



# IAS 39 Under the Hood - Issue 6

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## Cross Currency Swaps and IAS39

In this issue we discuss some of the possible options for hedge accounting cross currency interest rate swaps (CCIRSs) under IAS 39.

**Please note that this area is subject to much debate and approval from your auditors is essential before considering implementing any methods discussed here.**

As with many seemingly simple hedging scenarios, there are some complexities that arise. Three issues that can arise in a basic CCIRS situation are related to the:

1. Day One gain or loss,
2. Value of margin and
3. Definition of the hypothetical derivative.

To look at these issues in detail, we will take an example where a company issues a 10 year USD100m 5% bond and enters in to a CCIRS to swap the debt back into AUD160m floating paying a coupon of BBSW + 1.00%.

### 1. Day One gain or loss

If this transaction was done subsequent to the company transition date to IAS 39, then the fair value of the CCIRS is "its fair value plus ... transaction costs that are directly attributable to the acquisition or issue of the financial asset or liability" (para. 43)<sup>1</sup>. However subsequent measurement of financial instruments is done "at their fair values, *without* any deduction for transaction costs" (para 46). This clearly leads to a subsequent loss which may be taken in total to P&L on the subsequent measurement date. It is currently unclear how this issue will be resolved.

### 2. Margin

Suppose the company creates a fair value hedge where the cross currency swap is designated as hedging the change in fair value of the USD bond due to foreign exchange and interest rates. In this case, the total change in value of the bond plus cross currency swap will be exactly equal to the change in value of a floating rate loan with a 1% margin. The value of this margin will vary independently of the USD bond and this will create some P&L volatility. See the example hedge documentation below (designation date 31-Dec-04 and accounting date 30-Jun-05).

#### Valuation

	Valuation Method	Designation Value	Previous Value	Cumulative Change	Current Value	Cumulative Change
		31-Dec-2004	N/A	N/A	30-Jun-2005	30-Jun-2005
<b>Exposures:</b>	Value excluding accrued interest	-152,093,874			-136,830,196	15,263,678
<b>Hedges:</b>	Value excluding accrued interest	-19,568,888			-34,505,031	-14,936,143

#### Accounting Details:

30-Jun-2005	Cumulative P&L:327,535	
31-Dec-2004 - 30-Jun-2005	P&L:327,535	P&L (Excluded Val):23,274

As can be seen, there will be a residual change in value due to the *margin* on the synthetic AUD loan (in this example the P&L impact is \$327,535). This value will correspond roughly to the accrual of a 1% margin on an AUD loan but there will also be variations due to the change in the NPV of all of the future margin flows. This unpredictability is made more undesirable because a simple dollar offset retrospective test may now fail if the AUD fair value of the USD bond does not change significantly during the accounting period.



### 3. Definition of Hypothetical Derivative (HD)

One possible approach to avoid the variability in the value of future margin is to designate the margin in a separate cash flow hedge. The cash flow variability being hedged in this case would be the variability in the value of the USD margin flows. USD margin would have to be implied from the market data available on the issue date. As with most interest rate cash flow hedges a HD should be defined to determine the accounting entries. The change in value of this HD will be compared with the change in the value of the actual derivative to arrive at a measure of ineffectiveness. Guidance on the definition of the HD is very limited in IAS 39, but Issue G7 of the implementation guidance of FAS133 does stipulate that the HD should have a fair value of zero on inception date. There is no guarantee that this will lead to perfect effectiveness but, if allowed, this approach should lead to less P&L volatility.

#### System Implications:

A system must be able to split the value of a cross currency interest rate swap into changes in accrued interest, margin and other components, and be able to calculate these separately or in combination. These will be needed to analyse and mitigate ineffectiveness where applicable.

## IR swaps hedging cross currency swap flows

### Solution – Partial Term Hedging

If a company is permitted to create two hedge relationships, one cash flow hedge for the duration of the swap and a second fair value hedge for the remainder of the loan period, then most P&L impact will be avoided. The main issue that arises in this case is how the hypothetical fixed/fixed CCIRS is defined for the cash flow hedge.

The following example assumes the same situation as above and that the company has entered into an interest rate swap maturing in June 2009 hedging the interest rate variability of the first five years of the foreign loan. The first hedge relationship is a cash flow hedge maturing in June 2009. (Note that the fair value hedge from 2009 to 2014 will be similar to the basic situation described above). The hypothetical derivative in this case –

- is a fixed/fixed CCIRS where the USD leg exactly matches the flows of the bond,
- the coupon of the AUD leg is chosen so that the CCIRS has a zero value on the designation date and
- the AUD principal corresponds to the spot rate prevailing on that date. A possible alternative method would be to choose the AUD principal to match that of the swap and vary the coupon to generate a zero value.

Both of these methods lead to duration mismatches and ineffectiveness. The choice of hypothetical for this type of hedge is still open to debate and each option will have its own potential source of P&L volatility.

In recent times, this has been the most hotly debated IAS 39 issue both here and overseas. There is a strong feeling that if a company enters into an interest rate swap to hedge exposure to movement in interest rates, then hedge accounting should be the same whether the exposure arises because of a normal AUD loan or an AUD loan arising from a foreign bond issue and cross currency swap.

This issue is summarised well by the UK Association of Corporate Treasurers who said: "From our members' feedback we found that the main issue is where normal commercial treasury transactions and practices give rise to accounting results that do not seem to follow the true economics of what is being undertaken. The stringent rules on what constitutes a hedge in accounting terms, cause most of the anomalies in this respect."<sup>2</sup>



The example output below shows a retrospective test based on cumulative dollar offset. The comparison is between the changes in values of the hedging instruments (which are the cross currency swap and interest rate swap) and the hypothetical derivative.

A hypothetical derivative with a principal and coupon of AUD160m and 6.7% respectively would lead to perfect effectiveness. But the hypothetical derivative, in this case, has a zero value on the designation date and an AUD principal based on the spot rate prevailing on this date which corresponds to AUD128.2m and 8.13%. As a result, the retrospective test result in the example is 115%. In all of these cases it is important to document upfront how any retrospective test failures will be handled as such failures can never be ruled out completely.

Hypothetical Derivatives	Allocation / (%)	Market Values	
<b>USD 2014 Bond_CCIRS USD Leg</b>	100,000,000 (100%)	Designation	140,241,670
CCIRS USD Leg		Current	135,059,811
USD 100,000,000 Principal			
Invest 4.000% + 1.000% Semi			
Interest Basis: Actual/365			
31-Dec-04 to 30-Jun-09			
Counterparty: n/a			
<b>USD 2014 Bond_CCIRS AUD Leg</b>	128,200,000 (100%)	Designation	-140,283,470
CCIRS AUD Leg		Current	-140,017,711
AUD 128,200,000 Principal			
Borrow 7.130% + 1.000% Semi			
Interest Basis: Actual/365			
31-Dec-04 to 30-Jun-09			
Counterparty: n/a			

Hedges	Allocation / (%)	Market Values	
<b>CCIRS 1</b>	100,000,000 (100%)	Designation	140,251,245
CCIRS USD Leg		Current	135,043,231
USD 100,000,000 Principal			
Invest 4.000% + 1.000% Semi			
Interest Basis: 30/360			
30-Jun-04 to 30-Jun-14			
Counterparty: n/a			
<b>CCIRS 1</b>	160,000,000 (100%)	Designation	-166,349,689
CCIRS AUD Leg		Current	-165,714,944
AUD 160,000,000 Principal			
Borrow BBSW + 1.000% Qtr			
Interest Basis: Actual/365			
30-Jun-04 to 30-Jun-14			
Counterparty: n/a			
<b>IR Swap 1</b>	160,000,000 (100%)	Designation	-82,543
IR Swap		Current	-1,178,798
AUD 160,000,000 Principal			
Pay / Rec 5.7000% / BBSW Qtr/Qtr			
Interest Basis: Actual/365 Actual/365			
30-Jun-04 to 30-Jun-09			
Counterparty: n/a			

**Retrospective Testing Results:**

Retrospective test result (cumulative): (-5,669,524/-4,916,100) = 115%

**System Implications:**

If allowed, a system will need to be able to split the values of cross currency swaps and debt into different time periods (partial terms). Flexibility in defining the hypothetical derivative will be important as there are a number of possible approaches that may be allowed and it will be important to test these approaches thoroughly prior to designation.



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## Next Issues

Our next few issues of Under the Hood will look at several examples of hedge accounting in practice for interest rate exposures.

## Previous Issues

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[http://www.visualrisk.com/01\\_company/newsletters.htm](http://www.visualrisk.com/01_company/newsletters.htm)

<sup>1</sup> All references to the standard are to Accounting Standard AASB 139, July 2004.

<sup>2</sup> The Association of Corporate Treasurers, IAS 39 implementation experiences reported by members", July 2005.

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