

In depth

A look at current financial reporting issues



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IFRS 9 – Expected credit losses

At a glance

On July 24, 2014 the IASB published the complete version of IFRS 9, *Financial instruments*, which replaces most of the guidance in IAS 39. This includes amended guidance for the classification and measurement of financial assets by introducing a fair value through other comprehensive income category for certain debt instruments. It also contains a new impairment model which will result in earlier recognition of losses.

No changes were introduced for the classification and measurement of financial liabilities, except for the recognition of changes in own credit risk in other comprehensive income for liabilities designated at fair value through profit or loss. It also includes the new hedging guidance that was issued in November 2013. These changes are likely to have a significant impact on entities that have significant financial assets and in particular financial institutions. IFRS 9 will be effective for annual periods beginning on or after January 1, 2018, subject to endorsement in certain territories.

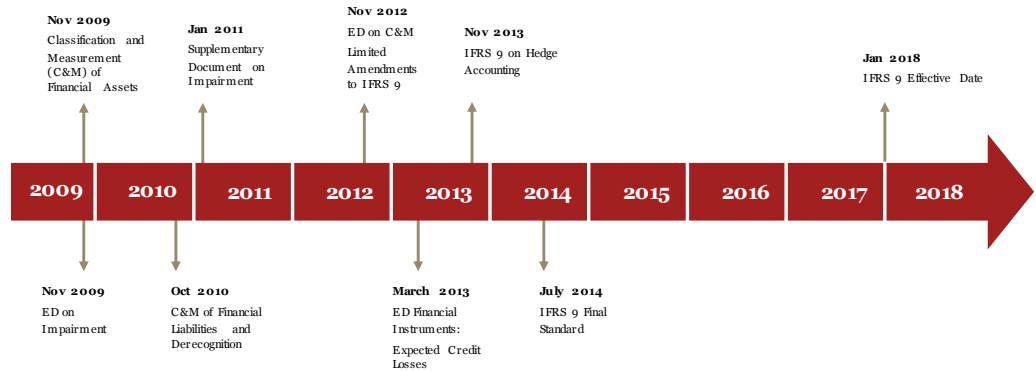
This publication considers the new impairment model. Further details on the changes to classification and measurement of financial assets are included in [In depth US2014-05, IFRS 9 - Classification and measurement](#). The general hedging model is covered in [Dateline 2014-03, Accounting for hedging activities - IASB new general hedge accounting requirements](#).

Background

.1 During the financial crisis, the G20 tasked global accounting standard setters to work towards the objective of creating a single set of high-quality global standards. In response to this request, the IASB and FASB began to work together on the development of new financial instruments standards. The IASB decided to accelerate its project to replace IAS 39, and sub-divided it into three main phases: classification and measurement; impairment; and hedging. Macro hedging¹ is being considered as a separate project.

¹ The Discussion Paper on Accounting for Dynamic Risk Management: a Portfolio Revaluation Approach to Macro Hedging was issued in April 2014.

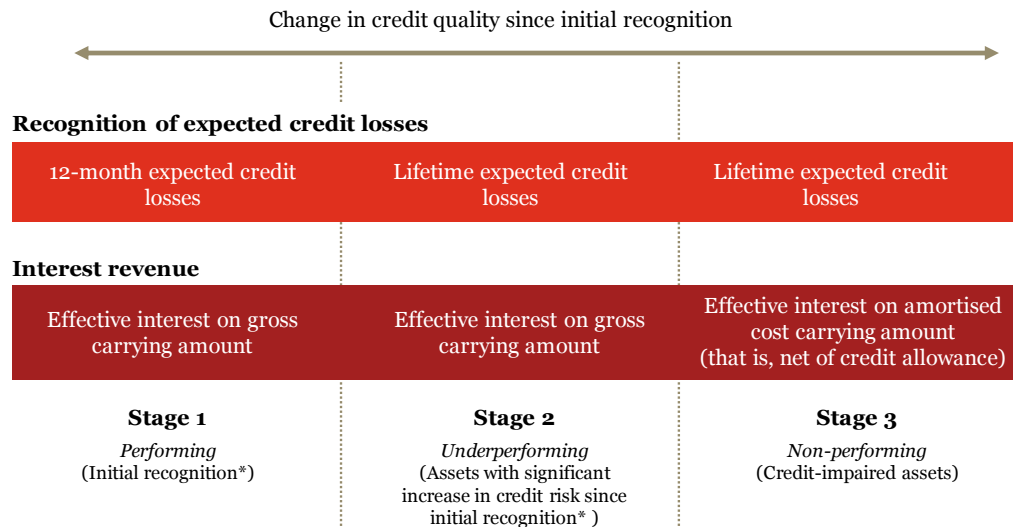
Timeline – IFRS 9



.2 At the beginning of the project the FASB and IASB worked jointly on both the classification and measurement and the impairment projects. However, due to lack of support for a three-stage approach for the recognition of impairment losses in the US, the FASB developed a single measurement model, while the IASB decided to continue with the three-stage model. In addition, the FASB decided it would not continue to pursue a classification and measurement model similar to the IASB. As a consequence, IFRS 9 is not a converged standard.

Overview of the model

.3 As stated above, the new standard outlines a ‘three-stage’ model (‘general model’) for impairment based on changes in credit quality since initial recognition:



(*) There is specific guidance on purchased or originated credit-impaired financial assets (see ‘Scope exception from the general model: purchased or originated credit-impaired assets below).

Stage 1 includes financial instruments that have not had a significant increase in credit risk since initial recognition or that have low credit risk at the reporting date. For these assets, 12-month expected credit losses (‘ECL’) are recognized and interest revenue is calculated on the gross carrying amount of the asset (that is, without deduction for credit allowance). 12-month ECL are the expected credit losses that result from default events that are possible within 12 months after the reporting date. It is not the expected cash shortfalls over the 12-month period but the entire credit

loss on an asset weighted by the probability that the loss will occur in the next 12 months.

Stage 2 includes financial instruments that have had a significant increase in credit risk since initial recognition (unless they have low credit risk at the reporting date) but that do not have objective evidence of impairment. For these assets, lifetime ECL are recognized, but interest revenue is still calculated on the gross carrying amount of the asset. Lifetime ECL are the expected credit losses that result from all possible default events over the expected life of the financial instrument. Expected credit losses are the weighted average credit losses with the probability of default ('PD') as the weight.

Stage 3 includes financial assets that have objective evidence of impairment at the reporting date. For these assets, lifetime ECL are recognized and interest revenue is calculated on the net carrying amount (that is, net of credit allowance).

.4 The standard requires management, when determining whether the credit risk on a financial instrument has increased significantly, to consider reasonable and supportable information available, in order to compare the risk of a default occurring at the reporting date with the risk of a default occurring at initial recognition of the financial instrument.

PwC observation:

The ECL model relies on a relative assessment of credit risk. This means that a loan with the same characteristics could be included in Stage 1 for one entity and in Stage 2 for another, depending on the credit risk at initial recognition of the loan for each entity.

Moreover, an entity could have different loans with the same counterparty that are included in different stages of the model, depending on the credit risk that each loan had at origination.

.5 An entity should apply a definition of default that is consistent with the definition used for internal credit risk management purposes for the relevant financial instrument, and it should consider qualitative factors (for example, financial covenants), where appropriate. However, there is a rebuttable presumption that default does not occur later than when a financial asset is 90 days past due, unless an entity has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.

PwC observation:

The '90 days past due' rebuttable presumption is supposed to serve as a backstop for those cases where no additional information can be obtained. The purpose of the rebuttable presumption is not to delay the default event until the financial asset becomes 90 days past due, but to ensure that entities will not define default later than that point without reasonable and supportable information.

PwC observation:

The new standard will apply to a wide range of entities, as its scope is not industry-specific. While non-financial institutions will have a practical expedient (as explained in the following pages) that will significantly reduce the amount of work needed for implementation, entities in the financial sector will not benefit from this expedient. All entities need to make an assessment of the implications of the new standard. It is expected that new requirements will involve modifying not only accounting policies but also credit management systems. An implementation group is being established by the IASB in order to deal with the most challenging aspects of implementation.

The model in detail

Scope

.6 The new model should be applied to:

- investments in debt instruments measured at amortized cost;
- investments in debt instruments measured at fair value through other comprehensive income (FVOCI);
- all loan commitments not measured at fair value through profit or loss;
- financial guarantee contracts to which IFRS 9 is applied and that are not accounted for at fair value through profit or loss; and
- lease receivables that are within the scope of IAS 17, Leases, and trade receivables or contract assets within the scope of IFRS 15 that give rise to an unconditional right to consideration².

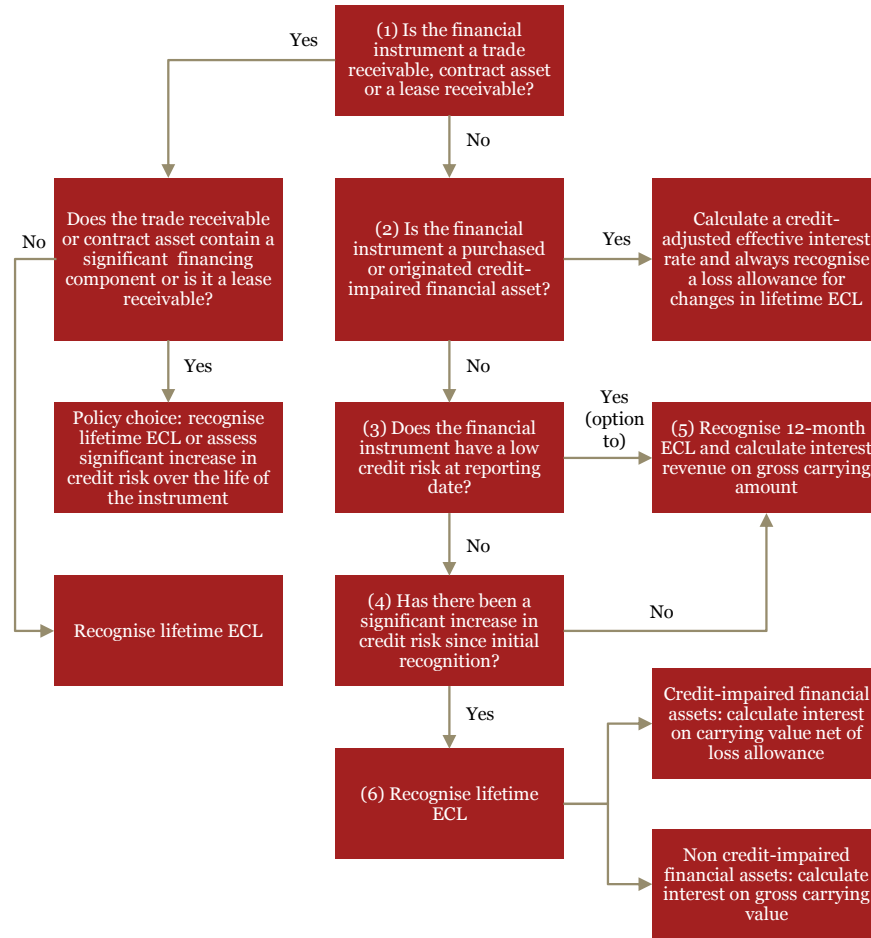
PwC observation:

The standard has removed the distinction that existed between loan commitments in the scope of IFRS 9 and those in the scope of IAS 37. An issuer of loan commitments should apply the impairment requirements of IFRS 9 to loan commitments that are not otherwise within the scope of the standard.

Setting the scene: the ECL model

The illustration below shows the overall ECL model; each decision box will be considered over the following pages:

² Entities applying IFRS 9 before adopting IFRS 15 should apply the impairment requirements to construction contracts under IAS 11 and IAS 18.



(1) Is the financial instrument a trade receivable, contract asset or a lease receivable?

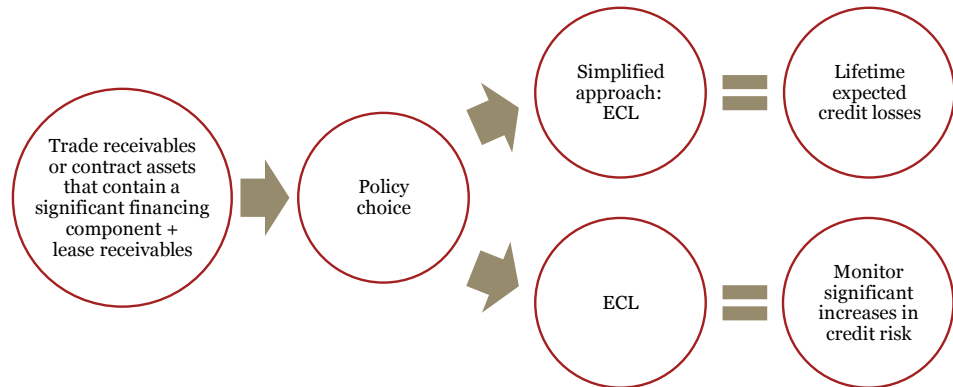
Scope exception from the general model: simplified approach for trade and lease receivables

.7 The model includes some operational simplifications for trade receivables, contract assets and lease receivables, because they are often held by entities that do not have sophisticated credit risk management systems. These simplifications eliminate the need to calculate 12-month ECL and to assess when a significant increase in credit risk has occurred.

.8 For trade receivables or contract assets that do not contain a significant financing component, the loss allowance should be measured at initial recognition and throughout the life of the receivable at an amount equal to lifetime ECL. As a practical expedient, a provision matrix may be used to estimate ECL for these financial instruments. See example 1 in the Appendix for reference.



.9 For trade receivables or contract assets which contain a significant financing component in accordance with IFRS 15 and lease receivables, an entity has an accounting policy choice: either it can apply the simplified approach (that is, to measure the loss allowance at an amount equal to lifetime ECL at initial recognition and throughout its life), or it can apply the general model.



.10 The policy choice should be applied consistently, but an entity can apply the policy election for trade receivables, contract assets and lease receivables independently of each other.

(2) Is the financial instrument a purchased or originated credit-impaired financial asset?

Scope exception from the general model: purchased or originated credit-impaired assets

.11 The general impairment model does not apply to purchased or originated credit-impaired assets. A financial asset is considered credit-impaired on purchase or origination if there is evidence of impairment (as defined in IFRS 9 Appendix A) at the point of initial recognition (for instance, if it is acquired at a deep discount).

.12 For such assets, impairment is determined based on full lifetime ECL on initial recognition. However, lifetime ECL are included in the estimated cash flows when calculating the effective interest rate on initial recognition. The effective interest rate for interest recognition throughout the life of the asset is a credit-adjusted effective interest rate. As a result, no loss allowance is recognized on initial recognition.

.13 Any subsequent changes in lifetime ECL, both positive and negative, will be recognized immediately in profit or loss.

PwC observation:

The accounting for purchased or originated credit-impaired assets is largely consistent with how entities currently apply paragraph AG5 of IAS 39.

(3) Does the financial instrument have a low credit risk at reporting date?

Practical expedient for financial assets with low credit risk

.14 As an exception to the general model, if the credit risk of a financial instrument is low at the reporting date, management can measure impairment using 12-month ECL, and so it does not have to assess whether a significant increase in credit risk has occurred. In order for this operational simplification to apply, the financial instrument has to meet the following requirements:

- it has a low risk of default;
- the borrower is considered, in the short term, to have a strong capacity to meet its obligations; and
- the lender expects, in the longer term, that adverse changes in economic and business conditions might, but will not necessarily; reduce the ability of the borrower to fulfil its obligations.

.15 The credit risk of the instrument needs to be evaluated without consideration of collateral. This means that financial instruments are not considered to have low credit risk simply because that risk is mitigated by collateral. Financial instruments are also not considered to have low credit risk simply because they have a lower risk of default than the entity's other financial instruments or relative to the credit risk of the jurisdiction within which the entity operates.

PwC observation:

The use of the practical expedient is optional. That is, management can choose to apply the general model for those assets that would meet the low credit risk requirements.

It is expected that this operational simplification will provide relief to entities especially financial institutions, such as insurers, who hold large portfolios of securities with high credit ratings. This expedient will avoid having to assess whether there are significant increases in credit risk for financial assets with low credit risk.

.16 Financial instruments are not required to be externally rated. An entity can use internal credit ratings that are consistent with a global credit rating definition of 'investment grade'.

.17 The low credit risk simplification is not meant to be a bright-line trigger for the recognition of lifetime ECL. Instead, when credit risk is no longer low, management should assess whether there has been a significant increase in credit risk to determine whether lifetime ECL should be recognized. This means that just because an instrument's credit risk has increased such that it no longer qualifies as low credit risk, it is not automatically included in Stage 2. Management needs to assess if a significant increase in credit risk has occurred before calculating lifetime ECL for the instrument.

Exploring the general model: assessing a significant increase in credit risk

.18 When assessing whether the credit risk on a financial instrument has increased significantly since initial recognition, management looks at the change in the risk of a default occurring over the expected life of the financial instrument rather than the change in the ECL. An entity should compare the risk of a default as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition. If management chooses to make the assessment by using PD, generally a lifetime PD (over the remaining life of the instrument) should be used. However, as a practical expedient, a 12-month PD can be used if it is not expected to give a different result to using lifetime PDs.

(4) Has there been a significant increase in credit risk since initial recognition?

PwC observation:

There are cases where using a 12-month PD is not a reasonable approximation to using lifetime PD. These include, for example, bullet repayment loans where the payment obligations of the debtor are not significant during the first 12 months of the loan facility; or loans where changes in credit-related factors only have an impact on the credit risk of the financial instrument beyond 12 months. Example 2 in the Appendix illustrates a case where looking at 12-month PD would not be appropriate.

In order to perform the assessment all information available should be taken into account. When the financial instrument is collateralized, entities should assess significant increases in credit risk without taking into account the collateral. Nevertheless, when calculating ECL, the expected recovery from collateral should be taken into account. Example 3 in the Appendix reflects how the assessment should be done.

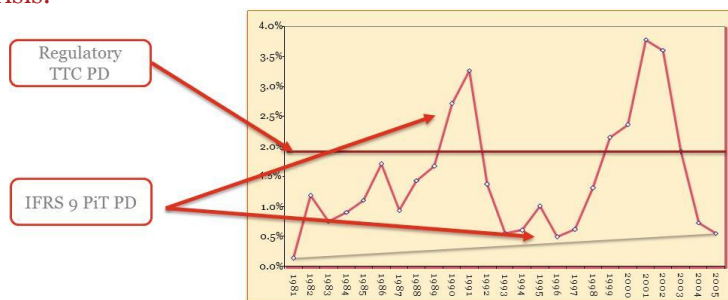
PwC observation:

The standard allows entities to make the assessment of changes in credit risk by using a 12-month PD where it would not be expected to give a different result to using lifetime PDs. This does not mean that the 12-month PD used for regulatory purposes can be used without adjustment.

Twelve-month expected credit losses used for regulatory purposes are normally based on ‘through the cycle’ (‘TTC’) probabilities of a default (that is, probability of default in cycle-neutral economic conditions) and can include an adjustment for prudence. PD used for IFRS 9 should be ‘point in time’ (‘PiT’) probabilities (that is, probability of default in current economic conditions) and do not contain adjustment for prudence. However, regulatory PDs might be a good starting point, provided they can be reconciled to IFRS 9 PDs.

Under IFRS 9, estimates of PD will change as an entity moves through the economic cycle. Under many regulatory models, as PD is calculated through the cycle, estimates are less sensitive to changes in economic conditions. Therefore, regulatory PDs reflect longer-term trends in PD behavior as opposed to PiT PDs.

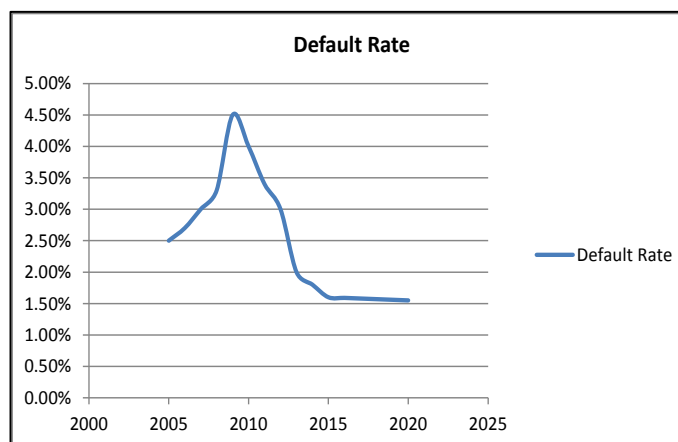
As a consequence, during a benign credit environment, IFRS 9 PD (PiT) will be lower than regulatory PD (TTC), while the adjustment will be the opposite during a financial crisis:



The standard does not provide any guidance on how to adjust TTC PD to PiT PD. The process is complex and will require the use of judgment.

PwC observation:

Management should be aware that a simple or absolute comparison of PDs at initial recognition and at the reporting date is not appropriate. All other things staying constant, the PD of a financial instrument should reduce with the passage of time. So, management needs to consider the relative maturities of a financial instrument at inception and at the reporting date when comparing PDs. This means that the PD for the remaining life of a financial asset at the reporting date (for example, two years if three years have already passed on a five-year instrument) should be compared to the PD expected at initial recognition for the last two years of its maturity (that is, for years 4 and 5). Management might find this requirement operationally challenging.



.19 When determining whether the credit risk on an instrument has increased significantly, management should consider reasonable and supportable best information available without undue cost or effort. This information should include actual and expected changes in external market indicators, internal factors and borrower-specific information.

Examples of ways in which the assessment of significant increases in credit risk could be implemented more simply include:

- ✓ Establishing the initial maximum credit risk for a particular portfolio by product type and/or region (the 'origination credit risk') and comparing that to the credit risk at the reporting date. This would only be possible for portfolios of financial instruments with similar credit risk on initial recognition;
- ✓ Assessing increases in credit risk through a counterparty assessment, as long as such assessment achieves the objectives of the proposed model; and
- ✓ An actual or expected significant change in the financial instrument's external credit rating.

.20 The examples above are not exhaustive, so other ways of assessing a significant increase in credit risk might be used. Refer to Example 3 in the Appendix for an example on assessing increases in credit risk based on PD.

.21 Generally a financial instrument would have a significant increase in credit risk before there is objective evidence of impairment or before a default occurs. The standard requires both forward-looking and historical information to be used in order to determine whether a significant increase in credit risk has occurred.

.22 Lifetime ECL are expected to be recognized before a financial asset becomes delinquent. If forward-looking information is reasonably available, an entity cannot rely

solely on delinquency information when determining whether credit risk has increased significantly since initial recognition; it also needs to consider the forward-looking information. However, if information that is more forward-looking than past due status is not available, there is a rebuttable presumption that credit risk has increased significantly since initial recognition no later than when contractual payments are more than 30 days past due.

.23 This presumption can be rebutted if there is reasonable and supportable evidence that, regardless of the past-due status, there has been no significant increase in the credit risk: For example, where non-payment is an administrative oversight, instead of resulting from financial difficulty of the borrower. Another example is where management has access to historical evidence that demonstrates that there is no correlation between significant increases in the risk of a default occurring and financial assets on which payments are more than 30 days past due, but that evidence does not identify such a correlation when payments are more than 60 days past due.

.24 Generally, a significant increase in credit risk happens gradually over time and before the financial asset becomes credit-impaired or is in default. As a result, the lifetime ECL should not be delayed and is recognized before a financial asset is regarded as credit-impaired or in default.

Level at which the increase in credit risk assessment should be performed

.25 The model can be applied at an individual or portfolio level. However, some factors or indicators may not be identifiable at an instrument level. In such cases, the factors or indicators should be assessed at a portfolio level. Management cannot avoid calculating lifetime ECL by considering the assessment at an individual asset level only, if information available at portfolio level indicates that there has been an increase in credit risk for the instruments included in the portfolio.

.26 Depending on the nature of the financial instrument and the credit risk information available for particular groups of financial instruments, management might not be able to identify significant changes in credit risk for individual financial instruments before the financial instrument becomes past due. This might be the case for financial instruments, such as retail loans, for which there is little or no updated credit risk information that is routinely obtained and monitored on an individual instrument basis until a customer breaches the contractual terms.

.27 If changes in the credit risk for individual financial instruments are not captured before they become past due, a loss allowance based only on credit information at an individual financial instrument level would not faithfully represent the changes in credit risk since initial recognition.

.28 In some circumstances management does not have reasonable and supportable information that is available without undue cost or effort to measure lifetime ECL on an individual instrument basis. In that case, lifetime ECL should be recognized on a collective basis that considers comprehensive credit risk information. This comprehensive credit risk information must incorporate not only past-due information but also all relevant credit information, including forward-looking macro-economic information, in order to approximate the result of recognizing lifetime ECL when there has been a significant increase in credit risk since initial recognition on an individual instrument level.

.29 Management can group financial instruments on the basis of shared credit risk characteristics with the objective of facilitating an analysis that is designed to enable significant increases in credit risk to be identified on a timely basis. The entity should not obscure this information by grouping financial instruments with different risk

characteristics. Examples of shared credit risk characteristics might include, but are not limited to:

- a. the instrument type;
- b. the credit risk ratings;
- c. the collateral type;
- d. the date of origination;
- e. the remaining term to maturity;
- f. the industry;
- g. the geographical location of the borrower; and
- h. the value of collateral relative to the commitment if it has an impact on the probability of a default occurring (for example, non-recourse loans in some jurisdictions or loan-to-value ratios).

PwC observation:

IFRS 9 provides some examples of how to perform the portfolio analysis. It establishes that individual exposures could be grouped into sub-portfolios on the basis of common borrower-specific characteristics, such as geographical location or postcodes, headroom/access affordability at origination or behavioral scoring (that is, ‘bottom up’ approach). Alternatively management could estimate the proportion of the portfolio that has experienced a significant increase in credit risk using general information and calculate expected credit losses on that basis (that is, ‘top down’ approach). Example 4 in the Appendix illustrates these approaches.

If management does not have forward-looking information available at an individual level, and therefore assesses significant increases in credit risk using past-due information only (‘bottom up’ approach), the standard requires management to also consider forward-looking information at a portfolio level in order to determine whether there has been a significant increase in credit risk (‘top down’ approach).

(5) Recognize 12-month ECL and calculate interest revenue on gross carrying amount

(6) Recognize lifetime ECL

Measuring ECL

.30 ECL are a probability-weighted estimate of credit losses. A credit loss is the difference between the cash flows that are due to an entity in accordance with the contract and the cash flows that the entity expects to receive discounted at the original effective interest rate. Because ECL consider the amount and timing of payments, a credit loss arises even if the entity expects to be paid in full but later than when contractually due.

.31 The illustration below shows the ECL for a financial asset and a loan commitment:

Financial assets

.32 ECL represent a probability-weighted estimate of the difference over the remaining life of the financial instrument, between:



Undrawn loan commitments

.32 ECL represent a probability-weighted estimate of the difference over the remaining life of the financial instrument, between:

Present value of contractual cash flows if holder draws down	≠	Present value of cash flows the entity expects to receive if drawn down
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.33 The time value of money must be taken into account when calculating the ECL (regardless of whether it is the 12-month or the lifetime ECL). Management should discount the cash flows that it expects to receive at the effective interest rate determined at initial recognition, or an approximation thereof in order to calculate ECL. If a financial instrument has a variable interest rate, ECL should be discounted using the current effective interest rate.

.34 When calculating ECL on financial assets classified in the FVOCI category, movements in the ECL provision will impact profit or loss ('P&L'). Under the model, impairment charges in P&L will always occur earlier as compared to current IAS 39 guidance, and this is no different for financial assets classified in the FVOCI category. Example 5 in the Appendix illustrates the estimation of credit losses for FVOCI financial assets.

.35 An estimate of ECL on loan commitments should be consistent with expectations of draw-downs on that loan commitment. That is, management should consider the expected portion of the loan commitment that will be drawn down within 12 months of the reporting date when estimating 12-month ECL and the expected portion of the loan commitment that will be drawn down over the expected life of the loan commitment when estimating lifetime ECL.

.36 For a financial guarantee contract, management is required to make payments only in the event of a default by the debtor in accordance with the terms of the instrument that is guaranteed. Accordingly, cash shortfalls are the expected payments to reimburse the holder for a credit loss that it incurs, less any amounts that management expects to receive from the holder, the debtor or any other party. If the asset is fully guaranteed, the estimation of cash shortfalls for a financial guarantee contract would be consistent with the estimations of cash shortfalls for the asset subject to the guarantee.

.37 For a financial asset that is credit-impaired at the reporting date, but that is not a purchased or originated credit-impaired financial asset, an entity should measure the ECL as the difference between the asset's gross carrying amount and the present value of estimated future cash flows discounted at the financial asset's original effective interest rate. Any adjustment is recognized in profit or loss as an impairment gain or loss.

PwC observation:

The standard establishes that management needs to take into account credit risk management actions that are taken once an exposure has deteriorated (such as the reduction or removal of undrawn limits) when estimating the period over which to calculate ECL on loan commitments.

This could affect loan commitments where the agreement establishes an adjustment to interest rates at draw-down which compensates for credit risk. Entities might need to take this feature into account when estimating ECL on the loan commitments.

(5) Recognize 12-month ECL and calculate interest revenue on gross carrying amount

(6) Recognize lifetime ECL

Period over which to estimate ECL

.38 For loan commitments, the maximum period over which ECL should be measured is the maximum contractual period over which the entity is exposed to credit risk.

.39 Some financial instruments include both a loan and an undrawn commitment component, such as revolving credit facilities. In such cases, the contractual ability to demand repayment and cancel the undrawn commitment does not necessarily limit the exposure to credit losses beyond the contractual period. For those financial instruments, management should measure ECL over the period that the entity is exposed to credit risk and ECL would not be mitigated by credit risk management actions, even if that period extends beyond the maximum contractual period. Example 6 in the Appendix illustrates this approach.

.40 For those types of instrument, the factors to be considered when determining the period over which to estimate ECL are:

- the period over which the entity was exposed to credit risk on similar instruments;
- the length of time for related defaults to occur on similar financial instruments following an increase in credit risk; and
- the credit risk management actions that an entity expects to take once the credit risk on the financial instrument has increased, such as the reduction or removal of undrawn limits.

PwC observation:

The standard is clear that this exception to the recognition of ECL only applies to instruments that include both a loan and an undrawn commitment component where the ability to demand repayment and cancel the undrawn commitment does not limit the exposure to credit losses. It should not be applied to other types of instruments. Management will need to apply significant judgment in order to determine the behavioral life of these types of instrument such as credit cards.

(5) Recognize 12-month ECL and calculate interest revenue on gross carrying amount

(6) Recognize lifetime ECL

Measurement of ECL: what information to consider

.50 The standard establishes that management should measure expected credit losses over the remaining life of a financial instrument in a way that reflects:

- an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes;
- the time value of money; and
- reasonable and supportable information about past events, current conditions and reasonable and supportable forecasts of future events and economic conditions at the reporting date.

.51 When estimating ECL, management should consider information that is reasonably available, including information about past events, current conditions and reasonable and supportable forecasts of future events and economic conditions. The degree of judgment that is required for the estimates depends on the availability of detailed information. See example 7 in the Appendix for some examples.

.52 For periods beyond 'reasonable and supportable forecasts', management should consider how best to reflect its expectations by considering information at the reporting

date about the current conditions, as well as forecasts of future events and economic conditions.

.53 As the forecast horizon increases, the availability of detailed information decreases, and the degree of judgment to estimate ECL increases. The estimate of ECL does not require a detailed estimate for periods that are far in the future – for such periods, management may extrapolate projections from available, detailed information.

PwC observation:

The standard is not specific on how to extrapolate projections from available information.

Different ways of extrapolation can be used. For example, management could apply the average ECL over the remaining period or use a steady rate of expected credit losses based on the last available forecast. These are only examples, and other methods might apply. Management should choose an approach and apply it consistently.

This is a highly judgmental area which could have a large impact on the allowance for impairment.

.54 The standard requires the estimate of ECL to reflect an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes. It is specific that at least two outcomes should be considered. In particular, management should consider the possibility of a credit loss occurring and the possibility that no credit loss occurs.

.55 In practice, this may not need to be a complex analysis. In some cases relatively simple modelling may be sufficient, without the need for a large number of detailed simulations of scenarios. For example, the average credit losses of a large group of financial instruments with shared risk characteristics may be a reasonable estimate of the probability-weighted amount. In other situations, multiple scenarios that specify the amount and timing of the cash flows for particular outcomes and the estimated probability of those outcomes may be needed.

Modifications

.56 Where an entity modifies the contractual cash flows of a financial asset, and the modification does not result in derecognition, the gross carrying amount of the asset should be adjusted to reflect the revised contractual cash flows. The new gross carrying amount should be determined as the present value of the estimated future modified contractual cash flows discounted at the asset's original effective interest rate. The resulting adjustment should be charged to profit or loss as a gain or loss on modification.

.57 Modified assets should be assessed to determine whether a significant increase in credit risk has occurred in the same way as any other financial instrument. Management should consider the credit risk at the reporting date under the modified contractual terms of the asset. This is compared to the credit risk at initial recognition under the original unmodified contractual terms of the financial asset. If this comparison does not show a significant increase in credit risk, the loss allowance should be measured at 12-month ECL. Example 8 in the Appendix illustrates this approach.

PwC observation:

The guidance included above is applicable only to those cases where the modification does not result in derecognition of the asset.

If the modification results in derecognition, the date of the modification would be treated as the date of initial recognition of the new financial asset, and significant increases in credit risk should be monitored against the credit risk at that date.

Collateral

.58 For measuring ECL, the estimate of expected cash shortfalls should reflect the cash flows expected from collateral and other credit enhancements that are part of the contractual terms and are not recognized separately by the entity.

.59 The estimate of expected cash shortfalls on a collateralized financial instrument reflects the amount and timing of cash flows that are expected from foreclosure on the collateral less the costs of obtaining and selling the collateral. This is irrespective of whether foreclosure is probable (that is, the estimate of expected cash flows considers the probability of a foreclosure and the cash flows that would result from it). Consequently, any cash flows that are expected from the realization of the collateral beyond the contractual maturity should be included in this analysis. Any collateral obtained as a result of foreclosure is not recognized as an asset that is separate from the collateralized financial instrument unless it meets the relevant recognition criteria for an asset.

Presentation

.60 Management should present interest revenue in the statement of comprehensive income as a separate line item. Impairment losses (including reversals of impairment losses or impairment gains) should also be presented as a separate line item.

.61 An entity should recognize ECL in the statement of financial position as:

- a loss allowance for financial assets measured at amortized cost and lease receivables; and
- a provision (that is, a liability) for loan commitments and financial guarantee contracts.

.62 For financial assets that are mandatorily measured at fair value through other comprehensive income, the accumulated impairment amount is not separately presented in the statement of financial position. However, an entity should disclose the loss allowance in the notes to the financial statements.

Disclosure

.63 Extensive disclosures are required to identify and explain the amounts in the financial statements that arise from ECL and the effect of deterioration and improvement in credit risk. Example of key disclosure requirements are presented below:

<i>Quantitative</i>	<i>Qualitative</i>
Reconciliation of opening to closing amounts of loss allowance showing key drivers of change	Inputs, assumptions and estimation techniques for estimating ECL
Reconciliation of opening to closing amounts of gross carrying amounts showing key drivers of change	Inputs, assumptions and estimation techniques to determine significant increases in credit risk and default
Gross carrying amounts by credit risk grade	Inputs, assumptions and techniques to determine credit-impaired assets
Write offs, recoveries and modifications	Write off policies, modification policies and collateral

.64 The new disclosures will represent a significant challenge for management (specifically for financial institutions) as the detailed level of information is likely to require significant changes to systems and processes.

.65 The standard and the implementation guidance set out the detail of the disclosures that are required to be provided.

Transition

.66 IFRS 9 allows entities to early adopt the standard. However, entities cannot early adopt previous versions of IFRS 9 after February 1, 2015. If management elects to early apply the standard after such date, it is required to apply all the provisions in the standard, including classification and measurement, hedge accounting and own credit risk.

.67 The standard is to be applied retrospectively. Restatement of comparatives is not required, but entities are permitted to restate comparatives if they can do so without the use of hindsight. If an entity does not restate comparatives, it should adjust the opening balance of its retained earnings for the effect of applying the standard in the year of initial application.

.68 IFRS 9 includes some operational simplifications in order to ease retrospective application. All these simplifications apply at the date of initial application, which is the date when an entity first applies the requirements of the standard. This date must be the beginning of a reporting period after the standard is issued.

Operational simplifications upon transition

- At the date of initial application in order to determine whether there has been a significant increase in credit risk since initial recognition, an entity may apply:
 - The low credit risk simplification for those financial instruments that are deemed to have low credit risk at the date of initial application.
 - The '30 days past due' rebuttable presumption if, and only if, management identifies significant increases in credit risk since initial recognition.
- If, at the date of initial application, determining the credit risk as at the initial recognition of a financial instrument would require undue cost or effort, the loss

allowance or provision should be determined only on the basis of whether the credit risk is low at each reporting date until the financial instrument is derecognized.

Transition disclosures

.69 On the date of initial application, management is required to disclose information that would permit the reconciliation of the ending impairment allowances in accordance with IAS 39 or the provisions in accordance with IAS 37 to the opening loss allowances determined in accordance with IFRS 9. For financial assets, this disclosure should be provided by the related financial assets' measurement categories in accordance with IAS 39 and IFRS 9, and should show separately the effect of the changes in the measurement category on the loss allowance at that date.

Implementation challenges

.70 This standard will be very challenging to apply, in particular for financial institutions.

.71 Currently, most entities do not collect the amount of credit information required by the standard. Entities will need to significantly modify their current credit and information systems in order to gather the required information.

.72 Management will need to build new models to determine both 12-month and lifetime ECL. This will require complex judgments (for example, definition of default, definition of low credit risk and behavioral life of revolving credit facilities). It is expected that the implementation process will require a significant amount of time before an entity will be in a position to comply with the requirements of the standard.

Appendix – Illustrative examples

Example 1: Use of a provision matrix

IFRS 9 includes the following example of how to estimate ECL when the trade receivables exception applies:

A non-financial institution holds trade receivables that do not have a significant financing component. In order to determine the amount of ECL to be recognized in the financial statements, it has set up a provision matrix based on its historical observed default rates which is adjusted for forward-looking estimates and establishes that ECL should be calculated as:

- non-past due: 0.3% of carrying value
- 30 days past due: 1.6% of carrying value
- 31-60 days past due: 3.6% of carrying value
- 61-90 days past due: 6.6% of carrying value
- more than 90 days past due: 10.6% of carrying value

Analysis: The standard allows for a provision matrix to be used for recognizing ECL on trade receivables. An entity needs to use its historical credit loss experience and more forward-looking information in order to establish the loss rates.

Example 2: Assessing increases in credit risk based on probability of default

The standard includes a number of examples of how to perform the assessment of whether there has been a significant increase in credit risk. We have included below one of the examples for illustration purposes.

Entity B acquires a portfolio of 1,000 five-year bullet repayment loans for CU1,000 each (that is, CU1,000,000 in total) with an average 12-month PD of 0.5 % for the portfolio. Entity B determines that, because the loans only have significant payment obligations beyond the next 12 months, changes in the 12-month PD would not be appropriate to determine whether there has been a significant increase in credit risk since initial recognition.

At the reporting date, Entity B determines that there has not been a significant increase in credit risk since initial recognition and estimates that the portfolio has an average loss given default ('LGD') of 25%. Entity B determines that it is appropriate to measure the loss allowance on a collective basis. Entity B measures the loss allowance on a collective basis at an amount equal to 12-month ECL.

Analysis: In this case, the entity assessed that using a 12-month PD to determine movements in **credit** risk was not a reasonable approximation of lifetime PD as the instrument had significant payments that were beyond the 12 month period.

Example 3: Assessing increases in credit risk based on probability of default

IFRS 9 includes a number of examples of how to perform the assessment of whether there has been a significant increase in credit risk. We have included below one of the examples for illustration purposes.

Company H owns real estate assets which are financed by a five-year loan from Bank Z with a PD of 0.5% over the next 12 months (the entity assessed that, for this particular instrument, changes in the 12-month ECL are considered a reasonable approximation of changes in lifetime ECL). The loan is secured with first-ranking security over the real estate assets.

Subsequent to initial recognition, the revenues and operating profits of Company H have decreased because of an economic recession. Furthermore, expected increases in regulation have the potential to further negatively affect revenue and operating profit. These negative effects on Company H's operations could be significant and ongoing.

As a result of these recent events and expected adverse economic conditions, Company H's free cash flow is expected to be reduced to the point that the coverage of scheduled loan payments could be tight. Bank Z estimates that a further deterioration in cash flows might result in Company H missing a contractual payment on the loan and becoming past due.

As a consequence of these facts, the PD has increased by 15% to 15.5%. At the reporting date, the loan to Company H is not considered to have low credit risk. Bank Z therefore needs to assess whether there has been a significant increase in credit risk since initial recognition, irrespective of the value of the collateral that it holds. It notes that the loan is subject to considerable credit risk at the reporting date because even a slight deterioration in cash flows could result in Company H missing a contractual payment on the loan. As a result, Bank Z determines that the credit risk (that is, the risk of a default occurring) has increased significantly since initial recognition. Consequently, Bank Z recognizes lifetime expected credit losses on the loan to Company H.

Although lifetime expected credit losses should be recognized, the amount of the expected credit losses will reflect the recovery expected from the collateral on the property value and might result in the expected credit loss being very small.

Analysis: In this case, the bank considered both PD and other information (such as macroeconomic and client-specific information), in order to determine whether a significant increase in credit risk occurred. An assessment based on LGD information only would not have identified that credit risk has increased significantly for the asset. Nevertheless, when calculating ECL the bank should factor in the expected recovery from collateral.

Example 4: Responsiveness to changes in credit risk (individual and portfolio assessments)

IFRS 9 includes a number of examples of how to perform the individual and portfolio analysis. We have included below one of the examples for illustration purposes. Bank ABC provides mortgages to finance residential real estate in three different regions. The bank sets its acceptance criteria based on credit scores, and loans with a credit score above the 'acceptance level' are approved, as these borrowers are

considered to be able to meet contractual payment obligations. When new mortgage loans are originated, Bank ABC uses the credit score to determine the risk of a default occurring as at initial recognition.

Individual assessment

In Region One, Bank ABC assesses each of its mortgage loans on a monthly basis by means of an automated behavioral scoring process that is based on current and historical past due statuses, indebtedness, loan-to-value measures ('LTV measures'), customer behavior on other financial instruments with Bank ABC, the loan size and the time since the origination of the loan. Bank ABC updates LTV measures on a regular basis through an automated process that re-estimates property values using recent sales. Historical data indicates a strong correlation between the value of residential property and default rates for mortgages, which is factored into the behavioral score. Bank ABC is able to identify significant increases in credit risk since initial recognition on individual customers before a mortgage becomes past due if there has been deterioration in the behavioral score.

When the increase in credit risk has been significant, a loss allowance at an amount equal to lifetime ECL is recognized; otherwise, a loss allowance at an amount equal to 12-month ECL continues to be recognized. The loss allowance is measured using LTV measures to estimate the severity of the loss. If Bank ABC is unable to update behavioral scores, for example, to reflect the expected declines in property prices, it uses reasonable and supportable information that is available without undue cost or effort to undertake a portfolio assessment to determine the loans on which there has been a significant increase in credit risk since initial recognition and recognize lifetime expected credit losses for those loans.

Portfolio assessment

In Regions Two and Three, Bank ABC does not have an automated scoring capability. Instead, for credit risk management purposes, Bank ABC tracks the risk of a default occurring by means of past-due statuses. It recognizes a loss allowance at an amount equal to lifetime ECL for all loans that have a past-due status of more than 30 days past due. Although Bank ABC uses past-due status information as the only borrower-specific information, it also considers other reasonable and supportable forward-looking information that is available without undue cost or effort to assess whether lifetime ECL should be recognized on loans that are not more than 30 days past due. This is necessary in order to meet the objective in paragraph 5.5.4 of IFRS 9 of recognizing lifetime expected credit losses for all significant increases in credit risk.

Region Two includes a mining community that is largely dependent on the export of coal and related products. Bank ABC becomes aware of a significant decline in coal exports and anticipates the closure of several coal mines. Because of the expected increase in the unemployment rate, the risk of a default occurring on mortgage loans to borrowers in these areas who rely on the coal mines is determined to have increased significantly, even if those customers are not past due at the reporting date. Bank ABC segments its mortgage portfolio, by the industry within which customers are employed, to identify customers that rely on coal mining as the dominant source of employment (that is, 'bottom up' approach). For such groups of mortgages, Bank ABC recognizes a loss allowance at an amount equal to lifetime ECL while it continues to recognize a loss allowance at an amount equal to 12-month ECL for all other mortgages in Region Two. Newly originated loans to borrowers who rely on the coal mines in this community would, however, have a loss allowance at an amount equal to 12-month ECL, as they would not have experienced a significant increase in credit risk since initial recognition.

In Region Three, Bank ABC anticipates the risk of a default occurring and thus an increase in credit risk, as a result of an expected increase in interest rates during the expected life of the mortgages. Historically, an increase in interest rates has been a lead indicator of future defaults on mortgages in Region Three, especially when customers do not have a fixed interest-rate mortgage. Bank ABC determines that the variable interest-rate portfolio of mortgages in Region Three is homogenous and that, unlike for Region Two, it is not possible to identify particular sub-portfolios on the basis of shared risk characteristics that represent customers who are expected to have increased significantly in credit risk. However, as a result of the homogenous nature of the mortgages in Region Three, Bank ABC determines that an assessment can be made of a proportion of the overall portfolio that has significantly increased in credit risk since initial recognition (that is, a 'top down' approach can be used). Based on historical information, Bank ABC estimates that an increase in interest rates of 200 basis points will cause a significant increase in credit risk on 20% of the variable interest-rate portfolio. Therefore, as a result of the anticipated increase in interest rates, Bank ABC determines that the credit risk on 20% of mortgages in Region Three has increased significantly since initial recognition. Accordingly, Bank ABC recognizes lifetime ECL on 20% of the variable rate mortgage portfolio and a loss allowance at an amount equal to 12-month ECL for the remainder of the portfolio.

Analysis: In this case, where the individual assessment only takes into account past due information, the bank is required to complete an assessment of changes in credit risk at a portfolio level using more forward looking information. To complete this assessment, the bank has used both the 'bottom up' and the 'top down' approach based on the information available for each portfolio. Both approaches are acceptable according to the standard.

In addition, an entity should subdivide a portfolio if it identifies that there has been a significant increase in credit risk that applies only to a portion of a given portfolio. This might indicate that the risk characteristics have become different and therefore it is necessary to subdivide the portfolio.

Example 5: Estimating expected credit losses – FVOCI

IFRS 9 includes a number of examples of how to estimate ECL. We have included below one of the examples for illustration purposes.

An entity purchases a debt instrument with a fair value of CU1,000 on December 15, 20X0 and measures the debt instrument at fair value through other comprehensive income. The instrument has an interest rate of 5% over the contractual term of 10 years, and has a 5% effective interest rate. At initial recognition, the entity determines that the asset is not a purchased or originated credit-impaired asset.

	Debit	Credit
Financial asset – FVOCI	CU 1,000	
Cash		CU1,000

On December 31, 20X0 (the reporting date), the fair value of the debt instrument has decreased to CU950 as a result of changes in market interest rates. The entity determines that there has not been a significant increase in credit risk since initial recognition and that ECL should be measured at an amount equal to 12-month ECL, which amounts to CU30. For simplicity, journal entries for the receipt of interest revenue are not provided.

	Debit	Credit
Impairment expense (P&L)	CU30	
Other comprehensive income	CU20	
Financial asset – FVOCI		CU50

The cumulative loss in other comprehensive income at the reporting date was CU20. That amount consists of the total fair value change of CU50 (that is, CU1,000 – CU950) offset by the change in the accumulated impairment amount representing 12-month expected credit losses that was recognized (CU30).

On January 1, 20X1, the entity decides to sell the debt instrument for CU950, which is its fair value at that date.

	Debit	Credit
Cash	CU950	
Financial asset – FVOCI		CU950
Loss on sale (P&L)	CU20	
Other comprehensive income		CU20

Analysis: When calculating ECL on financial assets classified in the FVOCI category, movements in the ECL provision will impact P&L. Under the model, impairment charges in P&L will always occur earlier as compared to current IAS 39 guidance, and this is no different for financial assets classified in the FVOCI category.

Example 6: Revolving credit facilities

IFRS 9 includes an example of how to determine ECL on revolving credit facilities. We have included below one of the examples for illustration purposes.

Bank A provides co-branded credit cards to customers in conjunction with a local department store. The credit cards have a one-day notice period after which Bank A has the contractual right to cancel the credit card (both the drawn and undrawn components). However, Bank A does not enforce its contractual right to cancel the credit cards in the normal day-to-day management of the instruments and only cancels facilities when it becomes aware of an increase in credit risk and starts to monitor customers on an individual basis. Bank A therefore does not consider the contractual right to cancel the credit cards to limit its exposure to credit losses to the contractual notice period. For credit risk management purposes, Bank A considers that there is only one set of contractual cash flows from customers to assess and does not distinguish between the drawn and undrawn balances at the reporting date. The portfolio is therefore managed and expected credit losses are measured on a facility level.

At the reporting date, the outstanding balance on the credit card portfolio is CU60,000 and the available undrawn facility is CU40,000. Bank A determines the expected life of the portfolio by estimating the period over which it expects to be exposed to credit risk on the facilities at the reporting date, taking into account:

The period over which it was exposed to credit risk on a similar portfolio of credit cards;

The length of time for related defaults to occur on similar financial instruments; and

Past events that led to credit risk management actions because of an increase in credit risk on similar financial instruments, such as the reduction or removal of undrawn limits.

Bank A determines that the expected life of the credit card portfolio is 30 months. At the reporting date, Bank A assesses the change in the credit risk on the portfolio since initial recognition and determines that the credit risk on a portion of the credit card facilities representing 25% of the portfolio has increased significantly since initial recognition. The outstanding balance on these credit facilities for which lifetime expected credit losses should be recognized is CU20,000 and the available undrawn facility is CU10,000.

When measuring the expected credit, Bank A considers its expectations about future draw-downs over the expected life of the portfolio (that is, 30 months) and estimates what it expects the outstanding balance (that is, exposure at default) on the portfolio would be if customers were to default. By using its credit risk models, Bank A determines that the exposure at default on the credit card facilities for which lifetime expected credit losses should be recognized is CU25,000 (that is, the drawn balance of CU20,000 plus further draw-downs of CU5,000 from the available undrawn commitment). The exposure at default of the credit card facilities for which 12-month expected credit losses are recognized is CU45,000 (that is, the outstanding balance of CU40,000 and an additional draw-down of CU5,000 from the undrawn commitment over the next 12 months).

The exposure at default and expected life determined by Bank A are used to measure the lifetime expected credit losses and 12-month expected credit losses on its credit card portfolio. Bank A measures expected credit losses on a facility level and therefore cannot separately identify the expected credit losses on the undrawn commitment component from those on the loan component. It recognizes expected credit losses for the undrawn commitment together with the loss allowance for the loan component in the statement of financial position. To the extent that the combined expected credit losses exceed the gross carrying amount of the financial asset, the expected credit losses should be presented as a provision.

Analysis: When estimating ECL on revolving credit facilities, expected life can be greater than contractual life.

Example 7: Estimating expected credit losses

IFRS 9 includes a number of examples of how to estimate ECL. We have included below one of the examples for illustration purposes.

Entity A originates a single 10-year amortizing loan for CU1 million. Taking into consideration the expectations for instruments with similar credit risk (using reasonable and supportable information that is available without undue cost or effort), the credit risk of the borrower, and the economic outlook for the next 12 months, Entity A estimates that the loan at initial recognition has a PD of 0.5% over the next 12 months. Entity A also determines that changes in the 12-month PD are a reasonable approximation of the changes in the lifetime PD for determining whether there has been a significant increase in credit risk since initial recognition.

At the reporting date (which is before payment on the loan is due), there has been no change in the 12-month PD, and Entity A determines that there was no significant increase in credit risk since initial recognition. Entity A determines that 25% of the gross carrying amount will be lost if the loan defaults (that is, the LGD is 25%). Entity A measures the loss allowance at an amount equal to 12-month ECL using the 12-month PD of 0.5%. Implicit in that calculation is the 99.5% probability that there is no default. At the reporting date, the loss allowance for the 12-month ECL is CU1,250 ($0.5\% \times 25\% \times \text{CU}1,000,000$).

Entity B acquires a portfolio of 1,000 five-year bullet loans for CU1,000 each (that is, CU1 million in total) with an average 12-month PD of 0.5% for the portfolio. Entity B determines that because the loans only have significant payment obligations beyond the next 12 months, it would not be appropriate to consider changes in the 12-month PD when determining whether there have been significant increases in credit risk since initial recognition. At the reporting date, Entity B therefore uses changes in the lifetime PD to determine whether the credit risk of the portfolio has increased significantly since initial recognition.

Entity B determines that there has not been a significant increase in credit risk since initial recognition and estimates that the portfolio has an average LGD of 25%. Entity B determines that it is appropriate to measure the loss allowance on a collective basis in accordance with IFRS 9. The 12-month PD remains at 0.5% at the reporting date. Entity B therefore measures the loss allowance on a collective basis at an amount equal to 12-month expected credit losses based on the average 12-month PD of 0.5%. Implicit in the calculation is the 99.5% probability that there is no default. At the reporting date, the loss allowance for the 12-month expected credit losses is CU1,250 ($0.5\% \times 25\% \times \text{CU}1,000,000$).

Analysis: This example illustrates that the information used and the process for calculating the ECL allowance should vary depending on the nature and circumstances of each instrument.

Example 8: Modified financial instruments

IFRS 9 includes an example of how to estimate ECL for modified financial assets. We have included below one of the examples for illustration purposes.

Bank A originates a five-year loan that requires the repayment of the outstanding contractual amount in full at maturity. Its contractual par amount is CU1,000 with an interest rate of 5% payable annually. The effective interest rate is 5%. At the end of the first reporting period (Period 1), Bank A recognizes a loss allowance at an amount equal to 12-month expected credit losses because there has not been a significant increase in credit risk since initial recognition. A loss allowance balance of CU20 is recognized.

In the subsequent reporting period (Period 2), Bank A determines that the credit risk on the loan has increased significantly since initial recognition. As a result of this increase, Bank A recognizes lifetime expected credit losses on the loan. The loss allowance balance is CU30.

At the end of the third reporting period (Period 3), following significant financial difficulty of the borrower, Bank A modifies the contractual cash flows on the loan. It extends the contractual term of the loan by one year so that the remaining term at the date of the modification is three years. The modification does not result in the derecognition of the loan by Bank A.

As a result of that modification, Bank A recalculates the gross carrying amount of the financial asset as the present value of the modified contractual cash flows discounted at the loan's original effective interest rate of 5%. The difference between this recalculated gross carrying amount and the gross carrying amount before the modification is recognized as a modification gain or loss. Bank A recognizes the modification loss (calculated as CU300) against the gross carrying amount of the loan, reducing it to CU700, and a modification loss of CU300 in profit or loss.

Bank A also remeasures the loss allowance, taking into account the modified contractual cash flows and evaluates whether the loss allowance for the loan should continue to be measured at an amount equal to lifetime expected credit losses. Bank A compares the current credit risk (taking into consideration the modified cash flows) to the credit risk (on the original unmodified cash flows) at initial recognition. Bank A determines that the loan is not credit-impaired at the reporting date but that credit risk has still significantly increased compared to the credit risk at initial recognition and continues to measure the loss allowance at an amount equal to lifetime expected credit losses. The loss allowance balance for lifetime expected credit losses is CU100 at the reporting date.

Period	Beginning gross carrying A	Impairment (loss)/ gain B	Modification (Loss)/ gain	Interest revenue D gross: A x 5%	Cash flows E	Ending gross carrying F=A+C +D-E	Loss allowance G	Ending amortized cost H=F-G
1	CU1,000	(CU20)		CU50	CU50	CU1,000	CU20	CU980
2	CU1,000	(CU10)		CU50	CU50	CU1,000	CU30	CU970
3	CU1,000	(CU70)	(CU300)	CU50	CU50	CU700	CU100	CU600

At each subsequent reporting date, Bank A evaluates whether there is a significant increase in credit risk by comparing the loan's credit risk at initial recognition (based on the original, unmodified cash flows) with the credit risk at the reporting date (based on the modified cash flows).

Two reporting periods after the loan modification (Period 5), the borrower has outperformed its business plan significantly compared to the expectations at the modification date. In addition, the outlook for the business is more positive than previously envisaged. An assessment of all reasonable and supportable information that is available without undue cost or effort indicates that the overall credit risk on the loan has decreased and that the risk of a default occurring over the expected life of the loan has decreased, so Bank A adjusts the borrower's internal credit rating at the end of the reporting period.

Given the positive overall development, Bank A re-assesses the situation and concludes that the credit risk of the loan has decreased and there is no longer a significant increase in credit risk since initial recognition. As a result, Bank A once again measures the loss allowance at an amount equal to 12-month expected credit losses.

Analysis: As the modification did not result in derecognition of the financial asset, Bank A should continue to assess increases in credit risk by comparing credit risk at the reporting date with credit risk at initial recognition. As the model is symmetrical, the bank should consider both positive and negative developments in credit risk.

Questions?

PwC clients who have questions about this *In depth* should contact their engagement partner. Engagement teams who have questions should contact the Financial Instruments team in the National Professional Services Group (1-973-236-7803).

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