

Bank Asset/Liability Management

Vol. 34, No. 7 July 2018



Prepared by Peter Mihaltian

Fair Value Hedges with Interest Rate Swaps

Background

Fair value hedge accounting rules have been challenging for banks that seek to use interest rate swaps in the textbook application of swapping fixed interest rate exposures into variable rate exposures. The difficulty arises because the typical economic objective of most swap users is to transform future cash flows, while in order to apply fair value hedge accounting the stated hedge objective must be to offset changes in fair values. These two objectives, however, are in conflict.

Hedge Economics

The economics of swapping from fixed cash flows to floating is straightforward: Consider the example of a bank with a fixed rate loan, where the bank seeks to swap from fixed-to-floating. The loan generates fixed interest revenues throughout the life of the asset. The swap that's paired with this loan is structured so the company pays fixed cash flows on the swap and receives variable.

In the typical design, the fixed cash flows on the swap and the fixed cash flows on the loan are aligned, such that these two are offsetting — although not perfectly if these two, respective fixed rate are not the same, as is the typical case. Additionally, as stated above, the company also receives a variable cash flow from the swap. Economically, the resulting effective interest received during any swap accrual period derives from three distinct cash flows and is calculated as follows:

$$(1) INT = F_{bond} + (V_{swap} - F_{swap})$$

where:

INT = Effective interest received

F_{bond} = The fixed interest received on the bond (adjusted for accruals)

V_{swap} = The variable cash flow received under the swap

F_{swap} = The fixed cash flow paid under the swap

Equation (1) assumes that the swap settlements occur on a

In This Issue:

- Fair Value Hedges with Interest Rate Swaps.... 1
- 2018 Asset/Liability Management Compensation Survey 3
- Preparing for CECL Analysis and Reporting 6

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., HedgeStar

Jon Kozlowski, ProfitStars – a Jack Henry Company

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

Rick Redmond, Vining-Sparks, IBG

Brian Velligan, CEO, Velligan-Blaxall, LLC



LexisNexis[®]

An A.S. Pratt[™] Publication

schedule that includes the last day of the accounting accrual period. If not, a minor modification is required to adjust for swap accruals. For the purposes of this article, such accrual adjustments are assumed to be unnecessary (i.e., equal to zero). For clarity, a negative sign is assigned to F_{swap} to reflect the fact that F_{swap} is a cash *outflow* in this constructed example, while the other settlements are *inflows*. It should be clear, however, that if the example involved hedging a fixed rate debt (as opposed to a fixed rate asset), the sign assignments would be reversed for all right-hand-side terms.

Ignoring any accounting considerations, *INT* should be understood to be the post-hedge interest revenue earned by the hedged loan, and these revenues would mimic the cash flows of a variable-rate loan. The swap thus synthetically converts fixed rate assets to variable rate assets. Furthermore, the resulting interest revenues can be viewed as a variable benchmark interest rate return (most typically, LIBOR), plus a spread equal to the difference between the two fixed rates of the loan and the swap, respectively. Importantly, this is a robust conclusion that holds for *any* pairing of fixed rate instruments with plain vanilla interest rate swaps, irrespective of the length or duration of the bond's accrual periods.

Fair Value Hedge Accounting

Despite the fact that the economic objective of the hedge is to transform future cash flows, cash flow hedge accounting is unavailable for this strategy. This proscription arises from the cash flow hedging's prerequisite condition that requires hedged items to be *uncertain* cash flows. Clearly, with a fixed rate instrument serving as hedged items, this condition isn't satisfied; and as a consequence, if hedge accounting is deemed to be desirable, fair value hedge accounting is the only possible alternative.

Under the fair value hedge accounting procedures, total gains or losses from the derivative are recognized in earnings, as are the fixed interest receipts derived from the fixed-rate hedged item. In addition, fair value accounting also requires an adjustment to the carrying value of the hedged item, with the adjustment reflecting the change in the value of the hedged item due solely to the risk being hedged. In the case of this example where the hedging derivative is a plain vanilla interest rate swap, the risk being hedged would be the effect of the benchmark rate change.

Mathematically, all of the components underlying the effective interest payment (*INT*) in equation (1) will be recognized in income, along with two other amounts: (a) the unrealized gain or loss on the swap (*MTMswap*) and (b) the change in the carrying value of the loan due to the risk being hedged (*LoanAdj*). Thus, we define earnings under the application of fair value hedging (*Earnings*) as follows:

$$(2) \text{ Earnings} = F_{bond} + (V_{swap} - F_{swap}) + MTMswap + LoanAdj$$

Again, as with Equation 1, Equation 2 assumes that accrual adjustments are not required or warranted for the swap settlements.

It should be clear that if and when *MTMswap* and *LoanAdj* are equal and opposite, *Earnings* (in Equation 2) precisely equal to *INT* (in Equation 1). Otherwise, the accounting presentation would reflect some other transformation—i.e., something other than purely swapping from fixed to floating.

As it happens, the desired outcome is precisely that which would result if the reporting entity qualifies for and applies the *shortcut* treatment. The shortcut method is particularly attractive because, besides harmonizing the economics and the accounting for the hedge, if shortcut prerequisite conditions are satisfied, effectiveness testing requirements are obviated.

For most single-element hedged items (i.e., single loans or securities), structuring the hedge to qualify for the shortcut treatment should be a relatively straightforward exercise, but some restrictions apply. For fair value hedges, the primary qualifying provisions include the following:

- The notional of the swap must match the outstanding principal of the hedged item
- The swap must have a fair value of zero as of the start of the hedge
- If the debt has any embedded call or put features, the swap must have mirror-image features

The Long Haul Method

When conditions for shortcut are not satisfied, fair value hedging might still be applied, but in this case the *long haul* method would be required. Under this method, the value of *LoanAdj* in Equation (2) has to be calculated, explicitly, to reflect the change in the value of the hedged item due to the risk being hedged. It turns out, however, that that calculation has been made easier—even trivial—with amended guidance published in ASC 815-25-55-106 and ASC815-25-55-61A.

These paragraphs allow for the hedged item adjustment to be calculated by first creating somewhat of a surrogate hedged item that has a fixed interest rate equal to the at-market benchmark swap rate as of the start of hedge designation for the horizon—i.e., the same benchmark swap rate that would apply for the time horizon covered by the intended hedge. Those fixed cash flows are then discounted using the same discount rates as those used to value at-market benchmark derivative. Without explicitly saying so, this newly prescribed procedure yields exactly the same result as the shortcut result for any hedge initiated with an at-market swap. While

Bank Asset/Liability Management

this revised guidance is certainly welcome, in this authors judgement, it simply doesn't go far enough, in that, despite generating the *right* accounting results, the entity still has to satisfy effectiveness testing requirements—and that's more of a problem than it should be.

Here're the rub: In ASC 815-20-25-74, the accounting guidance states that "*the hedging relationship, both at inception of the hedge and on an ongoing basis, shall be expected to be highly effective in achieving... offsetting changes in fair value attributable to the hedged risk during the period that the hedge is designated.*" This guidance is particularly problematic because *under no circumstances* can one reasonably expect this condition to be satisfied by the textbook swapping from fixed-to-floating strategy.

Consider the performance of the swap. GAAP requires recognition of realized and unrealized gains or losses over the course of the hedge. *Realized* gains or losses are past swap settlements; *unrealized* gains or losses are the mark-to-market changes that relate to future expected settlements. By the end of the hedge, however, all results will be realized (i.e., no unrealized gains or losses will remain), and thus the entire gain or loss will simply equal the sum of the settlements. This outcome could be positive or negative, but the probability that these swap settlements will sum to zero is virtually zero.

In contrast, the change in the fair value of the hedged item, i.e., the fixed rate asset or liability, will be known with certainty at the start of the hedge. This change in fair value will be the difference between the starting and ending prices of the instrument being hedged. When the hedged item is issued and redeemed at par, this change in fair value will unambiguously be *zero*. Thus, any representation that the hedge results will offset this change in fair value of any fixed-rate instrument is patently false; and if the GAAP is to be taken literally as written, fair value hedge accounting for fixed-rate instruments would never be approved.

With the economic objective of swapping from fixed-to-floating, the idea that the derivative's result should fully offset the change in the carrying value of the hedged item is economically nonsensical. If the derivative's combined realized and unrealized results were identically equal to the change in the carrying value of the hedged item, the resulting post-hedge earnings outcome would be unchanged from the starting fixed rate exposure. That is, *Earnings* in equation (2) would reduce to *Fbond*. Put another way, the perfect hedge wouldn't foster *any* earnings effect, whatsoever. The entity would realize exactly the same interest earnings *after* the hedge as it would have realized *before* the hedge. In the context of interest rate hedging, effectiveness *has to* be measured and analyzed in a different way from the approach stated in current guidance.

From experience, I see myriad hedging entities recognizing this economic reality and *qualifying* for long haul hedge accounting by ignoring the settlements of the swap and focusing solely on the swap's unrealized gains or losses, i.e., the swap's mark-to-market effects. In the typical situation of swapping from fixed to floating, we only get to the seemingly desirable offset by ignoring settlements. The swaps starting and ending value is zero for a zero change over the hedge

horizon; and with the hedged item issued and redeemed at par, its change in fair value is also zero. Life is good (or seems to be)—except for the fact that this approach requires a wink and a nod in that it is clearly at odds with accounting guidance as written.

Concluding Remarks

It's disheartening that this disconnect between economics and accounting has persisted for so long for something as pedestrian as a textbook application of a plain vanilla interest rate swap. With this particular swap application, i.e., where the objective is to swap from fixed to floating interest payments, it's time for FASB to remove the current ambiguity from its guidance and explicitly recognize that the swap isn't *offsetting* the fair value of the hedged item due to a change in benchmark rates, rather it's *transforming* the risk being hedged.

The fact is, one leg of the swap does serve as an offset, but the other leg delivers a wholly unpredictable result that will vary, depending on the path of the variable interest rate during the course of the hedge. Taken together, the two legs of the swap will perfectly satisfy the intended economic objective, but they certainly won't offset the change in the fair value of the fixed rate hedged item. FASB should recognize these economic realities for these types of fair value hedges and ease the hurdles of effectiveness testing requirements, accordingly.

— Ira G. Kawaller, Ph.D
HedgeStar

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.