STAFF PAPER

REGIASB Meeting

Project	Impairment
Paper topic	Methods and information to assess criteria
CONTACT(S)	Manuel Kapsis	mkapsis@ifrs.org	+44 (0)20 7246 6459
	Jana Streckenbach	jstreckenbach@ifrs.org	+44 (0)20 7246 6473

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Introduction

1. In October 2012, after receiving a summary of the input received from participants in the outreach, the IASB decided to clarify the criteria for recognition of lifetime expected losses.

2. Agenda Paper 5B addressed the concerns raised during recent outreach regarding the clarification of the criteria. Many asked what information could be used to assess the criteria to determine whether lifetime expected losses are required. In particular, many expressed concerns about applying a model based on deterioration to retail loans as detailed information about credit quality is typically not available post origination for these assets (unlike commercial loans). This paper discusses how an entity might measure credit risk, and the information that should be used, for the purpose of assessing the criteria.

3. In Agenda Paper 5B, the staff recommend that the IASB require recognition of lifetime expected losses under the three bucket model if:

    (a)   there has been a deterioration in credit quality since initial recognition that is significant (when considering the term of the asset and the original credit quality); and

(b)   the credit quality of the asset would not be considered investment grade.

4.   Appendix A includes application guidance as suggested in the analysis in this paper for illustration purposes.

Background

5.   As noted in Agenda Paper 5B, the IASB previously has tentatively decided that the assessment of the criteria would consider the probability of default, but not the severity of the loss given default,[1] and further, that credit quality would be assessed based on the cumulative probability of default for the term of the asset. References to credit risk in that paper are based on the above and the staff have not considered amending this.

6.   Notwithstanding the definition of credit risk as above, the assessment of criteria is not intended to require a statistical approach or methods. In the staff's view, credit risk can be measured using different methods based on the best information at hand.

7.   This paper suggests some additional application guidance to assist in the determination of the best available information, and to assist in the assessment of the criteria.

Assessment of the criteria

8.   Both boards have previously noted that an entity should use the best available information to apply the expected loss model. An entity need not undertake an exhaustive search for information, instead information should be used that is available without undue cost or effort. However an entity should not ignore information that is available or invent information that is not available.

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[1] The severity of the loss would be included in the measurement of the allowance balance.

Notwithstanding the undue cost or effort limitation, entities will likely require changes to their systems and data collection and processing to implement the requirements. The issue is, how much cost will be imposed and whether there are ways an entity can minimise these costs by maximising the use of information that is already available.

9. The IASB has addressed this issue before – it has been considered in finalising IFRS 13 *Fair Value Measurement* and as part of the exposure draft *Insurance Contracts*.

10. IFRS 13 requires an entity to maximise the use of observable inputs and minimise the use of unobservable inputs. The staff notes that this requirement is consistent with the measurement objective of fair value (ie consistent with a market view of value). But when using unobservable inputs, IFRS 13 requires that the best information available is used. For disclosure purposes, IFRS 13 requires an entity to classify the measurement by the information used and the extent to which unobservable inputs have been used (the fair value hierarchy).

11. The staff do not think that a hierarchy based on observability would be appropriate in this case, as credit risk (and specifically the measure of credit risk as a probability of default) cannot be directly observed (it is a component of the price of a financial instrument). However, even though the measurement of expected credit losses is not a market based measure, an entity's assessment of the lifetime loss criteria and measurements should reflect all available evidence, both external and internal.

12. In the staffs' view, estimation of the probability of default and the measurement of credit risk and expected losses is analogous to the estimation of mortality rates and and the measurement of expected value of insurance liabilities. Insurers use both external and internal information as a basis for their estimates. Thus, in the *Insurance Contracts* project guidance was provided to assist entities in determining the appropriate information set.

13. The staff think that it should be emphasised that an entity should use information that is as forward looking as possible. This is best achieved through

observable inputs such as prices. However, because credit risk is a component of a price and cannot be directly observed, the measurement of credit risk is inherently subjective regardless of the use of such inputs. Therefore information about default expectations and credit quality is more persuasive when several pieces of information corroborate each other.

14. It must also be clear that if historical inputs are used, those inputs must be adjusted to reflect expected future events. The use of a statistical method alone is not enough to conclude that the information is forward looking or that the measurement of credit risk is appropriate. In that sense a qualitative assessment based on forward looking information might better reflect the measurement of credit risk than a statistical method using historical data. This section discusses some of the methods that might be used to measure credit risk and changes in credit risk including:

    (a)   Probability of default models (paragraphs 21 – 23);

    (b)   Prices for credit (paragraphs 24 – 27);

    (c)   Credit ratings (paragraphs 28 – 30);

    (d)   Delinquencies (paragraphs 31 – 37); and

    (e)   Other qualitative inputs (paragraphs 38 – 39).

15. These measures are considered as inputs to determine expected losses or as information to assess the criteria for lifetime losses in the three bucket model. In making the latter assessment this information would be used in order to determine whether the asset is investment grade and whether there has been a significant deterioration in credit quality from initial recognition (based on the staff recommendation to clarify the three bucket model).

16. Some of the above measures are convertible to other measures, for example an external credit rating can be converted to a probability of default and vice-versa. However, an entity should ensure it considers the limitations of a given measure when converting (for example, historical average default rates for a given rating should be adjusted for current circumstances and future expectations). Thus, the

outcome of the assessment of the criteria should be the same regardless of the method used. As noted previously, that assessment would be more persuasive if supported by more than one measure of credit risk, if they are determined independently (for example a change in credit rating that is also supported by a change in credit spread).

17.   In Appendix A a table is included to illustrate how this information could be used in the assessment of the lifetime loss criteria for the three bucket model (based on the staff's recommended clarification of that model).

Probability of default models

18.   The probability of default is a statistic that can be estimated or derived from multiple sources of data, including an entity's own default studies and statistical models, external default studies conducted by rating agencies or models that compute a probability of default from market data such as yield spreads, credit default swaps and macro-economic inputs.

19.   From an operational perspective banks expressed significant concerns about the proposal that the criteria be assessed based on the *lifetime* PD. This would mean that an entity would need to determine both the lifetime and 12 month PD for all assets with a 12 months' expected losses measure.[2] Because the banks' credit risk management systems are geared towards a 12 month PD, banks suggested that the criteria should be assessed based on that measure. They also argued that this measure would be the most robust and will already be used for the 12 month expected losses measurement.

20.   Ideally, the staff think that, the credit risk curve should be projected for an asset (or class of assets with similar credit characteristics) to assess the two criteria – the credit quality and the change in quality would be assessed against that curve. However, the staff think that a reasonable approximation could be achieved

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[2] To determine whether recognition of lifetime expected losses are required and to calculate the 12 month expected losses measure respectively.

using a 12 month probability of default (if the assessment is done on a PD basis). This is because a shift in the 12 month PD will usually result in a shift in the entire risk curve and this would generally be a reasonable assumption to make if there is no evidence that the risk curve is abnormal. Therefore, the assessment of the lifetime expected loss criteria needs not be unduly complex particularly for some respondents such as sophisticated banks who already calculate 12 month probability of default statistics for regulatory purposes.[3]

21. Under a probability of default approach, assessing the credit quality criterion requires an entity to determine the appropriate PD threshold and then assessing the PD of an asset against that threshold (for example, if the credit quality criterion is set at investment grade, the comparison is the highest PD for investment grade for an asset of the same maturity).

22. Assessing the deterioration criterion would require the tracking of the initial probability of default for an asset (or class of assets that are originated at the same level of credit risk). Secondly, it would require the setting of the required change in PD from initial recognition (for example determining when the change is regarded as significant considering the term of the asset at the initial credit quality).

23. Taking the above a step further, an entity's own measure of 12 months expected loss for an asset or assets can also be an indicator of a significant increase in credit risk. An increase in the measure of 12 months expected loss for a portfolio may indicate that further investigation is required to determine whether that increase is due to an increase in the probability of default or loss given default of a subset of assets in that portfolio (if a subset can be identified) or for the portfolio overall.

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[3] The staff notes that the same thinking applies if any of the other methods are used to measure credit risk and that measure is converted to a probability of default.

Prices for credit

24. The spread between a given interest bearing asset's market yield and a 'risk free' bond's market yield is typically considered by market participants as being a proxy for the price of credit. Conceptually, the spread includes some form of market assessment of probability of default and loss given default (ie the expected loss). This was the concept inherent in the original ED. However, other components are also included in that spread, including liquidity premiums and prices of other features. Consequently, changes in the spread cannot be directly linked to changes in the probability of default, and therefore cannot be directly converted to a probability of default.

25. However, under some circumstances changes in market prices of assets are correlated with changes in the underlying credit risk, with the strength of the link depending on facts and circumstances. For example, a change in price in a liquid market is typically seen as a better measure of credit risk than a change in price in an illiquid market. Because of the practical problems in isolating changes in credit risk from changes in overall prices, it would be beneficial to corroborate changes in market pricing with other information, such as macro-economic changes, specific news items about a company or other changes in a company's business risk. Changes in pricing should therefore seldom be looked at in isolation.

26. In assessing the credit risk against the deterioration criteria (for example in considering whether the change is significant based on the staff's recommendation), an entity would be required to determine whether a change in price implies a change in the probability of default (ie credit risk), or in another component of the price.

27. In assessing the credit risk against the credit quality criteria (for example if the credit quality criteria was set at investment grade level), then given assumptions about loss given default, the criteria could, for example, be assessed by comparing credit spreads or credit default swap prices of the lowest investment grade asset (or a reference index of such bonds) to the credit spread or credit

default swap prices for the asset in question. The use of market prices does not
need to be limited to market prices available for a particular asset, because
changes in market prices for assets with similar characteristics may also be
relevant indicators of changes in credit quality. This could be the case for
changes in the interest rate charged for loans to companies operating in the same
industry or in the interest rate charged to a particular class of retail customers.
Such a change could indicate that risk factors have changed for that class of
customers or for loans to companies in that specific industry.

Credit ratings and scores

28.   As noted previously, there is a wide variety of credit rating systems in place,
        both external and internal, absolute (cardinal) and relative (ordinal, ie rank-
        ordering).

29.   External ratings are only available on some assets. If the reporting entity does
        not have access to private syndicate level of information (ie a bilateral lending
        relationship does not exist with the obligor), external rating information may be
        one of the few sources of information available about the credit risk of an entity.
        When available, external ratings would be a useful tool in assessing the criteria,
        because ratings consider the relationship between credit risk and the term and
        initial credit risk (refer Agenda Paper 5B). Thus change in credit rating might
        be considered as an indicator of a significant change in credit risk. An entity
        would need to determine when a change in rating meets the deterioration
        criterion as decided by the IASB.

30.   Ratings systems are inherently arbitrary and are influenced by factors other than
        credit risk, including an entity's business practices. While the range of credit
        risk for credit ratings in lower risk categories should be tighter than higher risk
        categories, the distinction and the rate of growth may vary depending on how
        the rank-ordering is defined. This could be because an entity may have more
        volume in one category than another, therefore a finer analysis of credit risk
        may be required for business purposes and that would also be supported by

sufficient data points. Ratings systems would also change over time as information emerges. *Thus, if internal ratings are used, these should either be mapped to external ratings or supported by default studies that show that the ratings are appropriate for use in credit risk assessment.* If an entity assesses the criteria based on internal ratings and changes in those ratings, clearly the effect of the entity's credit risk practices become particularly pronounced - this emphasises the importance of confirmatory information.

Delinquencies

31.   Participants in our outreach noted that, for many retail portfolios, data on probability of default or price is not available. Instead, those loans are typically managed on a delinquency basis. In particular many banks, especially less sophisticated ones noted that no other information is available for assessing the credit risk of retail assets that is more forward-looking, without undue cost or effort. Credit risk information is used to make initial lending decisions but then it is often not updated and generally is not updated on a timely basis.

32.   Delinquency could be used both to determine credit quality and deterioration. Allowing delinquency to be used to assess the criteria would help those that do not have any more forward looking information and also it would enable a single set of information to be used to assess both criteria. However, delinquency is a lagging indicator of deterioration in credit risk. Relying on delinquency is similar to recognising the lifetime loss when losses are incurred (or at best would bring the recognition forward only marginally). However, in some cases it seems that it is the only information available without undue cost and effort. *The staff believe that if the IASB agrees that delinquencies can be used it should be clear that delinquencies should only be used in isolation in the absence of more forward looking information.*

33.   Other information should exist prior to delinquency that would indicate an increase in credit risk, including information that is not specific to the borrower but is relevant to portfolios or classes of assets such as changes in macro-

economic indicators including unemployment and economic growth. However to take this information into consideration will require an entity to model credit risk and identify sub-populations of the portfolio that would react differently to information.

34. Ideally, if delinquency information was used it should be on the basis of understanding the relationship between delinquencies and expectations of default. However, when delinquency information is used as a backstop, a rebuttable presumption could be included in the model that both criteria for the recognition of lifetime expected losses are met if an asset is 30 days past due. That presumption could be rebutted if there is other information (such as default studies) that show that 30 days past due is not a suitable indicator of deterioration for an asset (or group of assets).

35. Delinquencies are a lagging indicator of credit deterioration. Therefore as a general observation it is expected that when more forward looking information is used, assets should meet the criteria before becoming delinquent. For that reason the staff recommend that a 30 day past due presumption should be applicable irrespective of the information used to apply the model (ie it should not be confined to those using delinquency information in isolation).

36. The staff have included this in the suggested application guidance in Appendix A.

37. In the staff's view, the IASB should require disclosure of whether and how the entity has rebutted the presumption that assets 30 days past due have not met the criteria for lifetime loss recognition.

Qualitative assessment

38. In some cases the qualitative information available may be sufficient to determine that an asset has satisfied the deterioration criterion. That is, the information does not need to flow through a statistical model or ratings process in order to be used to assess deterioration and credit quality.

39.   Price and credit risk are a function of the information available. The above
        discussion about different methods is not intended to preclude an entity from
        making an assessment of changes in credit risk based on information directly
        (for example undertaking fundamental credit analysis) without using statistical
        models, or observing prices. The list in Appendix A includes information that is
        typically considered in a fundamental credit analysis.

Specificity of guidance

40.   The clarifications set out above would provide more clarity about the
        information that should be considered to assess the lifetime loss criteria and
        about how that information could be used to assess the criteria (as illustrated in
        Appendix A).

41.   Entities would however still be required to determine when a change meets the
        deterioration criteria ie when deterioration is considered significant. The Board
        could go a step further and specify when a change is considered to be significant
        eg by stating that a change in 12 month PD of 5% is significant or that a one
        notch change in external rating is considered significant.

42.   However, the staff do not recommend doing this. The staff believe that the
        changes proposed in the rearticulation of the criteria in Agenda Paper 5B in
        conjunction with confirmation of relevant information as set out in this paper
        provide greater clarity than before. Entities would know what they need to
        assess. The assessment of credit risk and measurement of expected losses is
        inherently subjective, therefore specifying further what is significant would be
        arbitrary and may inadvertently prevent entities from being able to make a
        sensible assessment based on the information they have available and their own
        credit risk knowledge if the criteria are too prescriptive. In addition, the staff do
        not think that the IASB can specify when factors such as qualitative changes
        will cause a significant deterioration in credit risk - in such cases it is
        unavoidable that a more holistic assessment of credit quality is needed.

Staff recommendation

43.   The staff recommend that the above types of information be included in application guidance as sources of information to determine expected losses and to assess when lifetime expected losses shall be recognised as set out in Appendix A. The most relevant information would depend on facts and circumstances and the staff would recommend that guidance also be included that sets out the concepts in paragraphs 8 - 16.

44.   The staff do not recommend prescribing in more detail in the criterion *when* the deterioration criteria is satisfied.

45.   To address questions raised regarding application challenges the staff recommend that the Board allow the use of delinquency information. However, as delinquency is a lagging indicator the staff are of the view that it is only appropriate that it be relied upon in isolation to assess the criteria when that information is the basis of the credit risk management for the relevant assets and only where more forward looking information is not available without undue cost and effort.

46.   In addition, the staff recommend that entities be permitted to use 12 month PD rather than lifetime PDs to assess the lifetime loss criteria consistent with the analysis in Agenda Paper 5B.

Question for the Board

(1)   Does the Board agree that the information used to determine expected losses and to assess the need to recognise lifetime expected losses should include probabilities of default, pricing information, credit ratings and other qualitative inputs as illustrated in Appendix A?

(2)   Does the Board agree that delinquency information can be used to determine expected losses and to assess the need to recognise lifetime expected losses? Does the Board want to specify that delinquency information should only be used in isolation for this purpose when

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    (i)   it forms the basis for the credit risk management of the relevant assets

    (ii)   only where more forward looking information is not available without undue cost and effort?

(3)   Does the Board agree with the inclusion of a rebuttable presumption that both lifetime loss criteria are met if the asset is 30 days past due and to require disclosure of how the entity has rebutted the presumption that assets 30 days past due have not met the criteria for lifetime loss recognition?

(4)   Does the Board agree that entities be permitted to use 12 month PD rather than lifetime PDs to assess the lifetime loss criteria [if there is no evidence that the risk curve is abnormal]?

Appendix A – Suggested application guidance for assessment of lifetime loss criteria

This appendix includes an illustration of application guidance that could be included in the exposure draft for the assessment of the lifetime loss criteria based on the staff recommendation in Agenda Paper 5B.

Information to consider in making the evaluation

In evaluating whether recognition of lifetime expected losses is required, an entity shall consider the information that might affect the asset's probability of a loss. Consideration of the following factors may assist when making that evaluation:

	Deterioration criteria	Credit quality criteria
External indicators		
external market indicators of credit risk, for a particular financial asset or similar financial assets with the same term. Changes in market indicators of credit risk include, but are not limited to: (a) credit spread	significant changes in market indicators of credit risk (for example observed change in market prices). Other changes in re-origination rates or terms; ie, if an existing financial asset was newly originated or issued at the reporting date, it would be originated or issued with terms that	market indicators of credit risk are greater than for the lowest quality investment grade asset with the same tenor (eg the credit margin on the asset is higher than for an investment grade asset of the same maturity).

(b) credit default swap prices for the borrower. (c) the length of time and the extent to which the fair value of a financial asset has been less than the amortised cost.	would be significantly different (such as more stringent covenants, increased amounts of collateral or guarantees, or higher income coverage) because of changes in the credit risk of the asset since inception.	
External credit ratings	an actual or expected change in credit rating for the borrower.	the credit rating for the borrower is below investment grade.
Internal indicators		
internal price indicators of credit risk include, but are not limited to the credit spread that would result if a particular financial asset or similar financial assets with the same term were newly originated or issued at the reporting date.	significant changes in internal price indicators as a result of change in credit quality since inception. Other changes in re-origination rates or terms; that is, if an existing financial asset was newly originated or issued at the reporting date, it would be originated or issued with terms that would be significantly different (such as more stringent covenants, increased amounts of	internal price indicators of credit risk are worse than the market indicators of credit risk for the lowest quality investment grade asset with the same term.

	collateral or guarantees, or higher income coverage) because of changes in the credit risk of the asset since inception.	
Internal credit ratings (an entity would have to ensure these are mapped to external ratings or supported by default studies)	an actual or expected credit rating downgrade for the borrower.	a credit rating for the borrower that is below investment grade.
General economic or market conditions:		
Uncertainty or exposure to adverse business, financial or economic conditions	existing or forecast adverse *changes in conditions* that are expected to cause a reassessment of the future ability of the borrower to meet its obligations;	*major ongoing* uncertainties or exposure which could lead to the borrower's inadequate capacity to meet its obligations.
Borrower-specific factors		
for example, operating results of the entity (ie, trends and projections in operating results), operating risks, prospects for future business, working capital, asset quality, balance sheet	Significant changes in factors specific to the borrower; for example, declining revenues or margins, increase in operating risks, working capital deficiencies, decreased asset quality,	Factors consistent with a non-investment grade rating that are expected to give rise to major ongoing uncertainties or exposure which could lead to the borrower's inadequate capacity to

leverage, liquidity and management.	increased balance sheet leverage, liquidity or management problems, that are expected to cause a reassessment of the future ability of the borrower to meet its obligations; or the discontinuance of a segment of the business that is expected to negatively affect the future earnings potential of the borrower - that results in a significant change in credit risk	meet its obligations.
the regulatory, economic, or technological environment of the borrower	an actual or expected significant adverse change in the environment of the borrower that results in a significant change in credit risk	The environment of the borrower gives rise to major ongoing uncertainties or exposure which could lead to the borrower's inadequate capacity to meet its obligations.
value of collateral supporting the obligation and quality of third party guarantees or credit enhancements	changes in the value of the collateral, which are expected to reduce the borrower's economic incentive to make scheduled contractual payments and that results in a significant change in credit risk	

credit quality enhancements/support including consideration of the financial condition of the guarantor and/or, for interests issued in securitisations, whether subordinated interests are expected to be capable of absorbing estimated losses (eg, on the loans underlying the security)	changes, such as reductions in financial support from a parent entity or other affiliate, an actual or expected significant change in the quality of credit enhancement, if any that results in a significant change in credit risk	
Legal framework of the asset	Expected changes in the loan documentation including an expected breach of contract which may lead to covenant amendments, interest payment holidays, interest rate step ups, requiring additional collateral or guarantees, or other recalibrations of the legal framework of the asset taking into account the borrower's financial performance that results in a significant change in credit risk	
changes in expected performance of the borrower, including changes in the expected payment status of borrowers in the group (eg, an increase in the expected number or extent of delayed contractual payments or a significant increase in the expected number of credit card borrowers who are		

expected to reach their credit limit or who are expected to be paying the minimum monthly amount).		
Credit risk management	changes in the reporting entity's credit management approach in relation to the asset: that is, based on emerging indicators of changes in credit quality of the financial asset, the entity's credit risk management practice is expected to become more active or focused in managing the loan, including a loan becoming closely monitored or controlled, or the entity specifically intervening with the borrower	Credit risk management is more active or focused in managing the loan, a loan is closely monitored or controlled and the entity specifically intervenes with the borrower.
Lagging indicators		
Delinquency	Rebuttable presumption that both criteria are met when payments are 30 days past due. Alternatively the entity can map delinquencies and recovery rates to show which delinquencies meet the criteria.	
other lagging indicators, including the criteria for identifying whether an asset is credit-	Presumed to meet both criteria.	

impaired on initial recognition (objective evidence of impairment); however information will typically be available that the probability of a loss has increased before that loss occurs.	