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Methodology of Financial Instruments Expected Credit Losses assessment and credit Risk Category determination

Article 1. purpose

1. The purpose of this regulation is to ensure reflecting accurate, complete and up-to-date information on commercial bank's financial position in its financial statements, with respect to the expected credit losses and quality of financial instruments under "International Financial reporting Standart 9" ("Hereinafter IFRS 9"), which is useful information for users of financial statements in assessing amount, timing and expectancy of commercial bank's future cash flows.
2. Implementation of this regulation will help to ascertain commercial bank's real financial position and disclose it to commercial bank's depositors, shareholders, potential investors, the National Bank of Georgia (hereinafter - the National Bank) or other stakeholders. A key component of this information is reflecting financial instruments with regards to their risk and establishing adequate Provisions for expected credit losses by a commercial bank.
3. This Regulation is applicable for all financial assets that are within the scope of IFRS 9 requirements. The IFRS 9 allows commercial banks to use principle-based assumptions to estimate expected credit losses.
4. A commercial bank shall establish a provision for expected credit losses for a financial asset in accordance with IFRS 9 and the present Regulation, when the regulation specifies the approach for purposes of IFRS 9 application. To achieve this goal, a commercial bank shall develop a methodology for assessing the expected credit losses of financial instruments in accordance with this regulation, which would promote a fair evaluation of credit risks for both at individual and portfolio levels.
5. A commercial bank shall follow the guidelines specified in the present regulation and in IFRS 9, in such a way that it is appropriate for the size and complexity of the organization, as well as for the nature, scope and complexity of the business and portfolio. However, at the same time, the application of the proportionality approach shall not jeopardize the high-quality assessment of the expected credit losses.
6. Approaches for meeting the requirements of this regulation and IFRS 9 may differ among commercial banks. For example, different techniques or models can be used to measure expected credit losses.
7. When in case of a commercial bank, non-compliance with any of the provisions of this regulation does not lead to a breach of the requirements set out in IFRS 9, the commercial bank shall be entitled to calculate expected credit losses with an approach different from the one specified in this regulation for purposes of the audited financial statements. In this case, the commercial bank is obliged to notify the National Bank in writing and indicate:
 - A) Which requirement(s) of the regulation was not fulfilled by the commercial bank;
 - B) For how long were the requirements of the regulation not being met;
 - C) Arguments of the commercial bank about the reason(s) of non-compliance with regulation requirements;

- D) The approach developed by the commercial bank and the justification why the commercial bank's approach reflects the expected credit loss in a qualitatively better way than the one defined by this regulation.
8. The National Bank shall review the written explanation of the commercial bank within 1 month and confirm or reject the arguments related to non-compliance.
 9. If the National Bank does not consider the above arguments to be justified, it shall be entitled to request the commercial bank to fully recalculate the expected credit loss of the financial instrument in accordance with this regulation and reflect the identified difference in commercial bank's regulatory prudential requirements, regarding Decree of the President of the National Bank of Georgia N 176 /04 ("Rules for determining capital buffers for commercial banks within Pillar 2", CRA buffer).
 10. A Commercial bank shall present reconciliation in capital adequacy disclosure note in the audited financial statements if the approach other than the one specified in this regulation was applied. Reconciliation shall include at least, disclosure of the effect on the capital adequacy of the differences between this regulation and the provisioning approach for financial reporting purposes.
 11. The Supervisory Board and the top management are responsible for ensuring that the commercial bank has a credit risk management policy / procedures, a proper framework and models for timely recognition of expected credit losses, as well as an effective internal control system. The expected credit loss methodology of a commercial bank shall clearly reflect the important definitions and approaches associated with credit risk assessment and the measurement of expected credit loss, such as default events, assigning the credit risk category, migration rates, etc.

Article 2. Definition of terms

1. The terms used in this regulation have the following meanings:
 - A) Financial Instrument - Financial Instruments as defined in IAS 32;
 - B) High Credit Risk Financial Instrument – Potentially weak Stage 1 credit risk category financial instrument, where the financial standing of the borrower and its ability to service the borrowed amount is not stable. At the origination of the financial instrument there are deficiencies and negative tendencies, that if materialized might raise doubts about borrower satisfying contractual obligations. High Credit Risk financial instruments are designated as Stage 1 credit risk category, only due to the fact that financial instrument is not recognized as impaired at the initial recognition, or there was no significant increase in credit risk of the financial instrument since initial recognition;
 - C) Effective Interest Rate - The rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial asset or financial liability to the gross carrying amount of a financial asset or to the amortised cost of a financial liability in accordance with IFRS 9;

- D) Overdue financial instrument - a financial instrument for which the principal amount (or part thereof) or the accrued interest has not been paid by the due date indicated in the documentation relating to the financial instrument;
- E) Restructured Financial Instrument - A new or existing financial instrument whose repayment terms, were renegotiated due to the financial difficulties of the borrower and there is an agreement between the commercial bank and the borrower. Restructured financial instruments include all financial instruments whose terms of the contract have been renegotiated in accordance with one of the following criteria:
 - E.A) Reduction of interest rate or waiver of the right to receive accrued interest, for the purpose of reducing loan payment amounts;
 - E.B) Capitalization of accrued interest income;
 - E.C) Repayment of principal or interest (including refinancing) that is not the result of genuine payment by the borrower, including cases where the Borrower has repaid interest or principal by means of financial instruments borrowed by itself, other members of the other or the affiliated group;
 - E.D) Extension of repayment period;
 - E.E) Commencement of a grace period (except in the case of seasonal businesses);
 - E.F) Any other rights or privileges granted to the borrower by a commercial bank that would not normally have occurred;
- F) Refinanced financial instrument – A new or existing financial instrument for which Exists agreement between Commercial bank and Borrower about change of repayment terms. The borrower, at the moment of refinancing, shall fully meet the Stage 1 credit risk category criteria, and the change in repayment terms shall not be caused by the borrower's financial difficulties or deterioration of financial position, which didn't cause/wasn't provoking factor to worsen credit risk category. A financial instrument may be removed from the classification of refinanced financial instruments only if more than one year has passed since its refinancing. This type of refinancing includes, but is not limited to:
 - F.A) Reduction of interest rates due to competition;
 - F.B) Renewal of financial instruments disbursed for working capital financing;
 - F.C) Consolidation of existing financial instruments;
 - F.D) Refinancing in case of additional financing of the borrower, including when the debt increases in order to finance new projects, and etc;
- G) Considerable Modified Financial Instruments – A new or existing financial instrument for which the existing financial instrument was recovered or payment terms have been changed in agreement with the bank. The change in repayment terms shall be caused by the borrower's financial position deterioration. The borrower, at the moment of Considerable Modification, shall fully meet the Stage 1 credit risk category criteria. A financial instrument may be removed from the Considerable Modified Financial Instruments classification only if more than one year has passed since its considerable Modification.
- H) Fully secured financial instrument - a financial instrument for timely and full payment of which there is an asset secured by a mortgage or pledge in favor of a commercial bank, whose market value in accordance with International Valuation Standards (IVS) is equal to or greater than the outstanding amount of the financial instrument;

- I) Partially Secured Financial Instrument - a financial instrument for which the market value of the security (assets pledged or mortgaged), calculated in accordance with International Valuation Standards (IVS), are less than the outstanding amount of the financial instrument;
- J) Unsecured financial instrument - a financial instrument for which there is no asset secured by a pledge or mortgage, or if it exists, it has no value, and / or regardless its value, it is not enforceable, which may be due to incorrect registration or other reasons;
- K) Expected Credit Loss – The weighted average of credit losses with the respective risks of a default occurring as the weights;
- L) Business borrower's Debt Service Coverage Ratio – Business borrower's ability to meet its debt obligations, which calculated following way:

$$DSCR = \frac{EBITDA}{PMT}$$

- M) ICR - Interest Coverage Ratio - borrower's ability to repay accrued interest of the financial instrument, which calculated following way:

$$ICR = \frac{EBIT}{Accrued\ Interest}$$

- N) Earnings before Interest, Taxes, Depreciation and Amortization (EBITDA) - operating profit before accrued interest and profit, excluding depreciation and amortization costs and with consideration of maintenance capital expenditure required for Business continuity. Furthermore, this ratio shall not include income and expenses from one-off and non-ordinary business activity;
- O) Earnings before Interest and Taxes (EBIT) - Operating profit before income tax and accrued interest, taking into account depreciation and amortization expenses;
- P) Payment (PMT) - contributions required for the payment of on-balance and off-balance exposure (interest and principal);
- Q) Debt service ratio of retail borrowers (PTI) - debt service ratio for retail loans. For this regulation, the calculation of this ratio should be carried out taking into account the maximum maturity of financial instruments by the decree of the President of the National Bank of Georgia, N44/04, "Regulation on Lending to the Individuals".
- R) Detailed forecast period - the period during which forecast information is used to calculate expected credit losses (usually three years);
- S) Long-term forecast period - the period during which forecast information is not used to calculate expected credit losses;
- T) Purchased or Originated Credit-Impaired Financial Instruments (POCI) – Purchased or originated financial Instruments that are credit-impaired on initial recognition in accordance with IFRS 9;
- U) Data constraint - data deficit caused by the number of borrowers and / or lack of data horizon, which makes it impossible to build a sustainable model at the individual level;
- V) Recurring credit risk factors - factors that may be used in forecast economic scenarios (e.g. housing price indices, commodity prices such as oil, gold and etc.);

- W) Non-recurring factors - unpredictable factors that are not taken into account in forecast economic scenarios;
- X) Consecutive, demonstrative payments - payments shall not include any kind of alleviated term different from market conditions, such as a grace period for interest or principal;

Other terms used in this rule have meanings defined according to the IFRS and the legislation of Georgia.

Article 3. Credit risk categories of financial instruments

1. The credit risk classification for a financial instrument is divided into three categories:
 - A) Stage 1 credit risk category financial instruments;
 - B) Stage 2 credit risk category financial instruments;
 - C) Stage 3 credit risk category financial instruments;
2. When determining / assigning a credit risk category:
 - A) A commercial bank shall conduct a thorough search of information that is important in determining the credit risk category both at the initial issuance of a financial instrument and during the period of its existence;
 - B) The information used by a commercial bank shall include factors that are specific to the borrower and provide for general economic environment based on both current circumstances as well as forecast assumptions;
 - C) A commercial bank can use different sources of data, which can be both internal or external. Possible sources of data include internal historical experience of credit losses, internal estimations, other persons' credit loss experience and external estimates, reports and statistics.

Article 4. Stage 1 credit risk category financial instruments;

1. Stage 1 credit risk category includes those financial instruments that meet one or more of the following criteria:
 - A) Not belong to Stage 2 and Stage 3 credit risk categories;
 - B) Are no more than 30 days overdue;
 - C) Any change in the terms of the financial instrument contract, which is not determined by the borrower's financial difficulties;
2. In the event of classifying a financial instrument in the Stage 1 credit risk category, it shall be evaluated by 12-month expected credit loss method (or a shorter term if the expected life of a financial instrument is less than 12 months.)
3. For financial instruments with a renewable limit, such as credit lines, overdrafts, etc. that do not require amortization (repayment) of the financial instrument, the borrower shall be able to repay within a reasonable time.

4. A commercial bank shall exercise diligent monitoring over financial instruments with high credit risk in order to promptly identify the need for assigning Stage 2 and Stage 3 credit risk category to them.
5. In the case of a financial instrument being issued to a company based on projection/forecasted financial performance, the borrower shall prove that their business plan is realistic, competitive and feasible.
6. If the instrument has ongoing over due status for more than 30 days, but no longer than 90 days, the commercial bank can assign Stage 1 credit risk category to the borrower only if the analysis confirms that the overdue status is caused only by technical reasons and not by deterioration of the borrower's financial position.

Article 5. Stage 2 Credit Risk Financial Instruments

1. Financial instruments are classified as Stage 2 credit risk category when it's not impaired and meet one or more of the following criteria:
 - A) The Financial instrument's credit risk has increased significantly since initial recognition.
 - B) The Financial instrument is over due for more than 30 days.
 - C) The Financial instrument is restructured.
2. The classification of a financial instrument into Stage 2 risk category shall also be based on the assessment of the negative developments in macroeconomic factors that may have already occurred or may occur in the future. The comprehensive analysis and review reveal that the borrower's credit risk has significantly increased.
3. Expected credit losses for financial instruments in the Stage 2 credit risk category shall be measured by lifetime expected credit loss methodology.
4. Financial instruments shall be reasonably assessed in terms of importance of the increase in credit risk. Triggers that indicate the borrower's potential weakness and may indicate significantly increased credit risk may be, but are not limited to, the following:
 - A) For all types of borrowers:
 - A.a) Deterioration of the relevant macroeconomic perspective for the borrower or group of borrowers;
 - A.b) Unfavorable changes in the conditions of the borrower's sector or industry;
 - A.c) Deterioration of relevant supervisory, technological or other perspectives for the borrower or group of borrowers;
 - A.d) Significant changes in the internal price indicators of products similar to the financial instrument being measured, such as an increase in interest rates, an increase in the minimum collateral requirements, etc.;
 - A.e) Initiation of a legal dispute, which may lead to the imposition of a significant liability (ies) on the borrower and deterioration of their financial position;
 - A.f) Deterioration of the borrower's credit rating;
 - A.g) Deterioration of the value of collateral;

- A.h) A pledge or mortgage used to secure a financial instrument is not legally duly executed or registered;
- A.i) There is information about the suspicious condition of the pledge or mortgage or its monitoring and control;
- B) For business borrowers:
 - B.a) Draw down of any off-balance sheet liabilities of the Borrower (of any type) that were not anticipated and determined in advance;
 - B.b) Fraud in business;
 - B.c) The sale of a part of a business or property involved in the day-to-day profitable activities of an enterprise;
 - B.d) Delays in provision of financial information;
 - B.e) Recent frequent changes in the top management.
 - B.f) Deterioration of financial measures, as indicated by:
 - B.f.a) Deterioration of debt service ratio (DSCR);
 - B.f.b) Deterioration of interest coverage ratio (ICR);
 - B.f.c) Increase in Debt / EBITDA ratio
 - B.f.d) Decrease in equity / assets;
 - B.f.e) Significant reduction in sales;
 - B.f.f) Persistence negative operating cash flows;
 - B.f.g) Loss of a large client (s);
 - B.f.h) Termination of the contract with a large supplier;
 - B.f.i) Deterioration of liquidity;
 - B.f.j) Deterioration of profitability;
 - C) Decrease in loan servicing capacity (PTI) for individuals.
- 5. If the financial instruments of some borrowers in the interrelated group of borrowers' are impaired or the credit risk is significantly increased, an appropriate assessment should be made to estimate whether the financial instruments of other borrowers in the interrelated group are impaired, or the credit risk is significantly increased since initial recognition.

Article 6. Stage 3 Credit Risk Financial Instruments

1. Impaired financial instruments belong to Stage 3 credit risk category.
2. A financial instrument is impaired when it meet one or more of the following criteria:
 - A) The borrower has financial problems that threaten the payment of the debt or make the full payment doubtful;

- B) Major sources of payment for a financial instrument, including capital, profit, or the capacity to generate cash flows, are not sufficient to pay off debt. Accordingly, a commercial bank shall use the other sources of payment, such as selling a pledged or mortgaged property or other assets of the borrower;
 - C) The borrower's liability has decreased due to partial forgiving or write off the of the principal and/or accrued interest of the financial instrument;
 - D) The financial instrument is overdue for more than 90 days;
3. If any of the borrower's financial instruments is overdue by more than 90 days, the borrower's other financial instruments shall be deemed impaired as well, except for cases considered in Article 23, point 2
 4. Possible additional indicators for identifying the borrower's financial difficulty and, consequently, recognizing the financial instrument as impaired are:
 - A) A significant reduction in the borrower's income, which may be reflected in the failure to meet assumed liabilities;
 - B) Commencement of the collateral realization process;
 - C) Full or partial restriction/loss of license by the borrower;
 - D) Exhaustion or significant reduction of the borrower's capital;
 - E) Sharp deterioration of financial indicators;
 - F) The borrower is the guarantor / co-borrower of an impaired financial instrument;
 - G) Failure of the borrower to submit financial information to the commercial bank and/or a significant delay in submission;
 - H) Fraud in the borrower's business that impacts the timely repayment of the liability;
 - I) Refusal by the Borrower to service the liability (ies), commencement of bankruptcy proceedings.
 - J) Breaching the terms of the contract (including "covenants"), which may lead to the request of early repayment of exposure;
 5. In case of granular financial instruments, if recognition of impairment is solely based on past due days, the number of overdue days may vary by product type. For example, past due status of less than 90 days for credit cards or installments may be an indicator of the financial instrument impairment.
 6. Expected credit losses for financial instruments in the Stage 3 credit risk category shall be calculated using the lifetime expected credit losses methodology.
 7. A commercial bank shall ensure that an impaired financial instrument or part thereof is written off when there is no reasonable expectation of recovery. A financial instrument shall be written off when:
 - A) Reimbursement of the amount (or part thereof) is not legally enforceable, including through the sale or foreclosure of the collateral of the borrower or any third party;
 - B) It is legally possible to obtain the money from the borrower or a third party, but the probability of this occurring is very low.

8. A commercial bank shall develop policy for financial assets' write off based on overdue days, which takes into considerations borrower, product and collateral specifics. A commercial bank should substantiate suggested overdue days sufficient to require write-off of the financial assets based on statistical analysis and analysis of empirical experience.
9. In case a commercial bank does not possess a policy for writing off financial assets based on overdue days, the following approach should be adopted:
 - A) An unsecured financial instrument or an unsecured part of a partially secured financial instrument has been overdue for over 360 days;
 - B) The fully secured instrument or the secured part of the partially secured financial instrument has been overdue for more than 720 days.

Article 7. Restructured Financial Instrument

1. A commercial bank shall grant a restructured status to a financial instrument taking into account such factors as:
 - A) Number of renewals or extensions of the financial instrument;
 - B) Change in the overall maturity of a financial instrument compared to its original maturity;
 - C) Change in the repayment dates for interest on the financial instrument compared to the original dates;
 - D) Specific changes in the terms of the contract on the issuance of a financial instrument that were introduced in the agreement on a financial instrument and the reasons for these changes.
2. Particular attention shall be paid to any reduction in interest rates below the market interest rates, the extension of the term and also to the factors associated with these conditions.
3. The decision of a commercial bank on any Restructuring/Refinancing/ Considerable Modification shall be based on the financial analysis of the borrowers, which is to be thoroughly documented and made available to the National Bank's examiners.
4. In case of restructured financial instrument, its credit risk category should be deteriorated, unless the financial asset is derecognized or, in cases mentioned in article 7, of this document.
5. In case financial asset is derecognized as a result of restructuring, new financial asset recognized should be classified as Stage 1 credit risk category financial instrument in rare substantiated cases or as purchased or originated credit impaired financial asset. In addition, new financial asset recognized should be classified as restructured in any case and high credit risk category financial instrument in case the instrument is classified as Stage 1 credit risk category instrument.
6. If the restructuring of the financial instrument was conducted without a financial analysis of the borrower due to the absence of suitable information, the financial instrument should be classified into the Stage 3 credit risk category.
7. A commercial bank may leave the risk category unchanged after restructuring a Stage 2 credit risk category financial instrument, only if the financial instrument fully and unconditionally satisfies the criteria of the relevant risk category.
8. In case when a restructured financial instrument with a deteriorating credit risk category is transferred to the additional or replacement borrower, and the replacement or additional debtor does not have the financial capacity to repay all of the outstanding principal amount and interest over an agreed period of time, such financial instrument should be classified as Stage 3 credit risk category instrument or Originated Credit Impaired (POCI) category.

9. The status of a restructured financial instrument shall not be improved if replacing or additional borrower is a member of the interrelated group of borrowers' to which the initial borrower belongs (see definition of the interrelated borrowers' group in the Decree N 228/ 04 of the National Bank's Governor).
10. The credit risk department of the commercial bank shall periodically review the issue of recognizing as impaired the financial instruments that are restructured and have the status of significantly increased credit risk.
11. A financial instrument shall no longer be considered restructured only if more than a year has passed since its restructuring and the financial instrument is classified in the Stage 1 credit risk category for more than one year.

Article 8. Financial Instrument's Credit Risk Category Reclassification

1. Any reclassification (category improvement) of a financial instrument should be based on a financial analysis, thoroughly documented and available to the National Bank's examiners.
2. A financial instrument can be reclassified from Stage 2 credit risk category to Stage 1 credit risk category if a commercial bank carried out comprehensive financial analysis of the borrower, financial instrument fully and unconditionally satisfies requirements of Stage 1 credit risk category and in addition three consecutive, demonstrative payments have been made.
3. A financial instrument can be reclassified from Stage 3 credit risk category to Stage 2 credit risk category if a commercial bank carried out comprehensive financial analysis of the borrower and financial instrument fully and unconditionally satisfies requirements of Stage 2 credit risk category and in addition three consecutive, demonstrative payments have been made.
4. A Stage 3 credit risk category financial instrument can be reclassified into Stage 1 credit risk category only if it fully and unconditionally meets the requirements of the relevant risk category, a commercial bank carried out comprehensive financial analysis of the borrower and, in addition, six consecutive, demonstrative payments have been made.
5. In case of seasonal income, reclassification into improved credit risk category shall be allowed taking into account one new cycle/season data. In addition, as a result of the new cycle/season, there should be genuine repayment of liabilities observed.
6. Where it is not possible to perform a comprehensive financial analysis of the borrower for the purpose of reclassification (category improvement) of the financial instrument, the latter may be reclassified from the Stage 2 credit risk category into the Stage 1 credit risk category if six consecutive, demonstrative payments have been made.
7. Impaired financial instrument may be reclassified into the Stage 2 credit risk category if six consecutive, demonstrative payments are made.
8. If the process of the collateral foreclosure has been initiated by a commercial bank or amount of financial instrument is reduced by partial write-off, which led to the termination of recognition of a financial instrument according to IFRS and the recognition of a new financial instrument, except for justified exceptions, must be classified as purchased or originated credit impaired financial instrument.

Article 9. Individual assessment

1. In determining the materiality of assessing borrower's credit risk category on an individual basis, commercial banks Consider not only the outstanding amount of the given financial instrument, also cumulative outstanding amounts of all financial instruments related to the borrower. In case the cumulative outstanding amount is material, as defined in paragraph 2 below, each loan should be assessed individually.
2. The borrower, in order to determine the credit risk category, shall be assessed individually:
 - A) If the financial instruments, except for high credit risk financial instruments, issued to the borrower or group of borrowers are classified in Stage 1 credit risk category and their outstanding amount is more than 1.0% of the Tier 1 capital;
 - B) If the financial instruments, issued to the borrower or group of borrowers in the high credit risk category, Stage 2 credit risk category, or Stage 3 credit risk category and their outstanding amount is more than 0.5% of the Tier 1 capital;
 - C) If the information used for assessment is available to a commercial bank without undue costs or effort;
 - D) Taking into account subparagraphs "a" to "c" of this section, it is notable that, as assessed by the commercial bank, the borrower is individually significant.
3. Expected credit loss of an individually significant financial instrument may be estimated on a collective basis, if the instrument belongs to Stage 1 or Stage 2 credit risk category.
4. Credit risk category of financial instruments deemed individually insignificant in accordance with paragraph 2 of this article, may be estimated both on collective or individual basis.
5. In making an individual assessment of the credit risk category of the Borrower the commercial bank shall take into account all relevant facts and events, assumed economic scenarios that differ from historical experience and may have an impact on the borrower's credit risk assessment and expected loss.
6. In addition to the analysis of the credit risk indicators, a commercial bank shall take into account the following when making an individual assessment of credit risk category, but not be limited to:
 - A) Continuity of revenue sources essential for timely servicing of liabilities;
 - B) Sufficiency of free cash flows to be able to fully service scheduled payments. In the event of future cash flow improvements, when there is a historical trend of declining income or cash flows, improvements shall not be planned without reasonable evidence;
 - C) Capital and other investment costs necessary to maintain operational capacity as well as to finance expansion, if planned;
 - D) Payment of dividends;
 - E) Current level of leverage and also, expected change in it;
 - F) Readiness and willingness to serve obligations on time and in fully;
 - G) Capacity to raise additional free funds that the borrower can obtain by selling idle assets or by the founder's contribution, and the borrower can direct these funds to cover existing liabilities. while considering these funds, a commercial bank shall:
 1. Analyze the source of these funds;
 2. Substantiate the reasonableness of receiving these funds and the ability to direct the funds without further approval;

- H) Recurring and potential one-off behavioral characteristics of the business that could impact the borrower's capacity to fulfill contractual obligations;
 - I) Change in the value of collateral, which may affect the fulfillment of liabilities;
 - J) Specifics of the industry in which the borrower operates, including existing and expected industrial and economic trends that may have an effect on the borrower's current or future cash flows;
7. The group borrowers' assessment shall be made based on the assumption that cash flows generated by all borrowers in the group (including from realization of collateral) will be used to cover the remaining liability of the group, unless there is the other evidence that cash flow generated by one borrower in the group will not be used to cover the financial instrument(s) of the other borrowers in the group.
 8. The analysis shall be based on the latest available information (both financial and non-financial).
 9. When assessing credit risk category of the borrower, commercial bank shall take into consideration contamination principles stipulated in Article 23. In case, a commercial bank assesses borrower's one loan on an individual basis and the credit risk category of this borrower is Stage 2 or Stage 3, a commercial bank shall assess other financial instruments of the same borrower or group of borrowers individually, to satisfy contamination principles.

Article 10. Collective Assessment of Expected Credit Losses - Data Quality

1. The quality of the data must correspond to the principles and requirements defined by the “Regulation of Data-driven Statistical, AI, and Machine Learning Model Risk Management “ Decree №151/04 approved by the Governor of the National Bank of Georgia on August 17, 2020.
2. For the purpose of developing, testing and implementing the expected credit loss model, a commercial bank shall ensure obtaining all necessary detailed, high quality data.
3. Outdated data shall not be used . The frequency of data updates should be in line with the objectives of the relevant model and the availability of the other data.
4. The data used to construct the model shall comprise or adequately reflect the data of the relevant portfolio / homogeneous group of the commercial bank and cover at least five years , unless the commercial bank does not have sufficient historical data.

Article 11. Collective Assessment of Expected Credit Losses - Consideration of Forecast Information

1. Macroeconomic factors shall be taken into account during a predetermined forecast period, which should be at least three years. Shortening of this period is solely with appropriate justification.
2. When making a forecast beyond the detailed period, a commercial bank can use historical losses as a reference. The coverage period of data used to calculate the long-term historical average loss must be at least five years.
3. Forecast information should be considered when modeling all three components of expected credit loss (Probability of Default - PD / Loss Given at Default - LGD / Exposure at Default - EAD). Expected credit losses should be calculated according to each scenario and subsequently weighted based on the probability of scenario occurrence.

4. A commercial bank shall use the macroeconomic scenarios published by the National Bank for the purpose of calculating expected credit losses. If the commercial bank chooses to use its own scenarios, it is required to provide evidence and justify the superiority of the alternative source used.
5. In case of using internally developed scenarios, the forecasting of macroeconomic variables must shall be carried out through a robust analytical framework based on a structural forecasting model. When making prediction for macroeconomic variables, it is prohibited to use univariate time series models such as ARIMA, AR, MA, etc.
6. In addition to statistical testing, the forecast made by the model shall also undergo expert judgment to validate its relevance.

Article 12. Collective Assessment of Expected Credit Losses - Formation of Homogenous Groups

1. Collectively assessed financial instruments shall be grouped based on similar credit risk characteristics. Commercial banks, shall use the most relevant of these common characteristics, in order to identify groups.
2. Groups should have a sufficiently large number of financial instruments and be sufficiently homogenous in terms of characteristics of financial instruments, So that to be ensured sufficient reliability of the statistical analysis for the group.
3. Commercial banks shall not combine financial instruments in a manner that fails to reflect the increase in credit risk of a specific instrument in the quality characteristics of the group.
4. The characteristics used by a commercial bank and their quantity might vary in the formation of different homogeneous groups. Furthermore, attention should be paid to the migration of financial instruments among different groups. It is recommended to validate the appropriateness of the groupings using historical data on losses.
5. The formation of homogeneous groups should be carried out in a manner that ensures similarity of the characteristics and factors affecting the credit risk of each financial instrument/borrower within each portfolio. When determining factors affecting credit risk of a homogeneous group, the impact of forecast information, including macroeconomic factors, should be considered.
6. Common credit risk characteristics include, but are not limited to:
 - A) Portfolio segment (corporate, small and medium, micro, retail);
 - B) Product type (revolving products, consumer loans, etc.);
 - C) Business sector (borrower's business sector, employer sector may be considered for retail borrowers);
 - D) Type of collateral (cash, residential / commercial real estate, vehicles, precious metals and stones, etc.);
 - E) Geographic location (urban / rural, etc.);
 - F) Type of counterparties (individual/legal entity and others);
 - G) Currency;
 - H) Maturity;

- I) Size of financial instrument;
 - J) General macroeconomic characteristics.
7. A commercial bank should conduct regular reviews of the grouping principles. The grouping should be re-evaluated in the presence of new information or changes in credit risk expectations. In cases where timely portfolio reorganization is not possible, a temporary adjustment may be employed.

Article 13. Collective Assessment of Expected Credit Losses - Impairment Models

1. A model for different homogeneous groups should be constructed separately to estimate the components of the expected credit loss. Within a homogeneous group, the same types of models and identical parameters should be used. One specific model type along with identical parameters should be used within each homogeneous group.
2. The model used for estimating the expected credit loss should take into account all relevant internal and external factors that could affect the client's solvency, including the Debt Service ratios (PTI, DSCR), financial instrument's Loan to Value ratio (LTV), other financial indicators of a borrower, changes in lending policies / procedures, write-off standard, type of collateral, amount / volume of other financial instruments held by the borrower (based on data of credit bureau or other external sources) the quality of such financial instruments and the influence of geographical, economic, political and other factors. These factors might be considered either directly within the PD / LGD / EAD model (s) as an explanatory variable, or indirectly in the credit risk category, in the formation of homogeneous portfolio groups, and / or in the customer rating process, if the calculation of expected credit loss components (PD / LGD) / EAD) is based on the above ratings in the future.
3. The process of development and validation of model shall comply with the requirements and principles defined by the “Regulation of Data-driven Statistical, AI, and Machine Learning Model Risk Management “ Decree №151/04 approved by the Governor of the National Bank of Georgia on August 17, 2020 The validation process should include checking the assumptions, data quality, model design, and results. In the validation framework, it is also recommended to define thresholds for the use of the model. In case of threshold breaches, recalibration of the model, development of a new model and/or other mitigation measures should be implemented. The high importance of credit risk must be taken into account when applying the proportionality and risk-based approach.
4. The expected credit loss should reflect the sum of discounted expected losses for future periods (monthly / quarterly/ semi-annually), taking into account the relevant term (12 months or lifetime expectancy). In order to calculate ECL for each period a marginal PD method should be used.

Article 14. Collective Assessment of Expected Credit Losses - Default Probability Models

1. In the case of a portfolio where data is limited, it is recommended to use models based on the migration matrix. The migration matrix should be based on borrowers' ratings. Building of a migration matrix based on overdue days is feasible if all of the following conditions are met:
 - A) There are no internal / external ratings for the clients in a given portfolio;
 - B) Obtaining customer ratings is associated with unreasonable costs;

- C) Due to data constraints, different models from the migration matrix cannot be used.
2. Macroeconomic information can be considered directly in the migration matrix (e.g. Vasicek model) or through the satellite model (e.g. modeling the relationship between impaired financial instruments and macroeconomic variables). The model shall take into account the non-uniform and non-linear impact of variables on the credit risk.
 3. In the case of retail, small and medium and micro segments, where there is no data limitations the commercial banks should use more sophisticated, regression type models which incorporate microdata. These models allow for more discrimination and interpretation and therefore improve forecast accuracy. Such models include logistic, survival analysis models, etc. It is also permitted to use rating based migration matrices. Macroeconomic factors shall be directly integrated into these models. The satellite models can be used if none of the macroeconomic factors are found to be statistically significant and / or their impact on credit risk is substantially irrelevant.

Article 15. Collective Assessment of Expected Credit Losses - LGD Models

1. The LGD estimation methodology, where it is possible, should be developed at the component level (micro-structural assessment approach) so, that LGD is calculated according to the main determinants. These include the probability of recovery, the recovery rate (or loss rate), and the probability of re-default.
2. The recovery rate should be calculated using the present value of the expected recoveries, in which all direct costs should be taken into account. The requirements of Article 25 of this rule must be considered when calculating the recovery received from the collateral.
3. For active and defaulted loans, a commercial bank should have different models for calculating LGD.
 - A) It is recommended that the LGD assessment for active loans differ depending on the age of the loan
 - B) For defaulted loans, LGD parameters should vary, depending on the default period
4. In the case of using an alternative approach, its advantage should be justified.
5. For LGD modeling, the formation of homogeneous groups should at least be based on the segment and the presence of collateral.
6. LGD components should be forecasted for each scenario. Special attention should be paid to considering changes in real estate prices.
7. The recovery rate can be calculated using loss triangle approach, regression and machine learning models. In the Loss Triangle Approach, unknown fields can be reconstructed through the Bornhuetter-Ferguson approach, the chain ladder approach - based on the historical average, or by using regression methods.
8. The nature of the portfolio should be considered when selecting recovery rate and cure rate modeling techniques; Small number of defaults or specific risk positions within portfolios can have significant influence on changes in these parameters. Consequently, there is a high risk of

misestimating losses. To address this a commercial bank should develop a robust methodology to mitigate the problem within such portfolios.

9. Apart from the micro-structural approach, a commercial bank can estimate aggregated LGD (without breaking it down into components) using regression models. In such a case, it is recommended to use models where the predicted value of the outcome variable falls within [0;1] limits. Examples of such models include beta regression, Tobit regression, machine learning models, etc.

Article 16. Collective Assessment of Expected Credit Losses - EAD Models

1. In the process of calculating the EAD, a commercial bank should not avoid modeling prepayments in order to ensure conservatism. At the same time forecast information should be considered, unless it is justified that the information is not statistically significant.
2. When dealing with revolving financial instruments, the expected utilization shall be determined by modeling the EAD Factor (EADF), Conversion Factor (CCF) and / or Loan Equivalent Financial Instrument (LEQ). It is recommended to use truncated Tobit regression for CCF and LEQ modeling and beta regression for EADF modeling.
3. Prepayment modelling is recommended for non-revolving financial instruments. For this purpose, (panel) logistic, machine learning and / or survival analysis models can be used.
4. A commercial bank may use an alternative approach to EAD modeling if it demonstrates its superiority over the approaches set out in paragraphs 2 and 3 of this Article.
5. If statistical, econometric and machine learning methods fail to build a robust model due to data constraints, the utilization level (e.g. conversion factor) and the amount of prepayment can be estimated based on historical data through expert judgement.

Article 17. Collective Assessment of Expected Credit Losses - Simplified (Alternate) Approaches

1. Commercial bank can use simplified approach provided for in IFRS 9 for trade receivables, contract assets and leases.
2. If accounting is conducted according to simplified approach provided for in this Article, it should be disclosed in the commercial bank's accounting methodology.

Article 18. Model Adjustment by means of Experience-based expert Judgment

1. At the validation stage, certain limitations related to the model may be identified due to various circumstances, including:
 - A) To neglect the factors influencing credit risk the credit risk rating and ECL modeling;
 - B) Failure to consider new credit risk factors arising from changes in economic conditions;
 - C) Data constraints;
 - D) Insufficient capacity of the model;
2. Model adjustments shall compensate for the limitations of paragraph 1 of this Article.
3. Expert judgement and/or proxy model may be used for model adjustment.

4. Model adjustments might be necessary due to recurring credit risk factors or non-recurring factors.
5. Adjustment of the model based on expert judgment shall be made only if the need to adjust the model arises from:
 - A) non-recurring factors.
 - B) recurring credit risk factors, if their consideration in the model is associated with unreasonable costs, or there is no relevant data.
6. Except for the circumstances set forth in sub-paragraph 5.b of this Article, the expert judgment based adjustment of the model, which relies on recurring credit risk factors should be a temporary in nature until the deficient factor is reflected in the underlying model. Model updating (e.g., reflection of deficient factors) should be done as promptly as possible to avoid bias and manipulation for obtaining benefits.
7. A commercial bank is required to have a work plan with the timeframe to update the model and reduce reliance on one off adjustments. If the model has significant defects, it must be replaced with a new one.

Article 19. Credit Risk Rating Assigning Process and Grouping

1. When applying a rating, a commercial bank shall have an organized credit risk assessment process in order to properly group financial instruments based on their overall credit risk characteristics.
2. The rating system should ensure proper assessment of borrower and transaction characteristics, proper differentiation of risk, and accurate and consistent quantitative assessment.

Article 20. Credit Risk Rating Assigning Process and Grouping - Grouping Based on Overall Credit Risk Characteristics

1. The level of risk differentiation shall ensure that the number of financial instruments in the rating is sufficient to assess and validate the characteristics of a given rating loss. Also the concentration of the number of borrowers shall not be excessive in any group; both high concentration and the presence of extremely small borrowers in a group are only permissible if supported by convincing empirical evidence of the risk homogeneity of these borrowers.
2. Commercial banks with a concentrated portfolio in a specific market segment and within a specific default risk range, should maintain sufficient number of rankings within this range to prevent excessive concentration of borrowers within a particular rating.

Article 21. Credit Risk Rating Assigning Process and Grouping - Credit Risk Rating Models

1. The development process of the credit risk scoring function shall include stages of univariate and multivariate analysis.
2. At the stage of univariate analysis variables with high discriminatory power should be selected based on criteria such as Gini coefficient, informational significance, accuracy ratio and etc.

3. At the stage of multivariate analysis, techniques such as hierarchical cluster analysis among others, can be used to estimate the correlation between variables. The selection of a function / model for a multivariate analysis shall be done taking into account the following criteria: discriminatory power; statistical significance of variables coefficient and the adequacy of signs; stability of the discrimination power.

Article 22. Credit Risk Rating Assigning Process and Grouping - Requirements for the Use of External Rating

1. A commercial bank shall use only reliable credit ratings published by reputable external credit rating agencies.
2. The methodology for assigning external ratings should be robust systematic and subject to independent validation based on historical experience. Ratings should be monitored continuously, including in the event of changes in the financial position of the entity being evaluated.
3. In case of using external rating, a commercial bank shall have knowledge about assigning the external rating model, be aware of , intuition, logic, as well as, if available, technical aspect and validation document. The entity using the external rating should perform back-testing analysis on its own historical data and ensure that the accuracy of the model is consistent with the risk appetite determined by the commercial bank's back-testing policy.

Article 23. Contamination

1. Commercial bank shall adhere to contamination principles in the following manner:
 - A) Significant increase in credit risk since initial recognition / impairment of one of the borrower's financial instruments for retail and micro portfolios will usually result in a significant increase in credit risk since initial recognition / impairment of the borrower's other financial instruments, whether these instruments fall into one homogeneous group or in different groups.
 - B) In the case of small, medium-sized and corporate portfolios, a significant increase in credit risk since initial recognition / impairment one of the group's financial instruments, usually, will result in a significant increase in credit risk since initial recognition / impairment of the group's other financial instruments. In this case, respective assessment should be made whether financial instruments of other borrowers of this group are impaired or credit risk significantly increased since initial recognition.
2. In case different financial instruments belonging to the same borrower or group of borrowers are assigned different credit risk categories, a commercial bank should prove by means of individual or statistical analysis, that the risk factors does not trigger higher risk category in particular instruments are not pervasive enough to cause significant increase in credit risk since initial recognition or impairment in other instruments having lower credit category.
3. When applying the contamination principle at the group of borrowers level, a commercial bank must determine borrowers with nonmaterial exposures whose significant increase in credit risk/impairment will not lead to a significant increase in credit risk/impairment of other borrowers

of the group of borrowers. The commercial bank should determine the nonmaterial exposures threshold in such a way that it is appropriate for the size and complexity of the organization and the nature, scope, and complexity of the portfolio. In case of a significant increase in credit risk/impairment of the financial instrument of the borrower with nonmaterial exposures, the commercial bank must have detailed and comprehensive information about the trigger indicator.

Article 24. Recommended Limits of Solvency Indicators

1. National Bank recommends that the commercial banks consider, along with the criteria stipulated in Article 6, the solvency indicators given in Table №1 when assigning Stage 3 credit risk category financial instruments:

Table №1. PTI Ratios

Monthly net income (GEL or equivalent in foreign currency)	Stage 3 Credit Risk Category
< 1,000	> 55 %
>= 1,000	> 70 %

2. When changing the credit risk category, if PTI exceeds the ratios required by the Regulation on Lending to the Individuals, approved by the order of the president of the National Bank of Georgia dated March 13, 2020 N44/04, the bank shall consider variance in ratio by 10 percentage points as an indicator for transition to another category.
3. When assigning a Stage 3 credit risk category to a financial instrument with consideration of the income received from the business, it is recommended that commercial bank use the ratios presented in Table №2:
 - A) When financing projects, including long-term ones, when the project may not be profitable in the initial years, the bank shall calculate the financial ratios in accordance with the normalized indicators provided by the project. In addition, the project progress has to be in line with the initial plan without significant deviations;
 - B) In case commodities actively traded and price is quoted at international markets, when financing a particular trading operation, the borrower may not be able to meet the financial ratios presented in Table № 1 and Table № 2. In such cases, the bank shall have an adequate profit margin determined on the basis of internal policy, procedures and experience, which ensures mitigation of expected credit losses when commodity prices change.

Table №2. Solvency ratio of business borrowers

All Economic Sectors		
Credit Risk Category	Debt/EBITDA	DSCR for 10 years
Stage 3	> 6.00	< 1.0
* Hotels, energy, real estate management		
Credit Risk Category	Debt/EBITDA	DSCR for 15 years
Stage 3	> 7.50	< 1.0

4. When changing the credit risk category, if Debt/ EBITDA exceeds 4.5 or DSCR is less than 1.2, the bank shall consider variance in ratio by 10 percentage as an indicator for transition to another category.
5. A commercial bank is obliged to periodically submit to the National Bank of Georgia an analysis of the loan portfolio in terms of the given ratios, taking into account the latest data available to it.

Article 25. Taking into Account Mortgaged, Pledged Property in Calculation of Expected Credit Losses

1. The market value of the security shall be estimated in accordance with the requirements of International Valuation Standards (IVS)
2. Valuation and revaluation of real estate used as a security for a financial instrument shall be carried out in accordance with the Decree of the President of the National Bank of Georgia dated 14 May, 2018 N84 /04 ("Instruction on Real Estate Valuation for Commercial Banks")
3. The analysis of the fair value of the assessed collateral, realization period and related costs shall reflect current market situation, past experience (statistical data) and forecasted macroeconomic indicators.
4. The commercial bank shall ensure that the appraisers responsible for valuing the security have sufficient expertise, resources and independence.
5. The commercial bank shall submit the following information, together with the sale's price on the collateralized property, which is to be used for reduction of the outstanding amount on the financial instrument:
 - A) The assumptions and calculations used in the valuation when determining the market value;
 - B) Adjustments used;
 - C) Costs associated with the sale of the property used as a collateral;
 - D) The period required for the realization of the pledged property;
6. When estimating the cash flows from the realization of property used as a security for the financial instrument in addition to the provisions stipulated in paragraph 5 of this article, the commercial bank shall take into account the following factors:
 - A) Time required for the sale of property, taking into account local legislation and historical experience;
 - B) The selling price of the real estate shall not include the impact of forecasted macroeconomic indicators that are more optimistic than the information published by the National Bank;
 - C) The so-called "Waiting" strategy for anticipating improvements in market conditions shall not be used;
7. The commercial bank, in calculating the present value of cash flows from the realization of the borrower's property, shall take into account the period required for executing the sale, which should be consistent with the historical data of similar practices. The calculation shall also consider any operating expenses and capital expenditures incurred prior to the sale of the property.
8. A commercial bank shall use adequate discount rates for market prices to determine the fair value of the property used as a security for a financial instrument, which may vary depending on the level of the real estate's liquidity.
9. The commercial bank shall submit assumptions regarding the realization costs of the property and the market price discount rate, which shall be consistent with the historical data. If a commercial bank does not have the above mentioned historical data, it shall use conservative approaches with regards to assumptions.
10. For calculation of the present value of future cash flows, the value of collateral should be calculated as the present value of the difference between its market value and costs associated with its sale, discounted at the effective interest rate, to obtain a net recoverable amount.

11. Costs related to the sale of collateral include and are not limited to the following: VAT, auction fees, acquisition costs, realization costs, legal costs, etc. Such expenses shall be fully taken into account in determining the amount of losses in case of default of the financial instrument.

Article 26. Supervisory Measures and/or Sanctions

In case of breach of the requirements specified by this regulation by the commercial bank, the National Bank of Georgia is entitled to use the supervisory measures and/or sanctions defined by the legislation of Georgia.

In case of any discrepancies between the translated version and the original version of the regulation, the original version shall prevail.