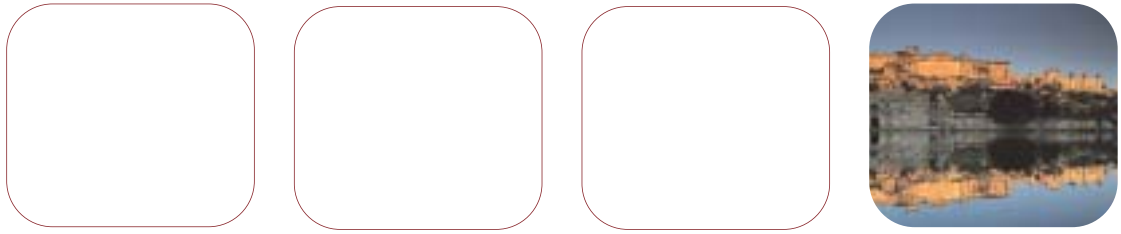


Hedging and Hedge Accounting



IFRS – Global Reporting Revolution

March 2003



The IFRS Revolution

Welcome to the fourth in a series of papers dedicated to discussing International Financial Reporting Standards and the impact on the banking industry. IFRS is much more than just a technical issue and, based on the current proposals, will result in fundamental changes to the way in which the industry does business.

The impending requirement for EU listed companies to adopt IFRS, and in particular IAS 39 Financial Instruments – Recognition and Measurement which deals with hedge accounting, will create a number of major challenges which cannot be underestimated.

I hope that you will find this paper thought-provoking and insightful. If you would like to discuss any of the issues addressed in more detail, please speak with your usual contact at PricewaterhouseCoopers or those listed at the end of this paper, as this helps us to ensure that we are addressing the issues that you are most focused on.

John Hitchins
UK Banking Leader

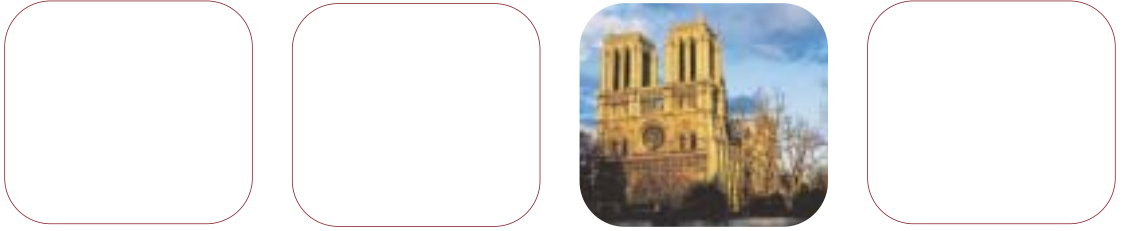
Hedging and Hedge Accounting

Introduction

IAS 39 Financial Instruments – Recognition and Measurement will create a number of significant issues for banks. This paper deals with some of the more significant issues around hedging.

Most UK financial institutions which use derivatives extensively follow the high level principles set out in the British Bankers Association Statement of Recommended Practice ('the BBA SORP') on Derivatives. The BBA SORP gives in general terms, the principles which should be applied: 'Non-trading transactions should be clearly identified and their purpose clearly documented at the outset and an on-going assessment should be undertaken to confirm that such transactions do in fact manage the risk to the degree sought.'

While the requirements of IAS 39 are not inconsistent with the BBA SORP's principles, there are now specific and, importantly, much more onerous requirements, principally in the area of documentation and demonstration of effectiveness, to be met before hedge accounting can be applied.



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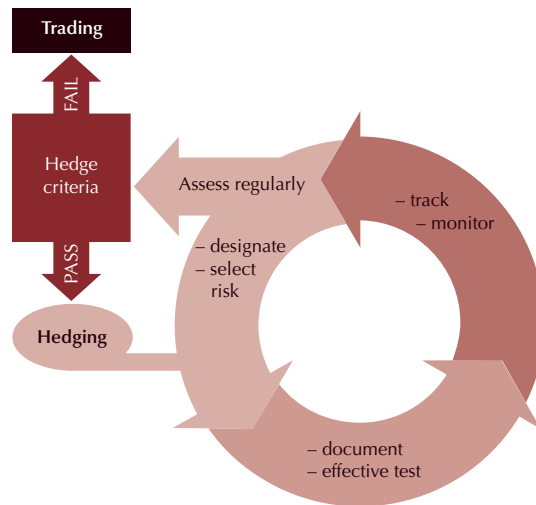
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Cause for concern

Why should this standard be a cause for significant concern for banks? The key factor is that IAS 39 requires that effectively all derivatives be held on the balance sheet at fair value, with the changes in the fair value of those instruments being recognised through the profit and loss account. Where institutions are using derivatives to hedge exposures accounted for on an accruals basis they face the prospect of having to take changes in the fair value of the hedging instrument to the profit and loss account without being able to recognise the associated changes in the

underlying hedged instrument unless some very complex and restrictive rules for hedge accounting are followed. For organisations with

substantial portfolios of hedging derivatives this would expose their reported profitability to significant volatility if hedge accounting cannot be achieved.



Hedging and Hedge Accounting

Institutions need to consider the challenges of IAS 39 now. While there are frequently goals that can be achieved easily for certain significant transactions within a retail financial institution, they should not underestimate the challenges and complexities of considering the questions posed by IAS 39 in the areas of hedging of pipeline exposure and achieving hedge accounting for the derivatives used to manage interest rate exposure on mortgage books. It is certain that most, if not all, institutions will have to accept some degree of volatility as a result of their use of derivative instruments, however there are a number of actions which can be taken that will enable much of this volatility to be removed.

A number of institutions who have US GAAP as their secondary reporting framework have already been subject to the requirements of US Financial Accounting Standard 133 ('FAS 133') which has similar hedge accounting rules to IAS 39.

Experience with these Securities and Exchange Commission (SEC) Registrants has shown that a large number of banks have not attempted to apply the US rules and have accepted the resulting earnings volatility in their reported balances for US GAAP reconciliation purposes (20-F). Most organisations do not, however, consider this acceptable when it begins to impact reported results in their primary GAAP, i.e. their primary 'reported profit measures'.

A large number of institutions will therefore need to address the challenging issues within IAS 39 if they are to avoid unpleasant and unwanted earnings volatility. Addressing such problems is far from a straightforward matter. Given the requirements under IAS 39, it is important for banks to consider the impact of their hedging activities on their financial results as soon as possible. A bank wishing to convert to IFRS for the year-end 31 December 2005 which requires two years of

comparatives, will need to have complied with the hedging regulations from 1 January 2003, although the SEC may yet give a dispensation of some form.

A Question of Guidance

IAS 39 poses a number of searching questions, but not surprisingly, given the complexity of the subject it does not always specify the level of detail and rigour that would be acceptable for the adoption of hedge accounting. This lack of clarity is a key concern because the consequences of not being able to adopt hedge accounting could be considerable for an organisation.

The potential consequences of not meeting the criteria go beyond the issue of earnings volatility. The adoption in the United States of FAS 133 saw the SEC requiring public restatement of the accounts of institutions which had not complied with the hedging documentation requirements.

Hedging and Hedge Accounting



Banks wishing to adopt hedge accounting need to get compliance with the requirements right first time. It has always been important for banks to comply with financial reporting requirements, but in the current climate the consequences of non-compliance are much more severe. Accordingly, institutions are naturally concerned as to how to address the questions of quality and sufficiency of documentation and the development of robust hedge effectiveness testing.

Documentation

IAS 39 requires key information about the hedging relationships to be formally documented prior to hedge accounting treatment being applied, this may be at the date of inception of the hedging instrument or a subsequent date. Failure to establish this documentation will mean hedge accounting cannot be adopted regardless of how effective the hedge actually is in offsetting risk. Organisations will need to consider how much documentation is required

and what level of detail there should be.

IAS 39 sets out the areas that hedge documentation should cover, but does not go as far as giving specific examples of pro-forma documentation. Many banks will consider developing their own pro-forma documentation that can be used for all types of hedge. The advantage the pro-forma approach brings is that it ensures a consistent standard of documentation for all of an organisation's hedges and that the key information is captured each time. However, it is important to note that a high level of detail will be needed in the hedge documentation in areas such as describing how effectiveness will be measured. A good test of the level of

documentation is whether it would be sufficient to enable a third party to re-perform the effectiveness testing. Therefore, there must be robust review procedures in place to ensure ongoing compliance. It is also important to recognise that the establishment of documentation is a prospective matter. The requisite documentation must be put in place prior to the adoption of hedge accounting.

A common misconception is that the failure to put hedge documentation in place at the date of execution of the hedging item prevents the adoption of hedge accounting for a particular relationship at a later date. However, Hedge accounting can be adopted later but only from the date when the documentation was put in place.

Example 1:

If Bank A undertakes to hedge a fixed rate loan issued on 1 January 2003 with a fixed versus floating rate interest swap, also executed on 1 January 2003, but has not put the hedge documentation in place until 1 May 2003, then Bank A can begin to hedge account for the swap from 1 May 2003, providing that it passes the effectiveness tests but must recognise in the income statement the fair value movements on the swap for the four month period between January 1 and April 30 when the documentation was not in place.

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Hedge effectiveness testing

In addition to the documentation of the hedging relationship IAS 39 requires organisations to prove that their hedging instruments are indeed ‘effective’ in mitigating the hedged risk or variability in cashflows in the underlying instrument. It is therefore very important that banks are specific about the nature of the risk that they are hedging, as this will tie directly into the effectiveness testing.

There is no specific method for testing hedge effectiveness prescribed by IAS 39 so organisations wishing to adopt hedge accounting will need to design, build and implement effectiveness tests. However, IAS 39 discusses the need for two distinct types of testing.

Firstly, at inception of the hedge the hedging relationship must be shown to be effective on a prospective basis, i.e. that the hedge is indeed expected to be effective. The level of effectiveness required for prospective effectiveness in IAS 39 is that the risks are ‘almost fully offset’. Whilst no numerical range has been formally given as meeting the ‘almost fully offset’ criteria, it is viewed in practice that the changes in the value or cashflows of the hedged item are expected to be at least between 95% and 105% of the changes in value or in the cashflows of the hedging instrument.

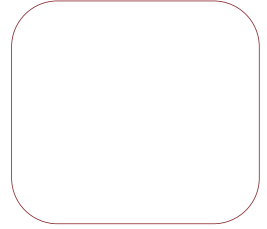
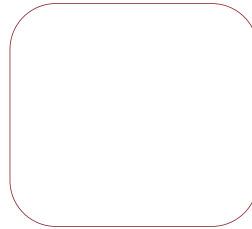
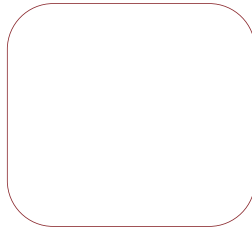
Secondly, there is a requirement to show that the hedge was actually ‘highly effective’ on a retrospective basis. Here the definition of ‘highly effective’ is slightly less strict than for prospective testing, the range being given within IAS 39 as 80%-125% effective.

Hedge Effectiveness Tests

Guidance as to what is and is not an effective hedge does not, however, completely address the question of what constitutes an acceptable hedge effectiveness test.

In practice there are a number of general factors to consider when looking at hedge effectiveness, including which one of a range of methods to use, from the intuitively straightforward, to the mathematically sophisticated proposed in the United States following the introduction of FAS 133.

It is critical to consider carefully the method of effectiveness testing adopted, since the careful design of an effectiveness test can mean the difference between a hedging relationship passing and failing the test. Furthermore many of the popular methods do not



necessarily produce consistent results. Some hedge effectiveness tests will show a relationship to be ineffective whereas other methods may indicate a high degree of effectiveness. This is highlighted by looking at the most common method of testing effectiveness the so-called 'dollar offset method'.

The dollar offset method has the advantage of being easy to understand and to implement, providing the institution has the systems capability to generate fair values for the instruments concerned. In basic terms it compares the ratio of the changes in fair value of the hedged item and the hedging derivative. The problem with this method is that where the underlying hedged

item is affected by a small change in value in a period, the test often fails hedges even where the cashflows and terms are highly correlated. As an illustration consider the scenarios given below (see Example 2).

In both scenarios there is an absolute difference of 1,000 in the change in fair value of the hedged item and hedged instrument, but in Scenario A because the changes in fair value are small this leads to a failure of a test whereas in Scenario B, the relationship appears highly effective.

This problem can be avoided by using more advanced techniques such as a statistical regression based test. However, such

techniques are intuitively less obvious and more time consuming to implement.

A further complication is that the choice of hedge effectiveness test cannot be made by looking at each hedging relationship in isolation. Banks will need to bear in mind that where a method of assessing is adopted for a particular hedging relationship there is the requirement that the same method will be applied to all similar hedges, groupwide.

A final point to note on the methods of assessing effectiveness is that IAS 39 does not permit the use of the 'short-cut method' which is allowed by FAS 133, whereby if the critical contractual terms of individual hedged item and hedging instrument match, then the hedge can be assumed to be 100% effective. Many UK organisations currently applying hedge accounting for any US GAAP reporting will need to revisit their hedge

Example 2:

| | Scenario A | Scenario B |
|--------------------------------|------------|------------|
| Change in Fair Value | | |
| Hedged Item due to Hedged Risk | 1,000 | 99,000 |
| Hedging Instrument | 2,000 | 100,000 |
| Dollar-Offset Effectiveness | 50% | 99% |

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documentation to ensure that they are not relying on the short-cut method when hedge accounting under IFRS. This may lead to the need to commence effectiveness testing.

Frequency of Effectiveness Testing

IFRS requires the performance of effectiveness testing at least as often as the release of publicly available financial reporting. Are there benefits to undertaking effectiveness testing more frequently than required by the accounting standards?

This is a decision that will need to be weighed up by banks, they should balance the costs and effort required in conducting frequent testing against the benefit achieved. If the hedge effectiveness test fails for a period then all of the movements on the hedging instrument during that period must be taken to earnings, so in essence the longer you leave it the worse it can be. Therefore, although it is costly for hedge effectiveness testing to be undertaken more frequently, if the test is failed during any one period, and depending when it fails, there is

a shorter timeframe over which earnings are directly impacted.

The hedge accounting rules will also have to be accompanied by a change in processes, and potentially behaviour, as it is recognised that a hedge being economically effective does not necessarily imply that the hedge will be effective for accounting purposes. A number of UK organisations have already begun to analyse the potential effectiveness of their current hedging strategies from an IFRS perspective and to investigate alternative strategies which would meet hedge effectiveness criteria without significantly changing the economic substance or incurring excessive costs.

Macro-hedging and 'Consolidated' interest rate risk management

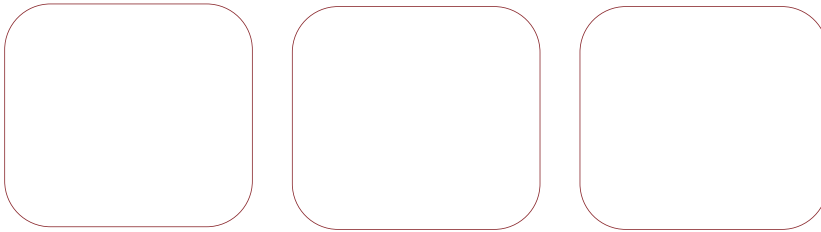
The hedging of interest rate and other risks at a consolidated macro level is a common practice in the banking industry, owing principally to the economies of scale that it offers institutions given the tens of thousands of individual exposures of a typical bank. Of

the many challenges that IAS 39 raises for the banking industry, some of the most contentious are the rules surrounding this practice of macro-hedging.

The key IAS 39 requirement is that there should exist a direct one-to-one linkage between the hedging instrument and the hedged item. In practice, many hedging relationships are on a many-to-one basis for example the situation where a mortgage lender hedges the interest exposure on the fixed rate portion of its portfolio using an interest rate swap. Here a single derivative has been used to hedge the exposure on a large number of individual mortgages. In order to consider the application of hedge accounting to this situation it is necessary to link the swap on a mortgage-by-mortgage basis.

Practical experience has shown that although the mortgage portfolio can be analysed item by item, there are considerable practical difficulties, such as being able to match the hedging derivatives against the individual advances to customers, given current system specifications. Further, even if this can be

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achieved, the strictness of the 'almost fully offset' requirement of the prospective test for effectiveness means that almost any dissimilarity in the terms of the individual item being hedged and the derivative will lead to a failure in the effectiveness test. Under IFRS it is possible to have a single hedging instrument for a portfolio of identical assets, however a considerable degree of analysis will be required to identify assets which are sufficiently similar to pass the tests. Overall, the current methods typically used by retail and some wholesale banks are unlikely to enable effectiveness to be proven on an instrument-by-instrument basis.

As a consequence many retail banks will be facing the possibility of the volatility on the fair value changes on their current hedging instruments affecting their earnings. From a financial reporting perspective, many institutions will consider this to be an unacceptable situation and they will need to re-evaluate their hedging strategies in light of the new standard. With new and complex products being developed in the industry,

Example 3

A bank has a portfolio of interest rate bearing assets of 90, interest-rate bearing liabilities of 100 and it wishes to hedge the net interest rate exposure via an interest rate swap with notional 10. Following the guidance of IGC 121-2, the bank would designate the swap as the hedge of a particular liability of 10, put in place appropriate documentation and commence effectiveness testing.

At a later date the asset profile of the bank has changed, such that it now has assets of 110, but liabilities of 100. If the bank wishes to hedge the net interest rate risk exposure and takes out a swap with notional 20 to gain the appropriate exposure (from hedging a net liability of 10 to an asset of 10), it will need to designate the second swap as the hedge of an asset of 20.

Experience in territories where IAS has been implemented has shown that this process of designation and testing of effectiveness is a complex one requiring considerable investment in developing suitable systems.

effecting an accounting hedge will become increasingly challenging. Those banks hedging pools of assets which redeem faster or slower than expected may need to take out a large number of smaller swaps to match the maturity profile rather than one large swap, which will clearly be more costly.

For banks that have portfolios of assets and liabilities and are not able to undertake micro hedging, IAS 39 in its Implementation Guidance Question and Answers 121-2 ('IGC 121-2') gives a method whereby entities designate a single asset or liability with the same characteristics as the whole net

portfolio to be the hedged item. The intricacies of this process can be illustrated by means of an example (see Example 3).

Another challenging problem for retail financial institutions has been, and will continue to be, the application of hedge accounting for hedging anticipated, or pipeline transactions. Current UK GAAP allows the hedging of such transactions, provided there is a reasonable expectation that the anticipated transaction will be undertaken. IAS imposes more stringent criteria over the expectation beyond just a reasonable anticipation. Accordingly, how a bank

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chooses to hedge its pipeline risk will need to be given careful consideration, and future hedges may need to be undertaken in smaller tranches for the associated additional costs.

Systems and resources

The above issues highlight that hedging will have a major impact for institutions in the areas of both systems and resources. Where an organisation undertakes a significant volume of hedging transactions then the manpower required to establish and maintain documentation, identify and monitor the hedged and hedging items and conduct effectiveness testing can be considerable. Existing transactional level systems are unlikely to be configured to allow the designation and

documentation of hedges and to perform the associated hedge effectiveness testing.

Commercially available IT solutions addressing these issues are beginning to be developed by software providers. Such solutions will primarily be meeting the requirements of banks undertaking small numbers of hedging transactions and implementing straightforward hedging strategies. Organisations looking at undertaking some of the designation and re-designation strategies of IGC 121-2 or undertaking hedge effectiveness testing beyond the simple dollar offset or regression methods may find the packages insufficiently flexible without extensive modifications.

Some organisations will need or choose to build dedicated

systems that maintain the underlying data and automatically conduct effectiveness testing. Such systems by their nature are complex and cannot be designed and built easily or cheaply given the cost of employing suitable IT resources. Experience has shown that even when such systems are past the development phase considerable time will be spent in testing the systems given the complex nature of the task that it will perform. A challenge for institutions will be to weigh the costs of meeting the requirements for hedge accounting against the consequences of the potential earnings volatility arising by not implementing hedge accounting. Hedging strategies may have to be simplified greatly, purely on the grounds of the systems costs needed to maintain them.

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With the potential difficulties inherent in achieving hedge accounting, putting in the processes which will ensure compliance may involve substantial effort and resources and involve a timescale denominated in months and years rather than days. Given the timetable for the introduction of IFRS, institutions need to be deciding on their strategy now.

Conclusion

The introduction of IAS 39 will radically change the ability of UK financial institutions to achieve hedge accounting, resulting in increased earnings volatility. Many will feel this effect to be sufficiently severe or misleading of the 'true' (or economic) performance that it justifies incurring the additional costs needed to achieve hedge accounting treatment. Management of institutions are advised to consider the matter of hedge accounting thoroughly and as soon as possible to ensure that they are making an informed decision and putting in place the most appropriate course of action.

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Contacts

PricewaterhouseCoopers

If you would like to discuss any of the issues raised in this paper, please speak with your usual contact at PricewaterhouseCoopers.

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