<u>**From Banking Regulation and Supervision Agency:**</u>

GUIDELINE ON CALCULATING EXPECTED CREDIT LOSS ALLOWANCES IN ACCORDANCE WITH TFRS 9

SECTION ONE
Purpose, Scope and Basis

1. The purpose of this Guideline is to describe the best practices expected of banks in respect of processes, data, methodologies and models used in expected credit loss (ECL) accounting which must be carried out in accordance with TFRS 9 in the scope of the internal systems, risk management, corporate governance and loan classification regulations and reliable credit risk practices introduced under the Banking Law No. 5411. The principles laid down in this Guideline have been prepared as a guide to guarantee practices regarding ECL calculation as per TFRS 9.
2. This Guideline is prepared based on Article 20 of the Regulation on the Principles and Procedures regarding Classification of Loans and the Provisions to be Set Aside.

SECTION TWO
Basic Principles

Reasonable and supportable information

3. The information relied upon in ECL accounting should be related to assessment and measurement of credit risk and include past events, existing conditions and macroeconomic estimates. Therefore the information used to determine the credit risk and measure the ECL should be reasonable and supportable. Banks should make use of expert opinions in determining whether the information to be taken into account are reasonable and supportable. For the purposes of this Guideline, information based on events that pose importance in terms of ECL accounting and reasonable decisions are considered as reasonable and supportable.

Consideration of forward looking information

4. Consideration of forward looking information, including macroeconomic factors, which is a distinctive factor of ECL accounting, is critical to timely recognition of ECL. For economic analysis and predictions, banks should use sound judgment methods that are consistent with generally accepted methods. Taking into account that credit risk management is a core competence of banking, forward looking information must be supported with sufficient set of data. Presence of appropriate monitoring and effective internal systems must contribute to impartial execution of ECL assessment and measurement processes.
5. Banks must be able to justify that the information used in ECL assessment and measurement process is reasonable and supportable. A piece of information must not be excluded from ECL calculation process for reasons such as that the possibility of occurrence of an event is low or the credit risk or impact of that event on ECL is uncertain. In some cases, the information relating to assessment and measurement of the credit risk may not be reasonable and supportable, and therefore may be excluded from ECL assessment and measurement process.

However, such exceptional cases must be justified and documented adequately by banks. The information used must include an impartial evaluation of elements that arise from situations and events that are specific to the bank and its activities or originate from non-banking conditions, and also the impact of these elements on creditworthiness and cash shortfall.

6. The basic principles and explanations below aim to provide guidance on the methods to be used by banks in order to benefit from the basic elements of the credit risk management process for a reliable ECL assessment and measurement in accordance with TFRS 9.

Principle 1 - Responsibilities of the Board of Directors and Senior Management

The board of directors and senior management are responsible for creating and maintaining appropriate credit risk management practices, including effective internal control systems consistent with the bank's existing policies and processes, TFRS 9 and the relevant best practice guidelines in order to calculate sufficient ECL allowance.

7. The board of directors is responsible for approving and regularly reviewing a bank's credit risk management strategy and significant policies and processes for identifying, measuring, evaluating, monitoring, reporting and mitigating credit risk consistent with the approved risk appetite of the bank.

8. To fulfill the above-mentioned responsibilities, the board of directors should ensure the development and maintenance of the processes that must be systematicly and consistently applied by the senior management to calculate the required ECL allowances. The Board of Directors should demand reporting from the senior management about credit risk assessment and measurement processes including ECL allowances. Senior management should establish, implement and, as necessary, update suitable policies and procedures to communicate the credit risk assessment and measurement process internally to all relevant personnel.

9. The presence of an effective internal control system for credit risk assessment and measurement is essential to enabling senior management to fulfill its duties. An effective internal control system should comprise the following components:

(a) Measures to comply with all applicable regulations, bank policies and processes,

(b) Measures to enable the accuracy and consistency of the information used, and to provide reasonable assurance that ECL allowances shown in bank reports and financial statements are in compliance with TFRS 9 and best practice guidelines,

(c) Well-defined credit risk assessment and measurement processes that are independent from lending function, which contain:

- an effective credit risk management that accurately grades differing credit risk characteristics, identifies changes in credit risk on a timely basis, and prompts appropriate action;
- an effective process which ensures that all relevant and reasonable and supportable information, including forward-looking information, is appropriately considered in assessing and measuring ECL. (This process must also include maintaining appropriate reports, details of reviews performed, and identification and descriptions of the roles and responsibilities of the personnel involved.),
- an assessment policy that ensures ECL measurement occurs when necessary to appropriately measure ECL at the collective portfolio level by grouping exposures based on identified shared credit risk characteristics,

- an effective model validation process to ensure that the credit risk assessment and measurement models are able to generate accurate, consistent and unbiased predictive estimates on an ongoing basis. (The model must comprise policies and processes for determining and approving changes, and reporting these validation results);
- A clear formal communication and coordination among a bank's credit risk staff, financial reporting staff, senior management, the board and others who are involved in the credit risk assessment and measurement process for an ECL accounting framework.

(ç) An internal audit system that independently evaluates the bank's credit assessment and measurement systems and processes, including the credit risk rating system.

Principle 2 - Sound ECL methodologies

Banks should develop, document and maintain sound methodologies that address policies, processes and controls for assessing and measuring all credit risks. The measurement of allowances should build upon robust methodologies and result in the timely and appropriate recognition of ECL.

10. The credit risk assessment and measurement processes, underscored by credit risk methodologies, should provide information to the bank's senior management to make the right judgments about credit riskexposures and the related estimation of ECL.

11. Definition and/or explanations of the basic terms related to ECL measurement should be documented in the scope of the methodologies used. In cases where terms, data and assumptions are used in different fields (such as accounting, capital adequacy and credit risk management), the reasons of such differences should be documented and approved by the senior management. Information and assumptions as to ECL estimates should be reviewed regularly according to TFRS 9, and revised where necessary. Also, the rationale for changes in assumptions that affect ECL measurement should be documented.

12. A reliable methodology as regards assessment of the credit risk and measurement of allowance level (by credit type) can consider the following issues:

(a) A robust process that enables to detect and measure changes likely to arise in the level and the nature of credit risk since the first recognition,

(b) Criteria to duly consider forward looking data, including, macroeconomic data (Aside from the credit risk assessment being conducted on a loan or group basis, the bank has to demonstrate that it has conducted such assessment and ECL recognition in a timely manner. The criteria in question should enable to determine the facts that have a bearing on repayment, the ability and intention to fulfill contractual obligations. The economic factors that are evaluated should be related to determination of credit risk, and encompass international, national and local conditions.),

(c) For collectively evaluated exposures, a description of the basis for creating groups of portfolios of exposures with shared credit risk characteristics,

(ç) Identifying and documenting the selected ECL assessment and measurement methods (loss rate, probability of default (PD), loss given default (LGD) ratio, etc.) on a loan or group basis,

(d) Documenting why the selected method is appropriate particularly in cases where different ECL measurement methods are applied to different loans and groups (The justifications of changes in the measurement approach should be available for inspection.),

(e) Documenting the inputs, data and assumptions used in allowance calculation process (historical loss ratios, PD, LGD estimates and economic forecasts, etc.), how the life of an exposure or portfolio is determined (including, expected prepayment and default), the time interval over which historical loss experience is evaluated and the adjustments made in ECL calculation in the scope of TFRS 9 (For instance, if the current and forecasted economic conditions are different than that those that existed during the historic estimation period used, adjustments addressing such differences should be made. Moreover, if the bank has experienced little or no actual loss in the time interval analyzed, to the extent the existing or forecasted conditions differ from the conditions in the past, the impact of such conditions on ECL should be taken into account.);

(f) A process designed to evaluate the appropriateness of significant inputs and assumptions involved in the selected ECL measurement method (The basis of such inputs and assumptions is expected to be consistent from period to period. However, when such inputs and assumptions change, the rationale should be documented.);

(g) Identifying the situations that lead to reasonable changes in the ECL measurement method, inputs and assumptions (For instance, a loan which is evaluated in the scope of a group using (PD/LGD) method is removed from that group, and is individually evaluated according to the discounted cash flow method for reasons attributable to the borrower);

(h) Considering internal and external factors that have an impact on ECL estimate such as changes in standards applied to a lending exposure at origination, industrial, geographical, economic and political factors;

(ı) An explanation of how ECL estimates are determined (Banks must have an unbiased view about uncertainties in its lending activities when estimating ECL);

(i) Identifying what factors are considered in establishing historical time periods used in the scope of historic loss assessment (When conducting an ECL calculation, a bank should have sufficient historic data - ideally one full credit cycle as a minimum - in order to carry out a meaningful credit loss analysis);

(j) Determining the extent to which the collateral value and other credit risk mitigants affect ECL;

(k) Outlining the bank's policies and processes on write-offs and recoveries,

(l) Documenting the methods used to validate models in ECL measurement;

(m) Ensuring that forward looking information, including, macroeconomic factors, that has not been factored into allowances measured on an individual exposure basis are appropriately incorporated into ECL estimations;

(n) That a process is in place for the evaluation of sufficiency of allowances in the scope of TFRS 9.

13. The credit risk identification process of a bank should enable to determine appropriately and regularly those factors which result in a change in credit risk and have an impact on ECL estimates. In this context, considering the credit risk inherent in new products and activities is a key part of risk identification process and ECL measurement and assessment.

14. Banks should evaluate the conditions, including forward looking information, which might result in deviations from past ECL calculations and affect the credit risk and full collectability of loans.

15. Banks may take into account the following issues in evaluating (by loan type) borrower's qualifications, payment capacity and capital, terms of the loan agreement, collaterals taken and factors regarding other credit risk mitigants.

   (a) Policies and procedures regarding loan allocation, and exceptions to such processes;

   (b) Regular income of the borrower available to meet scheduled payments and its sources;

   (c) The borrower's capability to generate sufficient cash flow throughout the lifetime of the financial instrument;

   (ç) The borrower's overall leverage level, and expectations of changes therein;

   (d) Unencumbered assets that the borrower may pledge as collateral, and expectations as to changes in the prices of such assets;

   (e) Potential one-off events or recurring events that might affect the borrower's ability to meet contractual obligations;

   (f) Timely evaluation of collaterals, and consideration of factors likely to affect the future value of collaterals.

16. In cases where business models, prevailing macroeconomic conditions or future estimations are expected to affect collection of overdue receivables, the following may be considered.

   (a) Conditions regarding laws, banking regulations and competition;

   (b) Trends in the bank's overall volume of credit by years,

   (c) Overall credit risk profile, and expectation related to changes thereto,

   (ç) Credit concentrations to borrowers or by product type, portfolio segments and geographical regions;

   (d) Expectations as to collection, charge-off, and recovery practices,

   (e) Expectations of change in factors likely to affect ECL such as unemployment, GDP, benchmark interest rates, inflation, liquidity or technology,

   (f) The incentives and willingness of borrowers to meet their obligations.

17. ECL methodologies should take into account different scenarios, and should not rely on subjective, biased or overly optimistic assessments. Banks should develop and document a process to generate appropriate scenarios for use in ECL estimates. In this context, in particular;

(a) Banks should document how ECL estimates would change in different scenarios, including changes in external factors that affect ECL estimates and (such as PD and LGD parameters) ECL components.

(b) Banks should have documented processes in place to determine the time horizon for the scenarios. Moreover, they should explain how ECL is estimated for loans with a term longer than the time period projected for economic forecasts.

(c) A variety of experts, including risk experts, economists, business managers and senior managers, should assist in the selection of the scenarios relevant with the Bank's credit risk exposure profile. Care should be exercised to ensure that scenarios developed by third parties outside the bank reflect the Bank's business and credit risk exposure profile. The fact that scenarios are developed outside the bank shall not relieve the bank of its responsibility.

(ç) Backtesting should be performed to make sure that the most appropriate economic factors that affect credit risk and collectability are being considered in ECL estimates.

(d) Market indicators of future performance (e.g. CDS spreads) can be used to check the consistency of the assessments conducted by the bank.

18. Banks should demonstrate that the risks arising from the nature of the product are understood and taken into account in credit pricing. Banks should re-evaluate ECLs for increases in credit risk that arise after initial recognition. Examples of fact patterns potentially indicative of inadequate estimates of ECL include:

(a) The granting of credit to borrowers with a fragile income stream,

(b) The expected cash flows of the borrower being insufficient to cover loans and other debts,

(c) Flexible payment schedules, including payment vacations, interest-only payments,

(ç) For real estate and other asset-based financing, lending of amounts equal to or exceeding the value of the financed property or otherwise failing to provide an adequate margin of collateral protection;

(d) Undue increases in restructuring/modifications due to financial difficulty faced by the borrower or competition conditions,

(e) Undue increase in the bank's credit volume in connection with the increased credit volume of the other banks,

(f) Increase in loans monitored under Group Two and non-performing receivables.

19. The accounting policies and the allowance methodology of banks should include criteria regarding (a) restructurings and modifications in loan agreements and (b) "purchased or originated credit-impaired assets" as per TFRS 9.

(a) The allowance methodology should ensure that ECL measurement is carried out as required in relation to loans restructured or whose contractual terms are changed. For example, the allowance level of a restructured or modified loan must be consistent with the collectability level of the loan. Assuming an immediate decrease in the borrower's credit risk after restructuring would not be a prudent approach and anydecrease in the allowance level of a restructured loan with such an assumption should be supported by sound evidence.

(b) Decrease in the credit risk of a borrower would be possible following regular payments that take place over a reasonable period of time. In the scope of a restructuring or modification of contractual terms, repayment performance of the borrower in the form of interest payments alone may not be indicative of whether the collection of loan principal is reasonably assured. In addition, further expected delays in payments show that the credit risk has not improved, and thus the level of ECL should be reassessed carefully. The allowance methodology should enable appropriate identification and accounting for "purchased or originated credit-impaired financial assets". The cash flow estimates regarding these kinds of loans must be reviewed at each reporting period, and revised where necessary. The revisions made within this scope must be appropriately supported and documented, and approved by the senior management.

Principle 3 - Credit risk rating process and grouping

Banks should have a credit risk rating process in place to group loans on the basis of shared credit risk characteristics.

Credit risk rating process

20. As part of the credit risk assessment process, comprehensive processes and information systems should be established to monitor loan quality. These processes and systems should include an effective credit risk rating process that detects the change over time in the level, nature and drivers of credit risk in order to ensure that loans are appropriately monitored and sufficient ECL allowance is set aside.

21. Credit risk rating process should include an independent review function. Assigning credit risk grades and updating these credit grades should be subject to the evaluation of an independent review function.

22. In determining the credit risk grade at initial recognition date, elements such as product type, contract terms, collateral type and amount, borrower's characteristics, or the geographical region of operation can be taken into account.

23. In updating credit risk grades assigned as a result of assessments on a loan or group basis, changes in such factors as industry outlook, growth rates, consumer sentiment, economic forecasts (interest rates, unemployment rates, commodity prices, etc.) or weaknesses that occurred after allocation, can be taken into consideration.

24. An effective credit risk rating system should capture all loans when assessing changes in credit risk, and not only those that experienced significant increases in credit risk, have incurred losses or borrower of which suffered a deterioration of creditworthiness. In this context, a credit risk rating system should enable to identify migration and significant increases in credit risk.

25. In describing the elements of a credit risk rating system, each credit risk grade should be clearly defined, and the people responsible for the design, implementation, periodic testing of the system, and the approval of the model should be identified.

26. Credit risk grades should be revised whenever relevant new information is received, or a bank's expectation of credit risk has changed. Credit risk grades should be reviewed maximum on a quarterly basis to ensure that they are accurate and up to date.

Grouping based on shared credit risk characteristics

27. Groups with shared credit risk characteristics should be created to enable the assessment of the impact of the credit risk changes on ECL. The grouping methodology (product type, contractual terms, sector/market segmentation, geographical region, vintages etc.) should be documented and reviewed, and be subject to the approval of senior management.

28. Loans with shared credit risk characteristics should be grouped to reflect the sensitivity of the change in the level of credit risk to the change in elements that affect the credit risk. Forward looking information, including macroeconomic factors, should be taken into account in the grouping of loans.

29. Loans should not be grouped in such a way that an increase in the credit risk of particular exposures is masked by the performance of the group as a whole.

30. The reliability of processes should be ensured upon initial grouping of loans, and thereafter, in cases where relevant new information is received, or the change in the bank's expectation regarding the credit risk suggests a permanent adjustment, the grouping of loans should be re-evaluated, and loans should be placed in appropriate groups. If any time constraint is present for regrouping of loans, the temporary adjustments described in the subsequent paragraphs of this Guideline can be used.

Temporary adjustments

31. Temporary adjustments to the allowance are adjustments which are used for circumstances when it is detected that existing or expected risk elements have not been considered in credit risk rating and modeling process. Such adjustments would be used only as a temporary solution – for example, in transient circumstances or when there is insufficient time to appropriately incorporate relevant new information into the existing credit risk rating system or to re-segment existing groups of lending exposures, or when lending exposures within a group react to factors or events differently than initially expected.

32. The use of temporary adjustments requires the application of significant judgment and creates the potential for bias. Temporary adjustments should be consistent with forward looking forecasts, be documented and subject to appropriate corporate governance processes.

33. If the adjustment is made for reasons such the occurrence of a new risk element which is not expected to be temporary, the methodology should be revised as soon as possible to include the new elements.

Principle 4 - Adequacy of ECL allowances

The aggregate amount of allowance calculated by the bank whether allowance components are determined on a collective or an individual basis, should be adequate and consistent with TFRS 9.

34. Banks should apply robust credit risk methodologies to ensure that ECL allowances are calculated sufficiently and in accordance with TFRS 9.

35. Evaluation of the sufficiency of the allowances to be set aside calls for consideration of the relevant factors and expectations that may affect the cash flows over the life of a loan or a loan group as of the reporting date. In addition to past and current data, forward looking reasonable and supportable data, including macroeconomic factors that will enable to evaluate loans in accordance with TFRS 9 should also be taken into account.

36. Individual and collective assessment approaches for exposures are the basis of allowance for ECL; in any case, the approach should be consistent with TFRS 9, and individual versus collective assessments should not result in materially different allowance measurements.

37. The approach used in assessment of ECL should be consistent with the bank's credit risk management. Regardless of the assessment approach used –individual or collective-, it should not result in delayed recognition of ECL. Depending on the level of sophistication of a bank's credit risk management systems, if the impact of forward looking information, including macroeconomic forecasts, into assessments for individual borrowers prevents a robust analysis, a collective assessments can be preferred.

38. ECL assessments based on an individual approach, all reasonable and supportable forward looking information, including macroeconomic factors, which affect collectability of the loan and credit risk, should be taken into account, and the bank should document how such information is reflected to ECL calculations.

39. In instances where an individual assessments of exposure do not adequately consider forward-looking information, it is appropriate to group lending exposures with shared credit risk characteristics to estimate the impact of this information.

40. If the bank's allowance methodology does not incorporate or partially incorporates events and circumstances not previously considered that affect ECL as of the reporting date, temporary adjustments may be necessary. However, if the reason for adjustment is not expected to be temporary, such as the emergence of a new risk driver that has not previously been incorporated into the bank's allowance methodology, the methodology should be updated immediately to incorporate that factor.

Principle 5 - ECL model validation

A bank should have policies and processes in place to appropriately validate models used to assess and measure ECL.

41. Models may be used in various aspects of the ECL assessment and measurement process at both the individual transaction and overall portfolio levels, including credit grading, credit risk identification, measurement of ECL allowances, stress testing and capital allocation. ECL models should consider the effect of changes in historical, current and reasonable and supportable forward looking information related to the credit risk such as PD, LGD, exposure amount, collateral amount, changes in PDs and credit risk grades assigned by the bank to the borrower, including also changes regarding the borrower and macroeconomic factors.

42. There should be robust policies and processes to validate the accuracy and consistency of model-based rating systems and processes, including also the estimation of all relevant risk components, at the outset of model usage and on an ongoing basis. Validation of the model should be carried out regularly in terms of compliance with its purpose of use, including the making of significant changes upon initial development of the model and thereafter.

43. Model validation should cover the following elements as a minimum requirement:

a) Clear roles and responsibilities for model validation should be clearly defined and model validation should be performed by staff who have the necessary expertise. Verification and approval of the model should be conducted by staff with necessary experience and expertise independently of the model development process. The findings and results of model validation should be reported to the relevant in-house management units without delay.

If model validation has been outsourced, the responsibility for the effectiveness of model validation and the continued compliance of the validation service rendered by a third party to the principles in this Guideline shall rest with the bank.

b) A model validation scope and methodology should include a systematic process of evaluating the model's reliability, consistency and accuracy of as well as its continued relevance to the underlying portfolio An effective model verification and approval process should also make it possible to define potential limitations of the model on a timely basis. Model validation should include an examination of inputs, design, outputs/performance of the model.

- **Inputs -** Banks should establish quality and reliability standards regarding the data used as model inputs (historical, current and forward looking data). The data used for estimating ECL allowances should be consistent with the portfolios and as far as possible accurate, reliable and complete, and should not include exceptions that would lead to bias estimates. Model validation should provide assurance that the data used meets these standards.

- **Design** - Model validation should demonstrate that the underlying theory of the model is conceptually sound, recognized and generally accepted for its intended purpose. Moreover, from a forward looking perspective, model validation should assess the extent to which the model takes account of changes in economic and credit environment and the changes regarding the borrower on the basis of risk elements and throughout the model.

- **Output / performance** - The bank should establish standards for a sufficient model performance. If the performance threshold is significantly exceeded, model re-calibration or re-development should be considered.

c) The documentation regarding model validation should be created to include the changes in the validation process of the model, validation methodology and tools, the data range used, the results and remedial measures taken when necessary. The documentation should be regularly reviewed and updated.

ç) The effectiveness of model validation and its independence from the model development process should be reviewed regularly by in-house or external independent parties. The findings of the review should be reported in a prompt and timely manner to the senior management and audit committee of the bank.

Principle 6 - Experienced credit judgment

Use of experienced credit judgment is essential to the measurement and assessment of ECL. Experienced credit judgment should be used particularly in the robust consideration of reasonable and supportable forward-looking information (including macroeconomic factors).

44. Banks should have the necessary systems to ensure a robust estimate and timely recognition of ECL. Information on historical loss experience or impact of current events may not fully reflect the credit risk. In this context, experienced credit judgment should be used to incorporate the expected impact of all reasonable and supportable forward looking information (including macroeconomic factors) on ECL calculations. The use of experienced credit judgment should be documented in the bank's credit risk methodology, and regularly reviewed.

45. Historical information provides a useful basis in determining the trends and correlations used in identifying credit risk factors. However, ECL estimates should take into account of the impact of forward-looking events and conditions on such factors. ECL estimates should reflect the expected future cash shortfalls resulting from such impact.

46. Banks should demonstrate that forward-looking information factored into the ECL estimation process has a link to the credit risk drivers for particular exposures. Where it is not statistically possible to demonstrate a strong link between information and credit risk factors, the use of experienced credit judgment will be crucial in establishing an appropriate level for individual or collective allowance. In cases where a forward-looking factor has been identified as relevant, but was not incorporated into individual or collective assessment, temporary adjustments may be necessary.

47. Macroeconomic forecasts and other relevant information that affect credit risk factors relating to different portfolios in the same manner should be applied consistently to the portfolios in question. Furthermore, when developing ECL estimates, experienced credit judgment should be applied to consider its point in the credit cycle.

48. Banks should make use of information with forward-looking nature produced for capital adequacy measurement and risk management purposes also during ECL estimation.

Principle 7 – Common Processes, Systems, Tools and Data

Banks should have a sound credit risk assessment and measurement process that provides them with a strong basis for common systems, tools and data to asses credit risk and measure expected credit losses.

49. Banks should, to the extent possible, use common processes, systems, tools and data to assess credit risk, measure ECL for accounting purposes, and to determine expected losses pertaining to capital adequacy. These common processes, systems, tools and data can include credit risk rating systems, estimated probability of default, past-due status, loan-to-value ratios, historical loss rates, product type, amortisation schedule, down payment requirements, market segment, geographical location, vintage and collateral type.

50. Credit risk practices should be reviewed periodically to ensure that relevant data are captured and the systems are updated as the change of lending activities of the bank.

51. Appropriate communication channels should be established within the bank to ensure that information on estimates of ECL, changes in the credit risk and actual losses experienced on loans is shared among bank's credit risk experts, accounting and legal reporting personnel and loan underwriting personnel

52. The bank's credit risk monitoring system should be designed to include all lending exposures when assessing the impact of changes in credit risk, and not only loans that may have experienced significant increase in credit risk, have incurred losses or are otherwise credit-impaired.

SECTION THREE

Other Issues Regarding the ECL Accounting

53. This section of the Guideline includes additional explanations in TFRS 9 about the Agency's expectations as regards 1) the loss allowance at an amount equal to 12-month expected credit loss, 2) the assessment of significant increases in credit risk and (3) the use of practical expedients. The following explanations should be considered with the principles set out above.

Loss Allowance at an Amount Equal to 12-Month Expected Credit Loss

54. The paragraph 5.5.5 of TFRS 9 provides, "*If the credit risk on a financial instrument has not increased significantly at the reporting date since initial recognition, an entity shall measure the loss allowance pertaining to that financial instrument at an amount equal to 12-month expected credit losses.*" In this context, it is essential to calculate ECL for all lending exposures, and it is expected that setting aside a nil allowance will be exceptional. Yet, ECL estimates contain a probability-weighted amount that should always reflect the possibility that a credit loss will occur.

55. In the measurement and assessment of 12-month ECL, banks are expected to adopt an active approach that will enable to identify changes in credit risk in a timely manner. The estimates regarding the amount and timing of 12-month ECL should rely on senior management's experienced credit judgment as per the principle presented in Principle 6 herein and should reflect an unbiased and probability-weighted ECL.

56. TFRS 9 defines an amount equal to 12-month ECL as the "*portion of lifetime expected credit losses that represent the expected credit losses that result from default events on a financial instrument that are possible within the 12 months after the reporting date.*" [1] It should be taken into account that the amount equal to 12-month ECL covers not only the losses expected in the next 12 months but also the cash shortfalls that are expected over the life of a loan or a loan group due to potential loss events likely to occur in 12 months. In order to evaluate incorporation of a loan into lifetime expected credit loss (LEL) calculation, the change in the risk of default occurring over the expected lifetime of the loan should be considered. In TFRS 9, in some circumstances, it is permitted to use the change in risk of default in the next 12 months in order to conduct such assessment. However, taking into account the fact that this approach may not fit every situation, the principles set out in paragraph B5.5.14 of TFRS 9 should be taken into account.

57. TFRS 9 does not provide a direct definition of default, and the definition of default should be made in consistency with the definition used in credit risk management. In paragraph B5.5.37 of TFRS 9, there is a rebuttable presumption that default does not occur later than 90 days past due. It is expected that the definition of default which is used for accounting purposes should take into account the definition of default set out in the Communiqué on Calculation of the Amount Subject to Credit Risk by Internal Rating Based Approaches published in the volume of the Official Gazette dated 23/10/2015 and numbered 29511. -

    In the Communique in question, Appendix-2, paragraph (29), it is provided, "*The borrower is deemed to be in default upon occurrence of either one of following events*;

    a) The bank' considers that the borrower will not be able to fully pay its debts to the bank or one of its subsidiaries which is a consolidated financial institution without realising security,

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[1] See TFRS 9, Appendix A, Terms Defined

b)   The borrower is past due more than 90 on any material credit obligation to the bank or one of its subsidiaries which is a consolidated financial institution."

-- The condition set out in paragraph b of the said default definition corresponds to the rebuttable presumption that default does not occur later than 90 days past due, as set out in B5.5.37 of TFRS 9.

58. According to the above-mentioned definition, default occurs when either or both of the conditions in subparagraphs (a) and (b) occur. In this context, the condition set forth in (a) regarding borrower's failure to fulfill his obligation enables to establish default prior to the criterion in (b) which relates to the loan becoming overdue by 90 days, The issues which are presented as indications of the failure to fulfill the obligations laid down in the Regulation on the Principles and Procedures regarding Classification of Loans and the Provisions to be Set Aside, and Communiqué on Calculation of the Amount Subject to Credit Risk by Internal Rating Based Approaches should be applied to detect in a timely manner the events of "unlikeliness to pay" which precipitate eventual cash shortfalls.

59. In estimating the 12-month ECL, it is important to take into account forward looking reasonable and supportable information, including macroeconomic factors, which affect the credit risk. A bank should exercise its experienced credit judgment to consider qualitative and quantitative information which might affect credit risk assessment. While TFRS 9 does not require a more-than-necessary investigation for the required data in 12-month ECL calculation, any information that can affect estimation of ECL should be taken into account, and important information that could be reasonably acquired should not be excluded from the calculation.

60. Loans with a high credit risk at origination and their allowances initially calculated in the scope of 12-month ECL should be monitored closely for a timely transfer to LEL calculation when a significant increase occurs in credit risk. If a bank has policies in place to extend credit for high-risk lending exposures, that policy and the relevant corporate governance process should be well documented, and sound underwriting practices should be followed, and suitable robust credit risk management techniques should be employed.

61. 12-month ECL measurement can be conducted individually or collectively. ECL requirements of TFRS 9 should be implemented reliably taking into account the migration of credit risk, and increases in credit risk should be identified prior to transition to LELmeasurement on an individual or collective basis, and necessary additional provisions set aside.

62. Even if an increase in credit risk is not judged to be significant, the bank should adjust its 12-month ECL estimate to the changes take place in credit risk.

63. In the case of ECL assessment on a collective basis, if it is determined that further or different segmentation within a group of loan is required, the group should be split into subgroups, and the measurement of 12-month ECL should be updated for each subgroup, or in the case of transient circumstances, a temporary adjustment should be applied.

64. Loans should not be grouped in such a way to obscure timely identification of significant increases in credit risk.

Assessment of Significant Increases in Credit Risk

65. TFRS 9, paragraph 5.5.4, provides, "*The objective of the impairment requirements is to recognize lifetime expected credit losses for all financial instruments for which there have been significant increases in credit risk since initial recognition – whether assessed on an individual or collective basis – considering all reasonable and supportable information, including that which is forward-looking."*

66. This approach is based on the assumption that the creditworthiness of the counterparty and therefore the ECL upon initial recognition have been taken into account in the pricing of the loan *at that date*. If a post-origination increase in credit risk may not be fully compensated by the interest rate charged, it is necessary to evaluate *whether a significant increase has occurred in credit risk*. If

such an increase has occurred, it is necessary to measure *LEL*.

67. To be able to assess whether a significant increase occurred in credit risk or not and accordingly, to calculate 12-month or lifetime ECL properly, banks should establish or adapt corporate governance and internal systems in accordance with the principles laid down in this Guideline. Ensuring a consistent approach across entities of similar type and scale within a consolidated group is important. In this framework, it is important that economic projections regarding different countries and industries are reviewed and approved by the senior management of the parent bank, and also, the processes, controls and assumptions used in developing the projections and linking these to ECL are consistent across the group. On the other hand, the consistency requirement should not be interpreted as being completely equal at the entire group level. In a consistent system, it is probable that differences may arise among countries and product subject to existing information and conditions, but such differences should be well documented and justified.

68. Banks should have in place processes enabling to identify whether a significant increase has occurred in credit risk after initial recognition of a loan, and to describe the situation in all aspects, and if such an increase has occurred, then to measure LEL on an individual loan or group of loans with similar risk characteristics in compliance with impairment requirements of TFRS 9.

69. As set out in TFRS 9, paragraph 5.5.17, the scope of information that must be taken into account in assessing whether a significant increase has occurred in credit risk after initial recognition of a loan is very extensive. In this respect, it is necessary to take into account strategic, operational and other properties specific to the borrower as well as macroeconomic conditions, and information about the industry and geographic region of the borrower or the group of borrowers that have credit risk characteristics in common with the borrower. The basic aspect is to take into account existing conditions and historical information as well as all reasonable and supportable forward looking information that can be acquired without sustaining undue cost and effort.

70. In order to recognize allowances on a timely basis in line with TFRS 9, banks will need to;

    a) assemble data and forward projections for the key drivers of credit risk in their portfolios; and

    b) be able to quantify the credit risk in each of their exposures or portfolios based on these data and projections.

71. In TFRS 9, paragraph B5.5.2, it is stated that LEL are generally expected to be recognized before the financial instrument becomes overdue, and credit risk increases significantly before the financial instrument becomes past due or other lagging borrower-specific factors (for example, modification and restructuring) occur.

For this reason, it is important that banks' analyses take into account the fact that the determinants of credit losses very often begin to deteriorate a considerable time before any objective evidence of delinquency appears in the lending exposures affected. In addition, banks should take into account that delinquency data are generally backward-looking, and in this connection, it shall only be sufficient in rare cases to take delinquency data into consideration in applying the ECL approach. For instance, when consumer loans are concerned, adverse developments in macroeconomic conditions or borrower attributes may point to a significant increase in credit risk before delinquency occurs.

72. For this reason, the linkages between the macroeconomic factors, conditions specific to the borrower, and credit risk level should be taken into account by banks along with reasonable and supportable information to be able to achieve the purpose of TFRS 9. To this end, banks should conduct a detailed analysis of historical and current data that will enable to identify the most appropriate credit risk drivers and ensure that existing and estimated conditions that are likely to affect the credit risk element, expected cash shortfalls and hence loss expectations are included in the analyses.

73. Banks should conduct analyses not only for loan portfolios of individually small credits, such as credit cards exposure, but also for loans in high amounts. For example, when a high amount of commercial real estate loan is concerned, the sensitivity of the commercial real estate market in different countries to the general macroeconomic conditions should be taken into account, and in order to determine whether a significant increase has occurred in credit riskusing data such as interest rates or vacancy rates.

74. Banks should have policies in place showing the elements indicating a "significant" increase in credit risk for different types of loans, to include also the criteria that results in such determination. These criteria and the approach to and the reasons for using the definitions for, such criteria, should be disclosed in the footnotes to the financial statements. TFRS 9, paragraph 5.5.9 requires that, during the evaluation of significant increases occurred in credit risk, *"instead of the change in expected credit loss amount, the change that occurs lifetime expected default risk of the financial instrument"* should be relied upon. In other words, it is essential that such evaluation is conducted according to the default risk and the ECL should not be used as a basis (for example, the effects of credit risk mitigators such as collateral and guarantee should not be taken into consideration).

75. While developing approaches that enable to determine whether a significant increase has occurred in credit risk, each of the sixteen indicators as shown in TFRS 9, paragraph B5.5.17 (a-p) should be taken into account to the extent they are related to the loan subject-matter of the evaluation, and it should considered whether there are additional information that must be taken into account or not. Because the use of some of these indicators will be more appropriate than other indicators in terms of measuring whether a significant increase has occurred in the credit risk of a certain type of financial instrument, the indicators referred to in TFRS 9 should not be seen as a "checklist" in terms of both TFRS 9 and this Guideline. Banks should not limit the significant increase issue in credit risk to situations especially when a financial instrument is expected to move to the third stage. Rather, there may be a significant increase in credit risk of the borrower without any evidence that the financial assets will be impaired. On the other hand, a significant increase in credit risk does not necessarily mean that default is probable; it only shows that the probability of default has increased compared to the situation at the date of initial recognition. Symmetry (operates in two directions) of TFRS 9 ECL model points to this issue: A financial asset may be moved to the second stage (LEL), but if, the threshold of significant increase in credit risk is no longer met, it can be moved back to the first stage (12-month expected loss).

76. Banks should take into account, without limitation, the following indicators in the determination of significant increases in credit risk:

(a) a discretionary decision by management such that the credit risk of the exposure at the reporting date would be significantly higher than it was when the loan was actually originated because of an increase in the credit risk of the specific borrower since inception;

(b) a decision by management to strengthen collateral and/or covenant requirements for new exposures that are similar to exposures already advanced because of changes in the credit risk of those exposures since initial recognition,

(c) a downgrade of a borrower within a bank's internal credit rating system, or, if it is taken into account by the bank, a downgrade by a credit rating institution authorized or directly recognized by the Board under the Regulation on Principles Regarding Authorization and Activities of Rating Institutions,

(d) As a result of the assessment performed within the bank in relation to performing loans that are monitored on a loan basis, it is concluded that credit quality is lower than that prevailed at the initial recognition date,

(e) The credit risk determinants (such as future cash flows) pertaining to an individual borrower (or group of borrowers) shows deterioration,

(f) A restructuring is expected due to financial difficulties.

77. In addition to the above mentioned, the following general issues should be taken into account in evaluating whether there has been a significant increase in credit risk:

(a) Deterioration of macroeconomic outlook in relation to a specific borrower or a group of borrowers. Macroeconomic evaluations should be conducted to include issues related to countries, companies, households and other borrower types, and also encompass regional economic performance differences in a certain country[2].

(b) Deterioration of expectations as regards the sector or industry where the borrower operates.

78. Because a minor change in the qualitative characteristics of a loan might be the indication of a big increase in default risk, determination of the elements of credit risk and the indication of the relationship between such elements and the credit risk level are of great importance. -
Also, TFRS 9, paragraph 5.5.9 states that the significance of a change that occurred in credit risk after initial recognition date depends on the risk of a default occurring at initial recognition. In this context, if a bank uses the changes in PD to determine changes in the occurrence risk of default, the level of materiality of the change in PD may be expressed by calculating its ratio to PD at the date of initial recognition (or taking change ratio) (for example, change in PD / PD at initial recognition date) taking into account paragraph B5.5.11 of TFRS 9.

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[2] For further explanation about taking account of forward looking information, including macroeconomic factors, see principle 6 of this Guideline.

On the other hand, in the scope of this analysis, the width of change in PD (eg. PD at measurement date minus PD at initial recognition) should also be taken into consideration.

79. Because the change that PD will incur as a result of a change of one degree in credit rating may not always be linear, it will not be sufficient to take into account how many "grades" a rating downgrade entails (for example, the default probability over five years of an exposure rated BB is around three times that of one rated BBB). Furthermore, because the significance of a one-grade movement would depend on the granularity of a bank's rating system – and hence the "width" of each grade – an appropriate initial segmentation is important to ensure that a significant increase in credit risk for an individual exposure or group of exposures is not masked within a segment. Therefore, in order to ensure that credit risk is appropriately distinguished, banks should make sure that their internal rating system includes sufficient number of steps. In the performance of all these analyses, banks should take into account that a significant increase in credit risk may arise prior to the occurrence of a change in credit rating.

80. Banks should take into account that, in some cases, the issues specified in paragraphs number 76-78 may not be indicative of a significant increase in credit risk. For example, it may be the case that the default probability of an exposure rated AA is low, and not much greater than one rated AAA. However, very few bank loans are of such apparently low credit risk – and, the sensitivity of default probability to rating grades may increase strongly as rating quality declines.

81. There could also be circumstances in which some factors move in an adverse direction but may be counterbalanced by improvement in others. However, , in view of the importance of detecting whether there has been a significant increase in credit risk, governance and control processes capable of reliably validating any judgment that negative factors are counterbalanced by positive one should be developed and become functional.

82. Decisions in relation to significant increase in credit risk, which require the discretion of the bank management must be reached through extensive assessment, and necessary importance should be accorded to this matter. For example, if a decision is made to monitor a borrower closely due to hesitations as to his credit risk, it is expected that such a decision has been taken as a result of a significant increase that occurred in credit risk.

83. In assessments performed by the bank, it may be concluded that a significant increase in credit risk has occurred in relation to part of the loans disbursed to a borrower. In such situations which may arise due to reasons such as differences in dates of loan disbursement, special care should be exercised by the bank to determine all loans experienced significant increases in credit risk.

84. In determining whether a significant increase has occurred in credit risk, if loans are evaluated by groups (for example, consumer loans), portfolio definitions should be reviewed regularly in order to be sure that each loan carries the characteristics of the risk group in which it is included in terms of the reaction that it will give to credit risk determinants. Changes in economic conditions may require re-grouping of loans.

85. In accordance with paragraph TFRS 9, paragraph B5.5.1 regarding the evaluation of significant increases in credit risk on a group basis since the initial recognition date, where it is evaluated that there are significant increases in relation to a loan group even if the evidences relating to significant increases in credit risk do not exist on an individual loan basis, it should be ensured that LEL are recognized.

In an evaluation on a group basis, where it is obvious that there is a significant increase in some loans within the group although significant increases could not be identified on an individual loan basis, it is expected that the relevant part of the loan group is subject to LEL practice.

86. In accordance with TFRS 9, paragraph B5.5.6, if it is not possible to determine a specific sub-group with shared risk characteristics, where a significant increase has occurred in credit risk, a suitable portion of the group should be subject to LEL practice.

87. "Significant" should not be equated with statistical significance, meaning that the assessment approach should not be based solely on quantitative analysis. For portfolios which have a large number of individually small credits, and a rich set of relevant historical data, it may be possible to identify significant increases in credit risk in part by utilizing formal statistical techniques. However, employment of similar statistical methods for loan portfolios that do not bear such characteristics may not be feasible.

88. "Significant" should also not be judged in terms of the extent of impact on a bank's financial statements. Even where an increase in credit risk defined in terms of probability of default is unlikely to affect the allowance amount (for example, the exposure is more than fully collateralized), significant increases in credit risk should be defined and explained in footnotes because it is important for users of the financial statements who wish to understand the risk exposure in the bank's loan portfolio.

89. Banks should properly review the quality of approaches to assessments as to whether there is any significant increase in credit risk. Furthermore, the bank's senior management should consider whether there are additional factors to be taken into account in evaluating significant increases in credit risk.

90. Banks should exercise extreme care against biased assessments that might prevent the objectives of TFRS 9 from being met. In cases where banks believe that their approach to implementation is likely to have introduced bias, they should correct their assessment for identified bias and thus ensure that the objective of TFRS 9 is met.

91. TFRS 9, in paragraph 5.5.12 and paragraphs B5.5.25-B5.5.27 sets out the requirements for the assessment of significant increases in credit risk for lending exposures whose contractual cash flows have been renegotiated or modified. In particular, for modifications that do not result in de-recognition in accordance with TFRS 9, a bank must assess whether credit risk has increased significantly by comparing (a) the risk of a default occurring at the reporting date based on the modified contractual terms with (b) the risk of default occurring upon initial recognition based on the original, unmodified contractual terms.

92. Banks should pay maximum attention to ensure that modification of contractual terms or restructuring of the loan does not mask significant increases in credit risk, resulting in ECL being underestimated, or delaying the calculation of LEL calculation in relation to the loan, or result in a move from LEL measurement back to 12-month ECL measurement.

93. When determining whether there is a significant increase in credit risk for a modified lending exposure, banks should take into account whether such modifications or renegotiations have improved or restored the ability of the bank to collect interest and principal payments compared with the situation upon initial recognition, and should document that modification or renegotiation were intended to achieve the abovementioned ends.

Consideration should also be given to the substance of modified contractual cash flows as well as the implications of the modifications for the future credit risk of the exposure. Factors to consider in ECL projections of modified or renegotiated loans include, but are not limited to, the following;

    a. whether the modification or renegotiation of the contractual terms and resulting cash flows is economically beneficial to the obligor, compared with the original, unmodified contractual terms, and how the modification economically affects the obligor's ability to repay the debt;

    b. whether factors can be identified that support a bank's assessment of the obligor's ability to repay the debt, including circumstances leading up to the modification, and future prospects of the obligor as a result of the modifications, considering current conditions, macroeconomic forecasts, and prospects for the sector/industry within which the obligor operates, the obligor's business model, and the obligor's business plan that outlines the obligor's expectations of its future performance, financial resilience and cash flows; and

    c. whether the obligor's business plan is feasible, realizable and consistent with the repayment schedule of interest and principal under the modified contractual terms of the lending exposure.

94. Exposures transferred to LEL credit loss that are subsequently renegotiated or modified, and not derecognized, should not move back to 12-month ECL measurement unless there is sufficient evidence that the credit risk over the life of the exposure has not increased significantly compared with that upon initial recognition. For example, where a bank grants various concessions such as interest rate reductions or postponements of principal repayments to obligors in financial difficulty, the lending exposure may exhibit characteristics of a lower credit risk even though in reality the obligor may continue to experience financial difficulty with no realistic prospects of making scheduled repayments over the remaining term of the exposure. In TFRS 9, paragraph B5.5.27 it is noted that "*evidence that the criteria for the recognition of lifetime expected credit loss are no longer met could include a history of up-to-date and timely payment performance against the modified contractual terms.*" Therefore, because a negative impression due to a history of missed or incomplete payments would not typically be erased by simply making one payment on time following a modification of the contractual terms, a customer needs to demonstrate consistently good payment behaviour over a period of time before the credit risk is considered to have decreased.

Use of practical expedients

95. TFRS 9 includes a number of practical expedients, intended to ease the implementation in recognition of the fact that it will be used by a variety of entities, including firms outside the banking industry. The paragraphs below include explanations about practical expedient such as limiting the information set which an entity must consider in measuring ECL; financial instruments with "low" credit risk exposures; and the 30- days-past-due rebuttable presumption.

96. Use of practical expedients should be limited, because they may lead do biased practices and, the cost of obtaining relevant information by banks, given their business, is not likely to involve undue cost or effort. Justifications for the use of the practical expedients of TFRS 9 should be clearly documented by banks.

Information Set

97. TFRS 9, paragraph B5.5.15 states that an entity shall consider the best reasonable and supportable information that is available, without undue cost and effort and an entity need not undertake an exhaustive search for information. Banks should not read these statements restrictively, and develop systems and processes that use all reasonable and supportable information as needed to achieve a high quality, robust and consistent implementation of the ECL approach. However, unless this contributes to implementation of TFRS 9 at a high quality, it should not therefore be necessary to sustain any additional cost and operational burden.

"Low credit risk" exception

98. The paragraph 5.5.10 of TFRS 9 provides, "*If the financial instrument is determined to have a low credit risk at the reporting date, the entity can assume that the credit risk in the financial instrument has not increased significantly since initial recognition.*" However, banks should use low credit risk exception restrictively, and conduct timely assessment of significant increases in credit risk for all lending exposures.

99. In this context, banks should recognize changes in 12-month ECL through the allowance where there is not a significant increase in credit risk and a move to LELmeasurement if there is a significant increase in credit risk. In order to achieve a high-quality implementation of TFRS 9, any use of the low-credit-risk exemption must be accompanied by clear evidence that credit risk as of the reporting date is sufficiently low that a significant increase in credit risk since initial recognition could not have occurred.

100. In order to explain the low credit risk in paragraph B5.5.22 of TFRS 9, an example of a financial instrument with an external rating in the form of an "investment grade" is given in paragraph B.5.5.23. However, not all loans with an "investment grade" rating from the credit rating agency should be directly considered to have a low credit risk. Banks should primarily use their credit risk assessments in their credit risk analyses, and not only or mechanically, ratings given by credit rating companies and mechanically should be used. However, an optimistic internal credit rating calls for additional analysis and justification by senior management compared to external rating.

More-than-30-days-past-due rebuttable presumption

101. Banks should have credit risk assessment and management processes in place to ensure that credit risk increases are detected well ahead of exposures becoming past due. A bank should not use the more-than-30-days-past-due rebuttable presumption as a primary indicator of transfer to LEL, while recognizing that appropriate use of this rebuttable presumption as a backstop measure would not be precluded in accordance with TFRS 9 alongside other, earlier indicators for assessing significant increase in credit risk.

102. Any assertion that the more-than-30-days-past-due presumption is rebutted on the basis that there has not been a significant increase in credit risk will be accompanied by a thorough analysis clearly evidencing that 30 days past due is not correlated with a significant increase in credit risk. Such analysis should consider both current and reasonable and supportable forward-looking information that may cause future cash shortfalls to differ from historical experience.

103. In this regard, relevant forward-looking information that is reasonable and supportable should be used to analyze whether there is any substantive relationship between such information and credit risk drivers. The 30-days-past-due rebuttable presumption should not be used unless it is demonstrated that the forward-looking information had no substantive relationship with the credit risk driver or such information is not available without undue cost or effort.

104. In the limited instances where past-due information is the best criterion available to determine when exposures should move to the LEL category, particular attention should be accorded to measurement of 12-month ECL allowance to ensure that ECL are appropriately measured in accordance with TFRS 9. Moreover, it should be recognized that significant reliance on backward-looking information will introduce bias into the implementation of an ECL model and that particular attention should be paid to ensuring that the objectives of the TFRS 9 related to ECL (i.e. to reflect ECL that meet the stated measurement objectives and to capture all significant increases in credit risk) are met.