



Random Bond Market Observations

Maryland Government Finance Officers Association

Baltimore 2019

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Taxable Municipals

- 2017 Tax Reform eliminated tax-exempt advance refundings
- Tax-exempt debt can be advance refunded with a taxable deal
- Low taxable yields and a flat yield curve make it economically feasible to explore refunding outstanding tax-exempt debt with taxable debt

Taxable Municipal Issues (cont)

- Over \$13 billion in taxable refunding deals have been priced in the market since August 1st
- Over 100 new deals
- Most taxable new issue activity since Build America Bond program in 2009 – 2010
- Works best with outstanding 5.00% coupon bonds with call dates 2027 and shorter

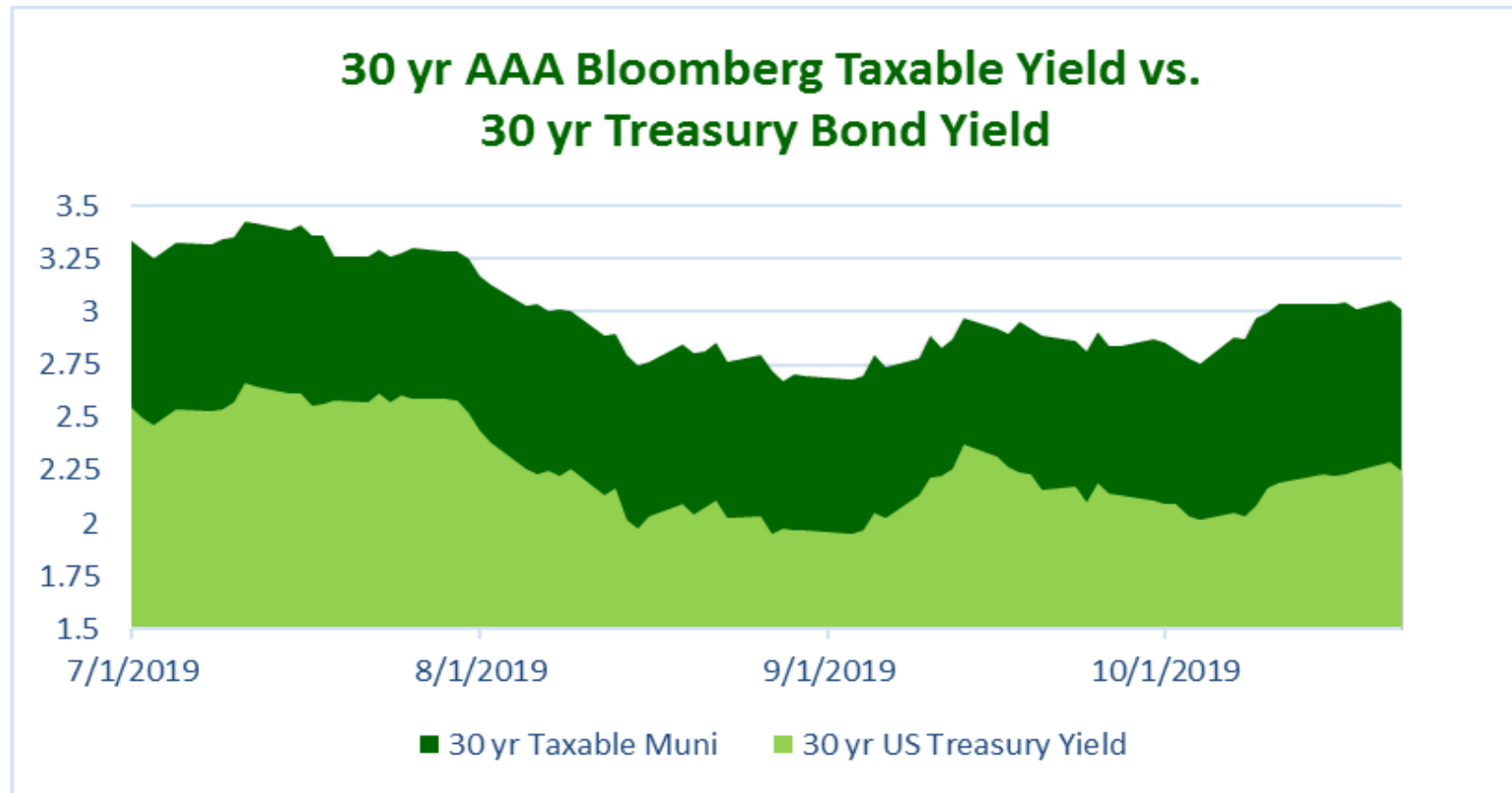
Taxable Municipal Issues (cont)

- Not uncommon for issuers to achieve present value savings of 20%
- \$175 million deal – 19% savings, \$10 million interest savings over the life of the deal
- Not limited to large issues
- Deals since August 1 range from \$2 million to \$1.1 billion

Taxable Municipal Issues (cont)

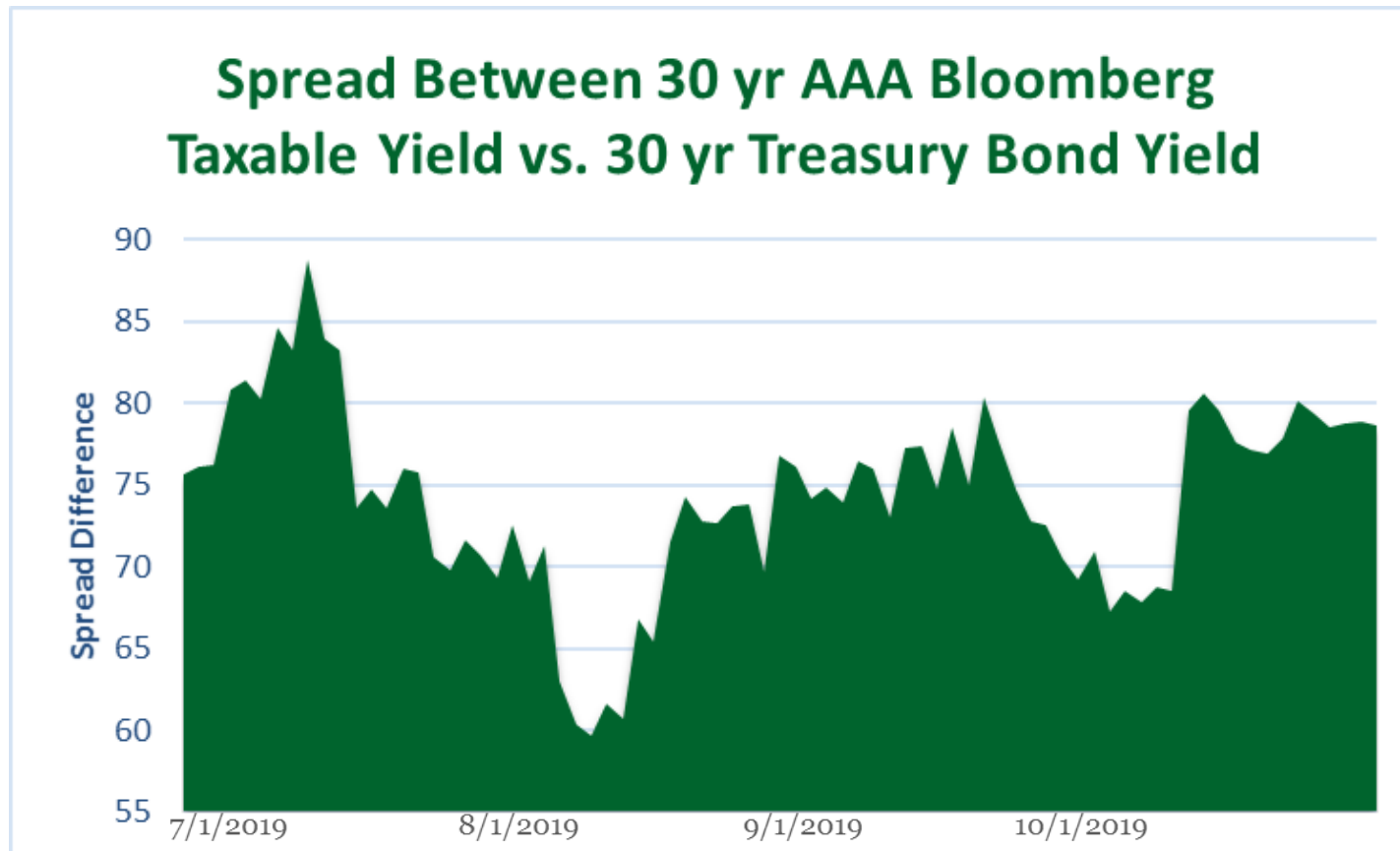
- What makes it work?
- Taxable deals price near par whether its competitive or negotiated
- Tax-exempt deals (negotiated) will tend to have a premium price structure in order to clear the market

Absolute Yield Spreads



- 75 basis point drop in long taxable yields allowed for taxable refundings to become economically feasible

Absolute Yield Spreads (cont)



- Long end spreads have widened since early August

Taxable Municipal Issues (cont)

- Fewer deals in Maryland
- Rockville
- Frederick County
- Carroll County

Taxable Municipal Issues (cont)

- Carroll County
- Recent competitive sale of \$11 million taxable bonds
- Partial refunding of outstanding tax-exempt debt
- Present Value Savings = 6.8%
- Interest Savings = \$742,000
- 2031 Final Maturity

Forward Settlement Deal

- Issuer sells debt for settlement sometime in the future
- Example – Fairfax Economic Development Authority
- Priced in September for settlement May 5, 2020 (8 months forward)
- Allowed issuer to current refund outstanding 2011 debt with first call date of 8/1/2020

Forward Settlement Deal

- Issuer was able to take advantage of low rates in September and eliminate future market risk
- Investors demanded ~20 – 25 basis point “Forward Premium” over a similar bond priced with current delivery
- In a low interest rate environment, anything money managers can do to increase yield is advantageous

Fairfax County EDA - Forward Analysis

Fairfax Cnty EDA - Forward Analysis

Date 9/10/2019
 SDA 5/5/2020
 S-T Rate 1.10%
 Time 0.65
 Investement \$ 1,000.00
 1,007.16

Maturity	Coupon	Yield	Spread	AAA	Spread	Current Offering Yield	Breakeven Yield	Forward Premium
8/1/2021	5.00%	1.35%	28	1.07%	10	1.1700%	1.207%	14
8/1/2022	5.00%	1.38%	30	1.08%	10	1.1800%	1.203%	18
8/1/2023	5.00%	1.39%	31	1.08%	10	1.1800%	1.196%	19
8/1/2024	5.00%	1.41%	32	1.09%	10	1.1900%	1.204%	21
8/1/2025	5.00%	1.46%	34	1.12%	10	1.2200%	1.235%	23
8/1/2026	5.00%	1.51%	35	1.16%	10	1.2600%	1.277%	23
8/1/2027	5.00%	1.57%	37	1.20%	12	1.3200%	1.340%	23
8/1/2028	5.00%	1.65%	39	1.26%	15	1.4100%	1.435%	22
8/1/2029	5.00%	1.72%	41	1.31%	15	1.4600%	1.485%	23
8/1/2030	5.00%	1.81%	44	1.37%	15	1.5200%	1.547%	26
8/1/2031	5.00%	1.86%	44	1.42%	10	1.5200%		
8/1/2032	5.00%	1.91%	45	1.46%	10	1.5600%		
8/1/2033	5.00%	1.95%	45	1.50%	10	1.6000%		
8/1/2034	5.00%	1.99%	45	1.54%	10	1.6400%		

Column D Offering spread vs. AAA scale

Column F Offering spread vs. AAA scale assuming current delivery bond

Column J Calculated Breakeven Yield (Investor is indifferent to investing for .62 years and reinvesting vs. locking)

Column L Pricing yield differential between offered yield and calculated breakeven yield

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Maryland Market Observations

- 37 General Obligation bond sales YTD 2019
- 36 sold via competitive bid
- Average number of bidders per deal = 7
- Largest # bidders = 12
- All but 2 issues received at least 5 bids
- All but one issue had a rating of AA or better

Underwriter Activity in Maryland (Negotiated) – YTD 2019

Negotiated Deals 2019 YTD		
Underwriter	# of Deals	Total Par Amount (\$ millions)
Piper Jaffray	9	467
Cross Point	7	7
Stifel Nicolaus	7	72
BAML	6	405
M&T Securities	3	47
Raymond James	3	76
RBC Capital	3	170
Wells Fargo	3	69
George K Baum	2	29
JP Morgan	2	229
Morgan Stanley	2	119
Goldman	1	36
Total	48	1726

Underwriter Activity in Maryland (Competitive) – YTD 2019

Competitive Deals 2019 YTD		
Underwriter	# of Deals	Total Par Amount (\$ millions)
BAML	7	1444
Citigroup	7	696
Morgan Stanley	6	494
Robert W. Baird & Co	5	141
Fidelity	4	81
JP Morgan Securities	3	412
Raymond James	3	186
FTN	2	28
Wells Fargo	2	416
Hutchinson Shockey	1	20
Intl FCStons Financial	1	6
Piper Jaffray	1	32
PNC Capital Mkts	1	23
Total	43	3979

Competitive vs. Negotiated Comparison

State	Competitive	Negotiated	Total
Maryland	43	57	100
Georgia	27	113	140
Virginia	54	48	102
North Carolina	24	54	78
Pennsylvania	93	429	522

General Obligation Issues vs. AAA

General Obligation Issues vs. AAA			
Issuer	Rating	5 yr. Spread	10 yr. Spread
HARFORD CO	Aaa/AAA/AAA	-2	0
BALTIMORE CO	Aaa/AAA/AAA	5	7
BALTIMORE CO CONS PUB IMP	Aaa/AAA/AAA	7	6
WASHINGTON SUBURBAN SAN	Aaa/AAA/AAA	2	-6
MARYLAND ST GROUP 1	Aaa/AAA/AAA	3	2
MARYLAND ST GROUP 2	Aaa/AAA/AAA	0	0
WORCESTER CNTY	Aa2/AA+/AA	3	6
ROCKVILLE MAYOR & COUNCIL	Aaa/AAA	-1	0
QUEEN ANNE'S CO	Aa1/AAA/AAA	0	3
CALVERT CNTY	Aaa/AAA/AAA	1	3
WASHINGTON CO	Aa1/AA+/AA+	1	2
BALTIMORE MAYOR & CITY-A	Aa2/AA	5	10
HOWARD CO - A-REF	Aaa/AAA/AAA	0	0
HOWARD CO - B-REF	Aaa/AAA/AAA	2	2
BALTIMORE CNTY-REF	Aaa/AAA/AAA	0	0
QUEEN ANNES CNTY -REF	Aa1/AAA	-2	-4
MARYLAND ST-SECOND SER A	Aaa/AAA/AAA	-3	-4
MARYLAND ST-SECOND SER A	Aaa/AAA/AAA	0	0
BRUNSWICK	Aa3	4	7
FREDERICK CO -A	Aaa/AAA/AAA	2	5
SALISBURY	Aa3/AA	-1	2
COLLEGE PARK	Aa1	-4	-2
	Min	-4	-6
	Max	7	10
	Average	1	2

Who is Buying your Bonds and Where

Bond Investor Summary			
Frederick County Maryland			
\$106,245,000			
Aaa/AAA/AAA			
Call 8/1/2029 @ 100			
Maturity	Coupon	Yield	Investors
8/1/2020	5.00%	1.06%	Money Managers, SMA, Trust Departments, Individuals
8/1/2021	5.00%	1.07%	"
8/1/2022	5.00%	1.08%	"
8/1/2023	5.00%	1.10%	"
8/1/2024	5.00%	1.11%	"
8/1/2025	5.00%	1.13%	"
8/1/2026	5.00%	1.17%	"
8/1/2027	5.00%	1.22%	"
8/1/2028	5.00%	1.30%	"
8/1/2029	5.00%	1.36%	"
8/1/2030	5.00%	1.42%	"
8/1/2031	3.00%	1.92%	"
8/1/2032	4.00%	1.71%	"
8/1/2033	2.25%	2.36%	Insurance Companies
8/1/2034	2.375%	2.43%	"
8/1/2035	2.50%	2.50%	"
8/1/2036	2.50%	2.56%	"
8/1/2037	2.50%	2.61%	"
8/1/2038	2.625%	2.66%	"
8/1/2039	2.625%	2.71%	"

Investor Class Taxable Equivalent Yield

Tax -Exempt Yield	2.50%
Individuals (Maryland Resident)	4.67%
Life Insurance Company	2.97%
Property and Casualty Company	3.13%
Bank	3.17%
Bank (Pre-Tax Reform - 35% Corp Rate)	3.71%

Tax-exempt Bond Funds

- Record cash inflows during 2019
- 41 straight weeks of inflows
- Weekly average inflow ~\$1.7 billion
- Since 2007 the weekly inflow has averaged ~\$381 million (almost 4.5X greater during 2019)
- 2019 total new cash => \$72 billion

Underwriting Environment

- 152 firms underwrote at least one municipal bond deal in 2010
- 101 firms underwrote at least one municipal bond deal in 2019
- Decline of 33%
- Top 10 dealers underwrite 75% of deals
- Top 20 dealers underwrite 90% of deals
- Average underwriting spread declined from \$6.26 in 2010 to the current level of \$4.95

Deal Structure

- Key component of determining borrowing cost
- Give bidders flexibility when drafting bid parameters
- Might need to be more restrictive depending on your particular situation (Ex – might need to generate premium)
- Remember – The job of the competitive underwriter is to buy the deal
- Generate a bid that produces the best math to buy the deal

Investors

- Individuals – buy longer on the curve (20-30 years), close to par
- Banks – Not as active as in the past. Lower corporate tax rate makes it less appealing for banks to buy tax-exempt bonds
- Insurance companies – We are seeing a lot of interest from insurance companies in the 20 year range

Coupon Structure – Bid Restrictions Dictate Results

Coupon Structure/Bid Restrictions Dictate Results					
Massapequa NY			Blind Brook - Rye NY		
21,400,000			44,665,000		
Aa1			Aa2		
10/1/2027 @ 100			10/1/2027 @ 100		
Year	Coupon	Yield	Coupon	Yield	Yield Spread
2020	5.000%	1.130%	2.250%	1.250%	12
2021	5.000%	1.130%	2.250%	1.250%	12
2022	5.000%	1.130%	2.250%	1.260%	13
2023	5.000%	1.110%	2.250%	1.280%	17
2024	5.000%	1.080%	2.250%	1.300%	22
2025	5.000%	1.090%	2.250%	1.350%	26
2026	5.000%	1.120%	2.250%	1.450%	33
2027	5.000%	1.160%	2.250%	1.650%	49
2028	4.000%	1.230%	2.250%	1.750%	52
2029	4.000%	1.280%	2.250%	1.900%	62
2030	4.000%	1.330%	2.250%	2.050%	72
2031	2.000%	2.000%	2.250%	2.200%	20
2032	2.000%	2.100%	2.250%	2.250%	15
2033	2.000%	2.200%	2.250%	2.300%	10
2034	2.250%	2.300%	2.250%	2.350%	5
2035			2.375%	2.400%	N/A
2036			2.375%	2.450%	N/A
2037			2.500%	2.500%	N/A
2038			2.500%	2.550%	N/A
2039			2.500%	2.600%	N/A
TIC	1.790%		2.330%		
TIC to 2034	1.790%		2.080%		
Gross Spread	\$4.18		\$10.45		

Underwriting Spread

\$17,500,000		
City of College Park, MD		
Sale Date: 10/3/2019		
Bidder	TIC	Spread
Bank 1	2.647	\$12.16
Bank 2	2.515	\$6.50
Bank 3	2.524	\$7.20
Bank 4	2.535	\$3.78
Bank 5	2.558	\$7.28

- Spread (Underwriter's Discount) does not tell the whole story
- It is one component of overall interest cost

Investors (cont)

- Insurance companies:
- 15 – 20 year range
- Close to par
- Clean, no frills

Global Interest Rate Market

- ~\$15 trillion sovereign debt trade with a negative yield
- Why does someone buy the German 10-year bond and -0.35%? Because they think it's going to -0.45% or lower.
- With global rates so low and negative in some cases, hard for U.S. rates to move higher

Foreign Buyer of U.S. Debt

- Here's an example of a foreign buyer with the Euro as their base currency
- Investment choices:
- Buy German 10-year bond at -0.35%
- Buy US 10-year treasury bond at 1.75%
- Buy Carroll County 10-year bond at 2.36%

Foreign Buyer of U.S. Debt (cont)

- Assumptions:
- Investment of EUR \$1 million
- 10 years to maturity
- Investor hedges their currency risk
- What are the comparable yields

Foreign Buyer of U.S. Debt

Investment	Yield (Unhedged)	Yield (Hedged)	Yield Pickup
German 10-Year	-0.35%	-0.35%	N/A
US 10-Year	1.75%	-0.16%	19 bps
Carroll County	2.25%	0.44%	79 bps

Federal Open Market Committee

- 91.5% probability of a rate cut at October meeting
- 37.6% probability of an additional rate cut at December meeting

Interest Rate Trends

- 10-year treasury yield has declined from a high of nearly 16% in early 80's to current level of ~1.75%
- 3rd time since 2012 the market has traded below 1.50%
- Unable to sustain trading below that level for any significant length of time

Interest Rate Trends (cont.)



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