MSRB Municipal Securities Rulemaking Board

Different Buying Patterns of Retail and Institutional Investors in Municipal Bonds

INTRODUCTION

Based on an analysis of recent municipal securities trade data, the Municipal Securities Rulemaking Board (MSRB) found that retail investors tend to purchase municipal bonds with lower coupons than institutional investors. Over half of the retail investor purchases during the period studied were for municipal bonds with a 3.0 – 3.5% coupon. In contrast, most purchases by institutional investors were for municipal bonds with a 5% coupon. Retail investors accounted for only about 8% of the purchases of 5% coupon bonds.

Given the difference in risk associated with purchasing lower coupon bonds, the MSRB is publishing this issue brief to provide information about recent differences in purchasing patterns between retail and institutional investors. The issue brief also informs investors about interest rate risk associated with lower coupon bonds that could affect their ability to resell the bond prior to maturity, potential tax implications of buying bonds at a significant discount and other considerations associated with purchasing municipal bonds.[1]

MSRB Analysis and Findings

The MSRB studied customer purchase data for a six-month period (May 1, 2019 to October 31, 2019) for municipal bonds maturing in 15 years and longer. The MSRB restricted its analysis to longer maturing bonds because all else being equal, the longer the time to maturity, the more volatile the price of a bond is relative to interest rate movements.

Using trades of 100 bonds or fewer (or $100,000 or less in value) as a proxy for retail investor purchases, the MSRB found that retail investors bought 34% of the municipal bonds with a coupon of 3.0 – 3.5%. In contrast, using trades of $1 million or more as a proxy for institutional investor purchases, the MSRB found that institutional investors bought 16% of these bonds. As shown in Table 1, the longer the time to maturity (*i.e.*, 30 years), the higher the percentage of purchases made by retail investors (*i.e.*, 59%).

Table 1: Percentage of Purchases by Retail Versus Institutional Investors in Municipal Bonds with a 3.0 – 3.5% Coupon, Based on the Number of Trades (May to October 2019)

Purchases By	15 year	20 year	25 year	30 year	Overall (15+ years)
Retail Investors ($100,000 or less)	26%	41%	45%	59%	34%
Institutional Investors ($1,000,000 or more)	13%	24%	15%	13%	16%

[1] The MSRB does not provide investment advice and thus takes no position on whether any particular investor or type of investor should be investing in a given investment product such as a lower coupon, longer maturing municipal bond. The MSRB recognizes that buying a lower coupon bond can be a valid investment decision for retail and institutional investors alike, depending on their facts and circumstances.

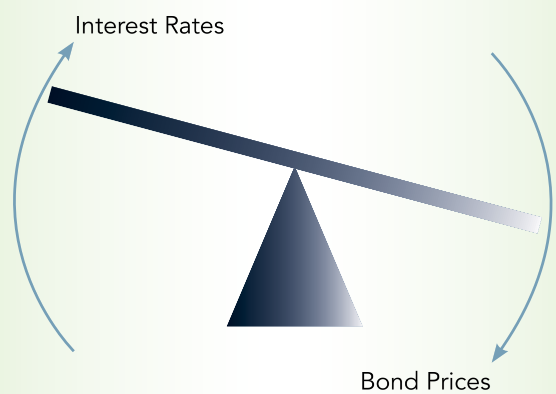
Table 2: Percentage of Purchases by Retail Versus Institutional Investors in Municipal Bonds with a 5% Coupon, Based on Number of Trades (May to October 2019)

Purchases By	15 year	20 year	25 year	30 year	Overall (15+ years)
Retail Investors ($100,000 or less)	29%	20%	19%	18%	24%
Institutional Investors ($1,000,000 or more)	50%	36%	38%	41%	41%

Additionally, the MSRB found that retail investors purchased 24% of the municipal bonds with a 5% coupon, whereas institutional investors purchased 41% of these bonds. As illustrated in Table 2, the contrast in retail and institutional purchases was most stark in the bonds with the longest maturity (*i.e.*, 30 years).

More details regarding the MSRB's analysis and findings, including statistics based on par amount traded, can be found in the appendix.

Interest rate risk is the risk that changes in interest rates may reduce (or increase) the value of a municipal bond. All else being equal, when interest rates rise, a bond's price or market value declines.



What Are the Potential Implications of Buying Lower Coupon Bonds

The MSRB is publishing its findings to highlight for investors and for financial professionals with retail customers the importance of understanding the potential implications of purchasing lower coupon, longer maturing municipal bonds. In particular, a potential future rise in interest rates could have a material impact on investors' ability to sell the bonds at market price, should they want to sell the bonds prior to maturity.

Interest Rate Risk and the *De Minimis* Rule

To understand how a rise in interest rates could affect the ability to sell a bond at market value, investors need to understand the *de minimis* rule. As explained in the MSRB's interpretative notice on market discount disclosure, under the *de minimis* rule, if the amount of market discount at the time of purchase is less than one-fourth of 1% (.0025) of the stated redemption price of the bond multiplied by the number of complete years from the date of purchase to the date of maturity, the market discount is *de minimis* and is generally taxed as a capital gain rather than ordinary income. If it is one-fourth of 1% (.0025) or greater, then the market discount is **not** *de minimis* and is generally taxed at the ordinary income tax rate. The ordinary income tax rate for investors who have higher incomes is higher than the capital gain tax rate—nearly double for investors in the highest tax bracket. Therefore, potential buyers would demand a substantially higher yield for bonds priced outside of the *de minimis* threshold to compensate for the higher taxes they would have to pay on the price appreciation of the bond. Moreover, the higher taxes associated with the *de minimis* rule could also have a liquidity impact because of a reduced pool of potential buyers. This means the seller would have to accept a significant discount in order to sell the bond.

Let's look at a hypothetical example of how the *de minimis* rule could affect an investor's sale of a municipal bond prior to maturity.

Part I: The Decision to Buy

Suppose a retail investor buys a 20-year municipal bond that is callable in 10 years with a **3% coupon**. Prior to the purchase, the investor discussed with her financial professional the possibility of buying a comparable bond with a 5% coupon, but she ultimately opted for the lower coupon bond because she preferred not to pay the higher premium associated with the 5% coupon bond and to have a municipal bond that was less likely to be called before maturity. Additionally, new issue pricings show that bonds with lower premiums often have a higher yield-to-call than bonds with higher premiums.

Evaluating Prices of Comparable 3% and 5% Municipal Bonds

To put the investor's purchase decision into context, Table 3 shows the potential premium associated with two bonds with the same maturity, call date and call price but different coupons.

Table 3: Differences in Premium Between Comparable 3% and 5% Municipal Bonds

Features	3% Bond	5% Bond
Coupon	3%	5%
Maturity	7/1/2038	7/1/2038
Call Date	7/1/2028	7/1/2028
Call Price	100	100
Yield	2.75%	2.75%
Price	**$102**	**$117**

At the same yield of 2.75%, the higher price of approximately $117 for the 5% coupon bond compared to about $102 for the 3% coupon shows the premium associated with a higher coupon bond. The 5% coupon bond has a significantly higher premium because of the higher coupon payments to an investor until at least the bond's first call date.

Part II. The Decision to Sell Before Maturity

Let's assume that five years later, the investor needs to sell the 3% bond. If the bond has 15 years until maturity, the *de minimis* threshold for the bond would be a dollar price of $96.25. Assuming the bond has 15 full years to maturity and five years of call protection remaining, and the prevailing interest rate is 3.35%, the dollar price of the bond would be approximately $95.797. That means the market discount would be greater than the *de minimis* threshold. Therefore, investors willing to buy this bond likely would look for a significantly higher yield (and thus, greater discount), driving the price of the bond down to compensate for the tax consequences to them and the illiquidity of the bond.

Now, assume all the same facts, except that the investor buys a 20-year, callable municipal bond with a **5% coupon**. This bond would not trigger the *de minimis* threshold unless 15-year rates were around 5.35% or higher. Interest rates would have to rise significantly before the 5% coupon bond became subject to ordinary income tax.

Summary

According to the MSRB's analysis of trade data during the six-month period of May to October 2019 for municipal bonds with maturities of 15 years or longer (described in greater detail in the appendix), both retail and institutional investors bought long-dated, 3.0 – 3.5% coupon bonds, but retail buying was more prevalent. As the hypothetical illustrates, retail investors may have preferred these bonds over higher coupon bonds for various reasons. For example, lower coupon bonds require the investor to pay less of a premium, have less call risk and could offer a higher initial yield than a 5% coupon bond. Nevertheless, because these lower coupon bonds are more sensitive to interest rate risks and have a higher risk of falling outside of the *de minimis* threshold some time prior to maturity, it is important that investors buying them understand the risks and make informed investment decisions.

Educational Resources

The MSRB Education Center provides educational resources that can help investors understand the considerations associated with buying or selling municipal bonds. Financial professionals can print, share and redistribute MSRB educational resources to retail customers. The following resources may help an investor consider whether buying lower coupon, longer maturing municipal bonds is a sound investment decision given the product's advantages and risks and the investor's characteristics and circumstances.

- About Original Issue Discount Bonds
- Evaluating a Municipal Bond's Interest Rate Risk
- What to Expect When Selling Municipal Bonds Before Maturity

Contact Us

Questions or suggestions regarding this issue brief can be submitted to John Bagley, the MSRB's Chief Market Structure Officer, at jbagley@msrb.org.

APPENDIX

As expected, trades for 100 bonds or less accounted for most of the trades during the period analyzed, and trades of $1 million or more dominated the par amount traded. For customer purchases during these six months, trades of 100 bonds or less represented 81% of all the trades and 9% of the par value traded. In contrast, trades of $1 million or more represented only 6% of the trades but 79% of the overall par amount purchased by customers.

On a relative basis, customers buying 100 bonds or less were significantly more likely to buy bonds with a coupon rate of 3.0 – 3.5%, while customers purchasing $1 million or more were more likely to buy bonds with a 5% coupon.

Customers buying 100 bonds or less accounted for 87% of the number of trades and 15% of the par value traded in bonds with coupons of 3.0 – 3.5%. For bonds with 5% coupons, these customers represented 74% of trades and less than 6% of the par amount traded. This is in stark contrast to customers purchasing $1 million or more. These larger trades represented only 3% of the trades and 68% of the par value traded for bonds with coupons of 3.0 – 3.5%. Meanwhile, purchases of $1 million or more represented 10% of the trades and 84% of the par value traded in bonds with a 5% coupon.

For securities with a 5% coupon, the percentage of trades for transactions of $100,000 or less decreased as the remaining maturity increased—from 71% for securities with 15 years to maturity to 39% for securities with 30 years to maturity. This is significantly lower than the 81% average for all transactions of $100,000 or less during the six months used in this analysis.

The opposite was true for transactions of $1 million or more, where the percentage of trades increased as the remaining maturity increased. Transactions in the 15-year maturity range accounted for 9% of all trades, while transactions in the 30-year maturity range accounted for 40% of all trades, both significantly higher than the 6% average for all of the transactions of $1 million or more during the six months used in this analysis.

It is important to note that the longer the time to maturity, the more likely the purchase of 100 bonds or less was in the 3.0 – 3.5% coupon range. Purchases of 100 bonds or less in this coupon range represented 40% of the par amount purchased of bonds maturing in 20 years, 42% of bonds maturing in 25 years and 53% of bonds maturing in 30 years. In contrast, purchases of 100 bonds or less with 5% coupons represented 22%, 22% and 10%, respectively, of the par amount purchased for bonds maturing in 20, 25 and 30 years.

For purchases of $1 million or more, the percentage of par amount purchased in 3.0 – 3.5% coupons decreased as the maturity date increased. Customer purchases in this coupon range represented 27% of the par amount traded in bonds maturing in 20 years, 14% of trades in bonds maturing in 25 years and 12% of trades in bonds maturing in 30 years. On the other hand, the percentage of par amount traded in bonds with 5% coupons increased from 35% for bonds maturing in 20 years to 42% and 41%, respectively, for bonds maturing in 25 and 30 years. For the 30-year bonds, small and large purchases were very similar. Of the par amount purchased of bonds with 30 years to maturity in amounts of 100 or less, 53% was in 3.0 – 3.5% coupon bonds and only 10% in 5% coupon bonds. For larger purchases, 12% were in 3.0 – 3.5% coupons and 41% were in 5% coupon bonds.