



IAS 39 Under the Hood - Issue 5

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Hedge Accounting in practice

In [Under the Hood Issue 4](#), we looked at a specific Hedge Accounting example from the point of view of an exporter with a flow of USD 1m revenue hedged with a FX Forward. In this issue we will look at hedging the same exposure using an Option expiring on the date of the flow.

Before the introduction of IAS 39, the normal accounting method was to accrue the Option premium to P&L over the life of the instrument. Under IAS 39, this is no longer the case; derivatives must be marked to market and this smoothing effect on earnings may not be possible any more. Using this example, this article will show how initial definition and testing have a major bearing on potential subsequent earnings volatility.

System Implications:

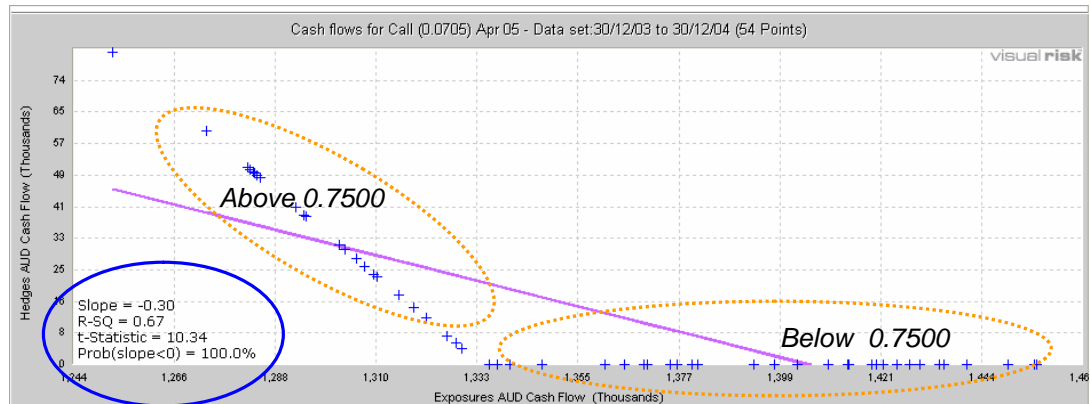
Numerous possibilities exist for definition and effectiveness testing. A system should be able to test various hedge designation alternatives prior to making a final decision on the Hedge Accounting approach adopted for different derivatives.

Example 2 – Option hedging revenue flow

In this example an exporter has the following:

- a) A highly probable revenue inflow of USD 1m, with an expected receipt date of 19 August 2005.
- b) An FX Option to sell USD 1m in exchange for AUD, with an exercise date of 19 August 2005 and a strike rate of 0.7500.
- c) A test date of 31 March 2005.

If a Prospective test is done by comparing the actual cash flows that will occur based on historical or simulated data then the test may or may not pass depending on the data set. When the exchange rate is above 0.7500 there will be a perfect inverse relationship between the cash flow of the option and the exposure, but below 0.7500 the option cash flow will be zero. Even if the relationship passed prospectively at inception because most of the spot FX rates in the data set used were *above* 0.7500, it is possible that it would fail in a future period if the historical test data set changed and came in *below* 0.7500. Normally a test using historical data must be run using the most recent data set available.

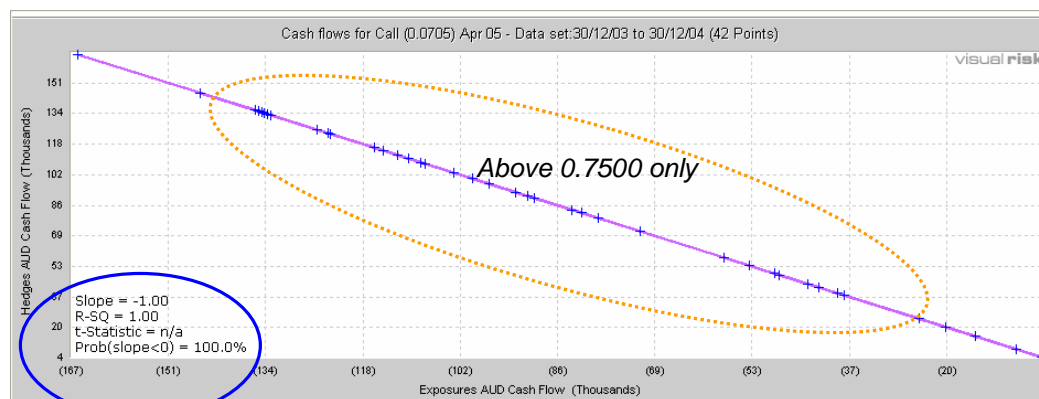




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To overcome this issue, the hedged risk can be redefined as being “*the risk of movements in the foreign exchange rate above 0.7500*”. Now comparisons between the cash flows of the hedge and the exposure are perfect when the exchange rate is in the defined range (i.e. above 0.7500). This test is trivial in the sense that for a correctly defined hedge relationship, the regression will always have a perfect slope and R-squared. It is a matter of debate as to how much testing has to be done in cases like these. Note that if the historical spot FX rates are *not* in the defined range (i.e below 0.7500), then a completely different testing approach may have to be considered.



Even if the Hedge Relationship does pass this test, it does not necessarily mean that there is no potential volatility in P&L, as the actual accounting entries passed will depend on how the market values of the instruments are handled. If the Time Value of the Option is excluded from the relationship, then there should be no ineffectiveness because the Intrinsic Value of the Option will be identical to the Value of the Exposure for exchange rates above 0.7500. However variations in the excluded Time Value will go to P&L.

For example, suppose the relevant values at the end of the first 3 accounting periods were:

Date	Value of Exposure (over 0.75)	Intrinsic Value of Option	Time Value of Option	Total Value of Option
30 Sep 2005	-\$10,000	\$10,000	\$15,000	\$25,000
31 Dec 2005	\$0	\$0	\$20,000	\$20,000
31 Mar 2006	-\$6,000	\$6,000	\$8,000	\$14,000

In this example, if the **Time Value of the Option** is *excluded* from Hedge Accounting, then in December 2005 a profit of \$5,000 (=\$20,000-\$15,000) will be reported and in March 2006 a loss of \$12,000 (=\$8,000-\$20,000). There will be no additional P&L movement arising from the remainder of the Option as its Intrinsic Value has been perfectly effective in offsetting the change in the value of the Exposure due to movement in the Option (i.e. risk of foreign exchange movements over 0.7500).

If the Total Value of the Option is *included* within Hedge Accounting, then in December 2005 the *cumulative* move in the **Value of the Exposure** of \$10,000 (=\$0-[-\$10,000]) exceeds the cumulative movement in the **Total Value of the Option** of \$5,000 (=-[\$20,000-\$25,000]) so there is no P&L movement. But in March 2006, the *cumulative* move in the **Total Value of the Option** of \$11,000 (=-[\$14,000-\$25,000]) exceeds the movement in the **Value of Exposure** of \$4,000 (-\$6,000-[-\$10,000]) so a loss of \$7,000 (\$11,000-\$4,000) would be reported (i.e. the excess of the Total Option Value decline over the change in the Value of the Exposure).



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In general, excluding the time value of the option from the relationship will result in more P&L movements but less volatility in those movements. Of course, it may be possible to avoid this issue altogether with some kind of Short Cut method approach (or an alternative approach to designation) as discussed in [Under the Hood Issue 3](#). This is in the hands of the auditors and how it will develop remains to be seen

System Implications:

A system will need seamless access to a reliable and transparent market price database to successfully run hedge effectiveness tests.

It is important to be able to perform what-if analyses to determine what might go through P&L when a user is performing hedge accounting.

Next Issues

Our next few issues of Under the Hood will discuss the application of Value-at-Risk in IAS39, as well as several examples of hedge accounting in practice for interest rate exposures.

Previous Issues

Previous Issues of Under the Hood and other newsletters from Visual Risk can be downloaded from our web-site at:

http://www.visualrisk.com/01_company/newsletters.htm

¹ All references to the standard are to Accounting Standard AASB 139 (July 2004).