

Managing the margin: *Hedging interest-rate risk from members*

By Jeremy Calva

As the economy starts to turn around and we enter a period of rising interest rates, managing interest-rate risk will become increasingly important to many credit unions. Unmanaged, interest-rate risk can quickly erode both the net interest margin (NII) and the net equity value (NEV) of a credit union. Fluctuations in interest rates can cause earnings volatility, which may limit a credit unions ability to forecast, manage and plan for growth.

As short-term share and money market accounts are utilized to fund the growth in long-term assets, variability in short term interest rates present interest-rate risk, which can be actively managed through the use of derivatives. Successfully managing interest-rate risk allows a credit union to provide members with consistently competitive products and services, while expanding their net asset base.

Hedging risk on member share accounts

Understanding and managing interest-rate risk must become a core competency at most credit unions. Historically, the tools available to credit unions have been limited to conventional methods of balance sheet risk management. Under WesCorp's NCUA-approved Pilot Derivative Hedging Program, derivative instruments are now readily available to credit unions as risk management tools. Credit unions can participate in the program after they have provided adequate support justifying their ability to use, account for, and manage a formal derivative program.

Bloomberg defines interest-rate risk for depository institutions as the risk that spread income will suffer because of a change in interest rates. For credit unions much of this exposure arises as a result of funding long-term, fixed-rate loans (mortgages, home equity, auto, etc.) with short-term, interest-rate sensitive liabilities (primarily money market shares and short-term CDs).

Share draft accounts and regular shares normally will be much less sensitive to interest-rate movements and can provide some degree of offset to long-term, fixed-rate assets. Generally, WesCorp has found that the interest-rate sensitivity of most credit union balance sheets can be reduced to two core elements: 1) the percentage of fixed-rate mortgage loans; and 2) the percentage of rate insensitive share accounts.

Lack of access to the derivative markets historically has forced credit unions to mitigate interest-rate risk by selling member loans, taking down long-term, fixed-rate borrowings, or by keeping a higher level of short-term investments than most other depository institutions. However, many credit unions have begun to look to derivative hedges in order to mitigate interest-rate risk (measured as reduced NEV and NII fluctuations under interest-rate shock scenarios) without stripping their balance sheets of their high quality loan assets or reducing their desire for member deposits.

Although the net cash flows of an interest-rate swap and the underlying hedged liability are similar to those of a fixed-rate borrowing, the balance sheet implications are far different and there are some added accounting considerations. However, the advantages may well justify the extra effort required to utilize the derivatives market. Derivatives allow credit unions to manage spread and growth while growing their balance sheet.

Four factors often keep credit unions from implementing a derivative hedging program. The first is a lack of understanding of how interest-rate derivatives work and their ongoing impact on NEV and NII. The second factor is the complexity of the accounting treatment and the financial impact on the timing of income recognition. The third factor has been the excessive regulatory hurdles experienced at both the federal and state level. The fourth and final factor has been a discomfort with the accuracy of

existing interest-rate risk measurement capabilities. The remainder of this article will attempt to address the first two concerns by providing readers with insight into how interest-rate swaps work, and how they are reflected in the financial statements.

Simple swaps

Interest-rate swaps are the most common and least complex method of managing interest-rate risk for member deposit accounts and CDs. While most credit unions choose to hedge short-term liabilities, the maturity structure of the swap(s) should match the runoff profile of the long-term, fixed-rate assets that are causing the interest rate mismatch.

It is important to avoid becoming over hedged, as this will increase interest rate sensitivity to declining interest rates. This method exchanges, or swaps, the variable rate paid on short-term accounts for a fixed rate that can then be matched against the fixed rate received on long-term, fixed-rate loan assets. Credit unions rarely choose to match the hedge against the fixed-rate asset because the accounting treatment is much more onerous.

A credit union may determine under their interest-rate risk management review process that they are unable to provide additional seven *plus* year fixed-rate loans to their members unless they 1) reduce their current long term holdings, or 2) replace their short term member deposit liabilities with longer term institutional borrowings.

In essence, they need to reduce the duration of their assets to better match their deposit liabilities or extend the duration of their liabilities to better match their assets. An interest-rate swap provides a mechanism to synthetically increase the liability duration without changing the structure or contents of the existing portfolios.

In an interest-rate swap, two parties agree to pay each other interest on a notional principal amount for a specified number of years. One party pays fixed and the other pays variable per an index (i.e., one month LIBOR). There is no exchange of the principal, which is merely established for calculation purposes. The credit unions that have implemented hedging programs to reduce NEV and NII volatility under the pilot program have typically agreed to pay fixed rates and receive variable rates over a combination of two, three, five and seven years. These hedges synthetically altered a component of the deposit liabilities from a variable rate to a fixed-rate liability.

Under the swap, the credit union receives interest payments reflecting the prevailing short-term interest rate environment (e.g., one-month LIBOR minus 20 basis points or three-month T-bills plus 20 basis points, etc.). The actual spread to a specific index and the frequency of reset is chosen to closely match the rates paid on the member accounts being hedged.

The credit union in turn pays a fixed rate of interest for the entire life of the swap. The net cash flow to the credit union then equals the fixed rate paid to the counterparty minus the spread the credit union paid members on deposits below the benchmark variable rate index. One important note regarding utilizing interest-rate swaps is that the characteristics of the derivative hedge should closely match the underlying liability to qualify for hedge accounting. For example, if there is an effective floor on the rates paid on a member account, then the interest-rate swap should also include a similar floor component on the variable rate received.

Accounting for swaps

Around the time the NCUA first approved WesCorp's derivative hedging program, the accounting oversight board (FASB) issued new accounting standards for accounting for derivatives. The new rule, and its subsequent amendments and interpretive guidance are known collectively as FAS 133. FAS 133 has key concepts directly applicable to interest-rate hedging with swaps. The fair value of the derivative must be reflected on the balance sheet as an asset or liability in each accounting period.

The fair value is NOT the notional amount of the swap. The fair value is the amount the credit union would pay or receive from a third party to exit the transaction at period end. This value is calculated by summing the present value of the future cash flows of the fixed payments to be received under the swap and deducting the present value of the future cash flow of the variable payments to be made under the swap.

Each period, the current yield curve is utilized to estimate the variable payments and to discount the cash flows. The accounting guidance then requires that the hedge be measured for effectiveness, and prove to be an effective hedge to keep the change in fair value from impacting earnings currently. Most, if not all, credit unions have elected cash flow hedge treatment for swaps.

“Effective” changes in value of cash flow hedges are stored in Other Comprehensive Income, a component of equity. Thus a perfectly effective hedge would reflect the deposit liability expense as the fixed rate. The variability in cash flows in member accounts should be offset with the variability in the interest-rate swap.

Effectiveness testing is a critical component of the FAS 133 accounting. To qualify for hedge accounting treatment, the derivative must mitigate the underlying risk hedged. In testing the effectiveness for cash flow hedges on interest-rate swaps, the changes in cash flows over the life of the hedge of the anticipated deposit liability are compared to the anticipated swap cash flows. The source of ineffectiveness will be the difference in interest rates movements between the deposit liability and the swap variable leg. The two areas that are generally identified as the hedged exposure for accounting purposes are money market share accounts and the future issuance of short-term certificates of deposit.

Effectiveness testing rules for hedges of member deposit accounts depend on whether the account has been specifically identified as being linking to the index **and** is tied to the variable rate defined in the swap (either equal to or with a fixed spread), or if the money market account rate has not been directly linked to an indexed rate. If the index rate is directly linked to the variable rate on the swap, and other critical terms of the swap reflect the liability’s characteristics, the designated risk will be the “benchmark interest rate” under FAS 133.

The hedge will be highly effective, as every change in the swap index will be mirrored by an exactly offsetting change in the money market. If the rate paid on the specified tier is not indexed to the swap, then the designated risk will be the “overall change in fair value” of the exposure and each period regression or other testing will be required to prove that the swap index provides an effective hedge of the deposit liability.

For example, if the rate on member accounts is publicly stated and linked, such as three-month T-bills plus a fixed spread, the fixed spread included on the member accounts can be excluded from effectiveness testing. However, if the rate is not publicly stated, fixed to the index and linked, the overall change must be assessed, which would compare the total rate paid on member accounts to the variable rate on the swap.

Any ineffectiveness on the swaps will be reflected in current earnings. Ineffectiveness is a result of over performance by the derivative (over hedging) or a correlation less than 100 percent between the derivative and underlying. If the correlation is less than 80 percent, the hedge is deemed ineffective and 100 percent of the derivative is recorded in earnings. If the correlation is between 80-100 percent, an allocation based on the mismatch between the performance of the interest-rate swap and the underline is recorded in earnings (i.e., the derivative is record at fair value less the uncorrelated portion). To minimize this potential, the liability being hedged should be closely linked to an index that can be offset with an interest-rate swap tied to that index.

Effectiveness testing rules for hedges of the future issuance of certificates of deposits are generally designated as hedges of the “benchmark interest rate.” Regression analysis is almost always required

for this program. If the swap variable leg index matches the tenor at issuance of the CD portfolio and other critical terms of the swap reflect the CD pricing, the hedge will be highly effective.

The effective portion is recorded on the balance sheet with the offsetting entry to OCI. Any ineffective portion is booked to earnings quarterly. The interest rate paid on CDs is comprised of two components—the market rate and a marketing component to make the CD competitive. The marketing component of CD's interest rate is excluded from the effectiveness testing.

Depending on the credit union's internal resources, three alternatives exist for managing the derivative hedge program:

1. Develop internal capabilities to manage and account for the hedges and apply for the appropriate regulatory approval.
2. Utilize WesCorp's "fast track" program while handling the accounting functions internally. This will allow the credit union to gradually develop the risk management expertise internally over time.
3. Same as (2) and outsource the accounting function to a derivative consulting company.

In all three cases, the credit union should work closely with its external auditors to develop mutually acceptable accounting procedures, comprehensive hedge documentation, and acceptable methods for correlation testing. WesCorp can help credit unions determine the option best suited for them, provide feedback on areas credit unions should pay special attention to, and help refer them to third-party providers for accounting support.

WesCorp welcomes the opportunity to assist members in the evaluation of derivative instruments and their application to your individual risk profile. WesCorp does not, however, provide accounting guidance. We recommend consultations with third parties familiar with the intricacies and requirements of FAS 133.

There are a number of third-party providers; however, Hedge Trackers, www.hedgetrackers.com, has been one third-party provider that has not only had success setting up these programs but has worked directly with WesCorp, FASB, NCUA, and credit union accounting firms to help formalize the process, refine the accounting interpretations, and calm examiners concerns. Their pricing also seems to present a long-term approach to serving credit unions as a value-added provider.

Contact information

For more information on interest-rate swaps for hedging member deposits and CDs, contact John Lau, WesCorp's Derivatives Hedging Manager, at (800) 442-4366, extension 6302.

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