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The implementation of IFRS 9 impairment requirements by banks

Global Public Policy Committee
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Preface

We are pleased to share 'The implementation of IFRS 9 impairment requirements by banks' which has been issued by the Global Public Policy Committee (GPPC)[1].

IFRS 9 (2014) 'Financial Instruments' fundamentally rewrites the accounting rules for financial instruments. It introduces a new approach for financial asset classification; a more forward-looking expected loss model; and major new requirements on hedge accounting.

With IFRS 9's mandatory effective date of 1 January 2018 moving ever closer, businesses need to start evaluating the impact of the new Standard now. This paper, which focuses on the implementation of IFRS 9's impairment requirements, will help audit committees of banks and other financial institutions with implementing the new Standard.

The paper has been organised into two main sections, covering:

1) **Areas of focus for those charged with governance**
   - the importance of strong governance and controls surrounding ECL models and processes
   - considerations regarding sophistication and proportionality
   - key issues on transition
   - ten questions those charged with governance may wish to discuss.

2) **Modeling principles**
   - ECL methodologies
   - default
   - probability of default
   - exposure
   - Loss Given Default (LGD)
   - discounting
   - staging assessment
   - forward-looking information.

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1 The Global Public Policy Committee (GPPC) of the world's six largest accounting networks comprises representatives from BDO, Deloitte, EY, Grant Thorwnton, KPMG and PwC.

The implementation of IFRS 9 impairment requirements by banks

Considerations for those charged with governance of systemically important banks

Global Public Policy Committee of representatives of the six largest accounting networks

17 June 2016

Dear Chair of the Audit Committee

The introduction of new requirements for the accounting for expected credit losses in IFRS 9 *Financial Instruments* will be a significant change to the financial reporting of banks. It will impact many stakeholders, including investors, regulators, analysts and auditors. Given the importance of banks in the global capital markets and the wider economy, the effective implementation of the new standard has the potential to benefit many. Conversely, a low-quality implementation based on approaches that are not fit for purpose has the risk of undermining confidence in the financial results of banks.

The Global Public Policy Committee (GPPC) is publishing this paper to promote the implementation of accounting for expected credit losses to a high standard. It aims to help those charged with governance to evaluate management's progress during the implementation and transition phase.

Time is running out. Banks that report under IFRSs must apply IFRS 9 *Financial Instruments* in their 2018 financial statements. To be ready, banks must complete a large multi-disciplinary project combining the skills of finance, risk and IT. The project will require strong governance and internal controls to give all stakeholders confidence in the resulting financial information. For many banks, the adoption of expected credit loss accounting will be the most momentous accounting change they have experienced, even more significant than their transition to IFRSs. Furthermore, the more judgemental, complex and volatile nature of expected credit losses compared with incurred losses means that there will likely be a need for more intensive oversight following implementation.

This paper is addressed primarily to the audit committees of systemically-important banks because of their relative importance to the capital markets and financial stability. We expect that these banks will be applying the Basel Committee on Banking Supervision's *Guidance on credit risk and accounting for expected credit losses* (GCRAECL). However, much of its content will be relevant to other banks and financial institutions. The paper focusses on lending, as opposed to investing in securities, because lending is core to the activities of banks and tends to rely more on internally-generated information. Further, although this paper focuses only on the implementation of the new impairment requirements, we do not intend to understate the importance of high-quality implementation of other IFRS 9 accounting requirements, such as the classification and measurement of financial instruments, hedge accounting and related disclosures.

The GPPC networks do not anticipate the same sophistication of implementation for all entities and all portfolios. There is no one size that fits all. However, this paper seeks to advance the objective of robust implementation based on a consistent understanding of IFRS 9, in the face of the risk that inadequate implementation approaches may develop and be accepted by those charged with governance.

The paper has been structured in a way to assist the two key groups within a bank that will be instrumental in ensuring a high-quality implementation of IFRS 9. First, those charged with governance who will set the tone for and oversee implementation, including related controls, and second, those finance, risk management, IT and other executives who are charged with implementing the new requirements. Section 1 discusses key areas of focus for those charged with governance and will be of more interest to the former. Section 2 will be of more interest to the latter. Section 2 is more detailed as it describes key components of implementing expected credit loss accounting.

Recognising that the degree of sophistication required to implement the new impairment requirements will vary across banks and portfolios, Section 2 describes for each key area one example of a 'sophisticated approach' and considerations for a 'simpler approach'. It sets out factors that those charged with governance can use in reviewing where their bank's approach should be between the two. We also include some examples of practices that we believe would not be compliant with the requirements of IFRS 9.

The introduction of an expected credit loss approach for accounting for impairment will depend heavily on the quality and availability of credit risk data. A lack of historical credit risk data will make transition to the new accounting standard more challenging. However, banks should be making efforts to overcome these challenges and to improve the availability and analysis of accurate data. In particular, banks will need to ensure that expected credit loss models make appropriate use of forward-looking information. The implementation of IFRS 9 will likely require the collection and tracking of information not previously used in loss modelling or existing regulatory capital approaches. An integral part of banks' implementation efforts will be towards meeting the new impairment disclosure requirements and providing investors with appropriately granular information on loss allowances and underlying assumptions across different asset classes.

As banks, regulators and auditors gain more experience with IFRS 9, new challenges and new insights may emerge. We expect that practices of banks will evolve, and that expectations of regulators and auditors

may change. Those charged with governance will need to stay abreast of developments and consider how they impact their bank. We may update and revise this paper in the future.

Given the large number of jurisdictions which require, or permit, IFRSs, the paper has been developed with IFRS-reporting banks in mind. It does not therefore reflect the forthcoming changes to US GAAP that will introduce a similar, though distinct, expected credit loss model into US GAAP.

We hope this paper complements the work of other international organisations that have also produced guidance to raise the standard of implementation of accounting for expected credit losses and related disclosure. Of particular note are the Basel Committee's GCRAECL, the Enhanced Disclosure Task Force's *Impact of Expected Credit Loss Approaches on Bank Risk Disclosures ("EDTF")*, both published in December 2015, and the IAASB's *Project to Revise ISA 540 (An Update on the Project and Initial Thinking on the Auditing Challenges Arising from the Adoption of Expected Credit Loss Models)*, published in March 2016.

We hope this contribution will be of value to you and support you in challenging those in your organisation so you are confident that IFRS 9 will be implemented to a high quality.

About this paper

The Global Public Policy Committee ("GPPC") is the global forum of representatives from the six largest international accounting networks - BDO, Deloitte, EY, Grant Thornton, KPMG, and PwC. Its public interest objective is to enhance quality in auditing and financial reporting.

The information contained in this paper is of a general nature. Further analysis will be needed in order for a bank to apply IFRSs to its own facts, circumstances and individual transactions. Further, understanding of IFRS may change as practice continues to develop. Banks are cautioned to read this publication in conjunction with the actual text of the standards and implementation guidance issued, and to consult their professional advisers before concluding on accounting treatments for their own transactions.

This paper contain cross-references to paragraphs in: IFRSs; the Basel Committee's GCRAECL; and the IASB staff summaries of meetings of the IFRS Transition Resource Group for Impairment of Financial Instruments (ITG). These cross-references are intended to highlight sections of those other documents that are helpful in understanding the paragraphs in this paper that contain the cross-references.

For the avoidance of doubt, this paper does not purport to in any way amend or interpret the requirements of IFRSs. The GPPC fully acknowledges that this is reserved to the International Accounting Standards Board (IASB) and the IFRS Interpretations Committee. This paper is intended to be consistent with the discussions of the ITG.

1 Key areas of focus for those charged with governance

1.1.1 A bank's board of directors and senior management are responsible for ensuring that the bank has appropriate credit risk practices, including an effective system of internal control, to determine adequate expected credit loss (ECL) allowances in accordance with IFRS 9 as well as the bank's stated policies and relevant supervisory guidance. This section is primarily aimed at those charged with governance although we believe that all parties involved in implementing IFRS 9 in a bank should familiarise themselves with the principles. [GCRAECL Principle 1]

1.1.2 The first part, 1.2, sets out broad recommendations for a **governance and controls** framework in the areas of data quality, modelling, systems, processes and internal controls, providing for clear senior management oversight before, during and after implementation.

1.1.3 The next part, 1.3, discusses **sophistication and proportionality**. It acknowledges that the implementation of expected credit loss methodologies across a bank will need to be commensurate with the complexity, structure, economic significance and risk profile of the bank's exposures and should consider all reasonable and supportable information that is available without undue cost or effort. It provides guidance on factors that banks should consider when determining the specific approach that will be taken for a given portfolio.

1.1.4 The discussion in 1.4 provides guidance on certain areas of specific importance at **transition** such as key (pre-existing) accounting policies, current risk management and modelling activities and dealing with limitations in data quality.

1.1.5 Finally, in 1.5, we provide a list of **ten questions** that audit committees can use to focus their discussions with senior management.

1.2 Governance and controls

1.2.1 Making sure that the bank has effective controls over compliance with the new financial reporting requirements – and guarding against the reputational, regulatory and financial damage that may result from material control failures – will be key concerns for those charged with governance. Some banks will be subject to additional requirements for reporting on the effectiveness of internal controls (e.g. Section 404 of the US Sarbanes-Oxley Act) and will also need to prepare for how IFRS 9 adoption will impact their compliance with those other rules. Regardless of an entity's size and complexity, the implementation of IFRS 9 will require significant upfront and ongoing senior management effort as well as substantial changes to credit risk management and financial reporting systems, processes and internal controls.

1.2.2 For most banks, expected credit loss (ECL) estimates are likely to be material to their financial statements. ECL estimation is complex and inherently judgemental. It is dependent on a wide range of data which may not be immediately available, including forward-looking estimates of key macro- and micro-economic factors and management's assumptions about the relationship between these forecasts and the amounts and timing of recoveries from borrowers. Because of the size of the potential impacts, these factors mean there is a risk of material bias affecting the financial statements. This could affect key financial and regulatory metrics. Accordingly, it is important that ECLs are determined in a well governed environment.

1.2.3 We believe an effective governance and control framework should be in place before, during and after transition. Banks should utilise all three lines of defence to achieve this – i.e. risk and control functions in the lending business; oversight functions including finance and risk management; and internal audit. The following areas will be key:

■ Data quality and availability. Management will need additional credit risk information that was not previously obtained, or is available but was not previously used for financial reporting purposes. In the latter case, the data may not currently be subject to the same rigorous governance and controls normally associated with information used for financial reporting. Appropriate governance and controls will be required for these sizeable additional data sets used for the estimation of ECLs.

■ Methodologies and modelling. Management will need to develop new ECL methodologies and models. This will require significant expertise and judgement in order to deliver probability-weighted and unbiased estimates of ECL on an ongoing basis. In applying IFRS 9's requirements, management has to make difficult and complex decisions about modelling principles which could have a material impact on ECL outcomes. Given the importance of these decisions, detailed considerations in relation to ECL modelling principles are set out in Section 2 of this paper. Ensuring that models are not a 'black box' and that ECL outcomes can be understood and articulated internally and externally – whilst at the same time respecting the complexity of ECL estimation – will be a significant challenge for management. Effective oversight will require robust governance and controls through the organisation. The use of expert credit judgement is a necessary ingredient in the application of IFRS 9 but is an indicator of potentially higher risk of misstatement. The exercise of such judgement – together with any separately-calculated adjustments to model results to address limitations in the core modelling approach - will require particular attention in the governance process.

■ Systems, processes and internal controls. On an ongoing basis, banks will need to produce IFRS 9 measurements and related disclosures within a short timeframe. Systems and processes that banks build – and associated controls – will need to be sufficiently automated and streamlined to deliver reliable results that are subject to appropriate review and challenge in the required timeframe. Further, as portfolio composition and market conditions change, processes, methodologies and assumptions are likely to require adaptation, sometimes quickly, in order to remain compliant with the requirements of IFRS 9. Strong governance and controls will be key. The costs – before, during and after transition – associated with achieving all these objectives are likely to be significant, both in terms of direct spend as well as management time.

1.2.4 Audit committees will need a clear overview of the risk and control framework and will need to challenge management in order to monitor the effectiveness of the bank's internal controls and the reliability of financial reporting under IFRS 9. We encourage those charged with governance to establish clear

reporting lines and accountability for their bank's IFRS 9 transition programme and ongoing implementation. For example, a board subcommittee with appropriate non-executive and senior management representation might be established to provide more intensive dedicated oversight. Key focus areas for those charged with governance include:

■ Timely monitoring, review and challenge of IFRS 9 implementation plans, key decisions and outputs. This will necessitate development of internal reporting mechanisms to support these efforts. Given the imminence of adoption and its complexity and importance, it may be difficult to change direction during later stages of the implementation project, leading to a higher risk of non-compliance or significant additional cost and management effort. Plans will need to incorporate processes for adequate testing of new models, processes and controls, including dry / parallel runs prior to 2018.

■ Considering whether assumptions and methodologies are consistent with business and risk management practices and strategies, including assessing whether they are consistent with those used in other areas of reporting and planning (e.g. forecasts used for IFRS 9 versus those used for assessing the recoverability of goodwill or used for regulatory capital planning) and, if not, why and what changes are required. Interpretations, assumptions and methodologies will also need to be documented and monitored by management as these may become inappropriate over time and solutions will need to be adaptable to changing circumstances.

■ Establishing a strong governance and controls framework over ECL estimation and reporting, focussing on data integrity and model validation given the large population of data, models and systems that either did not previously exist or were not used in financial reporting. Additionally, those charged with governance should have oversight over why different models are used for different portfolios across varying jurisdictions.

■ Establishing key performance indicators (KPIs) relating to ECL estimation and processes for regular reporting of those KPIs. KPIs may be used as a tool for challenging model calibration as well as for explaining performance within and outside the organisation. For example, staging assessment

KPIs might include how many facilities move directly from Stage 1 to Stage 3 or how many facilities are moved to Stage 2 only because they are 30 days past due (and not caught by other transfer criteria prior to delinquency).

■ Establishing the plan to deliver high quality disclosures before, during and after transition taking into account the recommendations of the EDTF and the expectations of regulators and investors. Audit committees will need to evaluate whether disclosures meet the objective of enabling users to understand the effect of credit risk on the amount, timing and uncertainty of future cash flows, including explaining the bank's credit risk management practices and the methods, estimation techniques, inputs and assumptions it has employed in implementing the new impairment requirements. The range of possible methods and judgements and the high estimation uncertainty associated with applying the new impairment requirements means that clear and transparent disclosure will be an essential part of maintaining the confidence of external stakeholders who are likely to be interested in information that allows them to make comparisons between different banks.

■ The Basel Committee's *Guidance on credit risk and accounting for expected credit losses* includes further discussion on governance and controls

1.3 **Sophistication and proportionality**

1.3.1　Banks will need to adopt sound ECL methodologies commensurate with the size, complexity, structure, economic significance and risk profile of their exposures. This means that, in general, the larger and more complex a portfolio or institution, and the larger and more volatile ECLs are expected to be, the more sophisticated a bank's approach should be. [GCRAECL.15]

1.3.2　IFRS 9 requires ECLs to reflect:

- an unbiased and probability-weighted amount that reflects a range of possible outcomes; and

- reasonable and supportable information that is available without undue cost or effort about past events, current conditions and forecasts of future conditions. [IFRS 9.5.5.17]

1.3.3　The approach to implementing these concepts will vary depending on the circumstances. Reasonable and supportable information will not generally present itself to management as such – rather management will need to determine what is relevant in the context of the impairment requirements and to actively gather and analyse data and use it to make estimates. For a bank, impairment is an area of high estimation uncertainty that is typically material to the bank's financial statements. Judgements made in applying accounting policies for impairment are typically complex and have a significant effect on amounts recognised in the financial statements. Care is required before determining that the acquisition or development of apparently relevant information is unduly burdensome. In particular, if a bank already collects and uses relevant data for regulatory or risk management purposes, it would be expected to use that data for IFRS 9 purposes. However, in many cases, there comes a point where increasing the amount of data or increasing the complexity and detail of analysis will yield an insignificant – if any – marginal improvement in the quality of the resulting output that is outweighed by the marginal cost.

1.3.4　Application of IFRS 9 is subject to the concept of materiality and it should be applied to all material portfolios. The materiality of portfolios and exposures and the related risks of material misstatement therefore will also be a factor in management's selection of an approach and the design of related internal

controls. However, this should not result in individual exposures or portfolios being considered immaterial if cumulatively they represent a material exposure. [GCRAECL.15]

1.3.5   In this document, we have described implementation by differentiating between one example of what a sophisticated approach might look like as well as considerations for a simpler approach.

1.3.6   To help a bank determine the level of sophistication required in implementing IFRS 9's ECL requirements for a particular portfolio, the following factors may be considered:

Entity-level factors

■   Extent of systemic risk posed by the bank, as indicated by categorisation (for example, G-SIFI, D-SIB, etc.) or extent of regulatory supervision.

■   Listing status and distribution of ownership of issued debt and equity securities.

■   Status as a public interest entity.

■   Total size of balance sheet and off-balance sheet credit exposures.

■   Level and volatility of historical credit losses.

Portfolio-level factors

■   Size of portfolio, relative to entity's total balance sheet and credit exposures.

■   Complexity of products in the portfolio.

■   Sophistication of other lending-related modelling methodologies, such as regulatory capital methodology (i.e. Advanced IRB, Foundation IRB or Standardised), stress testing methodology, pricing methodology, etc.

- Extent of relevant data available for the portfolio but not restricted solely to the data the bank currently has.[1] |

- Level of historical credit losses experienced on the portfolio.

- Level and volatility of potential future credit losses from the portfolio.

1.3.7 To illustrate the application of these factors to different types of portfolios:

- A significant portfolio of bespoke lending facilities, with significant historical and potential future losses, and widespread data available. The bank would typically be expected to use a sophisticated approach for this portfolio.

- An insignificant portfolio of mortgages in a particular territory, with insignificant historical and potential future credit losses. A bank would typically be justified in using a simpler approach for this portfolio unless it is aware that the local regulator in this particular territory will require a more sophisticated approach.

1.3.8 A simpler approach is not necessarily a lower quality approach if it is applied to an appropriate portfolio of credit exposures. Irrespective of where a portfolio is positioned overall on the sophistication spectrum, the approach must comply with IFRS 9, and therefore not be designed or implemented to introduce material bias. It may not be necessary for every single component of the ECL approach (for example, probability of default (PD) model, staging assessment, segmentation, etc.) to be at the same level of sophistication as indicated for the portfolio overall. However, management would be expected to provide particular justification for the use of any individual components with a much lower level of sophistication than is indicated for the portfolio overall. Management will also need to

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[1] For example, a new entrant to a market will have inherent limitations on historical data availability but may make use of external data available from industry bodies, credit bureaus, etc. Similarly, the availability of data will likely be dependent on the market the bank operates in, as well as the nature of the specific product. [IFRS 9.B5.5.51]

consider how disclosures will adequately describe the use of different approaches to users of the financial statements.

1.3.9   Where we describe approaches as not being compliant with IFRS 9, this is based on consideration of the relevant principles in IFRS 9 and we have not considered the question of materiality. The lists of approaches that are not compliant are examples where there may be a higher risk of misapplication of IFRS 9; they are not exhaustive.

1.3.10   A bank will need to monitor whether its approaches continue to be appropriate in light of changes in circumstances after transition and have internal controls to ensure that this objective is achieved. In particular, there may be improvements in the availability of data or in understanding the relationship between data and credit losses that may allow the adoption of more sophisticated modelling. Our expectation is that over time, banks will make enhancements to better implement the requirements of IFRS 9 as the availability of data improves.

1.4 Transition issues

1.4.1   There are some important issues in applying IFRS 9 to existing loan portfolios, systems and processes for the first time. These may require special focus by those charged with governance.

Existing policies and practices that underpin the IFRS 9 ECL approach

1.4.2   In a number of areas, IFRS 9's impairment requirements build upon existing accounting, credit risk and regulatory concepts. However, some of these change – perhaps subtly – under IFRS 9, while some become more important.

1.4.3   Concepts which underpin the calculation of IFRS 9 ECLs and where banks will need to consider how existing policies and practices will require amendment to be fit for purpose under IFRS 9 include:

- **Credit parameters:** many underlying credit parameters will have a direct or indirect bearing on the IFRS 9 ECL models – such as days past due and counterparty credit ratings. The methodologies used to derive these credit parameters will need to be reviewed to ensure their use under IFRS 9 is appropriate. IFRS 9 establishes new rebuttable backstops at 30 and 90 days past due, but does not define how these metrics are calculated. Without further consideration, there would be a risk that the previous bases of calculating days past due would be incorporated into the IFRS 9 approach even though they may be simplistic or inconsistently applied.

- **Using regulatory models:** many banks will leverage their regulatory capital models for the purpose of calculating IFRS 9 ECLs. However, these models will need adaptation to be appropriate for use under IFRS 9. This may require adjustments, such as revisions in the scope of assets within the models, alignment with accounting definitions and removal of regulatory floors and add-ons that would lead to bias.

- **Modifications and derecognition:** Some modifications of financial assets result in their derecognition and others do not. Determining when a modification of an asset (including through forbearance) leads to its derecognition will be more important under IFRS 9. Modification may affect the

determination of expected lifetimes of assets used in modelling probability of default and loss given default as well as whether there is a new date of initial recognition which resets the point in time to which changes in credit risk are compared. Derecognition could result in a change from recognition of lifetime expected losses to 12-month expected losses. IFRS 9 contains new guidance on accounting for modification gains and losses.

■ **Contractual terms:** determining the substantive terms of a financial asset that are relevant for IFRS 9 may require careful analysis. The terms may be broader than set out in the product agreement alone – they may incorporate other related agreements. For example, determining whether credit enhancements are integral to the contractual terms can have a significant impact on how ECLs are modelled. Contractual terms are also critical in the determination of the period over which expected losses need to be forecasted.

Simplifications used in deriving or modelling historical data

1.4.4   Implementing IFRS 9 for existing loans will often require the use of analyses which were not performed at an earlier date. Additional information that an entity begins to collect and use for new exposures may not have been collected for loans originated in the past.

1.4.5   IFRS 9 makes some allowance for this, particularly in determining whether there has been a significant increase in credit risk since initial recognition. IFRS 9 generally requires an entity to use reasonable and supportable information that is available without undue cost or effort to determine the credit risk of exposures on origination, to enable comparison to the credit risk at the balance sheet date. However, it is possible that the quality and extent of information available to determine the credit risk on origination for older exposures will be lower than would be expected for more recent and future lending. Also, limitations in historical data may result in simplifications in the modelling, for example, a higher level of aggregation in modelling certain portfolios of older loans.

1.4.6   For loans that exist at transition, IFRS 9 requires that the bank should "seek to approximate" the credit risk on initial recognition by considering all reasonable and supportable information that

is available without undue cost or effort. A bank with little historical information may use data from internal reports and statistics, data about similar products or peer group experience for comparable instruments. If a bank cannot construct comparable probability of default (PD) data for such an instrument at its origination, it may be possible to compare to the maximum level that would have been deemed acceptable at origination. This would be appropriate only if the exposures in the portfolio all had a sufficiently similar credit risk at initial recognition. [IFRS 9.B7.2.2-4, IE40-42]

1.4.7   If determining whether there has been a significant increase in credit risk since initial recognition for an exposure existing at transition would require undue cost and effort, then a bank is required to recognise a loss allowance equal to lifetime expected losses until the instrument is derecognised (unless the instrument has low credit risk at the reporting date). [IFRS 9.7.2.20]

1.4.8   When reviewing simplifications used in deriving or modelling historical data, it is important that those charged with governance consider explicitly whether these simplifications introduce any unacceptable bias – except where IFRS 9.7.2.20 is appropriately applied, a simplification cannot be justified on the basis that it drives a larger increase in loss allowances on initial application.

1.5 Ten questions those charged with governance may wish to discuss

1. What plans are in place to conclude on key decisions, build and test necessary models and infrastructure, execute dry/parallel runs and deliver high quality implementation by 2018? (1.2)

2. Has the bank identified all changes to existing systems and processes, including data requirements and internal controls, to ensure they are appropriate for use under IFRS 9? (1.2, 1.4)

3. How will reporting processes and controls be documented and tested, particularly where systems and data sources have not previously been subject to audit? (1.2, 1.4)

4. What are the planned levels of sophistication for different portfolios and why are these appropriate? (1.3)

5. What are the key accounting interpretations and judgements and why are they appropriate? (2.1-2.8)

6. How will a 'significant increase in credit risk' be identified and why are the chosen criteria appropriate? (2.7)

7. How will a representative range of forward-looking scenarios be used to capture non-linear and asymmetric impacts? (2.7, 2.8)

8. What KPIs and management information will be used to monitor drivers of expected credit loss and support effective governance over key judgements? (1.2)

9. How will the IFRS disclosure requirements be met and how will those disclosures facilitate comparability? (1.2)

10. How will implementation decisions be monitored to ensure they remain appropriate? (1.2, 1.3, 2.1.2.3, 2.1.2.10, 2.2.2.6, 2.7.3)

2   Key modelling principles illustrated[2]

2.1   Expected credit loss methodology

2.1.1.1   IFRS 9 requires a bank to determine an expected credit loss (ECL) amount on a probability-weighted basis as the difference between the cash flows that are due to the bank in accordance with the contractual terms of a financial instrument and the cash flows that the bank expects to receive. Although IFRS 9 establishes this objective, it generally does not prescribe particular detailed methods or techniques for achieving it.

2.1.1.2   In determining the cash flows that the bank expects to receive, many banks are planning to adopt a sum of marginal losses approach whereby ECLs are calculated as the sum of the marginal losses occurring in each time period from the balance sheet date. The marginal losses are derived from individual parameters that estimate exposures and losses in the case of default and the marginal probability of default for each period (the probability of a default in time period X conditional upon an exposure having survived to time period X).

2.1.1.3   This section describes overall frameworks for calculating 12-month and lifetime ECLs under IFRS 9. It includes references to a more detailed discussion in later sections of this document. [IFRS 9.5.5.1-11, 17-20]

2.1.2 A sophisticated approach

2.1.2.1   ECLs are a probability-weighted estimate of the present value of cash shortfalls (i.e., the weighted average of credit losses, with the respective risks of a default occurring in a given time period used as the weights). ECL measurements are unbiased (i.e. neutral, not conservative and not biased towards optimism or

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[2] This document discusses the application of the general impairment requirements in IFRS 9 – i.e. it does not discuss the simplified requirements for trade and lease receivables and contract assets or the special requirements for assets that are credit-impaired at initial recognition.

pessimism) and are determined by evaluating a range of possible outcomes. [IFRS 9.B5.5.41-43, BC5.86]

2.1.2.2 Consistent with regulatory and industry best practices, ECL calculations are based on four components:

- **Probability of Default ("PD") —** This is an estimate of the likelihood of default over a given time horizon. See section 2.3.

- **Exposure at Default ("EAD") —** This 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. See section 2.4.

- **Loss Given Default ("LGD") —** This is an estimate of the loss arising on default. It is based on the difference between the contractual cash flows due and those that the lender would expect to receive, including from any collateral. It is usually expressed as a percentage of the EAD. See section 2.5.

- **Discount Rate —** This is used to discount an expected loss to a present value at the reporting date using the effective interest rate (EIR) at initial recognition. See section 2.6.

2.1.2.3 Banks should regularly review their methodology and assumptions to reduce any differences between the estimates and actual credit loss experience. [IFRS 9.B5.5.52]

Measuring ECLs

2.1.2.4 ECLs are generally measured based on the risk of default over one of two different time horizons, depending on whether the credit risk of the borrower has increased significantly since the exposure was first recognised. The loss allowance for those exposures that have not increased significantly in credit risk ('stage 1' exposures) is based on 12-month ECLs. The allowance for those exposures that have suffered a significant increase in credit risk ('stage 2' and 'stage 3' exposures) is based on lifetime ECLs. The staging assessment is discussed in section 2.7. [IFRS 9.5.5.3, 5.5.5]

12-month ECLs

2.1.2.5 12-month ECLs are the portion of the lifetime ECLs that represent the ECLs that result from default events on a financial instrument that are possible within 12 months after the reporting date (or a shorter period if the expected life of the financial instrument is less than 12 months). 12-month ECLs are weighted by the probability of such a default occurring. [IFRS 9.A, B.5.5.43]

Lifetime ECLs

2.1.2.6 Lifetime ECLs are the losses that result from all possible default events over the expected life of the financial instrument. [IFRS 9.A]

2.1.2.7 The probability of default - as well as the EAD, the LGD and the effect of discounting - reflect the expected life or period of exposure. See sections 2.3 and 2.4. The bank calculates each of these components for a series of time intervals over the period of exposure (such as monthly, quarterly or annually) and sums them to derive the lifetime ECL.

Collective calculations and segmentation

2.1.2.8 ECLs on individually large exposures and credit-impaired loans are generally measured individually. For retail exposures and many exposures to small and medium-sized enterprises, where less borrower-specific information is available, ECLs are measured on a collective basis. This incorporates borrower-specific information, such as delinquency, collective historical experience of losses and forward-looking macroeconomic information.

2.1.2.9 Both to assess the staging of exposures and to measure a loss allowance on a collective basis, the bank groups its exposures into segments on the basis of shared credit risk characteristics. Examples of shared characteristics include: geographical region, type of customer (such as wholesale or retail), industry, product type (such as 'normal' repayment mortgages, interest-only mortgages and mortgages on rented property), customer rating, date of initial recognition, term to maturity, the quality of collateral and the loan to value (LTV) ratio. The different segments reflect differences in PDs and in recovery rates in the event of default. To assess the staging of exposures, the

grouping of exposures also takes into account the credit quality on origination in order to identify deterioration since initial recognition. [IFRS 9 B5.5.5]

2.1.2.10 The bank performs procedures to ensure that the groups of exposures continue to share credit characteristics, and to re-segment the portfolio when necessary, in the light of changes in credit characteristics over time. The procedures also guard against inappropriate reliance on models that may arise if resegmentation is too frequent or granular so as to result in segments that are too narrow.

2.1.3 Considerations for a simpler approach

2.1.3.1 Simplifications might include the following.

Term to maturity approach

2.1.3.2 This approach does not estimate PD, EAD and LGD for separate time intervals over the term of the loan but, instead, uses a single measure of each for the remaining term in order to measure lifetime ECLs. This is easier to apply than a more sophisticated approach, but is more suited to exposures that are non-amortising and cannot be prepaid (so that assumptions about the EAD are a less significant variable) and shorter term (so that assumptions about when during the term a borrower is more likely to default and the effect of discounting are less significant).

Loss rate approach

2.1.3.3 Using a 'loss rate' approach, the PD and LGD are assessed as a single combined measure, based on past losses, adjusted for current conditions and forecasts of future conditions. It may be easier to use when there is insufficient data to measure the separate components. This approach is, as with the term to maturity approach, more suited to exposures that are non-amortising and shorter term. Although an adjusted loss rate approach may be used to measure ECLs, an entity needs to be able to separate the changes in the risk of a default occurring from changes in other drivers of ECLs for the purpose of the staging assessment. [IFRS 9.B5.5.12]

Segment parameters

2.1.3.4 Whereas, in a sophisticated approach, individual exposures within a group of exposures used for measurement of ECLs will each be assigned an individual PD, it is possible that a single PD and LGD might be applied to all exposures in the segment. This is likely to be appropriate only when segments are sufficiently granular that there is no reason to believe, based on reasonable and supportable evidence, that the individual exposures do not share a similar PD or LGD.

2.1.4 What is not compliant

2.1.4.1 Using fair value models to estimate ECLs without appropriately adjusting for changes in market rates of interest and yields that should not be reflected in ECLs. [IFRS 9.A (definition of credit loss), IFRS 9.BC5.123]

2.1.4.2 Using expected losses as calculated for regulatory purposes without assessing whether any adjustments are required to reflect the requirements of IFRS 9. [IFRS 9.5.5.17(c), B5.5.49-54, BC5.283]

2.1.4.3 Groupings of exposures for collective assessment and measurement that result in segments that do not share credit risk characteristics such that changes in credit risk in a part of the portfolio may be masked by the performance of other parts of the portfolio. [IFRS 9.B5.5.5, GCRAECL.A11-12]

2.1.4.4 Excluding the effects of contractual repayments and expected prepayments on loans, and of expected drawdowns on committed facilities. [IFRS 9.B5.5.30-31, 51]

2.2 Default

2.2.1.1 The concept of "default" is critical to the implementation of IFRS 9. IFRS 9 requires that when making the assessment of whether there has been a significant increase in credit risk since initial recognition, an entity uses the change in the risk of default occurring over the expected life of the financial instrument. For financial instruments for which there has not been a significant increase in credit risk, ECLs are recognised only in respect of default events that are possible within the next 12 months. Furthermore, IFRSs require that assets meeting the definition of credit impaired ('stage 3 assets') should be disclosed and the definition of credit impaired includes references to defaults, as well as other events that have a detrimental impact on estimated future cash flows. [IFRS 9.5.5.9, IFRS 9.A, IFRS 7.35G(a)(iii)]

2.2.1.2 IFRS 9 does not define the term "default" but instead requires each entity to do so. The definition used should be consistent with the definition used for internal credit risk management purposes and consider qualitative indicators (for example, financial covenants) when appropriate. There is a rebuttable presumption that default takes place no later than 90 days past due. However, IFRS 9 contains no further guidance on how to define default. [IFRS 9.B5.5.37]

2.2.1.3 Regulatory literature, such as the Basel Capital Accord rules, provides examples in addition to the 90 days past due backstop which are known as unlikeliness to pay indicators ("UTP"). These UTPs form part of the regulatory definition of default. UTPs are similar, but not identical to, the events described in the definition of 'credit-impaired financial asset' under IFRS 9. In addition, the Basel Committee has recommended that the definition of default adopted for IFRS 9 accounting purposes is guided by the definition used for regulatory purposes. [IFRS 9.A, GCRAECL.A4]

2.2.1.4 The definition of default used – e.g. using the IFRS 9 definition of credit-impaired indicators as the definition of default or using the definition of default from Basel Committee rules – affects the calculation of PDs, LGDs and EADs. Different definitions can lead to different ECL results. Accordingly, amending the definition of

default used in a bank's models as part of the transition to IFRS 9 requires a recalibration of those models.

2.2.1.5　This section sets out how a bank could approach defining default for IFRS 9 purposes and could deal with these differences.

2.2.2　A sophisticated approach

2.2.2.1　The bank analyses the regulatory definition of default and the definition of default in IFRS 9 and maintains and applies (subject to 2.2.2.4) a consistent, single definition of default for both regulatory and financial reporting purposes, or documents good reasons why not.

2.2.2.2　For particular financial instruments, the same definition of default is applied uniformly in all aspects of modelling ECLs (e.g. in estimating PD, EAD and LGD). All indicators of credit impaired within IFRS 9 and all UTPs in the applicable regulatory definitions are considered in defining default for IFRS 9 purposes.

2.2.2.3　The definition of default and its application to different types of financial instruments is appropriately tailored to reflect their differing characteristics.

2.2.2.4　In exceptional cases where the definitions of default for regulatory purposes and accounting purposes continue to differ, this may result in two principal outcomes:

■　Assets recorded in 'stage 2' under IFRS 9 (because they have not yet reached the accounting definition of credit impaired) but are in regulatory default.

■　Assets recorded in 'stage 3' under IFRS 9 (because they have met the accounting definition of credit impaired) but are not yet in regulatory default.

2.2.2.5　If such outcomes occur because of different definitions, the bank, in accordance with a documented policy, explains and justifies why a credit-impaired financial asset is not in regulatory default and vice versa. The objectives of both definitions are similar, so, for example, if there are cases where an exposure

could be deemed "unlikely to pay" while at the same time not credit impaired, this would have to be explained.

2.2.2.6 The bank has processes to update both regulatory and accounting definitions for further changes in either regulatory requirements (such as local regulatory definitions) or emerging practice.

2.2.3 Considerations for a simpler approach

2.2.3.1 A bank may be able to use models that were developed for regulatory purposes without amending the definition of default used in the models and then adjust the model output for the effect of differences between the regulatory and accounting definitions. If the difference is believed to lead to only an immaterial difference in outcome, the bank has processes and controls in place to support this view.

2.2.4 What is not compliant

2.2.4.1 Using a definition of default when modelling the probability of default for IFRS 9 purposes that results in fewer default events being captured than are actually monitored and observed in the credit risk management of the business. [IFRS 9.B5.5.37]

2.2.4.2 Using information that was designed for regulatory purposes without assessing whether any adjustments are required for the information to be fit for use under IFRS 9. The bank should investigate the differences and assess their impact on the staging of its assets and ECL calculations. [IFRS 9.B5.5.37, GCRAECL.A4-5]

2.2.4.3 Not applying the 90 days past due backstop unless the bank has documented reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate. [IFRS 9.B5.5.37, GCRAECL.A5]

2.3 Probability of default

2.3.1.1 Many banks plan to use PDs as a key component both in calculating ECLs (see section 2.1) and in assessing whether a significant increase in credit risk has occurred (see section 2.7)). A PD used for IFRS 9 should reflect management's current view of the future and should be unbiased (i.e. it should not include any conservatism or optimism). Consideration of forward-looking information is discussed in section 2.8.

2.3.1.2 This section discusses how PDs may be calculated for IFRS 9 purposes and the relationship with regulatory PD measures.

2.3.1.3 Two types of PDs are used for calculating ECLs:

- 12-month PDs – This 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). This is used to calculate 12-month ECLs.

- Lifetime PDs – This is the estimated probability of a default occurring over the remaining life of the financial instrument. This is used to calculate lifetime ECLs for 'stage 2' and 'stage 3' exposures.

PDs may be broken down further into marginal probabilities for sub-periods within the remaining life.

2.3.2 A sophisticated approach

2.3.2.1 PDs are limited to the maximum period of exposure required by IFRS 9 (see section 2.4).

12-month PDs

2.3.2.2 If a bank uses IRB models for regulatory purposes, the bank may use the outputs from its IRB models as a starting point for calculating IFRS 9 PDs. However, the PDs from these IRB models may in some organisations be determined using a through the cycle (TTC) rating philosophy (or hybrid point-in-time approach) or may include certain conservative adjustments (such as floors). Therefore, these PDs are appropriately adjusted if they

are to be used for IFRS 9 purposes. Examples of adjustments include:

■ Conversion to an unbiased (rather than conservative) estimate.

■ Removal of any bias towards historical data (for example, TTC) that does not reflect management's current view of the future.

■ Aligning the definition of default used in the model with that used for IFRS 9 purposes.

■ Incorporating forward-looking information (see section 2.8).

2.3.2.3 If a bank does not have IRB models, new models are developed to produce 12-month PDs for IFRS 9 purposes. All key risk drivers and their predictive power are identified and calibrated based on historical data over a suitable time period. This could take the form of a scorecard approach. A scorecard approach uses a set of loan-specific or borrower-specific factors which are weighted to produce an assessment of credit risk.

Lifetime PDs

2.3.2.4 To determine lifetime PDs, the bank either builds from the 12-month PD model or develops a lifetime PD model separately.

2.3.2.5 If the bank builds from the 12-month PD model, it develops lifetime PD curves or term structures to reflect expected movements in default risk over the lifetime of the exposure. This involves:

■ Sourcing historical default data for the portfolio.

■ Performing vintage analysis to understand how default rates change over time.

■ Extrapolating trends to longer periods where default data are not available for the maximum period of exposure.

■ Performing analysis at an appropriately segmented level, such that groups of loans with historically different lifetime

default profiles are modelled using different lifetime default curves.

2.3.2.6 If the bank is able to incorporate detailed forecasts of future conditions in developing PD estimates only for a period that is shorter than the entire expected life, it applies a documented policy for determining the longer-term trend in rates of default based on historical and other available reasonable and supportable information. [IFRS 9.B.5.50, 52]

2.3.2.7 If the bank develops a new model to produce lifetime PDs, it will be necessary to ensure all key risk drivers and their predictive power are identified and calibrated based on historical data over a suitable time period. This could take the form of a scorecard approach.

2.3.3 Considerations for a simpler approach

12-month PDs

2.3.3.1 Where there is insufficient default history for a particular portfolio (e.g. a portfolio of new products), the bank uses internal benchmarking to a similar risk portfolio, or a reduced level of risk segmentation (i.e. grouping similar risks / portfolios to increase data credibility), and where relevant, uses external ratings and external benchmarking.

2.3.3.2 There may be simpler alternatives to a scorecard approach available to a bank. For example, adaptations of collective methodologies such as roll/transition rates may be possible. Roll/transition rate methods are commonly used under IAS39 to assess credit losses by analysing the movement of exposures between different risk buckets (e.g. delinquency states) over time. Such methods use historical observed rates to estimate the amounts of exposure that are expected to roll into default over a specified period.

2.3.3.3 When a bank relies on external ratings, internal benchmarking or grouping risks together, the bank should perform adequate analysis to justify this approach, and consider and document its limitations. For example, grouping risks together may mask underlying credit losses or increases in credit risks, if the segments are not sufficiently homogeneous. Therefore, the bank should support the suitability of any groupings of risks with sufficient evidence.

Lifetime PDs

2.3.3.4 A bank may apply simpler extrapolation techniques to the 12-month PD. For example, the bank may assume that the default rate does not change during the lifetime of the loan or use less segmentation than under a more sophisticated approach. This may be more common for shorter-term products. The bank should justify this approach with analysis evidencing that the PD profiles are appropriately similar.

2.3.3.5 If a bank uses an extrapolation approach to determine lifetime PDs, then it may combine different risk segments if they are considered to have similar lifetime PD profiles. This will simplify the modelling required and reduce the number of explicit PD profiles to be calculated at each reporting date. The bank should justify this approach with analysis supporting the assertion that the underlying PD profiles are appropriately similar.

2.3.4 What is not compliant

2.3.4.1 Leveraging existing models without, based on reasonable and supportable information, validating that these models are fit for purpose under IFRS 9 and/or making and documenting appropriate adjustments. [IFRS 9.5.5.17(c), B5.5.49-54, BC5.283]

2.3.4.2 Assuming a constant marginal rate of default over the remaining lifetime of a product without appropriate supporting analysis. [IFRS 9.5.5.17(c), B5.5.49-54]

2.3.4.3 Grouping together exposures that are not sufficiently similar. [IFRS 9.B5.5.5]

2.4 Exposure – (i) period of exposure and (ii) exposure at default

2.4.1.1 Many banks plan to use exposure at default ("EAD") as a key component of their ECL calculations. Although IFRS 9 does not explicitly require banks to model EAD, understanding how loan exposures are expected to change over time is crucial to an unbiased measurement of ECLs. This is particularly important for 'stage 2' loans, where the point of default may be several years in the future. Ignoring an expected fall in exposure (e.g. on a loan repayable in instalments) could lead to measurements of ECLs being too high. Ignoring an expected increase in exposure (e.g. drawdowns within an agreed limit on a revolving facility) could lead to measurements of ECLs being too low.

2.4.1.2 It is also necessary to determine the period of exposure that is considered for IFRS 9 purposes. The period of exposure limits the period over which possible defaults are considered and thus affects the determination of PDs and measurement of ECLs.

2.4.1.3 This section discusses how EAD may be calculated and the period of exposure may be determined for IFRS 9 purposes. Forward-looking information is discussed in section 2.8.

2.4.2 A sophisticated approach

Period of Exposure

2.4.2.1 Except for some revolving credit facilities, the maximum period over which expected credit losses are measured is the maximum contractual period over which the entity is exposed to credit risk. [IFRS 9.5.5.19]

2.4.2.2 This maximum contractual period is determined in accordance with the substantive terms of the contract, including the bank's ability to demand repayment or cancellation, and the customer's ability to require extension. [ITG April 2015.33-35, 38]

2.4.2.3 Where the period of exposure is taken to be the full contractual period, historical behavioural information (e.g. on prepayments) is reflected in the EAD model.

2.4.2.4 Where the period of exposure is calculated on the basis of historical behavioural information, the bank considers

appropriate segmentation to reflect different behavioural lives for different portfolio segments. Furthermore, the bank gives consideration to whether historical behavioural information captures current conditions and forward-looking information or needs to be adjusted.

2.4.2.5 For revolving credit facilities within the scope of IFRS 9.5.5.20 (i.e. that include both a loan and an undrawn commitment component, and the bank's contractual ability to demand repayment and cancel the undrawn commitment does not limit the bank's exposure to credit losses to the contractual notice period), the period of exposure is determined by considering the bank's expected credit risk management actions that serve to mitigate credit risk, including terminating or limiting credit exposure. In doing this, the bank:

- Considers its normal credit risk mitigation process, past practice and future intentions and expected credit risk mitigation actions.

- Analyses what actually happens in practice as a result of each of these types of actions and demonstrates that there is sufficient historical evidence that such actions are executed and impact the lifetime of the exposure. The analysis considers historical information and experience about the period over which the bank was exposed to credit risk on similar instruments and the length of time for defaults to occur on similar instruments following a significant increase in credit risk. [IFRS 9.5.5.20, B.5.5.40]

Exposure at default

2.4.2.6 The modelling approach for EAD reflects expected changes in the balance outstanding over the lifetime of the loan exposure that are permitted by the current contractual terms, including:

- Required repayments/amortisation schedule.

- Full early repayment (e.g. early refinancing).

- Monthly overpayments (i.e. payments over and above required repayments but not for the full amount of the loan).

- Changes in utilisation of an undrawn commitment within agreed credit limits in advance of default.

■ Credit mitigation actions taken prior to default.

2.4.2.7 The bank uses a cash-flow model to calculate the estimated exposure at each future month-end. This model is consistent with any similar model used for EIR or macro fair-value hedging purposes.

2.4.2.8 This cash-flow model further reflects movements in the EAD in the months before default. For example, three months of interest payments might be included in the EAD to reflect an expectation that these interest payments would be missed in advance of a default.

2.4.2.9 The inputs into the EAD model are reviewed to assess their suitability for IFRS 9 and adjusted, where required, to ensure an unbiased, probability-weighted ECL calculation reflecting current expectations and forward-looking information.

2.4.2.10 EAD models are differentiated to reflect the different risk characteristics of different portfolios. The bank considers these different underlying drivers in determining the different inputs to EAD models.

2.4.3 Considerations for a simpler approach

Period of exposure

2.4.3.1 If the period of exposure is taken to be less than the full period specified by IFRS 9 (e.g. the point at which a specific percentage of the balance has been repaid), the bank should provide reasonable and supportable information evidencing that the impact on ECLs of selecting this shorter period for the remaining balance is immaterial.

2.4.3.2 Otherwise, all of the principles detailed under the sophisticated approach also apply for simpler implementations, although the level of detail required in addressing each principle may be reduced.

Exposure at default

2.4.3.3 If a bank decides to use an approximation of the current 12-month EAD as a proxy for the EAD over the remaining life, the bank should provide reasonable and supportable information evidencing that this is appropriate for the specific product or

portfolio. For example, the proxy may hold only for certain portfolios where the balance is not anticipated to change significantly in the future.

2.4.3.4 Use of segmented credit conversion factor (CCF) models may be appropriate if the bank can justify this approach with analysis showing that exposures within each CCF segment are expected to behave similarly. A CCF is a modelled assumption which represents the proportion of any undrawn exposure that is expected to be drawn prior to a default event occurring.

2.4.3.5 Under a simpler approach, a bank may use fewer levels of risk segmentation, if it provides reasonable and supportable information evidencing that this is appropriate.

2.4.4 What is not compliant

Period of exposure

2.4.4.1 Defining the period of exposure to be shorter or longer than the maximum contractual period over which the entity is exposed to credit risk (except for certain revolving credit facilities). [IFRS 9.5.5.19-20, B5.5.38]

2.4.4.2 Determining the period of exposure to equal the historical average life of loans without evaluating whether this is consistent with forward-looking expectations based on reasonable and supportable information. [IFRS 9.5.5.17(c), B5.5.52]

2.4.4.3 For revolving credit facilities within the scope of IFRS 9.5.5.20, using the legally enforceable contractual period unless analysis of historical data shows that, in practice, management action consistently limits the period of exposure to the contractual period. [IFRS 9.5.5.20, B5.5.39-40, ITG December 2015.40-42]

2.4.4.4 Not considering all relevant historical information that is available without undue cost and effort when determining the exposure period of a revolving credit facility within the scope of IFRS 9.5.5.20. [IFRS 9.5.5.17(c), B5.5.40]

Exposure at default

2.4.4.5 Using new or existing EAD models developed for other purposes (e.g. regulatory capital) without demonstrating that these

models are fit for purpose under IFRS 9, including justifying and documenting the completeness and basis for inputs and adjustments to inputs. [IFRS 9.5.5.17(c), B5.5.49-54, BC5.283]

2.4.4.6 Using 12-month EADs as a proxy for lifetime EADs without appropriate justification. [IFRS 9.B5.5.13-14, IFRS 9.5.5.17(c), B5.5.49-54]

2.5 Loss given default

2.5.1.1 A key component of the sum of marginal losses approach is loss given default (LGD). For banks that are directly calculating expected cash flows, a combination of PD and LGD is used in order to calculate the expected cash flows from the projection of contractual cash flows. Estimates of LGD should consider forward-looking information (see section 2.8).

2.5.2 A sophisticated approach

2.5.2.1 The modelling approach for LGD (but not necessarily the actual LGD estimates) generally does not vary depending on which stage the exposure is in, i.e. there is a common LGD methodology that is applied consistently. However, if the bank has more specific data to model the LGD for a loan in default it uses that data.

2.5.2.2 The modelling methodology for LGD is designed, where appropriate, at a component level, whereby the calculation of LGD is broken down into a series of drivers.

2.5.2.3 For secured exposures, the approach considers at a minimum the following components:

- forecasts of future collateral valuations, including expected sale discounts;

- time to realisation of collateral (and other recoveries);

- allocation of collateral across exposures where there are a number of exposures to the same counterparty (cross-collateralisation);

- cure rates (including consideration of how the bank has looked at re-defaults within the lifetime calculation); and

- external costs of realisation of collateral.

2.5.2.4 For unsecured exposures the approach considers at a minimum the following components:

- time to recovery;

■ recovery rates; and

■ cure rates (including consideration of how the bank has looked at re-defaults within the lifetime calculation).

2.5.2.5 The estimation of the components considers the range of relevant drivers, including: geography (location of the counterparty and the collateral) and seniority of the credit exposure.

2.5.2.6 The estimation of LGD reflects expected changes in the exposure (consistent with assumptions used in modelling the EAD – see section 2.4), so that it is not biased (for example, a conservative estimate may arise if the expected exposure amount drops over time but this is not taken into account in estimating LGD).

2.5.2.7 The bank considers whether component values are dependent on macro-economic factors and reflects any such dependency in its modelling considering relevant forward-looking information (see section 2.8). In particular for exposures secured against real estate, the bank considers the interdependency between real estate prices and macro-economic variables.

2.5.2.8 Similarly, the bank considers whether there is any correlation or interdependency between components of LGD and then reflects that correlation in the estimation of LGD.

2.5.2.9 The data history that supports the modelling of LGD and its components covers a suitable period to support the relevance and reliability of the modelling (e.g. over a full economic cycle).

2.5.2.10 The estimation of the component values within LGD reflects available historical data and considers whether there have been or are expected to be any changes in economic conditions, or changes to internal policies or procedures, that should impact the calculation of LGD but which are not otherwise reflected in the modelling.

2.5.2.11 The LGD approach reflects discounting of cash shortfalls considering their expected timing using the EIR (see section 2.6). If regulatory LGD values are used as a starting point, then the effect of the different discount rates inherent in the regulatory LGD value is adjusted for (see section 2.6). Furthermore, if regulatory LGD values used as a starting point

contain floors that would lead to a biased result, these floors are removed for IFRS 9 purposes.

2.5.2.12 The IFRS 9 LGD only reflects credit enhancements that are integral to the terms of the exposure and that are not accounted for separately. If regulatory LGD values are used as a starting point and reflect credit enhancements that should not be included for IFRS 9 purposes (e.g. credit default swaps), then the impact is removed.

2.5.3 Considerations for a simpler approach

2.5.3.1 It may be possible to use portfolio averages for some components of LGD (e.g. if a separate value for the component cannot be estimated for each exposure) as opposed to applying a more granular estimation for all components of LGD. In other cases, estimation may only be possible based on portfolio-level averages. The bank determines whether a particular approach is acceptable by considering data availability and the risk of error, including ensuring information is unbiased (e.g. if conservative averages were used or if data reflected only good or bad times).

2.5.3.2 The estimation still considers any macro-economic dependency although the depth of the analysis carried out may be less.

2.5.3.3 The data histories used to support the analysis may be shorter or not cover the full range of variables used in the LGD analysis.

2.5.4 What is not compliant

2.5.4.1 Performing no analysis as to the macro-economic dependency of LGD or its components. [IFRS 9.5.5.17(c), B5.5.49-54]

2.5.4.2 Using regulatory LGD values without analysing whether adjustments are required. [IFRS 9.5.5.17-20, B5.5.49-54, BC5.283]

2.5.4.3 Failing to update collateral values when modelling the term structure of LGD. [IFRS 9.B5.5.55]

2.6 Discounting

2.6.1.1 ECLs are measured in a way that reflects the time value of money. This means that cash shortfalls associated with default are required to be discounted back to the balance sheet date. For a financial asset, a bank uses the effective interest rate (EIR) (i.e. the same rate used to recognise interest income) or an approximation.

2.6.1.2 The effect of discounting may be significant because default events and/or associated cash shortfalls may occur a long time into the future.

2.6.1.3 This section does not provide guidance on determination of the EIR (which has not changed from IAS 39) but instead focuses on its interaction with the impairment requirements of IFRS 9. As part of its implementation of IFRS 9, a bank will need to consider whether approximations used in determining EIRs under IAS 39 remain appropriate given the more significant role that discounting has in measuring impairment under IFRS 9 (e.g. discounting of cash shortfalls that may occur a number of years into the future).

2.6.2 A sophisticated approach

2.6.2.1 ECLs are calculated by estimating the timing of the expected cash shortfalls (taking into consideration realisation of collateral) associated with defaults and discounting them.

2.6.2.2 The discount rate is the EIR. For a financial guarantee contract, the discount rate reflects the current market assessment of the time value of money and the risks specific to the cash flows. Discount rates may be based on portfolio averages if this represents a reasonable approximation of the EIR.

2.6.2.3 Assumptions about prepayments, extensions and utilisation during the period of exposure (and within contractual credit limits) used in the ECL calculation are updated to reflect currently available information and are consistent with those used in estimating interest income.

2.6.2.4 The unwind of the time value of money (as the ECL is recalculated from period-to-period) is separately tracked, such that appropriate adjustments can be made to the interest

income amount for credit-impaired assets if this is otherwise calculated on the gross carrying amount of the financial asset.

2.6.2.5 For variable rate assets, the benchmark interest rate used to calculate the EIR may be either the current benchmark interest rate or a projected rate based on forward yield curves. There is consistency between the rate used to recognise interest revenue and the rate used to project and discount cash flows.

2.6.3 Considerations for a simpler approach

2.6.3.1 The time value of money is reflected in ECL calculations using estimated portfolio average collection periods (provided this is demonstrated to be a reasonable approximation).

2.6.3.2 A reclassification is made between the interest income and impairment lines of the income statement to take account of the requirement to recognise interest income on the net carrying amount of credit-impaired assets. This could be calculated by multiplying the average ECL balance for these assets by the portfolio EIR.

2.6.4 What is not compliant

2.6.4.1 Using discounting employed for regulatory purposes in the calculation of IFRS 9 ECL / LGD without making appropriate adjustments or evidencing that the impact of such adjustments would not be material. [IFRS 9.5.5.17-20, B5.5.49-54, BC5.283]

2.6.4.2 Continuing to use IAS 39 EIR approximations without assessing whether their use is appropriate for the purposes of IFRS 9, particularly given the longer time horizons over which amounts may be discounted under IFRS 9. [IFRS 9.A (definition of effective interest rate), B5.5.44, BC5.273-275]

2.6.4.3 Not reflecting the effect of the time value of money in ECL, or using discount rates which do not suitably approximate the EIR of the portfolio (e.g. current funding rates or risk-free rates). [IFRS 9.5.5.17, B5.5.44-48]

2.7 Staging assessment

2.7.1.1 The staging assessment will be a critical area for almost all banks. If an exposure's credit risk has not increased significantly since initial recognition ('stage 1'), then the bank recognises only 12-month ECLs as a loss allowance. However, if the exposure has suffered a significant increase in credit risk ('stage 2'), then the bank recognises a loss allowance equal to lifetime ECLs. Therefore, the assessment – especially for longer dated portfolios – can have a significant impact on reported earnings and equity. The staging assessment also drives how exposures will be disclosed in the notes to the financial statements. [IFRS 9.5.5.9 -11, IFRS 7.35A-M]

2.7.1.2 This section discusses the techniques a bank may employ and the judgements it needs to make in approaching the staging assessment.

2.7.2 A sophisticated approach

2.7.2.1 The bank's process to assess changes in credit risk is multi-factor and has three main elements (or 'pillars'):

■ a quantitative element (i.e. reflecting a quantitative comparison of PD at the reporting date and PD at initial recognition);

■ a qualitative element; and

■ 'backstop' indicators.

2.7.2.2 For larger exposures such as corporate and commercial, the assessment is usually driven by the internal credit rating of the exposure and a combination of forward-looking information that is specific to the individual borrower and forward-looking information on the macroeconomy, commercial sector and geographical region (to the extent such information has not been already reflected in the rating process).

2.7.2.3 For retail exposures, significant increases in credit risk cannot usually be assessed without undue cost and effort using forward-looking information at an individual instrument level, so the assessment is made on a collective basis that incorporates all relevant credit information, including forward-looking

macroeconomic information. For this purpose the bank groups its exposures on the basis of shared credit risk characteristics (see section 2.1).

2.7.2.4 Approaches are consistent across portfolios within a banking group, subject to considerations of what is material for individual businesses, products or geographical locations (see section 2.1.2).

2.7.2.5 All exposures are subject to a forward-looking credit assessment at original recognition, so as to establish the baseline for determining if there is subsequently a significant increase in credit risk.

2.7.2.6 The staging assessment uses all relevant information from processes used by the bank to measure and monitor credit risk. These processes require regular credit reviews or other monitoring and that all exposures are allocated to a credit quality rating or risk grade based on the most recent review or other information. The credit risk rating process includes an independent review function. The bank determines how these risk grades are predictive of the risk of default. [GCRAECL.40-45]

2.7.2.7 The assessment of a significant increase in credit risk for a particular product is informed by information available to the bank from other products. For instance, the assessment of whether a mortgage loan may have increased in credit risk might make use of behaviour evident from the customer's use of a current account or credit card.

Quantitative element

2.7.2.8 The quantitative element is the primary indicator of significant increases in credit risk, with the qualitative element playing a secondary role.

2.7.2.9 The quantitative element is calculated based on the change in lifetime PDs by comparing:

■ the remaining lifetime PD as at the reporting date; with

■ the remaining lifetime PD for this point in time that was estimated based on facts and circumstances at the time of

initial recognition of the exposure (adjusted where relevant for changes in prepayment expectations).

2.7.2.10 The PDs are forward-looking and based on the same methodologies and data used to measure ECLs (see section 2.3). In particular, as with the PDs used to measure ECLs, the lifetime PDs used to assess staging reflect the non-linear nature of credit losses arising from the range of possible macroeconomic scenarios (see section 2.8).

2.7.2.11 The bank defines criteria for the relative quantitative increases in PD that are indicative of a significant increase in credit risk. The threshold for an increase in PD to be considered significant varies depending on the PD at initial recognition (e.g. the higher the remaining lifetime PD estimated at initial recognition (see 2.7.2.9), the higher the threshold). [IFRS 9.B5.5.9]

Qualitative element

2.7.2.12 In general, qualitative factors that are indicative of an increase in credit risk are reflected in PD models on a timely basis and thus are included in the quantitative assessment and not in a separate qualitative assessment. However, if it is not possible to include all current information about such qualitative factors in the quantitative assessment, they are considered separately in a qualitative assessment as to whether there has been a significant increase in credit risk.

2.7.2.13 If there are qualitative factors that indicate an increase in credit risk that have not been included in the calculation of PDs used in the quantitative assessment, the bank recalibrates the PD or otherwise adjusts its estimate when calculating ECLs.

2.7.2.14 The staging assessment includes consideration of the qualitative indicators set out in IFRS 9.B5.5.17 and paragraph A24 of the GCRAECL. [IFRS 9.B5.5.17, GCRAECL.A24]

2.7.2.15 For corporate exposures, the bank considers specifically whether exposures on its "watch list" should migrate to 'stage 2'. If a bank intensifies the monitoring of a borrower or a class of borrowers and considers this is not indicative of a migration to

stage 2, it justifies and documents why a significant increase in credit risk has not occurred. [GCRAECL.A30]

2.7.2.16 Qualitative indicators that are monitored for retail exposures include:

■ Expectations of forbearance and payment holidays, or covenant breaches.

■ Credit and affordability scores.

■ Changes in credit card usage (e.g. movement from paying off each month to using the card to borrow).

■ Events such as death, unemployment, bankruptcy, or divorce.

■ Negative equity on mortgages (especially if interest-only).

2.7.2.17 Where there are multiple qualitative indicators that affect an exposure, or a qualitative indicator has a numerical measure (e.g. credit scores), the bank will establishes how much weight to give to the various indicators and how they are combined in making the assessment.

2.7.2.18 If there is evidence that there is no longer a significant increase in credit risk, the instrument will be transferred back to stage 1. If an exposure has been transferred to stage 2 based on a qualitative indicator, the bank monitors whether that indicator continues to exist or has changed. If the significant increase in credit risk arising from the qualitative indicator reverses, the exposure is returned to stage 1. However, some qualitative indicators (e.g. delinquency or forbearance) may be indicative of an increased risk of default that persists after the indicator itself has ceased to exist and the bank only returns the exposure to stage 1 once the risk of default has sufficiently decreased (sometimes referred to as a 'probation period'). The bank determines a policy for setting probation periods. In doing so, the bank understands how delinquency or forbearance and other such qualitative indicators impact lifetime PD. The policy is monitored to reflect changes in the impact and is applied consistently.

Backstop indicators

2.7.2.19 Instruments which are more than 30 days past due or have been granted forbearance are generally regarded as having significantly increased in credit risk and may be credit-impaired. There is a rebuttable presumption that the credit risk has increased significantly if contractual payments are more than 30 days past due; this presumption is applied unless the bank has reasonable and supportable information demonstrating that the credit risk has not increased significantly since initial recognition. The bank has a policy as to how days past due are calculated and applies it consistently. The bank applies its policy on probation periods to these exposures.

2.7.2.20 There may be other backstop indicators.

2.7.3 Considerations for a simpler approach

2.7.3.1 As for a sophisticated implementation, there are three elements of a simpler approach: quantitative, qualitative, and backstops. However, it is likely that the qualitative assessment will play a more significant role. This also may suggest a need for greater consideration as to what recalibration of PDs may be required when measuring ECLs to reflect qualitative indicators of increases in credit risk that have not been reflected in quantitative PD measures.

2.7.3.2 Even though the bank may not be able to assess changes in an exposure's lifetime PD, lifetime ECLs are generally expected to be recognised before a financial instrument becomes past due. Therefore, the assessment of whether there has been a significant increase in credit risk should be made based not only on whether the instrument is past due, or other lagging borrower-specific behavioural factors such as credit-bureau scores, but also using forward-looking information that is available without undue cost or effort. [IFRS 9.B5.5.2, ITG September 2015.19-25]

2.7.3.3 For the quantitative element of the assessment, it may be possible to use changes in 12-month PDs, rather than lifetime PDs, if the bank evidences that use of changes in 12-month PDs is a reasonable approximation. This is likely to be more difficult for loans with a maturity beyond 12 months where the most

significant cash flows, and hence risk of default, arise at or near maturity, such as 'bullet' loans. [IFRS 9.B5.5.13-14]

2.7.3.4 To justify continued use of 12-month PDs, a periodic review should be performed, although its nature and frequency will depend on the facts and circumstances. One approach would be to identify the key factors that would affect the appropriateness of using changes in 12-month PDs as a proxy, to monitor these factors on an ongoing basis as part of a qualitative review and to consider whether any changes in those factors indicate that changes in 12-month PDs are no longer an appropriate proxy. Key factors would include the differing impacts of macro-economic changes across the remaining lives of the instruments. [ITG September 2015.31]

2.7.3.5 While a less sophisticated staging assessment should still take account of non-linearity, it is possible that this might be achieved without quantitative modelling of multiple scenarios at every balance sheet date. There might only be a major change in the effect of non-linearity from period to period if there is a sufficient change in the range of distribution of possible scenarios. It is possible that the effect of non-linearity could be calculated in detail periodically and the distribution be monitored using qualitative information. It will also be necessary to use qualitative indicators for any non-linear effects which cannot be modelled.

2.7.3.6 Information that is already held by the bank to manage credit risk, or can be purchased from a credit bureau (such as the credit loss experience of other banks) or an economic forecasting company or an external ratings agency, or can be derived from market data, such as bond or CDS spreads, will normally be regarded as capable of being obtained and used without undue cost and effort.

2.7.4 What is not compliant

2.7.4.1 Assessing significant increases in credit risk based on an absolute PD or credit rating threshold that is applied to all exposures in a portfolio (unless the exposures in the portfolio all demonstrably had a sufficiently similar credit risk at initial recognition such that using the absolute threshold would serve to capture significant increases in credit risk since initial

recognition in a manner consistent with the requirements of IFRS 9). [IFRS 9.5.5.4, IE40, GCRAECL.A31]

2.7.4.2 Assessing whether there has been a significant increase in credit risk based on the risk of loss or change in ECL and not on the risk of default. It is not appropriate to avoid transferring an exposure to 'stage 2' because the bank holds adequate collateral. (However, the existence and value of collateral may influence the probability of the borrower defaulting and this should be taken into account.) [IFRS 9.5.5.9]

2.7.4.3 Assessing significant increases only by counterparty rather than by exposure without assessing the impact of cases in which there are multiple exposures to the same counterparty which may have been originated at different times and with different initial PDs (and thus have experienced different levels of relative increase in credit risk) and without making any necessary adjustments to comply with IFRS 9. [IFRS 9.IE43-47, GCRAECL.A31]

2.7.4.4 Using information that was designed for regulatory purposes, unless the bank documents its assessment, based on reasonable and supportable information, that its use leads to results that are compliant with IFRS 9 or adjusts it to be fit for use under IFRS 9. [IFRS 9.5.5.17(c), B5.5.49-54, BC5.283]

2.7.4.5 Concluding on a quantitative basis that there is not a significant increase in PD by comparing the remaining lifetime PD at the reporting date with the full lifetime PD at initial recognition in a manner that fails to allow for the relationship between expected life and risk of default. [IFRS 9.B5.5.11]

2.7.4.6 Using forward-looking information that takes a different view of future economic conditions for the staging assessment than that used in the calculation of ECLs. If there is a non-linear relationship between different representative forward-looking economic scenarios and the associated change in the risk of a default occurring since initial recognition, using only a single forward-looking scenario as a basis for the staging assessment would not meet the objectives of IFRS 9. However, as noted in section 2.7.3.5, quantitative modelling of multiple scenarios

might not be needed at every reporting date. [IFRS 9.5.5.3-4, 9, 17, B5.5.15, ITG December 2015.58-59]

2.7.4.7 Relying only on delinquency or other indicators that are insufficiently forward-looking to assess whether there has been a significant increase in credit risk. IFRS 9 permits this only when reasonable and supportable forward-looking information is not available without undue cost and effort. Except in very limited cases, it would be expected that a bank would be able to make use of other, qualitative indicators to supplement delinquency, such as credit bureau scores, the use of watch lists, etc. [IFRS 9.5.5.4, 11, GCRAECL.A17, A19]

2.7.4.8 Rebutting the 30 days past due presumption without reasonable and supportable evidence that demonstrates that contractual payments becoming more than 30 days past due does not represent a significant increase in credit risk. [IFRS 9.B5.5.20, GCRAECL.A52-A55]

2.7.4.9 Concluding that there has not been a significant increase in credit risk on the basis that the bank continues to lend, or would be prepared to lend, to the borrower. [IFRS 9.BC5.163-165]

2.7.4.10 Using changes in 12-month PD to assess whether a significant increase in credit risk (i.e. lifetime risk of default) has occurred without adequate analysis and ongoing review to support the conclusion that this is a reasonable approximation. [IFRS 9.5.5.9, B5.5.13-15, BC5.179, ITG September 2015.26-34]

2.8 Macro-economic forecasts and forward-looking information

2.8.1.1 A measure of ECL is an unbiased probability-weighted amount that is determined by evaluating a range of possible outcomes and using 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. [IFRS 9.5.5.17]

2.8.1.2 When there is a non-linear relationship between the different forward-looking scenarios and their associated credit losses, more than one forward-looking scenario would need to be incorporated into the measurement of expected credit losses to meet the above objective. [ITG December 2015.49]

2.8.1.3 This section discusses how a bank may incorporate different forward-looking information into its estimates of ECLs. This will require consideration of multiple forward-looking economic scenarios to ensure the ECL is unbiased, in particular by taking account of non-linear relationships between different possible scenarios and their associated credit losses. This section discusses how a bank may incorporate forward-looking information into its estimates of ECLs (incorporating forward-looking information into staging is discussed separately in section 2.7).

2.8.2 A sophisticated approach

2.8.2.1 In order to achieve the objective set out above, the overall approach to calculating ECL involves either to:

- Take the weighted average of the credit loss determined for each of the multiple scenarios selected, weighted by the likelihood of occurrence of each scenario *plus/minus* a separate adjustment for 'additional' factors; or

- Take the credit loss determined for the base scenario *plus/minus* a separate modelled adjustment to reflect the impact of other less likely scenarios and the resulting non-linear impacts (as a proxy for the above method*) plus/minus* a separate adjustment for 'additional' factors.

2.8.2.2 'Additional' factors are alternative economic scenarios or events not taken into account in the scenarios used in the main calculation (e.g. more extreme or idiosyncratic events not otherwise reflected in historical or forecast information such as a vote for a member state to exit from the EU or significantly increased political and military tension between nations in a particular region).

2.8.2.3 The following principles are applied within the approach adopted:

■ **Number of economic scenarios:** representative scenarios that capture material non-linearities are modelled (e.g. a base scenario, an upside scenario and a downside scenario). Different numbers of scenarios may be appropriate depending on the facts and circumstances - e.g. in periods of expected increased volatility. [IFRS 9.BC5.265, ITG December 2015.53(c)]

■ **Determining alternative economic scenarios:** whether a bank produces its own forward economic estimates or uses third party estimates, it considers all reasonable and supportable information available without undue cost or effort, unless the marginal effect of using additional data would be insignificant. In certain economies, extensive data will be available, but in other territories less information may be available. When developing and using internal forecasts, a bank considers third party data and views and justifies differences from external forecasts, but this does not mean it must replicate them.

■ **Representative scenarios:** upside and downside scenarios used are not biased to extreme scenarios such that the range and weighting of scenarios used is not representative. In particular, as noted in the Basel Committee's GCRAECL, "stressed scenarios developed for industry-wide supervisory purposes are not intended to be used directly for accounting purposes." [GCRAECL.37]

■ **Base scenario:** the base scenario is consistent with relevant inputs to other estimates in the financial statements (e.g. deferred tax recoverability and goodwill impairment assessments), budgets, strategic and capital plans, and other information used in managing and reporting by the bank. However, these inputs should not be lagging or biased. Even if the inputs used are timely and unbiased, if the group

budget is developed in September but macro-economic conditions have changed by the December year-end, or if the budget contains inherent optimism or pessimism, then appropriate adjustments are made to these inputs when using them to determine the base scenario for the purposes of the year-end ECL calculation. [GCRAECL.37]

■ **Sensitivities and asymmetries:** scenarios selected are representative and take account of key drivers of ECL, particularly non-linear and asymmetric sensitivities within portfolios. For example, if a bank has significant property exposures and hence significant ECL sensitivity to future property values, then different changes in property prices are modelled. The sensitivity of ECL to each individual forward economic parameter is monitored to identify key drivers and to estimate effects of changes in parameters on ECL.

■ **Parameter coherence:** in developing the detail of a specific economic scenario (e.g. a scenario with individual point estimates of future GDP, unemployment, interest rates, etc.), any expected correlation or other interrelationship between parameters (e.g. an increase in unemployment is expected to result in a decrease in interest rates) is considered in the development of the scenario so that it is realistic.

■ **Granularity of adjustments:** the calculation of a separate modelled adjustment to reflect the impact of less likely scenarios and the resulting non-linear impacts is performed at an appropriately low level of granularity which takes account of qualitatively different risk characteristics and sensitivities. For example, the adjustments for a UK residential mortgage book and an Italian residential mortgage book would be expected to be calculated separately. Additionally, this separately modelled adjustment is calculated using specific portfolio-level sensitivities and minimises the use of qualitative expert credit judgement that is not supported by quantitative analysis.

■ **'Additional' factors:** a list of significant scenarios or events not explicitly incorporated within the modelling of ECL, but which are nevertheless considered possible future outcomes and could have a significant effect on ECLs, is compiled and

evaluated. The bank assesses whether any adjustment to recognised ECLs should be made in respect of these 'additional' factors at the reporting date including: whether allowance for such events is already reflected in historical or forecast data and the need to avoid double-counting of the possible effects of extreme events; and whether the entity would have a reasonable and supportable basis on which to estimate an expected impact on credit risk and credit losses at the reporting date, such as whether reasonable and supportable information is available as to the likelihood of the event, its effect on PDs and, if the event does occur, its effect on credit losses. The bank makes an adjustment to recognised ECLs to reflect an additional factor if the bank can do so on the basis of reasonable and supportable information that is available without undue cost and effort, even if the adjustment reflects a relatively high level of measurement uncertainty. The bank does not make an adjustment to recognised ECLs to reflect an additional factor if the bank does not have a reasonable and supportable basis on which to estimate the event's impact. There are robust governance and controls around the process of identification, evaluation and inclusion or exclusion of additional factors. [ITG September 2015.43-47, 50]

2.8.3 Considerations for a simpler approach

2.8.3.1 The level of detail used in addressing each principle may be proportionately less for a simpler approach.

2.8.3.2 A bank may be able to perform a simpler analysis of historical relationships between observed defaults / credit losses and the overall position within the economic cycle at the time, which can then be used to estimate ECLs at different future estimated points in the economic cycle. Where a bank does not have its own data to do this (e.g. where it is a recent entrant to the market), it makes use of available external data sources such as industry data.

2.8.4 What is not compliant

2.8.4.1 Considering only a single future economic scenario for a portfolio with no separate adjustments to take account of non-linear impacts, unless the portfolio has no potentially material asymmetric exposures to ECL and this is evidenced by

appropriate analysis. [IFRS 9.5.5.17, B5.5.42, BC5.263, ITG December 2015.49]

2.8.4.2 Forecasts that are only developed internally or that only reference a single external source. Although a bank does not need to consult all available sources, it should consider information from a variety of sources and understand whether it supports or contradicts the bank's own forecasts of the future, in order to ensure that the information used is reasonable and supportable. [IFRS 9.5.5.17, B5.5.51, ITG December 2015.53(a)]

Abbreviations and terms used

Basel Committee	Basel Committee on Banking Supervision
CCF	Credit conversion factor
CDS	Credit default swap
D-SIB	Domestic Systemically Important Bank
EAD	Exposure at default
ECL	Expected credit loss
EDTF	Enhanced Disclosure Task Force
EIR	Effective interest rate
GPPC	Global Public Policy Committee of representatives of BDO, Deloitte, EY, Grant Thornton, KPMG, and PwC
GCRAECL	Basel Committee *Guidance on credit risk and accounting for expected credit losses* (December 2015)
G-SIFI	Global Systemically Important Financial Institution
IAS	International Accounting Standard
IAASB	International Auditing and Assurance Standards Board
IASB	International Accounting Standards Board
IFRS	International Financial Reporting Standard
IRB	Internal Ratings Based (as issued by the Basel Committee)
ITG	IFRS Transition Resource Group for Impairment of Financial Instruments
ITG [April/September/ December] 2015	ITG Meeting Summary for [April/September/December] 2015
KPI	Key performance indicator
LGD	Loss given default
PD	Probability of default
PiT	Point in time

TTC	Through the cycle
US GAAP	US Generally Accepted Accounting Principles
UTP	Unlikeliness to pay