Municipals Weekly

Tax time cheapening? Maybe, but maybe not

Industry Overview

15 March 2024

Municipals
United States

Key takeaways

- Muni bond tax time relative value weakness has only played out 43% of the time post-'09. Muni/Tsy ratios may remain contained
- POTUS sent familiar tax proposals to a divided Congress. Enactment would be positive for munis, but is unlikely in our view
- The muni market stood at $4.05tn as of 4Q23, growing just over $11bn q/q, per Flow of Funds data

Tax time cheapening of muni ratios not a norm

After 2009, muni bond tax time relative value weakness played out in six out of the 14 years, but not in the other eight years. With the Treasury market resuming a counter-trend selloff, muni bonds' ratio cheapening will likely be contained in March given good supply/demand numbers. Risks of relative cheapening in April remain.

Tax-exempt money market ratios cheapened during the 2009-2019 tax seasons. Those ratios in 2020-2021 are meaningless due to ZIRP (Zero Interest Rate Policy). In 2022-2023, there was no observable relative cheapening of the tax-exempt money market.

POTUS' tax proposals face a divided Congress…again

President Biden sent his budget proposal to a divided Congress on Monday. In it, he re-proposed raising (a) the top marginal rate to 39.6% from 37% for those earning >$400K, (b) the Medicare surtax to 5% from 3.8%, and (c) the corporate tax rate to 28% from 21%. He again called for a 25% minimum "Billionaire's tax". While the enactment of these provisions would increase demand for tax exempt munis, we discount the likelihood of passing a Republican-controlled House as we did when last proposed.

Muni market largely steady at $4.05tn as of 4Q23

The muni market stood at $4.05tn as of 4Q23, per Flow of Funds data, growing just over $11bn q/q. While most investor groups' holdings increased q/q, none were as fast as ETFs 13% q/q growth.

Key figures: issuance, returns, spreads & trade activity

Supply: YTD issuance through 13 March totals $75.6bn, up 19% y/y. YTD issuance is 94% tax-exempt and 6% taxable; 70% is new money and 30% is refundings. **Returns:** The Muni Master index (U0A0) returned 0.23% YTD through 13 March, outperforming govies, corporates and taxable munis, but underperforming high yield munis (2.52%). Among IG indexes, BBBs' YTD returns strongest at 0.90%, as are the 1-3yr maturities' 0.28%. **Spreads:** For the week ending 13 March, IG spreads widened 2bp w/w to 20bp, while HY spreads tightened 1bp to 190bp. **Trade activity:** In March, $74.3bn of muni par value has traded in the secondary, with a daily avg of $8.3bn; that daily avg is down 21% m/m and down 28% y/y.

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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

Municipals Weekly: Taxable munis are where it's at 08 March 2024

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Municipals Weekly: Hedging difficulties pressures down dealer inventories 23 February 2024

Municipals Educational Series: Market discount taxes 21 February 2024

Timestamp: 15 March 2024 07:30AM EDT

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

Resilient munis amid resumption of rates selloff

Last Friday's strong employment report for February was accompanied by a surprisingly large decline of average hourly earnings, an indication of weakening purchasing power. This week, not-so-benign February CPI data shows that such weakened purchasing power is not translating to a simultaneous decline in inflation just yet, though the decline in service inflation for February should offset some of the concerns. BofA's economists view the underlying details of the CPI report as largely favorable for their outlook of further disinflation down the road and they continue to expect the Fed to start easing rates in June (see US Watch: February CPI Inflation: Services inflation softens, but goods surprise to the upside 12 March 2024).

The 10yr Treasury yield bounced from a recent low of 4.03% to 4.30%. Technicals appear to suggest higher yields for the next few weeks, though the counter-trend selloff appears to be more behind us than left for the front (see Rates Technical Advantage: Confident charts for Q2 13 March 2024).

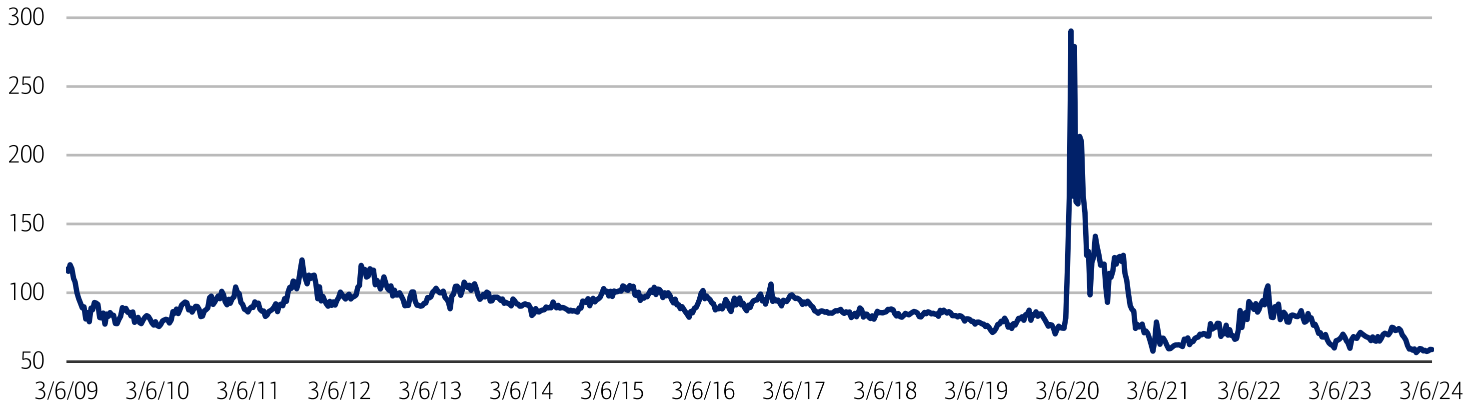
Munis did not participate in the recent yield bounce at all. The whole AAA curve barely changed since last Thursday, leading the 10yr muni/Treasury ratio down to 57% - a level close to the all-time low. This is despite the fact that we are already at mid-March, the early weeks of the tax payment season.

Generally, muni market weakness during tax season could happen, but not always, especially after the 2008/2009 Great Recession. Indeed, a careful review of the 10yr muni/Treasury ratio data shows that tax season relative weakness occurred in six of the past 14 years (2010, 2012, 2013, 2015, 2020, 2022), but not in the other eight years. So, whether tax season weakness occurs in 2024 is highly uncertain. Given what has happened so far, there is a fair chance that muni/Treasury ratios may remain well contained and rise only moderately during this tax season. If so, the only other season in 2024 that ratios may rise significantly would be in September/October due to possible macro issues.

As discussed in our 2024 Municipals Year Ahead, supply/demand technicals for March remain favorable, although meaningfully weaker than January/February. Total principal and coupon redemptions are expected to be $39bn for March and $31bn for April. On the other hand, our expected issuance figures are $32bn for March and $31bn for April. These numbers suggest that relative value risks for April may be somewhat higher than March. Also, it may depend on how high the 10yr Treasury yield may rise in this counter-trend selloff. It likely will require the 10yr Treasury yield to go meaningfully higher than 4.50% before tax-exempt muni investors may show some concern.

As discussed in the next section, President Biden's tax proposals are a positive factor for muni relative values. The proposals serve to remind investors of the value of tax-exemption for munis amid the pressure of higher Federal tax rates.

Exhibit 2: Weekly history of the 10-year muni/Treasury ratio (%)
Ratio weakness in six out of the past 14 years



Source: Refinitiv

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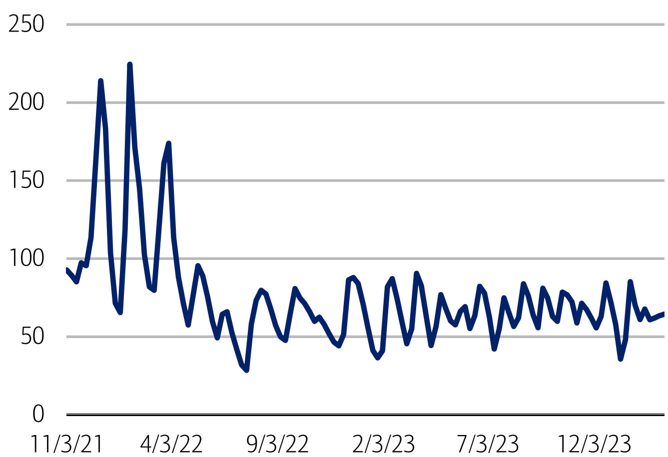
Tax-exempt muni market ratios may not necessarily be a blip either. With the short history of SOFR, we show the SIFMA weekly index ratio to the 1-month SOFR rate since late 2021. We skip 2020-2021 as money market ratios during that period are meaningless (both tax-exempt and taxable were nearly at zero). Exhibit 3 shows that at least for 2022 and 2023, money market ratios during tax season did not rise. This may be attributed to the tightening cycle.

On the other hand, SIFMA weekly index ratios to 1-month Libor between from Feb-09 and Feb-20 show that tax season weakness for tax-exempt money market happened each year over those 11 years. See Exhibit 4.

Exhibit 3: SIFMA Weekly Index ratio to 1-month SOFR
No tax season weakness in 2022 or 2023 for muni money market



Source: Bloomberg

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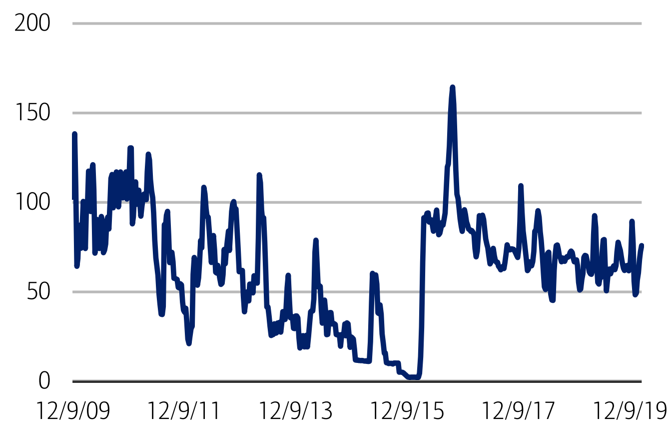
Exhibit 4: SIFMA ratio to 1-month Libor Feb 2009-Feb 2020
Tax season weakness of money market happened every year during 2009-2019



Source: Bloomberg

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POTUS' tax proposals face a divided Congress

On Monday, President Biden sent his proposed budget to a divided Congress. In it, he called for a myriad of revenue raisers, many of which he proposed previously. Those include: a minimum tax of 25% on those with wealth >$100mn, raising the top marginal tax rate to 39.6% from 37% for individuals with incomes >$400k (>$450k for joint filers), raising the corporate tax rate to 28% from its current 21%, but also raising the

Medicare surtax on earned and unearned income above $400K to 5% from 3.8%. Given Republican control of the House, we think these proposals (and many others contained in his budget) face limited prospects of enactment. House Speaker Johnson's statements, we think, are telling; he said "The price tag of President Biden's proposed budget is yet another glaring reminder of this Administration's insatiable appetite for reckless spending and the Democrats' disregard for fiscal responsibility. Biden's budget doesn't just miss the mark — it is a roadmap to accelerate America's decline."

That said, if the higher 39.6% income tax rate and 5% surtax are enacted, top federal tax rates would increase to 44.6%, and would result in top tax rates of roughly 58% for the highest earners in California and over 59% for top earners in New York City. While we discount the likelihood of these proposals passing, the effect should they pass would be an increase in muni demand, particularly from investors in the highest tax states.

We note that, no matter the outcome of this year's elections, the next Congress and administration will have a robust tax policy debate. As a reminder, changes to individual taxes enacted as part of 2017's Tax Cuts and Jobs Act sunset at the end of 2025. Republicans favor extending those provisions permanently, including the $10,000 cap on State and Local Tax (SALT) deductions.

Muni market stands at $4.05tn as of 4Q23

The Fed released updated flow of funds data for 4Q23 on 7 March. The muni market stood at $4.05tn as of 4Q23, up just $11.4bn q/q. As Exhibit 5 shows, ETFs' municipal securities holdings grew the most on a q/q basis in 4Q23, increasing by 13.3% to $122.4bn. Conversely, the Brokers & dealers' muni holdings fell the most q/q in 4Q23, declining by 10.4% to $13.5bn. Versus 4Q17 – the last quarter pre-Tax Cuts and Jobs Act – ETFs' holdings have grown the most while Brokers & dealers' contracted the most; since then, US banks' holdings are down 7.1% to $531.9bn.

Exhibit 5: Change in muni holdings by investor group

4Q23's holdings versus 4Q17's (when TCJA enacted), 1Q20 (start of COVID) and on a y/y & q/q basis

	4Q23 holdings ($bn)	vs 4Q17	vs 1Q20	vs 4Q22	vs 3Q23
Households & nonprofits	1,766.3	-8.7%	-7.0%	9.0%	8.8%
Mutual funds	764.4	11.1%	-2.8%	2.5%	5.0%
US banks	531.9	-7.1%	0.0%	-8.3%	2.4%
P&C insurers	223.8	-34.0%	-20.4%	-9.0%	4.0%
Life insurers	199.0	-2.5%	-9.8%	0.5%	6.5%
Money market funds	129.6	-6.2%	-4.4%	9.9%	6.7%
ETFs	122.4	307.3%	153.0%	17.2%	13.3%
Rest of the world	119.7	13.2%	10.9%	10.4%	10.6%
Closed-end funds	82.5	-8.3%	-7.7%	0.1%	6.1%
Brokers & dealers	13.5	-49.5%	-1.5%	12.2%	-10.4%

Source: BofA Global Research, Fed Flow of Funds

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Fed data shows state and local government defined benefit plans' funded ratio climbed 4.3ppt q/q to 65.3%. While that figure is lower than what both Milliman and Wilshire reported as of 4Q23 (78.2% for the Milliman PPFI and 81.3% for the states specifically according to Wilshire), the changes are directionally consistent. As we noted previously, the difference between the funding ratios likely has to do with the accounting methods used and discount rates being employed.

Performance

Exempt IG outpaces taxables as taxables sell off

While Treasuries sold off this week, muni rates moved slightly lower, resulting in exempt IG's outperformance versus govies, corporates and taxable munis. With its 24bp of total returns for the week, exempt IG outperformed govies by 70bp, corporates by 32bp and taxable munis by 78bp. However, exempt IG underperformed muni high yield again this week, this time by 17bp. While exempt IG is outperforming govies by 130bp, corporates by 64bp and taxable munis by 38bp for the YTD with its 23bp of total returns, it is underperforming muni high yield by 229bp. That is the largest gap between exempt IG and high yield since 2021's 233bp outperformance through 13 March. Among IG rating brackets, BBBs' returns were again strongest for the week at roughly 31bp – the 4th consecutive week and 14th of the last 20 weeks where BBB's returns were strongest – and remain strongest YTD at 90bp of total returns; AAAs' -9bp YTD is weakest. GOs underperformed revenue bonds again this week, and continue to do so for the YTD by 22bp. Only BBB GOs are outperforming their revenue bond counterparts. We continue to see the shorter maturity indexes with the strongest returns: for the YTD, the 1-3yr index is outperforming the 22+yr index, but that performance gap narrowed to just 1bp as of 13 March. The weakest performing maturity indexes YTD are the 3-7yr and 7-12yr.

Exhibit 6: Municipal total returns (%) monitor, as of 13 March 2024

Exempt IG failed to keep pace with taxable market rate rally, leading to underperformance this week

Index	Ticker	1d	1wk	MTD	1mo	3mo	YTD	1yr
Govt Master	G0A0	-0.178	-0.458	0.441	1.096	0.010	-1.072	0.099
Corporate Master	C0A0	-0.075	-0.080	0.850	1.516	0.881	-0.412	5.720
IG munis	**U0A0**	**0.000**	**0.244**	**0.445**	**0.868**	**1.790**	**0.231**	**4.879**
AAA	U0A1	0.003	0.249	0.409	0.783	1.470	-0.088	4.150
AA	U0A2	-0.004	0.226	0.417	0.804	1.609	0.123	4.430
A	U0A3	0.001	0.265	0.487	0.938	2.124	0.481	5.676
BBB	U0A4	0.022	0.309	0.610	1.346	2.799	0.902	7.123
1-3yr	U1A0	-0.003	0.092	0.182	0.385	0.722	0.276	3.066
3-7yr	U2A0	-0.006	0.163	0.307	0.629	1.117	0.133	3.582
7-12yr	U3A0	0.015	0.212	0.396	0.816	1.495	0.142	4.082
12-22yr	U4A0	0.004	0.268	0.465	0.943	2.039	0.281	5.744
22+yr	U5A0	-0.010	0.363	0.668	1.208	2.685	0.265	6.093
HY munis	**U0HY**	**0.110**	**0.416**	**0.914**	**1.798**	**4.226**	**2.518**	**7.014**
Non-rated	U0NR	0.033	0.414	0.794	2.155	4.254	2.410	9.004
General Obligation	**U0AG**	**0.004**	**0.227**	**0.406**	**0.754**	**1.437**	**0.065**	**4.218**
AAA	UGA1	0.009	0.233	0.401	0.717	1.239	-0.180	3.893
AA	UGA2	-0.002	0.228	0.417	0.779	1.450	0.085	4.163
A	UGA3	0.002	0.183	0.291	0.570	1.639	0.357	4.401
BBB	UGA4	0.153	0.319	0.561	1.120	2.536	1.025	6.912
State	U0AA	-0.005	0.184	0.336	0.686	1.323	0.109	3.972
Local	U0AB	0.013	0.277	0.487	0.835	1.567	0.013	4.494
Revenue	**U0AR**	**-0.002**	**0.249**	**0.458**	**0.904**	**1.904**	**0.285**	**5.093**
AAA	URA1	-0.001	0.260	0.412	0.828	1.627	-0.027	4.325
AA	URA2	-0.006	0.225	0.417	0.815	1.677	0.139	4.542
A	URA3	0.001	0.271	0.503	0.969	2.164	0.492	5.788
BBB	URA4	0.013	0.308	0.613	1.363	2.820	0.891	7.006
Airport	U0AV	-0.004	0.219	0.518	0.974	2.073	0.508	5.421
Education	U0AE	-0.005	0.235	0.406	0.824	1.803	0.095	4.817
Health	U0HL	0.054	0.355	1.012	2.337	5.429	2.341	9.370
Hospital	U0AH	0.011	0.338	0.571	1.023	2.292	0.412	5.653
Industrial Development Rev	U0ID	0.003	0.276	0.656	1.399	3.065	0.983	7.060
Leases, COPs & Appropriations	U0AL	0.000	0.260	0.452	0.872	1.696	0.250	4.621
Miscellaneous	U0AM	0.002	0.226	0.392	0.867	1.306	-0.141	3.892
Multi-family Housing	U0AU	0.001	0.293	0.500	0.939	1.849	0.169	5.014
Pollution Control	U0AQ	0.011	0.300	0.449	0.923	1.858	0.532	4.406
Power	U0AP	-0.013	0.181	0.371	0.759	1.726	0.258	4.311
Single-family Housing	U0AS	-0.006	0.314	0.510	1.007	1.812	0.243	4.319
Tax Revenue	U0TX	-0.017	0.218	0.411	0.823	1.619	-0.056	4.807
Tobacco	U0TB	-0.012	0.192	0.390	1.040	2.286	1.164	5.570
Toll & Turnpike	U0TL	0.003	0.267	0.465	0.937	1.906	0.431	5.197
Transportation - other	U0AT	0.010	0.240	0.444	0.939	1.920	0.329	5.645
Utilities - other	U0UT	0.002	0.264	0.527	0.952	2.217	0.655	5.710
Water & Sewer	U0AW	0.005	0.218	0.346	0.728	1.591	0.165	4.325
Taxable	**TXMB**	**-0.190**	**-0.536**	**0.681**	**1.511**	**1.373**	**-0.150**	**3.811**
Build America Bonds	BABS	-0.193	-0.539	0.493	0.969	0.909	-0.642	2.649
VRDOs	**VRDO**	**0.009**	**0.064**	**0.119**	**0.258**	**0.812**	**0.616**	**3.290**
Daily reset	VRDD	0.008	0.065	0.121	0.250	0.744	0.539	3.115
Weekly reset	VRDW	0.009	0.064	0.117	0.262	0.851	0.662	3.391

Source: ICE Data Indices, LLC

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IG spreads 2bp wider w/w overall; HY spreads 1bp tighter

IG muni spreads widened 2bp w/w overall to 20bp and are at the 12th percentile of their 52-week range. Muni HY spreads tightened 1bp to 190bp or the 7th percentile. Non-rated spreads were flat w/w at 194bp. GO spreads widened 2bp w/w and Revenue Bond spreads widened 1bp. Among IG muni revenue bond sectors, the Power sector narrowed the most by 2bp w/w. The Tax Revenue and Miscellaneous sectors experienced the largest widening at 3bp each.

Exhibit 7: Muni YTW spread monitor as of 13 March 2024
IG muni spreads 2bp wider w/w overall while HY spreads tightened 1bp

	52wk				Current	Change from				Current as %		
	Tights	Wides	T-1wk	T-1d	3/13/24	Tights	Wides	T-1wk	T-1d	of 52wk range	Price	Yield
Investment Grade	**18**	**35**	**18**	**19**	**20**	**2**	**-15**	**2**	**1**	**12**	**102**	**3.48**
AA	2	12	2	2	3	1	-9	1	1	10	103	3.31
A	46	77	47	46	47	1	-30	0	1	3	100	3.75
BBB	94	142	97	97	98	4	-44	1	1	8	98	4.26
High Yield	**178**	**350**	**191**	**190**	**190**	**12**	**-160**	**-1**	**0**	**7**	**96**	**5.18**
Non-rated	174	247	194	193	194	20	-53	0	1	27	66	5.22
General Obligation	**-12**	**-5**	**-11**	**-10**	**-9**	**3**	**-4**	**2**	**1**	**43**	**103**	**3.19**
AA	-19	-10	-17	-17	-16	3	-6	1	1	33	103	3.12
A	-15	29	0	1	2	17	-27	2	1	39	105	3.30
BBB	50	115	69	70	68	18	-47	-1	-2	28	97	3.96
State	-30	-22	-30	-30	-28	2	-6	2	2	25	106	3.00
Local	7	17	12	12	13	6	-4	1	1	60	99	3.41
Revenue	**28**	**49**	**28**	**28**	**29**	**1**	**-20**	**1**	**1**	**5**	**102**	**3.57**
AA	10	22	10	10	12	2	-10	2	2	17	103	3.40
A	50	81	50	50	51	1	-30	1	1	3	100	3.79
BBB	96	147	100	99	100	4	-47	0	1	8	98	4.28
Airport	52	84	54	54	55	3	-29	1	1	9	104	3.83
Education	8	30	8	8	10	2	-20	2	2	9	105	3.38
Health	135	174	135	136	136	1	-38	1	0	3	96	4.64
Hospital	60	89	60	60	61	1	-28	1	1	3	101	3.89
Industrial Development Rev	67	123	71	71	72	5	-51	1	1	9	101	4.00
Leases, COPs & Appropriations	-4	13	-3	-3	-2	2	-15	1	1	12	104	3.26
Miscellaneous	-3	17	10	12	13	16	-4	3	1	80	103	3.41
Multi-family Housing	54	89	61	61	63	9	-26	2	2	26	95	3.91
Pollution Control	30	64	50	48	49	19	-15	-1	1	56	99	3.77
Power	20	39	22	22	20	0	-19	-2	-2	0	105	3.48
Single-family Housing	69	89	83	82	83	14	-6	0	1	70	99	4.11
Tax Revenue	1	16	1	2	4	3	-12	3	2	20	102	3.32
Tobacco	-22	37	-9	-10	-7	15	-44	2	3	25	102	3.21
Toll & Turnpike	23	49	25	25	26	3	-23	1	1	12	99	3.54
Transportation - other	23	51	23	24	25	2	-26	2	1	7	100	3.53
Utilities - other	62	105	64	62	63	1	-42	-1	1	2	104	3.91
Water & Sewer	3	20	9	10	11	8	-9	2	1	47	104	3.39

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 $75.6bn, up 19% y/y

YTD issuance as of 13 March 2024 totals $75.6bn, up 19% y/y. 70% of YTD issuance is new money and 30% is refundings. New money volumes are up 6% y/y while refunding volumes are up % 70 y/y. MTD issuance totals $12.4bn, which is down 29% y/y. Refunding volumes MTD are up 40% y/y while new money volumes are down 40%.

Exhibit 8: Issuance summary ($mn)
YTD-24 issuance of $75.6bn was up 19% y/y; new money up 6% y/y while refundings up 70% y/y

	Month-to-date			Year-to-date		
	3/13/24	3/13/23	y/y % Δ	3/13/24	3/13/23	y/y % Δ
Total	**12,391.8**	**17,495.2**	**-29%**	**75,588.2**	**63,562.0**	**19%**
New Money	9,125.5	15,168.4	-40%	53,284.3	50,423.3	6%
Total Refunding	3,266.2	2,326.8	40%	22,303.9	13,138.6	70%

Exhibit 8: Issuance summary ($mn)

YTD-24 issuance of $75.6bn was up 19% y/y; new money up 6% y/y while refundings up 70% y/y

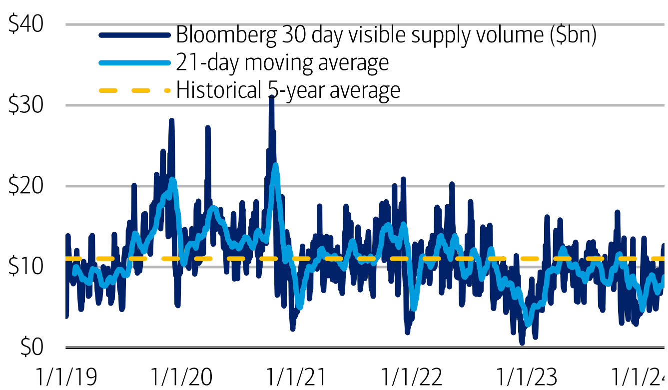
	Month-to-date			Year-to-date		
	3/13/24	3/13/23	y/y % Δ	3/13/24	3/13/23	y/y % Δ
Advanced refunding	0.0	0.0	-	5,809.7	1,380.9	321%
Unknown refunding	2,173.9	2,140.0	2%	10,153.4	10,327.0	-2%
Current & Forward refunding	1,092.3	186.8	485%	6,340.9	1,430.7	343%
Insured	1,214.5	914.3	33%	5,784.3	4,910.7	18%
Fixed Rate	10,879.8	16,002.9	-32%	66,429.9	55,721.0	19%
Variable Rate Long	1,499.2	1,327.7	13%	5,889.4	5,743.3	3%
Variable Rate Short	0.0	85.6	-100%	2,279.1	1,841.5	24%
Convertible	12.8	0.0	-	12.8	4.1	213%
Zero Coupon	0.0	3.0	-100%	361.7	126.1	187%
Linked Rate	0.0	76.0	-	615.3	126.0	388%
Variable rate no put	0.0	0.0	-	-	-	-
Tax Exempt	11,005.1	11,147.8	-1%	70,935.6	51,295.2	38%
Taxable	1,386.7	5,754.2	-76%	4,563.7	10,768.6	-58%
Alternate Minimum Tax	0.0	593.2	-100%	88.9	1,498.1	-94%
Education	4,805.9	2,467.0	95%	24,016.5	19,811.5	21%
General Purpose	1,484.2	3,717.3	-60%	14,011.3	11,868.7	18%
Utilities	2,823.3	5,829.4	-52%	12,591.8	11,618.1	8%
Housing	1,646.2	1,233.0	34%	7,442.1	5,232.0	42%
Transportation	814.7	3,014.6	-73%	7,831.0	6,800.0	15%
Healthcare	406.9	546.4	-26%	4,843.2	2,499.6	94%
Development	320.0	260.9	23%	1,616.7	1,520.0	6%
Electric Power	67.9	0.0	-	2,286.8	3,144.3	-27%
Public Facilities	22.6	7.0	223%	640.8	498.1	29%
Environmental Facilities	0.0	419.8	-100%	308.1	569.8	-46%
Muni-backed corporates	750.0	0.0	-	750.0	88.7	746%

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

BofA GLOBAL RESEARCH

Exhibit 9: Bloomberg 30-day visible supply ($bn)

30-day visible supply was $9.7bn as of 14 March 2024



Source: Bloomberg

BofA GLOBAL RESEARCH

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

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

	Issuance		Prin. & cpn redemptions	
Month	Forecast	Actual	Forecast	Actual
January	$26	30	$46	$45
February	27	32	49	46
March	32	12*	39	
April[1]	31		31	
May	32		39	
June	39		63	
July	30		63	
August	38		66	
September	34		37	
October	42		45	
November	33		43	
December	36		52	

Note: Totals may not add up due to rounding. Data as of 13 March 2024.
Source: BofA Global Research, LSEG, Bloomberg

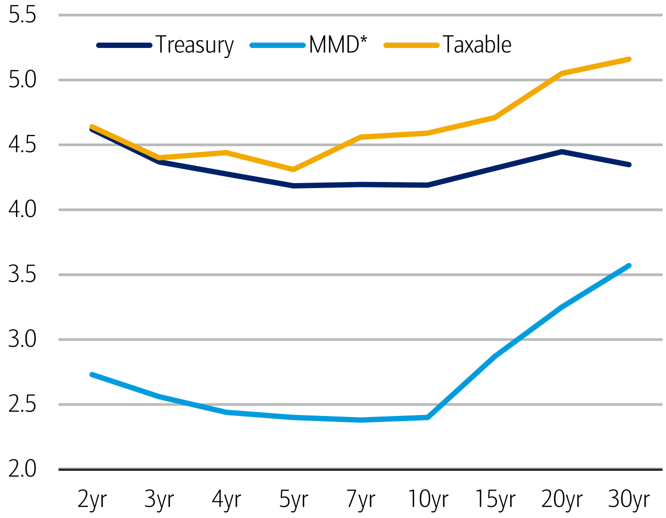
BofA GLOBAL RESEARCH

Curve

Curve flat w/w on avg and down 7bp m/m

The AAA MMD curve was flat w/w on average, and richened 7bp m/m. For the week, the 1s5s slope was flat at -55bp, 32bp more inverted y/y; the 5s10s flattened by 2bp w/w to 0bp, but is 4bp steeper y/y; the 10s20s slope steepened 2bp w/w to 85bp and is 6bp steeper y/y; the 20s30s was unchanged w/w at 32bp but is 14bp 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 11: AAA GO muni, Treasury and taxable yield curves (%)
On average, Tsy and Taxable cheapened w/w



Note: *MMD AAA GO yield curve. As of 13 March 2024.
Source: BofA Global Research, Refinitiv, Bloomberg

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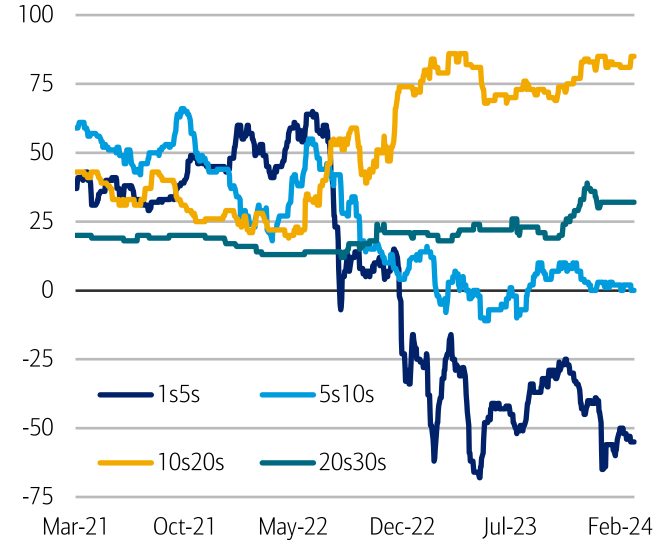
Exhibit 12: Curve slope (bp)
1s5s and 20s30s remain unchanged w/w



Source: Refinitiv

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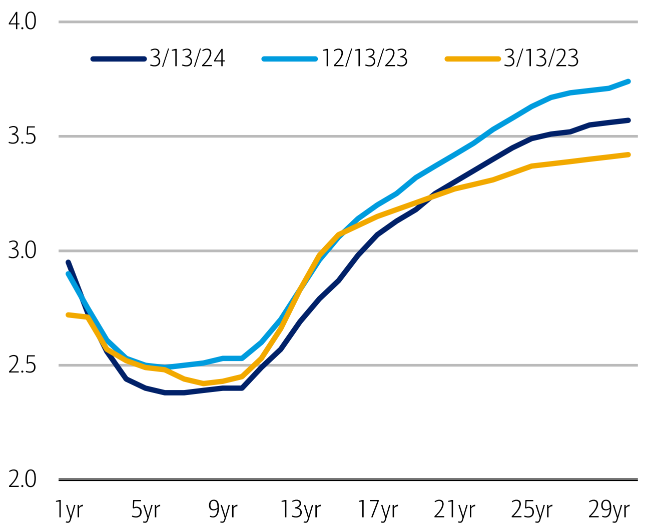
Exhibit 13: AAA GO municipal curve movement (%)
AAA is richer than three months ago across the curve outside of 1yr



Source: Refinitiv

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Relative value

At 7-12yr maturities, AA Utilities-other' and Single-A Power's OAS are very cheap, while Single-A Utilities is cheap. AAA Pollution Control and AAA Utilities are rich among others. At 22+yr maturities, BBB State GO and Utilities-other are very rich, while AAA Local GO and AA Utilities are cheap, among others.

Exhibit 14: Rich/cheap analysis of 7-12yr indexes' OAS (bp)
AA Utilities - Other's current OAS of 117bp at 7-12yrs is currently very cheap against its 3yr OAS average of 12bp

	Current OAS				Rich/cheap analysis				3yr OAS average			
Sector	**AAA**	**AA**	**A**	**BBB**	**AAA**	**AA**	**A**	**BBB**	**AAA**	**AA**	**A**	**BBB**
Airports		38	31	73		N	N	N		32	29	52
Higher Education	-10	-9	43		N	N	N		-9	-5	38	
GO Local	-2	6	49	106	N	N	N	N	-2	7	42	108

Exhibit 14: Rich/cheap analysis of 7-12yr indexes' OAS (bp)

AA Utilities - Other's current OAS of 117bp at 7-12yrs is currently very cheap against its 3yr OAS average of 12bp

	Current OAS				Rich/cheap analysis				3yr OAS average			
Sector	**AAA**	**AA**	**A**	**BBB**	**AAA**	**AA**	**A**	**BBB**	**AAA**	**AA**	**A**	**BBB**
GO State	-4	-8	45	0	N	N	N	R	-7	-6	42	89
Health		0	73	111		R	N	N		18	71	105
Hospital		13	37	79		N	N	N		15	36	94
IDR		56	67	74		N	N	N		36	52	78
Leases COPs & Appr.		8	19	107		N	N	N		9	32	109
Pollution Control	1		93		R		N		-2		72	
Power	-5	-5	101		N	N	VC		-5	-5	28	
Tax Revenues	0	0	57	106	R	R	N	N	1	6	55	113
Tobacco			25				N				47	
Toll & Turnpike		19	18	71		N	N	N		20	16	79
Transportation - Other	0	14	37	71	R	N	N	N	3	11	51	84
Utilities - Other	0	117	138		R	VC	C		-3	12	47	
Water & Sewer	-7	-10	16	25	N	N	N	N	-6	-8	11	99

Note: Data as of 12 March 2024. Only includes non-prerefunded bonds. Benchmark is 3-yr avg.
Source: ICE Data Indices, LLC

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Exhibit 15: 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 52bp

	Current OAS				Rich/cheap analysis				3yr OAS average			
Sector	**AAA**	**AA**	**A**	**BBB**	**AAA**	**AA**	**A**	**BBB**	**AAA**	**AA**	**A**	**BBB**
Airports		37	34	-7		N	N	N		26	24	8
Higher Education	40	8	30	93	N	N	N	N	26	-9	17	75
GO Local	20	13	21	78	C	N	N	N	-8	2	20	73
GO State	-3	11		0	N	C		VR	-25	-19		79
Health		-29	56	148		N	N	N		-19	38	114
Hospital		19	32	71		N	N	N		7	24	56
IDR			63	74			N	N			55	68
Leases COPs & Appr.	26	10	21	51	C	N	N	N	-4	-6	28	45
Pollution Control			37				N				18	
Power		12	28	44		N	N	N		-5	15	43
Tax Revenues	32	16	61	66	C	N	N	N	8	3	48	70
Tobacco				84				N				86
Toll & Turnpike			15	39			N	N			10	39
Transportation - Other		0	20	70		N	N	N		9	29	48
Utilities - Other		21	43	0		C	N	VR	-8	-7	22	52
Water & Sewer	5	4	19		C	N	N		-18	-14	-5	

Note: Data as of 12 March 2024. Only includes non-prerefunded bonds. Benchmark is 3-yr avg.
Source: ICE Data Indices, LLC

BofA GLOBAL RESEARCH

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 Industrial Development Revenue and Multi-Multi-Family Housing MWIs increasing the most. ETM and Single & Multi-Family Housing's MWIs are the lowest.

Exhibit 16: MWIs – sector momentum (%) as of 12 March 2024

Most sectors' MWIs stayed relatively stable over the past week

Sector	MWI	m/m Δ	Sector	MWI	m/m Δ
U0A0 Index	**99.3%**	**0.0%**	Miscellaneous	100.0%	0.4%
ETM	96.3%	-0.1%	Multi-Family Housing	97.1%	1.1%
GO - Local	99.3%	0.0%	Pollution Control	98.5%	0.0%
GO - State	99.1%	-0.2%	Power	97.7%	0.1%
Pre-Re	100.0%	0.0%	Single Family Housing	97.3%	0.3%
Airport	100.0%	0.1%	Tax revenue	99.8%	0.0%
Education	99.4%	0.2%	Tobacco	97.5%	0.0%
Health	100.0%	0.0%	Toll & Turnpike	99.9%	-0.1%

Exhibit 16: MWIs – sector momentum (%) as of 12 March 2024
Most sectors' MWIs stayed relatively stable over the past week

Sector	MWI	m/m Δ	Sector	MWI	m/m Δ
Hospitals	99.4%	0.1%	Transportation	99.6%	0.0%
Industrial Development Rev	100.0%	1.4%	Utilities - Other	97.6%	-0.3%
Leasing COPS & Appropriations	99.3%	-0.1%	Water & Sewer	99.6%	0.0%

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 09182TDL8, totaling $234.3mn. Those are Alabama Black Belt Energy Gas District revenue bonds due in 2055. By number trades it was 34074M3P4, totaling 183 trades. These are Florida Housing Finance Corp. Homeowner Mortgage revenue bonds due in 2049.

Exhibit 17: Most actively traded muni CUSIPs over the week ending 13 March 2024
34074M3P4 was the most frequently traded CUSIP. [1]Last trade

CUSIP	Short name	ST	Coupon/Maturity	Yield[1]	Spread	# of trades	Avg Vol ($mn)
09182TDL8	BLACK BELT ENRY GAS-A	AL	5.25s of '55	--	185	76	3.08
5977833H0	MIDLAND ISD	TX	4s of '54	4.18	63	114	0.77
072024YE6	BAY AREA TOLL AUTH-A	CA	3.5s of '55	--	-55	28	3.12
13032UP93	CALIFORNIA HLTH -B	CA	5s of '54	--	37	26	2.25
13048TGU1	CA MUN FIN-VAR-CHEVRO	CA	3.5s of '35	--	32	20	2.32
45129Y5H5	ID HSG & FIN ASSN-A	ID	4.6s of '49	4.50	102	80	0.54
34074M3P4	FLORIDA HSG FIN-1	FL	4.55s of '49	4.26	78	183	0.23
5977833G2	MIDLAND ISD	TX	5s of '50	3.78	29	109	0.37
59261AM53	MET TRANSP AUTH-E1	NY	3.6s of '50	--	-41	18	2.24
915260CL5	UNIV HOSPS & CLINIC-B	WI	3.55s of '48	--	-35	13	2.97
194641BB1	COLLIER CO IND DEV-A	FL	5s of '49	4.10	61	43	0.90
13062RG77	CA VAR-B-SUBSER B-5	CA	3.4s of '40	--	-6	18	2.12
040507QB4	AZ HLTH FACS AUTH-C	AZ	3.6s of '46	--	-21	15	2.51
447819KL6	HURST-EULESS-BEDFORD	TX	4s of '50	4.10	59	133	0.28
913366AW0	UNIV CA VAR-SER B-1	CA	3.65s of '32	--	63	14	2.63

Source: Bloomberg

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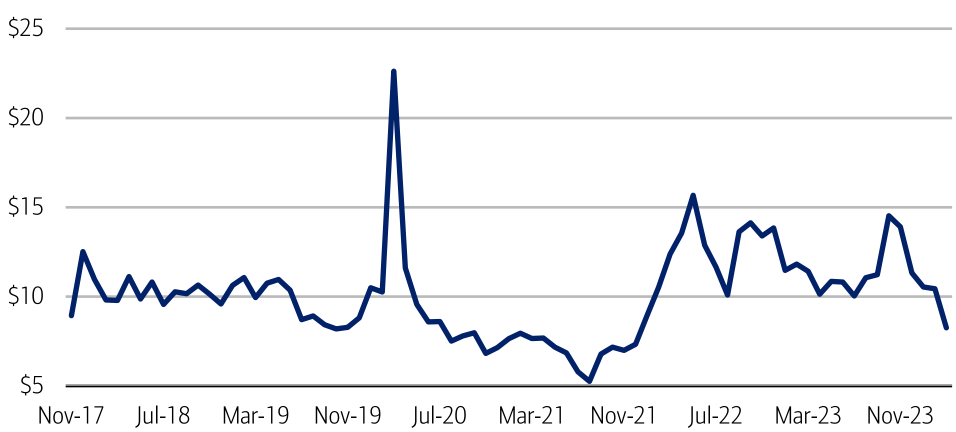
Mar-24's avg daily secondary trading at $8.3bn

Bloomberg data shows average daily secondary trading volume in Mar-24 moderated relative to earlier months at just $8.3bn currently. That represents a 21% decrease on a m/m basis and a nearly 28% decrease y/y. A total of just $74.3bn of muni bond par value traded during the month-to-date.

Exhibit 18: Daily avg secondary trading volume ($bn)
Mar-24 daily avg volume of $8.3bn down roughly 21% m/m and 28% y/y



Note: Data as of 13 March 2024.
Source: BofA Global Research, Bloomberg

Exhibit 18: Daily avg secondary trading volume ($bn)
Mar-24 daily avg volume of $8.3bn down roughly 21% m/m and 28% y/y

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Credit corner

Rating activity

S&P's upgrades outpace downgrades 2.0 to 1 in February

S&P's February rating activity skewed positive again, though at a more moderate degree than we saw throughout much of 2023, with just 47 ratings upgraded versus 24 downgraded, for an upgrade to downgrade ratio of 2.0 to 1. Local governments again accounted for the most upgrades with 39, but also the most downgrades, with 9. The charter school, education and health care sectors each saw more downgrades than upgrades during the month; public power and utilities were evenly split. Outlook revisions were more negative in February: S&P revised 5 outlooks to positive, 19 to stable and 17 to negative. While 4 ratings were removed from CreditWatch in February, 8 were placed on CreditWatch negative. All told, favorable outlook and CreditWatch changes were outpaced by unfavorable changes during the month 1.9 to 1.

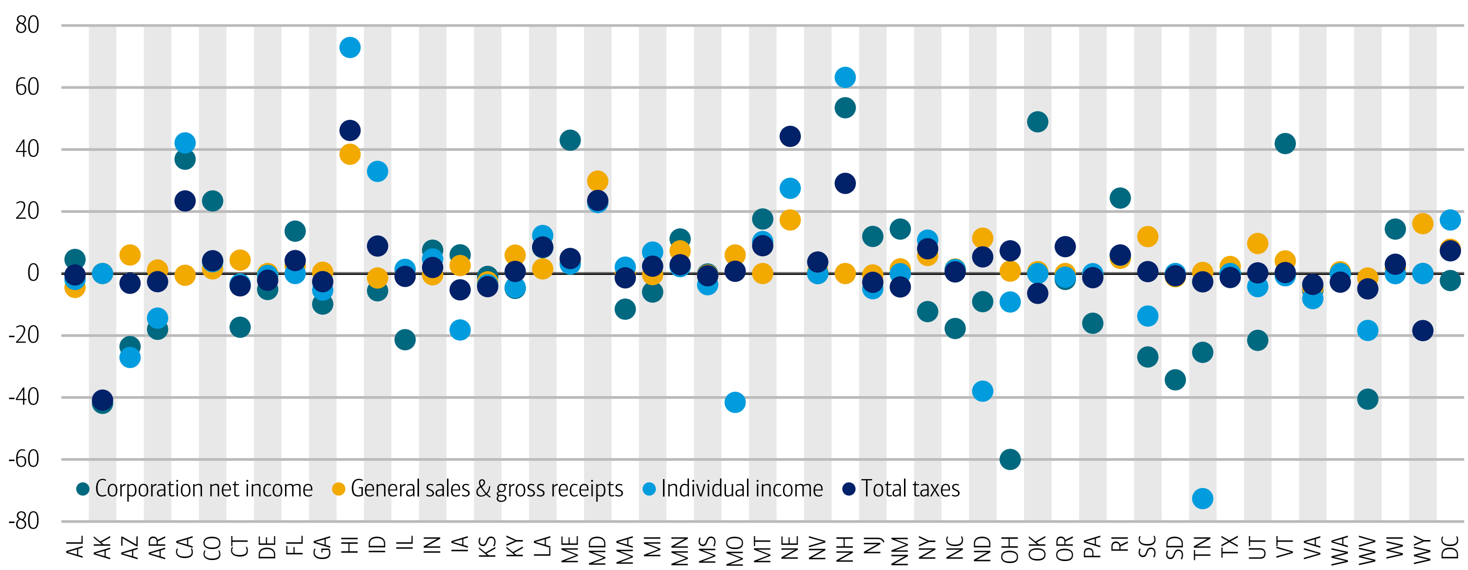
This data, together with ICE index net upgrade rates we discussed in our [last Weekly](), continue to support the view that while 2024 will be a positive rating year, activity will moderate from recent years' levels.

State & local governments

State tax collections up 5.6% y/y in 4Q23

The US Census Bureau released 4Q23 state and local tax collections on 14 March. Per Census data, the states' tax collections grew $18.7bn, or 5.6% y/y to $354.2bn in total. General sales and gross receipts taxes of $113.7bn increased $2.9bn, or 2.7%; individual income increased by $10.2bn, or 9.2% to $121.6bn; corporation net income tax collections of $35.4bn were up $4.5bn, or 14.5%; motor fuels collections of $15.0bn were up $1.2bn, or 8.4%; tobacco products revenues of $4.0bn fell $351mn, or 8.0%; and, severance tax collections of $5.7bn fell by $1.7bn, or 22.8%. Exhibit 19 shows that 28 states' tax collections grew in 4Q23. Overall, HI's 46% increase y/y was largest among the states driven by strong individual income tax collections, while AK's declined the most, down 41% on weaker severance tax collections per Census Bureau data.

Exhibit 19: Y/y percent (%) change in states' tax collections (4Q23 vs 4Q22)
28 states' tax collections increased y/y in 4Q23, led by HI's 46% growth on strong individual income tax collections



Note: For ease of viewing, HI's 110%, MD's 165%, MO's 462% and NE's 263% growth in corporation net income tax collections omitted.
Source: US Census Bureau.

Exhibit 19: Y/y percent (%) change in states' tax collections (4Q23 vs 4Q22)

28 states' tax collections increased y/y in 4Q23, led by HI's 46% growth on strong individual income tax collections

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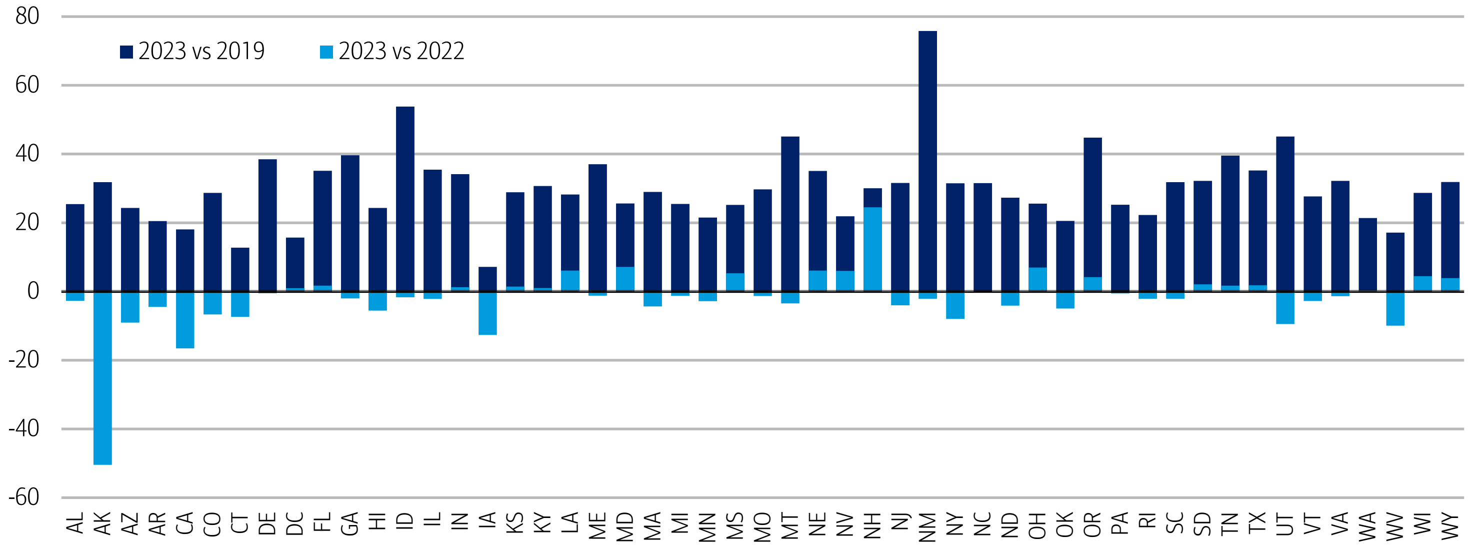
For the full calendar year of 2023, Exhibit 20 below shows that 32 states' tax collections declined y/y based on an aggregate of the Census Bureau's quarterly data. The weakest y/y growth in 2023 was in AK, where total tax collections fell roughly 50%. Versus 2019's tax collections, every state experienced growth, led by NM's 76% increase.

Exhibit 20: Percent (%) change in states' tax total collections, 2023 vs 2022 and 2019

NH's (+24%) tax collections grew the most y/y in 2023; AK's (-50%) decline was largest



Source: BofA Global Research, US Census Bureau

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Inclusive of local governments, 4Q23 tax collections grew 4.9% for the four largest state and local government tax categories (property, individual income, corporation net income and sales receipts) to $526.2bn on a seasonally adjusted basis. Property tax collections of $197.2bn were up 5.2% y/y in 4Q23.

This data is consistent with our own surveys of 4Q23 state collections. Looking at 1Q24 data, we noted previously that January collection median growth was on the order of 2.3% y/y. For the first 21-reporting states for February, we see median total y/y growth of -1.4%, with median personal income tax collection growth of -12.5%, sales tax collection growth of 0.0% and corporate collection growth of 28.6% y/y.

NYC registers 1st decrease in asylum seekers in Feb-24 – city comptroller

New York City's comptroller released his monthly "By the Numbers" report this week. In it, the comptroller focuses again on asylum seekers in the city. Per the comptroller, the "average number of asylum seekers in City-funded shelter in February decreased by approximately 2,550 individuals compared to January 2024. This is the first month of decline since the beginning of increased asylum seeker entries to New York City in July 2022." This can be partly explained, he says, by new 30- and 60-day notice requirements. The comptroller also highlights changes Moody's made to the factors it considers in the city's GO rating, which it recently affirmed. Some targets for tax revenues, fixed costs and gaps likely skew "to the downside." One example of that bringing "tax revenue growth closer to the 5.4% pre-pandemic trend," though the comptroller notes that "None of the forecasts (OMB, City Comptroller, State Comptroller, IBO, City Council, and Financial Control Board) projects 5.4% growth in tax revenues." Others, like the exclusion of "[c]osts for asylum seekers…from the evaluation of "significant structural budget imbalance" skew positive.

PREPA confirmation hearings continue; unemployment still very low

Puerto Rico Electric Power Authority (PREPA) confirmation hearings continued this week, and the court heard arguments both for and against disqualifying the votes on four separate agreements between the Financial Oversight and Management Board (FOMB) and creditors. As a reminder, confirmation hearings are currently scheduled to end on 19 March. Meanwhile, we note that Puerto Rico's unemployment rate – at just 5.7% as of January 2024 – is still among the lowest prints dating back to 1976; in fact, it is just 0.1ppt above the all-time low established in October and November of last year. Otherwise, we highlight: (a) Treasury Single Account (TSA) balances of $8.6bn as of 1 March that were down $575mn w/w, but for the YTD are up 25% above adopted liquidity plan (LP) estimates; and, (b) FY24 General Fund collections through 23 February of $9.0bn that were up 6% vs collections LP estimates.

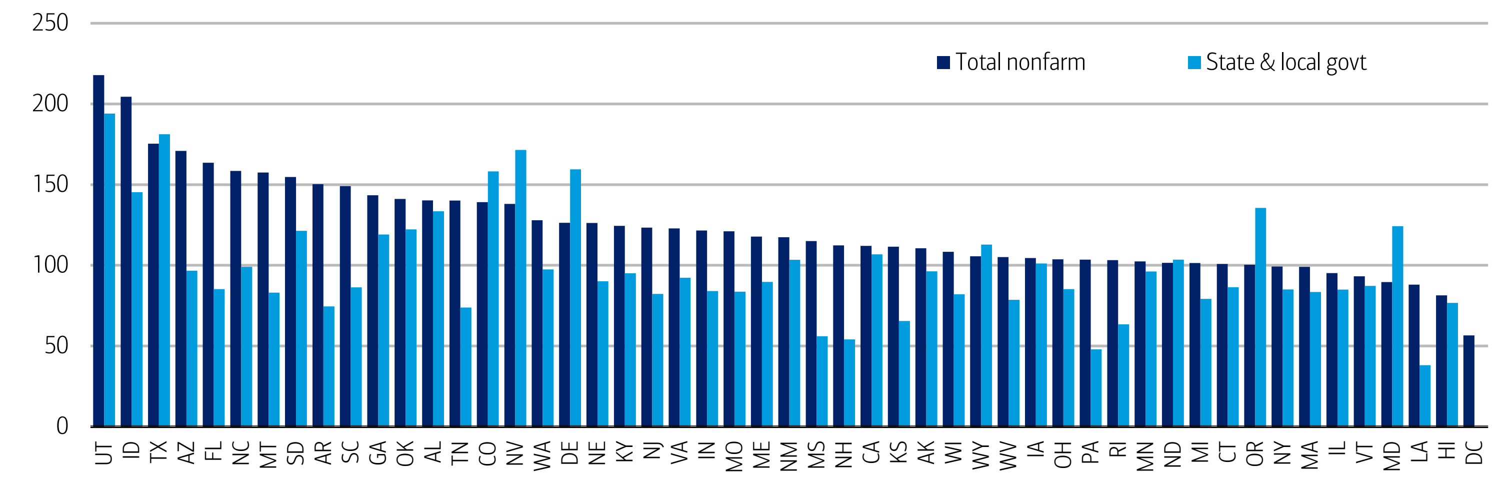
State government payroll recovery leads local government

The Feb-24 jobs report showed the US added 275K payrolls during the month, with the US unemployment rate increasing to 3.9%. Dec-23's payroll increase was revised down by 43K while Jan-23's estimate was revised down by 124K. State and local government payrolls grew 43K m/m in Feb-24 (state payrolls up 5K m/m and local payrolls up 38K m/m), bringing the sector's combined payroll recovery to 112.1%. All the same, state and local governments' combined recovery is materially lower than the overall 125.1% nonfarm payroll recovery. Local governments' recovery as of Feb-24 is at 105.9% and state governments at 141.6%. On a combined basis, state and local government education payrolls recovered 103.2% of jobs lost vs the 128.3% for non-education.

Separately, we note that 43 states fully recovered jobs lost during the pandemic crisis as of Jan-24 per our analysis of Bureau of Labor Statistics data, led by UT's 217.9% recovery. The weakest overall nonfarm payroll recoveries are still concentrated in tourism-dependent states. Exhibit 21 shows that state and local government payroll recoveries remain weaker across the states, fully recovering in just 17 states. Also, just 8 states' public sector payroll recoveries exceed their overall nonfarm payroll recoveries.

Exhibit 21: Nonfarm payroll and state and local payroll recoveries as of Jan-24, by state (%)

State and local government payroll recoveries exceed overall nonfarm payroll recoveries in 8 states, and are complete in 17 states



Source: BofA Global Research, Bureau of Labor Statistics

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Healthcare

Change Healthcare cyber attack introduces cash flow and liquidity risk – S&P

Change Healthcare, UnitedHealth Group's Optum claims processing platform, suffered a cyber attack in late February that forced its systems offline and caused material delays in processing claims for insurance payments. The exact timing of a resumption in full business operations is still unknown. S&P believes "the biggest near-term impact will be to cash flow and liquidity," per a recent report. Larger hospitals and systems that work with multiple claims businesses can transfer claims from Change Healthcare to another company, lowering the impact. They also have greater access to sources of liquidity for short-term cash needs. In contrast, stand-alone and smaller providers may not have these options. Many providers have been using workarounds to get claims paid and on 5 March, the Centers for Medicare and Medicaid Services (CMS) announced it was taking actions to support impacted providers. The possibility of advance payments from UnitedHealth Group and CMS has been spoken of to provide relief as well. S&P noted that there has been no credit impact to-date and that most rated providers, particularly those with ample reserves and access to liquidity could manage a period of less cash flow, but "smaller or lower-rated providers with lighter liquidity or less access to lines of credit and other cash support could be at greater risk of credit quality deterioration."

Piedmont Healthcare, GA outlook revised to stable from negative by S&P

Yesterday, S&P revised the outlook on Piedmont Healthcare Inc, GA's revenue bonds to stable from negative and affirmed its AA- rating. The stable outlook reflects "Piedmont's healthy operating performance despite industry pressures, management's successful integration of new assets into the system, and our expectation that the balance sheet will continue to improve over the outlook period," per S&P.

Higher education

NY comptroller highlights challenges facing NYS colleges

NY's comptroller released a report covering enrollment and student debt challenges facing many NYS college and university campuses. In order to illustrate the recruitment challenges faced by NY schools, the report looked to the past where in Fall 1970, 1 in 11 students nationally attended a school in NY, while in Fall 2010, around the time of peak enrollments nationally, that number had fallen to 1 in 16. While NY's share of student enrollment has maintained its levels since then, overall enrollment is down with Fall 2022 enrollment coming in at 896,000 students, the lowest in the past 15 years, down 7.6% since Fall 2008., driven by a 14% drop in public school enrollment over that time. Similar to trends nationwide, New York has experienced a rise in community college enrollment, with 75% of the Fall 2023 y/y SUNY system enrollment growth, the first increase since Fall 2010, driven by community colleges.

Mass Transit

MTA receives upgrade to AA from Fitch ahead of $1.2bn TRB sale

Late last week the NYC Metropolitan Transportation Authority (MTA) received an upgrade courtesy of Fitch from A to AA with a stable outlook, noting the MTA's post-pandemic recovery and stability. Fitch recently announced the revision of their Government-Related Entities Criteria, and this upgrade follows the implementation of their new standards. The MTA's around-the-clock transit system and essential nature of the service the MTA provides supports strong revenue defensibility, and the authority's credit is strengthened by the likelihood it would receive ample state support in stressful times. MTA ridership has reached roughly 70% of pre-pandemic ridership and seems to be in line with the latest forecasts. Fitch also highlights the MTA's broad fare and toll-rate setting authority, allowing the MTA to increase passenger fares and tolls in order to offset other drops in revenue. However, Fitch does note that labor expenses continues to be a pressure on MTA revenues for both current and retired employees and the continued need for infrastructure investment, as well as general rising capital needs expenditures.

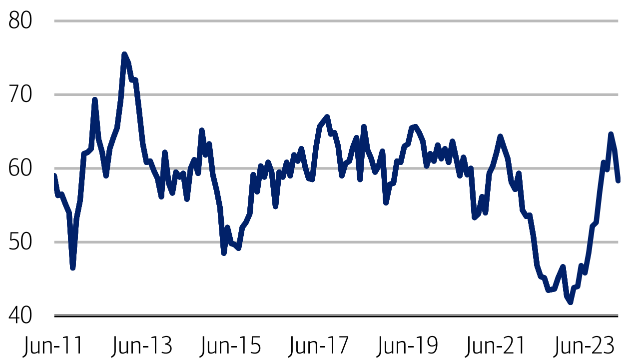
Defaults, distress & HY

Tracking: material credit events and Ch. 9 filings

For the week ending 13 March, our tracking of those Moody's-defined material credit events (MCEs) shows 19 postings, up 8 on a w/w basis, with the MTD total of 29 as of 13 March. See Exhibit 22. March MTD totals approach February's monthly total of 35, particularly as the 12 principal/interest payment delinquency filings in March YTD nearly match the 15 in the entire month of February.

There were no new Chapter 9 bankruptcy petitions filed for the week ending on 13 March; it has now been 295 days since the last bankruptcy petition was filed by Hazel Hawkins Memorial Hospital on 23 May 2023 – that is the 3rd longest period since July 1987 between Chapter 9 filings. Note that the only longer periods – 346 days and 447 days – began in the post-pandemic period. See Exhibit 23.

Exhibit 22: 6-mo mov avg of material credit events posted to EMMA
Filings posted to EMMA in March so far nearly match February totals



Note: Data as of 13 March 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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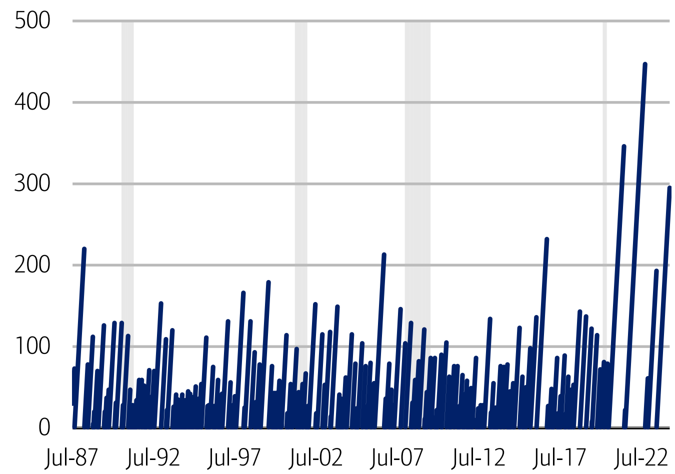
Exhibit 23: Calendar days since last Chapter 9 petition filed
295 days since Hazel Hawkins Memorial Hosp. filed Ch. 9 petition



Source: BofA Global Research, PACER, US Courts

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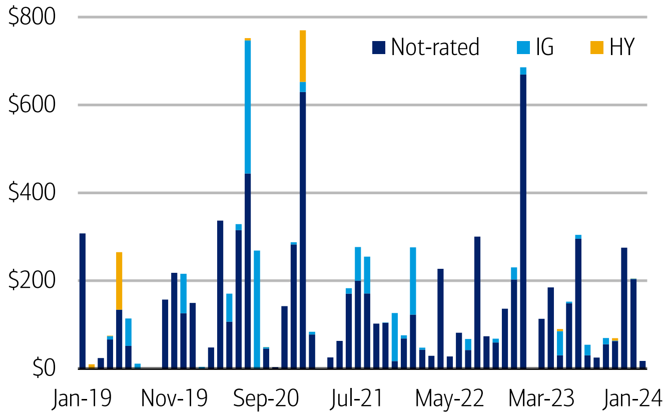
YTD default & distress through Feb-24

As discussed in our 1 March Municipals Weekly report, first-time payment defaults totaled $17mn in Feb-24, bringing YTD defaults to $250mn, down 64% y/y. First-time distressed debt totaled $186mn in February, bringing YTD first-time distress to $309mn, up 22% y/y. The total cumulative first-time distressed debt since 2019 totals $14.8bn; of that, 37.1% defaulted while 6% exited distressed status and 7% 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 24: Monthly first-time defaults ($mn) by avg rating at issue
Feb-24 first-time defaults $17mn; YTD defaults $250mnn, down 64% y/y



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

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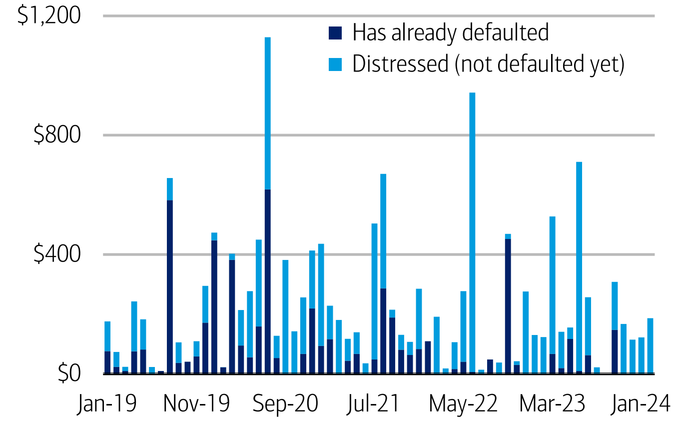
Exhibit 25: Monthly first-time distressed debt ($mn)
Feb-24 first-time distress $186mn; YTD distress $309mn, up 22% y/y



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

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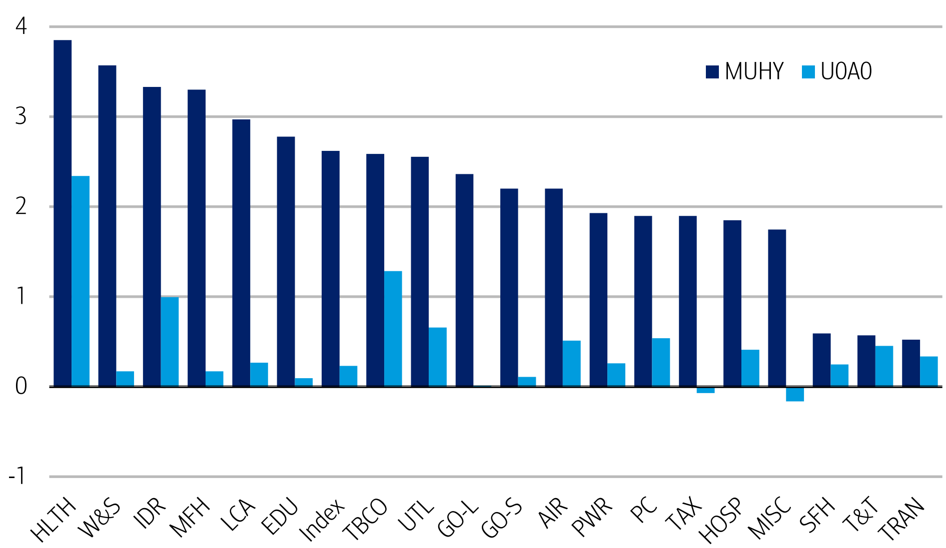
HY/NR munis returned 2.62% YTD, outperforming IG and HY corporates

The ICE US High Yield & Non-Rated Municipal Securities Index (MUHY) has had a strong start to the year with a total return of 2.62% through 13 March, or 3.34% on a taxable equivalent basis. That compares to 0.23% (not tax-adjusted) for the ICE BofA US Municipal Securities Index (U0A0), -0.41% for the ICE BofA US Corporate Index (C0A0), and 1.16% for the ICE BofA US High Yield Index (H0A0). MUHY's top-performing sectors for the YTD include Health at 3.85%; Water & Sewer at 3.57%; and Industrial Development Revenue at 3.33%. All sectors within MUHY have posted positive total returns for YTD-24. Exhibit 26 compares YTD-24 sector total returns by IG versus HY/NR and shows that IG has generally had a hard time keeping pace with HY/NR across the muni sectors. The largest gaps in total return performance between IG and HY/NR has been in the Water & Sewer and Multi-Family Housing sectors, by 300+bp each.

Exhibit 26: Sector YTD total returns: IG versus HY/NR (%)
IG returns haven't kept up with HY/NR in any muni sector for YTD-24



Note: Data as of 13 March 2024. See Exhibit 28 for sector definitions.
Source: ICE Data Indices, LLC

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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 taxable munis are less attractive for France, Italy, Spain, Japan and South Korea.

Exhibit 27: Cross currency equivalent yields as of 14 March 2024

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

	Government bond yield (in investor country's currency)			Cross currency equivalent yield*						Can foreign investors buy?					
				US Treasury			US AAA taxable muni			US Treasury			US AAA taxable muni		
				5 yr	10 yr	30 yr	5 yr	10 yr	30 yr						
Country	**5 yr**	**10 yr**	**30 yr**	**(4.287)**	**(4.284)**	**(4.430)**	**(4.31)**	**(4.59)**	**(5.16)**	**5 yr**	**10 yr**	**30 yr**	**5 yr**	**5 yr**	**10 yr**
Canada	3.595	3.523	3.404	3.764	3.828	4.210	3.787	4.132	4.933	Yes	Yes	Yes	Yes	3.595	3.523
United Kingdom	3.988	4.082	4.520	4.046	3.994	4.290	4.069	4.299	5.017	Yes			Yes	3.988	4.082
France	2.707	2.868	3.319	2.667	2.737	3.688	2.691	3.038	4.397			Yes		2.707	2.868
Germany	2.443	2.421	2.569	2.667	2.737	3.688	2.691	3.038	4.397	Yes	Yes	Yes	Yes	2.443	2.421
Italy	3.213	3.680	4.254	2.667	2.737	3.688	2.691	3.038	4.397					3.213	3.680
Spain	2.894	3.222	3.755	2.667	2.737	3.688	2.691	3.038	4.397					2.894	3.222
Portugal	2.611	3.046	3.437	2.667	2.737	3.688	2.691	3.038	4.397	Yes		Yes	Yes	2.611	3.046
Netherlands	2.570	2.705	2.739	2.667	2.737	3.688	2.691	3.038	4.397	Yes	Yes	Yes	Yes	2.570	2.705
Switzerland	0.722	0.665	0.657	2.667	2.737	3.688	2.691	3.038	4.397	Yes	Yes	Yes	Yes	0.722	0.665
Japan	0.367	0.774	1.822	0.135	0.545	2.662	0.157	0.845	3.338			Yes		0.367	0.774
Australia	3.718	4.052	4.420	4.246	4.712	4.634	4.269	5.013	5.366	Yes	Yes	Yes	Yes	3.718	4.052
South Korea	3.259	3.318	3.245	2.641	3.373	3.991	2.665	3.671	4.703		Yes	Yes		3.259	3.318
China	2.244	2.346	2.529	4.075	4.176	4.377	4.097	4.481	5.101	Yes	Yes	Yes	Yes	2.244	2.346
Taiwan	1.188	1.190	1.562	1.248	2.604	3.629	1.271	2.905	4.326	Yes	Yes	Yes	Yes	1.188	1.190
Singapore	2.984	3.029	2.959	3.662	3.942	4.264	3.685	4.246	4.986	Yes	Yes	Yes	Yes	2.984	3.029

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

Exhibit 28: Common acronyms used in our Municipals reports
This list is subject to change

Acronym	Definition	Acronym	Definition	Acronym	Definition
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	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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Research Analysts

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