



J.P.Morgan

2023 J.P. Morgan  
Securitized Products  
Midyear Outlook

June 20, 2023  
383 Madison Avenue  
New York City

# 2023 J.P. Morgan Securitized Products Midyear Outlook

June 20, 2023 | 383 Madison Avenue | New York City



## Municipals

Peter DeGroot <sup>AC</sup>, *Head of Municipal Research*

*(212) 834-7293*

*peter.degroot@jpmorgan.com*

J.P. Morgan Securities LLC

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# Hawkish Fed delays the secular bull market in Treasuries and extends the period of heightened volatility around the release of non-consensus data

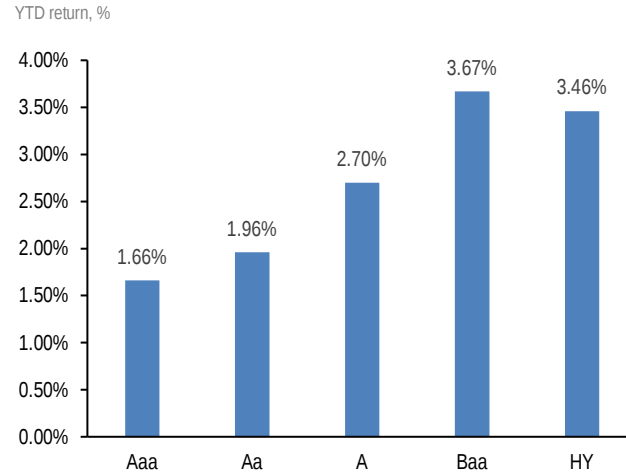
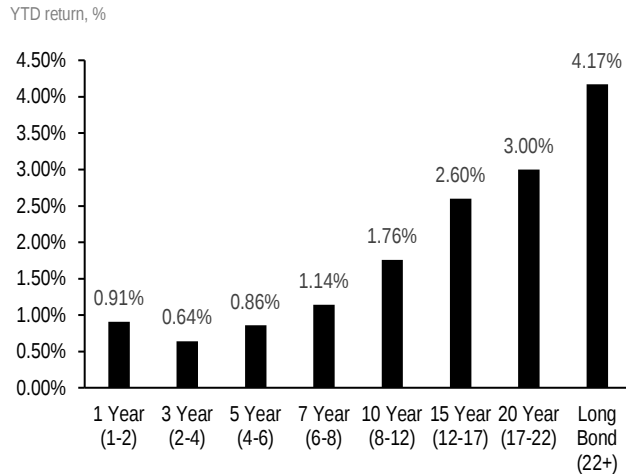
- At face value, last week's more hawkish Fed meeting suggests a delay in the arrival of a secular bull market in Treasuries and extends the period of oversized market reaction to non-consensus data.
- UST yields are expected to fall by 4Q23. 2-5Yr UST yields are expected to drop ~40bps, while 10-30Yr rates end the year down by ~25-10bps, respectively.
- The muni AAA tax-exempt curve is also expected to bull steepen, with yields forecast to move down by ~25-20-10-10bps in 2-5-10-30yrs on the curve.
- Mutual fund investors and fund flows should drive the narrative, while sustained Muni ETF inflows await a more sustained rally in muni HG rates.
- The market is expected to richen in the June-August period with reinvestment totaling \$121bn and net-negative tax-exempt supply of \$32bn.
- Municipal could cheapen in the October-November period, and particularly if rates rise and ETF outflows apply pressure to an already thin market.
- Curve roll suggests value in 13-15-25yr areas of the curve. While generic munis are rich inside of 10yrs on the curve, AMT airports, long NY, housing bonds, and long 3-5% cpn bonds provide sizable spread.
- We recommend buying high-beta assets in periods of weakness on lesser liquidity, given our view that the tightening cycle will conclude, and rates will ultimately decline.

Treasury	6/15/2023	1mo Ahead Forecast	3Q23 Forecast	4Q23 Forecast	1Q24 Forecast	2Q24 Forecast
2yr	4.65	4.55	4.45	4.25	4.00	3.75
5yr	3.92	3.85	3.75	3.55	3.40	3.25
10yr	3.73	3.70	3.70	3.50	3.40	3.30
30yr	3.85	3.90	3.85	3.75	3.75	3.65
<b>AAA Tax-exempt</b>						
2yr	2.93	3.00	2.95	2.70	2.55	2.35
5yr	2.64	2.65	2.65	2.45	2.35	2.25
10yr	2.57	2.60	2.65	2.45	2.50	2.40
30yr	3.50	3.55	3.55	3.40	3.45	3.35
<b>AAA / TSY Ratios</b>						
2yr	63%	66%	66%	64%	64%	63%
5yr	67%	69%	71%	69%	69%	69%
10yr	69%	70%	72%	70%	74%	73%
30yr	91%	91%	92%	91%	92%	92%

Source: Refinitiv, J.P. Morgan. Note: as of 6/15/2023

# This year's outlook suggested flipping the script, to long duration and long credit

- In our 2023 Municipal Market Outlook, we projected strong performance in risk assets. YTD through mid-June, Bloomberg's Long (22yr+ ) Index has outperformed the broader index by ~200bps.
- Through mid-June, Bloomberg's HY Index outperformed their IG benchmark by 127bps.
- Against a volatile but ultimately declining rate environment, we recommend buying high-beta assets in periods of weakness on lesser liquidity, with the view that the tightening cycle will conclude, and rates will ultimately decline. Outperformance is expected to move into the less liquid portions of the market should inflows become more systemic in nature.

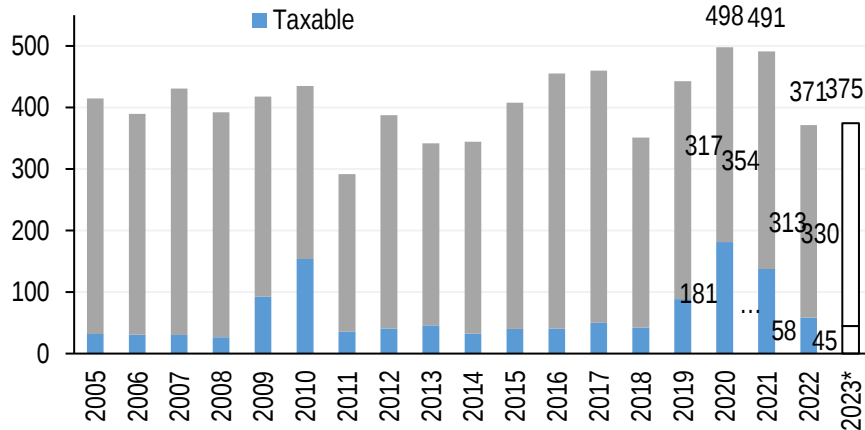


Source: Bloomberg Finance L.P., J.P. Morgan as of 6/12/2023

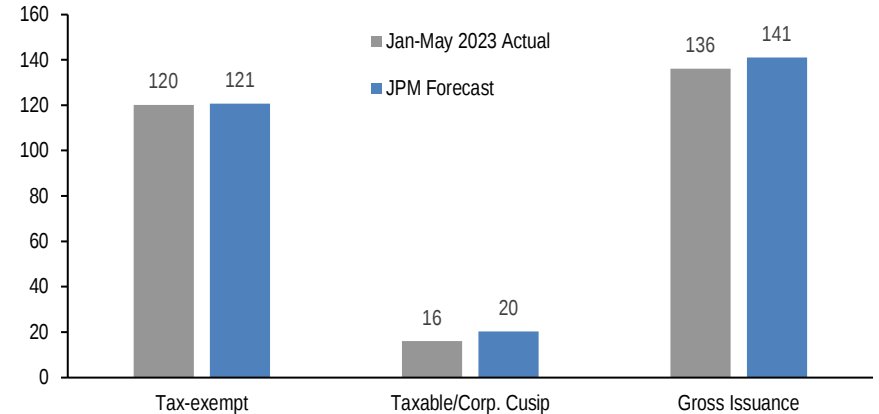
# We expect issuance will pickup and keep our forecast unchanged

- Jan through May tax-exempt issuance (\$120bn) is tracking at our Jan-May issuance forecast of \$121bn.
- YTD taxable municipal issuance totaled just \$16bn and is expected to increase to \$45bn by year-end 2023.

Annual supply, \$bn



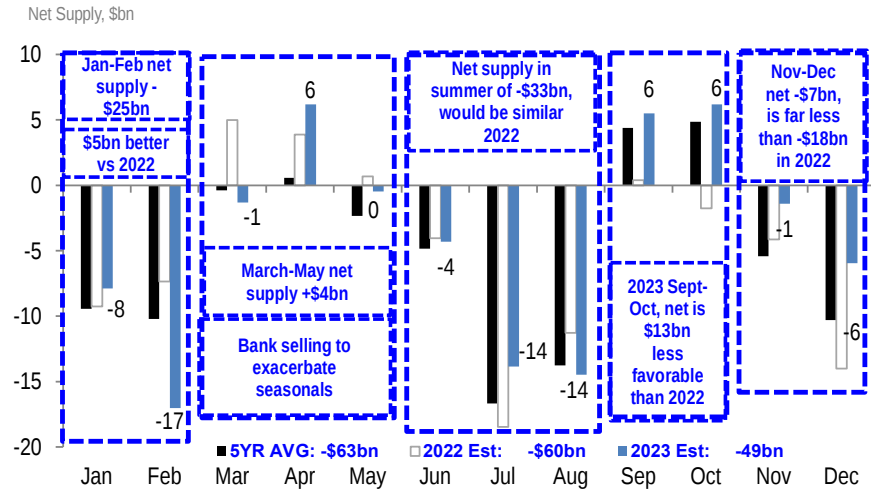
Jan-May actual and JPM forecast issuance, \$bn



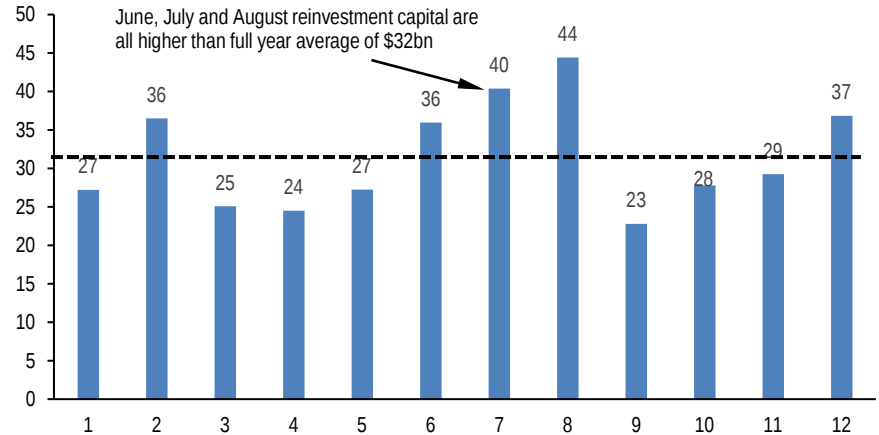
Source: Bloomberg Finance L.P., J.P. Morgan. Note: as of 5/31/2023

# Summer reinvestment capital typically drives performance through mid-August

- The market is expected to richen in the June-August period with reinvestment totaling \$121bn and net-negative tax-exempt supply of \$32bn.
- Municipals could cheapen in the October-November period and particularly if rates rise, and ETF outflows apply pressure to an already thin market.



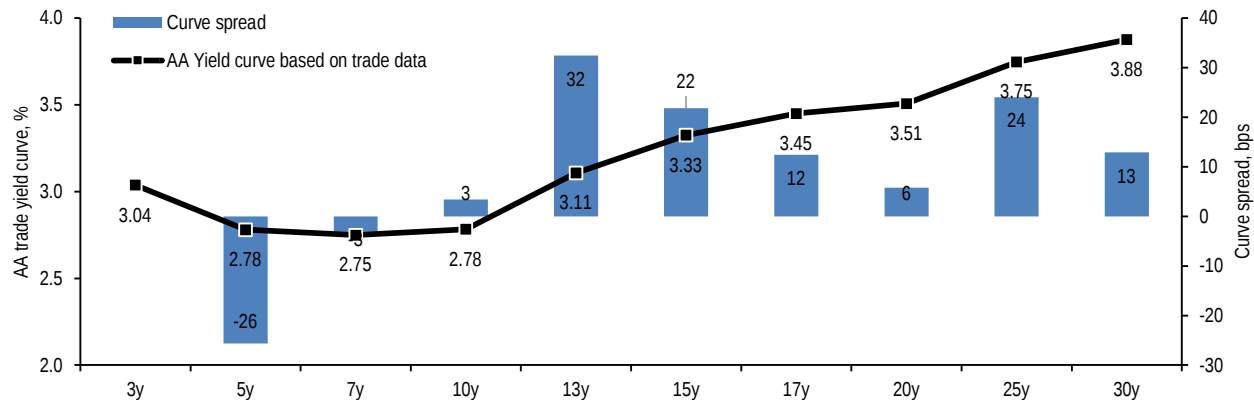
Reinvestment capital by month, \$bn



Source: Bloomberg Finance L.P., J.P. Morgan. Note: as of 5/31/2023. tax-exempt and long term only

# Curve roll suggests value in 13-15-25yr areas of the curve. While generic munis are rich, AMT airports, long NY, and long 3% cpn bonds provide sizable spread

- Based on trade data, in absolute yield terms, the largest roll-down was observed in the 13yr area (10-13yr bonds) of the curve, with a 32bps spread to 10yr AA bonds. We also find 15yr (13-15yr bond) portion of the curve compelling, providing a roll-down of 22bps.
- Our view on rates and curve roll coalesce in the longest portions of the curve where we find strong roll down of 24bps in 25yrs (24-26yr bonds) and 13bps in 30yrs (29-31yr bonds) on the curve. Naturally, the DV01 of these longer dated bonds would drive larger price return in an unchanged curve environment.

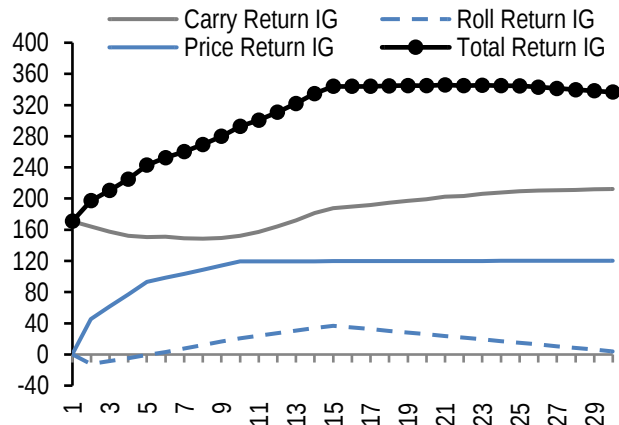


Source: MSRB, J.P. Morgan. Note: as of 6/5-6/8.

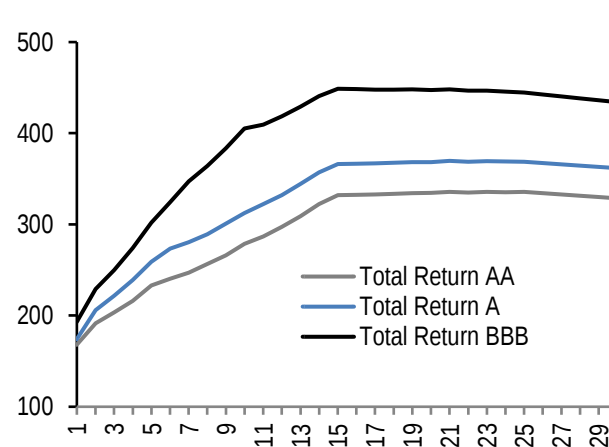
# We believe intermediate and BBB credit will generally outperform, along with long 3-4's and other spread product through year-end

- Total return performance of generic 5's over the remainder of the year, is expected to average 3.05%, with intermediate term IG 5's outperforming, amid relative flat performance across the curve. Our view that the Fed is nearing a pause but still volatile markets around the release of non-consensus data, suggest keeping close to benchmark and peer group weightings.
- The A and BBB portions of the market should continue to outperform with expected return of 3.26% and 3.96% for 5's. Given the flat performance curve and roll characteristics, we would overweight 11-13yr A and BBB rated bonds and add higher beta assets on weakness.
- We like short call 4-5's with yield pickup versus bullet bonds matching the call date, intermediates outside of de minimis, and cheaper trading NY, HSG, Airports.

Total return forecast, bps



Total return forecast, bps



Source: Refinitiv, Bloomberg Finance L.P., J.P. Morgan. Note: as of 6/15/2023. Returns between 6/16/2023 and 12/31/2023. The returns are based on 5% coupon and new issue bonds (non-callable or years to call similar to 10yrs)



# SVB sale update: ~\$4.4bn (64%) of the \$6.9bn in the FDIC tax-exempt portfolio has been sold thus far

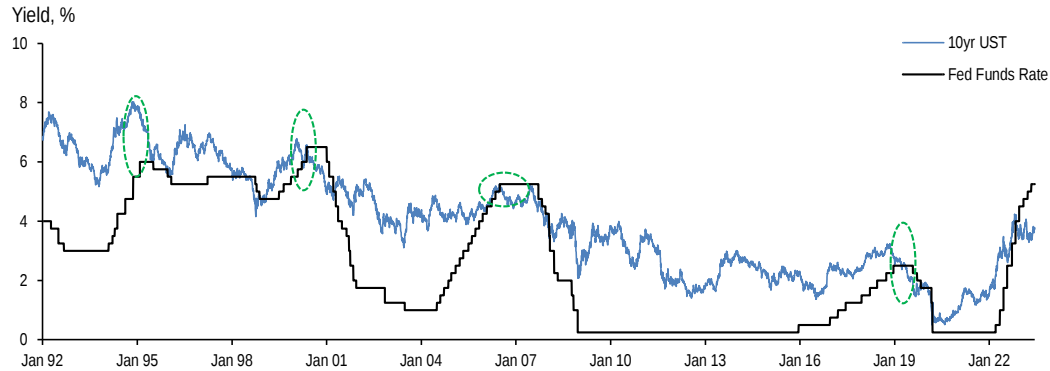
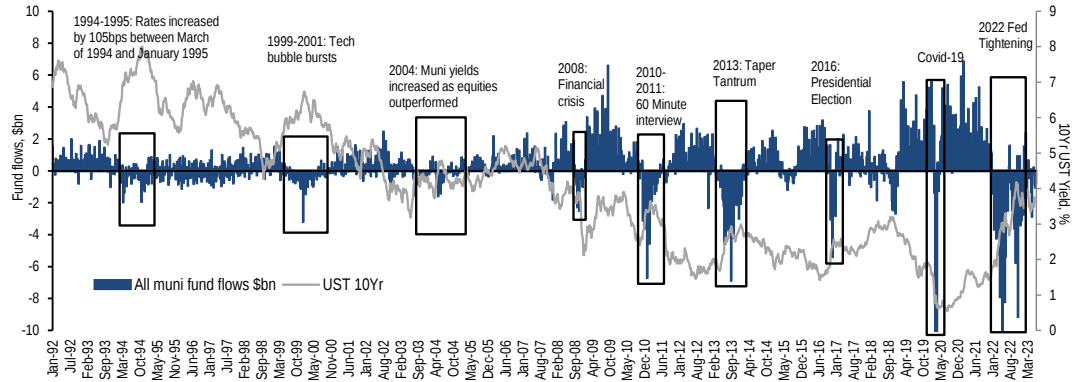
	Initial (\$mn)	Sold (\$mn)	Remaining (\$mn)	Completed (%)
<b>FDIC Tax-exempts</b>	<b>6,902</b>	<b>4,397</b>	<b>2,506</b>	<b>64%</b>
By maturity				
0yr	13	6	7	49%
1yr	24	20	4	84%
2yr	40	29	11	73%
3yr	50	40	11	79%
4yr	104	78	27	74%
5yr	120	92	28	77%
6yr	131	91	40	69%
7yr	214	166	48	77%
8yr	257	114	144	44%
9yr	292	137	155	47%
10yr	344	146	198	42%
11yr	507	267	239	53%
12yr	644	381	263	59%
13yr	720	438	282	61%
14yr	756	531	225	70%
15yr	762	503	260	66%
16yr	836	565	271	68%
17yr	717	527	190	74%
18yr	354	256	98	72%
19yr	5	4	1	78%
21yr	1	1	0	100%
22yr	2	0	2	0%
23yr	5	5	0	100%
24yr	4	0	4	0%

Maturity	5s Yield	0's Spread	3's Spread	Range Low (3's)	Range High (0's)	AA Corp Yield	HY Munis
<b>10-13yr</b>	<b>2.80</b>	130	70	<b>3.50</b>	<b>4.10</b>	4.48	4.77
<b>14-16yr</b>	<b>3.25</b>	130	70	<b>3.95</b>	<b>4.55</b>	4.74	4.98
<b>17-18yr</b>	<b>3.55</b>	130	80	<b>4.35</b>	<b>4.85</b>	5.00	5.28

- At the current pace, all bonds would be sold in the first week of July.
- There are approximately \$59mn of 0-4yr bonds, \$415mn of 5-9yr bonds, and \$2.0bn of 10yr+ bonds left to be sold.

Source: MSRB, BlackRock Advisers, J.P. Morgan. Note: as of 6/15/2023, data is estimates based on MSRB transactions matched to the portfolio distributed on 5/12/2023

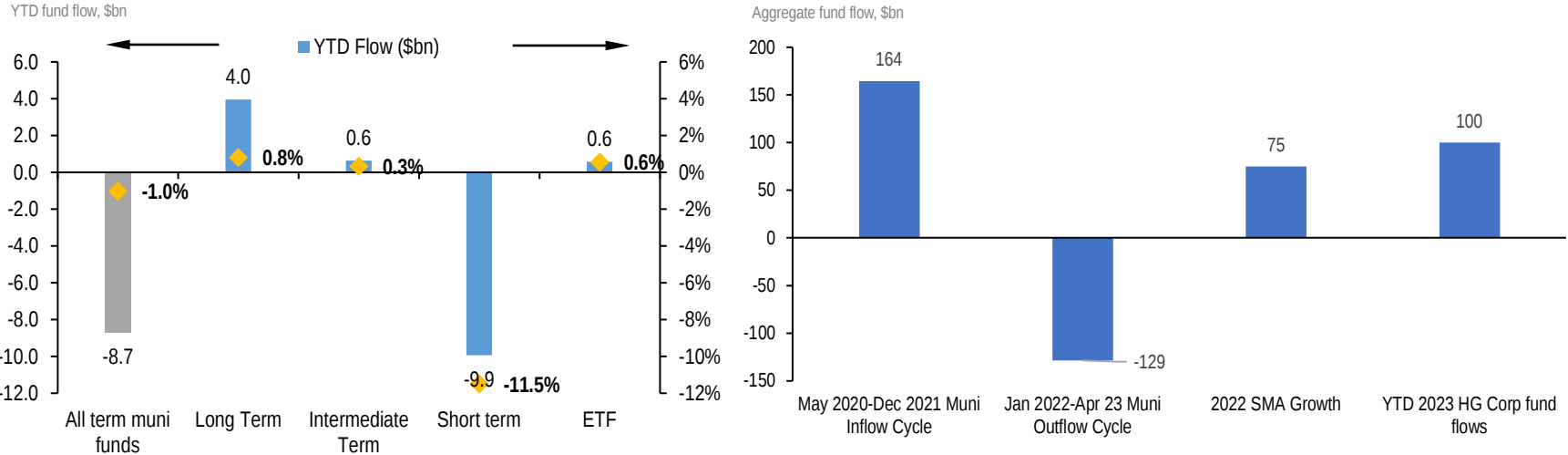
# The more protracted tightening cycle delays a more pronounced turn in fund flows, but we continue to look for flows to improve in 2H23



Source: Lipper US fund flow, J.P. Morgan. Note: as of 6/7/2023.

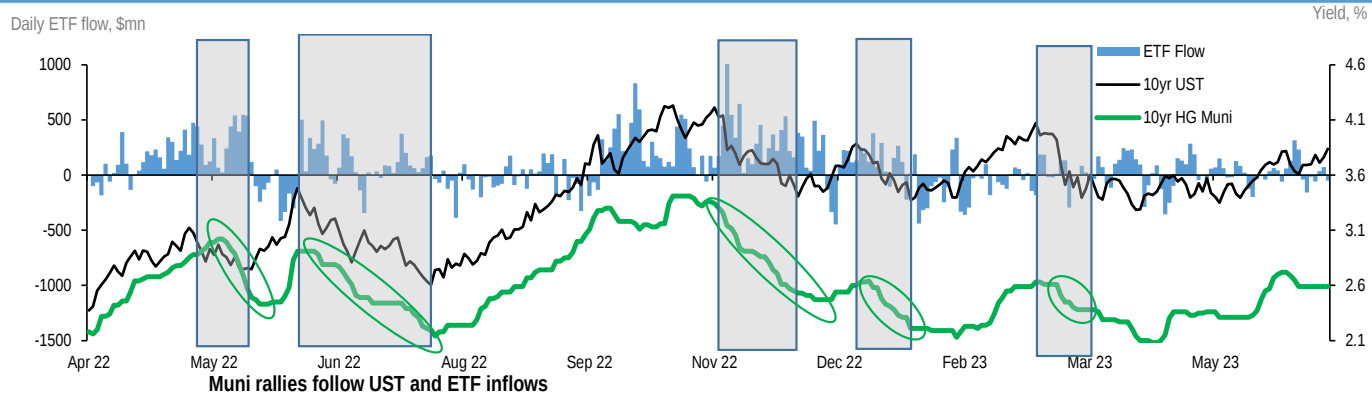
# Where did outflows go, and where will inflows come from?

- JPM's YTD 2023 estimates show outflows from short-term muni funds (-\$9.9bn) in part correspond with inflows into long-term muni funds (\$4.0bn).
- The 2022 muni outflow cycle totaled -\$129bn over January 2022-April 2023, according to Lipper. Meanwhile:
  - SMA's saw roughly \$75bn of inflows in 2022.
  - YTD, HG corporate bond funds recorded \$100bn of inflows (after that market's own outflow cycle in 2022).



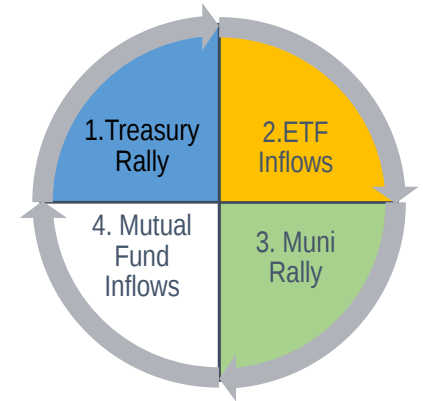
Source: US Lipper Fund Flow, J.P. Morgan

# Sustained Muni ETF inflows await a more sustained rally in muni HG rates



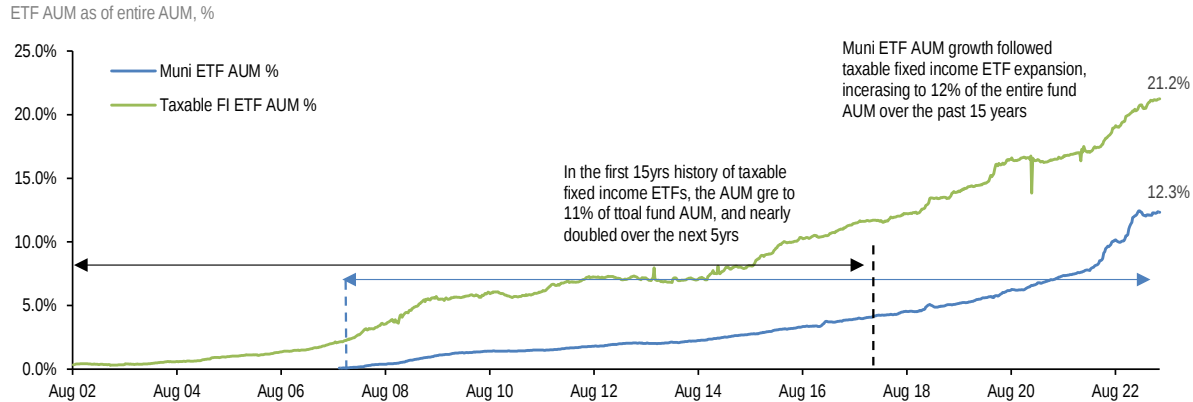
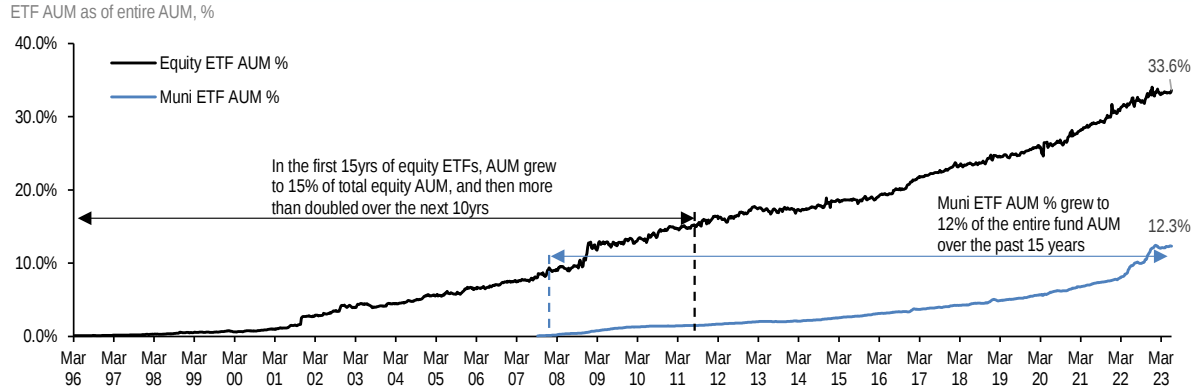
Source: Bloomberg Finance L.P., J.P. Morgan. Note: as of 6/13/2023.

- ETF flows largely follow Treasury yield movements.
- A lack of conviction in the UST and municipal markets has driven the same in muni ETF flows.
- In the prior two rallies, open-end mutual fund inflows followed the scale bumps by an average of 8 trading days.
- A resumption of the bear UST market reignited municipal fund outflows and the selling pressure/lower prices in the municipal space.



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# AUM of muni ETFs has increased to 12% of total funds outstanding. Equity ETF and taxable fixed income ETF growth suggests continued gains for muni ETFs



Source: Lipper fund flow, J.P. Morgan. Note: as of 6/7/2023.

# Taxable equivalent yields on longer dated tax-exempt bonds are compelling for corporate based buyers

	Maturity	UST Bond Yield	MUNI TAX-EXEMPT				LIFE CO TAX-EQUIV				P&C TAX-EQUIV				BANK TAX-EQUIV				CORP BOND	Taxable Muni
			AAA 5%	AAA 4%	AAA 3%	AAA 2%	5%	4%	3%	2%	5%	4%	3%	2%	5%	4%	3%	2%	AAA Corp Bond Yield	AAA Tax Muni Bond Yield
AAA	2	4.69	3.06	3.02	3.56	3.83	3.63	3.58	4.22	4.54	3.67	3.62	4.27	4.59	3.87	3.82	4.50	4.85	4.73	5.14
	5	4.02	2.84	2.83		3.86	3.37	3.35		4.58	3.41	3.39		4.63	3.60	3.58		4.89	4.28	4.84
	10	3.84	2.68	3.33	3.43	3.87	3.18	3.95	4.07	4.59	3.22	3.99	4.11	4.64	3.40	4.22	4.34	4.89	4.30	4.89
	30	3.94	3.95	4.20	4.59	4.74	4.69	4.98	5.44	5.62	4.74	5.04	5.50	5.68	5.00	5.32	5.81	6.00	4.59	5.37

	Maturity	UST Bond Yield	MUNI TAX-EXEMPT				LIFE CO TAX-EQUIV				P&C TAX-EQUIV				BANK TAX-EQUIV				CORP BOND	Taxable Muni
			AA 5%	AA 4%	AA 3%	AA 2%	5%	4%	3%	2%	5%	4%	3%	2%	5%	4%	3%	2%	AA Corporate Bond Yield	AA Tax Muni Bond Yield
AA	2	4.69	3.11	3.25	3.43	3.89	3.69	3.85	4.07	4.61	3.73	3.90	4.12	4.66	3.93	4.11	4.35	4.92	5.07	5.21
	5	4.02	2.86	3.10	3.42	3.92	3.39	3.68	4.06	4.65	3.43	3.72	4.11	4.70	3.62	3.93	4.34	4.96	4.57	4.85
	10	3.84	2.81	3.31	3.50	3.99	3.33	3.92	4.15	4.73	3.37	3.97	4.20	4.78	3.56	4.19	4.43	5.05	4.57	4.89
	30	3.94	3.96	4.43	4.65	4.73	4.70	5.25	5.52	5.61	4.75	5.31	5.58	5.67	5.01	5.61	5.89	5.98	4.84	5.54

	Maturity	UST Bond Yield	MUNI TAX-EXEMPT				LIFE CO TAX-EQUIV				P&C TAX-EQUIV				BANK TAX-EQUIV				CORP BOND	Taxable Muni
			A 5%	A 4%	A 3%	A 2%	5%	4%	3%	2%	5%	4%	3%	2%	5%	4%	3%	2%	A Corporate Bond Yield	A Tax Muni Bond Yield
A	2	4.69	3.48	3.82		4.21	4.13	4.53		4.99	4.18	4.58		5.05	4.41	4.84		5.33	5.65	5.42
	5	4.02	3.29	3.73			3.91	4.43			3.95	4.48			4.17	4.72			5.21	5.01
	10	3.84			3.71				4.41				4.45			4.70			5.21	5.15
	30	3.94		4.54	4.87	4.76		5.38	5.77	5.65		5.44	5.84	5.71		5.75	6.16	6.02	5.26	5.80

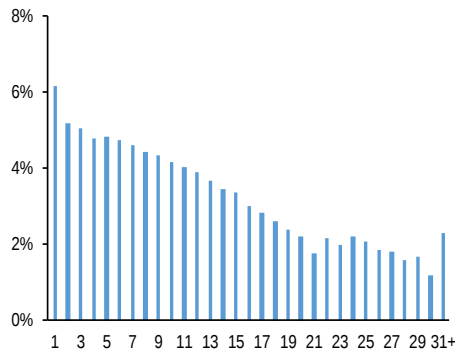
	Maturity	UST Bond Yield	MUNI TAX-EXEMPT				LIFE CO TAX-EQUIV				P&C TAX-EQUIV				BANK TAX-EQUIV				CORP BOND	Taxable Muni
			BBB 5%	BBB 4%	BBB 3%	BBB 2%	5%	4%	3%	2%	5%	4%	3%	2%	5%	4%	3%	2%	BBB Corp Bond Yield	BBB Tax Muni Bond Yield
BBB	2	4.69	4.10	4.86	4.71		4.86	5.76	5.59		4.92	5.83	5.65		5.19	6.15	5.96		5.98	6.16
	5	4.02	3.94				4.67				4.72				4.98				5.62	6.05
	10	3.84	3.99	4.37	3.91		4.73	5.19	4.63		4.78	5.25	4.68		5.05	5.54	4.94		5.70	6.73
	30	3.94	5.17	5.41	5.12		6.13	6.41	6.07		6.20	6.48	6.14		6.54	6.84	6.48		5.85	6.81

Source: ICE, J.P. Morgan. Note: non-AMT bonds only Note: As of 06/13/2023. Taxable equivalent yield calculated for Life, P&C, and Banking Companies multiplies the tax-exempt yield by 1.186, 1.199, and 1.266, respectively.

# Investors can find high-quality, longer term structures, along with sector diversification in municipal bonds

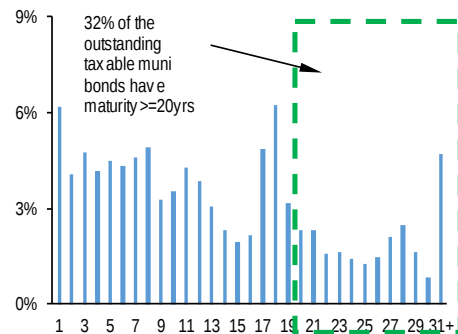
Tax-exempt Muni		
Rating	Amount outstanding (\$bn)	Proportion (%)
AAA	385	15%
AA	1,386	53%
A	383	15%
BBB	161	6%
HY/NR	295	11%
<b>Total</b>	<b>2,611</b>	<b>100%</b>

Proportion, %



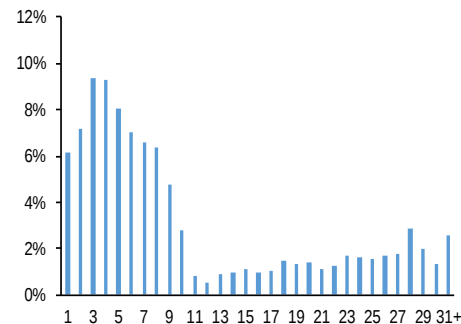
Taxable Muni		
Rating	Amount outstanding (\$bn)	Proportion (%)
AAA	106	14%
AA	452	59%
A	125	16%
BBB	40	5%
HY/NR	43	6%
<b>Total</b>	<b>767</b>	<b>100%</b>

Proportion, %



US Corporate USD Bonds		
Rating	Amount outstanding (\$bn)	Proportion (%)
AAA	87	1%
AA	374	6%
A	2,183	32%
BBB	2,651	39%
HY/NR	1,501	22%
<b>Total</b>	<b>6,796</b>	<b>100%</b>

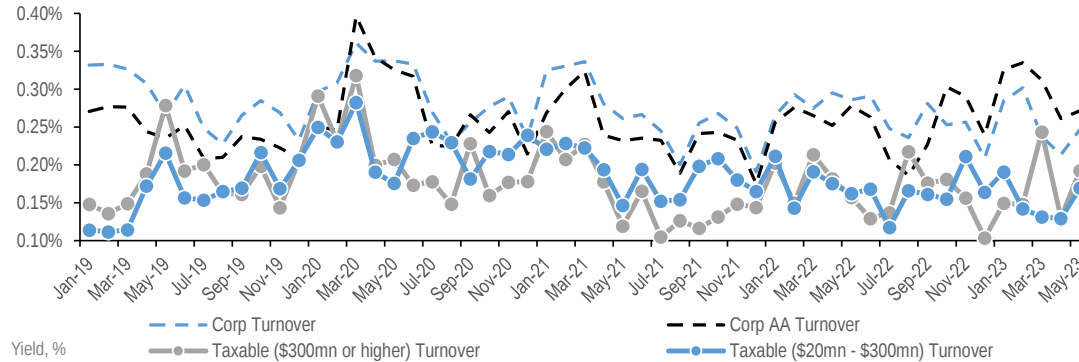
Proportion, %



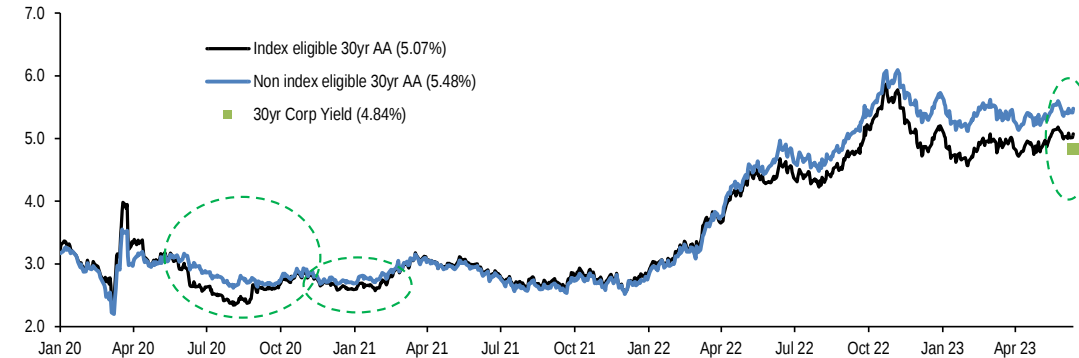
Source: Bloomberg Finance L.P., J.P. Morgan. Note: fixed coupon bonds only with original maturity >=13mo, exclude notes and derivatives. Corporate bonds only include Dollar denominated, US incorporated corporates. Corporate amount outstanding based on J.P. Morgan indices. Tax-exempt munis also exclude pre-refunded bonds

# AGG index eligible taxable munis have better liquidity vs non-index, but tighter spreads

Turnover ratio of taxable munis vs. corporates, %



Yield, %



Source: MSRB, Bloomberg Finance L.P., ICE, J.P. Morgan. Note: Corporate turnover is par value of transactions from index (JPM Corp. Index: JULI) eligible securities over the par value of the index. Taxable Muni index eligible (\$300mn or higher) turnover is par value of transactions from index eligible (min \$300mn) securities over the par value of the index. Taxable Muni Non-index eligible (Between \$20mn and \$300mn) turnover is par value of transactions from Non-index eligible (Between \$20mn and \$300mn) securities over the par value of those bonds.

- Turnover ratio of taxable munis are generally lower than corporate bonds.
  - While index eligible taxable munis have better liquidity than non-index eligible bonds.
- Currently both AGG index eligible taxable munis and non-index eligible bonds are trading significantly wider than same maturity corporates, with non-AGG index eligible bonds spread ~40bps wider than AGG index eligible taxable munis.
- We believe the spread will tighten over time as currency hedging costs lessen, and represents value for investors willing to trade liquidity for spread.



# Taxable municipals lean cheaper vs. IG US corporate bonds across the curve

## 2 to 5 years

Issuer	Rating	Maturity	Coupon (%)	YTW (%)
Apple	Aaa/AA+/-	5/13/2025	3.20	4.76
Coca Cola	A1/A+/A	9/6/2024	1.75	4.78
Disney	A2/A-/A-	1/13/2026	1.75	4.90
School Board of Miami	A1/A+/-	6/15/2027	6.24	4.83
State of California	Aa2/AA-/AA	2/1/2028	1.70	4.70
New York City	Aa2/AA/AA	8/1/2024	2.13	5.41

## 6 to 10 years

Issuer	Rating	Maturity	Coupon (%)	YTW (%)
Amazon.com	A1/AA/AA-	5/12/2031	2.10	4.56
John Deere	A2/A+/A+	1/6/2028	3.05	4.60
IBM	A3/A-/WD	5/15/2029	3.50	5.00
P&G	Aa3/AA+/-	4/23/2031	1.95	4.28
State of Texas	Aaa/AAA--	10/1/2030	3.70	4.63
City of New York	Aa2/AA/AA	10/1/2031	5.21	4.95
Connecticut	Aa3/AA-/AA-	4/15/2029	3.48	4.75
Massachusetts	Aa1/AA+/AA+	5/1/2029	4.91	4.63

## 10 years and longer:

Issuer	Rating	Maturity	Coupon (%)	YTW (%)
P&G	Aa3/AA+/-	10/25/2047	3.50	4.69
Stanford	Aaa/AAA/AAA	5/1/2048	3.65	4.75
Microsoft	Aaa/AAA/WD	2/6/2047	4.25	4.55
USC	Aa1/AA--	10/1/2047	3.84	4.84
Exxon	Aa2/AA+/-	8/16/2049	3.10	5.09
Amazon	A1/AA/AA-	8/22/2047	4.05	4.90
Cisco	A1/AA+/-	1/15/2040	5.50	5.03
University of VA	Aaa/AAA/AAA	9/1/2049	2.97	5.09
Apple	Aaa/AA+/-	9/11/2049	2.95	4.75
Shell	Aa2/A+/AA-	5/11/2045	4.38	5.32
Houston	Aa3/-/AA	3/1/2047	3.96	4.96
California	Aa2/AA-/AA	4/1/2039	7.55	5.20
DFW Airport	A1/A+/A+	11/1/2045	3.14	5.11
Kaiser	-/AA-/AA-	5/1/2047	4.15	5.13
Northwell Health	A3/A-/A-	11/1/2049	3.81	5.71

Source: Bloomberg Finance L.P., ICE, MSRB, J.P. Morgan. Note: as of 6/12/2023  
 \*Highlighted names indicate municipal bonds or non-profit corporate securities

# The TEY on callable sub-5% tax-exempts and taxable munis, provides spread pick up over Corps

Type	CUSIP	Issuer	Coupon (%)	Maturity	Next Call Date	Moody's	S&P	Fitch	Trade Yield (%)	TEY @ 21%
<b>AAA</b>										
Tax-exempts	64971XX94	New York City Transitional Finance Authority Future Tax Secured Revenue	4	8/1/2048	8/1/2032	Aa1	AAA	AAA	4.22	5.34
Tax-exempts	91514AJZ9	Board of Regents of the University of Texas System	5	8/15/2050		Aaa	AAA	AAA	3.72	4.71
Taxable Munis	91514AKD6	Board of Regents of the University of Texas System	2.439	8/15/2049	2/15/2049	Aaa	AAA	AAA	4.74	
Taxable Munis	89837LAH8	Trustees of Princeton University/The	4.201	3/1/2052	9/1/2051	Aaa			4.24	
Taxable Munis	575718AJ0	Massachusetts Institute of Technology	3.067	4/1/2052	10/1/2051	Aaa	AAA		4.71	
Corporates	594918CE2	Microsoft Corp	2.921	3/17/2052	9/17/2051	Aaa	AAA	WD	4.57	
<b>AA</b>										
Tax-exempts	57582RN93	Commonwealth of Massachusetts	2	4/1/2050	4/1/2031	Aa1	AA+	AA+	4.84	6.13
Tax-exempts	650028XQ1	State of New York Personal Income Tax Revenue	4	3/15/2054	3/15/2031		AA+	AA+	4.25	5.38
Tax-exempts	89602RGR0	Triborough Bridge & Tunnel Authority	4	11/15/2056	5/15/2031	Aa3	AA-	AA-	4.09	5.18
Taxable Munis	91412GEA9	University of California	6.296	5/15/2050	5/15/2030	Aa3	AA-	AA-	5.59	
Taxable Munis	783186TN9	Rutgers The State University of New Jersey	4.146	5/1/2048	5/1/2028	Aa3	A+		5.15	
Taxable Munis	913366DF4	Regents of the University of California Medical Center Pooled Revenue	6.583	5/15/2049		Aa3	AA-	AA-	5.15	
Taxable Munis	73358XCNO	Port Authority of New York & New Jersey	3.175	7/15/2060	7/15/2031	Aa3	AA-	AA-	5.05	
Taxable Munis	92812VD29	Virginia Housing Development Authority	3.834	4/1/2055	4/1/2029	Aa1	AA+		5.29	
Taxable Munis	235241LW4	Dallas Area Rapid Transit	5.022	12/1/2048		Aa2	AA+		5.02	
Corporates	92826CAQ5	Visa Inc	2	8/15/2050	2/15/2050	Aa3	AA-		4.54	
Corporates	30231GAZ5	Exxon Mobil Corp	3.095	8/16/2049	2/16/2049	Aa2	AA-		5.00	
Corporates	931142DW0	Walmart Inc	3.625	12/15/2047	6/15/2047	Aa2	AA	AA	4.73	
<b>A</b>										
Tax-exempts	6461367N5	New Jersey Transportation Trust Fund Authority	3	6/15/2050	12/15/2030	A2	A-	A	4.60	5.83
Tax-exempts	167593L67	Chicago O'Hare International Airport	5	1/1/2053	1/1/2029		A+	A+	4.63	5.86
Tax-exempts	59261AK55	Metropolitan Transportation Authority	4	11/15/2047	5/15/2031	A3	BBB+	A-	4.46	5.65
Taxable Munis	59261AG76	Metropolitan Transportation Authority	5.175	11/15/2049		A3	BBB+	A-	5.82	
Taxable Munis	23503CAN7	Dallas Fort Worth International Airport	4.507	11/1/2051	11/1/2032	A1	A+	A+	5.13	
Taxable Munis	5463986Q6	Tulane University	4.346	6/1/2051	12/1/2050	A1	A+		5.64	
Taxable Munis	491034AQ7	Cincinnati/Northern Kentucky International Airport Customer Facility Charge	4.689	1/1/2049	1/1/2029	A3		A-	5.59	
Taxable Munis	38611TCR6	Grand Parkway Transportation Corp	3.356	10/1/2052	4/1/2030	A2		A+	5.59	
Taxable Munis	20268JAG8	CommonSpirit Health	3.91	10/1/2050	4/1/2050	Baa1	A-	A-	5.67	
Taxable Munis	623115AE2	Mount Sinai Hospitals Group Inc	3.737	7/1/2049	1/1/2049	A3	A-		5.62	
Corporates	26442CAU8	Duke Energy Carolinas LLC	3.95	3/15/2048	9/15/2047	Aa3	A		5.34	
Corporates	06051GGG8	Bank of America Corp	4.443	1/20/2048	1/20/2047	A1	A-	AA-	5.53	
Corporates	110122DW5	Bristol-Myers Squibb Co	3.7	3/15/2052	9/15/2051	A2	A+		5.03	

Source: Bloomberg Finance L.P., MSRB, J.P. Morgan. Note: light green shaded are tax-exempt bonds, grey shaded are corporate bonds, white colors are taxable munis including corp cusip. As of 6/13/2023

# Long dated taxable muni relative value vs. US Corps

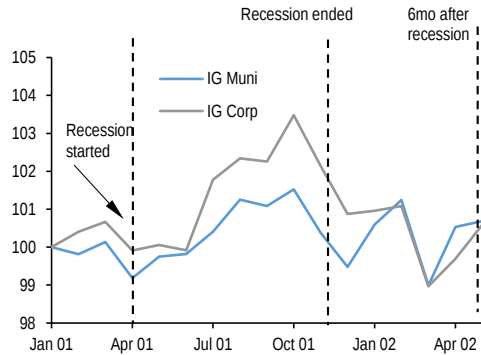
	Current Yield						Z-score to Corporates			Z-score to Treasuries		
		3mo High	3mo Low	1yr High	1yr Low	Spread to Corp	1yr	3yr	Spread to Tsy	1yr	3yr	
AAA-All	4.99	5.12	4.67	5.81	4.34	34	-0.41	0.79	110	-1.41	0.57	
AA-All	5.21	5.34	4.92	6.00	4.40	31	0.14	0.61	132	-1.07	0.60	
A-All	5.48	5.62	5.19	6.26	4.69	5	-0.24	-0.75	159	-1.32	0.39	
BBB-All	6.29	6.40	5.84	6.72	5.30	27	0.90	-0.35	240	0.48	0.43	
AAA-GO	4.92	5.04	4.56	5.59	4.18	1	0.08	0.46	103	-0.79	0.39	
AAA-Rev	4.99	5.13	4.68	5.84	4.35	9	-0.45	0.81	110	-1.37	0.59	
AAA-Higher Ed	4.89	5.02	4.52	5.76	3.97	-2	0.72	1.18	100	-0.74	0.79	
AA-GO	5.16	5.27	4.85	5.93	4.38	25	0.43	0.58	127	-0.84	0.62	
AA-Rev	5.21	5.34	4.93	6.00	4.41	31	0.10	0.59	132	-1.09	0.59	
AA Combined	5.50	5.61	4.94	5.97	4.24	59	1.28	2.07	161	0.88	1.55	
AA Water	5.14	5.28	4.83	5.90	4.23	23	0.62	0.78	125	-0.58	0.69	
AA Sewer	4.99	5.15	4.65	6.02	4.41	8	-1.12	-0.74	110	-1.28	-0.04	
AA Power	5.10	5.23	4.84	6.05	4.40	20	-0.81	0.16	121	-1.51	0.36	
AA Elec	4.94	5.05	4.59	5.73	4.16	3	-0.04	-0.42	104	-0.94	0.11	
AA Trans Ex Air	5.07	5.23	4.69	5.87	4.27	17	0.51	0.11	118	-0.72	0.45	
AA Air	5.08	5.20	4.76	5.86	4.34	17	0.00	-0.53	119	-0.95	-1.00	
AA Higher Ed	5.23	5.35	4.97	5.99	4.35	32	0.28	0.87	134	-0.86	0.74	
AA Tax Rev	5.17	5.29	4.89	6.00	4.42	27	-0.03	0.16	128	-1.23	0.40	
AA Health	5.38	5.51	5.07	6.15	4.51	47	0.32	0.76	149	-0.87	0.69	
A-GO	5.31	5.43	5.00	6.38	4.44	-12	-0.57	-1.10	142	-0.94	0.20	
A-Rev	5.48	5.62	5.20	6.26	4.69	5	-0.24	-0.75	159	-1.32	0.39	
A Airport	5.01	5.17	4.76	5.89	4.30	-41	-0.45	-1.06	112	-1.09	-0.35	
A Trans Ex Air	5.30	5.41	4.97	5.79	4.27	-12	0.47	-0.46	141	-0.06	0.34	
A Elec	5.39	5.51	5.03	6.29	4.68	-3	-0.35	-0.92	150	-1.04	0.35	
A Power	5.42	5.55	5.00	6.05	4.87	0	-0.27	-0.67	153	-0.97	0.33	
A Tax Rev	5.46	5.61	5.19	6.29	4.64	4	-0.43	-0.90	157	-1.54	0.22	
A Health	5.73	5.85	5.37	6.37	4.77	30	0.50	-0.19	184	-0.60	0.80	
BBB-Rev	6.33	6.45	5.88	6.76	5.28	31	0.94	-0.07	244	1.15	0.75	

Source: ICE, J.P. Morgan. Note: as of 6/5/2023. Corporate yields are from same rating bonds in J.P. Morgan 20yr JULI index. Treasury yields are using 30yr UST. Blue shade indicates cheap, grey indicates rich.

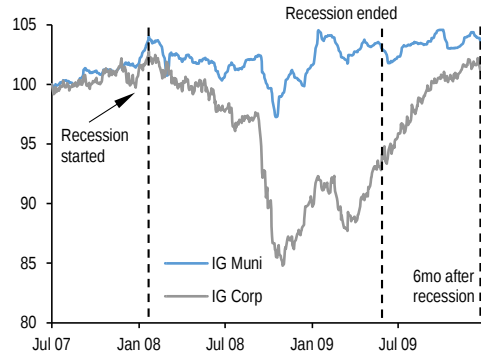
- Absolute yields on long (20yr+) IG taxable munis are currently 10-15bps from the 3-month highs, with health-care consistently showing the most value.
- Looking at the z-scores of spread vs corporates and Treasuries, taxable munis are largely fair value (within 1.5 sigma from 1-3yr historical averages).
- AAA-AA taxable munis are currently ~30-35bps wide to similar rated corporates.
- A-rated taxable munis are generally on the richer side of fair value, while BBB taxable munis are on the cheaper side.

# IG municipals significantly outperform IG corporates, in each of the recessionary periods below

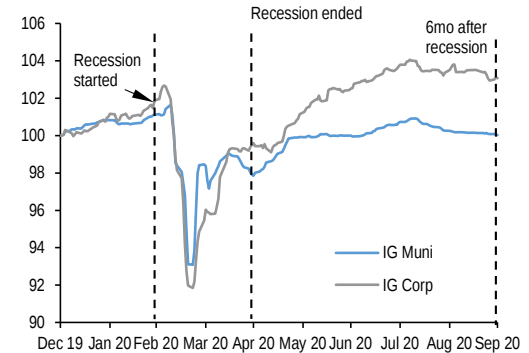
Normalized return starting from 100



Normalized return starting from 100



Normalized return starting from 100

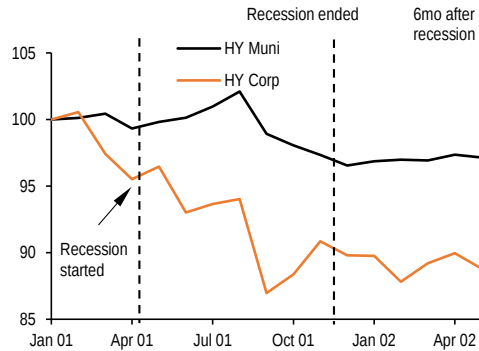


Source: Bloomberg Finance L.P., J.P. Morgan.

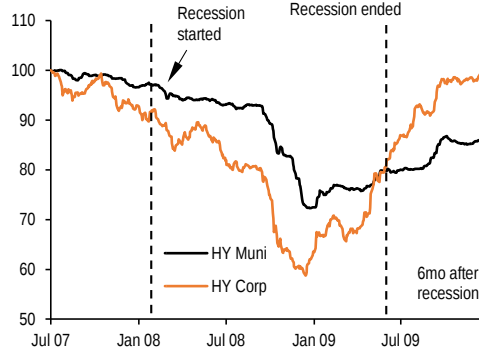
- We compare the price return of Bloomberg's 1-10yr IG Muni (LMISTR) and 1-10yr IG Corporate bond (LD06TRUU) indices.
- Over the recent recessions, the peak to trough price return on 1-10yr IG muni index outpaced the 1-10 IG Corporate bond index, by an average of 4.58%.
- It is also apparent to us that, some time before the end of the recession, the market begins to look toward recovery, and corporates handily outperform.

# HY municipals significantly outperform HY corporates, in each of the recessionary periods below

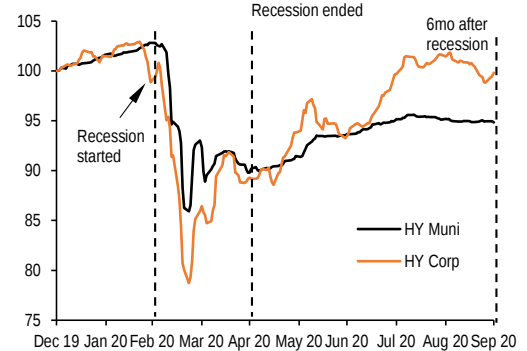
Normalized return starting from 100



Normalized return starting from 100



Normalized return starting from 100



Source: Bloomberg Finance L.P., J.P. Morgan.

- Moving to the high-yield markets, we compare the price performance of Bloomberg's 7-12yr HY Muni Index (I14027US) to J.P. Morgan's 7-10yr High Yield Corporate bond Index, over the periods around these recessions.
- Over the three recessions, the peak to trough price return on the 8-12yr HY Muni Index outpaced the 7-10yr Corporate HY Index, by an average of 10.1%.
- In the six-month period after these recessions, the 7-10yr HY Corporate bond index, outpaced the 8-12yr HY muni index by an average of 7.96%.

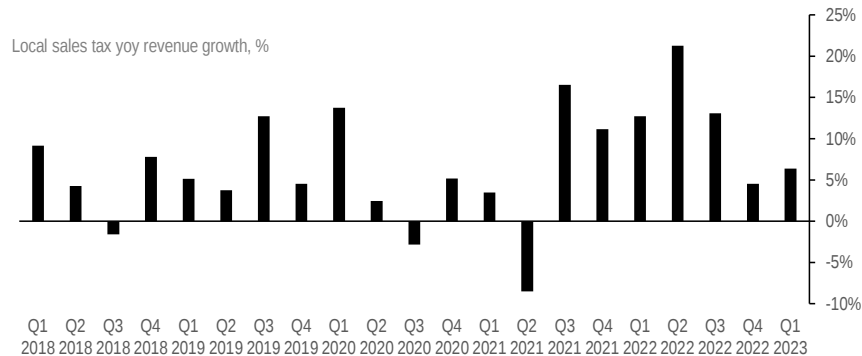
# Office market weakness suggests a downdraft in sales tax receipts; however the vast majority of sales tax bonds draw from broad regional areas

JPM's SPG's monthly Office Market Monitor showed **1Q23 office vacancy and total availability rates are at or above GFC highs, at 12.8% and 16.3%, respectively, and availability above 2019 in all of the 50 largest office markets.**

Sales taxes are the 2<sup>nd</sup> largest source of local tax revenues. While 1Q23 local sales tax showed a 7<sup>th</sup> consecutive quarter of YOY growth, at +6%, hybrid work could impact local consumption over time ([JPM Muni Mkts Weekly](#)).

Direct city sales tax backed debt is below \$5bn across 50 issuers, although this is a fraction of the \$77bn of debt outstanding that is backed by sales taxes issued by other entities, like transit systems, and bridge/tunnel authorities.

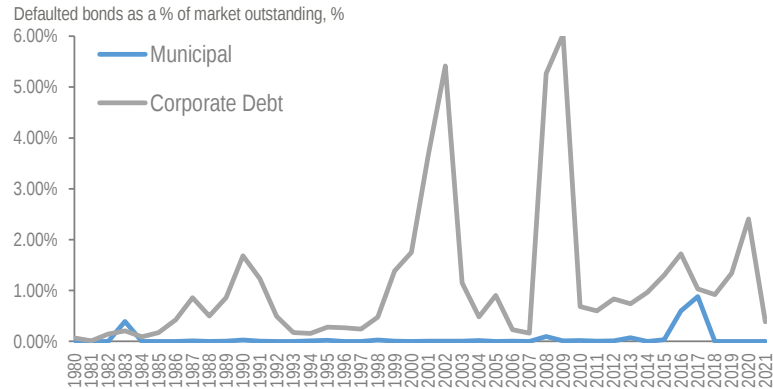
Across the largest issuers of metro area sales tax bonds, tax bases extend beyond the downtown office-centric areas. Revenue are generally captured from downtown hubs and the surrounding areas.



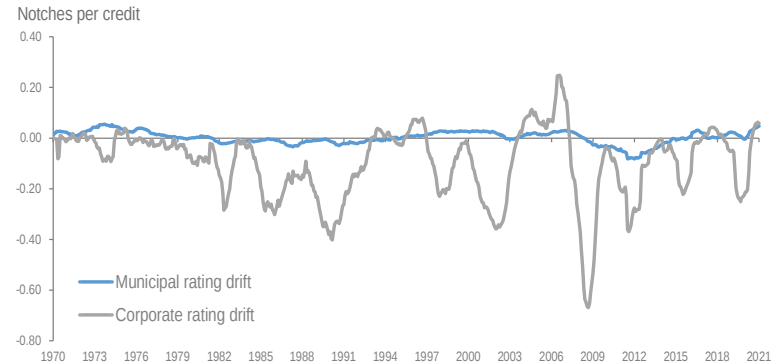
Source: US Census Bureau, J.P. Morgan. As of 1Q23, seasonally adjusted results

# Stable municipal rating transitions and solid historical default metrics add to the appeal of the asset class

- The historical municipal average cumulative default rate is just ~0.2%.
- Muni defaults in absolute dollar amounts and defaulted debt as a percentage of outstanding market size have been a fraction of those in the corporate bond market
  - Difference particularly evident during and around recessionary periods
  - The 2015-2017 spike in the muni market is attributable to Puerto Rico
- Rating volatility for municipals has remained relatively low, with rating drift bottoming out at just -8 notches per 100 credits during the Great Recession vs -67 notches for global corporates.



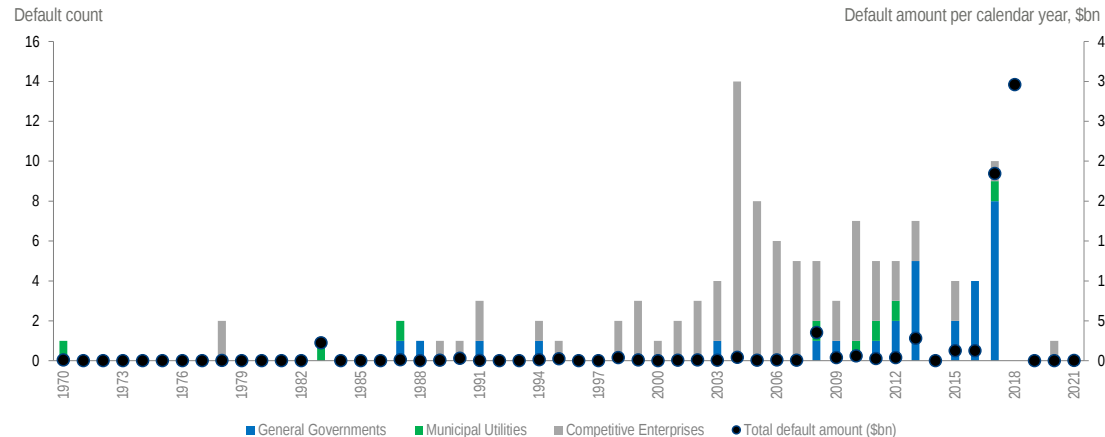
Source: Moody's Investors Service, SIFMA, J.P. Morgan



Source: Moody's Investors Service, J.P. Morgan

# Municipal sector defaults rise around recessionary periods but remain low compared to corporates

- While relatively rare, the pace and frequency of municipal defaults and bankruptcy filings picked up after the Great Recession.
  - 56 of the 114 U.S. public finance defaults recorded by Moody's since 1970 have occurred since 2007
  - Large numbers of defaults tend to stem from specific crises – for example, housing in 2004-2008 and Puerto Rico in 2016-2017
  - That said, dollar volume can vary significantly from default count, and ex-Puerto Rico, remains low

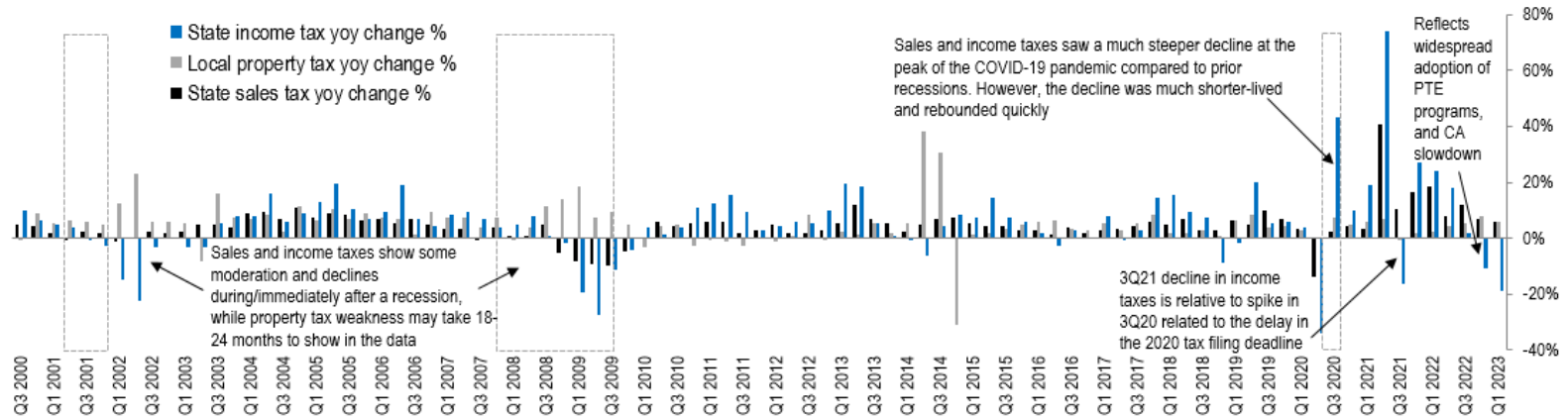


Source: Moody's Investors Service, J.P. Morgan



# Local property tax receipts are historically resilient, with impact of recession occurring at a lag. State and local sales and income tax receipts are more cyclical

- Property taxes, a historically stable and reliable source of revenue, account for ~80% of total local gov. tax receipts.
- States receive roughly half of their tax revenue from individual income (49%), and 38% from sales taxes.
- 1Q23 state and local collections were down 3.5% oya, as growth in sales tax revenue (+6%) and property tax revenue (+6%) more than offset a 17% decline in individual income tax receipts and 17% decline in corporate taxes.
  - The decline in PIT taxes reflects weakness in CA capital gains, and the widespread adoption of pass-through entity tax programs (a SALT cap workaround).



Source: US Census Bureau, J.P. Morgan. Data through 1Q23.

# Disclosures

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