

Floating Rate: Cost of Funds, BMA, or Percent of LIBOR?

Choosing what floating rate to receive under a swap contract to create synthetic fixed rate debt, when variable rate notes are issued, requires careful evaluation of the cost and benefits associated with the different alternatives. The three most common floating rates received by municipal issuers under swap contracts are Cost of Funds, BMA Index, and a percent of a LIBOR Index. From an economic perspective, the major differences between the three are the likelihood of matching the rate paid on variable rate notes and the fixed swap rate offered by a swap dealer. Other important factors that should be considered in the analysis are the need to integrate the swap into the bond issue for tax purposes and the accounting treatment if proposed rules from GASB are implemented.

One objective when synthetic fixed rate debt is created is to closely match the floating rate received under the swap contract with the rate paid on the variable rate notes. Under a Cost of Funds (CoF) swap, the reset rate under the swap contract equals that of the notes. As a result, there is no risk of discrepancies between the two rates, which is referred to as basis risk, and this is as close as we can get to a perfect hedge. The fixed rate that a dealer will accept in exchange for payments based on a CoF swap is the highest as compared to a BMA or percent of LIBOR swap since the cost of hedging the variable rate on the individual bonds is now transferred to the swap dealer.¹

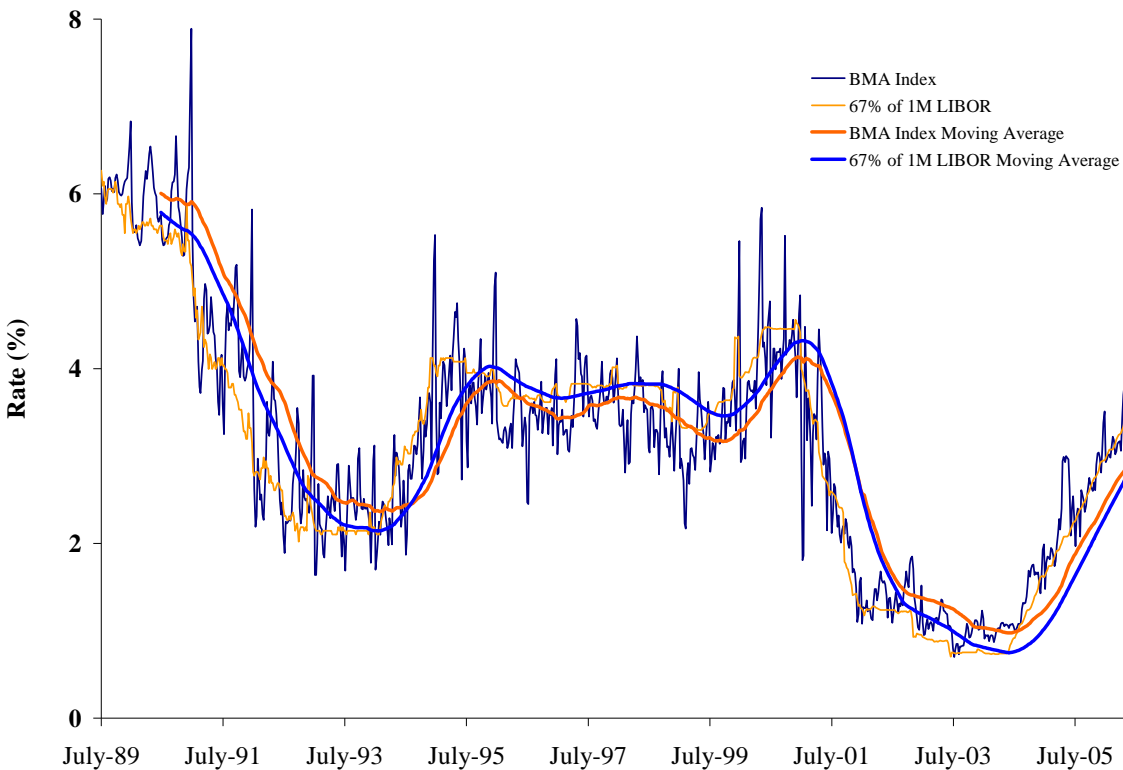
Under a BMA swap, the weekly BMA Index is used to calculate the floating swap payments. The BMA Index is calculated on approximately 650 short-term tax-exempt notes selected from a database of more than 16,000 tax-exempt issues. While it is unlikely that an individual issuer's bonds will reset to a rate that exactly matches the BMA Index, the deviation is most often not more than a few basis points.² The payments received under the swap will respond to changes in the market relating to tax-exempt variable rate notes in general, such as legislation regarding tax-exemption or general interest rate levels, and can therefore reasonably be expected to offset an individual issuer's notes. A swap dealer will accept a somewhat lower fixed rate, as compared to a CoF swap, since his variable payment is based on a standardized index and his position can be immediately hedged in the market.

When a percent of LIBOR swap is entered into, the floating payments under the swap is determined by applying a given percentage, such as 67%, of a given LIBOR Index, such as 1-Month LIBOR, to the notional amount. LIBOR is abbreviation for London Interbank Offered Rate and indices for maturities out to twelve months are published each day. A given index,

¹ If "Index Bonds", which have reset rates as a percent of LIBOR plus a spread, are issued the specific risks associated with the bonds are borne by the bondholder.

² Assuming insured bonds.


such as 3-Month LIBOR, is a calculation based on a survey of what rate London bankers are willing to make a three month sizable time deposit at with another dealer bank. Since LIBOR is an index that is based on interest rates subject to taxation, only a fraction of an index would normally be necessary to offset tax-exempt interest payments on notes. Theoretically, the ratio would be 100 less the marginal tax rate for the marginal purchaser of tax-exempt bonds, although this rarely happens at a given *point* in time. Since 1989, the ratio of 1-Month LIBOR that has created enough cash flows, *on average*, to offset payments based on the BMA Index is 67%. The graph below displays the historical relationship between BMA Index and 67% of 1-Month LIBOR.



The graph shows that, over time, a moving average of the BMA Index and 67% of 1-Month LIBOR move closely together as general interest rate levels change, but on a weekly basis 67% of 1-Month LIBOR is rarely equal to the BMA Index. A swap where an issuer receives 67% of 1-Month LIBOR can therefore, based on historical data, be reasonably expected to offset variable rate payments due on the average tax-exempt note over an extended period of time, under the assumption that marginal tax rates or the tax-exempt status of the bonds do not change. During a limited period of time, however, this historical relationship may be distorted. For example, between 2002 and 2004, the ratio of 1-Month LIBOR necessary to offset payment based on BMA Index was 80.1%. Issuers willing absorb this additional basis risk can be expected to be offered the lowest fixed rate under a swap contract as compared to a BMA or CoF swap. The LIBOR swap market is very liquid and the cost for a swap dealer to hedge his position is relatively low.

The fixed rate accepted by a swap dealer in exchange for a given floating rate is a direct function of a dealer's cost of hedging his position and risks assumed. A swap dealer does not speculate that the floating rate will stay below the fixed rate long enough to make a deal profitable, but the risk of changes in interest rates is hedged immediately. Further, when a BMA or CoF swap is entered into, a dealer must either assume or otherwise hedge the risks associated with possible future changes in tax rates or laws.

An issuer also assumes risks when synthetic fixed rate debt is created. When traditional fixed rate bonds are issued, the issuer is not dependent on the performance of a third party such as a credit provider for example, only the purchaser of the bond is. However, when a swap contract is entered into the issuer is dependent on the performance of the swap provider among others. This risk is referred to as counterparty risk and is often managed using collateral and careful monitoring of the counterparty's credit rating. In addition to counterparty risk, the issuer's cost of debt may change as cost of liquidity or remarketing may change over time, here referred to as Other risks. The picture below shows what risks are hedged or non-existent in natural fixed rate debt and compares this to the risks hedged with variable rate notes and three types of hedges to achieve a synthetic fixed rate. Please note that BMA swaps do have some basis risk although much less than percent of LIBOR swaps. As the number of risks hedged increase, so does the expected interest rate cost.

	Hedged Risk					Expected Interest Cost
	Interest Rate Risk	Tax Risk	Basis Risk	Counter-party Risk	Other Risks ¹	
Fixed Rate Bonds	✓	✓	✓	✓	✓	
Variable Rate Notes and						
CoF Swap	✓	✓	✓			
BMA Swap	✓	✓	✓			
% of LIBOR Swap	✓					

¹Other risks include termination, credit, liquidity, remarketing, and possible rollover risk.

In general, the closer the rate received under a swap matches the rate paid on variable rate bonds, the higher the expected fixed swap rate offered by the dealer, since the fixed swap rate is a function of the dealer's cost of hedging his position. CoF swaps are very unique since they relate to one issuer's specific bonds, BMA swaps are based on the U.S. municipal market as a whole, and LIBOR swaps are based on the entire corporate debt universe, which makes them relatively inexpensive to hedge. Apart from the risks hedged, liquidity in each market varies substantially as well. For example, the bid-ask spread in the "wholesale" BMA swap market is 7-10 basis points while it is only 1-2 basis points in the LIBOR swap market.

From an economic perspective, an issuer's selection of what floating rate to receive under a swap contract should be based on the ability to bear the risk of a mismatch between the payments received under the swap and those made to bondholders. Other important factors that also must be considered are the need for a certain tax- and/or accounting treatment.

In some instances, such as advance refundings, tax regulations require that the floating rate received under a swap to be “substantially the same”³ as the rate paid to bondholders so that the fixed yield of the new synthetic structure can be determined at execution. This may limit the use of percent of LIBOR swaps, even if this may be economically more advantageous, since current regulations do not permit any form of rebate payments where this may cause arbitrage profits.

From an accounting perspective, current GASB regulations only require disclosure in the notes of an issuer’s derivatives positions and their market values. However, the preliminary views document issued by GASB April 28, 2006 propose that market values of any derivative positions are included on the statement of financial position and that any changes in market value flow through the statement of activities. If a derivative qualifies for hedge accounting, and continues to be an effective hedge, an offsetting asset or liability would be created such that the net effect on the statement of activities would be zero. This could cause a problem when percent of LIBOR swaps are used since it involves a greater amount of basis risk.

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³ 26 C.F.R. § 1.148-4(h)(4).