Municipals Educational Series

Primer on taxable muni bonds

Primer

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Municipals
United States

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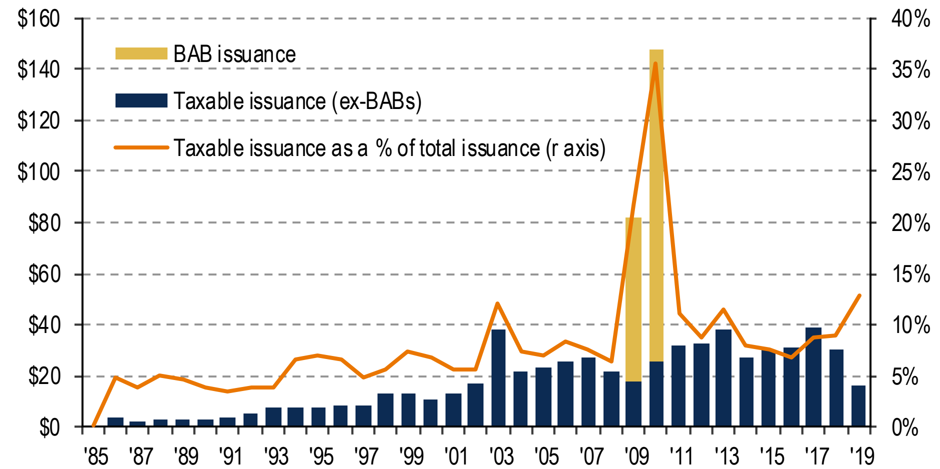
Key takeaways

- Municipals bonds can be taxable as well as tax-exempt.
- Taxable municipal bonds are typically very high quality.
- Build America Bonds are part of the taxable municipal bond market.

The basics of taxable municipal bonds

We discuss the basics of taxable municipal bonds: how the market began, the composition of the market, the different kinds of short-term instruments, the size of the market, the changing nature of market participants and the importance of the tax treatment of municipal bonds.

Chart 1: Historical new money taxable issuance* ($bn)



Source: BofA Merrill Lynch Global Research; Thompson Reuters; Bloomberg; 2019 data is year-to-date as of 17 July 2019

Refer to important disclosures on page 9 to 10.

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1. Historical Perspectives

The municipal bond market is the primary credit market for state and local governments in the United States. While many investors seek out municipal debt for its tax-advantaged status, there is a growing interest in the taxable segment of the municipal market.

Prior to the mid-1980s, the taxable muni market was largely unremarkable: it did not have much in terms of amount outstanding, liquidity or trading volume levels. However, following the Tax Reform Act of 1986 (TRA) and the introduction of the Build America Bonds (BABs) program in the late 2000s, the taxable municipal market developed considerably.

1. Tax Reform Act of 1986 (TRA)

The TRA created more certain rules as to who specifically could use or issue tax-exempt debt. Notably, the legislation introduced additional limitations and tests on Private Activity Bond (PAB) issuance. The more stringent rules thereafter regarding what was eligible for tax-exempt issuance caused the taxable market to significantly increase. Indeed, while 1985 saw only $260mn of taxable munis issued, that number rose to $3.4bn in 1986. From 1987 to 2007, taxable municipal issuance grew at an average annual rate of 14.5%.

2. Build America Bonds program (BABs)

Following the 2007-2008 financial crisis, the federal government enacted a stimulus package that, among other items, introduced the BAB program, which eventually set the bar for taxable issuance records. Though the program expired at the end of 2010, 24.6% of total municipal issuance that year was taxable municipal bonds. See Chart 1 above.

For our purposes, the major significance of BABs is how they introduced a new class of participants to the municipal market. Generally, BAB buyers have not been the “traditional” retail muni buyers. Instead, BABs’ primary investors are institutional investors, such as pension funds and insurance companies. Taxable mutual funds – including international bond funds – also entered the BAB market. This interest in taxable municipal paper has continued, even after the BAB program ended.

3. Historical perspectives on municipal market investors

As noted, the “traditional” muni buyers are retail investors seeking tax-exempt bonds. Looking at Table 1, we can see how households’ holdings have slightly declined over the last several years while other investor bases have grown.

Table 1: Municipal holdings, by investor ($bn)

		2011	2012	2013	2014	2015	2016	2017	2018	1Q18	1Q19	QoQ % change	YoY % change
Municipal market (MM)		3,921.1	3,918.4	3,850.7	3,804.6	3,819.2	3,864.2	3,877.6	3,817.8	3,857.2	3,815.8	-0.1%	-1.1%
Households and nonprofits	Holdings ($)	2,055.5	2,008.4	1,833.6	1,923.2	1,885.0	1,861.4	1,869.6	1,842.4	1,808.8	1,874.9	1.8%	3.7%
	% of MM	52.4%	51.3%	47.6%	50.5%	49.4%	48.2%	48.2%	48.3%	46.9%	49.1%		
	% of TFA	3.6%	3.3%	2.7%	2.6%	2.5%	2.4%	2.2%	2.2%	2.1%	2.1%		
US banks	Holdings ($)	297.3	374.4	415.5	461.9	507.7	544.9	572.6	498.8	555.7	491.1	-1.5%	-11.6%
	% of MM	7.6%	9.6%	10.8%	12.1%	13.3%	14.1%	14.8%	13.1%	14.4%	12.9%		
	% of TFA	2.5%	3.1%	3.3%	3.4%	3.6%	3.7%	3.7%	3.2%	3.6%	3.1%		
P&C insurers	Holdings ($)	368.5	350.5	347.0	350.6	357.5	350.7	338.9	293.8	333.1	299.1	1.8%	-10.2%
	% of MM	9.4%	8.9%	9.0%	9.2%	9.4%	9.1%	8.7%	7.7%	8.6%	7.8%		
	% of TFA	18.9%	17.6%	16.8%	16.4%	16.7%	15.8%	14.2%	12.2%	14.0%	12.0%		
Life insurers	Holdings ($)	136.9	153.9	150.4	169.6	177.3	185.2	197.8	190.4	198.3	194.1	1.9%	-2.1%
	% of MM	3.5%	3.9%	3.9%	4.5%	4.6%	4.8%	5.1%	5.0%	5.1%	5.1%		
	% of TFA	2.3%	2.4%	2.3%	2.4%	2.6%	2.6%	2.6%	2.5%	2.6%	2.5%		
Money market funds	Holdings ($)	358.7	337.6	296.4	264.8	236.0	154.3	134.4	142.8	131.8	135.0	-5.5%	2.4%
	% of MM	9.1%	8.6%	7.7%	7.0%	6.2%	4.0%	3.5%	3.7%	3.4%	3.5%		
	% of TFA	13.3%	12.5%	10.8%	9.6%	8.6%	5.6%	4.7%	4.7%	4.7%	4.4%		
Mutual funds	Holdings ($)	519.2	608.9	529.6	586.6	603.7	632.2	688.1	693.6	690.4	738.6	6.5%	7.0%
	% of MM	13.2%	15.5%	13.8%	15.4%	15.8%	16.4%	17.7%	18.2%	17.9%	19.4%		

Table 1: Municipal holdings, by investor ($bn)

		2011	2012	2013	2014	2015	2016	2017	2018	1Q18	1Q19	QoQ % change	YoY % change
	% of TFA	5.8%	5.9%	4.3%	4.5%	4.7%	4.6%	4.3%	4.7%	4.3%	4.6%		
Closed-end funds	Holdings ($)	84.1	90.6	82.9	90.2	90.4	87.7	89.8	87.0	88.1	89.0	2.3%	1.0%
	% of MM	2.1%	2.3%	2.2%	2.4%	2.4%	2.3%	2.3%	2.3%	2.3%	2.3%		
	% of TFA	34.7%	34.4%	29.7%	31.2%	34.4%	33.2%	32.4%	34.7%	32.8%	33.3%		
Exchange-traded funds	Holdings ($)	9.1	13.0	11.4	15.1	19.1	24.7	30.4	36.5	30.7	38.4	5.4%	25.2%
	% of MM	0.2%	0.3%	0.3%	0.4%	0.5%	0.6%	0.8%	1.0%	0.8%	1.0%		
	% of TFA	0.9%	1.0%	0.7%	0.8%	0.9%	1.0%	0.9%	1.1%	0.9%	1.0%		
Security brokers and dealers	Holdings ($)	30.9	26.6	18.6	18.9	14.0	21.0	26.7	20.7	25.8	16.4	-21.1%	-36.5%
	% of MM	0.8%	0.7%	0.5%	0.5%	0.4%	0.5%	0.7%	0.5%	0.7%	0.4%		
	% of TFA	0.9%	0.7%	0.5%	0.6%	0.5%	0.7%	0.9%	0.6%	0.8%	0.5%		
Rest of the world	Holdings ($)	72.4	71.8	76.2	80.6	87.0	94.2	101.3	101.0	101.4	100.6	-0.4%	-0.8%
	% of MM	1.8%	1.8%	2.0%	2.1%	2.3%	2.4%	2.6%	2.6%	2.6%	2.6%		
	% of TFA	0.4%	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%		

Source: Federal Reserve Board Flow of Funds data; BofA Merrill Lynch Global Research; "TFA" refers to total financial assets.

2. Overview of the market

a. Tax categories

The IRS classifies muni bonds as governmental or non-governmental. There are other important ways in which to categorize muni bonds besides the breakdown by holder given above. The Internal Revenue Service has created one important classification scheme, and how a muni bond is categorized under this system directly affects its taxation.

Governmental bonds are sold to finance activities that are owned and operated by a state or local government. Governmental bonds are also referred to as *essential purpose bonds* and are normally tax-exempt bonds. Non-governmental bonds are also called *private activity bonds* (PABs) and only some of these are tax-exempt. While there is a volume cap per state per year of PABs that is calculated and distributed at the federal level, some PABs are not subject to the state cap, such as those issued by 501(c)(3)s – certain healthcare and higher education issuers – which are granted tax-exempt status.

b. Payment sources

The issuer's payments on the bond can come from a variety of sources. If the only source for the payments is the tax receipts of the issuer, the bond is referred to as *tax-backed*. Revenue bonds are bonds issued by municipalities to finance specific public works projects, and are secured by the revenue generated by the particular project financed.

General Obligation Bonds *are supported by the taxing power of the issuer.* Where tax-backed bonds are supported by the full resources of the issuer, they are called **General Obligation Bonds,** or GOs. The full faith and credit of the issuer backs these bonds. In the event that the issuer of the GO fails to pay the bondholder as agreed, the trustee has the right to sue in court to compel the issuer to increase taxes in order to meet the obligation. This action is often termed obtaining a *writ of mandamus*.

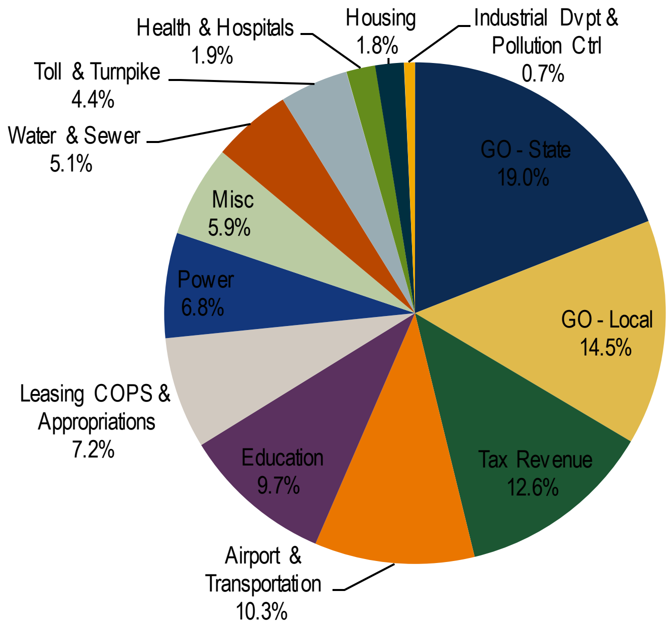
Revenue Bonds' *payments from revenue bonds come from the earnings of a project.* When the payments come from the earnings of an enterprise or a project and not taxes, the bond is a **Revenue Bond**. For example, a state or a local governmental authority may sell a bond to build a toll road. Since the state is the issuer, the interest income on the bond is federally tax-exempt. The tolls on the road, not the tax receipts of the state, pay off the bonds. Should the tolls prove inadequate to meet the debt service on the bond, the state is not obliged to pay.

c. Industry segments

The municipal bond market is divided into industry segments based on how the borrowed funds are used. Here, we breakdown the taxable muni market by industry segment using the ICE BofAML Broad US Taxable Municipal Securities Index (TXMB).

Chart 2 shows about 34% of the index is made up of GOs and the rest are revenue bonds.

Chart 2: Taxable muni index (TXMB) breakdown by par amount outstanding (as of July 2019)

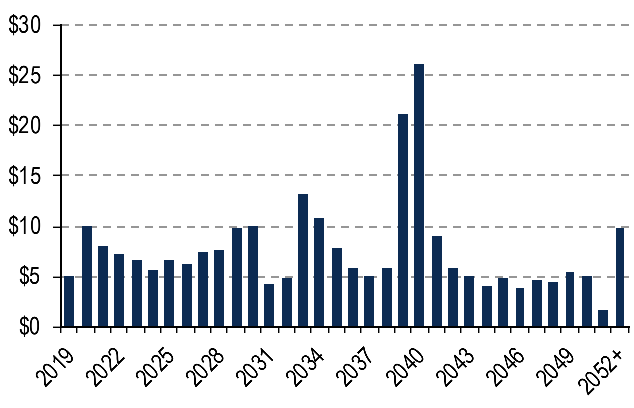


Source: ICE Data Indices, LLC; "Housing" includes both multi- and single family housing. "Misc" includes misc, cash, ETM, Tobacco, Utilities-other and pre-refunded.

d. Taxable muni market structure differences

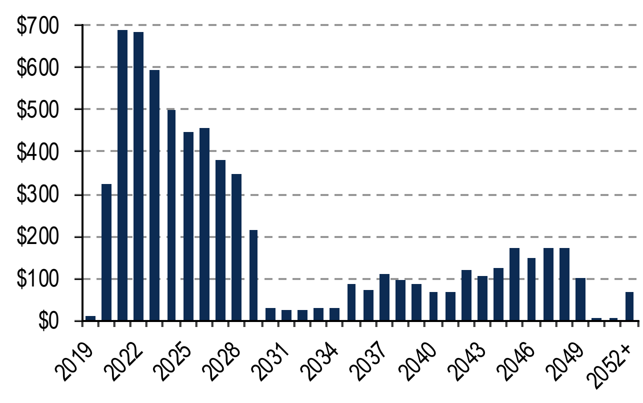
Compared to corporate bonds, taxable municipal bonds have much longer maturities. Reviewing TXMB, we can see that 68% of index members have a maturity after 2029; see Chart 3. The ICE BofAML US Corporate Index (C0A0), which is made up of high-grade corporate bonds, has only 29% with maturities that far out in comparison; see Chart 4.

Chart 3: Maturity distribution of taxable muni index TXMB ($bn)



Source: ICE Data Indices, LLC

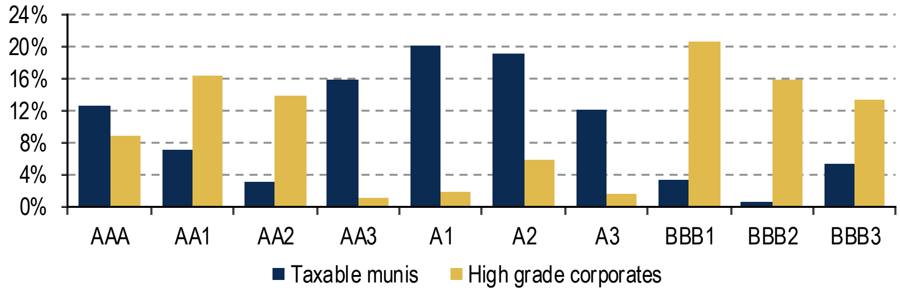
Chart 4: Maturity distribution of high grade corporate index C0A0 ($bn)



Source: ICE Data Indices, LLC

Municipal bonds are generally of *higher credit quality* than corporate bonds, whether taxable or not. Looking to Chart 5, if we review the weighted ratings averages for the Broad US Taxable Municipal Securities index (TXMB) compared to the US Corporate Index (C0A0), the former has a wider distribution across the higher quality ratings.

Chart 5: Weighted averaged for indexes' composite ratings across US corporates and taxable munis

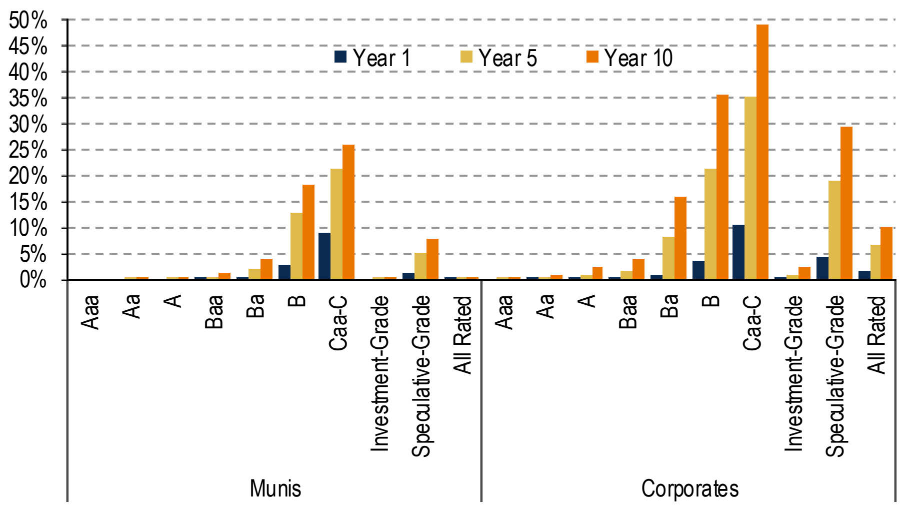


Source: BofA Merrill Lynch Global Research; ICE Data Indices, LLC

Even comparing at the same rating level, municipal bonds historically have far fewer defaults than corporates.

A study by Moody's found that there were only 113 defaults of Moody's-rated municipal issuers over the period 1970-2017, with about 60% of the defaults occurring in the healthcare and housing sectors, and some 90% occurring in non-general obligation debt (cities, counties and school districts have combined to 10 GO defaults over that time frame). Puerto Rico adds to that total. Over the same period, Moody's found that virtually no AAA rated bonds defaulted over rolling 10-year horizons, and that even Baa rated bonds had only a 0.4% average cumulative default rate.

Chart 6: Cumulative default rates: munis versus corporates, by rating (1970-2017)



Source: Moody's Investors Service

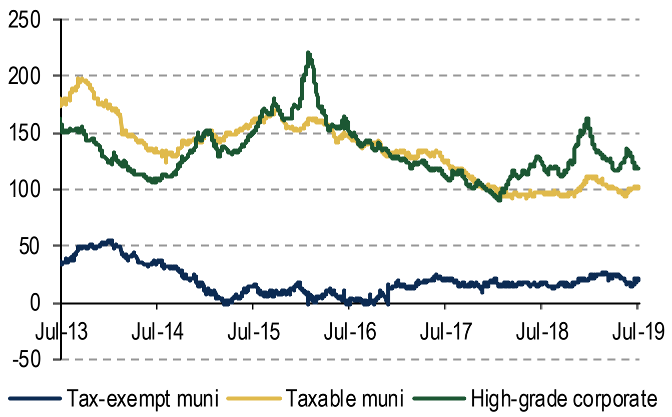
Chart 6 shows Moody's 10-year average cumulative default rates for municipals and global corporates, demonstrating that the prevalence of defaults for corporate bonds was considerably higher over the same period.

The overall default rate remains low. From 1970-2017, there was an average of 2.35 defaults per year, compared to 5.25 defaults between 2010-2017. In 2017, there were 10 defaults in the Moody's-rated universe, yet all but three were related to Puerto Rico.

To be sure, higher-rated municipal bonds rarely default. A Moody's study over the period between 1970 and 2017 found only 103 defaults of Moody's-rated municipal issuers, or a 0.07% default rate. Indeed, Moody's 10-year average cumulative default rates for municipals and global corporates in Chart 6 clearly shows the prevalence of corporate bond defaults was considerably higher over the same period.

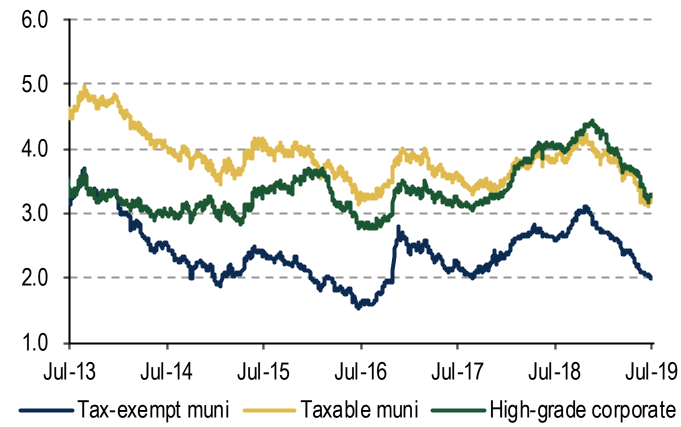
So, municipals have longer maturities and higher credit ratings – what about their performance historically? Reviewing the past five years, taxable municipal bonds' OAS has been roughly the same as high grade corporate's OAS, but wider than tax-exempt municipals. We can see in Chart 7 that, recently, taxable munis have outperformed corporates.

Chart 7: Historical OAS (bps)



Source: ICE Data Indices, LLC Note: We used the ICE BofAML US Corporate Index (C0A0), ICE BofAML US Municipal Securities (U0A0) and ICE BofAML Broad US Taxable Municipal Securities Index (TXMB) to illustrate the above. Data as of 16 July 2019

Chart 8: Historical yield-to-worst (%)



Source: ICE Data Indices, LLC Note: We used the ICE BofAML US Corporate Index (C0A0), ICE BofAML US Municipal Securities (U0A0) and ICE BofAML Broad US Taxable Municipal Securities Index (TXMB) to illustrate the above. Data as of 16 July 2019

Likewise, Table 2 shows that taxable munis generally experienced better returns than corporates and even the tax-exempt munis when they are tax-adjusted for certain periods.

Table 2: Select index returns as of 30 June 2019

Index	Ticker	2016	2017	2018	1mo	3mo	12mo	3yr	5yr	10yr
Taxable Municipals	TXMB	8.37	0.33	0.98	4.26	10.15	8.52	5.07	5.55	NA
US Municipal Securities	U0A0	5.42	1.04	0.43	2.33	6.73	5.35	3.13	3.75	4.93
Taxable equivalent[1]	U0A0*	8.47	3.99	0.66	3.07	9.81	6.87	6.20	6.76	8.09
US Composite Agency	UAGY	2.14	1.40	0.71	2.32	6.21	4.19	2.33	2.35	2.64
US Corporate	C0A0	6.48	-2.25	2.30	4.35	10.56	9.57	4.71	4.03	6.13

Source: Bloomberg; [1]Assumes a tax rate of 40.8% *Price return index Note: 3-,5- and 10-year returns annualized

3. Build America Bonds

As noted above, Congress authorized a special type of municipal bond – Build America Bonds (BABs) – under the American Recovery and Reinvestment Act (ARRA). These were intended to provide qualified municipal borrowers subsidized funding for infrastructure spending along with other essential municipal purposes. From the introduction of the program in April 2009 until the end of the program in December 2010, Build America Bond participants issued nearly $186bn in bonds. Importantly, there was no limit on the amount that could be issued.

BABs have the following key characteristics:

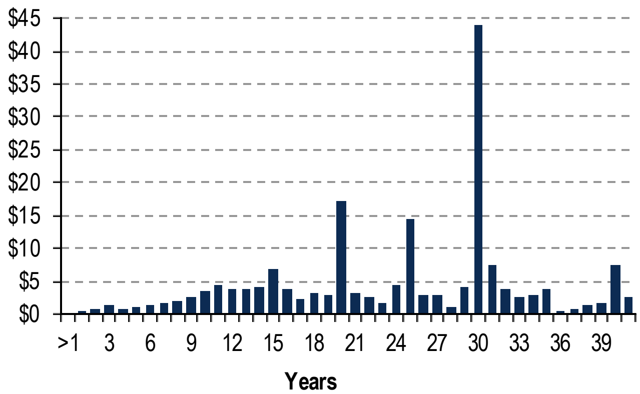
- Unlike most municipal bonds, the interest income is fully taxable at the federal level for investors but generally not by the state
- For direct-pay BABs, the tax benefit goes to the issuers, who receive a subsidy from the federal government of 35% of the coupon payment. That subsidy amount has been reduced under the federal sequester.

However, as a result of the government-wide sequester, the 35% subsidy mentioned above was reduced by 7.2% in 2014, 7.3% in 2015, 6.8% in 2016, 6.9% in 2017 and 6.6% in 2018. For fiscal year 2018, the federal subsidy is reduced to 32.83% from the 6.2% cut under sequestration.

Chart 9 shows that 91.5% of the total par amount of BABs issued had a maturity at issuance greater than 10 years. There was also no specific statutory limit on a BABs' maturity, so many were longer dated. Indeed, almost 70% of all BABs issued had a maturity greater than 20 years. Chart 10 shows that BABs are generally longer dated than their taxable muni counterparts.

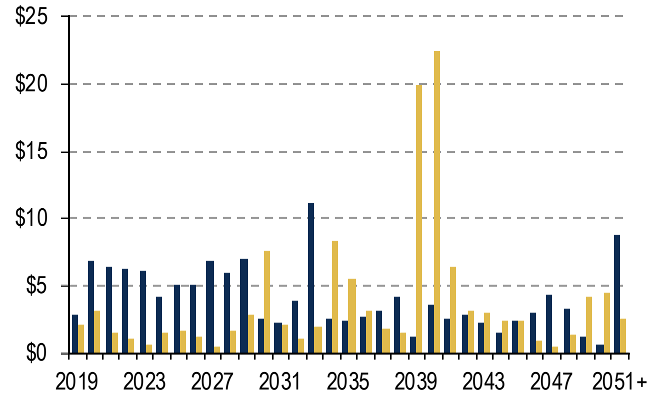
It is worth nothing that the minimum size requirements for inclusion in the ICE BofAML Broad US Taxable Municipal Securities Index (TXMB) varies between $10-25mn, though longer maturities have greater requirements based on the initial term to final maturity at time of issuance. BABs, however, do not have minimum size requirements.

Chart 9: Original BAB maturity at issuance, by par amount ($bn)



Source: Bloomberg; BofA Merrill Lynch Global Research

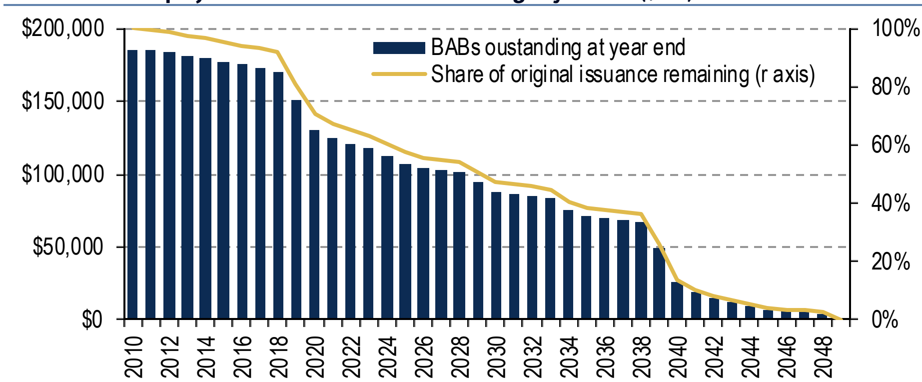
Chart 10: Maturity distribution of taxable muni index TXMB ($bn)



Source: ICE Data Indices, LLC

Currently, approximately 84% of BABs originally issued are outstanding. For simplicity, we assume all bonds will be called in the year they have a call and assume bonds that can be called anytime are called at maturity. This gives us a rough estimate that potentially only 70% of BABs originally issued will be outstanding at the end of 2020; by 2030, that share would drop below 50% of the almost $186bn originally sold.

Chart 11: Annual projection of future BABs outstanding at year end ($mn)

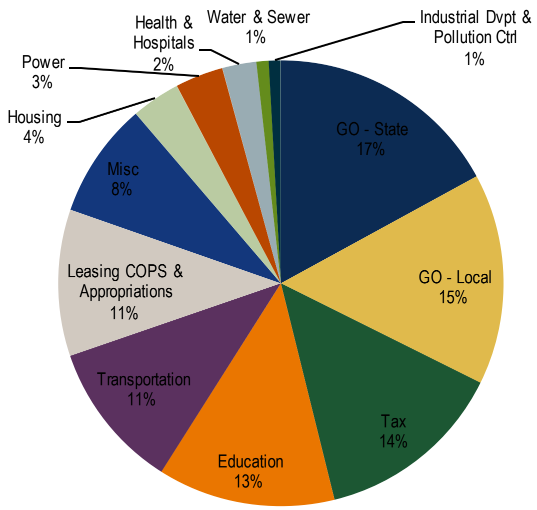


Source: Bloomberg; BofA Merrill Lynch Global Research; Data as of 16 May 2019

Of the almost $31bn BABs retired, roughly 42% were non-callable, and we infer that the majority of those matured without a call, but that the rest had some type of call exercised. BABs have a variety of calls, including make-whole calls, extraordinary redemption provision (ERP), mandatory tender and tax-option calls. The terms of the call options vary among the individual bonds, whether discretely called through an ERP or by a regular call. Make-whole-calls are often included but because of cost are frequently not exercised (for more on make-whole-calls, see our Primer on make-whole calls.)

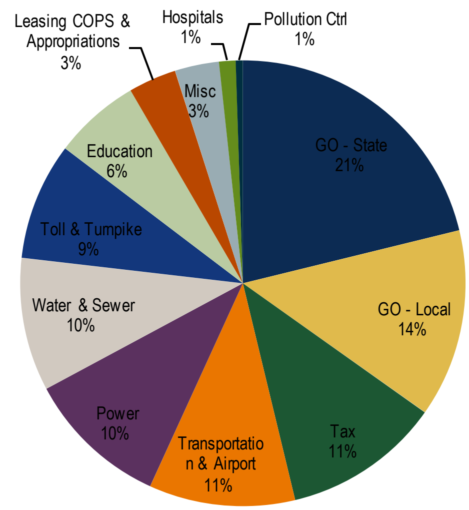
As noted above, BABs and non-BAB taxable municipal bonds have similar sectors of issuance. This is to be expected, as the program did not limit the specific purposes for what the bonds funded, as long as they were for governmental purposes. Chart 12 and Chart 13 illustrate the similarities between the BAB and non-BAB portions of TXMB.

Chart 12: Non-BAB portion of TXMB, by sector



Source: ICE Data Indices, LLC; "Housing" includes both multi- and single family housing. "Misc" includes misc, cash, ETM, Tobacco, Utilities-other and pre-refunded. Transportation is inclusive of transportation, toll & turnpike and airport

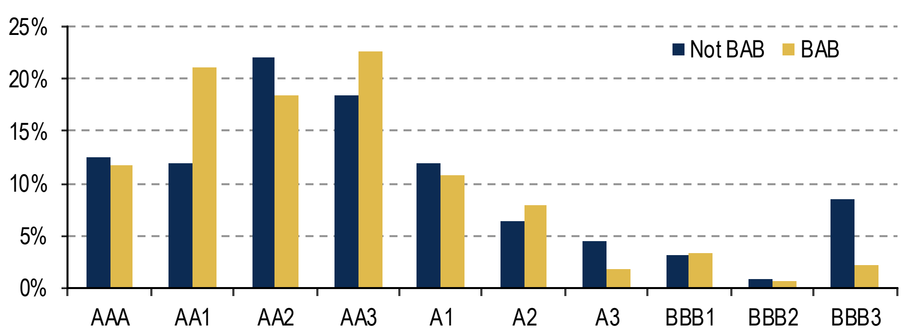
Chart 13: BAB portion of TXMB, by sector



Source: ICE Data Indices, LLC; "Misc" includes misc, ETM, Utilities-other and pre-refunded.

If we weight the ratings distribution for TXMB for BABs and non-BABs, we see that the weighted composite rating average for the BAB index members was AA2; that was one notch lower than the non-BAB taxable municipals' average rating of AA1. See Chart 14.

Chart 14: Composite weighted average rating distribution for taxable muni index by BAB-status



Source: ICE Data Indices, LLC

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