

Bank Asset/Liability Management

Vol. 23, No. 4, May 2003

Hedging Portfolios

By
Ira G. Kawaller*

A central source of profit for banks and other depository institution is the net interest margin, or the spread between funding rates and asset returns; and a complicating consideration is the fact that, more often than not, the maturities of the assets tend to differ from those of the liabilities. Given the uncertainty as to the level of interest rates as of the time assets or liabilities will roll over, these maturity imbalances necessarily expose depository institutions to interest rate risk. The maturity imbalance, however, can easily be “corrected” using interest rate derivatives – at least in theory.

In the typical bank, where assets generally have longer-dated maturities than liabilities, the bank has the choice: use derivatives either to (a) shorten asset maturities or (b) lengthen liability maturities. Depending on the nature of the hedge being implemented and the way in which the hedge is documented (or not), the accounting for the derivative might then be handled in one of three ways:

1. If the derivative is not designated as a hedge for accounting purposes, its gains or losses are simply be recognized in current income.
2. If the derivative is designated as a *fair value* hedge of the asset, hedge results are posted to current income, but changes in value of the hedged item due to the risk being hedged would be recognized in earnings, as well. (Note: This treatment assumes that the asset in question qualifies as a “hedge-able” exposure, in that it would otherwise *not* be revalued on the balance sheet with changes going through earnings if it were not designated as the hedged item.)
3. If the derivative is designated as a *cash flow* hedge of forecasted interest payments, *effective* hedge results are initially recorded in OCI and then reclassified to earnings coincidentally with the earnings impact of the associated, forecasted interest cash flows. (*Ineffective* hedge results are recorded in current earnings as they arise.)

Undoubtedly, the second or third alternative will be preferred to the first, in that both of these two choices will tend to yield lower income volatility, as

* Ira Kawaller is the Managing Partner of the Kawaller Fund and President of Kawaller & Company, LLC – a Brooklyn-based consulting company that assists commercial enterprises in their use of derivative instruments for risk management purposes. (kawaller@kawaller.com)

compared with the first choice. This lower volatility arises because the income effects of the hedging derivatives will generally be offsetting to the income effects of the hedged item(s); and with either type of hedge accounting these offsets occur in the same income period, while with out hedge accounting they occur in different income periods.

So what's the problem? In all likelihood, the intended hedged items would be either a collection of assets or a group of interest expenses, which means that FAS133's requirements pertaining to portfolio hedges would have to be satisfied. And these requirements happen to be especially restrictive. Here's what the standard says, in paragraph 21.a.(1):

"The changes in fair value attributable to the hedged risk for each individual item in a hedged portfolio must be expected to respond in a generally proportionate manner to the overall change in fair value of the aggregate portfolio attributable to the hedged risk. That is, if the change in fair value of a hedged portfolio attributable to the hedged risk was 10 per cent during a reporting period, the change in the fair values attributable to the hedged risk for each item constituting the portfolio should be expected to be within a fairly narrow range, such as 9 percent to 11 percent. In contrast, an expectation that the change in fair value attributable to the hedged risk for individual items in the portfolio would range from 7 percent to 13 percent would be inconsistent with this provision."

It should be clear that the components making up the hedged item would have to be quite homogeneous to satisfy this threshold. There may be an "out," however, in that FAS 133 allows for hedging relationships to be defined where a portion of the derivative serves as the hedging instrument. Thus, instead of hedging a portfolio of assets, the institution might be better served by hedging selected components of the portfolio individually (i.e., mini-portfolios), and devising an allocation algorithm to determine the appropriate portion of the derivative to be assigned to each component hedged item.

This work-around may still be problematic in that the various hedging relationships may not all be satisfied using the same hedge effectiveness test, so the solution may end up being quite cumbersome. Moreover, with a portfolio considered to be the hedged item, one might ordinarily expect to realize some benefit of diversification – where the effect of the hedge "over-performing" with respect to some portion of the portfolio would be balanced by some "under-performing" with respect to other portions. If hedging mini-portfolios, however, the effectiveness assessment must still be carried out for each designated hedge, individually. That is, even if the hedges perform well in the aggregate, if individual hedges fail the effectiveness assessment criteria, hedge accounting would not be permitted for those failing hedge relationships.

It should be understood that, assuming the aggregate portfolio can be broken down to a workable set of mini-portfolios, each qualifying for hedge accounting, there's nothing that requires separate derivatives for each hedging relationship. Rather, *portions* of a single derivative might be applicable for all of the hedging relationships.

Admittedly, the above solution would likely be less than satisfying for hedgers with large, very diverse portfolios. Thankfully, though, those banks still have the option to hedge the other side of the balance sheet. That is, instead of seeking to address their net interest margin exposure by reducing the duration of the bank's assets, the bank could seek to increase the duration of its liabilities. Attacking the problem from this perspective may require change in mind-set, but at least by doing so, the bank gets to apply cash flow hedge accounting, thereby avoiding the income volatility that would otherwise occur – either because the bank chose not to hedge at all, or because it did hedge its assets, but failed to qualify for fair value hedge accounting.