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*Municipal Strategy Note*

# Managing Duration with Muni BMA Swaps

**BMA Fixed Rate Swaps can be used to adjust the duration of tax exempt portfolios.**

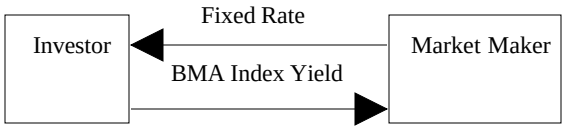
**Introduction**

The Muni BMA (Bond Market Association) Index, formerly known as the PSA Index, is a weekly high grade market index comprised of 7-day tax exempt variable rate demand notes produced by Municipal Market Data (MMD). It is a yield quoted each Wednesday. The BMA is the shortest end of the muni curve.

BMA Swaps are interest rate swaps and are designed to add exposure to the muni market by exchanging the BMA muni index yield for a fixed rate. BMA swaps are more liquid than the cash municipal market and allow an investor to put on or take off a position in a reasonable amount of time and for a reasonable price.

**Defining the Swap**

The BMA fixed rate swap is defined as:




The investor receives a fixed rate and pays the BMA Index. The fixed rate fluctuates over time and is locked in for the term of the contract at the time of the transaction. Cash flows are made and taxable in net.

The rates at which an investor can unwind the trade determine the value of the trade at any time. The BMA rate is variable and will match exactly the BMA leg of the swap when unwound. The fixed rate is the leg of the swap that might be different when unwinding. If the fixed rate is different from the rate on the original swap, this difference is locked in for the remainder of the term of the swap when the swap is unwound. The value of this difference over the time of the swap is dependant on the fixed rate.

The marked-to-market value of the swap is sensitive only to the fixed rate leg of the swap and the fixed leg of BMA swaps *do* track closely the muni rates in the cash market. This price sensitivity to the muni rates in the cash market is duration as defined by price sensitivity to interest rate shifts in the underlying market.

To add duration to a municipal portfolio (or when a portion of the muni yield curve is cheap and liquidity prevents buying that maturity), purchase the BMA Fixed Rate swap for the term matching that of the relatively cheap municipals: Receive a fixed rate and pay the BMA Inde.

*Example: 3yr BMA fixed rate swaps for adding duration*
This trade adds half a year of duration to a $50MM municipal portfolio using the 3yr fixed rate swap. To add a half year of duration to a $50MM account, $25MM duration dollars (dur $s) should be added.

(.5yrs)($50MM) = $25MM dur $s

The notional face amount of the swap is the amount of dur $s divided by the duration per dollar of notional face.

$notional face = ($25MM dur $s) / (dur per $notional face)

This calculation determines the notional face of the swap (in this case about $9.17MM) Each swap has a bid/ask spread of about 6 bps (round trip), in this case, about $5503 The longer it was held, however, the less it would cost because it has positive carry of about $27,517 per year.

The equivalent alternative to this trade in the cash market, in terms of exposures, involves buying 3yr munis. Both trades are sensitive to the yield changes in the 3yr portion of the muni market. To add the same duration using 3yr municipals in the cash market, the same notional face amount would have to be purchased because the durations of the swap and the cash market securities are the same. In the cash market this transaction requires $9.17MM. Cash market duration management such as this is not attractive in illiquid markets or when the portfolio does not have large amounts of new cash flows.

This strategy note is intended to show that the BMA swap can be one effective method of implementing duration management. There are other methods of managing duration including treasury futures, swaps in the taxable market, euro$ futures, etc.