

Bank Asset/Liability Management

Vol. 33, No. 7 July 2017



Prepared by Peter Mihaltian

Interest Rate Swaps: Economics and Accounting

Despite the aura of complexity and exotica for the uninitiated, interest rate swaps may be one of the most straight forward and accessible tools in the risk management arsenal. Although these tools can be used for other purposes, the most ubiquitous application is the textbook strategy of converting variable interest rate exposures to fixed, or vice versa, using plain vanilla interest rate swaps. These strategies have proven to be extremely useful to financial managers in commercial enterprises, across the board.

For corporate managers, the predominant application of interest rate swaps applies to variable rate funding, where the use of an interest rate swap synthetically creates fixed rate debt and thereby stabilizes interest expenses. Applying hedge accounting to this strategy dampens the volatility of reported earnings that would otherwise occur had the variable rate debt remained unhedged. For banks, on the other hand, because interest rate exposures are present on both sides of the balance sheet, the use of swaps tends to be a bit more balanced, sometimes fostering the need to swap from fixed-to-floating, other times in the reverse direction, typically with the objective of harmonizing the exposures on both sides of the balance sheet thereby minimizing the interest rate gap.

Economically, the intent of all of these swap applications is to change the nature of future cash flows, irrespective of whether the objective is to swap from fixed-to-floating or floating-to-fixed. Accounting authorities, however, see these strategies as distinct, depending on which way the swap is employed. For hedges designed to swap from floating-to-fixed, *cash flow* hedge accounting is required to reflect the intended strategy. On the other hand, for hedges that swap from fixed-to-floating, *fair value* hedge accounting is required.

For typical variable interest rate hedges, perfect hedges can generally be arranged to swap from variable to fixed by (a) setting the notional of the swap equal to the principal of the asset or liability being hedged, (b) matching the reference

In This Issue:

- Interest Rate Swaps: Economics and Accounting..... 1
- Big Data – Not Just for Big Banks Any Longer..... 3
- 2017 Asset/Liability Management Compensation Survey 5

Editorial Board:

Michael Arnold, Ph.D., *ALCO Partners, LLC*

George K. Darling, *Darling Consulting Group*

Gregory W. Doner, *FIMAC Solutions, LLC*

David Easton, Ph.D., *Bank of America*

Michael Jamesson, *Jamesson Associates*

Ira G. Kawaller, Ph.D., *Kawaller and Co., LLC*

Jon Kozlowski, *ProfitStars – a Jack Henry Company*

Deedee Myers, Ph.D., *DDJ Myers, Ltd.*

Rick Redmond, *Vining-Sparks, IBG*

Jeff Wildenthaler, *McGuire Performance Solutions, Inc.*

 **LexisNexis®**
An A.S. Pratt™ Publication

interest rate of the variable leg of the swap to the variable interest rate being hedged, with the same frequency and reset date schedules and assuring the use of a common set of conventions for both settlement calculations, and (d) arranging the fixed rate on the swap so as to assure that no initial settlement occurs coincidentally or immediately following the swap's trade execution.

With such a swap in place, hedge gains or losses would be considered to be *perfectly effective*, whereby the hedge results would be initially recorded in other comprehensive income and subsequently reclassified to earnings coincidentally with the earnings recognition of the variable interest rate exposures being hedged. The combined earnings of the original variable rate interest amounts plus the reclassified swap earnings would replicate the earnings of a fixed rate asset or liability. Thus, the economic objective of swapping from floating-to-fixed would be reflected in the resulting reported earnings. Critically, any swap construction other than that perfect construction described above would yield somewhat different results – both economically and accounting-wise.

The accounting process for fair value hedges is totally different. For fair value hedges, all of the derivative's gains or losses, realized and unrealized (i.e., settlements and changes in present values), would be reported in current income; but besides this treatment for the derivative, fair value hedging also requires making an adjustment to the carrying value of the hedged item, i.e., the fixed rate asset or liability being hedged. In this case, however, the accounting and economics are harmonized only if the carrying value adjustment for the hedged item offsets all of the swap's earnings effects *except for the swap settlements adjusted for accruals*. Under current guidance, the only way to achieve this outcome in the general case would be for the hedging entity to qualify for and apply a special accounting treatment called the *shortcut* treatment. Under this treatment, the adjustment to the carrying value of the hedge item is a plug amount that serves to yield the *correct* accounting outcome. That is, the carrying value adjustment is set equal and opposite to the swap's total results, i.e., settlements plus mark-to-market effects, net of settlements adjusted for accruals.

Qualifying for shortcut on fair value hedges requires structuring the swap with the following features: (a) the hedging derivative's notional amount equals the principal of the hedged item, (b) the start and end dates are equal for the swap and the hedged item, and (c), the frequency of the variable interest resets on the swap is no longer than a six-month interval. If shortcut is not applied, fair value hedging calls for a process called the *long haul* method, whereby the change in the carrying value of the hedged item must be determined analytically; and shortcut and long haul accounting results will typically differ.

This difference between these two accounting outcomes may very well be remedied with a widely-anticipated amendment to the hedge accounting rules expected to be ratified later this year. The current disparity arises because guidance presently requires using two different discount curves for the swap's valuations and the adjustment to the carrying value of the hedged item. With the revised rules, that guidance appears likely to be revised, such that a common set of discount rates would apply to both sides of the hedge relationship. This change would assure that for a properly constructed hedge, the value associated with any given benchmark rate change would be identical for the two sides of a hedge relationship. Thus, without specifically saying so, this change would have the effect of causing the long haul method and shortcut to yield identical accounting results – again, presuming the hedging derivative is properly constructed.

An additional expected rule change is the proscription on hedging for only a portion of the time to the maturity of a fixed rate asset liability. Current guidance for the shortcut treatment requires that the swap and the hedged item have common maturity, or expiration, dates. This requirement appears likely to be relaxed, allowing, for example, for swapping from fixed-to-floating on, say, the first three years of a five-year asset or liability. Under the revised guidance, this strategy would still deliver an accounting result that reflects the intended economics, while under current guidance, this outcome is virtually impossible to achieve.

While these expected changes still require a formal sign-off by the FASB before they become GAAP, it seems like a good bet that they'll be included in the next round of amendments with the dual benefit of adding greater flexibility to hedgers' risk management capabilities and greater harmony between accounting and economics.

Although the comments thus far have assumed that the asset or liability being hedged under a fair value hedge is a *standard* fixed rate instrument. In fact, the guidance allows for the shortcut treatment when hedging assets or liabilities with embedded cancellation options, but only if the swap is constructed with mirror image termination provisions. That is, to qualify for shortcut with such hedges, if either side of the hedge relationship is terminated early, the hedger must be able to seamlessly affect the termination of the other side with no prospect of realizing any unintended windfall or penalty.

A further constraint is that the termination options on the two sides of the hedge relationship must be treated similarly. For example, if the hedged item were pre-payable debt, with the prepayment option fully reflected in the price of the debt, the price of the early cancellation feature of the swap would have to be fully reflected in the specified fixed rate of the swap. In other words, for the *right* accounting to

Bank Asset/Liability Management

be realized, the cancelation option on the swap couldn't be arranged with an initial cash settlement unless parallel treatment applied to the hedged item's early termination option.

As a final comment, this article started by focusing attention to the most widely used swap strategies – swapping from fixed-to-floating or vice versa. With either of these objectives in mind, the process of engineering perfect hedges should generally be straightforward; and properly designed hedges should end up with compatible accounting, i.e., recognized earnings impacts that reflect the intended economic objective. An alternative swap application strategy applies, however, for portfolio managers who generally look for ways to protect against value changes, but who really don't care all that much about altering future cash flows. While the more traditional textbook application effectively seeks to offset the risk of changes in a benchmark interest rate, i.e., the benchmark rate that pertains to the swap, this alternative strategy has a slightly different objective. It calls for offsetting the *full price effect* of the asset or liability being hedged.

It should be understood that this second strategy is different from the first, and it requires a different hedge construction. That is, when hedging the entire price risk of an asset or liability, the hedger should strive to set the interest rate sensitivity of the hedging derivative to be equal and opposite to that of the hedge item. In general, this construction would require a notional amount of the hedged would *not* be equal to the principal amount of the hedge item, where the appropriate hedge ratio would have to be determined analytically, on a case by case basis. Moreover, this type of hedge would likely require dynamic adjustments as the respective interest rate sensitivities of the hedged item and the derivative should not be expected to remain in balance throughout the intended hedge horizon; and with each hedge adjustment, a true-up of the accounting would be required. That is, a new carrying value adjustment would have to be performed each and every time the size of the hedge is adjusted to reflect the most recent hedge position prior to the adjustment.

— *Ira G. Kawaller, Ph.D.*
Kawaller & Co.

Bank Asset/Liability Management

Editor

Peter A. Mihaltian, President
Southeast Consulting, Inc.
212 S. Tryon Street, Suite 925
P.O.Box 470886
Charlotte, NC 28247-0886
(704) 338-9160
E-mail: info@southeastconsulting.com
Website:
www.southeastconsulting.com

Publisher's Staff

Manuscript Editor
Jennifer Brooke

Editorial Inquiries
Peter A. Mihaltian

BANK ASSET/LIABILITY MANAGEMENT (ISBN 978-0-76987-756-3) is published monthly by Matthew Bender & Company, Inc. Copyright 2014 Reed Elsevier Properties SA., used under license by Matthew Bender & Company, Inc. All rights reserved. No part of this newsletter may be reproduced in any form by microfilm, xerography, or otherwise incorporated into any information retrieval system without the written permission of the copyright owner. Requests to reproduce material contained in the publications should be addressed to Copyright Clearance Center, 222 Rosewood Drive, Danvers MA 01923, (978) 750-8400, fax (978) 750-4470. For customer support, please contact LexisNexis Matthew Bender, 1275 Broadway, Albany, NY 12204 or e-mail Customer.Support@lexisnexis.com. Direct editorial inquiries to judith.ryser@lexisnexis.com.

POSTMASTER: Send address changes to BANK ASSET/LIABILITY MANAGEMENT, LexisNexis Matthew Bender, 121 Chanlon Road, North Building, New Providence, NJ 07974.