

Municipal Outlook

Keep Calm and Carry On

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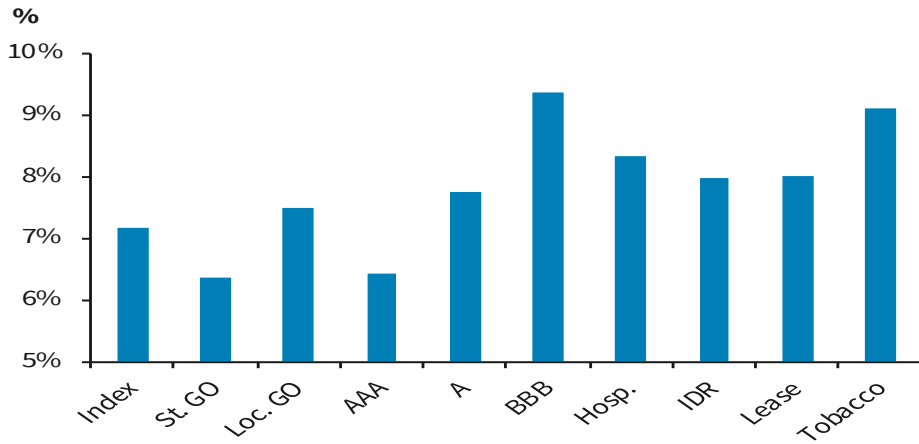
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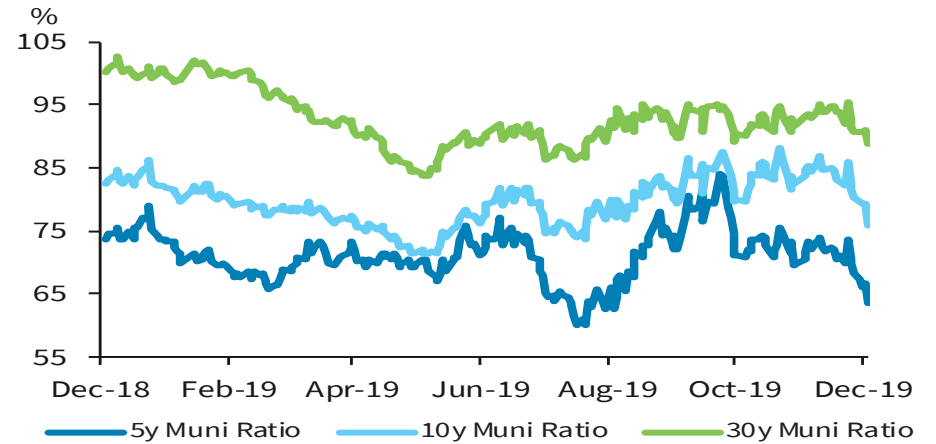
Surprisingly strong performance in 2019

- Performance has surpassed expectation - helped by rates, low 1H supply and inflows.

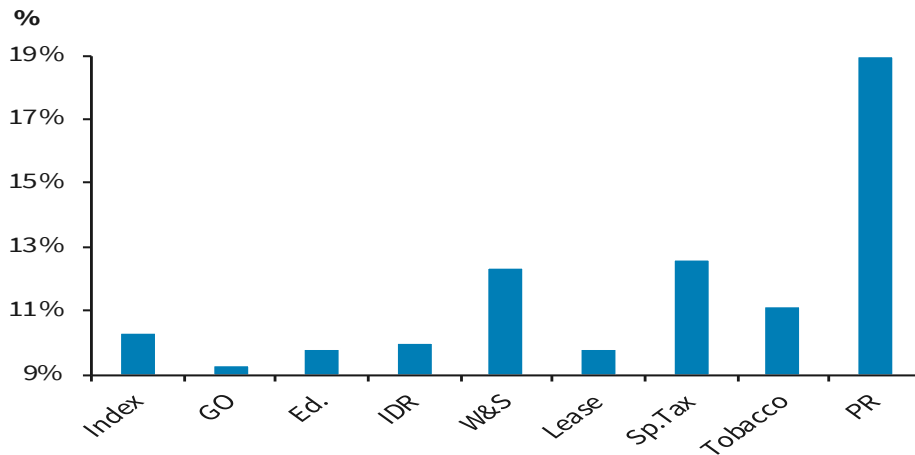
IG Index Returns and Sectors



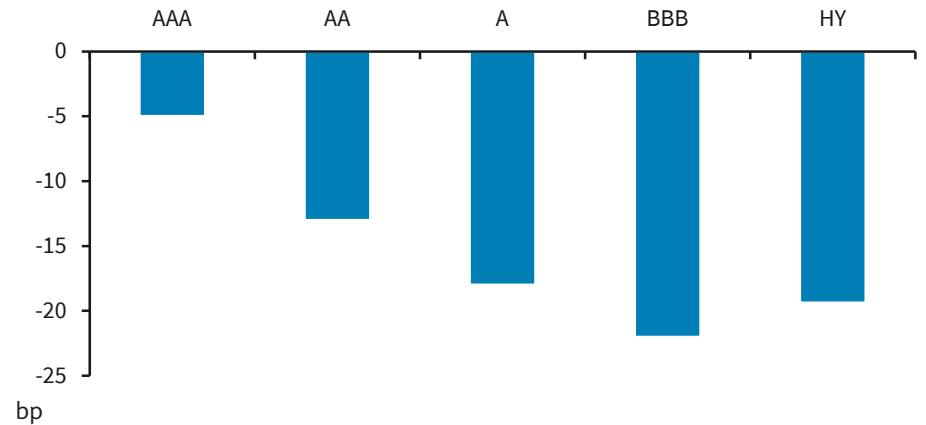
MMD-UST Ratios



HY Index Returns and Sectors



Spread Compression vs. 10y MMD

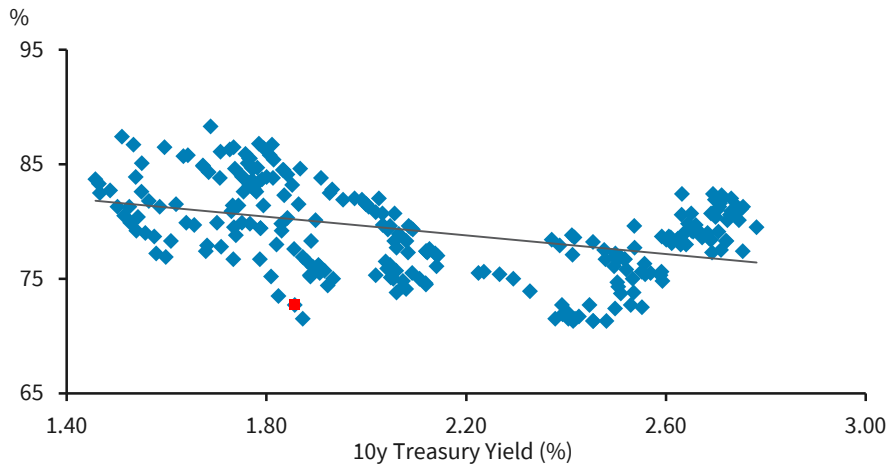


Source for all charts: Bloomberg Barclays Indices, Muni Market Dataline, Barclays Research

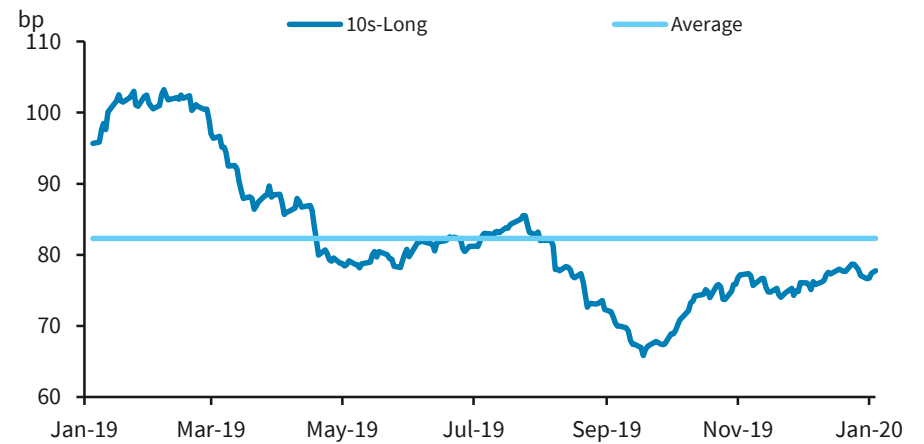
Rich valuations

- Ratios are low, curves are flat, IG spreads are tight; although HY spreads not as rich.

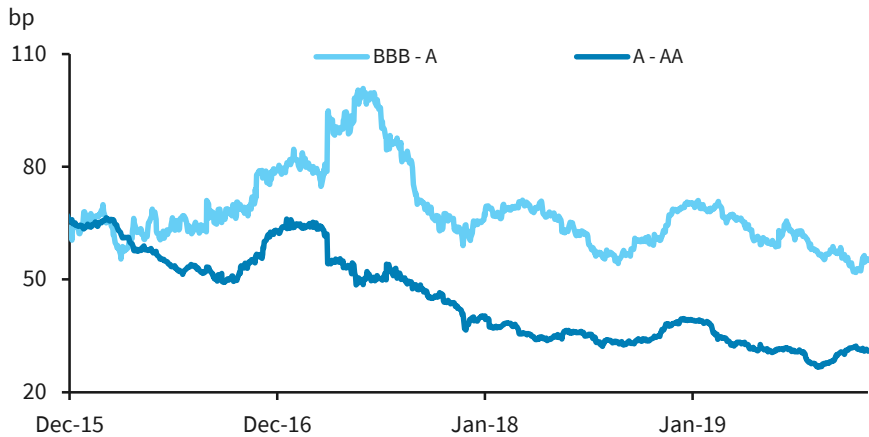
MMD-UST 10y



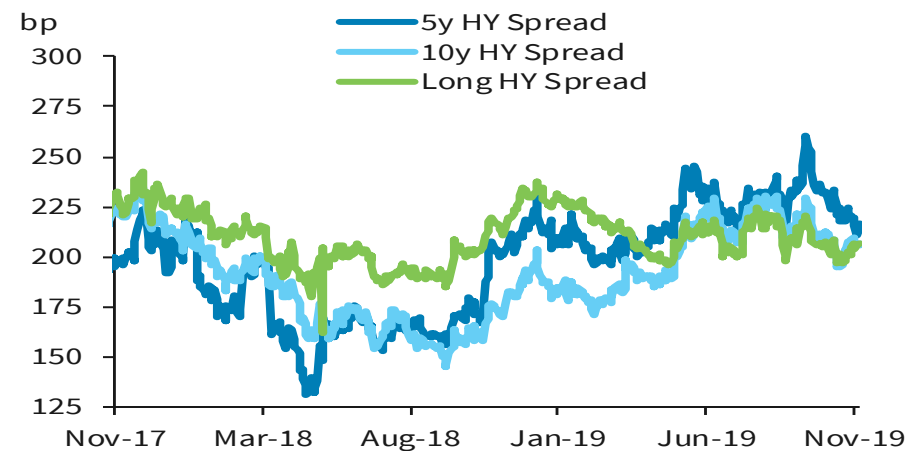
10s30s



IG Credit Spreads



HY Muni Index Spreads

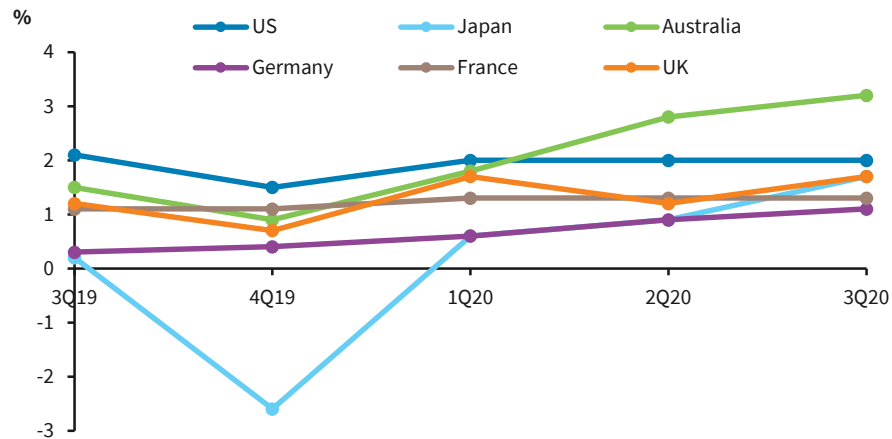


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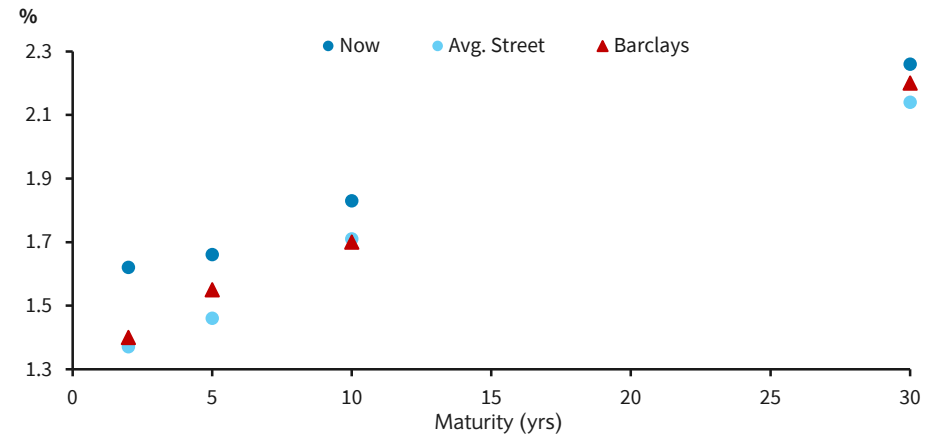
Looking ahead: Brighter economic outlook

- Expect stronger growth in 2020, rate expectations are too low. Less uncertainty.

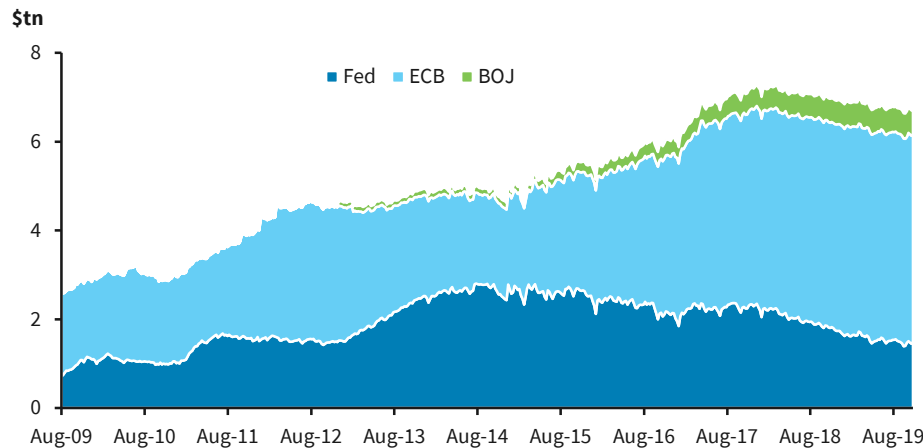
Global GDP 2020 Forecast



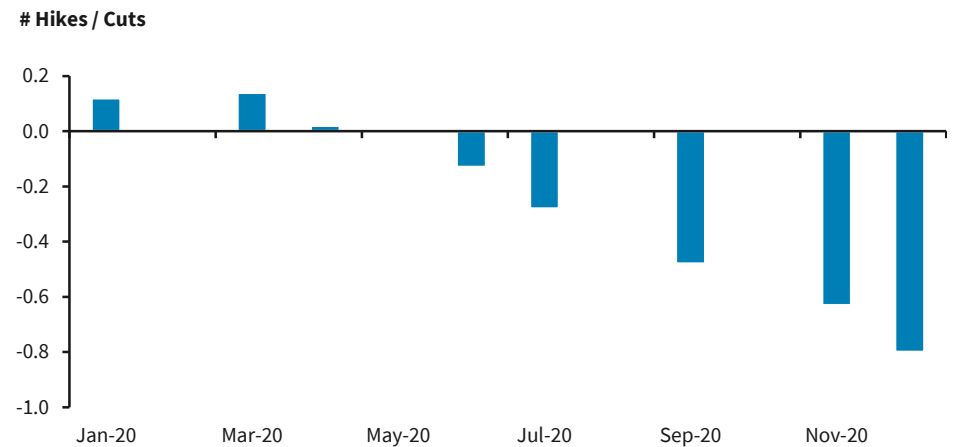
2020YE US Rate Expectations



QE Continues



Market-Implied Rate Changes



Source for all charts: Bloomberg, Barclays Research

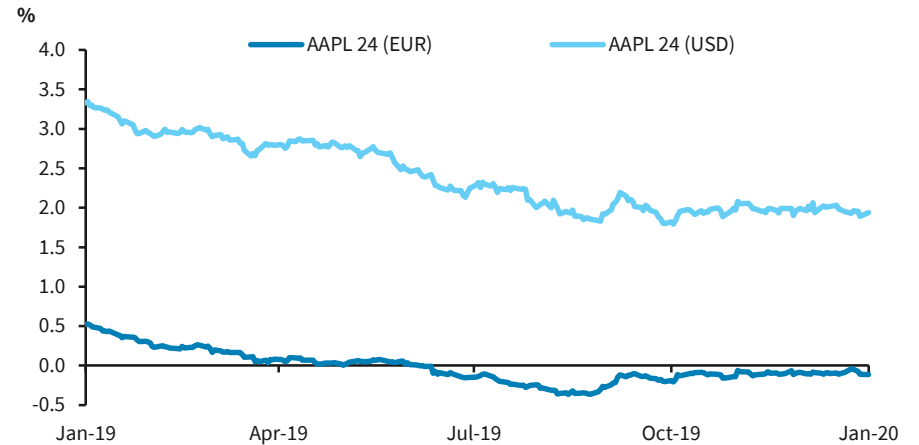
Muni yields can become negative

- Theoretically, muni yields can become negative, as buyers expect price appreciation.

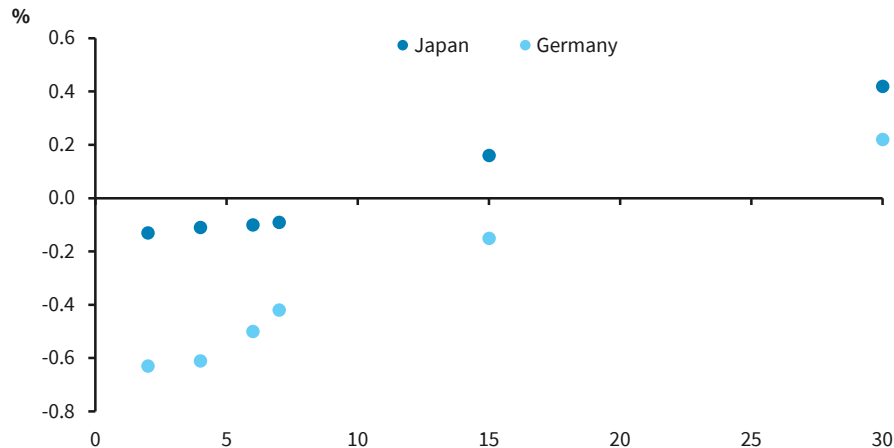
Global Share of Debt With Neg. Yield



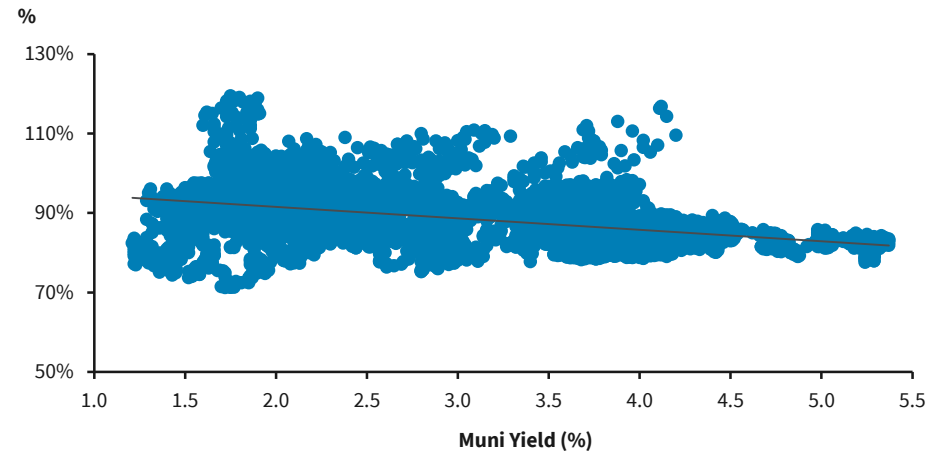
Corporates Denominated in USD /EUR



Upward Sloping Curves



MMD-UST vs Muni Yields (2000-20)



Source for all charts: Bloomberg, Muni Market Dataline

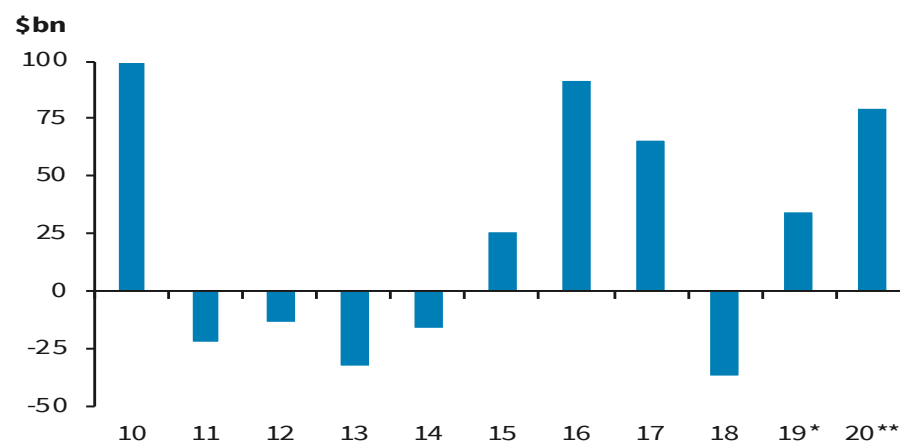
Looking ahead: Robust supply

- Supply will likely remain heavy, and will likely be front-loaded. Positive net issuance.

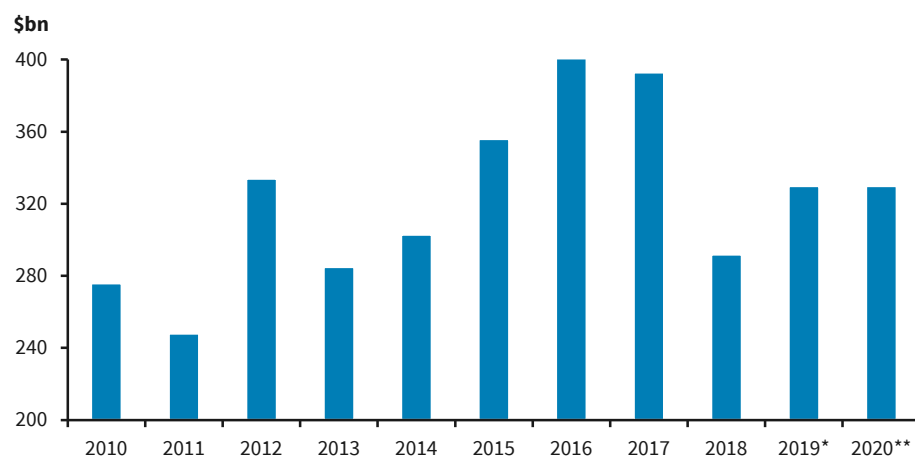
2020 Muni Issuance Forecast

	(\$bn)
Gross Supply	415
Tax-Exempt Supply	330
Taxable Supply	85
New Money Supply	245
Refunding Supply	170
Total Redemptions	335
Net Supply	80

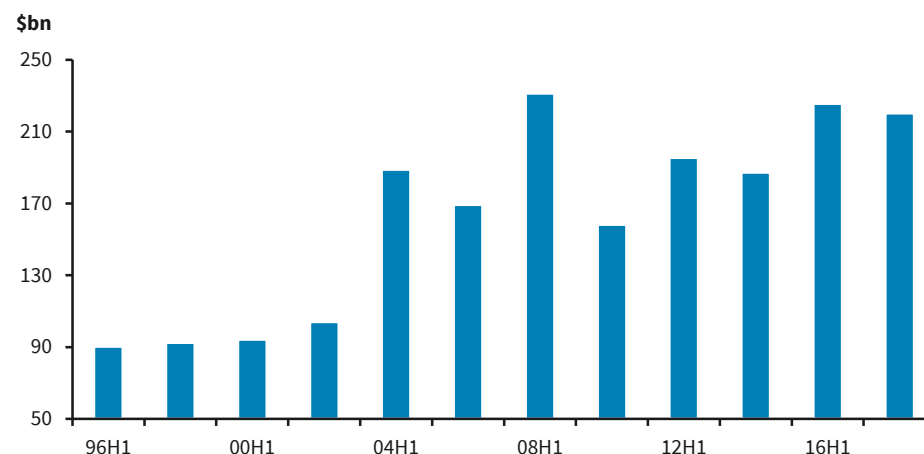
Net Issuance



Tax-Exempt Supply



Front-loaded Issuance in Election Years

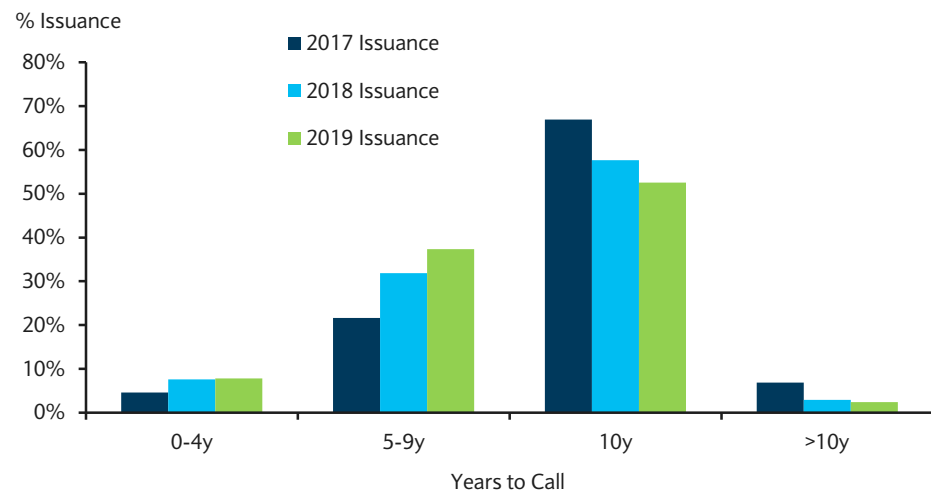


* - YTD, ** - forecast. Source for all charts: SIFMA, Barclays Research

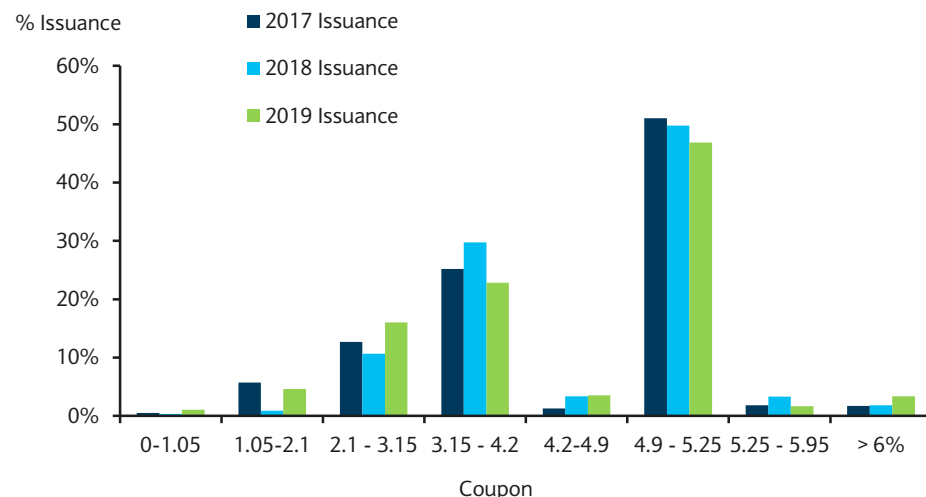
Life without advance refundings

- Despite all the talk, advance refundings are unlikely to be resurrected any time soon.
- More innovative structures possible: Forward start deals and derivatives, although they are somewhat expensive to issuers, and may not be as many if rates are in check. Taxable advance refundings dominate taxable supply.
- Supply trends: Calls are getting shorter, but coupons are not really getting much lower, contrary to expectations; also, not as many 3% non-calls as some investors expected.

Embedded Calls Getting Shorter



Coupons Not Getting Much Lower

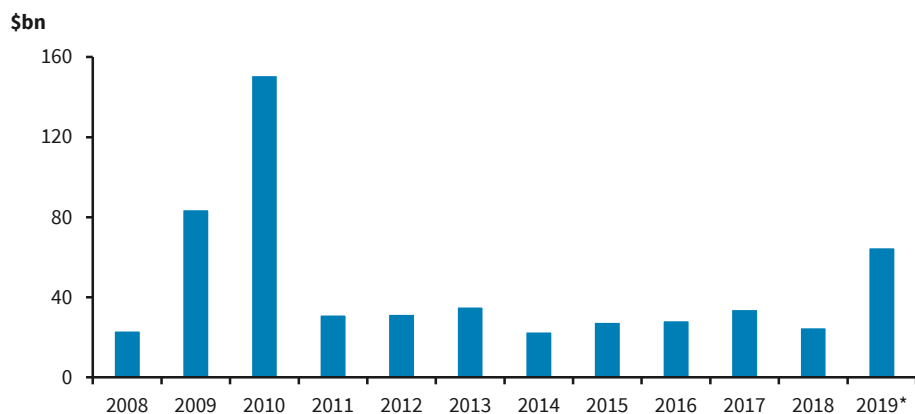


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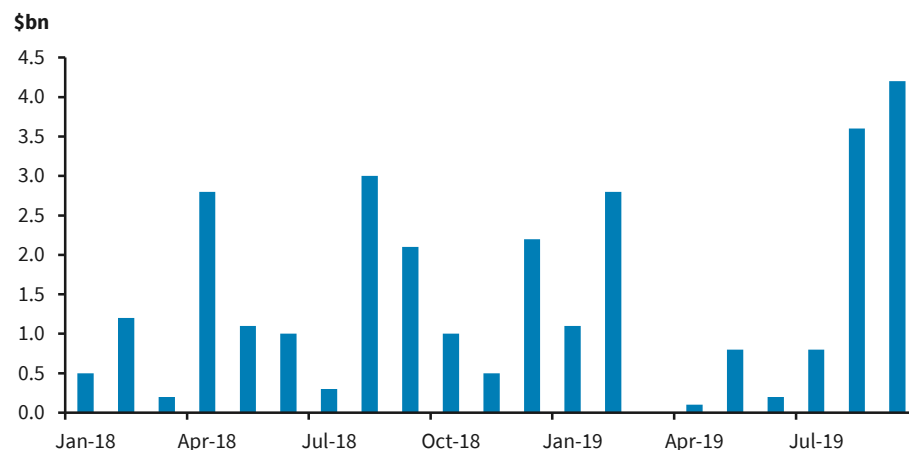
Taxable issuance trending higher

- Taxable issuance \$80-90bn / \$10-12bn corporate CUSIPs, but only if rates remain low.

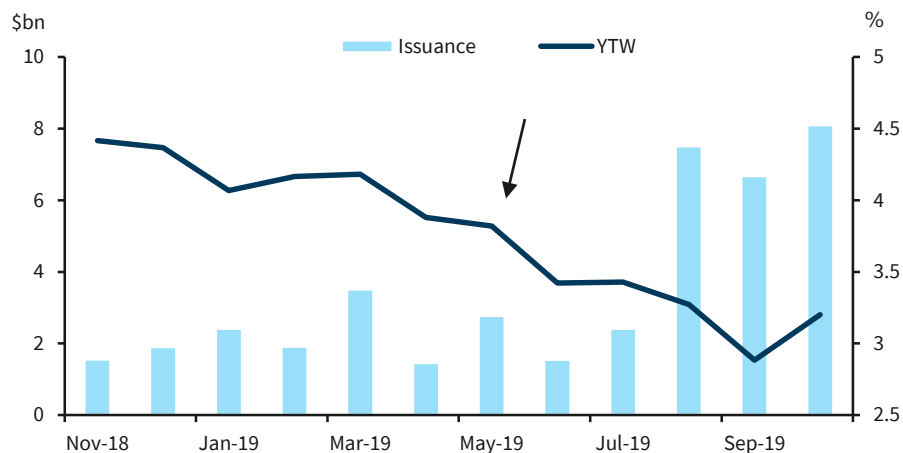
Annual Taxable Muni Supply



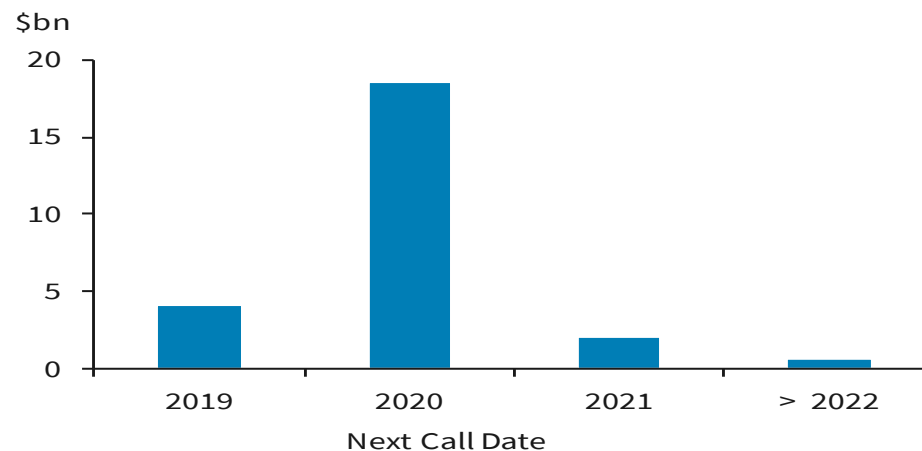
Taxable Advance Refundings Spiked



When Yields Declined



Outstanding Callable BABs

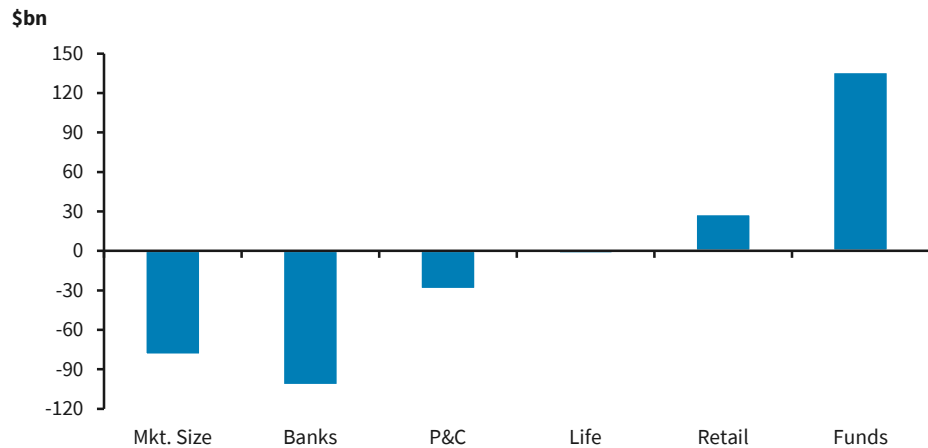


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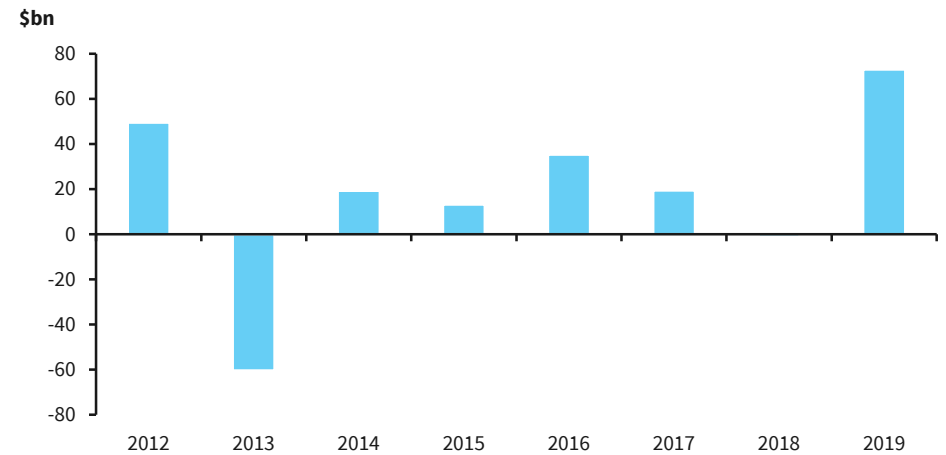
Technicals – delicately balanced

- More interest in taxable munis from institutional investors; likely, slower fund inflows.

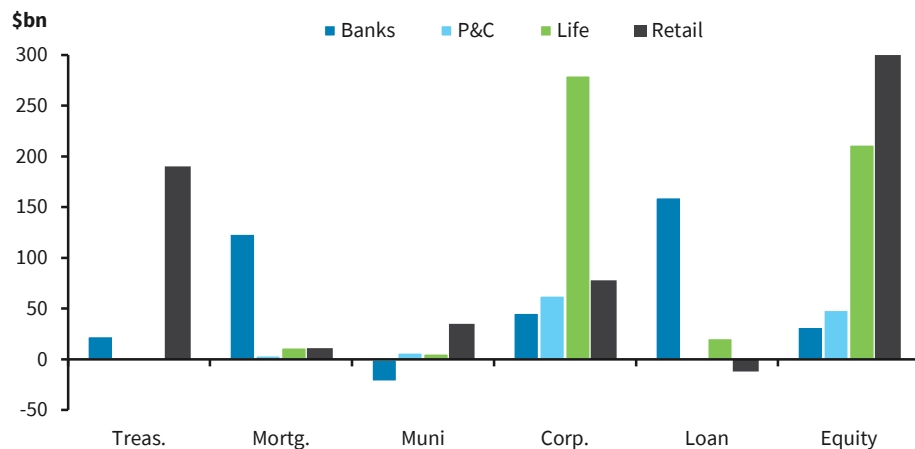
Change in Muni Holdings (Q4 17 - Q3 19)



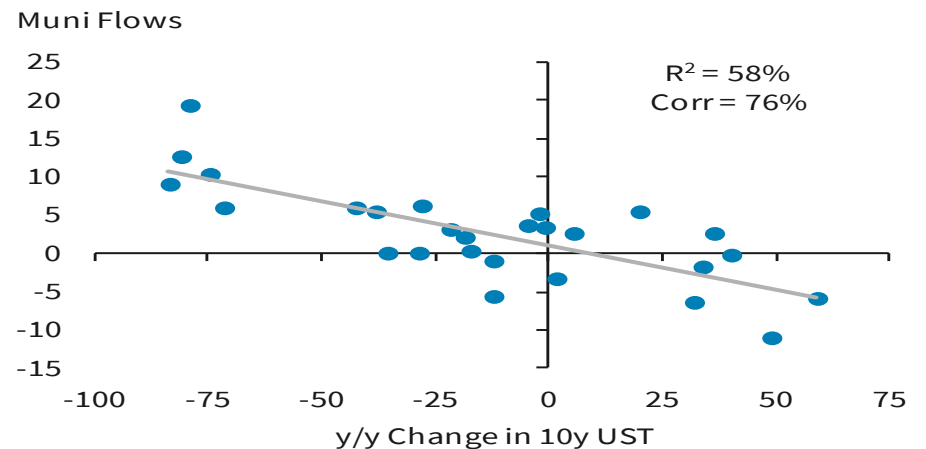
Fund Inflows



Changes in Holdings



Muni Fund Flows vs. Rates

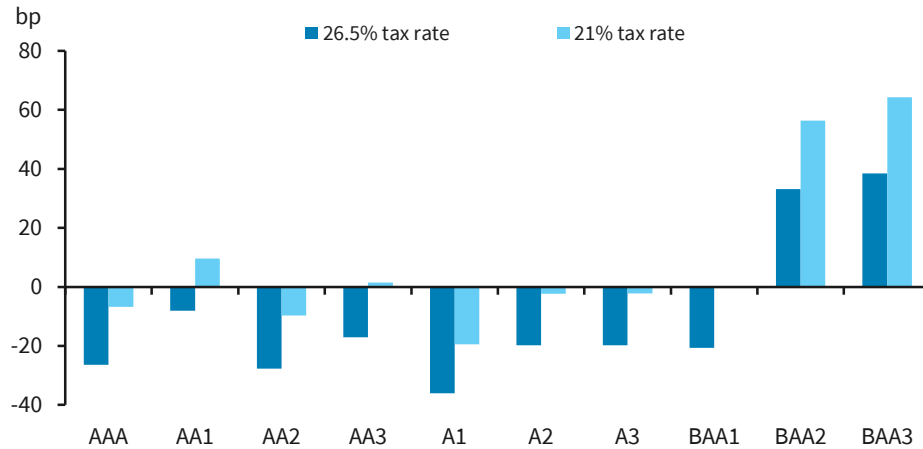


Source for all charts: Bloomberg, Lipper, Fed Flow of Funds, Barclays Research

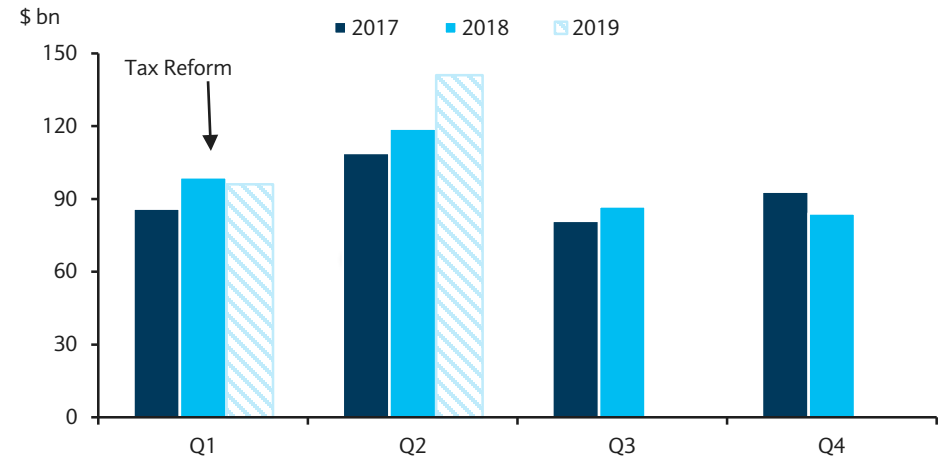
Looking ahead: Politics

- If elected, Senator Warren's policies could have a profound effect on municipals.

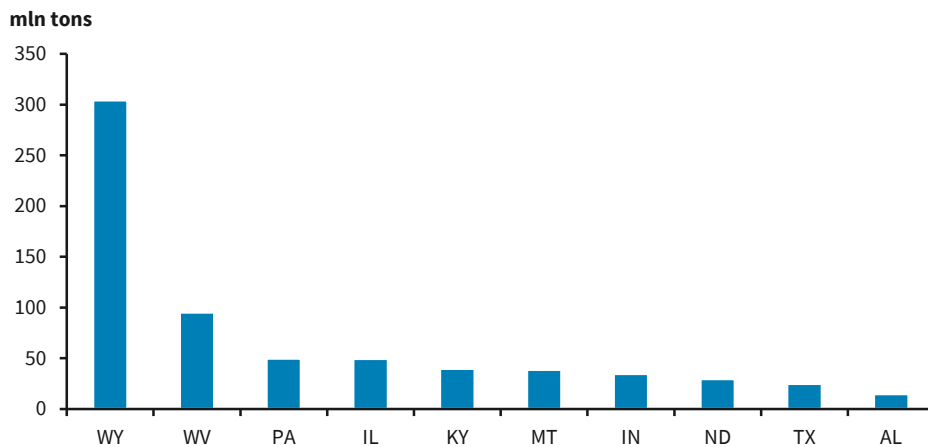
Corporate Yields vs. Muni Tax-Adj.



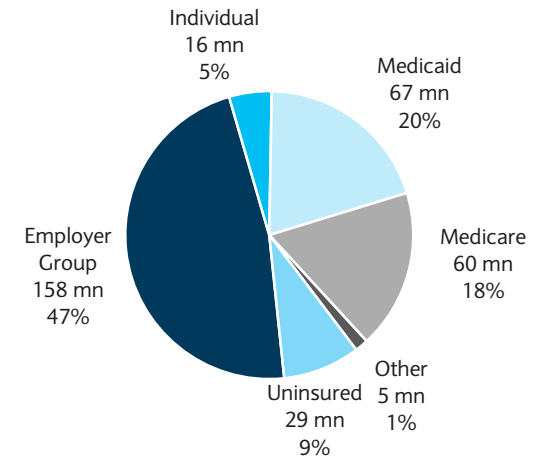
State Tax Revenues Improved



Coal Production (by State)



Sources of Health Insurance Coverage



Source for all charts: Muni Market Data line, Bloomberg Barclays Indices, Barclays Research

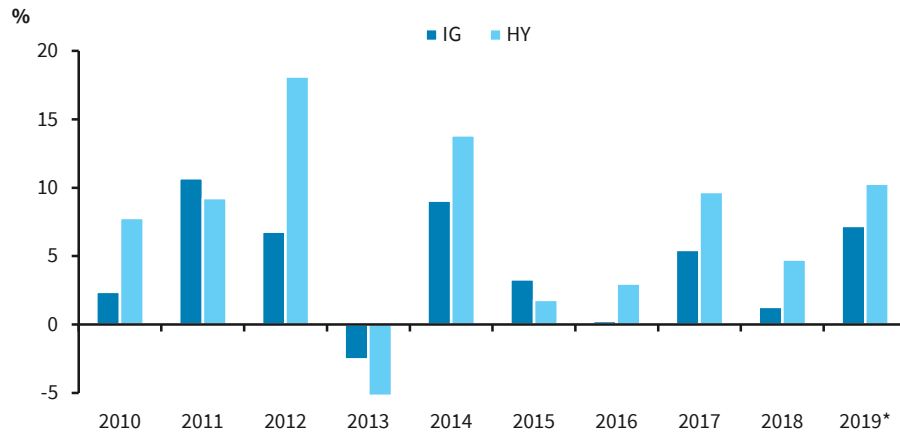
Return expectations: Best days are behind us

- Clip your coupon in 2020. IG 2-2.5%, HY 3-3.5%, 1-1.5% excess returns for taxables.

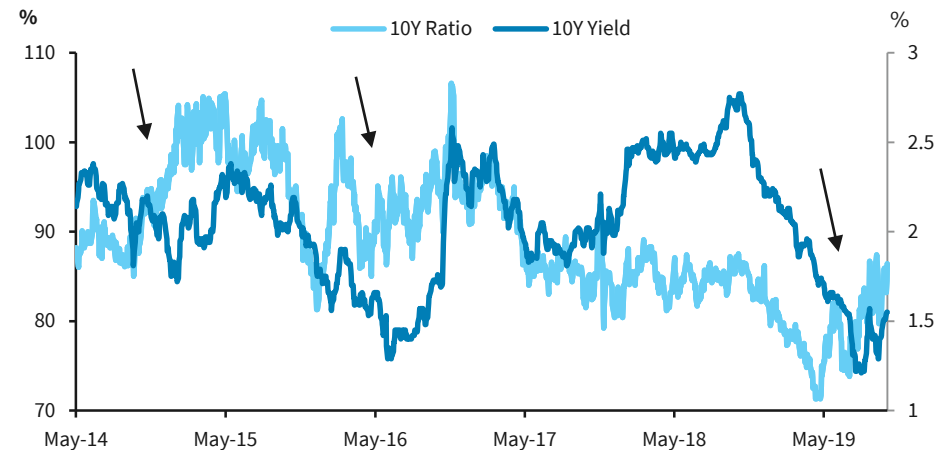
Tax-exempt AAA Forecasted Returns

Maturity Bucket	Weight	AAA Muni Duration	UST Duration	Current UST Yield	UST Forecast	Current AAA Muni / Treasury Ratio	AAA Muni / Treasury Ratio Forecast	Implied Change in AAA Munis	Muni Carry Contribution	Muni Total Return	Muni Excess Return
0-3y	10%	1.8	1.9	1.60%	1.40%	67%	70%	-0.09%	0.1%	0.1%	-0.1%
3-7y	21%	3.9	4.8	1.62%	1.55%	71%	70%	-0.07%	0.2%	0.3%	-0.1%
7-12y	26%	5.4	9.1	1.78%	1.70%	83%	82%	-0.06%	0.4%	0.5%	-0.2%
12-17y	15%	6.3	12.3	1.92%	1.83%	89%	90%	-0.06%	0.2%	0.3%	-0.1%
17-22y	13%	6.8	14.8	2.06%	1.95%	91%	92%	-0.09%	0.2%	0.3%	-0.2%
22+y	15%	8.9	21.9	2.20%	2.20%	94%	94%	0.01%	0.3%	0.3%	0.0%
Total									1.5%	1.9%	-0.7%

Rarely Two Strong Years in a Row



Low Yields Hamper Performance



Source for all charts: Bloomberg, Lipper, Fed Flow of Funds

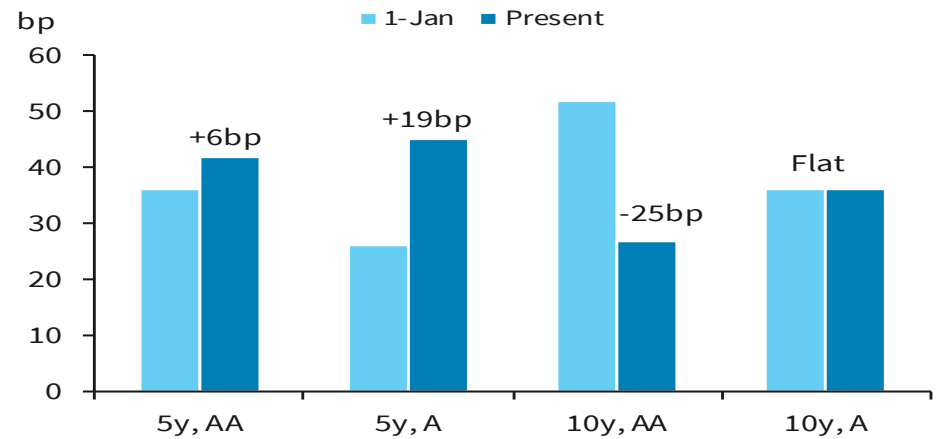
Portfolio positioning: Credit pickers market

- Stay shorter, selectively down in credit quality. Taxable spreads have room to tighten.

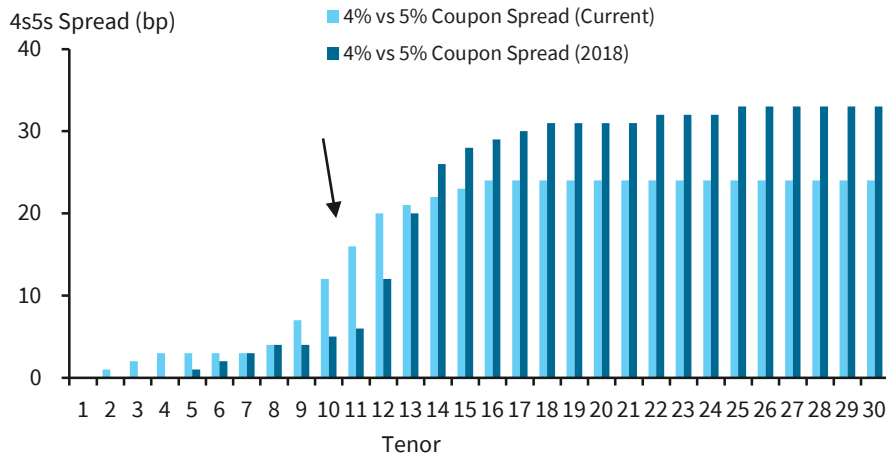
Muni Ratios in Rising Rate Environment

Period of Rate Increase	10y UST Change (bp)	30y UST Change (bp)	10y Ratio Change	30y Ratio Change
5/1/2013-12/31/2013	137	110	-9%	8%
1/30/2015-3/6/2015	56	58	-6%	-4%
4/3/2015-6/10/2015	64	72	-9%	-8%
7/8/2016-12/16/2016	123	108	-1%	8%
7/8/2017-11/8/2018	85	52	0%	3%
9/4/2019-Present	32	27	1%	0%
Average	83	71	-4%	1%

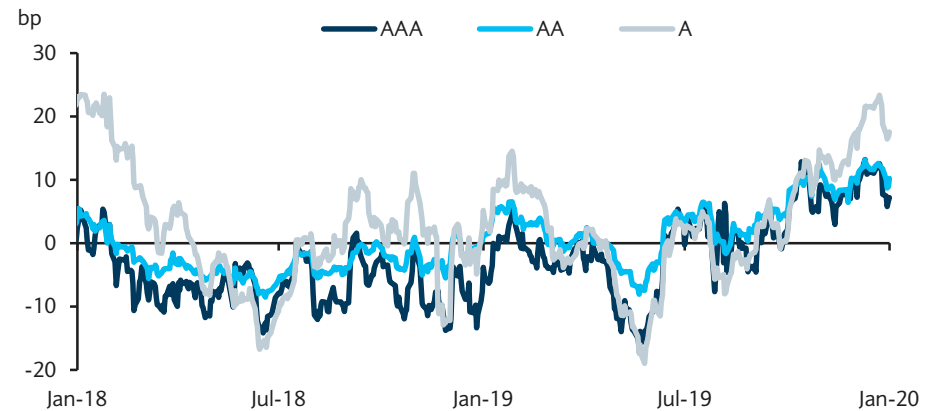
AMT vs Non-AMT



4s5s



Taxable Munis vs. Long Credit

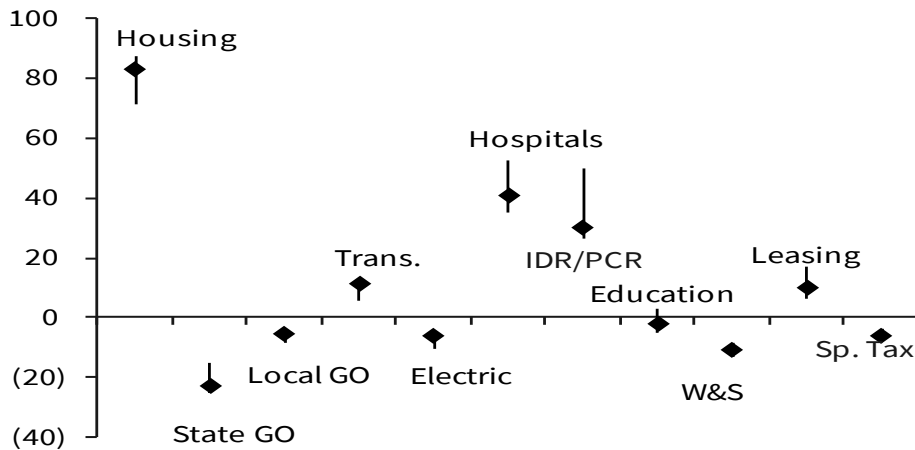


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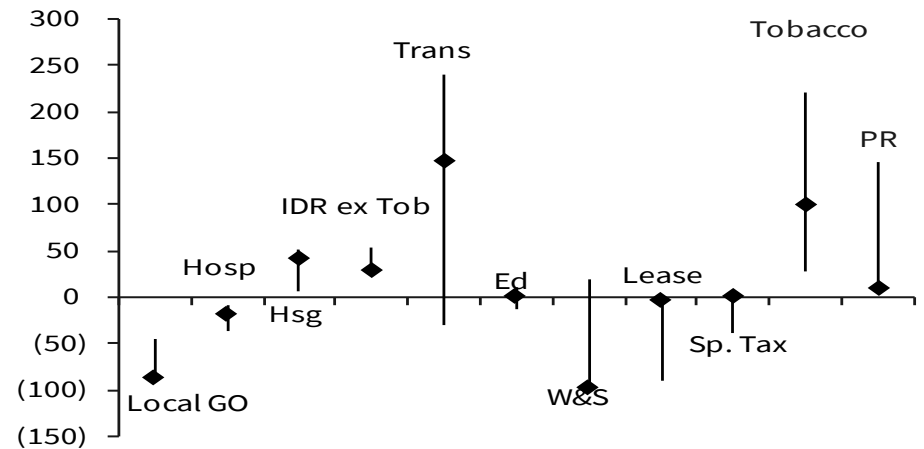
Fundamental outlook

- Generally the outlook is positive, credit quality is solid, but valuations are compressed.

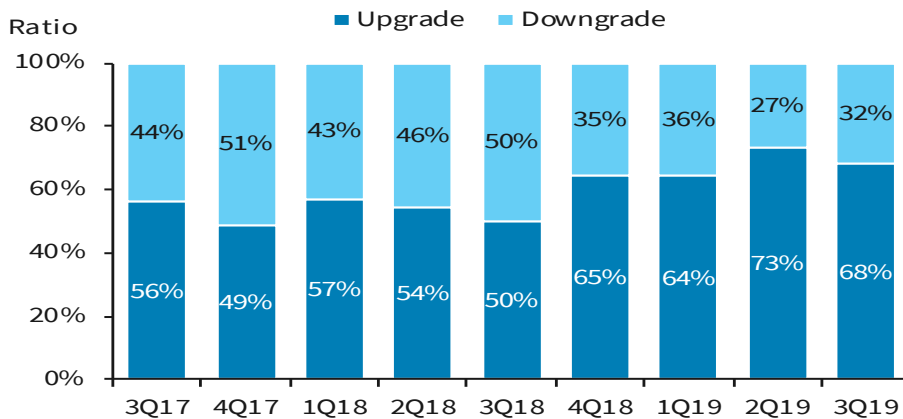
Spread Pickup over IG Index (1y)



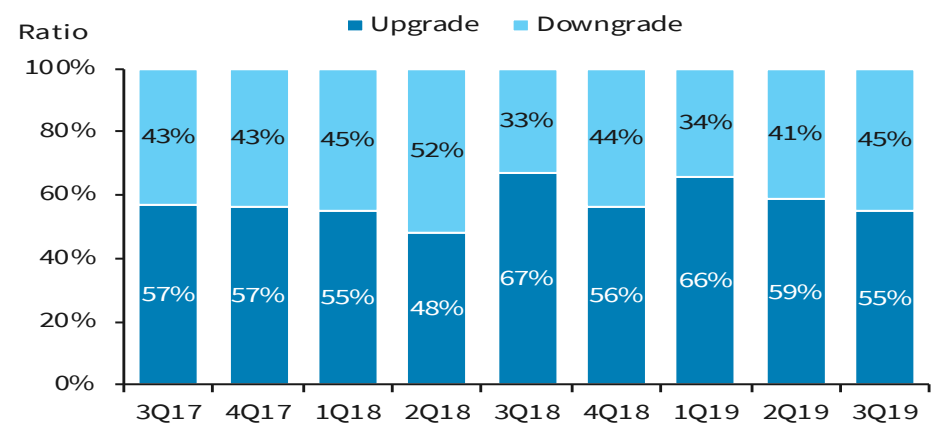
Spread Pickup over HY Index (1y)



Ratings Trends (GOs)



Ratings Trends (Revenue)



Source for all charts: US Census Bureau, Moody's, Barclays Research

Sector outlooks and credit picks

Sector Outlooks for 2020

Credit Sector	2020 Outlook	Credit Characteristics
State GO	Positive	Strong economy; TCJA support for high tax states; strong governance
Local GO	Caution	Pension liabilities; tax fatigue; negative TCJA effect for housing; some school districts under pressure
Special Tax	Neutral	Dedicated tax; strong underlying economy; strong structure
Leasing	Caution	Marginal credits tied to outsized pension liabilities; prefer strong legal structure; alternative to high GO debt load
Healthcare	Positive	Strong regional or national systems; stable margins; 36 expansion states; low tax-exempt supply
Private Higher Ed	Neutral	Strong upper and high quality middle tiers only. Cautious on small suburban and rural colleges
Public University	Neutral	Consistent state aid; pension exposure; preference for strong research faculty; stable admissions
Transportation	Positive	Robust user trend; major growth projects; diverse revenue base; minimal trade war impact to date
Water & Sewer	Neutral	Diverse customer base; self regulated; strong financials; capex projects for strategic and climate upgrades
Public Power	Neutral	Self regulated rates; varied fuel strategies affect capital programs; strong base
Housing	Positive	Stable rate environment will keep prepayment speeds within PAC collars; issuance likely to increase
Tobacco	Positive	Withdrawal of rules on nicotine reduction; increased regulatory focus on e-cigarettes; attractive carry
Prepay/Corp Backed	Positive	Strength in corporate sector should translate well for corporate-backed munis
Territories (PR)	Neutral	PREPA may have upside from current levels; COFINA offers good carry, CABs are cheap
Territories (USVI)	Caution	Improved liquidity and financial profile offset by looming retirement system depletion by FY23
CCRCs	Caution	Slowing home price appreciation, tighter labor markets, potentially increased leverage

Selective Credit Picks

State GO/ Appropriation		Healthcare	
Commonwealth of Illinois	NJ Transportation Trust	Commonspirit Taxable Stanford University	Beth Israel Lahey Health University of Miami
Utilities/Power		Puerto Rico	
Miami Dade County Wtr & Swr Guam Waterworks	MEAG M	COFINA	PREPA
Transportation		Prepay Gas	
Denver Airport Miami International Airport	South Jersey Port Port Everglades	Black Belt Energy Patriots Energy	Main Street Natural Gas (Puts) Main Street Natural Gas (NC)
Housing		HY Tobacco	
OH, NC, CT HFAs	IL Housing Dev. Authority	Tobacco Settlement Fin Corp/VA	Northern Tobacco Securitization Corp/AK

See [Municipal Outlook for 2020](#), 6 December 2019. Source for all charts: Barclays Research

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