



Hedge Effectiveness

The wild card in accounting for derivatives



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Companies with derivatives exposures face any number of outcomes. Nothing is certain. But the implementation of FAS 133 made accounting for derivative fair market value a requirement.

Despite any impression to the contrary, the concept underlying hedging with derivatives is actually quite simple: A company with exposure to interest rates, currency exchange rates, or prices of basic commodities can enter into a derivative contract, with the expectation that the derivative will offset the risk being hedged. If the company were to lose on its exposure, the derivative would generate a compensating gain; and conversely, if the risk turns out not to occur and, instead, the exposure proves to be beneficial to the company, the derivative would be expected to post a loss.

Back in 1998, accounting for derivatives became somewhat more complicated when new accounting rules came out under the Financial Accounting Standard No. 133 (FAS 133). Previously, most derivatives were off-balance sheet contracts, and earnings impacts were generally restricted to *realized* derivative results. With the advent of FAS 133, though, this accounting changed. Under FAS 133, derivatives are now recorded on the balance sheet as assets or liabilities, reflecting their fair market value; and depending on the manner in which the derivatives are used, both realized and unrealized results might be reported in earnings ... or not.

“Regular” derivatives accounting posts these mark-to-market effects to current earnings, but “special hedge accounting” might be elected and applied if certain rather stringent conditions are satisfied. Qualifying for hedge accounting is important because it assures that the income statement will reflect the economics of the hedging activity. It does so by causing the earnings impact of the derivative to be recognized coincidentally with the earnings impact that derives from the risk being hedged. *Fair value* hedge accounting achieves this result by applying the regular accounting to the derivative but accelerating the earnings impact from the risk being hedged (i.e., recognizing that earnings impact in the current period, rather than later), and cash flow hedge accounting achieves this pairing by deferring the derivatives earnings impact until the period when the risk effects occur. Importantly, whether fair value or *cash flow* hedging is appropriate is determined by the nature of the risk being hedged. It’s generally not a matter of choice.

The appeal of hedge accounting for public companies is understandable. Because well performing derivatives typically generate offsetting gains or losses relative to the risks being hedged, recognizing both effects in the same accounting period will necessarily serve to dampen reported income volatility; and it’s commonly appreciated that firms with lower income volatility tend to be rewarded with higher stock prices, all else remaining equal.

Critically, to qualify for hedge accounting the hedge need not perform perfectly; but it does have to be “highly effective.” This condition is certainly satisfied when the hedger can credibly assert that the derivative *perfectly* offsets the gain or loss due to the risk being hedged. In this instance, that derivative could be said to be the hypothetical derivative. If that’s the situation, the documentation should simply assert that the actual derivative is one-and-the-same as the hypothetical derivative.

The most basic test of effectiveness is a dollar offset ratio which compares the results of the derivative to the gain or loss associated with the risk being hedged – or, alternatively relative to that which would be generated by the hypothetical derivative. Passing this test requires that this ratio to fall within the bounds of 0.80 to 1.25. Clearly, these requirements become trivial if the actual derivative is the hypothetical derivative. If this is the case, the dollar offset ratio will necessarily be equal to unity, irrespective of the time period being assessed. Thus, the mere assertion that the actual derivative and the hypothetical derivative are identical should be sufficient for passing these effectiveness tests – assuming the assertion can be demonstrated to be true.

Being able to actually transact the hypothetical derivative is a function of the exposure being hedged. Sometimes you can define and transact the hypothetical derivative, and sometimes you can’t. For instance, one situation where you can usually trade the hypothetical derivative is when you’re trying to hedge variable interest rate exposures with plain vanilla interest rate swaps. The actual derivative would be the hypothetical derivative if and when (a) the swap’s notional amount is no greater than the debt’s outstanding balance throughout the hedge, (b) the swap’s reset dates (and rates) match those of the debt, (c) the interest calculation for the debt and the variable cash flow on the swap apply the same day count convention and (d) settlements for the debt and the swap occur on common dates.

Unfortunately, not all exposures are so well behaved; and when you can’t transact the hypothetical derivative, qualifying for hedge accounting requires a different approach. FASB has allowed two special elections in connection with forward contract hedges and option hedges. Specifically, with forward contracts, the effect of derivative’s value changes that are due to changes in forward points (i.e., the difference between the forward price and the spot price) may be excluded from the assessment of hedge effectiveness. Analogously, with option hedges, the changes in option’s time value may also be excluded. Making these elections often forestalls any more arduous approach to effectiveness testing.

These elections are particularly powerful in connection with currency hedges where the timing of the hedged item (e.g., the forecasted purchase or sale) involves a degree of

uncertainty. Assuming the exposure and the derivative are both denominated in the same currency, electing to exclude the effects of changes in forward points or time values effectively distill the effectiveness assessment to a comparison of the same spot price change for both the hedged item and the hedging derivative. The statement that these two respective spot market changes are identical during the life of the hedging relationship is unassailable, and this condition should thus serve to justify the conclusion that the hedge will be highly effective.

If electing to exclude forward point effects or time value effects still fails to satisfy the requirements for prospective effectiveness testing (i.e., if the nature of the hedging relationship was that there was an inherent source of ineffectiveness independent of the forward points or the time values), a more analytical approach to effectiveness testing would be required. Most companies rely on regression analysis for this purpose.

Although the mechanics of performing a regression may be trivial and the resulting measure of correlation is readily transparent, the design and interpretation of the regression tests requires some statistical know-how. These tests yield information as to the appropriate size of the derivative position relative to the size of the exposure. If hedges aren't constructed in a manner consistent with the results of a regression test, any conclusions that might have been made relating to hedge effectiveness might not be valid, and hedge accounting could be jeopardized.

In any case, besides satisfying a prospective effectiveness test, FAS 133 also requires entities to review and assess their hedges retrospectively – no less frequently than quarterly – and qualifying for hedge accounting requires passing both the prospective and the retrospective test. Well... sort of.

Actually, fairly early on, FASB came to appreciate that it wasn't quite so easy to pass dollar offset respective tests as they seemed to have thought it would be, and they created a bit of a carve out. That is, in one of the subsequent releases that clarified technical implementation practice (DIG

Issue G7), the FASB addressed this concern and provided a remedy. This guidance stipulated that even if a retrospective test were not satisfied, hedge accounting could still be applied seamlessly, provided the documentation had specified a statistical prospective test that could be updated and satisfied anew. Critically, these effectiveness testing procedures had to be part of the original documentation.

This guidance notwithstanding, repeated failures of retrospective dollar offset tests will likely serve as a red flag, bringing renewed scrutiny to the design of the statistical analysis. If the statistical tests fail to stand up to this scrutiny, not only will hedge accounting be precluded going forward, but the company may also face the risk that past hedge accounting that had been allowed in error. In the worst case, an earnings re-statement could be required. The only way to preclude this nightmare scenario from occurring is to do it right in the first place.

While many firms have found these documentation requirements to be onerous, the exercise may have merit in that it may force a re-examination of intuition. All well and good if the intuition is validated. But what if it's not? If you can't satisfy the required effectiveness tests, it's very possible that your intuition is faulty and your hedging program deserves reconsideration. In this light, failing the effectiveness tests might end up being more of a blessing than a curse. However, before concluding that your intuition is wrong, a closer look at the statistical tests might be in order. The failure might be in the design of the test, as opposed to the design of the hedge. And whether this error affects the manner in which hedges are transacted or the way in which the results will be accounting for, in either case the consequences could be profound.

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