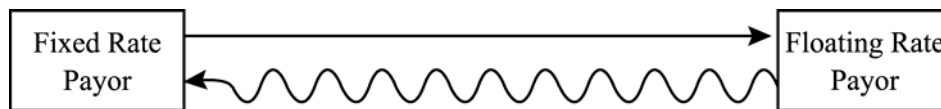


Swaps and Synthetic Fixed Rate Debt

Synthetic fixed rate debt is often presented as an alternative to traditional fixed rate bonds and a fundamental understanding of how synthetic fixed rate debt is created is essential to any entity that may be issuing debt since the comparison between the two is not always straightforward. The interest rate on debt can be “synthetically” fixed from the perspective that different financial instruments are combined such that the overall obligation resembles a fixed rate bond. One of the instruments most commonly used is an interest rate swap.

A swap is a contract to exchange cash flows and a “plain vanilla” swap exchanges cash flows based on a fixed rate of interest for cash flows based on a variable rate of interest, such as 3-month LIBOR. The cash flow calculations are based on a notional amount, which is not exchanged. An illustration of the principle of a swap is illustrated below with the fixed cash flows being represented by a straight line and the variable cash flows by a wavy line.



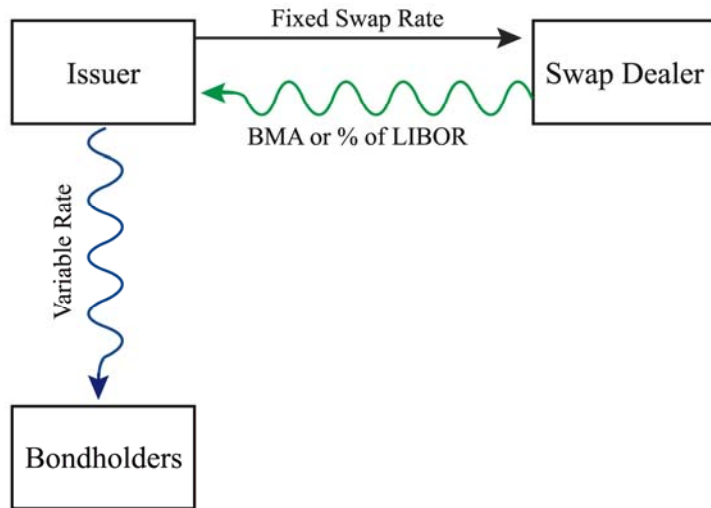
A swap has, absent dealer compensation and other transaction costs, zero value when it is executed and can therefore be entered into without an upfront premium. A value of zero is achieved by writing the contract such that the present values of the two expected cash flow streams are equal to each other. The expected future floating cash flows can be derived from market quotations and are not subjectively determined and the fixed rate of interest is then specified in the contract. Dealer compensation and transaction fees are included by adjusting the fixed rate up or down depending on if the dealer receives or pays a fixed rate, thus creating a bid-ask spread in the market.

To see how a swap can be used to create synthetic fixed rate debt, we begin by looking at traditional fixed rate debt. This is shown on the left side in the picture below. Tax exempt bonds are issued and bondholders receive a tax-exempt fixed rate of interest (red line). As an alternative, synthetic fixed rate debt can be created using two separate obligations; tax-exempt variable rate notes are issued to bondholders and a separate swap contract is entered into with a swap dealer. This is shown on the right in the picture below.

Traditional Fixed Rate Debt



Synthetic Fixed Rate Debt



Under the synthetic fixed rate structure, the variable rate cash flows received under the swap contract (green line) are intended to offset the variable rate cash flows paid to bondholders (blue line) such that the only remaining obligation is the fixed swap rate paid to the swap dealer (black line). This is in contrast to traditional fixed rate debt where the fixed rate is paid to the bondholders (red line). In practice, if the two payments exchanged under the swap (black and green) occur on the same day, they are usually netted.

The two most common floating rate alternatives for municipal issuers to receive under a swap contract are BMA Index or a percent of a LIBOR Index, such as 1-Month LIBOR. A third not so common alternative anymore is to receive the actual variable rate paid to bondholders, which is referred to as a Cost of Funds swap. The floating rate selected under the swap contract directly influences the fixed swap rate offered by the dealer as the dealer's cost of offsetting deal varies depending on the floating rate paid to the issuer. A swap dealer does not speculate on what that the floating rate will be during the life of the swap, but the risk of changes in interest rates is hedged immediately.

Ultimately, the synthetic fixed rate achieved is the sum of the fixed swap rate, liquidity and remarketing costs of the variable rate bonds, and any mismatch between the rate paid to bondholders and that received under the swap, which is referred to as basis risk. However, most often the synthetic fixed rate should not be directly compared to the cost of issuing traditional fixed rate bonds as these often contain a call provision for the issuer. The ability to "call" synthetic fixed rate debt can be incorporated through the appropriate use of options, although this right is frequently given up in exchange for a lower fixed rate.

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