

Bank Asset/Liability Management

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Pros and Cons of Hedging Book Values

Assuming the traditional bank structure of longer-term assets funded by shorter-term liabilities, it is generally well understood that the same pay-fixed/receive-floating interest rate swap could be thought of as a hedge of the fixed rate asset or a hedge of the uncertain interest payments associated with the liability side of the balance sheet. The economics (i.e., cash flows) associated with both orientations are identical, but the accounting happens to be different. In either case, most institutions would strive to qualify for and apply special hedge accounting – an accounting treatment that is generally favored because it makes the economic purpose of the hedge more transparently obvious in the financial statements of the bank. Different hedge accounting rules would apply, however. If documented as a hedge of the fixed rate assets, fair value hedging would apply; if hedging rollover funding exposures, cash flow hedge accounting would apply. Critically, both of these accounting treatments serve the same objective of reducing volatility in reported earnings. Moreover, because most banks opt to hedge only a portion of their exposures, a residual volatility in the bank's net book value per share will still remain.

Affects on Net Book Value. Net book value will be affected by (a) value changes in assets that are posted to other comprehensive income (OCI), (b) effective cash flow hedge results (also posted to OCI), and (c) undistributed earnings in each period. The first two of these contributions to net book value changes, however, are transitory effects. That is, barring default or liquidation prior to maturities, asset values will ultimately converge to par amounts, and effective hedge results will necessarily be reclassified out of OCI to earnings. That being the case, the decision to hedge net book value is problematic. It is challenging to justify hedging an effect that is expected to self-correct, in time. Put another way,

if such an exposure were hedged on a continuing basis, the aggregate hedge results should also be self-correcting. That is, those results should largely aggregate to zero.

Given that these OCI effects may be seen to self-correct automatically, it may seem reasonable that the bank should, in effect, ignore this volatility. Hedging this volatility may seem unnecessary. On the other hand, if the bank sees the book value volatility as being detrimental to their stock valuation, perhaps taking steps to mitigate this volatility makes sense. This is a policy question that deserves consideration at the highest level of management. The remainder of this article describes how this book value hedge should be structured, assuming that objective is deemed to be appropriate.

The Starting Point. The starting point is a recognition that although the traditional hedge for managing net interest income (i.e., the cash flow hedge of prospective costs or the fair value hedge of some portfolio of bank assets) clearly has impacts on net book value, the book value hedge needs to be considered to be a separate, secondary hedge designed to address a distinctly different risk. Operationally, the bank would first institute a net income hedge pertaining to its earnings exposure and then assess the resulting duration for the entire portfolio, inclusive of this initial hedge position. A second hedge would then be entered into, in order to address the still-remaining book value exposure.

The original, i.e., income-related, hedge reflects a business judgment that is generally left to the bank's management team. In any case, whatever this hedge coverage, the residual exposure, i.e., the amount relating to assets for which funding is not hedged, becomes the relevant amount for consideration as the hedged item for the book value hedge. To realize the desired accounting treatment, the bank would need to specifically identify a portfolio of assets to serve as the hedged item. To put the magnitudes of these book value hedges in another perspective, if the objective were to fully hedge the book value exposure, the combined durations of the derivative

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that serves as the earnings impact hedge and the derivative that serves as the hedge of the book value exposure should sum to the duration of the bank's assets that contribute to book value changes.

A Hedge Designation. Conceptually the bank would likely want to designate the hedges of these fixed-rate assets as fair value hedges. This hedge designation is needed in order to avoid having an impact in current reported earnings from this book value hedge. That is, assuming all the prerequisite conditions are satisfied for fair value hedging, this treatment would result in moving the asset value changes (or a substantial portion of them) from OCI to current earnings. At the same time, the derivative's gains or losses relating to the book value hedge would also be reported in current earnings. As a consequence, the hedge will eliminate much of the volatility in book value per share without having it show up in earnings. Without the fair value hedge designation, the derivatives' gains or losses would be reported in earnings, with no associated offset. Applying the fair value hedge treatment thus serves to allow for reported earnings to be considerably less volatile than would be the case without this special hedge accounting treatment. Note, however, that, all else being equal, the resulting book value would be identical whether fair value hedging is applied, or not, as net income is closed out to equity in each quarter, regardless of the derivatives' accounting treatment. Several Problems. As conceptually appealing as this book value hedging strategy might be at first blush, it is not without its problems. The hedging prerequisites require considerable homogeneity of the component assets being hedged. More likely than not, the hedges may need to be designated for each asset, individually, or possibly small sub-groupings. Second, hedges are likely to be imperfect, particularly if the assets that serve as the hedged item incorporate prepayment options. Prepayment options complicate the capacity to measure interest rate sensitivity with much precision. Furthermore, ex post earnings impacts can end up being at odds with the ex ante expectations; and even if these ex post results come close to ex ante expectations, book value could still be impacted by changes in asset values due to credit quality considerations.

Another practical feature of this strategy is that these hedges will have to be designated anew, periodically – say, monthly or quarterly. Even assuming the hedged item to be a static asset position, it should be appreciated that the hedging derivative's gain or loss over time will simply be the sum of the settlements made throughout the contract's life. On the other hand, assuming the hedged item is an asset that is expected to be held to maturity, the change in the fair value of the hedged item

is predetermined. It is simply the difference between the starting value of the asset at the time of the hedge designation and its ultimate redemption value (par). The probability that the derivative's settlements will equal this predetermined amount is virtually zero. The workaround for this problem is to adjust the hedge, period by period, in a manner that strives to maintain equivalency between the duration of the derivative to the duration of the hedged item – both of which will be ever-changing as time progresses.

Market Conditions. In all likelihood, the appeal of hedging book value will be contingent on market conditions. Such hedges will likely be attractive when higher interest rates are expected, but in falling rate environments, not so much. Critically, the fair value hedging designation is in no way inconsistent with this kind of market timing orientation; and the fair value hedging treatment will result in considerably less reported earnings volatility than would be the case if hedge accounting were not applied.

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