Introduction

Background

1. The Board discussed the eligibility of risk components at previous meetings. The Board’s tentative decisions so far are:

   (a) to permit the designation of risk components as eligible hedged items (ie permit bifurcation-by-risk) and to explore new ways of determining risk components that are eligible for designation as hedged items (eligible risk components);¹

   (b) that ‘one-sided risks’ (ie hedging exposures only against changes to one side of a specified level) would be eligible for designation as hedged items;²

   (c) that a contractually-specified risk component should be an eligible hedged item, irrespective of whether it is the component of a financial or a non-financial item;³ and

   (d) to retain the restrictions regarding the designation of risk components when the designated component would exceed the total cash flows of

¹ Tentative decisions at the 2 and 17 February 2010 meetings.
² Tentative decision at the 3 March 2010 meeting.
³ Tentative decision at the May 2010 meeting.

Purpose of this paper

2. This paper addresses the remaining aspect of risk components to be discussed. That aspect is the eligibility of risk components that are not contractually specified.

3. This paper is structured as follows:
   (a) the issue;
   (b) staff analysis;
   (c) staff recommendation and question to the Board.

The issue

Misalignment of hedge accounting and risk management

4. The root cause of the misalignment between the hedge accounting model in IAS 39 and risk management was set out in agenda paper 9D of the May 2010 Board meeting:

   Many risk management strategies use an approach that manages exposures by type of risk for different items. Not an approach that is by type of item for different (or all) risks. This has resulted in a misalignment of many risk management strategies and hedge accounting requirements. Hedge accounting uses the entire item as the default unit of account and then sets out rules that govern what risk components of that entire item can be used. Hence, what is the normal approach for risk management purposes is really the exception in hedge accounting requirements.

---

4 Tentative decision at the October 2010 meeting.
Differentiation by financial versus non-financial hedged items

5. The main issue with risk components is that:
   (a) for financial items IAS 39 allows designation of risk components as hedged items if they are identifiable and measureable;
   (b) whereas for non-financial items this is prohibited irrespective of whether or not risk components are identifiable and measureable (except for foreign currency risk).

6. In the context of the earlier discussion of contractually specified risk components the consequences of this differentiation were highlighted:
   (a) the availability of hedge accounting is arbitrarily drawn; and
   (b) even if hedge accounting is available, the measurement and recognition of hedge ineffectiveness for non-financial hedged items is systematically distorted. The reason is that the change in value of the entire hedged item has to be compared to the change in fair value of the hedging instrument. Hence, if an entity hedges only a risk component instead of the entire item the hedge ineffectiveness includes the effects of exposures that the entity has never set out to hedge.

7. This differentiation has a detrimental effect on the comparison of:
   (a) entities that hedge financial exposures versus those that hedge non-financial exposures.
   (b) entities that hedge only a component versus those that hedge the entire item.

Staff analysis

8. The issue raises the following questions:
   (a) what is the purpose of allowing or limiting the eligibility of risk components as hedged items?
(b) what criteria to determine the eligibility of risk components as hedged items can be arrived at from that purpose?

(c) why is a criteria-based approach to determining the eligibility of risk components accepted for financial hedged items while it is prohibited for non-financial hedged items?

The purpose of allowing or limiting the eligibility of risk components as hedged items

9. The relevance of risk components for a hedge accounting model is their effect on hedge effectiveness—both hedge effectiveness assessment and measurement of actual ineffectiveness. Risk components are the key driver of what is compared to the change in the fair value of the hedging instrument.

10. Hence, the purpose of allowing or limiting the eligibility of risk components as hedged items is that the changes in value of the hedged item versus those of the hedging instrument are determined on a comparable basis.

11. This aspect also relates to risk management in that a comparison for accounting purposes that is inconsistent with what risk management tries to achieve (ie its objective) can misrepresent the economic phenomenon. The potential error is that financial reporting presents an activity as ineffective whereas the activity is a different one (at least from a risk management perspective). The following simple example illustrates this.

12. Entity A enters into a firm commitment to sell a commodity in a foreign currency. In order to hedge its foreign exchange (FX) risk Entity A enters into an FX derivative. If for accounting purposes the change in fair value of the FX derivative was compared to the entire change in the fair value of the firm commitment (ie including the effect of commodity price changes) it would create significant ‘ineffectiveness’. However, the activity of Entity A is to

---

5 This extreme example was chosen because it illustrates the issue clearly. In this case an entity would unlikely qualify for hedge accounting because the effectiveness assessment would hardly be passed.
eliminate only the exposure to the FX risk but not to hedge its exposure to the fair value changes from commodity price risk. Hence, the ‘ineffectiveness’ determined for accounting purposes would misrepresent the economic activity of Entity A because it is an implicit assertion that Entity A would try to mitigate commodity price risk using FX derivatives and was not very successful at it.

13. This extreme example was chosen because it illustrates the issue clearly (whereas in other examples the same distortion—while applicable—is less noticeable). Note that in this case an entity would unlikely qualify for hedge accounting because the effectiveness assessment would hardly be passed based on a comparison of fair value changes of the FX derivative versus the firm commitment to sell the commodity (ie this would in most cases fail the requirement of the new effectiveness test that the hedging relationship must be expected to achieve offsetting of changes between the hedged item and the hedging instrument that are attributable to the hedged risk—‘other than accidental offsetting’).

**Criteria to determine the eligibility of risk components as hedged items**

14. Given the purpose of allowing or limiting the eligibility of risk components as hedged items is that the changes in value of the hedged item versus those of the hedging instrument are determined on a comparable basis, the criteria for determining eligible risk components must aim at identifying a part of the hedged item that represents the hedged risk.

15. IAS 39 uses the following criteria for determining eligible risk components of *financial*\(^6\) hedged items:\(^7\)

\(^6\) For non-financial hedged items these are not applicable (because the only exception regarding FX risk has been given directly so that applying the criteria is obsolete)—see paragraph 5.

\(^7\) IAS 39.81 and AG99F.
(a) the risk component must be *separately identifiable* within the entire hedged item; and

(b) the effects of the identifiable risk component on the changes in the cash flows or fair value of the entire financial instrument must be *reliably measurable*.

16. These criteria are consistent with the above mentioned purpose, which requires measuring the changes in value of a component of the entire hedged item that reflects a particular risk.

*Application to financial hedged items*

17. For *financial* hedged items these criteria have by and large worked. The main application has been interest rate risk and FX risk. There was one major discussion that resulted in a clarification of IAS 39 regarding inflation risk.

18. Following a discussion at the IFRIC\(^8\), in July 2008 the IASB amended IAS 39 to clarify how the criteria apply to inflation risk.

19. Hence, this paper will focus on the *non-financial* hedged items. This is the area where risk components other than FX risk were prohibited and which has caused significant problems under today’s hedge accounting model.

*Is a criteria-based approach to determining the eligibility of risk components suitable for non-financial hedged items?*

20. The analysis provided for the discussion of the contractually specified risk components at the May 2010 IASB meeting addressed the rationale for generally prohibiting the designation of risk components (other than FX risk) of non-financial hedged items under the hedge accounting model of IAS 39.\(^9\) The conclusion of that analysis was that there was no rational reason for

---

\(^8\) Now the IFRS Interpretations Committee.

\(^9\) See agenda paper 9D of the May 2010 IASB meeting, paragraphs 17-39.
differentiating between financial and non-financial hedged items, which is also what the Board tentatively concluded.10

21. Hence, the remaining question is whether for risk components that are *not* contractually-specified the approach for determining eligible risk components should differentiate between financial and non-financial hedged items. In other words, the question is whether a criteria-based approach for determining eligible risk components of non-financial hedged items is suitable or not.

**Example 1**

**Facts**

22. Entity B is a manufacturer of coffee products that requires specific qualities of coffee. Its risk management strategy is to hedge its exposure to the variability in the coffee price as follows:

(a) Entity B hedges its future coffee purchases based on its production forecast. Hedging starts up to 15 months before delivery for part of the forecast purchase volume and Entity B then increases the coverage volume over time (as the delivery date approaches).

(b) Entity B uses two different types of contracts to manage its coffee price risk:

   (i) exchange traded *coffee futures* (these are accounted for as financial instruments); and

   (ii) *coffee supply contracts* for Arabica coffee from Colombia to a specific manufacturing site (coffee supply contract). These contracts price a tonne of coffee based on the exchange traded coffee future price plus a fixed price differential plus a variable logistics services charge. The coffee supply contracts are executory contracts under

10 See paragraph 1(c).
which Entity B takes actual delivery of coffee (ie they are not accounted for as financial instruments).

(c) For deliveries that relate to current harvest Entity B can fix the price differential between the actual coffee quality purchased (Arabica coffee from Columbia) and the benchmark quality that is the underlying of the exchange traded future by entering into the coffee supply contracts. However, for deliveries that relate to the next harvest the coffee supply contracts are not yet available so that the price differential cannot be fixed.

(d) Entity B hedges the benchmark quality component of its coffee price risk using exchange traded coffee futures. These futures hedge the benchmark quality component for deliveries that relate to current harvest as well as to the next harvest.

23. For the deliveries that relate to current harvest Entity B has a contractually specified risk component once it has entered into a coffee supply contract. In accordance with the Board’s tentative decision on contractually specified risk components,.Entity B from that moment can use a coffee future as the hedging instrument for the benchmark coffee price risk component under the coffee supply contract.

24. For the deliveries that relate to the next harvest Entity B also uses the same coffee futures as hedging instruments—but there is not yet a contractually specified benchmark coffee price risk component (because Entity B has not yet signed a coffee supply contract). This raises the question whether Entity B should determine the hedged item as:

(a) the entire variability in the cash flows for its forecast actual purchases of Arabica coffee from Columbia (ie including changes in the variable logistics costs and in the price differential to the benchmark quality that will only be fixed after the next harvest); or

11 See paragraph 1(c).
(b) the benchmark coffee price risk component (as in the situations after entering into the coffee supply contracts).

Staff analysis

25. The staff view of the situation is that Entity B is exposed to different risks:

(a) Coffee price risk reflecting the benchmark quality (as represented by the coffee futures). This is the risk that Entity B hedges once entering into the coffee futures.

(b) Coffee price risk reflecting the spread (price differential) between the benchmark quality under (a) and the actual quality purchased for which Entity B takes deliver (Arabica coffee from Columbia). This price risk is only hedged for the current harvest but Entity B remains exposed to this risk for deliveries that relate to the next harvest (irrespective of whether the coffee price risk reflecting the benchmark quality has been hedged). Entity B does not seek to hedge this exposure before the current harvest and to the extent it hedges it for the current harvest it does so using coffee supply contracts. The coffee futures do not hedge this risk at any point in time. In fact, Entity B could hedge only the spread risk by only entering into coffee supply contracts (i.e. without a corresponding volume of coffee futures)—this would fall under executory contract accounting and not involve any financial instrument or hedge accounting.

(c) The variable logistics costs that depend on cost factors like fuel prices, port fees, insurance, etc. Entity B does not hedge this risk and hence remains exposed to the variability of these costs until delivery.

26. Hence, the staff consider that designating the coffee futures as hedging instruments in relation to the entire variability in the cash flows for its forecast actual purchases is a misrepresentation of the transactions and exposures of Entity B. It results in comparing hedging instruments to risks that are unrelated to them and does not reflect Entity B’s related hedging strategy. In particular,
Entity B’s hedging strategy regarding the coffee price risk reflecting the benchmark quality does not change depending on whether the delivery relates to the current or next harvest and whether the spread risk (price differential) is hedged (ie whether coffee supply contracts are entered into).

27. Such a designation mismatch would create hedge ineffectiveness in profit or loss from comparing value changes of items that are unrelated. Hence, an effective risk management strategy would systematically be presented as less effective than it actually is.

28. This is also an important aspect regarding the interaction with the new effectiveness assessment model. The staff also note that such a designation mismatch would have a detrimental effect on the application of the new effectiveness test. That requires that an entity chooses a hedge designation that results in a hedge ratio that does not reflect a deliberate mismatch between the weightings of the hedged item and of the hedging instrument within the hedging relationship. Hence, the inability of Entity B to designate a risk component for the non-financial hedged item would also distort the hedge ratio that has to be chosen for accounting purposes. That would result in a misalignment between the effectiveness test and risk management thus defeating one of the objectives of developing the new effectiveness test.

29. The staff note that Entity B remains exposed to different risks and that the coffee futures do not eliminate the entire variability of the actual purchase price for the delivered coffee. However, the staff consider there are two entirely different aspects that must not be confused:

(a) a decision not to hedge a risk but retain an exposure; and

(b) hedge ineffectiveness (which is the result of hedging an exposure but using a hedging instrument that does not provide a fully offsetting change in value).
Example 2

Facts

30. Entity C is an airline. Its risk management strategy is to hedge its exposure to the variability in the jet fuel price as follows:

(a) Entity C hedges its future jet fuel purchases based on its consumption forecast. Hedging starts up to 24 months before delivery for part of the forecast purchase volume and Entity C then increases the coverage volume over time (as the delivery date approaches).

(b) Entity C uses different types of contracts to manage its jet fuel price risk:

(i) crude oil options and futures;
(ii) gas oil options and futures; and
(iii) jet fuel forwards.

(c) Entity C’s choice between option and non-option derivatives depends on market volatility, price levels and the cost of option premiums.

(d) Entity C’s choice between the different underlyings depends on the time horizon of the hedge, which affects the market liquidity of the derivatives:

(i) for the time horizon from 24 months to about 12 months to delivery only crude oil derivatives have the sufficient market liquidity;
(ii) for the time horizon between 12 months and 6 months to delivery gas oil derivatives are sufficiently liquid; and
(iii) jet fuel derivatives are only sufficiently liquid within 6 months to delivery.

31. The costs of the different underlyings is related because of the production process for oil products. Both gas oil and jet fuel are made from oil distillates but they have different refining margins (also known as cracking spreads—ie the cost of converting crude oil into the respective distillate). Hence:
(a) crude oil is unrefined and its price excludes any cracking spread;

(b) gas oil prices include the cracking spread for that distillate; and

(c) jet fuel prices include a further refining margin compared to gas oil.

32. Hence, by using crude oil derivatives Entity C remains exposed to changes in the entire refining margin for jet fuel. As soon as gas oil derivatives are used the variability of a part of the refining margin of jet fuel is hedged (up to the gas oil level). Once jet fuel derivatives are used the variability of the entire refining margin is hedged.

Staff analysis

33. Similarly to Example 1, the staff consider that Entity C is exposed to different risks:

(a) the crude oil component of jet fuel; and

(b) the refining margin, which due to the refining process for oil distillates consists of several different refining margins for different types of distillates.12

34. Hence, again similarly to Example 1, the staff consider that designating the crude oil derivatives as hedging instruments in relation to the entire variability in the cash flows for forecast jet fuel purchases is a misrepresentation of the transactions and exposures of Entity C. It results in comparing hedging instruments to risks that are unrelated to them and does not reflect Entity C’s related hedging strategy. It would also have a detrimental impact on the new hedge effectiveness assessment.13

12 The different refining margins have resulted in different (basis) swap products that relate to the various margin differentials of oil distillates. Hence, the production process for oil products (refining) is reflected in the market structure for the related financial derivatives.

13 See paragraph 28.
35. In this context it is worth considering the valuation related implications of trying to compare the fair value changes of crude oil derivatives to the change in the value of the jet fuel purchases in their entirety:

(a) As a result of a liquid (forward) market for crude oil there is an observable forward curve for the entire relevant period for which Entity C hedges.

(b) In contrast, for jet fuel there is no liquid forward market for the periods exceeding about 6 months. Hence, for the crude oil hedges that cover time periods of 12 to 24 months from delivery Entity C needs to construct a forward curve for jet fuel in order to determine the change in value of the jet fuel in its entirety. This forward curve is constructed by taking the crude oil forward curve and adjusting it for estimates of the future jet fuel refining margin. This is a very difficult estimate because of the nature of the forward market, and highly subjective.14

36. Hence, forcing entities to compare the fair value changes of crude oil derivatives to the change in the value of the jet fuel in its entirety has two implications:

(a) it does not result in ‘more discipline’ or a more verifiable or objective outcome (but rather the opposite);

(b) given how the forward curve of jet fuel has to be constructed, an assertion that the crude oil component of the jet fuel price cannot be measured reliably15 is inconsistent with the measurement of the entire price change of jet fuel, which is based on a building block approach of crude oil element plus refining margin.

14 Jet fuel does not have a separate cost of carry element that could be used to build the curve, which means that the adjustments of the crude oil forward curve are very judgemental. The refining margin depends on production costs of refineries in the long run but in the short term can be driven by demand/supply imbalances in refining capacity and storages volumes of the different oil distillates, which is means it can be driven by very local market forces. Forecasting these factors is extremely difficult.

15 However, this is the rationale in IAS 39.BC138 underlying the prohibition of designating risk components in non-financial hedged items—based on that it is in ‘many cases’ difficult so it should be disallowed in all cases (except FX risk).
37. Therefore, again similarly to Example 1, the staff consider that forcing entities to compare the fair value changes of crude oil (and similarly gas oil) derivatives to the change in the value of the jet fuel in its entirety would create a designation mismatch that distorts hedge ineffectiveness. If an entity chooses not to hedge the refining margin that should not be confused with hedge ineffectiveness.

Conclusion

38. The examples demonstrate that a blanket assumption that risk components of non-financial items (other than FX risk) cannot be isolated and measured with sufficient reliability is unwarranted. In fact, in both examples the measurement of the change in the value of the hedged item in its entirety would require more judgemental assumptions (the price differential for different coffee qualities regarding the next harvest and the refining margin, respectively) than measuring the risk component.

39. The prohibition of designating risk components in these examples also demonstrates that hedge ineffectiveness is confused with a decision not to hedge a particular exposure.

40. In the staff’s view the question of what are appropriate risk components can only be determined in the context of the particular market structure regarding that risk. Hence, the determination of appropriate risk components requires an evaluation of the relevant facts and circumstances, which differ by risk.

41. For example, the link of the price of fuel oil products (petroleum products) to the price of crude oil in generally strong, but decreases the more other inputs (like additives etc.) and production costs are involved. A step further away from the petroleum products are petrochemicals (ie chemical products derived from petroleum). And products derived from petrochemicals such as plastics products or fertiliser are yet another step further away and hence have a weaker link to crude oil prices. Hence, there is a broad spectrum along which the influence of the crude oil price on the particular price risk of a product decreases, which means an crude oil price risk component is less likely to be identifiable.
42. However, there is no bright-line cut-off that could be set by one for everyone. Instead, it requires careful analysis and knowledge of the relevant markets. The examples here are related to petroleum related products (which has one of the most pervasive ripple effects on industrial products). There are obviously many other markets, for which similar considerations apply.

43. The need to consider individual facts and circumstances means that a criteria-based approach is appropriate. The use of criteria allows that entities can perform the evaluations in their specific situations.

44. Therefore, the staff consider that the differentiation in the current hedge accounting model that uses a criteria-based approach for financial items but disallows it for non-financial hedged items is not appropriate.

Criteria for determining eligible risk components

45. If a criteria-based approach is used for determining eligible risk components the question is what the criteria should be.

46. The staff consider that it would reduce complexity if financial and non-financial hedged items would be subject to the same criteria.

47. As noted above,\(^\text{16}\) the criteria used by the current hedge accounting model for financial hedged items are consistent with the purpose of determining the eligibility of risk components as hedged items, which requires measuring the changes in value of a component of the entire hedged item that reflects a particular risk. Hence, they are a natural starting point.

48. The staff note that the key aspect of the analysis of risk components of non-financial items was the evaluation of the facts and circumstances with regard to the particular market structure to which the risk relates and in which the hedging activity takes place (see paragraph 40). This would be a useful addition to the criteria used by the current hedge accounting model when extending it to

---

\(^\text{16}\) See paragraphs 14-16.
non-financial items. It would have the character of application guidance as it elaborates on the criteria that require that changes in value of a component of the entire hedged item that reflects a particular risk are reliably measurable.

49. In terms of drafting of the criteria, the staff also consider that the criteria of the current hedge accounting model—separately identifiable and reliably measurable—are not separate cumulative criteria but that reliably measurable is the criterion and that identifiability is a necessary precondition of measurability (because every measurement requires to first specify what is to be measured). This is not about a change in substance but rather about the logic of presenting the requirement.

Staff recommendation and question to the Board

50. The staff consider that retaining the prohibition to designate risk components of non-financial items (except FX risk) of the current hedge accounting model is inappropriate because:

(a) it results in mischaracterising the decision to retain an exposure instead of hedging it as ‘hedge ineffectiveness’—this is no useful information;

(b) whether risk components are reliably measureable does not depend on whether the hedged item is financial or non-financial—instead, that depends on the particular market structure to which the risk relates and in which the hedging activity takes place; and

(c) if designation of risk components was not available for non-financial hedged items the interaction with the new hedge effectiveness assessment model would result in a distortion of the hedge ratio and a misalignment between the effectiveness test and risk management thus defeating one of the objectives of developing the new effectiveness test.

51. Hence, the staff recommend:

(a) aligning the eligibility of risk components for financial and non-financial hedged items (ie that the risk component is reliably
measurable—for which identifiability of the risk component is a precondition); and

(b) to add guidance to the effect that the determination of eligible risk components requires an evaluation of the facts and circumstances with regard to the particular market structure to which the risk relates and in which the hedging activity takes place.

<table>
<thead>
<tr>
<th>Question—eligibility of risk components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the Board agree with the staff recommendation in paragraph 51 that the criteria for risk components be aligned for financial and non-financial hedged items using a criteria-based approach?</td>
</tr>
<tr>
<td>If the Board does not agree, what does the Board propose instead and why?</td>
</tr>
</tbody>
</table>
Appendix A

A1. This appendix reproduces parts of IAS 39 referred to in the agenda paper.

A2. IAS 39.AG99F:

To be eligible for hedge accounting, the designated risks and portions must be separately identifiable components of the financial instrument, and changes in the cash flows or fair value of the entire financial instrument arising from changes in the designated risks and portions must be reliably measurable. For example:

(a) for a fixed rate financial instrument hedged for changes in fair value attributable to changes in a risk-free or benchmark interest rate, the risk-free or benchmark rate is normally regarded as both a separately identifiable component of the financial instrument and reliably measurable.

(b) inflation is not separately identifiable and reliably measurable and cannot be designated as a risk or a portion of a financial instrument unless the requirements in (c) are met.

(c) a contractually specified inflation portion of the cash flows of a recognised inflation-linked bond (assuming there is no requirement to account for an embedded derivative separately) is separately identifiable and reliably measurable as long as other cash flows of the instrument are not affected by the inflation portion.
Appendix B

Summary of the Board’s tentative decision at the 24 August 2010 meeting

B1 The objective of the effectiveness assessment is to ensure that the hedging relationship will produce an unbiased result and minimise expected ineffectiveness. Thus, for accounting purposes hedging relationships should not reflect a deliberate mismatch between the weightings of the hedged item and of the hedging instrument within the hedging relationship.

B2 In addition, hedging relationships are expected to achieve offsetting of changes between the hedged item and the hedging instrument that are attributable to the hedged risk (other than accidental offsetting).

B3 The assessment is forward looking and is performed at inception and on an ongoing basis.

B4 The type of assessment (quantitative or qualitative) depends on the relevant characteristics of the hedging relationship and on the potential sources of ineffectiveness. The main source of information to perform the effectiveness assessment is entities' risk management.

B5 No particular methods for assessing hedge effectiveness are prescribed. However, the method used should be robust enough to capture the relevant characteristics of the hedging relationship including the sources of ineffectiveness.

B6 Changes in the method for assessing effectiveness are mandatory if there are unexpected sources of ineffectiveness (ie new sources not initially anticipated), or if, upon a rebalancing in the hedging relationship, the method previously used is no longer capable of capturing the sources of ineffectiveness and is therefore now not capable of demonstrating whether the hedge produces an unbiased result and minimises ineffectiveness.