of 4% coupon spreads. First, the entire 4% coupon spread curve rose above its levels on 10 March 2022; secondly, in 15+ years, 4% coupon spreads are 15bp higher than on 10 March 2022. This shows the yield backups for 4% coupons are more significant than 5% coupons.

In the same token, if the market rally resumes down the road, 4% coupon spreads should represent opportunities, we think. As it stands, the 4% coupon bracket's weighted average price according to ICE data is back below par, though as Exhibit 4 below shows, its 98.4 price is up roughly 10pt versus where they ended October 2023.

#### Exhibit 4: Weighted average prices of coupon brackets

Weighted average price of 4% coupons sits at 98.4



Note: Jan-24 data as of 23 January 2024.

Source: ICE Data Indices, LLC

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Exhibit 5 shows the weighted avg price of 3% coupon bracket (3s), 4% coupon bracket (4s) and 5% coupon bracket (5s) by sector at various points of the curve. It shows that only 4s in the airport, power and utilities-other sectors have a price below par at 5-10yrs, and only industrial development revenue and multi-family housing bonds do between 10-15 years. Between 15 and 20 years, though, 12 of the 19 sectors' bonds are priced below par. Beyond 20 years, only single family housing bonds' 4s price above par.

#### Exhibit 5: Price, by sector, maturity and coupon bracket

Discount 4s inside 15 years are harder to come by now

Sector	0-5yrs			5-10yrs			10-15yrs			15-20yrs			20-25yrs			25-30yrs		
	3s	4s	5s	3s	4s	5s	3s	4s	5s	3s	4s	5s	3s	4s	5s	3s	4s	5s
AIR	-	-	104.5	-	99.0	108.2	93.6	101.5	106.2	-	98.3	103.8	80.0	95.7	103.3	77.0	93.0	104.0
EDU	100.1	102.5	105.5	98.0	103.8	113.3	96.5	101.9	111.6	86.2	99.4	108.2	80.2	97.1	106.3	76.8	93.5	109.7
GO-L	99.6	102.6	105.0	99.1	103.8	111.2	94.4	102.0	110.0	86.5	100.1	107.4	80.5	98.7	107.7	75.7	97.4	107.9
GO-S	100.0	102.5	105.2	99.0	103.8	110.8	95.3	103.3	111.3	88.4	101.2	109.3	82.3	98.7	107.0	78.5	100.0	108.6
HLTH	100.1	99.6	105.5	-	-	105.3	-	-	101.1	-	87.5	96.2	79.7	86.0	97.4	76.0	84.4	100.5
HOSP	100.0	101.8	104.6	99.1	100.8	110.1	95.2	100.3	106.6	86.1	97.4	102.8	77.1	94.6	102.5	73.9	92.8	105.0
IDR	100.7	100.1	102.9	95.4	100.8	107.6	-	98.7	112.3	80.2	95.0	103.4	-	89.7	100.3	73.7	82.4	102.0
LCA	99.3	102.5	105.3	98.0	104.0	110.8	92.3	102.6	110.9	84.0	99.2	106.1	77.6	97.1	105.7	75.5	96.7	104.3
MFH	99.8	100.9	102.5	96.8	100.2	107.5	93.8	98.7	104.6	88.2	100.8	110.0	90.2	98.7	106.0	79.0	98.5	108.0
MISC	97.8	103.1	104.8	96.0	105.2	115.2	93.2	104.9	114.1	95.7	100.8	104.7	80.7	98.0	105.3	73.8	94.3	107.7
PC	99.8	100.4	106.1	97.2	101.5	109.3	95.8	102.1	106.5	-	98.2	105.0	71.8	94.1	101.7	-	-	107.4
PWR	99.2	100.2	105.0	96.4	100.0	107.9	95.9	101.0	108.7	88.9	99.3	107.1	-	98.0	106.8	81.5	95.4	108.2
SFH	100.0	-	-	96.6	-	-	93.4	102.7	108.9	86.9	100.9	106.5	88.8	100.0	104.1	96.3	100.1	104.9
TAX	98.2	101.6	105.4	97.8	103.6	111.2	93.5	103.6	110.3	86.2	99.8	107.9	78.2	97.5	107.1	76.2	95.6	108.0
TBCO	100.4	-	103.5	-	-	106.9	-	100.3	105.5	-	100.1	101.4	73.3	89.5	101.6	-	94.3	103.8
T&T	-	-	104.7	100.2	103.1	107.3	93.5	101.9	106.0	86.3	99.4	104.4	77.5	97.1	104.5	76.3	94.6	105.0
TRAN	98.5	102.7	104.9	97.0	103.4	109.1	90.4	102.3	108.1	86.0	99.1	105.4	82.3	96.6	104.8	75.9	93.6	106.3
UTL	99.7	99.6	103.1	98.3	98.9	106.1	93.0	101.6	107.8	76.2	98.7	104.7	-	96.1	105.2	-	94.1	105.4
W&S	99.1	101.8	104.9	99.0	103.3	111.3	94.4	102.4	109.7	86.9	100.8	105.3	81.5	98.4	105.9	75.5	97.0	108.1
<b>Overall</b>	<b>99.8</b>	<b>100.8</b>	<b>104.9</b>	<b>97.9</b>	<b>102.3</b>	<b>110.0</b>	<b>94.2</b>	<b>102.3</b>	<b>109.4</b>	<b>86.7</b>	<b>99.4</b>	<b>106.2</b>	<b>80.4</b>	<b>96.9</b>	<b>105.1</b>	<b>80.5</b>	<b>94.9</b>	<b>106.6</b>

Note: Highlighted are below par

Source: BofA Global Research, ICE Data Indices, LLC

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Note that, in January-to-date, only about 8.4% of newly issued bonds are 4% or lower coupons. During November-December 2023, 9.7% of newly issued bonds had 4% or less coupons.

# Performance

## Despite losses, exempt IG still outperforming taxables

For the MTD, 10yr AAA MMD rates sold off 18bp, sitting at 2.46% as of 24 January. 10yr Treasury rates have sold off over 30bp over that period. So, while exempt IG's returns thus far have been negative at -111bp, exempt IG is outperforming its taxable counterparts: govies returned -151bp YTD, corporates -116bp and taxable munis -151bp. Exempt IG is, however, underperforming HY munis MTD by some 77bp.

### Exhibit 6: Municipal total returns (%) monitor, as of 24 January 2024

Despite negative returns to start the year, exempt IG munis outperforming taxable counterparts

Index	Ticker	1d	1wk	MTD	1mo	3mo	YTD	1yr
Govt Master	GOAO	-0.231	-0.399	-1.511	-1.280	5.059	-1.511	-0.307
Corporate Master	COAO	-0.146	-0.188	-1.161	-0.747	8.105	-1.161	3.247
<b>IG munis</b>	<b>UOAO</b>	<b>-0.024</b>	<b>-0.546</b>	<b>-1.110</b>	<b>-0.871</b>	<b>7.568</b>	<b>-1.110</b>	<b>2.198</b>
AAA	UOA1	-0.030	-0.591	-1.265	-1.015	7.485	-1.265	1.529
AA	UOA2	-0.020	-0.513	-1.116	-0.900	7.290	-1.116	1.820
A	UOA3	-0.033	-0.558	-1.031	-0.769	7.874	-1.031	2.949
BBB	UOA4	-0.009	-0.708	-1.043	-0.697	9.047	-1.043	3.791
1-3yr	U1A0	0.014	-0.061	-0.300	-0.214	2.246	-0.300	2.013
3-7yr	U2A0	-0.013	-0.287	-0.776	-0.629	4.678	-0.776	1.458
7-12yr	U3A0	-0.056	-0.528	-0.971	-0.779	6.721	-0.971	1.673
12-22yr	U4A0	-0.043	-0.682	-1.173	-0.884	9.234	-1.173	3.085
22+yr	U5A0	-0.011	-0.828	-1.753	-1.399	11.194	-1.753	2.004
<b>HY munis</b>	<b>UOHY</b>	<b>0.031</b>	<b>-0.500</b>	<b>-0.344</b>	<b>-0.005</b>	<b>7.641</b>	<b>-0.344</b>	<b>2.532</b>
Non-rated	UONR	-0.040	-0.738	-0.985	-0.795	8.468	-0.985	3.443
<b>General Obligation</b>	<b>UOAG</b>	<b>-0.021</b>	<b>-0.518</b>	<b>-1.104</b>	<b>-0.896</b>	<b>6.906</b>	<b>-1.104</b>	<b>1.757</b>
AAA	UGA1	-0.049	-0.623	-1.338	-1.117	7.339	-1.338	1.216
AA	UGA2	-0.017	-0.489	-1.079	-0.872	6.875	-1.079	1.680
A	UGA3	0.016	-0.494	-0.801	-0.624	6.235	-0.801	2.084
BBB	UGA4	-0.003	-0.420	-0.537	-0.317	6.040	-0.537	5.056
State	UOAA	-0.025	-0.464	-0.932	-0.758	5.862	-0.932	1.774
Local	UOAB	-0.018	-0.581	-1.303	-1.058	8.124	-1.303	1.713
<b>Revenue</b>	<b>UOAR</b>	<b>-0.025</b>	<b>-0.555</b>	<b>-1.112</b>	<b>-0.862</b>	<b>7.783</b>	<b>-1.112</b>	<b>2.340</b>
AAA	URA1	-0.018	-0.568	-1.215	-0.946	7.582	-1.215	1.746
AA	URA2	-0.021	-0.523	-1.132	-0.913	7.467	-1.132	1.878
A	URA3	-0.037	-0.564	-1.050	-0.781	8.018	-1.050	3.027
BBB	URA4	-0.010	-0.731	-1.084	-0.727	9.299	-1.084	3.360
Airport	UOAV	-0.060	-0.599	-1.084	-0.799	7.612	-1.084	2.544
Education	UOAE	-0.067	-0.604	-1.152	-0.910	8.198	-1.152	1.933
Health	UOHL	-0.003	-0.709	-0.791	-0.236	10.849	-0.791	2.939
Hospital	UOAH	-0.026	-0.667	-1.342	-1.065	9.808	-1.342	2.086
Industrial Development Rev	UOID	-0.006	-0.765	-1.204	-0.928	8.235	-1.204	3.833
Leases, COPs & Appropriations	UOAL	-0.008	-0.509	-1.056	-0.826	6.913	-1.056	1.894
Miscellaneous	UOAM	-0.055	-0.592	-1.170	-0.949	7.224	-1.170	1.454
Multi-family Housing	UOAU	-0.013	-0.589	-1.240	-0.951	7.569	-1.240	1.982
Pollution Control	UOAQ	-0.031	-0.401	-0.801	-0.638	6.087	-0.801	1.739
Power	UOAP	-0.031	-0.443	-0.893	-0.626	6.443	-0.893	1.977
Single-family Housing	UOAS	-0.045	-0.492	-1.201	-0.956	6.627	-1.201	1.064
Tax Revenue	UOTX	0.007	-0.571	-1.259	-1.027	7.978	-1.259	2.287
Tobacco	UOTB	0.000	-0.382	-0.456	-0.162	6.125	-0.456	3.068
Toll & Turnpike	UOTL	-0.007	-0.519	-0.937	-0.693	7.608	-0.937	2.417
Transportation - other	UOAT	-0.047	-0.572	-1.153	-0.915	7.655	-1.153	3.288
Utilities - other	UOUT	-0.049	-0.440	-0.821	-0.575	6.398	-0.821	3.207
Water & Sewer	UOAW	-0.011	-0.468	-1.012	-0.790	7.432	-1.012	1.950
<b>Taxable</b>	<b>TXMB</b>	<b>-0.242</b>	<b>-0.390</b>	<b>-1.514</b>	<b>-1.220</b>	<b>7.549</b>	<b>-1.514</b>	<b>1.383</b>
Build America Bonds	BABS	-0.235	-0.378	-1.454	-1.137	7.761	-1.454	0.635
<b>VRDOs</b>	<b>VRDO</b>	<b>0.010</b>	<b>0.054</b>	<b>0.165</b>	<b>0.266</b>	<b>0.798</b>	<b>0.165</b>	<b>3.177</b>
Daily reset	VRDD	0.012	0.058	0.119	0.221	0.716	0.119	3.001
Weekly reset	VRDW	0.009	0.051	0.192	0.292	0.846	0.192	3.277

Source: ICE Data Indices, LLC

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Thus far in 2024, single-As' returns are strongest, with their -103bp of total returns while AAAs' -127bp are weakest. Note that GOs' performance overall is largely in line with revenue bonds, though AAA GOs are underperforming their revenue counterpart by



12bp; single-A GOs, though, are outperforming single-A revenue bonds by 25bp YTD. Among the maturity indexes, the longest maturities' (22+yr) have the weakest returns YTD, returning -175bp while the shortest maturity indexes returns (the 1-3yr index) are strongest at -30bp.

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

Muni IG spreads widened 1bp w/w to 22bp and are sitting at the 19<sup>th</sup> percentile of their 52-week range. Muni HY spreads tightened 1bp to 208bp or the 60<sup>th</sup> percentile. Non-rated spreads widened 1bp to 222bp. Both GO and Revenue spreads widened 1bp over the week. Among the muni IG revenue bond sectors, Tobacco narrowed the most by 1bp. The Industrial Development Revenue sector saw the most widening at 4bp for the week.

### Exhibit 7: Muni YTW spread monitor as of 24 January 2024

Muni IG spreads widened 1bp w/w overall while HY spreads tightened 1bp

	52wk				Current 1/24/24	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>22</b>	<b>22</b>	<b>3</b>	<b>-13</b>	<b>1</b>	<b>0</b>	<b>19</b>	<b>101</b>	<b>3.60</b>
AA	2	12	4	4	4	2	-8	0	0	20	102	3.42
A	49	77	52	52	53	4	-24	1	1	14	99	3.91
BBB	94	142	109	110	111	17	-31	2	1	35	96	4.49
<b>High Yield</b>	<b>176</b>	<b>229</b>	<b>209</b>	<b>208</b>	<b>208</b>	<b>32</b>	<b>-21</b>	<b>-1</b>	<b>0</b>	<b>60</b>	<b>94</b>	<b>5.46</b>
Non-rated	174	298	221	222	222	48	-76	1	0	39	64	5.60
<b>General Obligation</b>	<b>-12</b>	<b>-4</b>	<b>-9</b>	<b>-9</b>	<b>-8</b>	<b>4</b>	<b>-4</b>	<b>1</b>	<b>1</b>	<b>50</b>	<b>102</b>	<b>3.30</b>
AA	-19	-9	-15	-14	-14	5	-5	1	0	50	102	3.24
A	-15	29	4	7	7	22	-22	3	0	50	104	3.45
BBB	50	115	71	73	73	23	-42	2	0	35	96	4.11
State	-30	-20	-28	-27	-26	4	-6	2	1	40	106	3.12
Local	7	17	13	13	13	6	-4	0	0	60	98	3.51
<b>Revenue</b>	<b>30</b>	<b>49</b>	<b>31</b>	<b>32</b>	<b>32</b>	<b>2</b>	<b>-17</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>101</b>	<b>3.70</b>
AA	10	23	12	12	12	2	-11	0	0	15	102	3.50
A	53	81	56	56	57	4	-24	1	1	14	99	3.95
BBB	96	147	112	113	114	18	-33	2	1	35	96	4.52
Airport	52	84	58	59	60	8	-24	2	1	25	103	3.98
Education	9	35	12	12	13	4	-22	1	1	15	104	3.51
Health	135	174	152	152	152	17	-22	0	0	44	93	4.90
Hospital	60	89	64	66	67	7	-22	3	1	24	99	4.05
Industrial Development Rev	67	123	85	89	89	22	-34	4	0	39	99	4.27
Leases, COPs & Appropriations	-4	13	-2	-2	-2	2	-15	0	0	12	103	3.36
Miscellaneous	-3	12	5	5	5	8	-7	0	0	53	101	3.43
Multi-family Housing	54	89	64	64	64	10	-25	0	0	29	94	4.02
Pollution Control	30	64	59	59	60	30	-4	1	1	88	98	3.98
Power	22	39	23	23	23	1	-16	0	0	6	104	3.61
Single-family Housing	69	89	88	87	87	18	-2	-1	0	90	98	4.25
Tax Revenue	3	17	4	4	4	1	-13	0	0	7	101	3.42
Tobacco	-22	40	5	4	4	26	-36	-1	0	42	101	3.42
Toll & Turnpike	23	49	24	24	25	2	-24	1	1	8	98	3.63
Transportation - other	24	55	24	24	25	1	-30	1	1	3	99	3.63
Utilities - other	67	105	72	72	73	6	-32	1	1	16	103	4.11
Water & Sewer	3	20	13	13	13	10	-7	0	0	59	103	3.51

**Note:** YTW spread to the ICE BofA AAA US Municipal Securities Index (UOA1).

**Source:** BofA Global Research, ICE Data Indices, LLC

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## Supply & demand

### YTD issuance totals \$23.8bn, up 24% y/y

YTD issuance as of 24 January 2024 totaled \$23.8bn, up 24% y/y. 74% of YTD issuance is new money and 26% is refundings. New money volumes are up 30% y/y while refunding volumes are up 9%.



**Exhibit 8: Issuance summary (\$mn)**

YTD-24 issuance of \$23.8bn was up 24% y/y; new money up 30% y/y but refundings up 9% y/y

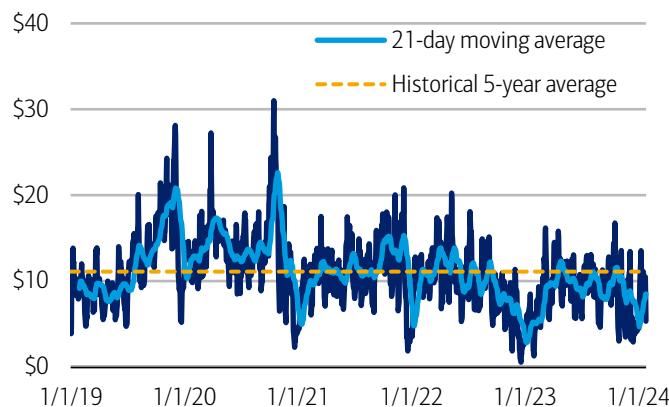
	Month-to-date			Annual, 2023 vs 2022		
	1/24/24	1/24/23	y/y % Δ	2023	2022	y/y % Δ
<b>Total</b>	<b>23,754.7</b>	<b>19,203.5</b>	<b>24%</b>	<b>380,361.0</b>	<b>391,298.2</b>	<b>-3%</b>
New Money	17,616.0	13,585.4	30%	294,914.4	309,852.5	-5%
Total Refunding	6,138.7	5,618.1	9%	85,446.6	81,445.7	5%
Advanced refunding	0.0	547.2	-100%	1,380.9	2,155.9	-36%
Unknown refunding	6,138.7	3,972.0	55%	79,314.2	71,802.7	10%
Current & Forward refunding	0.0	1,098.9	-100%	4,751.5	7,487.2	-37%
Insured	2,066.6	1,925.4	7%	31,855.9	28,884.3	10%
Fixed Rate	20,194.9	16,452.0	23%	336,132.2	358,785.9	-6%
Variable Rate Long	3,137.0	2,250.8	39%	29,619.6	16,219.9	83%
Variable Rate Short	149.8	436.8	-66%	12,449.7	11,532.8	8%
Linked Rate	0.0	50.0	-100%	1,573.3	2,869.4	-45%
Zero Coupon	273.0	13.9	1865%	435.6	1,283.0	-66%
Convertible	0.0	0.0	-	150.6	607.2	-75%
Variable rate no put	0.0	0.0	-	-	-	-
Tax Exempt	22,869.9	16,624.2	38%	326,209.2	315,316.7	3%
Taxable	859.1	2,057.3	-58%	37,443.5	54,279.5	-31%
Alternate Minimum Tax	25.7	522.0	-95%	16,708.3	21,702.1	-23%
General Purpose	4,795.0	3,184.0	51%	96,613.4	103,670.2	-7%
Education	5,587.1	6,934.1	-19%	94,850.5	91,631.7	4%
Housing	1,391.4	1,419.8	-2%	40,259.2	31,898.8	26%
Transportation	1,391.2	1,540.1	-10%	45,325.1	56,888.2	-20%
Healthcare	2,218.2	447.8	395%	16,752.4	27,905.3	-40%
Utilities	6,036.8	3,075.5	96%	47,480.7	48,187.0	-1%
Electric Power	1,805.4	1,616.4	12%	17,680.2	12,251.1	44%
Development	376.1	631.6	-40%	10,069.0	10,193.9	-1%
Environmental Facilities	15.4	150.0	-90%	3,636.7	3,007.6	21%
Public Facilities	138.1	204.3	-32%	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 9: Bloomberg 30-day visible supply (\$bn)**

30-day visible supply was \$5.3bn as of 25 January 2024

**Note:** Data as of 25 January 2024.**Source:** Bloomberg

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**Exhibit 10: 2024 gross issuance, redemption forecasts vs actuals (\$bn)**

Gross issuance forecast of \$400bn vs \$594bn of prin. &amp; cpn. redemptions

Month	Issuance		Prin. & cpn redemptions	
	Forecast	Actual	Forecast	Actual
January	\$26	24*	\$48	
February	27		51	
March	32		41	
April <sup>1</sup>	31		33	
May	32		41	
June	39		65	
July	30		65	
August	38		68	
September	34		38	
October	42		46	
November	33		44	
December	36		54	

**Note:** Totals may not add up due to rounding. Data as of 24 January 2024.**Source:** BofA Global Research, LSEG, Bloomberg

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## Curve

**Curve shifts up 7bp w/w on avg and up 19bp m/m**

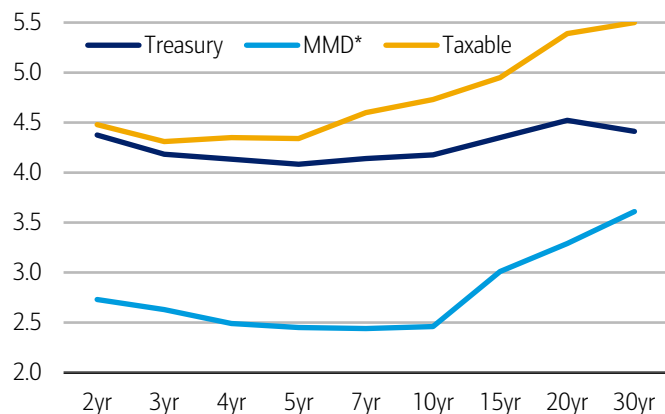
The AAA MMD curve rose 7bp w/w on average, and cheapened by 19bp m/m. For the week, the 1s5s slope inversion decreased by 8bp to -46bp, 30bp flatter than one year ago; the 5s10s flattened 2bp w/w to 1bp and is 13bp flatter than it was one year ago; the 10s20s slope was flat w/w at 83bp and is 7bp steeper than one year ago, the 20s30s



was also 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 11: AAA GO muni, Treasury and taxable yield curves (%)

On average Tsy, & MMD cheapened while taxable narrowly richened w/w



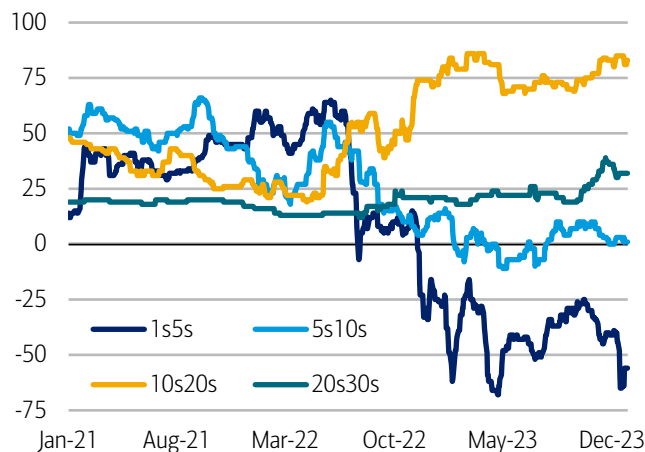
Note: \*MMD AAA GO yield curve. As of 24 January 2024.

Source: BofA Global Research, Refinitiv, Bloomberg

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#### Exhibit 12: Curve slope (bp)

10s20s and 20s30s stayed flat w/w

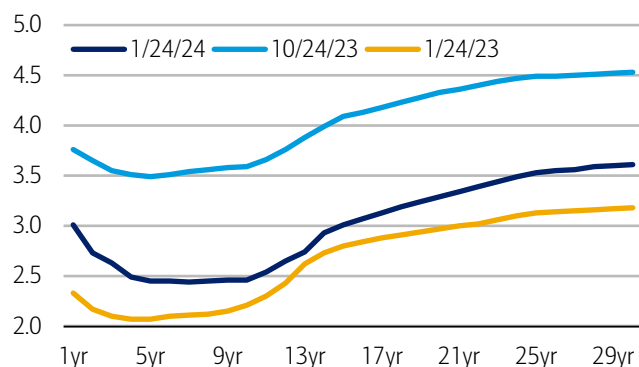


Source: Refinitiv

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#### Exhibit 13: 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 14: Rich/cheap analysis of MMD\*/Treasury ratios as of 24 January 2024

The muni market is Rich at 30yr on a ST basis and Rich at 10yr on a LT basis while the rest are Neutral

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	4.183%	62.9%	Neutral	74.1%	57.1%	63.8%	Neutral	130.7%	26.7%	61.8%
5yr	4.083%	60.0%	Neutral	74.3%	56.2%	63.4%	Neutral	92.0%	39.3%	63.3%
10yr	4.176%	58.9%	Neutral	74.9%	56.4%	64.1%	Rich	105.3%	54.7%	72.4%
30yr	4.412%	81.8%	Rich	92.3%	80.7%	86.9%	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 15: Rich/cheap analysis of MMD\* slopes (bp) as of 24 January 2024**

The slope at 10s30s is Neutral on a ST basis and Steep on a LT basis while the rest are Flat

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	-39	Flat	65	-68	9
1s10s	-55	Flat	-15	-63	-34	Flat	120	-74	35
10s30s	115	Neutral	123	94	110	Steep	123	32	71
1s30s	60	Flat	84	54	76	Flat	170	26	106

**Note:** See note in Exhibit 14 above.

**Source:** BofA Global Research, Refinitiv, Bloomberg

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**OAS rich/cheap analysis**

At 7-12yr maturities, AA Utilities - Other and AA Higher Education's OAS are very cheap, while AAA and AA Water & Sewer are cheap, among others. AAA Local GO, Pollution Control and Tax Revenue are very rich. At 22+yr maturities, BBB State GO and Utilities are very rich, while AA Hospital and AAA State & Local GOs are cheap among others.

**Exhibit 16: Rich/cheap analysis of 7-12yr indexes' OAS (bp)**

AA Utilities' current OAS of 48bp at 7-12yrs is currently Very Cheap against its 3yr OAS average of 9bp

Sector	Current OAS				Rich/cheap analysis				3yr OAS average			
	AAA	AA	A	BBB	AAA	AA	A	BBB	AAA	AA	A	BBB
Airports		36	34	66		N	N	N		32	31	57
Higher Education	-15	-13	45		N	VC	N		-8	-3	40	
GO Local	2	2	52	108	VR	N	N	N	-2	8	44	114
GO State	-5	-6	52	0	N	N	N	R	-6	-4	43	100
Health		21	74	142		N	N	N		20	71	108
Hospital		9	39	86		N	N	N		17	39	97
IDR		53	72	89		N	N	N		37	53	80
Leases COPS & Appr.		10	22	143		N	N	N		10	35	111
Pollution Control	5		100		VR		N		-1		73	
Power	-7	-6	71		N	N	C		-4	-4	27	
Tax Revenues	-3	2	60	108	VR	N	N	N	3	6	55	117
Tobacco			38				N				48	
Toll & Turnpike		16	14	82		N	N	N		21	18	81
Transportation - Other	0	14	41	0	R	N	N	R	5	13	56	88
Utilities - Other	0	48	112		R	VC	C		-2	9	44	
Water & Sewer	-12	-14	12	2	C	C	N	N	-5	-6	13	105

**Note:** Data as of 23 January 2024. Only includes non-prerefunded bonds. Benchmark is 3-yr avg.

**Source:** ICE Data Indices, LLC

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**Exhibit 17: Rich/cheap analysis of 22yr+ indexes' OAS (bp)**

BBB Utilities' current OAS of 0bp at 22yr+ is currently Very Rich against its 3yr OAS average of 57bp

Sector	Current OAS				Rich/cheap analysis				3yr OAS average			
	AAA	AA	A	BBB	AAA	AA	A	BBB	AAA	AA	A	BBB
Airports		41	34	31		N	N	N		27	26	14
Higher Education	36	9	27	98	N	N	N	N	25	-8	20	76
GO Local	15	13	22	91	C	N	N	N	-9	2	22	77
GO State	3	3		0	C	C		VR	-25	-19		83
Health		-26	58	187		N	N	C		-16	38	111
Hospital		26	35	77		C	N	N		7	25	57
IDR			71	83			N	N			54	70
Leases COPS & Appr.	17	5	28	67	N	N	N	N	-5	-5	31	49
Pollution Control			28				N				17	
Power		9	22	40		N	N	N		-5	17	44
Tax Revenues	24	14	65	67	C	N	N	N	8	4	50	74
Tobacco				100				N				85
Toll & Turnpike			20	42			N	N			12	42
Transportation - Other		0	29	71		N	N	N		11	33	50
Utilities - Other		18	37	0		C	N	VR	-7	-7	23	57
Water & Sewer	7	3	3		C	N	N		-18	-13	-2	

**Note:** Data as of 23 January 2024. Only includes non-prerefunded bonds. Benchmark is 3-yr avg.

**Source:** ICE Data Indices, LLC

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## Cross sector rich/cheap

### Exhibit 18: Cross sector rich/cheap analysis of YTW spreads (bps; as of 23 January 2024)

PC's, SFH's and W&S' spreads to other sectors are largely cheap, while T&T's and TRAN's skew more rich

	Market	GO	GO-S	GO-L	REV	AIR	EDU	HLTH	HOSP	IDR	LCA	MISC	MFH	PC	PWR	SFH	TAX	TBCO	T&T	TRAN	UTL	W&S
GO	-31		18	-22	-41	-68	-21	-161	-75	-98	-7	-14	-73	-68	-32	-96	-13	-13	-33	-33	-81	-22
GO-S	-49	-18		-40	-59	-86	-39	-179	-93	-116	-25	-32	-91	-86	-50	-114	-31	-31	-51	-51	-99	-40
GO-L	-9	22	40		-19	-46	1	-139	-53	-76	15	8	-51	-46	-10	-74	9	9	-11	-11	-59	0
REV	10	41	59	19		-27	20	-120	-34	-57	34	27	-32	-27	9	-55	28	28	8	8	-40	19
AIR	37	68	86	46	27		47	-93	-7	-30	61	54	-5	0	36	-28	55	55	35	35	-13	46
EDU	-10	21	39	-1	-20	-47		-140	-54	-77	14	7	-52	-47	-11	-75	8	8	-12	-12	-60	-1
HLTH	130	161	179	139	120	93	140		86	63	154	147	88	93	129	65	148	148	128	128	80	139
HOSP	44	75	93	53	34	7	54	-86		-23	68	61	2	7	43	-21	62	62	42	42	-6	53
IDR	67	98	116	76	57	30	77	-63	23		91	84	25	30	66	2	85	85	65	65	17	76
LCA	-24	7	25	-15	-34	-61	-14	-154	-68	-91		-7	-66	-61	-25	-89	-6	-6	-26	-26	-74	-15
MISC	-17	14	32	-8	-27	-54	-7	-147	-61	-84	7		-59	-54	-18	-82	1	1	-19	-19	-67	-8
MFH	42	73	91	51	32	5	52	-88	-2	-25	66	59		5	41	-23	60	60	40	40	-8	51
PC	37	68	86	46	27	0	47	-93	-7	-30	61	54	-5		36	-28	55	55	35	35	-13	46
PWR	1	32	50	10	-9	-36	11	-129	-43	-66	25	18	-41	-36		-64	19	19	-1	-1	-49	10
SFH	65	96	114	74	55	28	75	-65	21	-2	89	82	23	28	64		83	83	63	63	15	74
TAX	-18	13	31	-9	-28	-55	-8	-148	-62	-85	6	-1	-60	-55	-19	-83		0	-20	-20	-68	-9
TBCO	-18	13	31	-9	-28	-55	-8	-148	-62	-85	6	-1	-60	-55	-19	-83	0		-20	-20	-68	-9
T&T	2	33	51	11	-8	-35	12	-128	-42	-65	26	19	-40	-35	1	-63	20	20		0	-48	11
TRAN	2	33	51	11	-8	-35	12	-128	-42	-65	26	19	-40	-35	1	-63	20	20	0		-48	11
UTL	50	81	99	59	40	13	60	-80	6	-17	74	67	8	13	49	-15	68	68	48	48		59
W&S	-9	22	40	0	-19	-46	1	-139	-53	-76	15	8	-51	-46	-10	-74	9	9	-11	-11	-59	

**Note:** Dark blue shaded cells are Very Cheap; light blue shaded cells are Cheap; unshaded cells are Neutral; yellow shaded cells are Rich; orange shaded cells are Very Rich. Based on z-scores over the last 12 months. If a z-score is >2, then we view it as "Very Cheap"; if it is >1 but <2, then we view it as "Cheap"; if it is between -1 and 1, then we view it as "Neutral"; if it is <-1 but >-2, then we view it as "Rich"; lastly, if it is <-2, then we view it as "Very Rich". Read horizontally. For example, while Power's current 10bp spread to GO-L is very rich, it's -1bp spread to T&T is nonetheless cheap. See Exhibit 31 for sector definitions.

**Source:** BofA Global Research, ICE Data Indices, LLC

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## MWIs had small decreases 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 had small decreases in the overpriced space w/w, with the Industrial Development Revenue, Multi-Family Housing decreasing most. Industrial Development Revenue and Multi-Family Housing's MWI are the lowest.

### Exhibit 19: MWIs – sector momentum (%) as of 23 January 2024

Most sectors' MWIs had small decreases over the past week

Sector	MWI	m/m Δ	Sector	MWI	m/m Δ
UOA0 Index	98.7%	-0.7%	Miscellaneous	99.6%	-0.4%
ETM	96.6%	0.0%	Multi-Family Housing	91.0%	-6.0%
GO - Local	99.2%	-0.4%	Pollution Control	97.0%	-2.2%
GO - State	98.8%	-1.0%	Power	97.0%	-1.3%
Pre-Re	100.0%	0.0%	Single Family Housing	95.9%	-1.1%
Airport	98.2%	-0.5%	Tax revenue	99.5%	-0.4%
Education	99.6%	-0.3%	Tobacco	97.5%	0.0%
Health	98.3%	-1.7%	Toll & Turnpike	99.5%	0.3%
Hospitals	99.5%	-0.3%	Transportation	99.3%	-0.6%
Industrial Development Rev	91.0%	-5.6%	Utilities - Other	95.2%	-1.8%
Leasing COPS & Appropriations	99.4%	0.5%	Water & Sewer	97.9%	-1.0%

**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 13013JDR4, totaling \$243.4mn. Those are newly issued California Community Choice Financing Authority clean energy project bonds due in 2054. By number trades it was 235308Q22, totaling 299 trades. These are Dallas Texas Independent School District unlimited tax school building and refunding bonds due in 2054.



**Exhibit 20: Most actively traded muni CUSIPs over the week ending 24 January 2024**235308Q22 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)
13013JDR4	CA CMNTY CHOICE FING	CA	5s of '54	--	164	84	2.90
235308Q22	DALLAS ISD	TX	4s of '54	4.27	64	299	0.66
65830RDA4	N CAROLINA TPK AUTH-A	NC	5s of '58	4.28	65	179	0.97
499526AU5	KNOX CO HLTH EDU-A1	TN	5s of '64	4.29	66	245	0.53
46615SFP8	JEA WTR REV-A-REV	FL	5.5s of '54	4.04	41	83	1.23
64972GMV7	NYC MUNI WTR FIN-CC	NY	5.25s of '46	3.08	-39	270	0.31
34061QCV7	FLORIDA DEV FIN CORP	FL	4.5s of '55	4.68	105	84	0.86
402207AD6	GULF COAST INDL DEV	TX	3.05s of '41	--	-326	19	3.75
983069BW4	WYLIE ISD	TX	4.25s of '54	4.40	77	75	0.92
798306ZS8	SAN JUAN UNIF SD	CA	4s of '49	4.00	44	232	0.30
46615SFN3	JEA WTR REV-A-REV	FL	5.25s of '49	3.99	42	35	1.95
79905CAB9	SAN MATEO TRANSPRTN-B	CA	2.7s of '49	--	-1200	21	2.96
830227EP5	SKAGIT PUB HOSP DT#1	WA	5.5s of '54	4.98	135	39	1.55
010869MJ1	ALAMEDA CORRIDOR-A	CA	0s of '53	4.82	119	25	2.38
13032UMN5	CA HLTH FACS-A2	CA	4s of '44	4.00	60	100	0.59
13057EBD5	CA PUB FIN AUTH-B	CA	2.65s of '52	--	58	14	4.19
59261AM53	MET TRANSP AUTH-E1	NY	3.05s of '50	--	-359	14	3.93
64966MSD2	NY CITY-B5-VAR	NY	3.05s of '46	--	-349	18	3.00
13063D7G7	CALIFORNIA ST-TXBL	CA	5.875s of '41	5.42	125	13	4.15
010869ME2	ALAMEDA CORRIDOR-D	CA	0s of '48	6.29	188	21	2.50

Source: Bloomberg

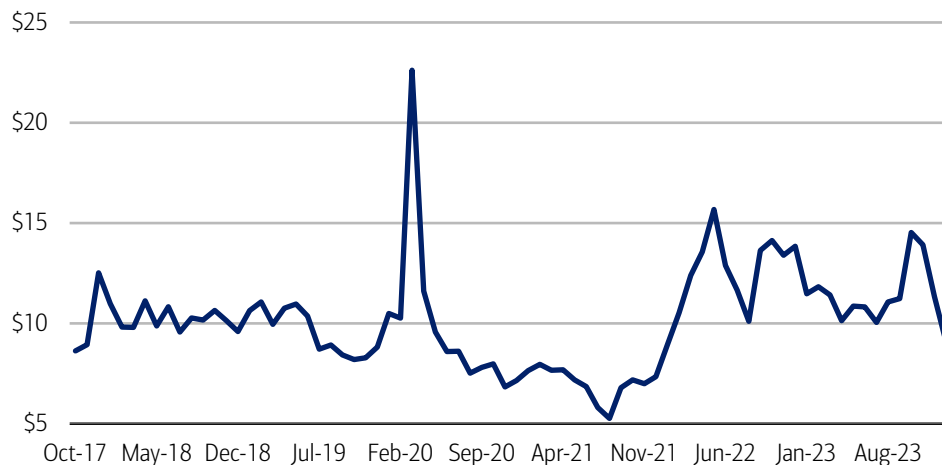
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**Jan-24's avg daily secondary trading at \$9.1bn**

Current data shows secondary trading volumes in January remain moderate relative to recent months'. As of 24 January, we see an average daily secondary trading volume of just \$9.1bn. While daily trading data is subject to revision over the course of the month, it currently represents a roughly 20% decrease a m/m basis and 21% decrease y/y. Note that, for the MTD, \$145.0bn of muni bond par value traded.

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

Jan-24 daily avg volume of \$9.1bn down 20% m/m and 21% y/y



Note: Data as of 24 January 2024.

Source: BofA Global Research, Bloomberg

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**Credit corner****State and local governments****Personal income tax collections fall while sales climb – BEA data**

State and local government personal income tax receipts totaled \$529.4bn at seasonally adjusted annual rates (SAAR) as of 4Q23, per data from the Bureau of Economic Analysis. That is down 5.5% y/y. Sales tax receipts grew 2.4% y/y to \$594.1bn SAAR, excise tax receipts grew 2.8% to \$250.5bn and property taxes – primarily the domain of



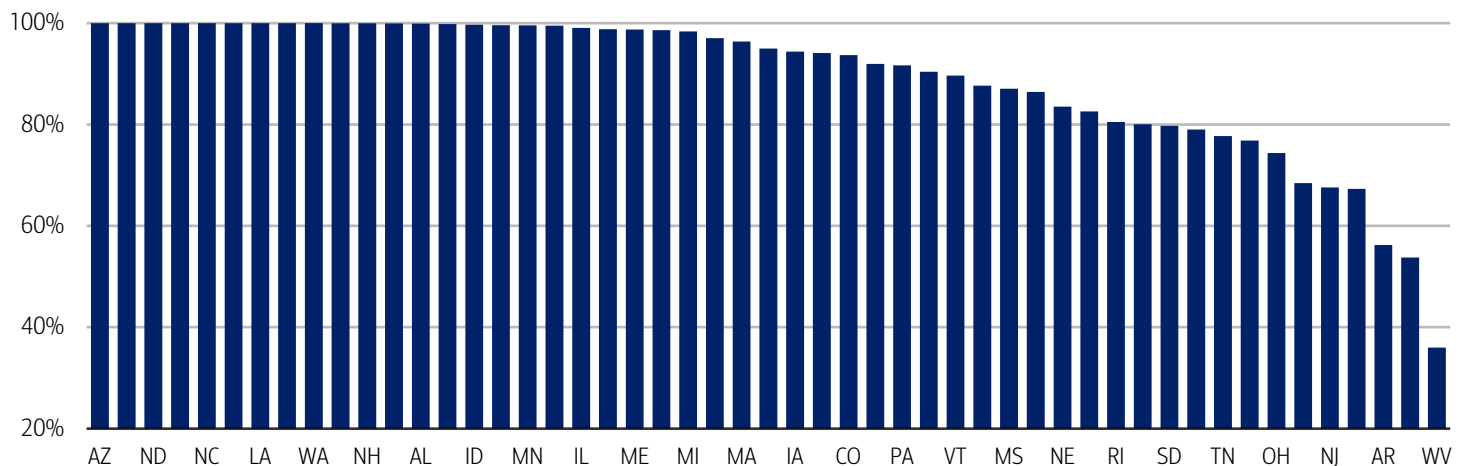
local governments – increased 2.5% y/y to \$690.9bn in 4Q23. The BEA's estimates are consistent with our own collection reporting for the quarter. As we showed in our Weeklies, the states' median personal income tax collection growth in October was -5.9% and in November just 1.3%. Sales tax collections during those months were modestly positive. States' December reporting thus far points to a modestly down month overall (for the 35 states reporting collections for the month of December, we see median y/y declines of 0.9%, with personal income and sales collections up 0.6% and 1.6%, respectively, y/y on median, but corporate collections are down 2.5%).

### State and local governments continue to budget ARPA recovery funds

The Treasury Department's latest quarterly data through 30 September showed "states and the largest cities and counties have reported budgeting 88% of their total SLFRF funds to specific projects, with the total number of reported projects growing 10% since the previous quarter, demonstrating continued steady progress in recipients' planning for the use of these funds." Per the latest data, states (and DC) adopted budgets for SLFRF projects totaling \$173.16bn, representing approximately 89% of their total SLFRF payments. Among that budgeting, the largest share is designated for revenue replacement at 39%, followed by negative economic impacts at 33% and infrastructure at 14%. Public health spending accounted for 9%. Exhibit 22 shows adopted budgeted amounts as a percentage of total SLFRF amounts by state. Treasury data shows 10 states and DC have adopted budgets for their full SLFRF amounts; it also shows that seven states budgeted less than 75%: OH (74.4%), TX (68.4%), NJ (67.6%), KY (67.3%), AR (56.2%), NY (53.8%) and WV (36.0%).

#### Exhibit 22: Adopted budgets as a percentage of total American Rescue Plan Act State Recovery Funds, by state

10 states and DC have already adopted budgets representing 100% of their respective SLFRF amounts



Source: BofA Global Research, Treasury Department

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### Guam and Camden, NJ both upgraded; Chicago to positive

Yesterday, Moody's upgraded Guam's issuer, GO, Hotel Occupancy Tax, and Business Privilege Tax bonds to Baa3 from Ba1. Guam's COPs rating was also raised, to Ba1 from Ba2. The bonds were assigned a stable outlook. The upgrades were driven by "significant improvement in the government's financial position bolstered by federal government support and substantial military construction activity, despite depressed tourism levels."

Also yesterday, the city of Camden, NJ had its GO rating upgraded to A from A- and assigned a stable outlook by S&P. The upgrade was based on Camden's "notable improvement in reserves, that although augmented by the receipt of federal stimulus funds, is also due to what we consider improved management conditions," per S&P.

Last week, Moody's revised Chicago, IL's outlook to positive from stable and affirmed its Baa3 rating. The city's Sewer Enterprise (Baa1/Baa2) and Water Enterprise (Baa1) also

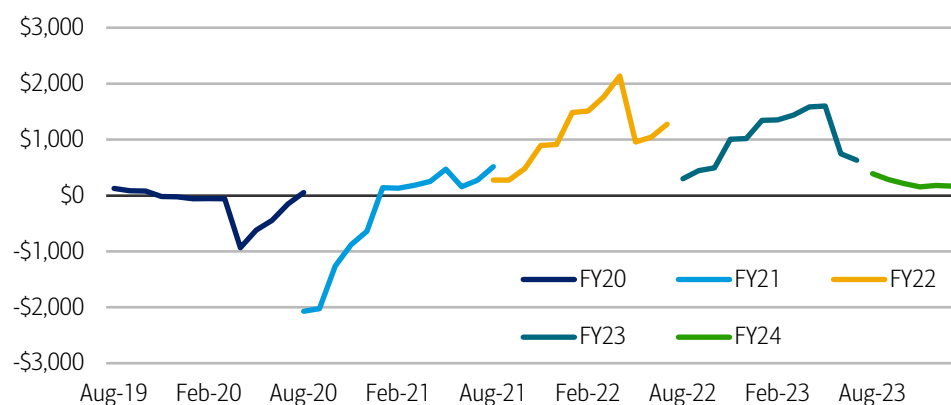
were assigned a positive outlook. The positive outlook is driven by "strengthened pension contribution practices and positive trends in the city's financial position." Moody's expects that Chicago will stick to its pension funding policy even if costs rise as a result, and that reserves will remain stable to growing.

### CT reduces forecasted FYE surplus further

In its sixth monthly estimate for FY24, CT's Office of Policy and Management (OPM) projected a \$167mn general fund surplus at fiscal year-end 2024, which is 58% below the level the adopted FY24 budget anticipated and down 6% vs the estimate from last month. The smaller surplus versus last month's estimate reflects lower revenue expectations, primarily regarding sales and use taxes; per OPM, better-than-expected collections from the withholding component of personal income taxes are "offset by weakness in the Sales and Use Tax, down \$75.0 million as collections have remained below target." 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.

#### Exhibit 23: Monthly GF surplus/deficit estimate at FY-end (\$mn)

CT decreased its FY24 surplus estimate 6% m/m in Jan to \$166.7bn



Source: BofA Global Research, CT OPM

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### NY's tax receipts besting estimates by nearly 11%

Our review of state comptroller data shows that New York's tax collections for the FYTD through December of \$74.4bn are besting updated estimates from the end of October 2023 by \$1.73bn, or 2.3%, and original estimates for the period from June in the Enacted Financial Plan by \$3.57bn, or 5.0%. Personal income and business taxes account for nearly all of the outperformance; versus updated estimates, personal income tax receipts are up \$829.3mn, or 2.3%, while business tax collections are up \$864.2mn, or 4.8%. Consumption/use collections are underperforming expectations by 0.7%, or \$116.8mn. "Other" tax collections are up 6.2% versus October's updated estimates per comptroller data, or \$149.1mn. On a y/y basis, however, only consumption/use collections are outperforming, up 7.2% overall, while personal income collections are down 13.7%, business are down 1.9% and "other" collections are down 13.5%. Overall tax receipts for the nine months ending Dec-23 are down 6.8%.

### PREPA arguments at the First Circuit in Boston

Focus on PREPA's restructuring remains on the First Circuit in Boston. While the First Circuit rejected creditors' motion to lift the bankruptcy stay, the appellate court nevertheless suggested creditors can seek a new lift stay motion, or as one legal commentator put it, "bondholders may have opportunity to make fresh attempts at additional bites of the proverbial apple." Meanwhile, in advance of their oral arguments next week, creditors also argued in court that Judge Swain erred when deciding bondholders' liens, both on the size and nature of their lien, pointing to additional sections of the trust agreements, statements from PREPA's CFO, and Puerto Rican law. Otherwise, we highlight: (a) TSA balances of \$9.1bn as of 12 January that were up

\$405mn w/w, and for the YTD are up 33.3% above adopted liquidity plan (LP) estimates; (b) FY24 General Fund collections through 12 January of \$7.2bn that were up 10.0% vs collections LP estimates; and, (c) cement sales – a bellwether for construction on island – that were down roughly 12% m/m and y/y in Dec-23.

### S&L govt union membership rate falls 0.9ppt y/y in 2023 to 34.2%

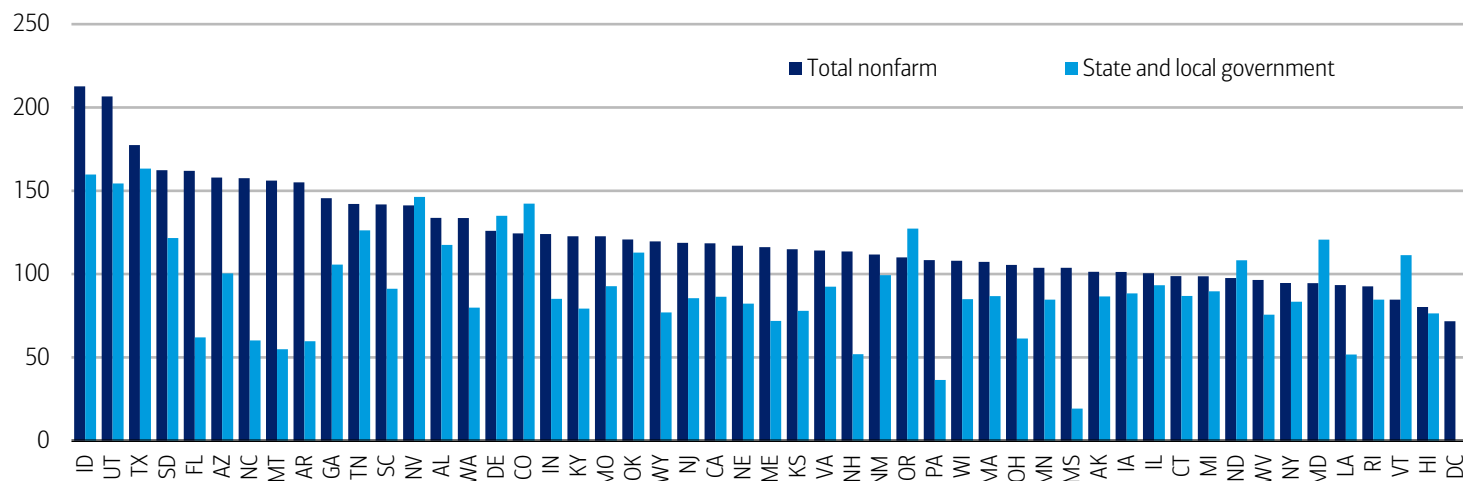
Overall, state and local governments' union membership rate fell 0.9ppt in 2023 to 34.2%. While state government union membership decreased 1.3ppt to 28.6%, local government union membership fell just 0.4ppt to 38.4% – the lowest rate since at least 2000, and down over 5.1ppt from the 2009's high of 39.3%. It is still materially higher, however, than private industry's 6% union membership rate. Why is this all important? Because union members are, simply, more costly to state and local governments. In fact, state government union members earned about 15% more per week on median than non-members in 2023, and for local government union members, about 26% more; private industry union members' median weekly wage is 10% higher than non-members'.

### Number of states fully recovering payroll losses increases to 40 as of Dec-23

40 states fully recovered jobs lost during the pandemic crisis as of Dec-23 per Bureau of Labor Statistics data, led by ID's 213% recovery. The weakest overall nonfarm payroll recoveries are still concentrated in tourism-dependent and energy-producing states. Exhibit 24 shows that state and local government payroll recoveries remain weaker across the states, fully recovering in just XX states: TX, SD, AZ, GA, TN, NV, AL, DE, CO, OK, OR, ND, MD and VT. Also, just seven states' public sector payroll recoveries exceed their overall nonfarm payroll recoveries: NV, DE, CO, OR, ND, MD and VT.

#### Exhibit 24: Nonfarm payroll and state and local payroll recoveries as of December 2023, by state (%)

State and local government payroll recoveries exceed overall nonfarm payroll recoveries in 7 states, but are complete in 16 states



Source: BofA Global Research, Bureau of Labor Statistics

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We note that, separately, the Bureau of Labor Statistics released its state-level JOLT report covering Nov-23 on 18 January. Comparing that report's job opening data versus unemployed levels for that month by state allows us to see where labor demand is highest. We see 3.7 job openings for every 1 unemployed person ND – the highest ratios among the states. ND is followed by both MD and SD, each with roughly 3.0 job openings per unemployed, and then NE and VT, each at 2.5. At the other end of the spectrum is CA, NJ, both below 1.0 job opening per unemployed, followed by NV, WA and NY, each with roughly 1.0.

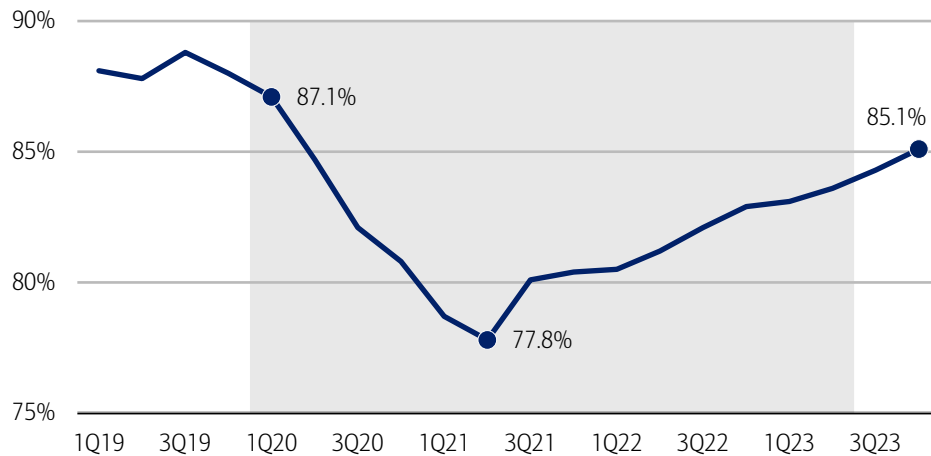
## Healthcare

### Senior housing occupancy improves for 10<sup>th</sup> consecutive quarter to 85.1%

Recently released National Investment Center for Seniors Housing & Care (NIC) data shows an increase in the senior housing occupancy rate to 85.1% in 4Q23, the 10<sup>th</sup> straight quarter of improvement. 4Q23 occupancy represented a 0.8ppt increase from the 84.3% struck in 4Q22. The occupancy rate was up 2.2ppt y/y but remained down 2.0ppt versus 1Q20. The gain was driven by “record-high rates of demand,” per NIC.

#### Exhibit 25: US senior housing occupancy rate (%)

Occupancy rose in 4Q23 for the 10<sup>th</sup> consecutive quarter



**Note:** Shaded area represents the COVID-19 pandemic. WHO declared a pandemic in March 2020 and announced the end of the emergency phase in May 2023.

**Source:** National Investment Center for Seniors Housing & Care

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Of the 31 metro areas within NIC’s data, Boston (90.7%), Baltimore (88.6%) and Minneapolis (88.1%) had the highest senior housing occupancy rates. In contrast, Houston (79.3%), Atlanta (81.8%) and Las Vegas (82.1%) had the lowest. By property type, assisted living occupancy gained 0.9ppt to 83.4%, while independent living increased 0.8ppt to 86.8% and nursing care grew 0.7ppt to 83.1%. NIC still anticipates that recovery to pre-pandemic levels will occur in 2H24. We find that estimate to be reasonable given an average quarterly growth rate of 0.6ppt over the past two years.

### NYU Langone Hospitals upgraded to A1 by Moody’s

Last week, Moody’s upgraded NYU Langone Hospitals’ revenue bonds to A1 from A2 and assigned a stable outlook. The upgrade considers the expected continuation of “very strong and consistent operating performance and revenue growth relative to peers,” supported by very strong market position and leadership.

## Higher education

### Undergraduate enrollment up 1.2% in fall 2023 per NSCRC

The National Student Clearinghouse Research Center (NSCRC) reported undergraduate enrollment growth for the first time since the onset of the pandemic, with fall 2023 undergraduate enrollment up 1.2% y/y. However, enrollment remains down from fall 2019, with fall 2023 enrollment still 5.6% off pre-pandemic levels. Community college enrollment saw the largest growth in fall 2023, up 2.6% y/y. Sector wide freshman enrollment was up just 0.8% y/y after a steep rise last fall where freshman enrollments were up 4.6%. Community college freshman enrollment rose 2.3% y/y. Fall 2023 freshman enrollment still lags pre-pandemic fall 2019 enrollment by 4.3% overall.

### California State University faculty resolves strike after one day

The California Faculty Association (CFA) – which represents over 29,000 faculty and staff across all of the 23 California State University (CSU) campuses – went on strike on



22 January, seeking several changes to their compensation structure and employment conditions. Contract negotiations between the CFA and CSU leaders had been ongoing for months prior, but negotiations broke down earlier this month. The systemwide strike was initially slated to last from 22 January through 26 January, but an agreement was reached late Monday, the first day of the strike. Faculty and staff returned to classrooms on 23 January. The new, tentative agreement, still to be ratified by union members, includes a 5% salary increase retroactive to 1 July 2023 and an additional 5% salary increase effective 1 July this year. The 5% increases are down from the 12% the faculty union had initially brought to negotiations with CSU leaders.

## Power

### Hawaii introduces bill to securitize wildfire costs

The Hawaii State Senate introduced SB2922 on 19 January and it passed its first reading on 22 January. The bill would establish the Catastrophic Wildfire Securitization Act, which would allow public utilities to securitize rates in order to raise capital that can be used to pay for costs and expenses arising out of catastrophic wildfires. The bill comes after the devastating August 2023 wildfires on Hawaii's island of Maui. For more background, see our [25 August 2023](#) and [18 August 2023](#) Municipal Weeklies.

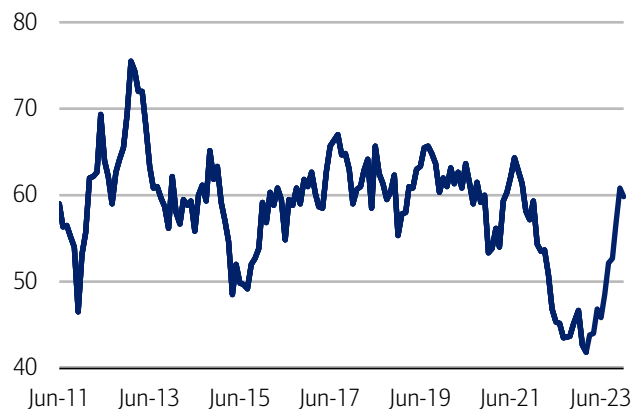
## Defaults, distress & HY

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

For the week ending 24 January, our tracking of those Moody's-defined material credit events (MCEs) shows 24 postings, up 15 on a w/w basis, with the MTD total of 54 as of 24 January. See Exhibit 26. We also note there were no new Chapter 9 bankruptcy petitions filed for the week ending on 24 January; it has now been 246 days since the last bankruptcy petition was filed by Hazel Hawkins Memorial Hospital on 23 May 2023, now 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 26: 6-mo mov avg of material credit events posted to EMMA

Filings posted to EMMA nearly triple w/w



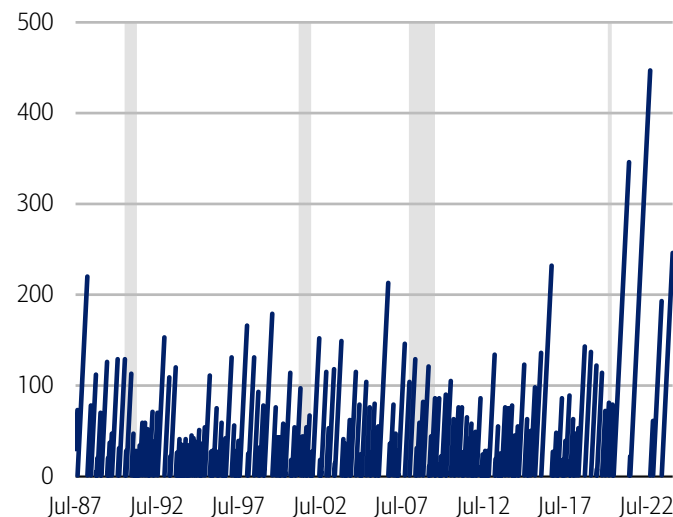
Note: Data as of 24 January 2024. Material credit events (MCE) reflect: 1. Bankruptcy, insolvency, receivership or similar event, 2. Financial obligation-event reflecting financial difficulties, 3. Nonpayment related default, 4. Principal/interest payment delinquency, 5. Unscheduled draw on credit enhancement reflecting financial difficulties, and 6. Unscheduled draw on debt service reserve reflecting financial difficulties.

Source: EMMA

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#### Exhibit 27: Calendar days since last Chapter 9 petition filed

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



Source: BofA Global Research, PACER, US Courts

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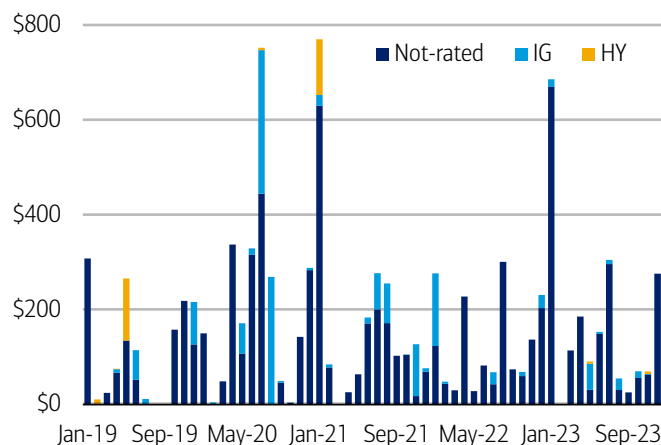
## 2023 defaults total \$2bn

After taking into account December 2023's \$275mn of first-time payment defaults, 2023's total first-time payment defaults reached \$2.0bn, as we expected. With \$115mn of newly distressed debt in Decembers, full year totals reached \$2.7bn. See our [last Weekly](#) for more details.

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.

#### Exhibit 28: Monthly first-time defaults (\$mn) by avg rating at issue

First-time defaults \$275mn in Dec; 2023 totals \$2.02bn, up 29% y/y



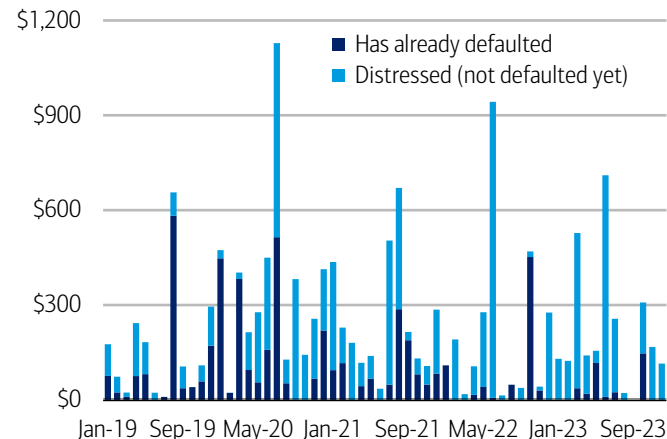
Note: We may revise data if Bloomberg revises its data.

Source: BofA Global Research, Bloomberg

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#### Exhibit 29: Monthly first-time distressed debt (\$mn)

First-time distress \$115mn in Dec; 2023 totals \$2.7bn, up 5% 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; 5yr taxable munis are less attractive for Spain and South Korea.

#### Exhibit 30: Cross currency equivalent yields as of 25 January 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 (4.009)	10 yr (4.126)	30 yr (4.376)	5 yr (4.34)	10 yr (4.73)	30 yr (5.5)	5 yr	10 yr	30 yr	5 yr	10 yr	30 yr
Canada	3.506	3.478	3.451	3.643	3.760	4.197	3.974	4.360	5.313	Yes	Yes	Yes	Yes	Yes	Yes
United Kingdom	3.905	3.977	4.590	3.890	3.924	4.277	4.222	4.530	5.397				Yes	Yes	Yes
France	2.513	2.777	3.317	2.473	2.653	3.660	2.801	3.254	4.750			Yes	Yes	Yes	Yes
Germany	2.182	2.287	2.493	2.473	2.653	3.660	2.801	3.254	4.750	Yes	Yes	Yes	Yes	Yes	Yes
Italy	3.212	3.817	4.470	2.473	2.653	3.660	2.801	3.254	4.750						Yes
Spain	2.816	3.190	3.863	2.473	2.653	3.660	2.801	3.254	4.750					Yes	Yes
Portugal	2.493	3.094	3.526	2.473	2.653	3.660	2.801	3.254	4.750			Yes	Yes	Yes	Yes
Netherlands	2.365	2.561	2.702	2.473	2.653	3.660	2.801	3.254	4.750	Yes	Yes	Yes	Yes	Yes	Yes
Switzerland	0.806	0.806	0.765	2.473	2.653	3.660	2.801	3.254	4.750	Yes	Yes	Yes	Yes	Yes	Yes
Japan	0.314	0.738	1.816	0.078	0.471	2.618	0.401	1.064	3.658			Yes	Yes	Yes	Yes
Australia	3.845	4.238	4.593	4.271	4.767	4.694	4.601	5.373	5.828	Yes	Yes	Yes	Yes	Yes	Yes
South Korea	3.308	3.387	3.285	2.422	3.226	3.945	2.750	3.827	5.041			Yes		Yes	Yes
China	2.332	2.496	2.725	3.696	3.941	4.287	4.030	4.544	5.399	Yes	Yes	Yes	Yes	Yes	Yes
Taiwan	1.180	1.225	1.540	0.865	2.342	3.525	1.191	2.937	4.593		Yes	Yes	Yes	Yes	Yes
Singapore	2.888	2.959	2.834	3.476	3.820	4.229	3.806	4.423	5.341	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 31: 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

**Exhibit 31: Common acronyms used in our Municipals reports**

This list is subject to change

Acronym	Definition	Acronym	Definition	Acronym	Definition
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
Fed	Federal Reserve	ND	North Dakota	VC	Very Cheap
FEMA	Federal Emergency Management Agency	NE	Nebraska	VPI	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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# Research Analysts

**Yingchen Li**  
Municipal Research Strategist  
BofAS  
[yingchen.li@bofa.com](mailto:yingchen.li@bofa.com)

**Ian Rogow**  
Municipal Research Strategist  
BofAS  
[ian.rogow@bofa.com](mailto:ian.rogow@bofa.com)

**John Lombardi**  
Municipal Research Strategist  
BofAS  
[jlombardi3@bofa.com](mailto:jlombardi3@bofa.com)

**Sophie Yan**  
Municipal Research Strategist  
BofAS  
[sophie.yan@bofa.com](mailto:sophie.yan@bofa.com)

**John Reilly**  
Municipal Research Strategist  
BofAS  
[john.reilly2@bofa.com](mailto:john.reilly2@bofa.com)

