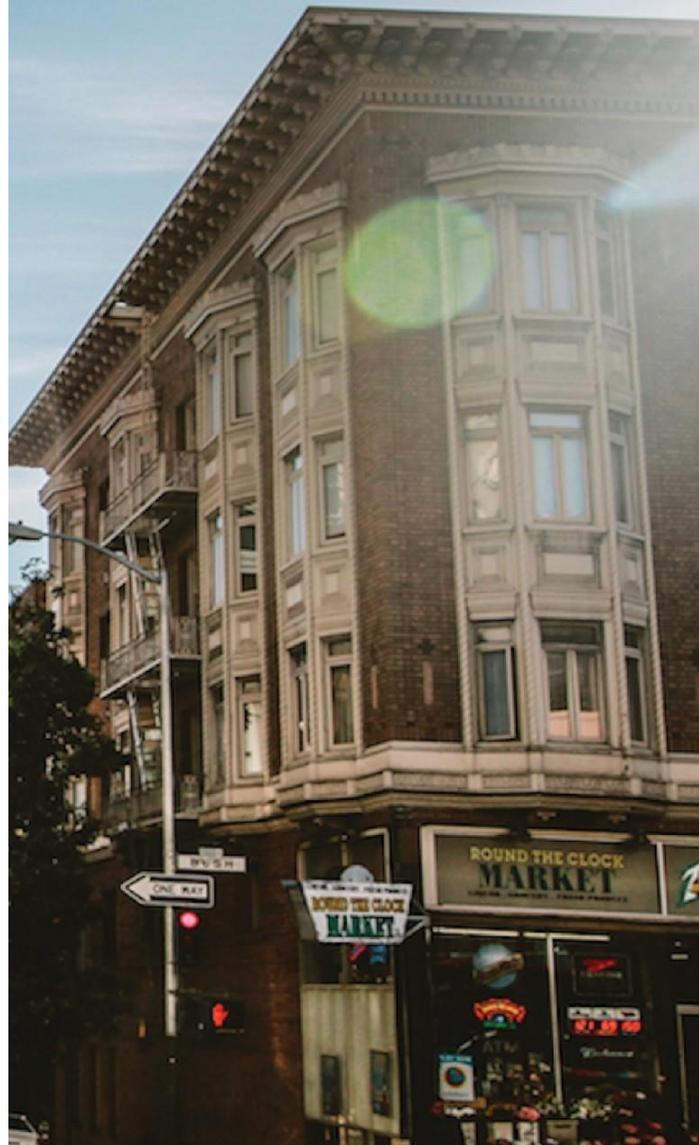


IFRS 9

Key Concepts

APRIL 27 2021

Whitepaper



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1. Introduction

In July 2014, the International Accounting Standards Board (“IASB”) issued the final version of IFRS 9 Financial Instruments (“IFRS 9”, or “the standard”), bringing together the classification and measurement, impairment and hedge accounting phases of the IASB’s project to replace IAS 39 and all previous versions of IFRS 9.

Within the impairment piece, the IASB has sought to address a key concern that arose as a result of the financial crisis in which the incurred loss model of IAS 39 contributed to the delayed recognition of credit losses. As such, it has introduced a forward-looking expected credit loss model which is a fundamental change in calculating the impairment provision. Invariably, this will result in an overhaul of existing policies and processes.

The objective of this document is to provide an understanding of the key concepts and requirements of IFRS9 primarily covering impairment methodology including a brief explanation on Classification and Measurement framework, Significant increase in credit risk, Definition of default, Modification and derecognition, Period over which to estimate ECL and ECL parameter modelling. Each section details the requirements as set by the standard, applicable guidance on its interpretation and the alternate approach that can be explored to address data limitations.

2. Classification and Measurement Framework

2.1 Classification and Measurement of financial assets

Classification and measurement of financial assets determines how financial assets are categorised and measured in the financial statements. Requirements for classification and measurement are thus the foundation of the accounting for financial instruments. The requirement of impairment and hedge accounting are also based on classification.

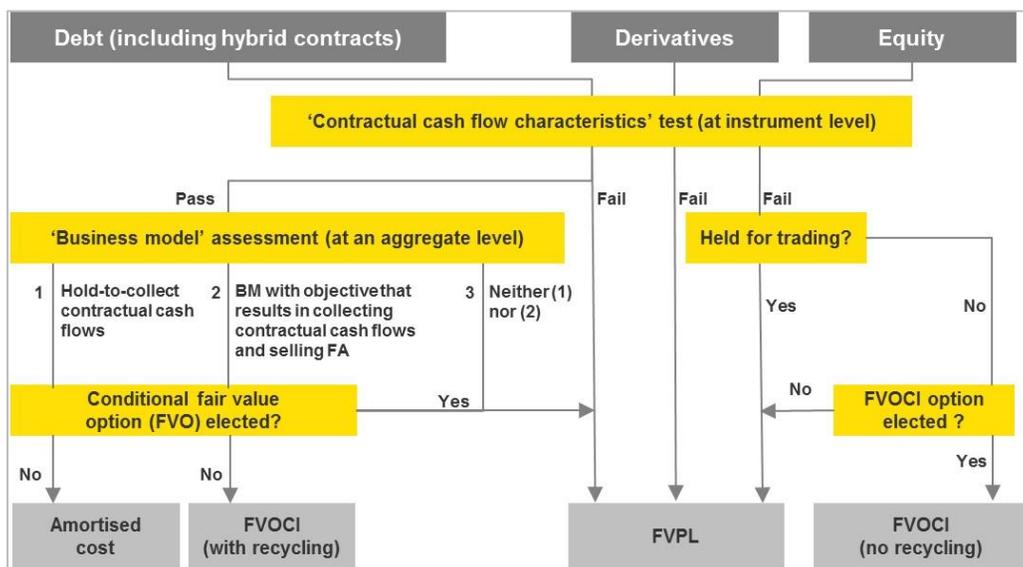
The new standard effectively sets out three major classifications; namely amortised cost (AC), fair value through profit and loss (FVTPL) and fair value through other comprehensive income (FVOCI).

IFRS 9 has the following measurement categories in which financial assets are classified:

- Debt instruments at amortised cost
- Debt instruments at fair value through other comprehensive income (“FVOCI”) with cumulative gains and losses reclassified to profit or loss upon derecognition
- Debt instruments, derivatives and equity instruments at fair value through profit or loss (“FVTPL”)
- Equity instruments designated as measured at FVOCI with gains and losses remaining in other comprehensive income (“OCI”) i.e., without recycling

The diagram below summarises the classification and measurement process included in the IFRS 9 assessment

Figure:1



2.2 Business Model Assessment

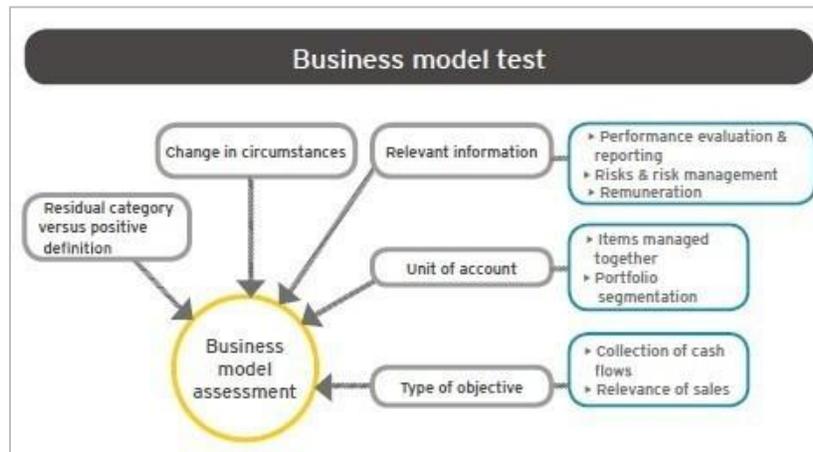
The business model is determined at a level that reflects how groups of financial assets (not individual instruments) are managed together to achieve a business objective.

Similarly, in some circumstances, it may be appropriate to split a portfolio of financial assets into sub-portfolios to reflect how its managed [IFRS 9. B4.1.2]. Those portfolios would be split and treated as separate portfolios, provided the assets belonging to each sub-portfolio are defined.

Judgement will need to be applied when determining the level of aggregation to which the business model assessment should be applied.

The diagram below summarises the business model aspects considered for performing the test included in the IFRS 9 assessment.

Figure:2



IFRS 9 requires the business model for each portfolio of financial assets to be categorised into one of the following models:

Business Model 1: Hold to collect contractual cash flows (BM1)

The objective of this business model is to hold the assets in order to collect contractual cash flows. The financial assets in this business model will be classified and measured at amortised cost (provided the asset also meets the contractual cash flow test, SPPI Assessment). Assets held to collect contractual cash flows may have some level of sales but not ‘more than infrequent’. The standard requires that if more than infrequent number of sales is made and those sales are more than insignificant in value, the entity would need to assess whether and how such sales are consistent with an objective of collecting contractual cash flows. Thus, in determining whether cash flows are going to be realised by collecting the financial assets’ contractual cash flows, it is necessary to consider the frequency, value and timing of sales in prior periods, the reasons for those sales and expectations about future sales activity.

According to IFRS 9, the entity business model may still remain to hold the assets to collect the contractual cash flows even when:

- The entity sells the financial assets when there is an increase in the assets’ credit risk
- Sales are made close to the maturity of the financial assets and the proceeds from the sales approximate the collection of the remaining contractual cash flows. [IFRS 9 B4.1.2C –B4.1.4].

Business Model 2: Hold to collect contractual cash flows and sell (BM2)

The objective of this business model is achieved by both collecting contractual cash flows and selling financial assets (provided the asset also meets the contractual cash flow test). The financial assets in this business model will be classified and measured at fair value through other comprehensive income (“FVOCI”) [IFRS 9 B4.1.4A – IFRS 9 B4.1.4C].

This business model will typically involve greater frequency and value of sales. This is because selling financial assets is integral to achieving the business model’s objective instead of being only incidental to it. However, there is no threshold for the frequency or value of sales that must occur in this business model because both collecting contractual cash flows and selling financial assets are integral to achieving its objectives

Business Model 3: Neither BM 1 nor BM 2 – Held for trading

These are portfolios that do not fall within any of the above business models e.g. those held for trading or managed with an objective of realising cash flows through active and frequent sales [IFRS 9 B4.1.5 – B4.1.6]. They will be classified and measured at Fair value through profit or loss (“FVTPL”).

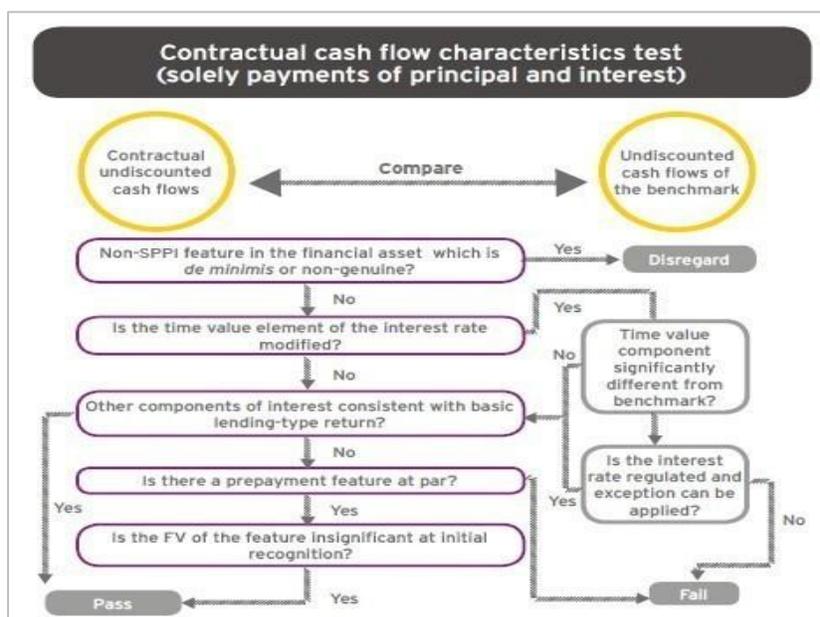
The key factors to be considered when determining the business model to which a portfolio belongs are portfolios’ investment strategy, key performance indicators, management information, sale factors, frequency and value.

2.3 Contractual cash flow characteristics test (SPPI Test)

The assessment aims to identify whether the contractual cash flows are solely payments of principal and interest (“SPPI”) on the principal amount outstanding. The SPPI test is designed to screen out financial assets on which the application of the effective interest method (EIM) either is not viable from a pure mechanical standpoint or does not provide useful information about the uncertainty, timing and amount of the financial asset’s contractual cash flows.

The diagram below summarises the contractual cash flow characteristics test (SPPI Test) included in the IFRS 9 assessment.

Figure:3



The sections below cover the individual aspect of the SPPI test:

Meaning of principal:

Principal should be 'the fair value of the asset at initial recognition' and it may change over the life of the financial asset (e.g. if there are repayments of the principal) [IFRS 9.4.1.3 (a)]

Meaning of interest:

Significant elements of interest within a basic lending arrangement include:

- Consideration for time value of money
- Consideration for credit risk and liquidity risk
- Administrative costs associated with holding the financial asset for a particular period of time
- Profit margin that is consistent with a basic lending arrangement

2.4 Classification and Measurement of financial Liabilities

The classification of financial liabilities under IFRS9 does not follow the approach for the classification of financial assets; rather it remains broadly the same as under IAS 39. Financial liabilities are measured at amortised cost or fair value through profit or loss (when they are held for trading). Financial liabilities can be designated at FVTPL if managed on a fair value basis or eliminates or reduces an accounting mismatch- refer to above on financial assets.

For financial liabilities designated as at FVTPL using the fair value option, the element of gains or losses attributable to changes in the entity's own credit risk should normally be recognised in OCI, with the remainder recognised in profit or loss. These amounts recognised in OCI are not recycled to profit or loss if the liability is ever repurchased at a discount. However, if presentation of the fair value change in respect of the liability's credit risk in OCI creates or enlarges an accounting mismatch in profit or loss (for example if an entity expects the effect of the change in the liability's credit risk to be offset by the fair value of a financial asset), gains and losses must be entirely presented in profit or loss.

2.5 Reclassification

In certain rare circumstances an entity may change its business model for managing financial assets. When and only when this happens, it shall prospectively reclassify all affected financial assets, unless irrevocably designated at initial recognition. This is not expected to be frequent. If, at all, it happens it will be a significant change to the entities business operations, and this should be demonstrable to external parties. An example would be if an entity acquires a new business line and the financial assets will be managed on a difference basis in line with the new business model. An entity shall not reclassify any financial liability.

3. Impairment Modelling Approach

The IASB has sought to address a key concern that arose as a result of the financial crisis that the incurred loss model in IAS 39 contributed to the delayed recognition of credit losses. As such, it has introduced a forward-looking expected credit loss model.

The guiding principle of the expected credit loss (ECL) model is to reflect the general pattern of deterioration or improvement in the credit quality of financial instruments. The amount of ECLs recognised as a loss allowance

or provision depends on the extent of credit deterioration since initial recognition. In applying the IFRS 9 requirements, an entity is required to follow one of the approaches below:

1. General approach

Under the general approach, at each reporting date, an entity recognises a loss allowance based on either 12-month ECL or lifetime ECL, depending on whether there has been a significant increase in credit risk on the financial instrument since initial recognition (see Section 3 - Significant increase in credit risk). The changes in the loss allowance balance are recognised in profit or loss as an impairment gain or loss.

2. Simplified approach

The simplified approach does not require an entity to track the changes in credit risk, but, instead, requires the entity to recognise a loss allowance based on lifetime ECL at each reporting date. Per IFRS 9 5.5.15, an entity shall always measure the loss allowance at amount equal to lifetime expected credit losses for trade receivables, contract assets that do not contain a significant financing component and lease receivables.

3. Purchased or originated credit-impaired approach (POCI)

On initial recognition of a financial asset, an entity is required to determine whether the asset is “credit impaired”. A financial asset is credit impaired when one or more events that have a detrimental impact on the estimated future cash flows on that financial asset have occurred.

4. Significant increase in Credit Risk

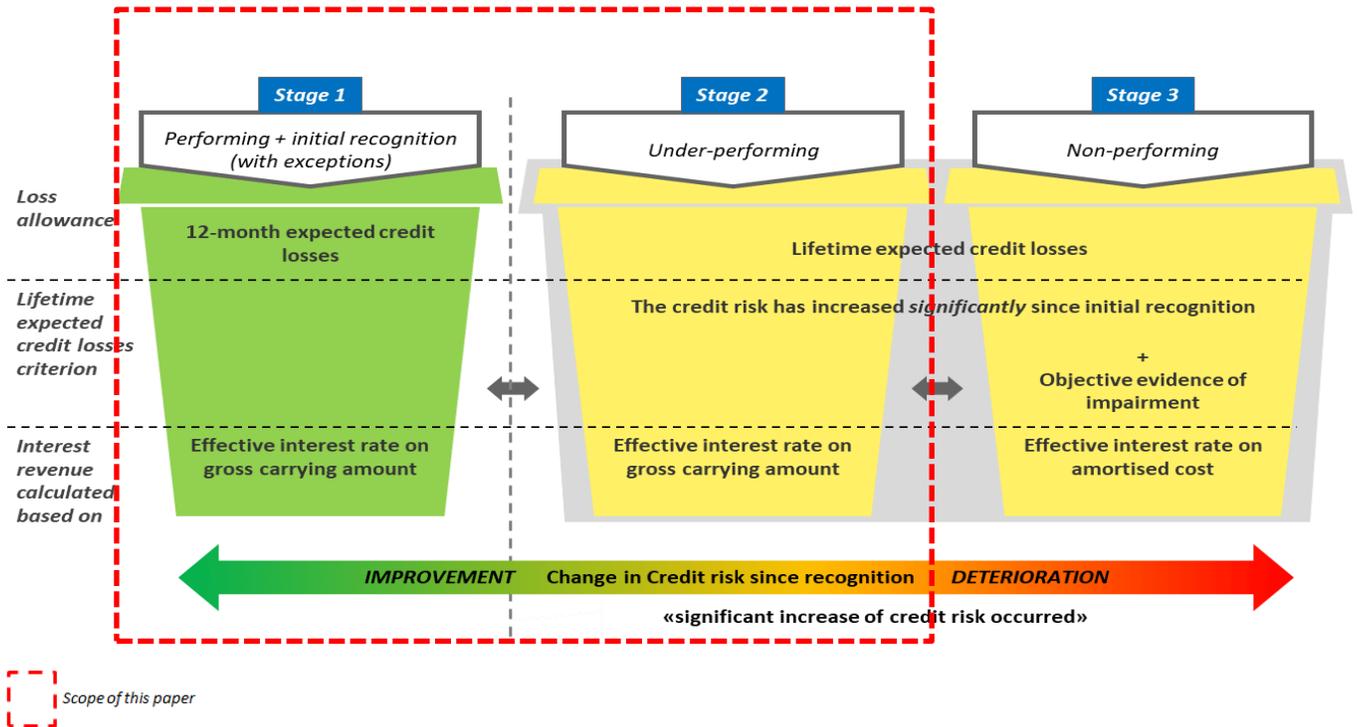
This section outlines IFRS 9 guidelines to assess the significant increase in credit risk for the purposes of Stage allocation.

IFRS 9 follows a 3 Stage approach for calculating expected credit losses. This is detailed below:

Table 1: Staging Approach

Stage	Description	Accounting implication
Stage 1	No significant changes in credit quality of exposure since initial recognition	<ul style="list-style-type: none"> ▪ 12-month expected credit losses ▪ Interest calculated on gross carrying amount
Stage 2	The credit risk of the exposure has increased significantly since initial recognition	<ul style="list-style-type: none"> ▪ Lifetime expected credit losses ▪ Interest calculated on gross carrying amount
Stage 3	The credit risk of the exposure has increased significantly since initial recognition and there is objective evidence of impairment	<ul style="list-style-type: none"> ▪ Lifetime expected credit losses ▪ Interest calculated on net carrying amount

Figure:4



The scope of this section is to determine the accounting guidelines around how to assess significant increase in credit risk that would trigger a transfer to Stage 2. Accounting policies for significant increases in credit risk that would trigger transfer from Stage 2 to Stage 3 are discussed in the Definition of Default and Credit-impaired section. The following key decisions have been considered:

Table 2: Significant Increase in credit risk decisions

Decision	Description
4.1 Indicators of significant increase in credit risk	Indicators to be used to identify significant increases in credit risk
4.2 Exit criteria	Exit criteria to be met before an instrument in Stage 2 can be returned to Stage 1
4.3 Unit of account	Unit of account at which assessment of significant increase in credit risk will be performed
4.4 Low credit risk simplification	Use of low credit risk simplification (expedient for facilities considered to be 'low credit risk' to remain in Stage 1 regardless of performance)

4.1 Indicators of significant increase in credit risk and backstop

4.1.1 Technical interpretation

IFRS 9 Requirements:

IFRS 9 provides the following guidance in relation to the assessment of significant increase in credit risk:

- The assessment should be relative, i.e. increase in credit risk since origination needs to be assessed instead of an absolute increase in credit risk (IFRS 9 5.5.9)
- Must include all reasonable and supportable information, including that which is forward-looking, macroeconomic information (IFRS 9 B.5.5.4)
- Must be identified before default occurs or the financial asset becomes credit impaired (IFRS 9 B.5.5.7)
- The assessment should be based on an increase in lifetime risk of default, but under certain circumstances, increase in 12-month risk of default can be used for the assessment (IFRS 9 B.5.5.13-14). However, this is not permitted by the G-CRAECL¹ guidance (see below)
- There is a rebuttable presumption that the credit risk on a financial asset has increased significantly since initial recognition when contractual payments are more than 30 days past due (IFRS 9 5.5.11).
- The rebuttable presumption in paragraph 5.5.11 is not an absolute indicator that lifetime expected credit losses should be recognised but is presumed to be the latest point at which lifetime expected credit losses should be recognised even when using forward-looking information (including macroeconomic factors on a portfolio level).
- An entity can rebut this presumption. However, it can do so only when it has reasonable and supportable information available that demonstrates that even if contractual payments become more than 30 days past due, this does not represent a significant increase in the credit risk of a financial instrument. For example when non-payment was an administrative oversight, instead of resulting from financial difficulty of the borrower, or the entity 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 identify such a correlation when payments are more than 60 days past due.
- An entity cannot align the timing of significant increases in credit risk and the recognition of lifetime expected credit losses to when a financial asset is regarded as credit-impaired or an entity's internal definition of default.

No specific or mechanistic approach is imposed by the standard. The appropriate approach will vary depending on the level of sophistication of entities, the financial instruments and the availability of data.

G-CRAECL Guidance:

BCBS G-CRAECL guidance suggests that the primary indicators for assessing significant increase in credit risk should:

- Incorporate forward-looking information, including macroeconomic factors
- Consider all reasonable and supportable information available at the time of calculation

4.2 Exit criteria applied before Stage 2 loan can return to Stage 1

¹ In December 2015, the Basel Committee on Banking Supervision issued a Guidance on credit risk and accounting for expected credit losses (G-CRAECL) that outlined supervisory expectations regarding sound credit risk practices associated with implementing and applying an expected credit loss (ECL) accounting framework.

4.2.1 Technical interpretation

IFRS 9 requires assets to be transferred back to Stage 1 (calculate ECL based on 12-month losses) when the criteria for identifying a significant deterioration in credit risk are no longer met (IFRS 9 5.5.7).

If the contractual cash flows on a financial asset have been renegotiated or otherwise modified, but the financial asset is not derecognised, evidence that the criteria for the recognition of lifetime expected credit losses are no longer met may include a history of up-to-date and timely payment performance against the modified contractual terms. Typically, a customer would need to demonstrate consistently good payment behaviour over a period of time before the credit risk is considered to have decreased. For example, a history of missed or incomplete payments would not typically be erased by simply making one payment on time following a modification of the contractual terms (IFRS 9 B5.5.27).

Once an asset has met either the primary, secondary or backstop indicators as discussed above, it would transfer from Stage 1 to Stage 2. As noted in the scope of this section, significant increases in credit risk that would trigger transfer from Stage 2 to Stage 3 are discussed in the Definition of Default and Credit-impaired section.

IFRS 9 does not specify any minimum cure period neither to go back from Stage 3 to Stage 2, nor to go back from Stage 2 to Stage 1. However, PRA expectation is that there should be some sort of 'cure period' before a facility moves from Stage 2 to Stage 1. Where management discretion is used, this is only applied after a set number of days and, again, a cure period is incorporated.

4.3 Unit of account for stage allocation

4.3.1 Technical interpretation

IFRS 9 requires a relative assessment of credit risk as compared to initial recognition, which requires a comparison of the current PD with PD at origination, depending on the origination date of each financial instrument.

IFRS 9 5.5.9 states that at each reporting date, an entity shall assess whether the credit risk on a financial instrument has increased significantly since initial recognition.

IFRS 9.BC5.167 states that the objective of the impairment requirements is to reflect the economics of lending to provide users of financial statements with relevant information about the performance of financial instruments instead of the performance of a counterparty. A counterparty assessment could misstate expected credit losses if its credit risk had changed.

IFRS 9.BC 5.168 states that an overall assessment of a counterparty's credit risk could be undertaken, for example, to make an initial assessment of whether credit risk has increased significantly, as long as outcome would not be different to the outcome if the financial instruments had been individually assessed.

4.4 Low credit risk simplification for lending portfolios

4.4.1 Technical interpretation

Financial instruments that have low credit risk at the reporting date (IFRS 9 5.5.10 and B5.5.22-24)

IFRS 9 allows a practical expedient that an entity may assume that the credit risk on a financial instrument has not increased significantly if the financial instrument is determined to have low credit risk at the reporting date.

The following criteria must be met for a facility to be classed as 'low risk':

- The financial instrument has a low risk of default
- The borrower has a strong capacity to meet its contractual cash flow obligations in the near term
- Adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce ability to meet obligations)

The value of the collateral relative to the value of the financial instrument cannot in itself deem an asset to be low risk.

Internal credit risk rating or external grading, that are consistent with globally understood definition of low credit risk can be used to determine whether a financial instrument is low risk.

5. Definition of default and credit impaired

5.1 Accounting definition of default

5.1.1 Technical interpretation

IFRS 9 introduces the concept of 'default', which impacts the following:

- Expected Credit Loss ("ECL") calculation (IFRS 9.5.5) (the most significant input being PD, LGD and EAD), and
- Determining the transfer between the 12M and Lifetime Expected Credit Loss calculation (IFRS 9.5.5.9 in 'determining significant increase in credit risk' section)
- Determining allocation to stage 3 Credit impaired

Although default is not specifically defined within IFRS 9, the following guidance is available within the Standard:

Table 3: Definition of Default guidance

Reference	Requirements
<p>IFRS 9 B5.5.37</p>	<p>'When defining default for the purposes of determining the risk of a default occurring, an entity shall apply a default definition that is consistent with the definition used for internal credit risk management purposes for the relevant financial instrument and consider qualitative indicators (for example, financial covenants) when appropriate.</p> <p>However, there is a rebuttable presumption that default does not occur later than when a financial asset is 90 days past due (DPD) unless an entity has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.</p> <p>The definition of default used for these purposes shall be applied consistently to all financial instruments unless information becomes available that demonstrates that another default definition is more appropriate for a particular financial instrument.'</p>

The key factors to consider when defining 'default' are therefore:

- Qualitative factors (Inability to repay, bankruptcy and significant change in collateral etc.)
- There is a rebuttable presumption that a facility is in default if it is 90 DPD
- The definition should be consistent with the definition used for internal credit risk management purposes.

Additionally, the BCBS Guidance on Credit risk and Expected Credit Loss (G-CRAECL) expects that the definition adopted should be "guided by the definition used for regulatory purposes".

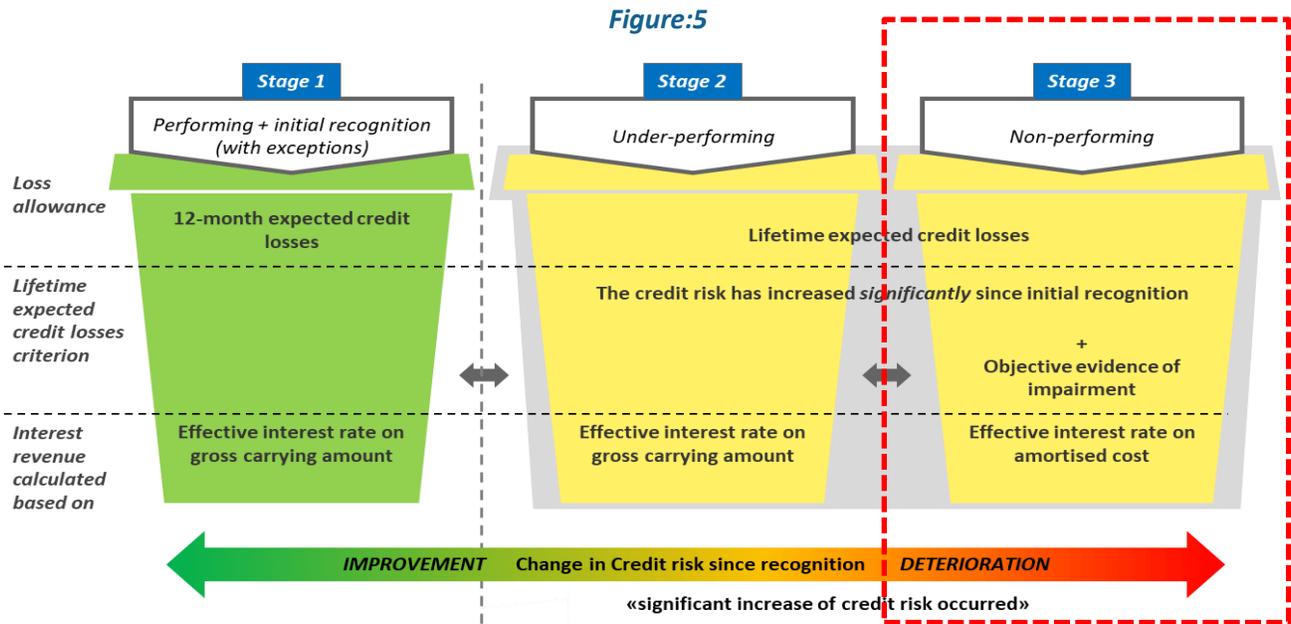
The EBA guidance on the definition of default proposes that an exposure in Stage 3 under IFRS 9 is regarded as default for regulatory reporting purpose, unless local regulator permits 180 DPD.

The PRA allows the 90 days backstop to be replaced with 180 days in the days past due component of the definition of default for exposures secured by residential or SME commercial real estate in the retail exposure class.

5.2 Definition of credit impaired

5.2.1 Technical interpretation

Under IFRS 9, an asset is ‘credit impaired’ when ‘one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred.



The definition of ‘credit impaired’ is important as facilities that meet the definition are classified as Stage 3 and consequently, they are subject to lifetime ECLs as well as calculation of interest on a net basis (gross carrying amount less loss allowance).

There is currently no guidance in IFRS 9 on whether to apply any discontinuation/cure criteria before returning Stage 3 assets to Stage 2. However, the PRA expects further due diligence to be performed in addition to single payment trigger to determine transfer out of Stage 3.

6. Modification and Derecognition

The section outlines IFRS 9 guidelines in relation to modified instruments from an accounting perspective and includes treatment and implications of scenarios that are considered modification and/or derecognition

6.1 Technical interpretation

6.1.1 Modification

A modification occurs when there is a change in contractual cash flows due to renegotiation or modification.

Accounting implications for a modified instrument (that has not been derecognised):

- **Gross carrying amount** - Recalculate the gross carrying amount as the present value of the renegotiated or modified contractual cash flows (discounted at the original EIR) or credit-adjusted EIR for purchased or originated credit impaired financial assets (IFRS 9.5.4.3)
- **Modification gain/loss** - Recognise a modification gain/loss (P&L) by recalculating the gross carrying amount of the financial asset as the present value of the renegotiated or modified contractual cash flows, discounted at the financial asset's original EIR (or the credit-adjusted EIR for purchased or originated credit-impaired financial assets (IFRS 9.5.4.3) and comparing this to the original gross carrying amount of the financial asset. The difference between those two are the modification gain/loss. Note this is likely to be a change in practice to what entities have done under IAS 39 where any modification gain / loss will have been spread over the remaining life as part of the EIR.
- **Stage allocation** - Assess whether there has been a significant increase in the credit risk of the financial instrument, by comparing the risk of a default occurring at the reporting date (based on the modified contractual terms) and the risk of a default occurring at initial recognition (based on the original, unmodified contractual terms).
- **Provisions** - Continue with the current treatment for the existing asset that has been modified. A lifetime ECL is recognised for Stage 2 and 3 assets whilst a 12-month ECL is recognised for Stage 1 assets
- **Disclosure** - Incremental disclosure requirements (IFRS 9 Appendix C paragraph 35F, 35I and 35J). In summary the following are required:
 - Explanation of credit risk management practices relating to modifications of contractual cash flows, including the criteria for moving from lifetime EL to 12-month EL and any subsequent reversion to lifetime EL (35F)
 - Qualitative and quantitative explanations of how significant changes in the gross carrying amount of modified assets contributed to the change in the loss allowance (35I)
 - Disclosure of the amortised cost before the modification and the net modification gain or loss recognised for assets modified during the reporting period while they had a loss allowance measured at an amount equal to the lifetime expected credit losses: and
 - The gross carrying amount of assets modified when on lifetime ECL allowance, for which the loss allowance has changed during the reporting period to 12-month ECL (35J)

6.1.2 Derecognition

In some circumstances, the renegotiation or modification of the contractual cash flows of a financial asset can lead to derecognition of the existing financial asset and subsequently, the recognition of a 'new' financial asset. This means that the date of the modification will also be the date of initial recognition of the new financial asset.

Accounting implications when derecognising a modified instrument:

- **Recognition** - Existing asset derecognised and new asset recognised. In addition, a gain or loss is recognised on derecognition of the original instrument as the difference between the fair value of the new instrument initially recognised and the carrying amount of the original instrument derecognised (which includes the cumulative loss allowance).
- **Stage allocation** - Resets the clock for the relative significant deterioration assessment (origination date of the new asset). Typically, the asset will be recognised in Stage 1 (12-month ECL) at each reporting date until it displays significant deterioration in credit risk and transfers to Stage 2 (recognition of lifetime ECL).
- **Originated Credit impaired** - However, in some unusual circumstances following a modification that results in derecognition of the original financial asset, there may be evidence that the new financial asset is credit-impaired on initial recognition, and thus, the financial asset should be recognised as an originated credit-impaired financial asset. (also see Definition of default and credit impaired section)
- **Classification** - Revisiting the Solely Payment of Principal and Interest ('SPPI') test for classification
- **Provisions** - Recalculation of the ECL based on the reset stage allocation. An Impairment gain or loss may be recognised. A reduction in ECL from lifetime loss allowance to 12-month loss allowance may result if the newly recognised asset is Stage 1 and the derecognised asset was Stage 2 or 3, leading to an improved profit and loss account
- **Disclosure implications** under IFRS 9 Appendix C paragraph 35J

7. ECL Calculation Period

7.1 Technical interpretation

The general requirement in IFRS 9 5.5.19 states that the expected credit losses should be based on 'the maximum contractual period (including extension options) over which the entity is exposed to credit risk and not a longer period, even if that longer period is consistent with business practice.'

There is also further guidance given in paragraph 5.5.20 which states that 'the entity shall measure expected credit losses over the period that the entity is exposed to credit risk and expected credit losses would not be mitigated by credit risk management actions, even if that period extends beyond the maximum contractual period.' This applies only for financial instruments that contain both an instrument and an undrawn commitment component and the entity's contractual ability to demand repayment and cancel the undrawn commitment does not limit the entity's exposure to credit losses to the contractual notice period.

IFRS 9 states that an entity shall estimate cash flows by considering all contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) through the expected life of that financial instrument. There is a presumption that the expected life of a financial instrument can be estimated reliably. However, in those rare cases when it is not possible to reliably estimate the expected life of a financial instrument, the entity shall use the remaining contractual term of the financial instrument.

8. ECL Parameter Modelling

8.1 Introduction

The purpose of this paper is to outline the standards on modelling of appropriate input parameters for IFRS 9 implementation. These inputs include 12-month Probability of Default (“PD”), Lifetime PD, Loss Given Default (“LGD”) and Exposure at Default. This section also details the incorporation macroeconomic scenarios in both the staging assessment and Expected Credit Loss (“ECL”) computation

8.2 Probability of Default

The Probability of Default (“PD”) is the estimate of the likelihood that a counterparty will default in a defined period. The general approach requires both a 12-month (current) PD and a Lifetime PD for the calculation of ECLs.

A 12-month PD is the estimated probability of default occurring within the next 12 months (or over the remaining life of the financial instrument if that is less than 12 months) and is used to calculate the 12-month ECL.

The lifetime PD is the probability that the instrument defaults at any point in its lifetime and is used to calculate the lifetime ECL.

IFRS 9 Requirement:

IFRS 9 emphasizes that the adopted approach will vary depending on the sophistication of the entity, financial instruments and the availability of data. The following presents the standard’s guidance on PD estimation.

Table 4: IFRS 9 PD Guidance

Source	Guidance
5.5.17	An entity shall measure expected credit losses of a financial instrument in a way that reflects: <ul style="list-style-type: none"> a. an unbiased a probability weighted amount that is determined by evaluating a range of possible outcomes b. the time value of money c. reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions
B5.5.44	Expected credit losses shall be discounted to the reporting date, not to the expected default or some other date, using the effective interest rate determined at initial recognition or an approximation thereof

B5.5.52. Historical information is an important anchor or base from which to measure expected credit losses. However, an entity shall adjust historical data, such as credit loss experience, on the basis of current observable data to reflect the effects of the current conditions and its forecasts of future conditions that did not affect the period on which the historical data is based, and to remove the effects of the conditions in the historical period that are not relevant to the future contractual cash flows.

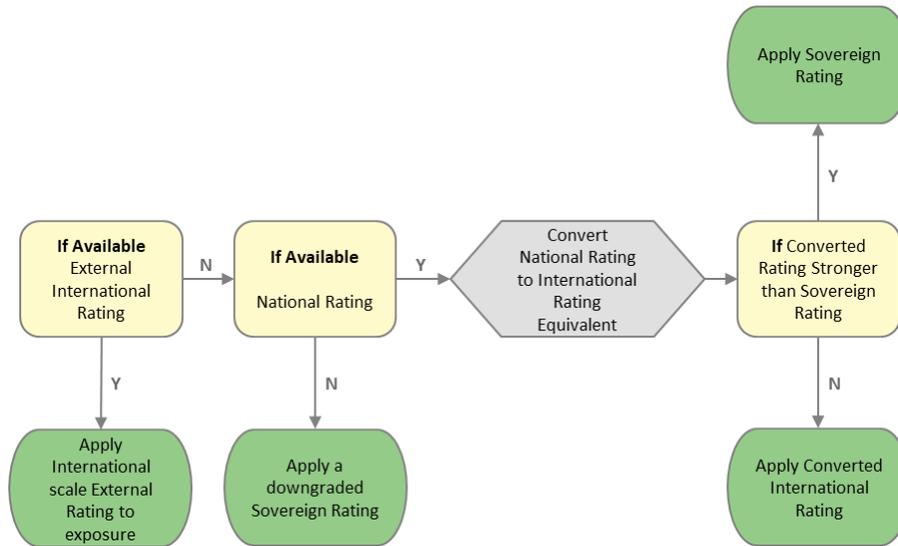
Whilst a specific approach to determine PD values is not prescribed, guidance does indicate that:

- PDs should be Point-in-time (“PIT”) estimates, reflecting management’s current view of the future by incorporating forward looking information
- PDs should be unbiased (e.g. due to historical data that does not reflect management’s expectation of the future)
- The definition of default should be aligned to that considered for IFRS 9 purposes

Internal Rating and PD Model can be used to estimate PD internally on availability of historical loss data. In cases of insufficient default data external rating scale can also be used with internal calibration to determine the probability of default. External ratings are determined through consideration of both quantitative and qualitative factors including economic and industry analysis, corporate governance, financial performance and ratio analysis. Ratings are intended to measure long-term risk and hence look through to the next economic cycle or longer. To address the limitation of data availability use of the rating grade published by rating agencies is observed.

To determine a proxy IFRS 9 rating per exposure, a cascaded rating framework can be used (as shown below) with appropriate measures of conservatism. The assumptions adopted throughout are to be validated and ratified on a frequent basis.

Figure:6



The PD Model also can make use of external data (namely observed default rates and forward-looking macroeconomic data) to infer Point in Time PDs (12 month and lifetime) for each rating grade as a starting point. Macroeconomic factors are to be considered to reflect the position in the economy and to make the rating and PD framework forward looking.

Through consideration of the strong relationships between each macroeconomic variable and observed default rates, forecasts of each and statistical standardization, a forward-looking PiT PD forecast per rating grade is achieved.

8.3 Loss Given Default

Loss Given Default is an estimate of the loss arising as a result of the default of a counterparty. Typically, the estimate is based on the difference between the contractual cash flows due and those that the lender would expect to receive, including from any collateral.

Like PD, LGD serves as a key input parameter in the determination of both 12 month and lifetime ECL. LGD is the primary driver of provisions determined for stage 3 assets.

The LGD represents the average expected loss per unit of exposure in default. Given the different features that each exposure may have, a single counterparty with multiple facilities may have significantly different LGDs per exposure.

IFRS 9 Requirement:

IFRS 9 emphasizes that the adopted approach will vary depending on the sophistication of the entity, financial instruments and the availability of data. The following presents the standard’s guidance on LGD estimation

Table 5: IFRS 9 LGD Guidance

Source	Guidance
5.5.17	An entity shall measure expected credit losses of a financial instrument in a way that reflects: <ul style="list-style-type: none"> d. an unbiased probability weighted amount that is determined by evaluating a range of possible outcomes e. the time value of money f. reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions
5.5.44	Expected credit losses shall be discounted to the reporting date, not to the expected default or some other date, using the effective interest rate determined at initial recognition or an approximation thereof Adjustments in consideration of costs (Collateral addressed in B5.5.55): <ul style="list-style-type: none"> ▪ Removal of general (internal) collection costs in LGD models (“costs of obtaining and selling the collateral, irrespective of whether foreclosure is probable” ▪ Improving the governance and audit ability of the internal files which provide information on costs
5.5.55	For the purposes of measuring expected credit losses, the estimate of expected cash shortfalls shall reflect the cash flows expected from collateral and other credit enhancements that are part of the contractual terms and are not recognised separately by the entity

At a high level, sophisticated approaches would typically demonstrate the following:

- LGDs should be unbiased (e.g. the LGD model should not be built on historical that is biased towards a positive or negative economic climate)
- LGDs require consideration of forward-looking information
- Macro-economic dependencies of LGD and its components should be considered

The LGD approach should typically reflect discounting of cash shortfalls considering their expected timing using the EIR. If regulatory LGD values are used as a starting point, then the effect of the downturn adjustments and regulatory floors should also be considered.

The standard notes that the appropriate approach will vary depending on the level of sophistication of the entity, the financial instruments and the availability of data.

In cases where enough loss data are not available, a Financial Institutions can explore the Basel foundation approach to determine the proxy LGD. FIRB approach provides estimate of LGD and haircut for each type of collateral type and will be assumed constant for the remaining life of the asset. Unsecured exposure will be assigned LGD of 45%. Exposure secured by recognised collateral will be assigned LGD as shown below.

Table 6: Recognised Collateral and LGD Assignment

Collateral Type	Minimum LGD	Required Minimum Collateralisation level of exposure (C*)	Required level of over-collateralisation for full LGD recognition (C**)
Eligible Financial Collaterals (refer to Appendix B for list of eligible collateral)	0%	0%	Not Applicable
Receivables	35%	0%	125%
CRE/ RRE	35%	30%	140%
Other Collaterals	40%	30%	140%

- LGD of 45% will be assigned to exposure when the ratio of the current value of the collateral to Exposure is below a threshold level of C*
- Exposures where the ratio of the Current value of Collateral to Exposure exceeds C** will be assigned an LGD according to the recognised Collateral and LGD assignment table below
- Exposures where the ratio of the Current value of Collateral to Exposure do not exceeds C**. Secured portion of exposure will be assigned an LGD according to the recognised Collateral and LGD assignment table below and unsecured portion will be assigned 45% LGD

The curial limitation of the above approach is the mapping of available collateral to the Basel recommended qualified collateral categories (as shown in Table 6) need to be done properly to avoid any undue consideration of over/under-estimation of the worked-out LDG.

8.4 Exposure at Default

Exposure at Default (“EAD”) is an estimate of the exposure at a future default date, taking into account expected changes in the exposure after the reporting date, including repayments of principal and interest, and expected drawdowns on committed facilities.

IFRS 9 Requirement:

The standard provides the following key guidance.

Table 7: IFRS 9 Guidance relating to EAD

Source	Guidance
B5.5.29	For financial assets, a credit loss is the present value of the difference between: (a) the contractual cash flows that are due to an entity under the contract; and (b) the cash flows that the entity expects to receive.
B5.5.30	For undrawn loan commitments, a credit loss is the present value of the difference between: (a) the contractual cash flows that are due to the entity if the holder of the loan commitment draws down the loan; and (b) the cash flows that the entity expects to receive if the loan is drawn down.

B5.5.31

An entity’s estimate of expected credit losses on loan commitments shall be consistent with its expectations of drawdowns on that loan commitment, i.e. it shall consider the expected portion of the loan commitment that will be drawn down within 12 months of the reporting date when estimating 12-month expected credit losses, and the expected portion of the loan commitment that will be drawn down over the expected life of the loan commitment when estimating lifetime expected credit losses.

For committed but undrawn exposures, Cash Conversion Factors (“CCFs”) should be considered such the EAD represents both the drawn and undrawn component.

8.5 Macroeconomic Scenario Analysis

Forward looking expectations and macroeconomic scenarios analysis are key themes in the IFRS 9 impairment recognition model.

The purpose of macroeconomic scenario analysis is to understand the impacts of changing economic scenarios on the stage allocation of an instrument and the resulting expected credit loss calculations.

IFRS 9 Requirement:

Whilst the standard does not mechanistically prescribe an approach to consider different macroeconomic scenarios, the below guidance is provided.

Table 8: Relevant IFRS 9 guidance on Macroeconomic scenarios and forward-looking information

Source	Guidance
B5.5.4	The objective of the impairment requirements is to recognise lifetime expected credit losses for all financial instruments for which there have been significant increases in credit risk since initial recognition — whether assessed on an individual or collective basis — considering all reasonable and supportable information, including that which is forward-looking.
B5.5.17	An entity shall measure expected credit losses of a financial instrument in a way that reflects: <ol style="list-style-type: none"> a. an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes; b. the time value of money; and c. reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions.
B5.5.41	The purpose of estimating expected credit losses is neither to estimate a worst-case scenario nor to estimate the best-case scenario. Instead, an estimate of expected credit losses shall always reflect the possibility that a credit loss occurs and the possibility that no credit loss occurs even if the most likely outcome is no credit loss.
B5.5.42	Paragraph 5.5.17(a) requires the estimate of expected credit losses to reflect an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes. 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.

Financial Institutions shall incorporate the impact of changing macroeconomic scenarios on both staging and the ECL computation through consideration of three discrete scenarios Upturn Base and Downturn. Staging assessment shall be performed based on scenario probability weighted average approach to estimate the lifetime PD at origination date and reporting date. ECL shall be computed based on scenario probability weighted average approach for both 12-months and lifetime expected credit loss estimation.

8.6 ECL Computation

Lifetime ECL would be estimated based on the present value of all discounted (with EIR) cash shortfalls over the remaining life of the financial instrument. The 12-month ECL is a portion of the lifetime ECL that is associated with the probability of default events occurring within the 12 months after the reporting date.

12 month and Lifetime ECLs shall be computed under each scenario, with the final ECL determined as the probability weighted average of each scenarios ECL (either 12 month or lifetime, depending on the stage assigned).