

## BALANCE SHEET STRUCTURE IN A RISING RATE ENVIRONMENT: PROTECT YOUR MARGIN WITH CHEAPER BORROWINGS

Since June 2004, cash flows from asset prepayments have slowed down, yet loan demand remains strong. Competition for funding heated up as bankers then had to rely on funding to fuel their loan pipelines. Products such as promotional CDs reappeared on the landscape. Also, innovative borrowing structures began to emerge.

As the Treasury yield curve has continued to flatten, margins have tightened. Now, institutions are seeking ways to minimize further margin compression. When the yield curve was steep, managers could short-fund assets at a decent spread. Now that short rates have risen, banks are concerned about increasing liability sensitivity. Their focus is shifting to lowering borrowing costs. Meanwhile, deposits continue to run-off and their borrowings are maturing or, in some cases, converting to floating rates.

While most bankers would agree that customer deposits are the best way to fund assets, many institutions are finding it increasingly difficult to retain existing, or even attract, new customer deposits. Today, there are borrowing structures that provide the opportunity to fund at sub-Libor rates.

Here, we introduce two different funding strategies, the interest rate assumptions a borrower might consider to evaluate them, and the environments in which these proposals might not perform as expected. These transactions, known as structured repurchase transactions, are increasingly popular with many financial institutions. In this interest rate environment, where short-term interest rates are quickly rising, these transactions help to manage risk and reduce borrowing costs.

The first funding option is a floating-to-fixed rate borrowing. While this borrowing type has many permutations, the funding we discuss here has a five-year term, which begins with a floating rate equal to three-month Libor minus fifty basis points (equivalent to 3.66%, or nine basis points cheaper than Fed funds, at the time of writing). This floating rate resets quarterly for one year, during which it cannot be cancelled by either the lender or the borrower.

Assuming that the borrowing is not cancelled by the lender at the end of year one, a fixed rate period of four years follows. During this fixed rate period, the borrowing is generally cancellable by the lender on a quarterly basis. The cancellation option can be tailored to fit institutional needs, by using either one-time or quarterly calls.

### **Mechanics of the floating-to-fixed rate borrowing:**

The initial, first quarter rate is equal to the three-month Libor rate minus fifty basis points. Second, third and fourth quarter rates are reset at the then prevailing three-month Libor rate minus fifty basis points. At the end of the fourth quarter, the borrowing is cancellable by the lender, which is likely if, at that time, the current four-year borrowing rate is above the stated fixed rate (back-end rate) on the floating-to-fixed rate borrowing.

### **Example:**

Enter into a five-year, floating-to-fixed rate borrowing with an initial rate of three-month Libor minus fifty basis points (currently equal to 3.66%). For the next three quarters, the interest rate paid will reset at the three-month Libor rate minus fifty basis points. At the end of the first year, if the new four-year borrowing rate is 4.65%, but the rate on the remaining four years of the floating-to-fixed rate borrowing is 4.50%, the floating-to-fixed rate borrowing would likely be cancelled. That's because the lender can make an extra fifteen basis points by lending the same sum at this new, four-year term borrowing rate.

The analysis of this type of funding strategy is more complicated than that of a simple bullet. That's because the floating-to-fixed rate borrowing is cancellable and has a floating-rate component. However, two general analytical assumptions apply: 1) Three-month Libor must be shocked up and down to provide a reasonable estimate of the first year borrowing cost, and 2) the fixed rate at the back-end of the borrowing should be compared to forward rates to derive an estimate of the funding's likelihood of being cancelled.

This particular strategy is regularly used by institutions which need short-term funding. By looking at the forward curve and comparing market expectations for interest rates to different floating-to-fixed rate alternatives, a borrower can choose the structure that is in- or out-of- the-money. If the expectation is that future interest rates will be higher than the back-end, fixed rate, the borrower will choose a funding option that is "in-the-money", hoping that the borrowing will be cancelled at its first opportunity.

If an institution wanted to "lock-in" a blended rate for a longer term, it might consider a longer lockout period or a higher fixed rate on the "back-end". These structures would be "out-of-the-money" and less likely to be cancelled at the first option date.

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What are the risks with the float-to-fixed borrowing strategy? First, interest rates could rise sharply in the initial period of the borrowing. That would significantly increase the first period cost, perhaps to a blended rate that is above the comparable term borrowing cost available from the borrower's lender of choice.

In addition, if rates rose quickly, the borrowing would likely be cancelled by the lender at its first opportunity (at the end of the initial period). As a result, the financial institution may need to borrow again, at a rate higher than the hoped-for back-end rate. However, for the initial period, the institution would have the benefit of cheaper-than-market funding. In the worst case, rates could drop and remain low after the initial adjustable period and the borrower would have above-market funding costs for the remaining term of the repurchase agreement.

The second alternative is a step-up repurchase transaction. Often compared to a step-up bond or step-up Certificate of Deposit, the **borrower pays** a lower-than-market, fixed-rate coupon during the lockout period. At the end of the lockout, the rate "steps up" for the remaining term of the borrowing. (There are no calls or other options assumed to be embedded in this structure.) The result is a blended cost of funding that may be lower than comparable borrowings available in the marketplace.

In the case of this five-year, non-cancelable for one-year structure:

$$\text{Funding cost} = ((\text{initial interest rate}) + (4 * \text{step-up rate})) \text{ divided by } 5$$

Institutions that use this structure assume that the all-in cost **will remain lower** than other available funding options over the life of the borrowing. Thus, borrowing rates must continue to rise, or rise above and remain above the blended funding cost for this particular strategy to do well. Conversely, if term funding rates drop **below** the blended cost of the step-up, you have a higher cost of funds that remains on the books for the entire term of the borrowing.

As with callable agencies, the yield associated with these instruments is favorable when compared to similar term bullet instruments. This is because you are selling an option, which is embedded in the instrument. Each structure is different and requires appropriate modeling to anticipate how the funding's cost would change in various interest rate scenarios.

As with any investment or balance sheet alternative, you should consider the impact on your institution before entering into any particular strategy. Specifically, you should consider the impact on the institution if interest rates move in a direction that would trigger an option's exercise. If the institution is already negatively impacted by higher rates, adding a borrowing structure that further increases costs in a rising rate environment may not be prudent.

As the Treasury yield curve continues to flatten, institutions are increasingly challenged to maintain their margins. This challenge can be made easier by either putting on higher yielding assets or by securing cheaper funding. Using instruments with embedded options on either side of the balance sheet can help accomplish this. However, this opportunity also carries additional risks. It is imperative that these risks are identified and fully understood both in the context of the specific transaction and that transaction's impact on the overall balance sheet complexion. By identifying and understanding the down side scenarios, you can consider the likelihood of that scenario actually occurring before entering into the transaction.

Many financial institutions are quick to purchase callable agency bonds or step-up notes to achieve a higher yield by selling options. Now that asset cash flow is slowing and customer deposits are more expensive, this strategy may be equally effective on the liability side of the balance sheet. It affords you an up-front opportunity to achieve a sub-Libor cost of borrowing. Just remember how important it is to know what interest rate (move or lack of move) bet you are making, when employing instruments with embedded options on either side of your balance sheet.

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