**NATIONAL BANK OF MOLDOVA**

# DECISION
## for the approval of the Regulation on the treatment of credit risk under the Internal Ratings Based Approach

**No 162 of 2 July 2026**

*(in force as of 1 July 2027, with the exception of certain provisions set forth in paragraphs 2 and 3)*

Official Gazette of the Republic of Moldova No 298-300 Article 543 of 7 July 2026

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Pursuant to Article 66 of the Law No 202/2017 on the activity of banks (Official Gazette of the Republic of Moldova, 2017, No 434-439, Article 727), with subsequent amendments, the Executive Board of the National Bank of Moldova

**DECIDES:**

This decision:
- partially transposes (transposes: Article 4, paragraphs 53 to 55, 78; Article 5, paragraphs 1 to 9; Article 142; Article 143 (1) to (4); Article 144(1); Articles 145-147(1) to (10); Articles 148 to 150 (1a); Articles 151 to 153 (1) to (8); Articles 154 to 157 (1) to (5); Articles 158 to 164 (1) to (4), (6) to (7) and (10); Article 166-173 (1)-(2); Articles 174 to 178(1) to (5); Articles 179 to 180 (1) to (2); Article 181 (1) to (2); Article 182(1) to (3); Article 183-191) Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and amending Regulation (EU) No 648/2012, published in Official Journal of the European Union L 176 of 27 June 2013, CELEX: 32013R0575, as last amended by Regulation (EU) 2025/1215 of the European Parliament and of the Council of 17 June 2025;
- transposes Commission Delegated Regulation (EU) 2021/598 of 14 December 2020 supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards for assigning risk weights to specialised lending exposures, published in the Official Journal of the European Union L 127 of 14 April 2021, CELEX: 32021R0598.

**1.** The Regulation on the treatment of credit risk under the IRB Approach is approved (attached).

**2.** This Decision shall enter into force on 1 July 2027, with the exception of paragraph 138 of the specific reporting obligations, which shall enter into force on 1 January 2028.

**3.** Until the date of entry into force of the Treaty of Accession of the Republic of Moldova to the European Union:

**3.1.** for the provisions specified in paragraph 23.1.2 the banks shall apply a value of MDL 5 million;

**3.2.** for the provisions specified in paragraph 27.3 banks shall apply a maximum exposure value to a natural person of less than or equal to MDL 500,000;

**3.3.** for the provisions specified in paragraph 73 banks will apply an amount equal to the equivalent in MDL of EUR 25 million instead of EUR 50 million;

**3.4.** for the provisions specified in paragraphs 71.2.2, 71.3, 79, 80.1, 80.2 banks will apply a coefficient of 10 instead of 12.5 and a weighting of 1000% instead of 1250%.

**CHAIRMAN OF THE EXECUTIVE BOARD** **Anca-Dana DRAGU**

**Nr.162. Chișinău, 2 July 2026.**

Approved
by the Decision of the Executive Board
of the National Bank of Moldova
No 162 of 2 July 2026

# REGULATION
# ON THE TREATMENT OF CREDIT RISK UNDER THE INTERNAL RATINGS BASED APPROACH

## Chapter I
## General provisions

**1.** This Regulation shall apply to banks established in the Republic of Moldova and branches in the Republic of Moldova of banks from other states, which are licensed by the National Bank of Moldova (hereinafter - banks). This Regulation shall apply at both individual and consolidated level.

**2.** This Regulation establishes the methodology and conditions that banks shall apply, based on the Internal Ratings Based (IRB) Approach for determining risk-weighted exposure amounts for the purpose of calculating banks' own funds requirements in accordance with the Regulation on own funds of banks and capital requirements, approved by the Decision of the Executive Board of the National Bank of Moldova No 109/2018 (hereinafter - Regulation No 109/2018).

**3.** The terms and expressions used in this Regulation have the meanings provided in the Law No 202/2017 on the activity of banks (hereinafter - Law No 202/2017) and in other normative acts of the National Bank of Moldova issued in application of the said law. The following concepts shall also be used for the purposes of this Regulation:

**3.1. PD/LGD modelling adjustment approach -** an adjustment of the LGD or modelling an adjustment of both the PD and the LGD of the underlying exposure;

**3.2. appropriate adjustment -** the impact on risk parameter estimates resulting from the application of methodologies within the estimation of risk parameters to correct the identified deficiencies in data and in estimation methods, and to account for changes to underwriting standards, risk appetite, collection and recovery policies and any other source of additional uncertainty, to the extent possible in order to avoid biases in risk parameter estimates;

**3.3. exposure class -** any of the exposure classes referred to in paragraph 19;

**3.4. obligor grade -** risk category within the obligor rating scale of a rating system, to which obligors are assigned on the basis of a specified and distinct set of rating criteria, from which estimates of probability of default (PD) are derived;

**3.5. facility grade** - a risk category within a rating system's facility scale, to which exposures are assigned on the basis of a specified and distinct set of rating criteria, from which own estimates of LGD are derived;

**3.6. large regulated financial sector entity -** a financial sector entity which meets all of the following conditions:

**3.6.1.** the entity's total assets, or the total assets of its parent company where the entity has a parent company, calculated on an individual or consolidated basis, are equal to or greater than the MDL equivalent of EUR 70 billion, using the most recent audited financial statement or consolidated financial statement in order to determine asset size;

**3.6.2.** the entity is subject to prudential requirements, directly on an individual or consolidated basis or indirectly on the basis of prudential consolidation of its parent undertaking, in accordance with the Regulation on consolidated supervision of banks, approved by Decision of the Executive Board of the National Bank of Moldova No 101/2020 (hereinafter - Regulation No 101/2020), normative acts on prudential requirements of investment firms and normative acts on the taking-up and pursuit of the business of insurance and reinsurance, or legal prudential requirements of a third country that are at least equivalent to those normative acts of the Republic of Moldova;

**3.7. unregulated financial sector entity -** a financial sector entity that does not fulfil the condition set out in paragraph 3.6.2;

**3.8. retail exposure -** an exposure assigned to any of the exposure classes referred to in paragraph 19 sub-paragraph 19.5;

**3.9. credit exposure -** any on- or off-balance sheet item that results, or may result in a credit obligation;

**3.10. regional governments, local authorities and public sector entities exposure -** an exposure assigned to any of the exposure classes referred to in paragraph 19 sub-paragraph 19.2;

**3.11. corporate exposure -** an exposure assigned to any of the exposure classes referred to in paragraph 19 sub-paragraph 19.4;

**3.12. credit conversion factor based on the Standardised Approach** (SA-CCF) - percentage applicable under the Regulation on the treatment of banks' credit risk using standardised approach, approved by the Decision of the Executive Board of the National Bank of Moldova No 111/2018 (hereinafter - Regulation No 111/2018);

**3.13. IRB credit conversion factor (**IRB-CCF) - own estimates of credit conversion factor;

**3.14. facility or credit facility -** a credit exposure arising from a contract or a set of contracts between an obligor and an institution;

**3.15. margin of conservatism -** an add-on incorporated in risk parameter estimates to account for the expected range of estimation errors stemming from identified deficiencies in data, methods, models, and changes to underwriting standards, risk appetite, collection and recovery policies and any other source of additional uncertainty, as well as from general estimation error;

**3.16. credit obligation -** any obligation arising from a credit contract, including principal, accrued interest and fees, owed by an obligor;

**3.17. loss given default or LGD** - the ratio of the loss on an exposure related to a single facility due to the default of an obligor or, where applicable, of a credit facility to the amount outstanding at default or at a given reference date after the date of default, and, in the context of dilution risk, the loss given dilution meaning the ratio of the loss on an exposure related to a purchased receivable due to dilution, to the amount outstanding of the purchased receivable;

**3.18. probability of default or PD** - the probability of default of an obligor or, where applicable, of a credit facility over a one-year period, and, in the context of dilution risk, the probability of dilution over a one-year period;

**3.19. one-year default rate** - the ratio between the number of obligors or, where the definition of default is applied at credit facility level in accordance with paragraph 24 of Regulation No 111/2018, the number of credit facilities for which a default is considered to have occurred during a period that starts from one year prior to a date of observation T, to the number of obligors or, where the definition of default is applied at credit facility level, credit facilities classified in this grade or pool one year prior to that date of observation T;

**3.20. dilution risk -** the risk that an amount receivable is reduced through cash or non-cash credits to the obligor;

**3.21. loss** - economic loss, including material discount effects, and material direct and indirect costs associated with collecting on the instrument;

**3.22. expected loss or EL -** the ratio, related to a single facility, of the amount expected to be lost on an exposure from any of the following:

**3.22.1.** a potential default of an obligor over a one-year period to the amount outstanding at default;

**3.22.2.** a potential dilution event over a one-year period to the amount outstanding at the date of occurrence of the dilution event;

**3.23. protection-provider-RW-floor -** the risk weight applicable to a comparable, direct exposure to the protection provider;

**3.24. unfunded credit protection "recognised"**, in the case of an exposure for which a bank applies the IRB Approach using its own estimates of LGD in accordance with paragraphs 4-

7, “recognised” unfunded credit protection whose effect on the calculation of risk-weighted exposure amounts or expected loss amounts of the underlying exposure is taken into account using one of the following methods, in accordance with the Regulation on credit risk mitigation techniques of banks, approved by Decision of the Executive Board of the National Bank of Moldova No 112/2018 (hereinafter - Regulation No 112/2018):

**3.24.1.** the PD/LGD adjustment modelling approach;

**3.24.2.** substitution of risk parameters approach under A-IRB as defined in Regulation No 112/2018;

**3.25. large corporate -** any corporate undertaking with consolidated annual sales of more than the equivalent in MDL of EUR 500 million or belonging to a group where the total annual sales of the consolidated group is more than the equivalent in MDL of EUR 500 million.

When assessing the sales threshold, the amounts shall be reported as set out in the audited financial statements of the companies or, in the case of corporates that are part of consolidated groups, of their consolidated groups, in accordance with the accounting standard applicable to the ultimate parent undertaking of the consolidated group. The figures shall be based on the average amounts calculated over the prior three years or on the latest amounts updated every three years by the bank;

**3.26. rating system** - all of the methods, processes, controls, data collection and IT systems that support the assessment of credit risk, the assignment of exposures to rating grades or pools, and the quantification of default and loss estimates that have been developed for a certain type of exposures;

**3.27. type of exposures -** a group of homogeneously managed exposures, which may be limited to a single entity or a single sub-set of entities within a group provided that the same type of exposures is managed differently in other entities of the group;

**3.28. business unit -** any separate organisational or legal entities, business lines, geographical locations.

## Chapter II
## Permission granted by the National Bank of Moldova to use the Internal Ratings Based Approach

### *Section 1*
### *Approval to use the IRB Approach*

**4.** Where the conditions laid down in this Regulation are met, the National Bank of Moldova shall allow banks to calculate risk-weighted exposure amounts using the Internal Ratings Based Approach (“IRB Approach”).

**5.** Prior permission to use the IRB approach, including own estimates of LGDs and IRB-CCFs, is required for each exposure class, rating system and approach used to estimate LGDs and CCFs.

**6.** In case of changes to rating systems, banks shall obtain the prior approval of the National Bank of Moldova for:

**6.1.** significant changes in the scope of a rating system that the bank has been approved to use;

**6.2.** significant changes to a rating system that the bank has received permission to use.

The scope of a rating system shall cover all exposures of the relevant type of exposures for which that rating system has been designed.

**7.** Banks shall notify the National Bank of Moldova without delay in writing of any changes to the rating systems.

### *Section 2*
### *The National Bank of Moldova’s assessment of an application to use an IRB Approach*

**8.** The National Bank of Moldova shall grant permission to a bank to use the IRB Approach, including to use its own estimates of LGD and conversion factors, as set out in Section 1, only if the National Bank of Moldova is satisfied that requirements laid down in this Regulation, in particular those set out in Chapter VI, are met and that the bank's systems for the management and rating of credit risk exposures are sound and implemented with integrity, and in particular that the bank has demonstrated to the satisfaction of the National Bank of Moldova that the following standards are met:

**8.1.** The rating systems of the bank shall ensure a meaningful assessment of obligor and transaction characteristics, a meaningful differentiation of risk and accurate and consistent quantitative estimates of risk;

**8.2.** The internal ratings and default and loss estimates used to determine own funds requirements, as well as the associated systems and processes, play an essential role in the risk management and decision-making process, and in the credit approval, internal capital allocation and corporate governance functions of the bank;

**8.3.** The bank shall have a credit risk control unit responsible for its rating systems that is appropriately independent and free from undue influence;

**8.4.** The bank shall collect and store all relevant data to provide effective support to its credit risk measurement and management process;

**8.5.** The bank shall document its rating systems and the rationale for their design and validate the rating systems;

**8.6.** the bank has validated each rating system for an appropriate period of time before receiving permission to use that rating system, has assessed during that period whether each rating system is appropriate for the scope of that rating system and has made any necessary changes to each rating system as a result of its assessment;

**8.7.** The Bank has calculated, under the IRB approach, the own funds requirements resulting from its estimates of risk parameters and is able to submit the reports established by the instructions of the National Bank of Moldova on the submission by banks of COREP reports for supervisory purposes;

**8.8.** The bank has assigned and continues to assign to each exposure within the scope of a rating system a rating grade or group within that rating system.

**9.** The requirements to use the IRB Approach, including own estimates of LGD and conversion factors, shall also apply where a bank has implemented a rating system or model used in a rating system that it has purchased from a third-party vendor.

**10.** In order to obtain the prior approval referred to in paragraph 8, the bank shall submit to the National Bank of Moldova an application to which shall be attached the documents and information confirming that the bank meets the conditions set out in paragraph 8.

**11.** The National Bank of Moldova shall examine the application referred to in paragraph 10 within 180 working days from the date of its submission to the National Bank of Moldova, accompanied by all documents to be submitted to the National Bank of Moldova. The deadline may be extended by up to 90 working days, with subsequent notification to the bank at least 3 days before the expiry of the deadline for examining the application.

### *Section 3*
### *Prior experience of using IRB approaches and measures to be taken where the requirements of this Regulation cease to be met*

**12.** A bank applying for permission to use the IRB Approach shall have the experience of using, for the exposure classes concerned, rating systems that have been substantially compliant with the requirements set out in Chapter VI for the purposes of internal risk measurement and management for at least three years prior to qualifying for the use of the IRB Approach.

**13.** A bank applying for the use of own estimates of LGDs and conversion factors shall demonstrate to the satisfaction of the National Bank of Moldova that it has been estimating and employing own estimates of LGDs and conversion factors in a manner that was largely consistent with the requirements for the use of own estimates of those parameters set out in Chapter VI for at least three years prior to qualification to use own estimates of LGDs and conversion factors.

**14.** If the bank extends the use of the IRB Approach after having obtained initial prior approval, the bank's experience shall be sufficient to meet the requirements in paragraphs 12 and 13 with respect to the additional exposures covered. If the use of rating systems is extended to exposures that differ significantly from the original scope, so that the experience gained cannot be considered sufficient to comply with these provisions in relation to additional exposures, the requirements in paragraphs 12 and 13 shall be applied separately for additional exposures.

**15.** For the purposes of paragraph 12, rating systems that are broadly in line with the requirements set out in Chapter VI shall be deemed to have been applied by the bank at least three years prior the use of the IRB Approach for the purposes of calculating own funds requirements, where:

**15.1.** these rating systems have been used in the bank's risk management and decision-making processes as well as credit approval processes;

**15.2.** there is adequate documentation on the effective functioning of the rating systems over the three years, in particular as regards the respective monitoring, validation and audit reports.

**16.** For the purposes of assessing an application for approval of the extension of the IRB Approach in accordance with the sequential implementation plan, paragraph 15 shall also apply where the extension concerns exposures that differ significantly from the scope of the existing coverage, so that it cannot be reasonably assumed that the existing experience is sufficient to meet the requirements of the paragraphs 12 and 13 in respect of additional exposures as set out in paragraph 14.

**17.** If a bank no longer meets the requirements laid down in this Regulation, it shall notify the National Bank of Moldova without delay, in writing, of the measures taken in accordance with the provisions of Article 66 paragraph (3) of Law No 202/2017.

## *Section 4*
## *Methodology to assign exposures to exposure classes*

**18.** The methodology used by the bank for assigning exposures to different exposure classes shall be appropriate and consistent over time.

**19.** Each exposure shall be assigned to one of the following exposure classes:

**19.1.** Exposures to central governments and central banks;

**19.2.** Exposures to regional governments, local authorities and public sector entities, to be assigned to the following exposure classes:

**19.2.1.** Exposures to regional governments and local authorities;

**19.2.2.** Exposures to public sector entities;

**19.3.** Exposures to banks;

**19.4.** Exposures to corporates, to be assigned to the following exposure classes:

**19.4.1.** General corporates;

**19.4.2.** Specialised lending exposures;

**19.4.3.** Corporate purchased receivables;

**19.5.** Retail exposures, to be assigned to the following exposure classes;

**19.5.1.** qualifying revolving retail exposures ("QRRE");

**19.5.2.** retail exposures secured by residential property;

**19.5.3.** retail purchased receivables;

**19.5.4.** other retail exposures;

**19.6.** Equity exposures;

**19.7.** Exposures in the form of units or shares in a collective investment undertaking (CIU);

**19.8.** Items representing securitisation positions;

**19.9.** Other non credit-obligation assets.

**20.** The following exposures shall be assigned to the exposure class for central governments and central banks set out in paragraph 19.1:

**20.1.** Exposures to multilateral development banks referred to in paragraph 46 of Regulation No 111/2018;

**20.2.** Exposures to International Organisations which attract a risk weight of 0 % under paragraph 47 of Regulation No 111/2018.

**21.** By way of derogation from paragraph 19, exposures to regional governments, local authorities and public sector entities shall be assigned to the exposure class referred to in paragraph 19.1, where those exposures are treated as exposures to central governments in accordance with Regulation No 111/2018.

**22.** The following exposures shall be assigned to the class set out in paragraph 19.2:

**22.1.** Exposures to multilateral development banks that are not assigned a 0% risk weight in accordance with Regulation 111/2018; and

**22.2.** Exposures treated as exposures to banks in accordance with paragraph 51 of Regulation No 111/2018.

**23.** To be eligible for the retail exposure class set out in paragraph 19.5, exposures shall comply with the following criteria:

**23.1.** Exposures to:

**23.1.1.** One or more natural persons;

**23.1.2.** A small or medium-sized enterprise (SME), provided that the total amount owed to the bank and its parent undertakings and subsidiaries, including any exposure in default, by the obligor client or group of connected clients, but excluding exposures secured by residential property, up to the property value does not, to the knowledge of the bank which shall take reasonable steps to verify the amount of that exposure, exceed the amount of the equivalent in MDL of EUR 1 million;

**23.1.3.** Exposures secured by residential property, including first and successive liens, term loans, revolving personal lines of credit secured by immovable property and exposures as referred to in Regulation 112/2018 on credit risk mitigation techniques, irrespective of the size of the exposure, provided that the exposure is any of the following:

**23.1.3.1.**Exposure to a natural person;

**23.1.3.2.**An exposure to associations or cooperatives of natural persons which are governed by national law and whose sole purpose is to grant their members the right to use a principal residence in the property securing the credit;

**23.2.** They are treated by the bank in the risk management process consistently over time and in a similar manner;

**23.3.** They shall not be managed solely on an individual basis as exposures assigned to the corporate exposure classes referred to in sub-paragraphs 19.4.1, 19.4.2 or 19.4.3;

**23.4.** Each of them represents one of a significant number of exposures that are managed in a similar way.

**24.** In addition to the exposures listed in paragraph 23, the present value of minimum retail lease payments shall be included in the retail exposure class.

**25.** Exposures that meet all the conditions set out in sub-paragraphs 23.1.3 and 23.2, 23.3 and 23.4 fall within the retail exposure class secured by residential property referred to in sub-paragraph 19.5.2.

**26.** By way of derogation from paragraph 25, the National Bank of Moldova may exclude from the retail exposure class secured by residential property referred to in sub-paragraph 19.5.2 loans granted to natural persons who have mortgaged more than four immovable property or residential units, including loans granted to natural persons referred to in Regulation No 112/2018, and assign such loans to one of the exposure classes referred to in sub-paragraphs 19.4.1, 19.4.2 or 19.4.3.

**27.** Retail exposures belonging to a type of exposures that meet all of the following conditions shall be assigned to the QRRE exposure class referred to in paragraph 19.5.1:

**27.1.** Such exposures shall be to one or more natural persons;

**27.2.** Such exposures shall be revolving, unsecured and, to the extent that they are not drawn immediately and unconditionally, may be cancelled by the bank;

**27.3.** The maximum exposure in this type of exposure to a single natural person shall be the equivalent in MDL of EUR 100 000 or less;

**27.4.** This type of exposures exhibited low volatility of loss rates relative to the average level of loss rates, in particular within the low PD bands;

**27.5.** The treatment of exposures assigned to this type of exposures as eligible revolving retail exposures is consistent with the risk characteristics of this type of exposures.

**28.** By way of derogation from paragraph 27.2, the requirement to be unsecured shall not apply in respect of collateralised credit facilities linked to a wage account. In this case, the amounts recovered through the enforcement of the collateral shall not be taken into account in the LGD estimates.

**29.** Banks shall identify, within the QRRE exposure class referred to in paragraph 19.5.1, exposures to traders ("QRRE transactors") and exposures that are not exposures to traders ("QRRE revolvers"). In particular, QRREs with a repayment history of less than 12 months are identified as QRREs revolvers.

**30.** Unless assigned to the exposure class in the form of units or shares in a CIU, the equity exposures referred to in paragraph 84 of Regulation No 111/2018 shall be assigned to the equity exposure class referred to in paragraph 19.6.

**31.** Any credit obligation that is not assigned to the exposure classes referred to in sub-paragraphs 1919.1, 19.2, 19.5, 19.6, 19.7 and 19.8 that is assigned to one of the exposure classes referred to in sub-paragraph 19.4 sub-paragraphs 19.4.1, 19.4.2 or 19.4.3.

**32.** Within the corporate exposure class referred to in paragraph 19.4, banks shall separately identify as specialised lending exposures, exposures that have the following characteristics:

**32.1.** The exposure is to an entity that was created specifically to fund or manage physical assets or is an economically comparable exposure;

**32.2.** The contractual arrangements give the lender a substantial degree of control over the assets and income it generates;

**32.3.** The primary source of repayment of the obligation is the income generated by the financed assets and not the independent repayment capacity of the company as a whole.

**33.** The exposures referred to in paragraph 32 shall be assigned to the specialised lending exposure class referred to in sub-paragraph 19.4.2 and shall be classified as follows: "project finance" (PF), "object finance" (OF), "commodity finance" (CF) and "income-producing real estate" (IPRE).

**34.** The residual value of leased property shall be assigned to the exposure class "other non credit-obligation assets" set out in paragraph 19.9, unless the residual value is already included in the exposure value for leases set out in paragraph 147.

**35.** The exposure arising from the provision of protection through an nth-to-default basket credit derivative shall be assigned to the same class specified in paragraph 19 as the exposure in the basket would be, unless the individual exposures in the basket would be assigned to different exposure classes, in which case the exposure shall be assigned to the corporate exposure class set out in sub-paragraph 19.4.

## *Section 5*
## *Conditions for implementing the IRB Approach across different classes of exposure and business units*

**36.** A bank permitted to apply the IRB Approach shall implement, together with any parent undertaking and its subsidiaries, the IRB Approach for at least one of the exposure classes referred to in paragraph 19 sub-paragraphs 19.1-19.5 or sub-paragraph 19.9. Once a bank has implemented the IRB Approach for a specific type of exposures in an exposure class, the bank shall do so for all exposures in that exposure class, unless it has received permission from the National Bank of

Moldova to use the Standardised Approach on an ongoing basis in accordance with paragraphs 43-47.

**37.** Subject to the prior approval of the National Bank of Moldova, the implementation of the IRB Approach may be done progressively for different types of exposures within a given exposure class within the same business unit and for different business units within the same group or in the case of the use of own estimates of LGDs or the use of IRB-CCFs.

**38.** The National Bank of Moldova shall determine the period necessary for each bank, parent undertaking and its subsidiaries to implement the IRB Approach for all exposures in a given exposure class for different types of exposures within the same business unit and for different business units within the same group, or in the case of using own estimates of LGDs or using IRB-CCFs. This period shall be such as the National Bank of Moldova considers appropriate, depending on the nature and size of the activities of the bank concerned or of any parent undertaking and its subsidiaries, as well as on the number and nature of rating systems to be implemented.

**39.** Banks shall implement the IRB approach in accordance with the conditions set by the National Bank of Moldova. The conditions shall ensure that the flexibility granted under paragraphs 36-37 is not used selectively to achieve reduced own funds requirements in respect of those types of exposures or business units to be included in the IRB Approach or in the case of the use of own estimates of LGD or the use of IRB-CCF.

## *Section 6*
## *Conditions to revert to the use of less sophisticated approaches*

**40.** A bank using the IRB Approach for a given exposure class or type shall not waive the use of that approach to use the Standardised Approach for the calculation of risk-weighted exposure amounts instead, unless the following conditions are met:

**40.1.** The Bank has demonstrated to the satisfaction of the National Bank of Moldova that the use of the Standardised Approach is not intended to engage in regulatory arbitrage, including by unduly reducing own funds requirements, that it is necessary taking into account the nature and complexity of all such exposures of the Bank and that it would not have a material negative impact on the solvency of the Bank or its ability to manage risk effectively;

**40.2.** The Bank received the prior approval of the National Bank of Moldova.

**41.** Banks that have obtained the permission referred to in paragraph 56 for using their own estimates of LGDs and conversion factors shall not revert to using the LGD values and conversion factors referred to in paragraphs 54 and 55, unless the following conditions are met:

**41.1.** The Bank has demonstrated to the satisfaction of the National Bank of Moldova that the use of LGDs and conversion factors set out in paragraphs 54 and 55 for a given exposure class or type of exposure is not proposed to reduce the bank's own funds requirements, but is necessary taking into account the nature and complexity of the bank's total exposures of this type and would not have a significant negative impact on the bank's solvency or its ability to manage risk effectively;

**41.2.** The Bank received the prior permission of the National Bank of Moldova.

**42.** The application of paragraphs 40 and 41 shall be subject to the conditions for the progressive implementation of the IRB Approach established by the National Bank of Moldova in accordance with paragraphs 36-39 and to the permission for permanent partial use referred to in paragraphs 43-47.

## *Section 7*
## *Conditions for permanent partial use*

**43.** Banks shall apply the Standardised Approach to all of the following exposures:

**43.1.** Exposures assigned to the equity exposure class referred to in paragraph 19 sub-paragraph 19.6;

**43.2.** Exposures assigned to exposure classes or belonging to types of exposures in an exposure class for which banks have not received the prior permission of the National Bank of

Moldova to use the IRB Approach for the calculation of risk-weighted exposure amounts and expected loss amounts.

**44.** A bank permitted to use the IRB Approach for the calculation of risk-weighted exposure amounts and expected loss amounts for a given exposure class may, subject to the prior approval of the National Bank of Moldova, apply the Standardised Approach for certain types of exposures in that exposure class, including exposures from foreign branches and different groups of exposures, where those types of exposures are not material in terms of size and risk profile.

**45.** In addition to the exposures referred to in paragraphs 43 and 44, a bank may, subject to the prior approval of the National Bank of Moldova, apply the Standardised Approach to the following exposures where the IRB Approach is applied to other types of exposures in the same exposure class:

**45.1.** Exposures to the central government of the Republic of Moldova and the National Bank of Moldova, as well as to central governments and central banks of the Member States of the European Union and to their regional governments, local authorities and public sector entities, subject to the following conditions:

**45.1.1.** In terms of risk, as a result of specific public arrangements, there are no differences between the exposures to the central government and central bank concerned and the other exposures referred to; and

**45.1.2.** Exposures to central governments and central banks shall be assigned a 0% risk weight under Regulation No 111/2018;

**45.2.** Exposures of a bank to a counterparty that is its parent undertaking, its subsidiary or a subsidiary of its parent undertaking, provided that the counterparty is a bank or a financial holding company, mixed financial holding company, non-bank financial undertaking, asset management company or ancillary services undertaking subject to appropriate prudential requirements or an undertaking linked by a relationship within the meaning of the Law No 287/2017 on Accounting and Financial Reporting;

**45.3.** Exposures to banks in the Member States of the European Union that meet the requirements for prior permission from the competent authorities of those Member States shall not apply the risk weight requirements to exposures to counterparties with which the banks have entered into an institutional protection scheme consisting of a contractual or statutory liability arrangement that protects those banks and in particular ensures their liquidity and solvency to avoid insolvency proceedings where necessary.

**46.** A bank permitted to use the IRB Approach for the calculation of risk-weighted exposure amounts only for certain types of exposures within an exposure class shall apply the Standardised Approach for the other types of exposures within that exposure class.

**47.** In addition to the exposures referred to in paragraphs 44 and sup-paragraphs 45-46, a bank may apply the Standardised Approach for exposures to churches and religious communities that meet the requirements laid down in Regulation No 111/2018.

## Chapter III
## CALCULATION OF RISK-WEIGHTED EXPOSURE AMOUNTS

### *Section 1*
### *Treatment by type of exposure class*

#### *Subsection 1*
#### *Treatment by exposure class*

**48.** Risk weighted exposure amounts for credit risk for exposures belonging to one of the exposure classes referred to in paragraph 19 sub-paragraphs 19.1-19.5 or sub-paragraph 19.9 shall be calculated in accordance with paragraphs 71-93, unless those exposures are deducted from own funds or subject to the treatment set out in paragraph 19 [21] of Regulation No 109/2018.

**49.** The risk-weighted exposure amounts for dilution risk of purchased receivables shall be calculated in accordance with paragraphs 89-93. Where a bank has full recourse against the seller of purchased receivables for default risk and dilution risk, the provisions of this Section, paragraphs 59-70 and 94-97 in respect of purchased receivables shall not apply and the exposure shall be treated as a collateralised exposure.

**50.** The risk-weighted exposure amounts for credit risk and dilution risk shall be calculated on the basis of the relevant parameters of those exposures. Those parameters include PD, LGD, maturity ("M") and exposure value. PD and LGD may be considered individually or jointly in accordance with Chapter IV.

**51.** The weighted credit risk exposure amounts for specialised lending exposures shall be calculated in accordance with paragraphs 75-76.

**52.** For exposures belonging to the exposure classes referred to in paragraph 19 sub-paragraphs 19.1-19.5, banks shall provide their own estimates of PDs in accordance with paragraphs 4 to 7 and Chapter VI.

**53.** For retail exposures, banks shall provide their own estimates of LGD as well as IRB-CCF, where applicable, pursuant to paragraphs 151-154 and 156-157 in accordance with paragraphs 4-7 and Chapter VI. Banks shall use SA-CCF where the provisions in paragraphs 151-154 and 156-157 do not allow the use of IRB-CCF.

**54.** Banks shall apply the LGD values set out in paragraph 114 and the SA-CCF in accordance with paragraphs 151-154, 155 and 156-157 to following exposures:

**54.1.** Exposures assigned to the exposure class to banks referred to in paragraph 19 sub-paragraph 19.3;

**54.2.** Exposures to financial sector entities other than those referred to in sub-paragraph 54.1;

**54.3.** Exposures to large corporates that are not assigned to the specialised lending exposure class referred to in paragraph 19 sub-paragraph 19.4.2.

**55.** For exposures belonging to the exposure classes referred to in paragraph 19 sub-paragraphs 19.1, 19.2 or 19.4, except for the exposures referred to in paragraph 54, banks shall apply the LGD values set out in paragraph 114 and the SA-CCF in accordance with paragraph 151-154, 155, and 156-157, unless they have been permitted to use their own estimates of LGD and IRB-CCF for those exposures in accordance with paragraph 56.

**56.** For the exposures referred to in paragraph 55, the National Bank of Moldova shall allow banks to use own estimates of LGD as well as IRB-CCF, where applicable, pursuant to paragraphs 151-154 and 156-157, in accordance with paragraphs 4-7 and Chapter VI.

**57.** For securitised exposures and those assigned to the exposure class "items representing securitisation positions" referred to in paragraph 19 sub-paragraph 19.8, risk-weighted exposure amounts shall be calculated in accordance with the normative acts of the National Bank of Moldova related to the prudential treatment of securitisations.

**58.** For exposures in the form of shares or units in a CIU that belong to the exposure class referred to in paragraph 19 sub-paragraph 19.7, banks shall apply the treatment set out in paragraphs 59-70, unless those exposures are deducted from own funds or are subject to deduction from eligible liabilities items under Regulation No 109/2018.

### *Subsection 2*
### *Treatment of exposures in the form of units or shares in CIUs*

**59.** Banks shall calculate risk-weighted exposure amounts for their exposures in the form of units or shares in a CIU by multiplying the risk-weighted exposure amount for the CIU calculated in accordance with the approaches set out in paragraphs 60 and 64 by the percentage of units or shares held by those banks.

**60.** Where the conditions for determining the risk-weighted exposure amount of a CIU's exposures laid down in Regulation No 111/2018 are met, banks that have sufficient information about the individual underlying exposures of a CIU shall take those underlying exposures into account in order to calculate the risk-weighted exposure amount of the CIU by risk-weighting all the underlying exposures of the CIU as if they were held directly by those banks.

**61.** By way of derogation from paragraph 132 sub-paragraph 5) of Regulation No 109/2018, banks that calculate the risk-weighted exposure amount for CIUs in accordance with paragraphs 59 or 60 may calculate the own funds requirement for credit valuation adjustment risk for derivative exposures of that CIU as an amount equal to 50% of the own funds requirement for exposures from those derivatives, calculated in accordance with the approaches and methods set out in the normative acts of the National Bank of Moldova for the treatment of counterparty credit risk, as applicable.

**62.** By way of derogation from paragraph 61, a bank may exclude from the calculation of the own funds requirement for credit valuation adjustment risk derivative exposures that would not be subject to that requirement if they were directly assumed by the bank.

**63.** Banks that apply the look-through approach in accordance with paragraphs 60, 61 and 62 that do not use the methods set out in this Regulation or, where applicable, in the normative acts of the National Bank of Moldova related to the prudential treatment of securitisations, for all or part of the underlying exposures of the CIU, shall calculate risk-weighted exposure amounts and expected loss amounts for all or part of those underlying exposures in accordance with the following principles:

**63.1.** For the underlying exposures that would be assigned to the equity exposure class referred to in paragraph 19 sub-paragraph 19.6, banks shall apply the Standardised Approach set out in Regulation No 111/2018;

**63.2.** For exposures belonging to the class of items representing securitisation positions referred to in 19 paragraph 19.8, banks shall apply the treatment regarding the hierarchy of methods set out in the normative acts of the National Bank of Moldova related to the prudential treatment of securitisations as if those exposures were held directly by those banks;

**63.3.** For all other underlying exposures, banks shall apply the standardised approach set out in Regulation No 111/2018.

**64.** Where the conditions for determining the risk-weighted exposure amount for a CIU's exposures laid down in Regulation No 111/2018 are met, banks that do not have sufficient information on the individual underlying exposures of a CIU may calculate the risk-weighted exposure amount for those exposures in accordance with the limits set out in the mandate-based approach set out in paragraphs $82^{15}$-$82^{17}$ of Regulation No 111/2018. However, for the exposures listed in paragraph 63 sub-paragraphs 63.1-63.3, banks shall apply the approaches set out in those paragraphs.

**65.** Subject to paragraph $82^{21}$ of Regulation No 111/2018, banks that do not apply the look-through approach in accordance with paragraphs 60-62 or the mandate-based approach in accordance with paragraph 64 shall apply the fall-back approach referred to in paragraphs $82^{1}$-$82^{3}$ of Regulation No 111/2018.

**66.** Banks may calculate the risk-weighted exposure amount for their exposures in the form of units or shares in a CIU using a combination of the approaches referred to in this Section, to the extent that the conditions for using those approaches are met.

**67.** Banks that do not have adequate data or information to calculate the risk-weighted amount for a CIU in accordance with the approaches described in paragraphs 60-64 may rely on third-party calculations provided that all of the following conditions are met:

**67.1.** The third party is one of the following:

**67.1.1.** The depository institution or the depository financial institution of the CIU, provided that the CIU exclusively invests in securities and deposits all securities at that depository institution or depository financial institution;

**67.1.2.** For CIUs that do not fall under sub-paragraph 67.1.1, the CIU management company, provided that the CIU management company meets the criteria set out in paragraph $82^{4}$ sub-paragraph 1) of Regulation No 111/2018;

**67.2.** For exposures other than those referred to in paragraph 63 sub-paragraphs 63.1-63.3, the third party shall perform the calculation in accordance with the look-through approach set out in paragraph $82^{14}$ of Regulation No 111/2018;

**67.3.** For the exposures referred to in paragraph 63 sub-paragraphs 63.1-63.3, the third party shall perform the calculation in accordance with the approaches set out in those paragraphs;

**67.4.** An external auditor confirmed the accuracy of the third party's calculation.

**68.** Banks that rely on third-party calculations shall multiply the risk-weighted exposure amount of a CIU's exposures resulting from those calculations by a factor of 1,2.

**69.** By way of derogation from paragraph 68, where the bank has unrestricted access to detailed third-party calculations, the factor of 1,2 shall not apply. The Bank shall provide, upon request, the respective calculations to the National Bank of Moldova.

**70.** For the purposes of this Subsection, the exclusions from the approaches for calculating risk-weighted exposure amounts for CIUs and paragraphs $82^{11}$-$82^{12}$ of Regulation No 111/2018 shall apply. For the purposes of this Subsection, the treatment of off-balance sheet exposures to CIUs set out in Regulation No 111/2018 shall apply, using the risk weights calculated in accordance with this Regulation.

## *Section 2*
## *Calculation of risk-weighted exposure amounts for credit risk*

### *Subsection 1*
### *Risk-weighted exposure amounts for exposures to central governments and central banks, exposures to regional governments, local authorities and public sector entities, exposures to institutions and exposures to corporates*

**71.** Subject to the application of specific treatments set out in paragraphs 72 and 73, risk-weighted exposure amounts for exposures to central governments and central banks, exposures to regional governments, local authorities and public sector entities, exposures to banks and exposures to corporates shall be calculated in accordance with the following formulae:

*Risk – weighted exposure amount = RW · exposure value*

where the risk weight RW is defined as:

**71.1.** if PD = 0, RW shall be 0;

**71.2.** if PD = 1, i.e., for defaulted exposures:

**71.2.1.** when banks apply the LGD values set out in paragraph 114, RW shall be 0;

**71.2.2.** when banks use own estimates of LGD, RW shall be

$$RW = max\{0; 12{,}5 \cdot (LGD - EL_{BE})\}$$

where expected loss best estimate ($EL_{BE}$) shall be the bank's best estimate of expected loss for defaulted exposures in accordance with sub-paragraph 202.9;

**71.3.** if 0 < PD < 1, then:

$$RW = \left( LGD \cdot N\left( \frac{1}{\sqrt{1-R}} \cdot G(PD) * \sqrt{\frac{R}{1-R}} \cdot G(0.999) \right) - LGD \cdot PD \right) \cdot \frac{1 + (M - 2{,}5) \cdot b}{1 - 1{,}5 \cdot b} \cdot 12{,}5$$

where:

N = the cumulative distribution function of a standard normal random variable, i.e. N(x) equals the probability that a normally random variable with mean of 0 and variance of 1 is less than or equal to x;

G = the inverse of the cumulative distribution function for a standard normal random variable, i.e. if x = G(z), x is the value such that N(x) = z;
R = the coefficient of correlation, which is defined as:

$$R = 0.12 \cdot \frac{1 - e^{-50 \cdot PD}}{1 - e^{-50}} + 0.24 \cdot (1 - \frac{1 - e^{-50 \cdot PD}}{1 - e^{-50}})$$

b = the maturity adjustment factor, which is defined as:

$$b = (0.11852 - 0.05478 \cdot \ln(PD))^2$$

M = the maturity, expressed in years and determined in accordance with paragraphs 123-129.

**72.** For exposures to large regulated financial sector entities and unregulated financial sector entities, the coefficient of correlation R referred to in paragraph 71 sub-paragraph 71.3 or, where applicable, in paragraph 73 shall be multiplied by 1,25 when calculating the risk weights of those exposures.

**73.** For exposures to companies where the total annual sales for the consolidated group of which the firm is a part is less than than the equivalent in MDL of EUR 50 million, banks may use the following correlation formula in paragraph 71 sub-paragraph 71.3 for the calculation of risk weights for corporate exposures. In this formula S is expressed as total annual sales in millions of euro with EUR 5 million ≤ S ≤ EUR 50 million. Reported sales of less than EUR 5 million shall be treated as if they were equivalent to EUR 5 million. For purchased receivables the total annual sales shall be the weighted average by individual exposures of the pool.

$$R = 0.12 \cdot \frac{1-e^{-50 \cdot PD}}{1-e^{-50}} + 0.24 \cdot \left(\frac{1-e^{-50 \cdot PD}}{1-e^{-50}}\right) - 0.04 \cdot (1 - \frac{\min\{\max\{5, S\}, 50\} - 5}{45}).$$

**74.** Banks shall substitute total assets of the consolidated group for total annual sales when total annual sales are not a meaningful indicator of firm size and total assets are a more meaningful indicator than total annual sales.

**75.** For specialised lending exposures for which a bank is not able to estimate PD or the bank's PD estimates do not meet the requirements set out in Chapter VI, the bank shall assign risk weights to these exposures in accordance with Table 1, as follows:

*Table 1*

| **Remaining Maturity** | **Category 1** | **Category 2** | **Category 3** | **Category 4** | **Category 5** |
|---|---|---|---|---|---|
| Less than 2,5 years | 50 % | 70 % | 115 % | 250 % | 0 % |
| Equal or more than 2,5 years | 70 % | 90 % | 115 % | 250 % | 0 % |

**76.** In assigning risk weights to specialised lending exposures, banks shall take into account the following factors: financial strength, political and legal framework, transaction and/or asset characteristics, strength of the sponsor and developer, including any public private partnership income stream, and security package, as set out in the Annex to the Regulation.

**77.** For their purchased corporate receivables, banks shall comply with the requirements set out in paragraphs 231-236. For purchased corporate receivables that comply in addition with the conditions set out in paragraph 85, where it would be unduly burdensome for the bank to use the risk quantification standards for corporate exposures as set out in Chapter VI for these receivables, the risk quantification standards for retail exposures  as set out in Chapter VI may be used.

**78.** For purchased corporate receivables, refundable purchase price discounts, collaterals or partial guarantees providing first loss protection for default losses, dilution losses or both situations may be treated as first loss protection by the purchaser of the receivables or by the beneficiary of the collateral or of the partial guarantee, in accordance with the normative acts of the National Bank of Moldova on the prudential treatment of securitisations. The seller providing the refundable purchase price discount and the provider of a collateral or a partial guarantee shall treat those as an exposure to a first loss position in accordance with the normative acts of the National Bank of Moldova on the prudential treatment of securitisations.

**79.** Where a bank provides credit protection for a number of exposures subject to the condition that the nth default among the exposures shall trigger payment and that this credit event shall terminate the contract, the risk weights of the exposures included in the basket will be aggregated, except for n-1 exposures, where the sum of the expected loss amount multiplied by 12,5 and the risk-weighted exposure amount shall not exceed the nominal amount of the protection provided by the credit derivative multiplied by 12,5. The n-1 exposures to be excluded from the aggregation shall be determined on the basis that they shall include those exposures each of which produces a lower risk-weighted exposure amount than the risk-weighted exposure amount of any of the exposures included in the aggregation. A risk weight of 1250% shall be applied to positions in a basket for which the bank cannot determine the risk-weight under the IRB Approach.

### *Subsection 2*
### *Risk weighted exposure amounts for retail exposures and for other non credit-obligation assets*

**80.** The risk-weighted exposure amounts for retail exposures shall be calculated according to the following formulae:

$$Risk - weighted\ exposure\ amount = RW \cdot exposure\ value$$

where the risk weight RW is defined as follows:

**80.1.** if PD = 1, i.e. for defaulted exposures, RW shall be

$$RW = \max\{0; 12{,}5 \cdot (LGD - EL_{BE})\}$$

where $EL_{BE}$ is the best estimate of the expected loss of the bank for the defaulted exposure in accordance with sub-paragraph 202.9;

**80.2.** if PD < 1, then:

$$RW = \left( LGD \cdot N\left( \frac{1}{\sqrt{1-R}} \cdot G(PD) + \sqrt{\frac{R}{1-R}} \cdot G(0.999) \right) - LGD \cdot PD \right) \cdot 12{,}5$$

where:

N = the cumulative distribution function for a standard normal random variable, i.e. N(x) equals the probability that a normal random variable with mean of 0 and variance of 1, is less than or equal to x;

G = the inverse cumulative distribution function for a standard normal random variable, i.e. if x = G(z), x is the value such that N(x) = z;

R = the coefficient of correlation, which is defined as:

$$R = 0.03 \cdot \frac{1 - e^{-35 \cdot PD}}{1 - e^{-35}} + 0.16 \cdot (1 - \frac{1 - e^{-35 \cdot PD}}{1 - e^{-35}})$$

**81.** For retail exposures that are not in default and are secured or partially secured by residential property, a coefficient of correlation R of 0,15 shall replace the figure produced by the coefficient of correlation formula in paragraph 80.

**82.** The risk weight calculated for an exposure partially secured by residential property pursuant to paragraph 80 sub-paragraph 80.2, taking into account a coefficient of correlation R as set out in paragraph 81, shall be applied to both the secured and the unsecured parts of that exposure.

**83.** For QRREs that are not in default, a coefficient of correlation R of 0,04 shall replace the figure produced by the coefficient of correlation formula in paragraph 80.

**84.** The National Bank of Moldova shall review the relative volatility of loss rates across QRRE belonging to the same type of exposures, as well as across the aggregate QRRE exposure class.

**85.** To be eligible for the retail treatment, purchased receivables shall comply with the requirements set out in paragraphs 198-201, as well as with the following conditions:

**85.1.** The bank has purchased the receivables from an unrelated third party seller and its exposures to the obligor of the receivable does not include any exposures that are directly or indirectly originated by the bank itself;

**85.2.** Purchased receivables shall be generated at an arm's length basis between the seller and the obligor. As such, inter-company accounts receivables and receivables subject to contra-accounts between firms that buy and sell to each other are ineligible;

**85.3.** The purchasing bank has a claim on all proceeds from the purchased receivables or a pro-rata interest in the proceeds; and

**85.4.** The portfolio of purchased receivables is sufficiently diversified.

**86.** In the case of retail purchased receivables, refundable purchase price discounts, collaterals or partial guarantees providing first loss protection in case of default losses, dilution losses or both situations may be considered as first loss protection by the purchaser of the receivables or the collateral or partial guarantee beneficiary, in accordance with the normative acts of the National Bank of Moldova on the prudential treatment of securitisations. The seller providing the refundable purchase price discount and the provider of the collateral or partial guarantee shall treat those collaterals as an exposure to a first loss position in accordance with the normative acts of the National Bank of Moldova on the prudential treatment of securitisations.

**87.** For hybrid pools of purchased retail receivables, where the purchasing bank cannot separate exposures secured by an immovable property collateral and qualifying revolving retail exposures from other retail exposures, the retail risk weight function producing the highest capital requirements for those exposures shall apply.

**88.** The risk-weighted exposure amounts for other non credit-obligation assets shall be calculated in accordance with the following formula:

$Risk - weighted\ exposure\ amount = 100\ \% \cdot exposure\ value,$

except for:

**88.1.** Cash in hand and equivalent cash items as well as gold bullion held in own vault or on an allocated basis to the extent backed by bullion liabilities, in which case a 0% risk-weight shall be assigned;

**88.2.** When the exposure is a residual value of leased assets in which case it shall be calculated as follows:

$$\frac{1}{t} \cdot 100\% \cdot exposure\ value$$

where t is the greater of 1 and the nearest number of whole years of the lease remaining.

### *Section 3*
### *Calculation of risk-weighted exposure amounts for dilution risk of purchased receivables*

**89.** Banks shall calculate the risk-weighted exposure amounts for dilution risk of purchased corporate and retail receivables in accordance with the formula set out in paragraph 71.

**90.** Banks shall determine the PD and LGD input parameters in accordance with Chapter IV.

**91.** Banks shall determine the exposure value in accordance with Chapter VI.

**92.** For the purposes of this Section, the value of M shall be 1 year.

**93.** The National Bank of Moldova shall exempt a bank from the calculation and recognition of risk-weighted exposure amounts for dilution risk of a type of exposures caused by purchased corporate or retail receivables, if the bank has demonstrated to the satisfaction of the National Bank of Moldova that the dilution risk for that bank is immaterial for this type of exposures.

## *Section 4*
## *Expected loss amounts*

### *Subsection 1*
### *Treatment by exposure type*

**94.** The calculation of expected loss amounts shall be based on the same inputs of PD and LGD and the same exposure value for each exposure as those used for the calculation of risk-weighted exposure amounts in accordance with paragraphs 48-58.

**95.** Expected loss amounts for securitised exposures shall be calculated in accordance with the normative acts of the National Bank of Moldova on the prudential treatment of securitisations.

**96.** The expected loss amount shall be zero for exposures belonging to the exposure class "other non credit obligations assets" referred to in paragraph 19 sub-paragraph 19.9.

**97.** The expected loss amounts for exposures in the form of shares or units of a CIU referred to in paragraphs 59-70 shall be calculated in accordance with the methods set out in this Section.

**98.** The expected loss (EL) and expected loss amounts for exposures to corporates, banks, central governments and central banks, regional governments, local authorities and public sector entities, as well as for retail exposures, shall be calculated in accordance with the following formulae:

*Expected loss (EL)* = PD · LGD;

*Expected loss amount* = EL multiplied by the exposure value.

**99.** For defaulted exposures (PD = 100%), where banks use own estimates of LGD, EL shall be $EL_{BE}$, i.e. the bank's best estimate of expected loss for the defaulted exposure, in accordance with sub-paragraph 202.8.

**100.** For specialised lending exposures, where banks use the methods set out in paragraphs 75-76 for assigning risk weights, expected loss values shall be assigned in accordance with Table 2.

*Table 2*

| **Remaining Maturity** | **Category 1** | **Category 2** | **Category 3** | **Category 4** | **Category 5** |
|---|---|---|---|---|---|
| Less than 2,5 years | 0 % | 0,4 % | 2,8 % | 8 % | 50 % |
| Equal to or more than 2,5 years | 0,4 % | 0,8 % | 2,8 % | 8 % | 50 % |

**101.** The expected loss amount for a minimum value commitment that meets all the requirements set out in paragraph 82[25] of Regulation 111/2018 shall be zero.

**102.** The expected loss amount for dilution risk of purchased receivables shall be calculated according to the following formula:

*Expected loss (EL)* = PD · LGD;

*Expected loss amount* = EL · exposure value.

### *Subsection 2*
### *Treatment of expected loss amounts, IRB shortfall and IRB excess*

**103.** Banks shall subtract the expected loss amounts for the exposures referred to in paragraphs 98 to 100 and 102 from the sum of all of the following:

**103.1.** General and specific credit risk adjustments related to those exposures, calculated in accordance with the Regulation on the calculation of specific and general credit risk adjustments by banks, approved by the Decision of the Executive Board of the National Bank of Moldova No 116/2018;

**103.2.** Additional value adjustments due to counterparty default determined in accordance with paragraph 28 of Regulation No 109/2018 and related to exposures for which expected loss amounts are calculated in accordance with paragraphs 98 to 100 and 102;

**103.3.** Other own funds reductions related to those exposures, other than deductions related to the applicable amount of insufficient coverage for non-performing exposures made in accordance with paragraph 30 sub-paragraph 12) of Regulation No 109/2018.

**104.** Where the calculation carried out in accordance with paragraph 103 results in a positive amount, the amount obtained shall be called an “IRB excess”. Where the calculation carried out in accordance with the first sub-paragraph results in a negative amount, the amount obtained shall be called an “IRB shortfall”.

**105.** For the purposes of the calculation referred to in paragraph 103, banks shall treat discounts determined in accordance with paragraphs 142 to 144 on-balance sheet exposures purchased when in default in the same manner as specific credit risk adjustments. Discounts on balance-sheet exposures purchased when not in default shall not allowed to be included in the calculation of the IRB shortfall or IRB excess. Specific credit risk adjustments for defaulted exposures shall not be used to cover expected loss amounts for other exposures. Expected loss amounts for securitised exposures and general and specific credit risk adjustments for those exposures shall not be included in the calculation of the IRB shortfall or IRB excess.

## Chapter IV
## PD, LGD and maturity

### *Section 1*
### *Exposures to corporates, banks, central governments and central banks, regional governments, local authorities and public sector entities*

#### *Subsection 1*
#### *Probability of default PD, LGD and CCF thresholds*

**106.** For the purposes of this Regulation, in particular with regard to paragraphs 107,117, 136 and 158, where an exposure is covered by an eligible guarantee provided by a central government or a central bank, the minimum thresholds of PD, LGD and CCF shall not apply to the part of the exposure that is covered by that guarantee. However, the part of the exposure not covered by that guarantee shall be subject to the minimum thresholds of the PD, LGD and CCF concerned.

**107.** For exposures belonging to the exposure classes to banks or corporates referred to in paragraph 19 sub-paragraphs 19.3 or 19.4, for the sole purpose of calculating risk-weighted exposure amounts and expected loss amounts of those exposures, and in particular for the purposes of paragraphs 71 to 79 and 89 to 93 and paragraphs 94, 98-99 and 102, the PD value for each exposure that is used as an input to the formula for calculating risk-weighted exposure amounts and expected loss shall not be less than the following PD input floor value: 0,05%.

**108.** For exposures belonging to the exposure classes referred to in 19 paragraph 19.2, for the sole purpose of calculating risk-weighted exposure amounts and expected loss amounts for those exposures, the PD value for each exposure that is used as an input to the formula for calculating risk-weighted exposure amounts and expected loss shall not be lower than the following PD floor value: 0,03%.

**109.** In the case of corporate receivables exposures purchased by the bank for which the bank cannot estimate PDs or for which the bank's estimates of PDs do not meet the requirements set out in Chapter VI, PDs shall be determined in accordance with the following methods:

**109.1.** For senior claims in corporate receivables purchased by the bank, PD shall be the bank's estimate of expected loss divided by LGD for those receivables;

**109.2.** For subordinated claims in respect of claims on corporates purchased by the bank, PD shall be the bank's estimate of expected loss;

**109.3.** A bank that has received, pursuant to paragraphs 4-7, the approval of the National Bank of Moldova to use its own LGD estimates for exposures to corporates and that can decompose its EL estimates for purchased corporate receivables into PDs and LGDs in a manner that the National Bank of Moldova considers reliable, may use the PD estimate resulting from this decomposition.

**110.** In the case of defaulted obligors, the PD shall be 100%.

**111.** In the case of an exposure covered by unfunded credit protection, a bank using its own estimates of LGD under paragraphs 4-7 both for the exposure covered by unfunded credit protection and for comparable direct exposures to the protection provider may recognise the unfunded credit protection in the LGD in accordance with paragraphs 220-230.

**112.** For dilution risk of purchased corporate receivables, PD shall be set equal to the bank's expected loss estimates for dilution risk. A bank that has received, pursuant to paragraphs 4 to 7, the approval of the National Bank of Moldova to use own estimates of LGDs for corporate exposures and that can decompose its expected loss estimates for dilution risk of purchased corporate receivables into PDs and LGDs in a manner that the National Bank of Moldova considers reliable may use the PD estimates resulting from that decomposition. In calculating the PD, banks may recognise unfunded credit protection in accordance with Regulation No 112/2018.

**113.** A bank that has received, pursuant to paragraphs 4-7, the approval of the National Bank of Moldova to use its own LGD estimates for dilution risk of purchased corporate receivables may recognise unfunded credit protection by adjusting the PD, subject to paragraph 116.

### *Subsection 2*
### *Loss given default*

**114.** Banks shall use the following LGD values:

**114.1.** Senior exposures without eligible funded credit protection to central governments and central banks, financial sector entities and regional governments, local authorities and public sector entities: 45%;

**114.2.** Senior exposures without eligible funded credit protection to corporates that are not financial sector entities: 40%;

**114.3.** Subordinated exposures without eligible collateral: 75%;

**114.4.** Covered bonds eligible for the treatment set out in paragraphs $75^{14}$ and $75^{15}$ of Regulation No 111/2018 may be assigned a LGD value of 11,25%;

**114.5.** For exposures related to purchased senior corporate receivables, where a bank cannot estimate PD or where the bank's PD estimates do not meet the requirements set out in Chapter VI: 40%;

**114.6.** For exposures related to subordinated corporate receivables purchased by the bank, where the bank cannot estimate PDs or where the bank's estimates of PDs do not meet the requirements set out in Chapter VI: 100%;

**114.7.** For dilution risk of purchased corporate receivables: 100%.

**115.** For dilution and default risk, where a bank has received, pursuant to paragraphs 4-7, the approval of the National Bank of Moldova to use own LGD estimates for exposures to corporates and may decompose its EL estimates for receivables on corporates purchased by the bank into PDs and LGDs in a manner that the National Bank of Moldova considers reliable, the LGD estimate for receivables on corporates purchased by the bank may be used.

**116.** In the case of an exposure covered by unfunded credit protection, a bank that uses its own estimates of LGD under paragraphs 4-7 both for the exposure that is covered by unfunded credit protection and for comparable direct exposures to the protection provider may recognise the unfunded credit protection in the LGD in accordance with paragraphs 220-230.

**117.** For exposures to corporates assigned to the exposure classes referred to in paragraph 19 sub-paragraph 19.4, for the sole purpose of calculating risk-weighted exposure amounts and expected loss amounts of those exposures, in particular for the purposes of sub-paragraph 71.3, paragraphs 89-93 and paragraphs 94, 98-99 and 102, where own estimates of LGD are used, the LGD values that are used for each exposure as inputs to the formula for calculating risk-weighted exposure amounts and expected loss shall not be less than the LGD input floor values disclosed in Table 3, calculated in accordance with paragraphs 119 to 121.

*Table 3*

| **LGD input floors ($LGD_{floor}$) for exposures to corporates assigned to the exposure classes referred to in paragraph 19 sub-paragraph 19.4** | | |
|---|---|---|
| **Exposure without eligible FCP ($LGD_{U\text{-}floor}$)** | **Exposure fully secured by an eligible FCP ($LGD_{S\text{-}floor}$)** | |
| 25 % | financial collateral | 0 % |
| | receivables | 10 % |
| | residential property or commercial immovable property | 10 % |
| | other physical collateral | 15 % |

**118.** For exposures belonging to the exposure classes referred to in paragraph 19 sub-paragraph 19.2, for the sole purpose of calculating risk-weighted exposure amounts and expected loss amounts of those exposures, and in particular for the purposes of sub-paragraph 71.3, paragraphs 89-93, paragraphs 94, 98-99 and 102, where own estimates of LGD are used, the LGD value used as an input in the formula for calculating risk-weighted exposure amounts and expected loss for exposures without an eligible FCP shall not be less than the following LGD floor value: 5%.

**119.** For the purposes of paragraph 117, the LGD input floors in Table 3 for exposures fully secured by eligible funded credit protection shall apply where the value of the funded credit protection, after the application of the volatility adjustments Hc and $H_{fx}$ concerned in accordance with paragraphs $107^6$ to $107^{10}$ of Regulation No 112/2018, is equal to or exceeds the value of the underlying exposure.

**120.** For the purposes of paragraph 117 and for the purposes of applying the relevant related adjustments, Hc and $H_{fx}$, in accordance with paragraphs $107^6$ to $107^{10}$ of Regulation No 112/2018, funded credit protection is eligible under this Regulation. In this case, the type of funded credit protection "other physical collateral" set out in Table 5 of Regulation No 112/2018 shall be understood as "other physical collateral and other eligible collateral".

**121.** The applicable $LGD_{floor}$ for an exposure partially secured by an FCP shall be calculated as a weighted average between $LGD_{U\text{-}floor}$ for the part of the exposure without FCP and $LGD_{S\text{-}floor}$ for the part fully secured as follows:

$$LGD_{floor} = LGD_{U\text{-}floor} \cdot \frac{E_U}{E \cdot (1 + H_E)} + LGD_{S\text{-}floor} \cdot \frac{E_S}{E \cdot (1 + H_E)}$$

where:

$LGD_{U\text{-floor}}$ and $LGD_{S\text{-floor}}$ are the relevant floor values in in Table 3;

E, $E_S$, $E_U$ and $H_E$ are determined in accordance with paragraphs $107^6$ to $107^{10}$ of Regulation No 112/2018.

**122.** Where a bank using own estimates of LGDs for a specific type of unsecured exposures to corporates and unsecured exposures to regional governments, local authorities and public sector entities is not able to take into account, in its own estimates of LGDs, the effect of funded credit protection securing one of such exposures due to the lack of data on recoveries for that funded credit protection, the bank is allowed to apply the formula set out in paragraphs $107^6$ to $107^{10}$ of Regulation No 112/2018, except that the applicable LGD for an unsecured exposure ($LGD_U$) of that formula is the bank's own estimate of LGDs for unsecured exposures. In that case, the funded credit protection shall be eligible in accordance with Regulation No 112/2018 and the bank's own LGD estimate used as $LGD_U$ shall be calculated on the basis of the underlying loss, excluding any recoveries stemming from that funded credit protection.

***Subsection 3***
***Maturity***

**123.** For exposures for which a bank has not received permission from the National Bank of Moldova to use own estimates of LGD, the maturity value (M) shall be applied consistently and shall be either set at 2,5 years, except for exposures arising from securities financing transactions where the maturity is 0,5 years, or alternatively calculated in accordance with paragraph 124.

**124.** For exposures for which a bank applies own estimates of LGD, the maturity value (M) shall be calculated using periods denominated in years as set out in this paragraph and subject to paragraphs 125 to 126, 127, and 128. M shall not exceed five years, except in the cases of the Basic Approach on the treatment of credit valuation adjustment risk for banks, where M as specified in that paragraph shall be used. M shall be calculated, in each of the following cases, as follows:

**124.1.** For an instrument subject to cash flow schedule, maturity (M) shall be calculated according to the following formula:

$$M = \max\left\{1, min\left\{\frac{\sum_t t \cdot CF_t}{\sum_t CF_t}, 5\right\}\right\}$$

where $CF_t$ represents the cash flows (principal, interest and commissions) that the borrower is required to pay under the contract in period t;

**124.2.** For derivatives subject to a master netting agreement, maturity shall be the weighted average of the remaining maturities of the exposures and shall be at least 1 year. For the maturity weighting, the notional amount of each exposure shall be used;

**124.3.** For exposures arising from derivatives listed in Annex 1 to the Regulation on the treatment of market risk according to the standardised approach, approved by the Decision of the Executive Board of the National Bank of Moldova No 114/2018 (hereinafter – Regulation No 114/2018), fully or nearly-fully collateralised, and for exposures arising from margin lending transactions fully or nearly-fully collateralised, subject to a master netting agreement, the maturity shall be the weighted average of the remaining maturities of the transactions and shall be at least 10 days;

**124.4.** For repurchase transactions or securities or commodities lending or borrowing transactions subject to a master netting agreement, the maturity shall be the weighted average of the remaining maturities of the transactions and shall be at least 5 days. For the weighting of maturities, the notional amount of each transaction shall be used;

**124.5.** For secured lending transactions subject to a master netting agreement, M shall be the weighted average remaining maturity of the transactions and shall be at least 20 days; for the weighting of maturities, the notional amount of each transaction shall be used;

**124.6.** For a master netting agreement that includes more than one of the types of transactions corresponding to sub-paragraphs 124.3, 124.4 or 124.5, M shall be the weighted average remaining maturity of the transactions and shall be at least the longest holding period, expressed in years, applicable to such transactions as set out in paragraphs 96 to 96[1] of Regulation No 112/2018, i.e. either 10 or 20 days, as applicable; for the weighting of maturities, the notional amount of each transaction shall be used;

**124.7.** For a bank that has received, pursuant to paragraphs 4-7, the approval of the National Bank of Moldova to use its own estimates of PD for purchased receivables on corporates, in the case of drawn amounts, the maturity shall be equal to the weighted average maturity of the exposures arising from purchased receivables and shall be at least 90 days. The same maturity value shall apply to undrawn amounts under a committed purchase facility, provided that the purchase facility contains effective covenants, early amortisation triggers or other elements to protect the purchasing bank against a significant future deterioration in the quality of the receivables it is obliged to purchase until the maturity of the facility. In the absence of such effective protection, for unused amounts, maturity shall be calculated as the sum of the longest maturity of a potential claim under the purchase contract and the residual maturity of the purchase facility and shall be at least 90 days;

**124.8.** For any instruments other than those referred to in this paragraph , or where a bank is unable to calculate M as set out in sub-paragraph 124.1, M, the maximum remaining time, in years, that the obligor may have at its disposal to pay its contractual obligations in full, including principal, interest and fees, and shall be at least one year;

**124.9.** In the case of banks that determine exposure values using the Internal Model Method provided in the normative acts of the National Bank of Moldova on the treatment of counterparty credit risk, for exposures to which that method is applied and which are included in a netting set where the maturity of the longest contract is more than one year, the maturity shall be calculated according to the following formula:

$$\mathrm{M} = \min\left\{\frac{\sum_k \mathrm{Effective\,EE}_{t_k} \cdot \Delta t_k \cdot \mathrm{df}_{t_k} \cdot s_{t_k} + \sum_k \mathrm{EE}_{t_k} \cdot \Delta t_k \cdot \mathrm{df}_{t_k} \cdot (1 - s_{t_k})}{\sum_k \mathrm{Effective\,EE}_{t_k} \cdot \Delta t_k \cdot \mathrm{df}_{t_k} \cdot s_{t_k}}, 5\right\}$$

where:

| | |
|---|---|
| $\mathbf{S}\boldsymbol{t_k}$ | = a dummy variable whose value for the future period $t_k$ is equal to 0, if $t_k > 1$ year, and to 1, if $t_k \leq 1$; |
| $\mathbf{EE}\boldsymbol{t_k}$ | = the expected exposure for the future period $t_k$; |
| $\mathbf{EffectiveEE}\boldsymbol{t_k}$ | = the effective expected exposure for the future period $t_k$; |
| $\mathbf{df}\boldsymbol{t_k}$ | = the risk-free discount factor for the future time period $t_k$; |

$$\Delta t_k = t_k - t_{k-1},$$

**124.10.** A bank that uses an internal model to calculate a unilateral credit valuation adjustment (CVA) may use as a maturity value, with the approval of the National Bank of Moldova, the effective duration of the credit estimated by the internal model as M.

Subject to paragraph 124, for netting sets where all contracts have an original maturity of less than 1 year, the formula in sub-paragraph 124.1;

**124.11.** In the case of banks that use the Standardised Approach or the Basic Approach according to the normative acts of the National Bank of Moldova on the treatment of credit valuation adjustment risk in order to calculate the own funds requirements for CVA risk of transactions with a given counterparty, M shall not be greater than 1 in the formula set out in paragraph 71 sub-paragraph 71.3 for the purpose of calculating risk-weighted exposure amounts for counterparty risk for the same transactions, as referred to in sub-paragraphs 1) or 6) of paragraph 132 of Regulation No 109/2018, as applicable;

**124.12.** For revolving exposures, M shall be determined using the maximum contractual termination date of the facility; banks shall not use the repayment date of the current drawdown if that date is not the maximum contractual end date of the facility.

**125.** Where the documentation requires daily re-margining and daily revaluation and includes clauses allowing for the prompt liquidation or netting of collateral in the event of default or failure to remargin, M shall be the weighted average of the remaining maturities of the transactions and shall be at least one day for:

**125.1.** Derivatives listed in Annex 1 of Regulation 114/2018, fully or nearly-fully collateralised;

**125.2.** Margin lending transactions fully or nearly-fully collateralised;

**125.3.** Repurchase transactions, securities or commodities lending or borrowing transactions.

**126.** In addition, for qualifying short-term exposures that are not part of the current funding of the obligor by the bank, the maturity shall be at least one day. Qualifying short-term exposures shall include the following:

**126.1.** Exposures to banks or investment firms arising from the settlement of foreign exchange obligations;

**126.2.** Self-liquidating short-term trade financing transactions and purchased corporate receivables, provided that those exposures have a residual maturity of up to one year;

**126.3.** Exposures arising from the settlement of purchases and sales of securities within the usual two business day delivery period;

**126.4.** Exposures arising from the settlement of cash payments by wire transfer and the settlement of electronic payment transactions and prepaid services, including overdrafts resulting from unsuccessful transactions, not exceeding a reduced, fixed and agreed number of business days;

**126.5.** Letters of credit issued and confirmed that are short-term, i.e. have a maturity of less than one year, and are self-liquidating.

**127.** For exposures to corporates that are established in the Union and that are not large corporates, banks may choose to set M for all such exposures as set out in paragraph 123, instead of applying paragraph 124.

**128.** Maturity mismatches shall be treated as laid down in Regulation No 112/2018.

**129.** For the purpose of expressing in years the minimum number of days referred to in paragraph 124 sub-paragraphs 124.3 to 124.6 and 125, the minimum number of days shall be divided by 365,25.

## *Section 2*
## *Retail exposures*

### *Subsection 1*
### *Probability of default*

**130.** For the sole purpose of calculating risk-weighted exposure amounts and expected loss amounts of those exposures, in particular for the purposes of paragraphs 80-87 and 89-93 and paragraphs 94, 98-99 and 102, the PD for each exposure that is used as an input to the formula for calculating risk-weighted exposure amounts and expected loss shall be the higher of the one-year PD associated with the obligor's internal rating grade or pool to which the retail exposure belongs and the following PD input floor values:

**130.1.** 0,1 % for QRRE revolvers;

**130.2.** 0,05 % for retail exposures which are not QRRE revolvers.

**131.** The PD of obligors or, where an obligation approach is used, of exposures in default shall be 100 %.

**132.** For dilution risk on purchased receivables, the PD shall be equal to the expected loss estimates for dilution risk. If a bank can decompose its own expected loss estimates for dilution risk of purchased receivables into PDs and LGDs in a manner that the National Bank of Moldova considers reliable, the PD estimation may be used.

**133.** For an exposure covered by unfunded credit protection, a bank using own estimates of LGD under paragraphs 4-7 for comparable direct exposures to the protection provider may recognise the unfunded credit protection in the PD in accordance with paragraphs 220-230.

### *Subsection 2*
### *Loss given default*

**134.** Banks shall provide their own estimates of LGD in compliance with the requirements set out in Chapter VI and with the approval of the National Bank of Moldova granted in accordance with paragraphs 4 to 7. For dilution risk of purchased receivables, the LGD value of 100 % shall be used. If a bank can reliably decompose its expected loss estimates for dilution risk of purchased receivables into PDs and LGDs, the bank may use its own estimates of LGDs.

**135.** Banks using own estimates of LGD under paragraphs 4-7 for comparable direct exposures to the protection provider may recognise unfunded credit protection in the LGD in accordance with paragraphs 220-230.

**136.** For the sole purpose of calculating risk-weighted exposure amounts and expected loss amounts for retail exposures, and in particular pursuant to sub-paragraph 80.2, paragraphs 89 to 93 and 94, 98-99 and 102, the LGD values for each exposure used as inputs to the formula for calculating risk-weighted exposure amounts and expected loss shall not be less than the LGD input floor values set out in Table 4 calculated in accordance with paragraph 137:

*Table 4*

<table>
<tr><th colspan="4">LGD input floors ($LGD_{floors}$) for retail exposures</th></tr>
<tr><th colspan="2">Exposure without FCP ($LGD_{U\text{-}floor}$)</th><th colspan="2">Exposure secured by an FCP ($LGD_{S\text{-}floor}$)</th></tr>
<tr><td>Retail exposure secured by residential property</td><td>not applicable</td><td>Retail exposure secured by residential property</td><td>5 %</td></tr>
<tr><td>QRRE</td><td>50 %</td><td>QRRE</td><td>not applicable</td></tr>
<tr><td rowspan="4">Other retail exposure</td><td rowspan="4">30 %</td><td>Other retail exposure secured by financial collateral</td><td>0 %</td></tr>
<tr><td>Other retail exposure secured by receivables</td><td>10 %</td></tr>
<tr><td>Other retail exposure secured by residential property or commercial immovable property</td><td>10 %</td></tr>
<tr><td>Other retail exposure secured by other physical collateral</td><td>15 %</td></tr>
</table>

**137.** For the purposes of paragraph 136, the following shall apply:

**137.1.** The LGD input floors in Table 4 shall apply to exposures secured by funded credit protection where the funded credit protection is eligible under this Regulation;

**137.2.** With the exception of retail exposures secured by residential property, the LGD input floors in Table 4 shall apply to exposures fully secured by funded credit protection where the value of the FCP, after the application of the relevant volatility adjustments in accordance with paragraphs $107^6$ to $107^{10}$ of Regulation No 112/2018, equals or exceeds the value of the underlying exposure; for the purpose of applying the relevant related adjustments, $H_c$ and $H_{fx}$, in accordance with paragraphs $107^6$ to $107^{10}$ of Regulation No 112/2018, funded credit protection shall be eligible under this Regulation;

**137.3.** With the exception of retail exposures secured by residential property, the LGD input floor applicable to an exposure partially secured by funded credit protection shall be calculated in accordance with the formula set out in paragraphs 119-121;

**137.4.** For retail exposures secured by residential property, the applicable LGD input floor shall be set at 5 % irrespective of the level of collateral provided by the residential property.

**138.** Based on the data collected pursuant to Annex $2^1$ of Regulation No 111/2018 and any other relevant indicators, and taking into account the prospects for the evolution of real estate markets, the National Bank of Moldova shall periodically, at least annually, assess whether the LGD input floor values set out in paragraph 136 are appropriate for retail exposures secured by residential property or other retail exposures secured by residential or commercial immovable property located in the territory of the Republic of Moldova.

**139.** Where, based on the assessment referred to in paragraph 138, the National Bank of Moldova concludes that the LGD input floor values referred to in paragraph 136 are not appropriate, and where it considers that the inadequacy of the LGD input floor values could have adverse effects on current or future financial stability, it may set higher LGD input floor values for those exposures. Those higher LGD input floor values may also be applied at the level of one or more real estate segments of those exposures.

**140.** Where the National Bank of Moldova sets higher LGD floor values pursuant to paragraphs 138 to 139, banks shall have a transitional period of six months to apply them.

**141.** Banks shall apply the higher minimum LGD values determined by the authorities of a Member State of the European Union in accordance with provisions that are equivalent to paragraphs 138 to 139, to all their corresponding exposures secured by mortgages on residential property or commercial immovable property located in one or more parts of the territory of that Member State of the European Union.

## Chapter V
## Exposure value - exposures to corporates, banks, central governments and central banks, regional governments, local authorities and public sector entities, retail exposures and non credit-obligation assets

**142.** Unless otherwise specified, the exposure value for on-balance sheet exposures shall be the accounting value measured without taking into account credit risk adjustments made.

**143.** This rule also applies to assets purchased at a price different from the amount owed.

**144.** For purchased assets, the difference between the amount owed and the accounting value remaining after specific credit risk adjustments have been applied that has been recorded on the balance-sheet of the banks when purchasing the asset is denoted discount if the amount owed is larger, and premium if it is smaller.

**145.** Where banks use master netting agreements for repurchase transactions or securities or commodities lending or borrowing transactions, the exposure value shall be calculated in accordance with Regulation No 112/2018 or the normative acts of the National Bank of Moldova on the treatment of counterparty credit risk.

**146.** When calculating the exposure value for on-balance sheet netting of loans and deposits, banks shall apply the methods set out in Regulation No 112/2018.

**147.** The exposure value for leases is the present value of the minimum lease payments. Minimum lease payments are payments that the lessee is or may be required to make during the lease term, as well as any bargain option (whose probability of exercise is reasonably certain). If a party other than the lessee may be required to make a payment related to the residual value of the leased asset and if that payment obligation meets the set of conditions laid down in paragraph 36 of Regulation No 112/2018 on the eligibility of protection providers, as well as the requirements for the recognition of other types of guarantees laid down in paragraphs 52 to 56 of Regulation No 112/2018, the payment obligation may be recognised as unfunded credit protection in accordance with that regulation.

**148.** In the case of any contract referred to in Annex 1 to Regulation No 114/2018, the exposure value shall be determined using the methods set out in the normative acts of the National Bank of Moldova on the treatment of counterparty credit risk and shall not take into account the credit risk adjustments made.

**149.** For the purposes of calculating risk-weighted exposure amounts for purchased receivables, the exposure value shall be the value determined in accordance with paragraphs 142 to 144, excluding own funds requirements for dilution risk, prior to the application of credit risk mitigation techniques.

**150.** In the case of an exposure in the form of securities or commodities sold, posted or lent in repurchase transactions, securities or commodities lending or borrowing transactions, long settlement transactions and margin lending transactions, the exposure value shall be the value of the securities or commodities determined in accordance with the applicable accounting framework. Where the Financial Collateral Comprehensive Method set out in paragraphs 84 to 94 of Regulation No 112/2018 is used, the exposure value shall be increased by the volatility adjustment corresponding to such securities or commodities as set out in that Regulation. In the case of repurchase transactions, securities or commodities lending or borrowing transactions, long settlement transactions and margin lending transactions, the exposure value may be determined either in accordance with the normative acts of the National Bank of Moldova on the treatment of counterparty credit risk or in accordance with paragraph 69 of Regulation No 112/2018.

**151.** The exposure value of off-balance sheet items that are not contracts as listed in Annex 1 to Regulation No 114/2018 shall be calculated using either the IRB-CCF or the SA-CCF in accordance with paragraphs 155 and 156 and 54 to 55.

**152.** Where only drawn balances of revolving facilities have been securitised, banks shall ensure that they continue to hold the required amount of own funds relative to the undrawn balances associated with the securitisation.

**153.** A bank that has not been authorised to use IRB-CCF shall calculate the exposure value as the committed but undrawn amount multiplied by the SA-CCF concerned.

**154.** A bank using IRB-CCF shall calculate the exposure value for undrawn commitments as the undrawn amount multiplied by the IRB-CCF.

**155.** For an exposure for which the bank has not received permission to use the IRB-CCF, the applicable CCF shall be the SA-CCF set out in Regulation No 111/2018 for the same types of items as set out in paragraphs 5 to 10 of Regulation No 111/2018. The amount to which the SA-CCF is to be applied shall be the lower of the committed but undrawn amount and the amount that reflects any possible constraint on the availability of the facility, including the existence of an upper limit on the potential amount of credit that is related to the reported cash flow of the obligor. Where a facility is subject to such constraints, the bank shall have sufficient procedures in place to monitor and manage the credit line to support the existence of that constraint.

**156.** Subject to the approval of the National Bank of Moldova, banks that meet the requirements to use IRB-CCF as specified in Chapter VI shall use IRB-CCF for exposures arising from undrawn revolving commitments treated under the IRB Approach, provided that those exposures are not subject to a 100 % SA-CCF under the Standardised Approach. SA-CCF shall be used for:

**156.1.** All other off-balance sheet items, in particular undrawn non-revolving commitments;

**156.2.** Exposures for which the minimum requirements for the calculation of IRB-CCF, as specified in Chapter VI, are not met by the bank or for which the National Bank of Moldova has not allowed the use of IRB-CCF.

**157.** For the purposes of this Chapter, a commitment is considered “revolving” when it allows an obligor to obtain a loan where the obligor has the flexibility to decide how often and at what intervals to draw down the loan, allowing the obligor to draw down, repay and draw down the loans granted to it. Contractual arrangements allowing prepayments and subsequently new drawdowns of those prepayments shall be considered revolving.

**158.** Where the IRB-CCF is used exclusively for the purpose of calculating risk-weighted exposure amounts and expected loss amounts for exposures arising from revolving commitments other than exposures assigned to the exposure class in accordance with paragraph 19 sub-paragraph 19.1, in particular under paragraphs 71 and 89 to 93 and 94, 98-99 and 102, the value for each exposure used as an input in the formula for calculating the risk-weighted exposure amount and expected loss shall not be less than the sum of:

**158.1.** The amount drawn from the revolving commitment;

**158.2.** 50% of the off-balance sheet exposure amount of the remaining undrawn part of the revolving commitment calculated using the applicable SA-CCF as set out in paragraphs 5 to 10 of Regulation No 111/2018.

The sum of the amounts in sub-paragraphs 158.1 and 158.2 is referred to as the "CCF input floor".

**159.** Where one commitment relates to the extension of another commitment, the lower of the two conversion factors associated with the individual commitments shall be used.

**160.** The exposure value of assets other than credit obligations shall be the carrying amount after specific credit risk adjustments have been applied.

## Chapter VI
## Requirements for the IRB Approach

### *Section 1*
### *Rating systems*

#### *Subsection 1*
#### *Structure of rating systems*

**161.** Where a bank uses more than one rating system, the rationale for assigning an obligor or transaction to a particular rating system shall be documented and applied in such a way as to adequately reflect the level of risk.

**162.** Assignment criteria and processes shall be reviewed periodically to determine whether they are still appropriate to the current portfolio and external conditions.

**163.** Where a bank uses direct estimates of risk parameters for individual obligors or exposures, these may be considered as estimates assigned to grades on a continuous rating scale.

**164.** The structure of rating systems for exposures to corporates, banks, central governments and central and regional governments, local authorities and public sector entities shall comply with the following requirements:

**164.1.** A rating system shall take into account the risk characteristics of the obligor and the transaction;

**164.2.** A rating system shall include an obligor rating scale that exclusively reflects the quantification of the default risk associated with the obligors. The obligor rating scale shall have a minimum of 7 grades for non-defaulted obligors and one grade for defaulted obligors;

**164.3.** The bank shall document the relationship between obligor grades in terms of the level of default risk involved in each grade and the criteria used to distinguish that level of default risk;

**164.4.** Banks that hold portfolios focused on a particular market segment and in a given default risk range shall have a sufficient number of grades within that range to avoid excessive concentration of obligors in a given grade. Significant concentrations in a single grade shall be supported by convincing empirical evidence that the obligor grade covers a reasonably narrow PD band and that the default risk of all obligors in that grade is within that band;

**164.5.** In order to be allowed by the National Bank of Moldova to use own estimates of LGDs to determine own funds requirements, a rating system shall include a distinct facility rating scale that exclusively reflects the LGD-related characteristics of the transactions. The definition of the facility grade shall include both the description of how exposures are assigned to that grade and the criteria used to distinguish the level of risk associated with each grade;

**164.6.** Significant concentrations in a single facility grade shall be supported by convincing empirical evidence that the facility grade covers a reasonably narrow band of LGDs and that the risk of all exposures in that grade is within that band.

**165.** Banks using the methods set out in paragraphs 75-76 for assigning risk weights to specialised lending exposures shall be exempted from the obligation to have an obligor rating scale that solely reflects the quantification of the default risk associated with obligors for these exposures. Those banks shall have at least 4 grades for non-defaulted obligors and at least one grade for defaulted obligors for those exposures.

**166.** The structure of rating systems for retail exposures shall comply with the following requirements:

**166.1.** Rating systems shall reflect both obligor and transaction risk, and shall capture all relevant obligor and transaction characteristics.

**166.2.** The level of risk differentiation shall ensure that the number of exposures in a given grade or pool is sufficient to allow for meaningful quantification and validation of the loss characteristics at the grade or pool level. The distribution of exposures and obligors across grades or pools shall be such as to avoid excessive concentrations.

**166.3.** The process of assigning exposures to grades or pools shall provide for a meaningful differentiation of risk, for a grouping of sufficiently homogenous exposures, and shall allow for accurate and consistent estimation of loss characteristics at grade or pool level. For purchased receivables the grouping shall reflect the seller's underwriting practices and the heterogeneity of its customers.

**167.** When assigning exposures to risk classes or pools, banks shall take into account the following risk factors:

**167.1.** Obligor risk characteristics;

**167.2.** Transaction risk characteristics, including product and funded credit protection types, recognised unfunded credit protection, loan-to-value measures, seasoning and seniority; banks shall explicitly address cases where several exposures benefit from the same funded or unfunded credit protection;

**167.3.** Delinquency, except where a bank demonstrates to the satisfaction of the National Bank of Moldova that delinquency is not a material driver of risk for the exposure.

### *Subsection 2*
### *The assignment to grades or pools and the integrity of the assignment process. Use of models*

**168.** A bank shall use specific definitions, processes and criteria to assign exposures to grades or pools within a rating system that comply with the following requirements:

**168.1.** The grade or pool definitions and criteria shall be sufficiently detailed to allow those charged with assigning ratings to consistently assign obligors or facilities posing similar risk to the same grade or pool. This consistency shall exist across lines of business, departments and geographic locations;

**168.2.** The documentation of the rating process shall allow third parties to understand the assignments of exposures to grades or pools, to replicate grade and pool assignments and to evaluate the appropriateness of the assignments to a grade or a pool;

**168.3.** The criteria shall also be consistent with the bank's internal lending standards and its policies for handling troubled obligors and facilities.

**169.** A bank shall take all relevant information into account in assigning obligors and facilities to grades or pools. Information shall be current and shall enable the bank to forecast the future performance of the exposure. The less information a bank has, the more conservative shall be its assignments of exposures to obligor and facility grades or pools. If a bank uses an external rating as a primary factor determining an internal rating assignment, the bank shall ensure that it considers other relevant information.

**170.** Banks shall use a time horizon of more than one year when assigning ratings. An obligor rating is the bank's assessment of the obligor's ability and willingness to comply with the contract despite adverse economic conditions or unforeseen events. Rating systems shall be designed in such a way that idiosyncratic and sector-specific changes, where they are material risk factors for the type of exposure, are a determining factor in the transitions from one grade or pool to another. The effects of business cycles can also be a driver of the transitions from one grade or pool to another.

**171.** For exposures to central governments and central banks, exposures to regional governments, local authorities and public sector entities, exposures to banks and exposures to corporates, the assignment shall be carried out in accordance with the following criteria:

**171.1.** Each obligor shall be assigned to an obligor grade as part of the credit approval process;

**171.2.** For exposures for which a bank has received, pursuant to paragraphs 4 to 7, the approval of the National Bank of Moldova to use own estimates of LGDs and conversion factors, each exposure shall also be assigned to a transaction grade as part of the credit approval process;

**171.3.** Banks using the methods set out in paragraphs 75-76 for assigning risk weights to specialised lending exposures shall assign each of those exposures to a rating grade in accordance with paragraph 165;

**171.4.** Each separate legal entity to which the bank has exposures shall be assessed separately;

**171.5.** Separate exposures to the same obligor shall be assigned to the same obligor grade, irrespective of differences in the nature of each specific transaction. However, separate exposures may result in the same obligor being assigned to more than one grade in the following cases:

**171.5.1.** There is a country transfer risk depending on whether the exposures are denominated in the local currency or in a foreign currency;

**171.5.2.** The treatment of associated guarantees to an exposure may consist of adjusting a rating assigned to the obligor;

**171.5.3.** Consumer protection or bank secrecy laws, or any other regulations, prohibit the exchange of customer information.

**172.** For the purposes of sub-paragraph 171.4, a bank shall have appropriate policies regarding the treatment of individual obligor clients and groups of connected clients. Those policies shall contain a process for identifying Specific Wrong-Way Risk for each legal entity to which the bank has exposures.

**173.** For the purposes of the normative acts of the National Bank of Moldova on the treatment of counterparty credit risk, transactions with counterparties for which a specific Wrong-Way risk has been identified shall be treated differently when calculating their exposure value.

**174.** For retail exposures, each exposure shall be assigned to a grade or pool as part of the credit approval process.

**175.** For grade and pool assignments banks shall document the situations in which human judgement may override the inputs or outputs of the assignment process and the personnel responsible for approving these overrides. Banks shall document these overrides and note down the personnel responsible. Banks shall analyse the performance of the exposures whose assignments have been overridden. This analysis shall include an assessment of the performance of exposures whose rating has been overridden by a particular person, accounting for all the responsible personnel.

**176.** For exposures to central governments and central banks, exposures to regional governments, local authorities and public sector entities, exposures to banks and exposures to corporates, the assignment process shall meet the following requirements:

**176.1.** Assignments and periodic reviews of assignments shall be completed or approved by an independent party that does not directly benefit from decisions to extend the credit.

**176.2.** Banks shall review assignments at least annually and adjust the assignment where the result of the review does not justify carrying forward the current assignment. High risk obligors and problem exposures shall be subject to more frequent review. Banks shall undertake a new assignment if material information on the obligor or exposure becomes available.

**176.3.** A bank shall have in place an efficient process to obtain and update relevant information on obligor characteristics affecting PDs and transaction characteristics affecting LGDs or conversion factors.

**177.** For retail exposures, a bank shall at least annually review obligor and facility assignments and adjust the assignment where the result of the review does not justify carrying forward the current assignment, or review the loss characteristics and delinquency status of each identified risk pool, whichever applicable. A bank shall also at least annually review in a representative sample the status of individual exposures within each pool as a means of ensuring that exposures continue to be assigned to the correct pool, and adjust the assignment where the result of the review does not justify carrying forward the current assignment.

**178.** Banks shall use statistical or other mathematical methods ("models") to assign exposures to obligor or transaction grades or pools. The following requirements shall be met:

**178.1.** The model shall have good predictive power and own funds requirements shall not be distorted as a result of its use;

**178.2.** The bank shall have in place a process for vetting data inputs into the model, which includes an assessment of the accuracy, completeness and appropriateness of the data;

**178.3.** The data used to build the model shall be representative of the population of the bank's actual obligors or exposures;

**178.4.** The bank shall have a regular cycle of model validation that includes monitoring of model performance and stability; review of model specification; and testing of model outputs against outcomes;

**178.5.** The bank shall complement the statistical model by human judgement and human oversight to review model-based assignments and to ensure that the models are used appropriately. Review procedures shall aim at finding and limiting errors associated with model weaknesses. Human judgements shall take into account all relevant information not considered by the model. The bank shall document how human judgement and model results are to be combined.

**179.** For the purposes of sub-paragraph 178.1, the input variables shall form a reasonable and effective basis for the resulting predictions. The model shall not have material biases. There shall be a functional link between the inputs and the outputs of the model, which may be determined through expert judgement, where appropriate.

### *Subsection 3*
### *Documentation of rating systems and data maintenance*

**180.** Banks shall document the design and operational details of its rating systems. The documentation shall provide evidence of compliance with the requirements in this Chapter and address topics including portfolio differentiation, rating criteria, responsibilities of parties that rate obligors and exposures, frequency of assignment reviews, and management oversight of the rating process.

**181.** The bank shall document the rationale for and analysis supporting its choice of rating criteria. A bank shall document all major changes in the risk rating process, and such documentation shall support identification of changes made to the risk rating process subsequent to the last review by the National Bank of Moldova. The organisation of rating assignment including the rating assignment process and the internal control structure shall also be documented.

**182.** Banks shall document the specific definitions of default and loss used internally and ensure consistency with the definitions set out in this Regulation.

**183.** Where the bank employs statistical models in the rating process, the bank shall document their methodologies. This material shall:

**183.1.** Provide a detailed outline of the theory, assumptions and mathematical and empirical basis of the assignment of estimates to grades, individual obligors, exposures, or pools, and the data source(s) used to estimate the model;

**183.2.** Establish a rigorous statistical process including out-of-time and out-of-sample performance tests for validating the model;

**183.3.** Indicate any circumstances under which the model does not work effectively.

**184.** Where a bank has obtained a rating system, or a model used in a rating system, from a third-party vendor and the vendor denies or restricts the bank's access to information related to the methodology of that rating system or model, or to the underlying data used to develop that methodology or model, by invoking proprietary rights in that information, the bank concerned shall demonstrate to the satisfaction of the National Bank of Moldova that the requirements laid down in this Subsection are met.

### *Subsection 4*
### *Data maintenance*

**185.** Banks collect and maintain data on various aspects of their internal ratings, as provided for in the normative acts of the National Bank of Moldova on the requirements for publication of information by banks.

**186.** For exposures to central governments and central banks, exposures to regional governments, local authorities and public sector entities, exposures to banks and exposures to corporates, banks shall collect and store:

**186.1.** Complete rating histories on obligors and recognised guarantors;

**186.2.** The dates the ratings were assigned;

**186.3.** The key data and methodology used to derive the rating;

**186.4.** The person responsible for the rating assignment;

**186.5.** The identity of obligors and exposures that defaulted;

**186.6.** The date and circumstances of such defaults;

**186.7.** Data on the PDs and realised default rates associated with rating grades and ratings migration.

**187.** For exposures for which this Regulation allows the use of own estimates of LGD or the use of IRB-CCF, but for which banks do not use own estimates of LGD or IRB-CCF, banks shall collect and maintain data on comparisons between actual LGD values and values set out in paragraph 144, and between actual CCF values and SA-CCF values set out in paragraph 155.

**188.** Banks using own estimates of LGDs and conversion factors shall collect and retain:

**188.1.** Complete histories of data on the facility ratings and LGD and conversion factor estimates associated with each rating scale;

**188.2.** The dates on which the ratings were assigned and the estimates were made;

**188.3.** The key data and methodology used to derive the facility ratings and LGD and conversion factor estimates;

**188.4.** The person who assigned the facility rating and the person who provided LGD and conversion factor estimates;

**188.5.** Data on the estimated and realised LGDs and conversion factors associated with each defaulted exposure;

**188.6.** Data on the LGD of the exposure before and after evaluation of the effects of a guarantee/or credit derivative, for those banks that reflect the credit risk mitigating effects of guarantees or credit derivatives through LGD.

**188.7.** Data on the components of loss for each defaulted exposure.

**189.** For retail exposures, banks shall collect and store:

**189.1.** Data used in the process of allocating exposures to grades or pools;

**189.2.** Data on the estimated PDs, LGDs and conversion factors associated with grades or pools of exposures;

**189.3.** The identity of obligors and exposures that defaulted;

**189.4.** For defaulted exposures, data on the grades or pools to which the exposure was assigned over the year prior to default and the realised outcomes on LGD and conversion factor;

**189.5.** Data on loss rates for qualifying revolving retail exposures.

### *Subsection 5*
### *Stress tests used in assessment of capital adequacy*

**190.** A bank shall have in place sound stress testing processes for use in the assessment of its capital adequacy. Stress testing shall involve identifying possible events or future changes in economic conditions that could have unfavourable effects on bank's credit exposures and assessment of the bank's ability to withstand such changes.

**191.** A bank shall regularly perform a credit risk stress test to assess the effect of certain specific conditions on its total capital requirements for credit risk. The test shall be one chosen by the bank, subject to supervisory review. The test to be employed shall be meaningful and consider the effects of severe, but plausible, recession scenarios. A bank shall assess migration in its ratings under the stress test scenarios. Stressed portfolios shall contain the vast majority of a bank's total exposure.

**192.** The scenarios used under paragraph 191 shall also include ESG risk drivers, in particular physical and transition risk drivers stemming from climate change.

## *Section 2*
## *Risk quantification and validation of internal estimates*

### *Subsection 1*
### *Overall requirements for estimation*

**193.** The default of an obligor or credit facility shall be determined in accordance with paragraphs 23 to 28 of Regulation No 111/2018.

**194.** Banks using external data that are not consistent with the definition of default set out in paragraph 23 of Regulation No 111/2018 shall make appropriate adjustments to achieve substantial equivalence with the definition of default.

**195.** When quantifying the risk parameters to be associated with grades or pools, banks shall apply the following requirements:

**195.1.** A bank's own estimates of risk parameters: PD, LGD, conversion factor and expected loss shall take into account all relevant data, information and methods. Estimates are obtained using historical experience and empirical evidence and are not based solely on considerations derived from professional judgement. Estimates shall be plausible and intuitive and shall be based on the main factors determining the evolution of those risk parameters. A bank's estimates must be all the more prudent as it has less data.

**195.2.** A bank shall be able to provide a breakdown of its loss experience in terms of default frequency, LGD, conversion factor, or loss where EL estimates are used, by the factors it sees as the drivers of the respective risk parameters. The bank's estimates shall be representative of long run experience;

**195.3.** Any changes in lending practices or in the process of recovering amounts due during the observation periods referred to in sub-paragraphs 198.8 and 200.5, sub-paragraph 202.10 and paragraphs 206 to 208 and paragraph 217 and 218 to 219 shall be taken into account. A bank's estimates should take into account the implications of technological progress and new data, or other information, as it becomes available. Banks should review their estimates at least annually and when new information becomes available;

**195.4.** The population of exposures represented in the data used for estimation, the lending standards used when the data was generated and other relevant characteristics shall be comparable with those of the bank's exposures and standards. The economic or market conditions that underlie the data shall be relevant to current and foreseeable conditions. The number of exposures in the sample and the data period used for quantification shall be sufficient to provide the bank with confidence in the accuracy and robustness of its estimates.

**195.5.** For purchased receivables the estimates shall reflect all relevant information available to the purchasing bank regarding the quality of the underlying receivables, including data for similar pools provided by the seller, by the purchasing bank, or by external sources. The purchasing bank shall evaluate any data relied upon which is provided by the seller.

**195.6.** To overcome biases, a bank shall include appropriate adjustments in its estimates to the extent possible; after having included an appropriate adjustment, it shall add to its estimates a sufficient margin of conservatism that is related to the expected range of estimation errors; where methods and data are considered to be less satisfactory, the expected range of errors is larger, and the margin of conservatism shall be larger.

**196.** Where banks use estimates for the calculation of risk weights that are different from those used for internal purposes, this should be documented and reasonable.

**197.** Where a bank uses pooled data from more than one bank, it shall meet the following requirements:

**197.1.** The rating systems and criteria of other institutions in the pool are similar to its own;

**197.2.** The pool is representative of the portfolio for which the pooled data is used;

**197.3.** The pooled data is used consistently over time by the bank for its estimates;

**197.4.** The bank shall remain responsible for the integrity of its rating systems;

**197.5.** The bank shall maintain sufficient in-house understanding of its rating systems, including the ability to effectively monitor and audit the rating process.

### *Subsection 2*
### *Requirements specific to PD estimation*

**198.** In quantifying the risk parameters to be associated with rating grades or pools, banks shall apply the following specific PD estimation requirements to exposures to central governments and central banks, exposures to regional governments, local authorities and public sector entities, exposures to banks and exposures to corporates:

**198.1.** Banks shall estimate PDs by obligor grade from long run averages of one-year default rates. PD estimates for obligors that are highly leveraged or for obligors whose assets are predominantly traded assets shall reflect the performance of the underlying assets based on periods of stressed volatilities;

**198.2.** For purchased corporate receivables banks may estimate the EL by obligor grade from long run averages of one-year realised default rates;

**198.3.** If a bank derives long run average estimates of PDs and LGDs for purchased corporate receivables from an estimate of EL, and an appropriate estimate of PD or LGD, the process for estimating total losses shall meet the overall standards for estimation of PD and LGD set out in this part, and the outcome shall be consistent with the concept of LGD as set out in sub-paragraph 202.1;

**198.4.** Banks shall use PD estimation techniques only with supporting analysis. Institutions shall recognise the importance of judgmental considerations in combining results of techniques and in making adjustments for limitations of techniques and information;

**198.5.** To the extent that a bank uses data on internal default experience for the estimation of PDs, the estimates shall be reflective of current underwriting standards and of any differences in the rating system that generated the data and the current rating system; where underwriting standards or rating systems have changed, after including an appropriate adjustment, the bank shall add a greater margin of conservatism in its estimate of PD related to the expected range of estimation errors that is not already covered by the appropriate adjustment;

**198.6.** To the extent that a bank associates or maps its internal grades to the scale used by an ECAI or similar organisations and then attributes the default rate observed for the external organisation's grades to the bank's grades, mappings shall be based on a comparison of internal rating criteria to the criteria used by the external organisation and on a comparison of the internal and external ratings of any common obligors. Biases or inconsistencies in the mapping approach or underlying data shall be avoided. The criteria of the external organisation underlying the data used for quantification shall be oriented to default risk only and not reflect transaction characteristics. The analysis undertaken by the bank shall include a comparison of the default definitions used, subject to the requirements set out in paragraphs 23 to 28 of Regulation No 111/2018. The bank shall document the basis for the mapping;

**198.7.** To the extent that a bank uses statistical default prediction models it is allowed to estimate PDs as the simple average of default-probability estimates for individual obligors in a given grade. The bank's use of default probability models for this purpose shall meet the standards specified in paragraphs 178-179;

**198.8.** Irrespective of whether a bank is using external, internal, or pooled data sources, or a combination of the three, for its PD estimation, the length of the underlying historical observation period used shall be at least five years for at least one source;

**198.9.** Irrespective of the method used to estimate PD, banks shall estimate a PD for each rating grade based on the observed historical average one-year default rate that is an arithmetic average based on the number of obligors (count weighted); other approaches, including exposure-weighted averages, shall not be permitted.

**199.** For the purposes of sub-paragraph 198.8, where the available observation period is longer for any of the sources and where those data are relevant, that longer period shall be used. The data shall include a representative combination of favourable and unfavourable years of the economic cycle relevant for the type of exposures. Subject to the approval of the National Bank of Moldova, banks that have not received, pursuant to paragraphs 4 to 7, the approval of the National Bank of Moldova to use own LGD estimates or to use IRB-CCF may use, when applying the IRB Approach, relevant data covering a period of two years. The period to be covered shall be increased by one year each year until the relevant data cover at least five years.

**200.** For retail exposures, the following requirements shall apply:

**200.1.** Banks shall estimate PDs by obligor or transaction grades or pools from long run averages of one-year default rates and default rates shall be calculated at transaction level only where the definition of default is applied at the level of individual credit facilities pursuant to paragraph 24 of Regulation No 111/2018. The PD shall be based on the observed historical average of the one-year default rate;

**200.2.** PD estimates may also be derived from an estimate of total losses and appropriate estimates of LGDs;

**200.3.** Banks shall regard internal data for assigning exposures to grades or pools as the primary source of information for estimating loss characteristics. Banks may use external data (including pooled data) or statistical models for quantification provided that the following strong links both exist:

**200.3.1.** Between the bank's process of assigning exposures to grades or pools and the process used by the external data source; and

**200.3.2.** Between the bank's internal risk profile and the composition of the external data;

**200.4.** If a bank derives long run average estimates of PD and LGD for retail exposures from an estimate of total losses and an appropriate estimate of PD or LGD, the process for estimating total losses shall meet the overall standards for estimation of PD and LGD set out in this part, and the outcome shall be consistent with the concept of LGD as set out in sub-paragraph 202.1;

**200.5.** Irrespective of whether a bank uses external, internal or centralised data sources, or a combination thereof in its PD estimates, the historical observation period for the underlying data shall be at least five years for at least one source. Where the available observation period is longer for any of the sources and where those data are relevant, that longer period shall be used. The data shall include a representative combination of favourable and unfavourable years of the economic cycle relevant for the type of exposures. Subject to the approval of the National Bank of Moldova, when applying the IRB Approach, banks may use relevant data covering a period of two years. The period to be covered shall be increased by one year each year until the relevant data cover at least five years;

**200.6.** Banks should identify and analyse expected changes in risk parameters over the life of credit exposures (seasoning effects).

**201.** For purchased retail receivables, banks may use external and internal reference data. Banks should use all relevant data sources as points of comparison.

### *Subsection 3*
### *Requirements specific to own-LGD estimates*

**202.** When quantifying the risk parameters to be associated with grades or pools, banks shall apply the following specific requirements on own LGD estimates:

**202.1.** Banks shall estimate LGDs per grade or pool of transactions based on the average effective LGDs per grade or pool of transactions, taking into account all observed defaults in the data sources (default weighted average);

**202.2.** Banks shall use LGD estimates that are appropriate for an economic downturn if they are more conservative than the long-term average. To the extent that a rating system is expected to provide effective LGD values at a constant level per grade or pool over time, banks should make adjustments to their estimates of risk parameters per grade or pool in order to limit the impact of an economic downturn on capital.

**202.3.** A bank shall take into account the degree of any dependence between, on the one hand, the risk of the borrower and, on the other hand, the risk of funded credit protection other than master netting agreements and on-balance sheet netting of loans and deposits, or the risk of the provider of that protection;

**202.4.** Currency mismatches between the underlying obligation and funded credit protection other than master netting agreements and on-balance sheet netting of loans and deposits shall be treated with caution when estimating LGD by the bank;

**202.5.** To the extent that LGD estimates take into account the existence of funded credit protection other than master netting agreements and on-balance sheet netting of loans and deposits, those estimates shall not be based solely on the estimated market value of the funded credit protection;

**202.6.** To the extent that LGD estimates take into account the existence of funded credit protection other than master netting agreements and on-balance sheet netting of loans and deposits, banks shall establish internal requirements on management, legal certainty and risk management in relation to that funded credit protection and those requirements shall generally be consistent with those set out in Chapter VI of Regulation No 112/2018;

**202.7.** To the extent that a bank recognises funded credit protection other than master netting agreements and on-balance sheet netting of loans and deposits, when determining the amount of counterparty credit risk exposure in accordance with the normative acts of the National Bank of Moldova related to the treatment of counterparty credit risk, the bank shall not take into account in LGD estimates any amount it expects to recover from that funded credit protection;

**202.8.** In the specific case of exposures already in default, the bank shall use the sum of its best estimates of expected loss for each exposure, taking into account current economic conditions and the exposure situation, as well as its estimates of the increase in the loss rate due to possible unexpected additional losses during the recovery period, i.e. between the date of default and the final liquidation of the exposure;

**202.9.** To the extent that the penalties for late payment, imposed on the debtor before default, have been recorded in the bank's profit and loss account, they shall be added to the bank's exposure and loss value;

**202.10.** For exposures to corporates, banks, central governments and central banks and regional governments, local authorities and public sector entities, LGD estimates shall be based on data covering at least five years, increasing by one year each year after application until a minimum period of seven years is reached for at least one data source; if the available observation period is longer for any of the sources and those data are relevant, that longer period shall be the one to be used.

**203.** For the purposes of sub-paragraph 202.1, banks shall take due account of recoveries made during the relevant recovery processes from any type of funded credit protection as well as from unfunded credit protection that does not fall under the definition in sub-paragraph 3.24.

**204.** For the purposes of sub-paragraph 202.3, cases where there is a significant degree of dependency shall be treated prudently.

**205.** For the purposes of sub-paragraph 202.5, LGD estimates shall take into account the effect of the potential failure of banks to quickly gain control of the collateral and liquidate it.

**206.** In the case of retail exposures, banks may:

**206.1.** Derive LGD estimates from actual losses and appropriate estimates of PDs;

**206.2.** Reflect future drawings either in their conversion factors or in their LGD estimates;

**206.3.** For purchased retail receivables use external and internal reference data to estimate LGDs.

**207.** For the purposes of sub-paragraph 206.2, where banks include future additional drawings in their conversion factors, they should be reflected in the LGD in both the numerator and the denominator. If banks do not include future additional drawings in their conversion factors, they should be reflected in the LGD only in the numerator.

**208.** For retail exposures, LGD estimates shall be based on data covering at least five years. Subject to the approval of the National Bank of Moldova, when applying the IRB Approach, banks may use relevant data covering a period of two years. The period to be covered shall be increased by one year each year until the relevant data cover at least five years.

### *Subsection 4*
### *Requirements specific to own-conversion factor estimates*

**209.** When quantifying the risk parameters to be associated with rating grades or pools, banks shall apply the following specific requirements on own-conversion factor estimates:

**209.1.** Banks shall estimate conversion factors by facility grade or pool on the basis of the average realised conversion factors by facility grade or pool using the default weighted average resulting from all observed defaults within the data sources;

**209.2.** Banks shall use conversion factor estimates that are appropriate for an economic downturn if those are more conservative than the long-run average. To the extent a rating system is expected to deliver realised conversion factors at a constant level by grade or pool over time, banks shall make adjustments to their estimates of risk parameters by grade or pool to limit the capital impact of an economic downturn;

**209.3.** Banks' IRB-CCF shall take into account the possibility for the obligor to make additional drawings up to and after the date of a default event;

**209.4.** In arriving at estimates of conversion factors banks shall consider their specific policies and strategies adopted in respect of account monitoring and payment processing. Banks shall also consider their ability and willingness to prevent further drawings in circumstances short of payment default, such as covenant violations or other technical default events;

**209.5.** Banks shall have adequate systems and procedures in place to monitor facility amounts, current outstandings against committed lines and changes in outstandings per obligor and per grade. The bank shall be able to monitor outstanding balances on a daily basis;

**209.6.** If banks use different estimates of conversion factors to those used for internal purposes for the calculation of risk-weighted exposure amounts, this shall be documented and reasonable;

**209.7.** IRB-CCF of banks shall be estimated using a fixed time horizon approach of 12 months;

**209.8.** Banks' IRB-CCF shall be based on reference data reflecting the characteristics of the obligor, the facility and the bank management practice of the exposures to which the estimates apply.

**210.** For the purposes of sub-paragraph 209.1, where banks observe a negative effective conversion factor in their implicit observations, the effective conversion factor for those observations shall be zero for the purposes of quantifying their IRB-CCF. Banks may use the information on the actual negative conversion factor in the modelling process for the purpose of risk differentiation.

**211.** For the purposes of sub-paragraph 209.3, the IRB-CCF shall incorporate a greater margin of conservatism where a stronger positive correlation can reasonably be expected between the default frequency and the magnitude of the conversion factor.

**212.** For the purposes of sub-paragraph 209.7, each default shall be linked to relevant obligor and facility characteristics at the fixed reference date defined as 12 months prior to the date of default.

**213.** For the purposes of sub-paragraph 209.8, the IRB-CCF applied to particular exposures shall not be based on data that comingle the effects of disparate characteristics or data from exposures that exhibit materially different risk characteristics. IRB-CCF shall be based on appropriately homogenous segments. For that purpose, the following practices shall only be allowed on the basis of a detailed scrutiny and justification by a bank:

**213.1.** SME/mid-market underlying data being applied to large corporate obligors;

**213.2.** Data from commitments with a small unused limit availability being applied to facilities with a large unused limit availability;

**213.3.** Data from delinquent obligors or blocked for further drawdowns at the reference date being applied to obligors with no known delinquency or relevant restrictions;

**213.4.** Data that have been affected by changes in the obligors' mix of borrowing and other credit-related products over the observation period unless those data have been effectively adjusted by removing the effects of the changes in the product mix.

**214.** For the purposes of sub-paragraph 213.4, banks shall demonstrate to the competent authorities that they have a detailed understanding of the impact of changes in customer product mix on the exposures reference data sets and associated IRB-CCF, and that the impact is immaterial or has been effectively mitigated within their estimation process. In that regard, the following shall not be deemed appropriate:

**214.1.** Setting floors or caps for CCFs or observations on exposure values, excluding the actual zero conversion factor, in accordance with paragraph 210;

**214.2.** Use of obligor-level estimates that do not fully cover the relevant product transformation options or improperly combine products with very different characteristics;

**214.3.** Adjusting only material observations affected by product transformation;

**214.4.** Excluding observations affected by product profile transformation.

**215.** Banks shall ensure that the IRB-CCF is effectively protected from the potential effects of the region of instability caused by the fact that a facility is almost fully drawn at the reference date.

**216.** The reference dates shall not be capped at the principal amount of a facility or the available limit of the facility. Accrued interest, other payments due and drawdowns exceeding the limits of the facility shall be included in the reference dates.

**217.** For exposures to corporates, banks, central governments and central banks, and regional governments, local authorities and public sector entities, estimates of conversion factors shall be based on data over a minimum of five years, increasing by one year each year after implementation until a minimum of seven years is reached, for at least one data source. If the available observation period spans a longer period for any source, and the data are relevant, that longer period shall be used.

**218.** For retail exposures, banks may reflect future drawings either in their conversion factors or in their LGD estimates.

**219.** For retail exposures, estimates of conversion factors shall be based on data covering a minimum of five years. Subject to the approval of the National Bank of Moldova, when applying the IRB Approach, banks may use relevant data covering a period of two years. The period to be covered shall be increased by one year each year until the relevant data cover at least five years.

### *Subsection 5*
### *Requirements for assessing the effect of unfunded credit protection for exposures to central governments and central banks, exposures to regional governments, local authorities and public sector entities, and exposures to corporates, where own estimates of LGD are used and for retail exposures*

**220.** With regard to eligible guarantors (protection providers) and eligible guarantees, the following requirements shall apply:

**220.1.** Banks shall have clearly specified criteria for the types of guarantors they recognise for the calculation of risk-weighted exposure amounts;

**220.2.** For recognised guarantors, the same rules set out in paragraphs 168-170, 171-175 and 176-177 apply as for obligors;

**220.3.** The guarantee shall be evidenced in writing, non-cancellable and non-changeable on the part of the guarantor, in force until the obligation is satisfied in full, to the extent of the amount and tenor of the guarantee, and legally enforceable against the guarantor in a jurisdiction where the guarantor has assets to attach and enforce a judgement;

**220.4.** The guarantee shall be unconditional.

**221.** For the purposes of sub-paragraph 220.4, an "unconditional guarantee" means a guarantee where the credit protection contract does not contain any clause the fulfilment of which is outside the direct control of the lending bank and that could prevent the guarantor from being obliged to pay out in a timely manner pursuant to the qualifying default of the obligor or to the non-payment by the original obligor. A clause in the credit protection contract providing that a flawed due diligence or fraud by the lending bank cancels or diminishes the extent of the guarantee offered by the guarantor shall not disqualify that guarantee from being considered unconditional.

**222.** Guarantees where the payment by the guarantor is subject to the lending bank first having to pursue the obligor and that only cover losses remaining after the bank has completed the workout process shall be considered unconditional.

**223.** Banks may recognise unfunded credit protection using either the PD/LGD modelling adjustment approach in accordance with this Section and provided that the requirement set out in paragraph 229 is met or the substitution of risk parameters approach based on A-IRB in accordance with the calculation of risk-weighted exposure amounts and expected loss amounts in accordance with the substitution method when the guaranteed exposure is treated in accordance with the IRB approach using own estimates of LGD and a comparable direct exposure to the protection provider is treated in accordance with the IRB approach of Regulation No 112/2018 and provided that the eligibility requirements of Regulation No 112/2018 are met. Banks shall have clear policies for assessing the effects of unfunded credit protection on risk parameters. Banks' policies shall be consistent with their internal risk management practices and reflect the requirements of this Subsection. Those policies shall clearly specify which of the specific methods described in this paragraph are used for each rating system and banks shall apply those policies consistently over time.

**224.** A bank shall have clearly specified criteria for adjusting grades, pools or LGD estimates and, for retail and eligible purchased receivables, the process for assigning exposures to grades or pools to reflect the impact of guarantees on the calculation of risk-weighted exposure amounts. These criteria shall comply with the requirements set out in paragraphs 168-170, 171-175 and 176-177.

**225.** The criteria shall be plausible and intuitive. They shall address the guarantor's ability and willingness to perform under the guarantee, the likely timing of any payments from the guarantor, the degree to which the guarantor's ability to perform under the guarantee is correlated with the obligor's ability to repay, and the extent to which residual risk to the obligor remains.

**226.** The requirements set out in this Section for guarantees shall apply also for single-name credit derivatives. In relation to a mismatch between the underlying obligation and the reference obligation of the credit derivative or the obligation used for determining whether a credit event has occurred, the requirements set out in paragraph 64 of Regulation No 112/2018 shall apply. For retail exposures and eligible purchased receivables, paragraphs 226 to 228 shall apply to the assignment of exposures to grades or pools.

**227.** The criteria shall address the payout structure of the credit derivative and conservatively assess the impact this has on the level and timing of recoveries. The bank shall consider the extent to which other forms of residual risk remain.

**228.** First-to-default credit derivatives may be recognised as eligible unfunded credit protection. However, second-to-default and all other nth-to-default credit derivatives shall not be recognised as eligible unfunded credit protection.

**229.** Where banks recognise unfunded credit protection through the PD/LGD modelling adjustment approach, the covered part of the underlying exposure shall not be assigned a risk weight that would be lower than the risk weight floor for the protection provider. For that purpose, the risk weight floor for the protection provider shall be calculated using the same PD, LGD and risk weight function as those applicable to comparable direct exposure to the protection provider as referred to in the provisions for the calculation of risk-weighted exposure amounts and expected loss amounts under the substitution method where the guaranteed exposure is treated under the IRB approach using own estimates of LGD and a comparable direct exposure to the protection provider is treated under the IRB approach of Regulation No 112/2018.

**230.** In the case of retail guarantees, the requirements set out in paragraphs 220-222, 224 to 225, and to 226-228 shall also apply to the assignment of exposures to grades or pools and the estimation of PD.

### *Subsection 6*
### *Requirements for purchased receivables*

**231.** In quantifying the risk parameters to be associated with rating grades or pools for purchased receivables, banks shall ensure the conditions laid down in paragraphs 232 to 236 are met.

**232.** The structure of the facility shall ensure that under all foreseeable circumstances the bank has effective ownership and control of all cash remittances from the receivables. When the obligor makes payments directly to a seller or servicer, the bank shall verify regularly that payments are forwarded completely and within the contractually agreed terms. Banks shall have procedures to ensure that ownership over the receivables and cash receipts is protected against bankruptcy stays or legal challenges that could materially delay the lender's ability to liquidate or assign the receivables or retain control over cash receipts.

**233.** The bank shall monitor both the quality of the purchased receivables and the financial condition of the seller and servicer. The following shall apply:

**233.1.** The bank shall assess the correlation among the quality of the purchased receivables and the financial condition of both the seller and servicer, and have in place internal policies and procedures that provide adequate safeguards to protect against any contingencies, including the assignment of an internal risk rating for each seller and servicer;

**233.2.** The bank shall have clear and effective policies and procedures for determining seller and servicer eligibility. The bank or its agent shall conduct periodic reviews of sellers and servicers in order to verify the accuracy of reports from the seller or servicer, detect fraud or operational weaknesses, and verify the quality of the seller's credit policies and servicer's collection policies and procedures. The findings of these reviews shall be documented;

**233.3.** The bank shall assess the characteristics of the purchased receivables pools, including over-advances; history of the seller's arrears, bad debts, and bad debt allowances; payment terms, and potential contra accounts;

**233.4.** The bank shall have effective policies and procedures for monitoring on an aggregate basis single-obligor concentrations both within and across purchased receivables pools;

**233.5.** The bank shall ensure that it receives from the servicer timely and sufficiently detailed reports of receivables ageings and dilutions to ensure compliance with the bank's eligibility criteria and advancing policies governing purchased receivables, and provide an effective means with which to monitor and confirm the seller's terms of sale and dilution.

**234.** The bank shall have systems and procedures for detecting deteriorations in the seller's financial condition and purchased receivables quality at an early stage, and for addressing emerging problems pro-actively. In particular, the bank shall have clear and effective policies, procedures, and information systems to monitor covenant violations, and clear and effective policies and procedures for initiating legal actions and dealing with problem purchased receivables.

**235.** The bank shall have clear and effective policies and procedures governing the control of purchased receivables, credit, and cash. In particular, written internal policies shall specify all material elements of the receivables purchase programme, including the advancing rates, eligible collateral, necessary documentation, concentration limits, and the way cash receipts are to be handled. These elements shall take appropriate account of all relevant and material factors, including the seller and servicer's financial condition, risk concentrations, and trends in the quality of the purchased receivables and the seller's customer base, and internal systems shall ensure that funds are advanced only against specified supporting collateral and documentation.

**236.** The bank shall have an effective internal process for assessing compliance with all internal policies and procedures. The process shall include regular audits of all critical phases of the bank's receivables purchase programme, verification of the separation of duties between firstly the assessment of the seller and servicer and the assessment of the obligor and secondly between the assessment of the seller and servicer and the field audit of the seller and servicer, and evaluations of back office operations, with particular focus on qualifications, experience, staffing levels, and supporting automation systems.

### *Subsection 7*
### *Validation of internal estimates,*
### *corporate governance, credit risk control and internal audit*

**237.** Banks shall validate their internal estimates by complying with the following requirements:

**237.1.** Banks shall have robust systems in place to validate the accuracy and consistency of rating systems, processes, and the estimation of all relevant risk parameters. The internal validation process shall enable the institution to assess the performance of internal rating and risk estimation systems consistently and meaningfully;

**237.2.** Banks shall regularly compare realised default rates with estimated PDs for each grade and, where realised default rates are outside the expected range for that grade, banks shall specifically analyse the reasons for the deviation. Banks using own estimates of LGDs and conversion factors shall also perform analogous analysis for these estimates. Such comparisons shall make use of historical data that cover as long a period as possible. The bank shall document the methods and data used in such comparisons. This analysis and documentation shall be updated at least annually;

**237.3.** Banks shall also use other quantitative validation tools and comparisons with relevant external data sources. The analysis shall be based on data that are appropriate to the portfolio, are updated regularly, and cover a relevant observation period. Banks' internal assessments of the performance of their rating systems shall be based on as long a period as possible;

**237.4.** The methods and data used for quantitative validation shall be consistent through time. Changes in estimation and validation methods and data (both data sources and periods covered) shall be documented;

**237.5.** Banks shall have sound internal standards for situations where deviations in realised PDs, LGDs, conversion factors and total losses, where EL is used, from expectations, become significant enough to call the validity of the estimates into question. These standards shall take account of business cycles and similar systematic variability in default experience. Where realised values continue to be higher than expected values, banks shall revise estimates upward to reflect their default and loss experience.

**238.** All material aspects of the rating and estimation processes shall be approved by the bank's management body or a designated committee thereof and senior management. These parties shall possess a general understanding of the rating systems of the bank and detailed comprehension of its associated management reports.

**239.** Senior management shall meet the following requirements:

**239.1.** They shall provide notice to the management body or a designated committee thereof of material changes or exceptions from established policies that will materially impact the operations of the bank's rating systems;

**239.2.** They shall have a good understanding of the rating systems designs and operations;

**239.3.** They shall ensure, on an ongoing basis that the rating systems are operating properly.

**240.** Senior management shall be regularly informed by the credit risk control units about the performance of the rating process, areas needing improvement, and the status of efforts to improve previously identified deficiencies.

**241.** Internal ratings-based analysis of the bank's credit risk profile shall be an essential part of the management reporting to these parties. Reporting shall include at least risk profile by grade, migration across grades, estimation of the relevant parameters per grade, and comparison of realised default rates, and to the extent that own estimates are used of realised LGDs and realised conversion factors against expectations and stress-test results. Reporting frequencies shall depend on the significance and type of information and the level of the recipient.

**242.** The credit risk control unit shall be independent from the personnel and management functions responsible for originating or renewing exposures and report directly to senior management. The unit shall be responsible for the design or selection, implementation, oversight and performance of the rating systems. It shall regularly produce and analyse reports on the output of the rating systems.

**243.** The responsibilities of the credit risk control unit(s) shall be:

**243.1.** Testing and monitoring of grades and pools;

**243.2.** Production and analysis of summary reports of the bank's rating systems;

**243.3.** Implementing procedures to verify that grade and pool definitions are consistently applied across departments and geographic areas;

**243.4.** Reviewing and documenting any changes to the rating process, including the reasons for the changes;

**243.5.** Reviewing the rating criteria to evaluate if they remain predictive of risk. Changes to the rating process, criteria or individual rating parameters shall be documented and retained;

**243.6.** Active participation in the design or selection, implementation and validation of models used in the rating process;

**243.7.** Oversight and supervision of models used in the rating process;

**243.8.** Ongoing review and alterations to models used in the rating process.

**244.** Banks using pooled data from more than one bank in accordance with paragraph 197 may outsource the following activities:

**244.1.** Production of information relevant to testing and monitoring grades and pools;

**244.2.** Production of summary reports of the bank's rating systems;

**244.3.** Production of information relevant to a review of the rating criteria to evaluate if they remain predictive of risk;

**244.4.** Documentation of changes to the rating process, criteria or individual rating parameters;

**244.5.** Production of information relevant to ongoing review and alterations to models used in the rating process.

**245.** The banks applying paragraph 244 shall ensure that the National Bank of Moldova has access to all relevant information from third parties, which is necessary for the examination of the fulfilment of the requirements, and that they can carry out on-site inspections to the same extent as they can carry out on-site inspections of the bank.

**246.** Internal audit or another comparable independent auditing unit shall review at least annually the bank's rating systems and its operations, including the operations of the credit function and the estimation of PDs, LGDs, ELs and conversion factors. Areas of review shall include adherence to all applicable requirements.

**Annex**
**the Regulation on the treatment of credit risk**
**under the Internal Ratings Based Approach**

## Specification of the method used to take into account the factors for assigning risk weights to specialised lending exposures, as provided for in paragraph 76

### Section 1
### Default status of an obligor

**1.** Where the obligor is in default within the meaning of Regulation No 111/2018, the bank shall assign to that specialised lending exposure a risk weight of category 5 as set out in Table 1 in paragraph 75.

### Section 2
### Applicable assessment criteria for different specialised lending exposure classes

**2.** Where the purpose of a specialised lending exposure is to finance the development or acquisition of large, complex and costly installations, including in particular power plants, chemical processing plants, mines, transport infrastructures, environmental and telecommunications infrastructures, and the revenues to be generated by the assets are money from contracts for the production of the installation obtained from several parties not under the management control of the sponsor ("project finance exposures"), banks shall apply the assessment criteria set out in Table 1 of this Annex to this exposure class when assigning risk weights.

**3.** Where the purpose of a specialised lending exposure is to finance the development or acquisition of real estate, including in particular office buildings for rent, commercial premises, multi-family residential buildings, industrial or storage premises, hotels and land, and the income to be generated from real estate is lease payments, rents or income from the sale of real estate from one or more third parties ("real estate exposures"), banks shall apply the valuation criteria set out in Table 2 of this Annex to this exposure class when assigning risk weights.

**4.** Where the purpose of a specialised lending exposure is to finance the acquisition of tangible assets, including in particular vessels, aircraft, satellites, railcars and fleets, and the revenues to be generated by those assets consist of lease payments or rents from one or more third parties ("object finance exposures"), banks shall apply the assessment criteria set out in Table 3 of this Annex to this exposure class when assigning risk weights.

**5.** Where the purpose of a specialised lending exposure is to finance reserves, stocks or receivables related to exchange traded commodities, including in particular crude oil, metals or crops, and the revenues to be generated by those reserves, stocks or receivables are to be the proceeds from the sale of the commodities ("commodity finance exposures"), banks shall apply the assessment criteria set out in Table 4 of this Annex to this exposure class when assigning risk weights.

### Section 3
### Factor assessment and assignment of risk weights

**6.** On the basis of an overall assessment, banks shall assign to a category each factor set out in the Annex that is applicable to the specialised lending exposure class in accordance with Section 2 of this Annex. For each specialised lending exposure, the bank shall do so taking into account the categories to which each applicable sub-factor is assigned in accordance with Sections 3 and 4 of this Annex and the relative importance of each sub-factor for the type of specialised lending exposures as defined in sub-paragraph 3.27.

**7.** The bank shall assign to each factor a weighting expressed in percentages which shall not be less than 5% and not more than 60%, depending on the relative importance of the type of specialised lending exposures.

**8.** The bank shall calculate the weighted average of the categories to which the factors have been assigned in accordance with paragraph 6 of this Annex, applying the weights assigned in accordance with paragraph 7 of this Annex. If the weighted average is a decimal number, the banks shall round that number to the nearest cardinal number.

**9.** The bank shall assign the specialised lending exposure to the category set out in Table 1 in paragraph 75 whose number corresponds to the weighted average calculated in accordance with paragraph 8 of this Annex.

## Section 4
## Sub-factor assessment

**10.** If a sub-factor of a specific factor listed in Tables 1, 2, 3 or 4 of this Annex is not further broken down into components of the sub-factor, the bank shall assign the sub-factor to a category on the basis of the assessment criteria laid down for that sub-factor.

**11.** Where a sub-factor of a specific factor listed in Tables 1, 2, 3 or 4 is also broken down into components of the sub-factor, the bank shall:

**11.1.** assigns each component of the sub-factor to a category on the basis of the assessment criteria laid down for that component of the sub-factor;

**11.2.** assign the sub-factor to a category on the basis of an overall assessment made taking into account the categories assigned in accordance with sub-paragraph 11.1 of this Annex and the relative importance of each component of the sub-factor for the specific type of specialised lending exposure.

**12.** If the bank also takes into account other relevant information (an "additional risk driver") in accordance with paragraph 169 for a specific type of specialised lending exposures, it shall consider it together with the sub-factor that best matches that additional risk driver.

**13.** Where, exceptionally, a sub-factor or sub-factor component is not relevant for all specialised lending exposures of a particular type of specialised lending exposures, the bank may decide not to apply that sub-factor or sub-factor component to any specialised lending exposures of that type.

## Section 5
## Overlapping criteria at sub-factor and sub-factor component level

**14.** Where a sub-factor or component of a sub-factor has identical assessment criteria in two or more categories ("overlapping criteria") and the specialised lending exposure meets those overlapping criteria, banks shall assign the sub-factor or component of a sub-factor to a category as follows:

**14.1.** Where the overlapping criteria occur in two categories, banks shall rank in the highest category;

**14.2.** Where the overlapping criteria occur in three categories, banks shall rank between the highest and the lowest category.

## Section 6
## Documentation

**15.** Banks shall document the following information for each type of specialised lending exposures for which they assign risk weights in accordance with this Annex:

**15.1.** The risk weights assigned to each factor in accordance with paragraph 7 of this Annex and their justification;

**15.2.** A description of the additional risk drivers and a justification for taking them into account in accordance with paragraph 12 of this Annex, where applicable;

**15.3.** Reasons for deciding not to apply a specific sub-factor or component of a sub-factor in accordance with paragraph 13 of this Annex, as applicable.

**16.** Banks shall document the following information for each specialised lending exposure for which they assign risk weights in accordance with this Regulation:

**16.1.** Specialised lending exposure class as set out in paragraphs 2 to 5 of this Annex;

**16.2.** The category in Table 1 at the paragraph 75 where the specialised lending exposure was assigned;

**16.3.** The remaining maturity referred to in Table 1 of paragraph 75;

**16.4.** The assessment of the specialised lending exposure, at each step of the process laid down in paragraphs 1, 6 to 14 of this Annex, which has resulted in assigning the risk weight to that exposure.

***Table 1***

**Assessment criteria for project finance exposures**

| | **Category 1** | **Category 2** | **Category 3** | **Category 4** |
|---|---|---|---|---|
| **Factor: financial strength** | | | | |
| 1.Sub-factor: market conditions | Few competing suppliers or substantial and durable advantage in location, cost, or technology. Demand is strong and growing. | Few competing suppliers or better than average location, cost, or technology but this situation may not last. Demand is strong and stable. | Project has no advantage in location, cost, or technology. Demand is adequate and stable. | Project has worse than average location, cost, or technology. Demand is weak and declining. |
| 2.Sub-factor: financial ratios (e.g. debt service coverage ratio (DSCR, Interest Coverage Ratio (ICR, loan life coverage ratio (LLCR) and debt-to-equity ratio) | Strong financial ratios considering the level of project risk; very robust economic assumptions. | Strong to acceptable financial ratios considering the level of project risk; robust project economic assumptions. | Standard financial ratios considering the level of project risk | Aggressive financial ratios considering the level of project risk. |
| 3.Sub-factor: stress analysis on the basis of the income being generated during the tenor of the loan | The project can meet its financial obligations under sustained, severely stressed economic or sectoral conditions. | The project can meet its financial obligations under normal stressed economic or sectoral conditions. The project is only likely to default under severe economic conditions. | The project is vulnerable to stresses that are not uncommon through an economic cycle, and may default in an economic downturn. | The project is likely to default unless conditions improve soon. |
| 4.Sub-factor: financial structure | | | | |

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| 4.1.Amortisation schedule (sub-factor component) | Amortising debt without bullet repayment | Amortising debt with no or insignificant bullet repayment | Amortising debt repayments with limited bullet payment | Bullet repayment or amortising debt repayments with high bullet repayment |
| 4.2. Market/cycle and refinancing risk (sub-factor component) | There is no or very limited exposure to market or cycle risk since the expected cashflows cover all future loan repayments during the tenor of the loan and there are no significant delays between the cashflows and the loan repayments. There is no or very low refinancing risk. | The exposure to market or cycle risk is limited since the expected cashflows cover the majority of future loan repayments during the tenor of the loan and there are no significant delays between the cashflows and the loan repayments. There is low refinancing risk. | There is moderate exposure to market or cycle risk since the expected cashflows cover only a part of future loan repayments during the tenor of the loan or there are some significant delays between the cashflows and the loan repayments. Average refinancing risk. | There is significant exposure to market or cycle risk since the expected cashflows cover only a small part of future loan repayments during the tenor of the loan or there are some significant delays between the cashflows and the loan repayments. High refinancing risk. |
| 5.Sub-factor: foreign exchange risk | There is no foreign exchange risk because there is no difference in the currency of the loan and the income of the project or because the foreign exchange risk is fully hedged. | There is no foreign exchange risk because there is no difference in the currency of the loan and the income of the project or because the foreign exchange risk is fully hedged. | There is a difference in the currency of the loan and the income of the project, but the foreign exchange risk is considered low because the exchange rate is stable or because the foreign exchange risk is hedged to a large extent. | There is a difference in the currency of the loan and the income of the project, and the foreign exchange risk is considered high because the exchange rate is volatile and the foreign exchange risk is not hedged to a large extent. |
| **Factor: political and legal environment** | | | | |
| 1.Sub-factor: political risk, including transfer risk, considering project type and mitigants | Very low exposure; strong mitigation instruments, if needed | Low exposure; satisfactory mitigation instruments, if needed | Moderate exposure; fair mitigation instruments | High exposure; no or weak mitigation instruments |

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| 2.Sub-factor: force majeure risk (war, civil unrest, etc.) | No or very low exposure to force majeure risk’ | Limited exposure to force majeure risk | Significant exposure to force majeure risk which is not sufficiently mitigated | Significant exposure to force majeure risk which is not mitigated |
| 3.Sub-factor: government support and project’s importance for the country over the long term | Project of strategic importance for the country (preferably export-oriented). Strong support from Government. | Project considered important for the country. Good level of support from Government. | Project may not be strategic but brings unquestionable benefits for the country. Support from Government may not be explicit. | Project not key to the country. No or weak support from Government. |
| 4.Sub-factor: stability of legal and regulatory environment (risk of change in the law) | Favourable and stable regulatory environment over the long term | Favourable and stable regulatory environment over the medium term | Regulatory changes can be predicted with a fair level of certainty | Current or future regulatory issues may affect the project |
| 5.Sub-factor: acquisition of all necessary supports and approvals for such relief from local content laws | Strong | Satisfactory | Fair | Weak |
| 6.Sub-factor: enforceability of contracts, collateral and security | Contracts, collateral and security are enforceable. | Contracts, collateral and security are enforceable. | Contracts, collateral and security are considered enforceable even if certain non-key issues may exist | There are unresolved key issues in respect if actual enforcement of contracts, collateral and security |
| **Factor: transaction characteristics** | | | | |
| 1.Sub-factor: design and technology risk | Fully proven technology and design | Fully proven technology and design | Proven technology and design – start-up issues are mitigated by a strong completion package | Unproven technology and design; technology issues exist and/or complex design |
| 2.Sub-factor: construction risk | | | | |
| 2.1. Permitting and siting (sub-factor component) | All permits have been obtained | Some permits are still outstanding but their receipt is considered very likely | Some permits are still outstanding but the permitting process is well defined and they are considered routine. | Key permits still need to be obtained and are not considered routine. Significant conditions may be attached. |

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| 2.2. Type of construction contract (sub-factor component) | Fixed-price date-certain turnkey construction EPC (engineering and procurement contract) | Fixed-price date-certain turnkey construction EPC | Fixed-price date-certain turnkey construction contract with one or several contractors | No or partial fixed-price turnkey contract and/or interfacing issues with multiple contractors |
| 2.3. Likelihood to finish the project at the agreed time and cost (sub-factor component) | It is almost certain that the project will be finished within the agreed time horizon and at the agreed cost. | It is very likely that the project will be finished within the agreed time horizon and at the agreed cost. | It is uncertain whether the project will be finished within the agreed time horizon and at the agreed cost. | There are indications that the project will not be finished within the agreed time horizon and at the agreed cost. |
| 2.4. Completion guarantees or liquidated damages (sub-factor component) | Substantial liquidated damages supported by financial substance and/or strong completion guarantee from sponsors with excellent financial standing | Significant liquidated damages supported by financial substance and/or completion guarantee from sponsors with good financial standing | Adequate liquidated damages supported by financial substance and/or completion guarantee from sponsors with good financial standing | Inadequate liquidated damages or not supported by financial substance or weak completion guarantees |
| 2.5. Track record and financial strength of contractor in constructing similar projects (sub-factor component) | Strong | Good | Satisfactory | Weak |
| 3.Sub-factor: operating risk | | | | |
| 3.1. Scope, nature and complexity of operations and maintenance (O & M) contracts (sub-factor component) | Strong long-term O&M contract, preferably with contractual performance incentives, and/or O&M reserve accounts, although an O&M contract is not strictly necessary to perform the required maintenance because the O&M activities are straightforward and transparent. | The O&M activities are relatively straightforward and transparent, and there is a long-term O&M contract, and/or O&M reserve account. | The O&M activities are complex and an O&M contract is necessary. There is a limited long-term O&M contract and/or reserve account. | The O&M activities are complex and an O&M contract is strictly necessary. There is no O&M contract. There is therefore the risk of high operational cost overruns beyond mitigants. |

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| 3.2. Operator's expertise, track record, and financial strength (sub-factor component) | Very strong, or committed technical assistance of the sponsors | Strong | Acceptable | Limited/weak, or local operator dependent on local authorities |
| 4.Sub-factor: valuation of income, including off-take risk | | | | |
| 4.1. What is the robustness of the revenue contracts (e.g. off-take contracts, concession agreements, public private partnership income stream, and other revenue contracts)? What is the quality of the termination clauses? (sub-factor component) | Excellent robustness of the revenues | Good robustness of the revenues | Acceptable robustness of the revenues | The revenues of the project are not certain and there are indications that some of the revenues may not be obtained. |
| 4.2. If there is a take-or-pay or fixed-price off-take contract (sub-factor component) | Excellent creditworthiness of off-taker; strong termination clauses; tenor of contract comfortably exceeds the maturity of the debt. | Good creditworthiness of off-taker; strong termination clauses; tenor of contract exceeds the maturity of the debt. | Acceptable financial standing of off-taker; normal termination clauses; tenor of contract generally matches the maturity of the debt. | Weak off-taker; weak termination clauses; tenor of contract does not exceed the maturity of the debt. |
| 4.3. If there is no take-or-pay or fixed-price off-take contract (sub-factor component) | Project produces essential services or a commodity sold widely on a world market; output can readily be absorbed at projected prices even at lower than historic market. growth rates. | Project produces essential services or a commodity sold widely on a regional market that will absorb it at projected prices at historical growth rates. | Commodity is sold on a limited market that may absorb it only at lower than projected prices. | Project output is demanded by only one or a few buyers or is not generally sold on an organised market. |
| 5.Sub-factor: supply risk | | | | |
| 5.1. Price, volume and transportation risk of feed-stocks; supplier's track record and financial strength (sub-factor component) | Long-term supply contract with supplier of excellent financial standing | Long-term supply contract with supplier of good financial standing | Long-term supply contract with supplier of good financial standing – a degree of price risk may remain | Short-term supply contract or long-term supply contract with financially weak supplier – a degree of price risk definitely remains |

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| 5.2.Reserve risks (e.g. natural resource development) (sub-factor component) | Independently audited, proven and developed reserves well in excess of requirements over lifetime of the project. | Independently audited, proven and developed reserves in excess of requirements over lifetime of the project. | Proven reserves can supply the project adequately through the maturity of the debt. | Project relies to some extent on potential and undeveloped reserves. |
| **Factor: strength of sponsor (including any public private partnership)** | | | | |
| 1.Sub-factor: financial strength of the sponsor | Strong sponsor with high financial standing | Good sponsor with good financial standing | Sponsor with adequate financial standing | Weak sponsor with clear financial weaknesses |
| 2.Sub-factor: track record of the sponsor and its country/sector experience | Sponsor with excellent track record and country/sector experience | Sponsor with satisfactory track record and country/sector experience | Sponsor with adequate track record and country/sector experience | Sponsor with no or questionable track record or country/sector experience |
| 3.Sub-factor: sponsor support, as evidenced by equity, ownership clause and incentive to inject additional cash if necessary | Strong. Project is highly strategic for the sponsor (core business – long-term strategy). | Good. Project is strategic for the sponsor (core business – long-term strategy). | Acceptable. Project is considered important for the sponsor (core business). | Limited. Project is not key to sponsor's long-term strategy or core business. |
| **Factor: security package** | | | | |
| 1.Sub-factor: assignment of contracts and accounts | Fully comprehensive | Comprehensive | Acceptable | Weak |
| 2.Sub-factor: pledge of assets, taking into account quality, value and liquidity of assets | First perfected security interest in all project assets, contracts, permits and accounts necessary to run the project | Perfected security interest in all project assets, contracts, permits and accounts necessary to run the project | Acceptable security interest in all project assets, contracts, permits and accounts necessary to run the project | Little security or collateral for lenders; weak negative pledge clause |
| 3. Sub-factor: lender's control over cash flow (e.g. cash sweeps, independent escrow accounts | Strong | Satisfactory | Fair | Weak |
| 4.Sub-factor: strength of the covenant package(mandatory prepayments, payment deferrals, payment | Covenant package is strong for this type of project. Project may issue no additional debt. | Covenant package is satisfactory for this type of project. | Covenant package is fair for this type of project. | Covenant package is Insufficient for this type of project. |

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| cascade, dividend restrictions …) | | Project may issue extremely limited additional debt. | Project may issue limited additional debt. | Project may issue unlimited additional debt. |
| 5.Sub-factor: reserve funds (debt service, O&M, renewal and replacement, unforeseen events, etc.) | Longer than average coverage period, all reserve funds fully funded in cash or letters of credit from highly rated bank | Average coverage period, all reserve funds fully funded | Average coverage period, all reserve funds fully funded | Shorter than average coverage period, reserve funds funded from operating cash flows |

***Table 2***

**Assessment criteria for real estate exposures**

| | **Category 1** | **Category 2** | **Category 3** | **Category 4** |
|---|---|---|---|---|
| **Factor: financial strength** | | | | |
| 1.Sub-factor: market conditions | The supply and demand for the project's type and location are currently in equilibrium. The number of competitive properties coming to market is equal or lower than forecasted demand. | The supply and demand for the project's type and location are currently in equilibrium. The number of competitive properties coming to market is roughly equal to forecasted demand. | Market conditions are roughly in equilibrium. Competitive properties are coming on the market and others are in the planning stages. The design and capabilities of existing comparable properties are not state of the art as compared to new projects. | Market conditions are weak. It is uncertain when conditions will improve and return to equilibrium. Comparable properties in the market are losing tenants at lease expiration. New lease terms of comparable properties are less favourable compared to those existing. |
| 2.Sub-factor: financial ratios, i.e. Indicators of the borrower's ability to repay | The property's financial ratios, measured by the property's debt service coverage ratio (DSCR) or interest coverage ratio (ICR), are considered strong and are expected to remain strong taking into account the past evolution in financial ratios. DSCR or ICR is not relevant and should not be calculated for properties that are in | The property's financial ratios, measured by the property's DSCR or ICR, are considered good and are expected to remain good taking into account the past evolution in financial ratios. The DSCR or ICR is not relevant and should not be calculated for properties that are in the construction phase. | The property's financial ratios measured by the property's DSCR or ICR are satisfactory and are expected to remain satisfactory taking into account the past evolution in financial ratios. The DSCR or ICR is not relevant and should not be calculated for properties that are in the construction phase. | The property's financial ratios, measured by the property's DSCR or ICR are weak and are expected to remain weak taking into account the past evolution in financial ratios. The DSCR or ICR is not relevant and should not be calculated for properties that are in the construction phase. |

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| | the construction phase. | | | |
| 3.Sub-factor: advance ratio, i.e. the loan-to-value (LTV) ratio as an indicators of the borrower's willingness to repay | The property's loan to value ratio (LTV) is considered low given its property type. Where a secondary market exists, the transaction is underwritten to market standards. | The property's LTV is considered satisfactory given its property type. Where a secondary market exists, the transaction is underwritten to market standards. | The property's LTV is considered relatively high given its property type. | The property's LTV ratio is well above underwriting standards for new loans. |
| 4.Sub-factor: stress analysis on the basis of the income being generated during the tenor of the loan | The property's resources, contingencies and liability structure allow it to meet its financial obligations during a period of severe financial stress (e.g. interest rates, economic growth). | The property can meet its financial obligations under a sustained period of financial stress (e.g. interest rates, economic growth). The property is likely to default only under severe economic conditions. | During an economic downturn, the property would suffer a decline in revenue that significantly increase the risk of default. | The property's financial condition is strained and is likely to default unless conditions improve in the near term. |
| 5.Sub-factor: cash-flow predictability | | | | |
| 5.1. For complete and stabilised property (sub-factor component) | The property's leases are long-term with creditworthy tenants and their maturity dates are scattered, or a public private partnership guarantees a considerable part of the tenancy contracts.<br>The property has a track record of tenant retention upon lease expiration. Its vacancy rate is low. Expenses (maintenance, insurance, security, and property taxes) are predictable. | The majority of the property has several tenant lease contracts that are long-term, and with tenants that have on average a high creditworthiness, and with scattered maturity dates. A public private partnership may guarantee part of the tenancy contracts. Where the property has only one lease contract or one tenant has a very significant share in the income generated by the property, this tenant is of excellent creditworthiness and the contract includes covenants that ensure lease payments until the end of the project life or beyond. | Most of the property's leases are medium rather than long-term with tenants that range in creditworthiness. A public private partnership may guarantee only a minor part of the tenancy contracts. Where the property has only one lease contract or one tenant has a very significant share in the income generated by the property, this one tenant, the contract includes covenants that ensure lease payments until the end of the project life or beyond but the tenant has moderate creditworthiness.<br>The property experiences a | The proportion of short term leases is significant with tenants that range in creditworthiness, or the property has only one lease contract, or one tenant has a very significant share in the income generated by the property, where that tenant has a low creditworthiness and/or the contract does not include the necessary covenants that ensure lease payments until the end of the project life or beyond.<br>The property experiences a very high level of tenant turnover upon lease |

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| | | The property experiences a normal level of tenant turnover upon lease expiration. Its vacancy rate is low. Expenses are predictable. | moderate level of tenant turnover upon lease expiration. Its vacancy rate is moderate. Expenses are relatively predictable but vary in relation to revenue. | expiration. Its vacancy rate is high. Significant expenses are incurred preparing space for new tenants. |
| 5.2.For complete but not stabilised property (sub-factor component) | The cashflows obtained from the leasing activity, for instance obtained from a public private partnership, meet or exceed the expected cashflows used in the valuation of the property. The project should achieve stabilisation in the near future. | The cashflows obtained from the leasing activity, for instance obtained from a public private partnership, meet or exceed the expected cashflows used in the valuation of the property. The project should achieve stabilisation in the near future. | Most of the cashflows obtained from the leasing activity meet the expected cashflows used in the valuation of the property, however, stabilisation will not occur for some time. | The cashflows obtained from the leasing activity do not meet the expected cashflows used in the valuation of the property. Despite achieving target occupancy rate, cash flow coverage is tight due to disappointing revenue. |
| 5.3.For construction phase (sub-factor component | The property is entirely preleased through the tenor of the loan or pre-sold to a tenant or buyer of high creditworthiness, or the bank has a binding commitment for take-out financing from a tenant or buyer of high creditworthiness, for instance through a public private partnership. | The property is entirely pre-leased or pre-sold to a creditworthy tenant or buyer, or the bank has a binding commitment for permanent financing from a creditworthy lender, for instance through a public private partnership. | Leasing activity is within projections but the building may not be pre-leased and there may not exist a take-out financing. The bank may be the permanent lender. | The property is deteriorating due to cost overruns, market deterioration, tenant cancellations or other factors. There may be a dispute with the party providing the permanent financing. |
| **Factor: political and legal environment** | | | | |
| 1.Sub-factor: legal and regulatory risks | Jurisdiction is very favourable to repossession and enforcement of contracts. | Jurisdiction is generally favourable to repossession and enforcement of contracts. | Jurisdiction is generally favourable to repossession and enforcement of contracts, but repossession might be long and/or difficult. | Poor or unstable legal and regulatory environment. Jurisdiction may make repossession and enforcement of contracts lengthy or impossible. |

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| 2.Sub-factor: political risk, including transfer risk, considering property type and mitigants | Very low exposure; strong mitigation instruments, if needed | Low exposure; satisfactory mitigation instruments, if needed | Moderate exposure; fair mitigation instruments | High exposure; no or weak mitigation instruments |
| **Factor: asset/transaction characteristics** | | | | |
| 1.Sub-factor: location | Property is located in highly desirable location that is convenient to services that tenants desire. | Property is located in desirable location that is convenient to services that tenants desire. | The property location lacks a competitive advantage. | The property is located in an undesirable location. |
| 2.Sub-factor: design and condition | Property is favoured due to its design, configuration, and maintenance, and is highly competitive with new properties. | Property is appropriate in terms of its design, configuration and maintenance. The property's design and capabilities are competitive with new properties. | Property is adequate in terms of its configuration, design and maintenance. | The property's configuration, design and maintenance have contributed to the property's difficulties. Weaknesses exist in the property's configuration, design or maintenance. |
| 3.Sub-factor: property is under construction | Construction budget is conservative and technical hazards are limited. Contractors are highly qualified and have high credit standing. | Construction budget is conservative and technical hazards are limited. Contractors are highly qualified and have good credit standing. | Construction budget is adequate and contractors are ordinarily qualified and have average credit standing. | Project is over budget or unrealistic given its technical hazards. Contractors may be under qualified and have low credit standing. |
| 4.Sub-factor: financial structure: | | | | |
| 4.1.Amortisation schedule (sub-factor component) | Amortising debt without bullet repayment | Amortising debt with no or insignificant bullet repayment | Amortising debt repayments with limited bullet payment | Bullet repayment or amortising debt repayments with high bullet repayment |
| 4.2.Market/cycle and refinancing risk (sub-factor component) | There is no or very limited exposure to market or cycle risk since the expected cashflows cover all future loan | The exposure to market or cycle risk is limited since the expected cashflows cover the majority of future loan | There is moderate exposure to market or cycle risk since the expected cashflows cover only a part of future loan | There is significant exposure to market or cycle risk since the expected cashflows cover only a small part of |

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| | repayments during the tenor of the loan and there are no significant delays between the cashflows and the loan repayments. There is no or very low refinancing risk. | repayments during the tenor of the loan and there are no significant delays between the cashflows and the loan repayments. There is low refinancing risk. | repayments during the tenor of the loan or there are some significant delays between the cashflows and the loan repayments. Average refinancing risk. | future loan repayments during the tenor of the loan or there are some significant delays between the cashflows and the loan repayments. High refinancing risk. |
| **Factor: strength of sponsor/developer (including any public private partnership)** | | | | |
| 1.Sub-factor: financial capacity and willingness to support the property | The sponsor/developer made a substantial cash contribution to the construction or purchase of the property. The sponsor/developer has substantial resources and limited direct and contingent liabilities. The sponsor/developer's properties are diversified geographically and by property type. | The sponsor/developer made a material cash contribution to the construction or purchase of the property. The sponsor/developer's financial condition allows it to support the property in the event of a cash flow shortfall. The sponsor/developer's properties are located in several geographic regions. | The sponsor/developer's contribution may be immaterial or non-cash. The sponsor/developer is average to below average in financial resources. | The sponsor/developer lacks capacity or willingness to support the proper |
| 2.Sub-factor: reputation and track record with similar properties. | Experienced management and high sponsors' quality; strong reputation and lengthy and successful record with similar properties | Appropriate management and sponsors' quality. The sponsor or management has a successful record with similar properties. | Moderate management and sponsors' quality. Management or sponsor track record does not raise serious concerns. | Ineffective management and substandard sponsors' quality. Management and sponsor difficulties have contributed to difficulties in managing properties in the past. |
| 3.Sub-factor: relationships with relevant real estate actors | Strong relationships with leading actors such as leasing agents | Proven relationships with leading actors such as leasing agents | Adequate relationships with leasing agents and other parties providing important real estate services | Poor relationships with leasing agents and/or other parties providing important real estate services |
| **Factor:** | | | | |

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| **security package** | | | | |
| 1.Sub-factor: nature of the lien | Perfected first lien | Perfected first lien | Perfected first lien | Ability of lender to foreclose is constrained. |
| 2. Sub-factor: assignment of rents | The lender has obtained an assignment for the majority of the rents. They maintain current tenant information that would facilitate providing notice to remit rents directly to the lender, such as a current rent roll and copies of the project's leases. | The lender has obtained an assignment for a significant part of the rents. They maintain current tenant information that would facilitate providing notice to the tenants to remit rents directly to the lender, such as current rent roll and copies of the project's leases. | The lender has obtained an assignment for a relatively small part of the rent. The lender has not maintained current tenant information that would facilitate providing notice to the tenants to remit rents directly to the lender, such as current rent roll and copies of the project's leases. | The lender has not obtained an assignment of the leases. |
| 3. Sub-factor: quality of the insurance coverage | Very good quality | Good quality | Appropriate quality | Substandard quality |

***Table 3***

**Assessment criteria for object finance exposures**

| | Category 1 | Category 2 | Category 3 | Category 4 |
|---|---|---|---|---|
| **Factor: financial strength** | | | | |
| 1.Sub-factor: market conditions | Demand is strong and growing, strong entry barriers, low sensitivity to changes in technology and economic outlook. | Demand is strong and stable. Some entry barriers, some sensitivity to changes in technology and economic outlook. | Demand is adequate and stable, limited entry barriers, significant sensitivity to changes in technology and economic outlook. | Demand is weak and declining, vulnerable to changes in technology and economic outlook, highly uncertain environment. |
| 2.Sub-factor: financial ratios, i.e. DSCR or ICR | Strong financial ratios considering the type of asset. Very robust economic assumptions. | Strong/acceptable financial ratios considering the type of asset. Robust project economic assumptions. | Standard financial ratios for the asset type | Aggressive financial ratios considering the type of asse |
| 3.Sub-factor: advance ratio, i.e. loan-to-value (LTV) ratio | Strong LTV ratio considering the type of asset | Strong/good LTV ratio considering the type of asset | Standard LTV ratio for the asset type | Aggressive LTV ratio considering the type of asset |

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| 4.Sub-factor: stress analysis on the basis of the income being generated during the tenor of the loan | Stable long-term revenues, capable of withstanding severely stressed conditions through an economic cycle | Satisfactory short-term revenues. Loan can withstand some financial adversity. Default is only likely under severe economic conditions | Uncertain short-term revenues. Cash flows are vulnerable to stresses that are not uncommon through an economic cycle. The loan may default in an economic downturn | Revenues subject to strong uncertainties; even in normal economic conditions the asset may default, unless conditions improve |
| 5.Sub-factor: market liquidity | Market is structured on a worldwide basis; assets are highly liquid. | Market is worldwide or regional; assets are relatively liquid. | Market is regional with limited prospects in the short term, implying lower liquidity. | Local market and/or poor visibility. Low or no liquidity, particularly on niche markets. |
| **Factor:** **political and legal environment** | | | | |
| 1.Sub-factor: legal and regulatory risks | Jurisdiction is favourable to repossession and enforcement of contracts. | Jurisdiction is favourable to repossession and enforcement of contracts. | Jurisdiction is generally favourable to repossession and enforcement of contracts, even if repossession might be long and/or difficult. | Poor or unstable legal and regulatory environment. Jurisdiction may make repossession and enforcement of contracts lengthy or impossible. |
| 2.Sub-factor: political risk, including transfer risk, considering object type and mitigants | Very low exposure; strong mitigation instruments, if needed | Low exposure; satisfactory mitigation instruments, if needed | Moderate exposure; fair mitigation instruments | High exposure; no or weak mitigation instruments |
| **Factor:** **transaction characteristics** | | | | |
| 1.Sub-factor: amortisation schedule | Amortising debt without bullet repayment | Amortising debt with no or insignificant bullet repayment | Amortising debt repayments with limited bullet payment | Bullet repayment or amortising debt repayments with high bullet repayment |
| 2.Sub-factor: market/cycle and refinancing risk | There is no or very limited exposure to market or cycle risk since the expected cashflows cover all future loan repayments | The exposure to market or cycle risk is limited since the expected cashflows cover the majority of future loan repayments during the tenor of the loan and there are no | There is moderate exposure to market or cycle risk since the expected cashflows cover only a part of future loan repayments | There is significant exposure to market or cycle risk since the expected cashflows cover only a small part of future loan |

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| | during the tenor of the loan and there are no significant delays between the cashflows and the loan repayments.<br>There is no or very low refinancing risk. | significant delays between the cashflows and the loan repayments.<br>There is low refinancing risk. | during the tenor of the loan or there are some significant delays between the cashflows and the loan repayments.<br>Average refinancing risk. | repayments during the tenor of the loan or there are some significant delays between the cashflows and the loan repayments.<br>High refinancing risk. |
| 3.Sub-factor: operating risk | | | | |
| 3.1. Permits/licensing (sub-factor component) | All permits have been obtained; asset meets current and foreseeable safety regulations. | All permits obtained or in the process of being obtained; asset meets current and foreseeable safety regulations. | Most permits obtained or in process of being obtained, outstanding ones considered routine, asset meets current safety regulations. | Problems in obtaining all required permits, part of the planned configuration and/or planned operations might need to be revised. |
| 3.2.Scope and nature of O & M contracts (sub-factor component) | Strong long-term O&M contract, preferably with contractual performance incentives, and/or O&M reserve accounts (if needed) | Long-term O&M contract, and/or O&M reserve accounts (if needed) | Limited O&M contract or O&M reserve account (if needed) | No O&M contract: risk of high operational cost overruns beyond mitigants |
| 3.3. Operator's financial strength, track record in managing the asset type and capability to re-market asset when it comes off-lease (sub-factor component) | Excellent track record and strong re-marketing capability | Satisfactory track record and re-marketing capability | Weak or short track record and uncertain re-marketing capability | No or unknown track record and inability to re-market the asset |
| **Factor:**<br>**asset characteristics** | | | | |
| 1.Sub-factor: configuration, size, design and maintenance (i.e. age, size for a plane) compared to other assets on the same market | Strong advantage in design and maintenance. Configuration is standard such that the object meets a liquid market. | Above average design and maintenance. Standard configuration, maybe with very limited exceptions – such that the object meets a liquid market | Average design and maintenance. Configuration is somewhat specific, and thus might cause a narrower market for the object. | Below average design and maintenance. Asset is near the end of its economic life. Configuration is very specific; the market for the object is very narrow. |

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| 2.Sub-factor: resale value | Current resale value is well above debt value. | Resale value is moderately above debt value. | Resale value is slightly above debt value. | Resale value is below debt value. |
| 3.Sub-factor: sensitivity of the asset value and liquidity to economic cycle | Asset value and liquidity are relatively insensitive to economic cycles. | Asset value and liquidity are sensitive to economic cycles. | Asset value and liquidity are quite sensitive to economic cycles. | Asset value and liquidity are highly sensitive to economic cycles. |
| **Factor:** **strength of sponsor (including public private partnership)** | | | | |
| Sub-factor: sponsors' track record and financial strength | Sponsors with excellent track record and high financial standing | Sponsors with good track record and good financial standing | Sponsors with adequate track record and good financial standing | Sponsors with no or questionable track record and/or financial weaknesses |
| **Factor:** **security package** | | | | |
| 1.Sub-factor: asset control | Legal documentation provides the lender effective control (e.g. a first perfected security interest, or a leasing structure including such security) on the asset, or on the company owning it. | Legal documentation provides the lender effective control (e.g. a perfected security interest, or a leasing structure including such security) on the asset, or on the company owning it. | Legal documentation provides the lender effective control (e.g. a perfected security interest, or a leasing structure including such security) on the asset, or on the company owning it. | The contract provides little security to the lender and leaves room to some risk of losing control on the asse |
| 2.Sub-factor: rights and means at the lender's disposal to monitor the location and condition of the asset | The lender is able to monitor the location and condition of the asset, at any time and place (regular reports, possibility to lead inspections). | The lender is able to monitor the location and condition of the asset, almost at any time and place. | The lender is able to monitor the location and condition of the asset, almost at any time and place. | The lender's ability to monitor the location and condition of the asset are limited. |
| 3.Subfactor: insurance against damages | Strong insurance coverage including collateral damages with top quality insurance companies | Satisfactory insurance coverage (not including collateral damages) with good quality insurance companies | Fair insurance coverage (not including collateral damages) with acceptable quality insurance | Weak insurance coverage (not including collateral damages) or with weak quality insurance |

***Table 4***

**Assessment criteria for commodities finance exposures**

| | Category 1 | Category 2 | Category 3 | Category 4 |
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| **Factor: financial strength** | | | | |
| Sub-factor: the degree of over-collateralisation of trade | Strong | Good | Satisfactory | Weak |
| **Factor: political and legal environment** | | | | |
| 1.Sub-factor: country risk | No country risk | Limited exposure to country risk (in particular, offshore location of reserves in an emerging country) | Exposure to country risk (in particular, offshore location of reserves in an emerging country) | Strong exposure to country risk (in particular, inland reserves in an emerging country) |
| 2.Sub-factor: mitigation of country risks | Very strong mitigation: Strong offshore mechanisms Strategic commodity 1st class buyer | Strong mitigation: Offshore mechanisms Strategic commodity Strong buyer | Acceptable mitigation: Offshore mechanisms Less strategic commodity Acceptable buyer | Only partial mitigation: No offshore mechanisms Non-strategic commodity Weak buyer |
| **Factor: asset characteristics** | | | | |
| Sub-factor: liquidity and susceptibility to damage | Commodity is quoted and can be hedged through futures or OTC instruments. Commodity is not susceptible to damage. | Commodity is quoted and can be hedged through OTC instruments. Commodity is not susceptible to damage. | Commodity is not quoted but is liquid. There is uncertainty about the possibility of hedging. Commodity is not susceptible to damage. | Commodity is not quoted. Liquidity is limited given the size and depth of the market. No appropriate hedging instruments. Commodity is susceptible to damage. |
| **Factor: strength of sponsor (including public private partnership)** | | | | |
| 1.Sub-factor: financial strength of trader | Very strong, relative to trading philosophy and risks | Strong | Adequate | Weak |
| 2.Sub-factor: track record, including ability to manage the logistic process | Extensive experience with the type of transaction in | Sufficient experience with the type of transaction in | Limited experience with the type of transaction in question. Average | Limited or uncertain track record in general. Volatile costs and profits. |

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| | question. Strong record of operating success and cost efficiency. | question. Above average record of operating success and cost efficiency. | record of operating success and cost efficiency. | |
| 3.Sub-factor: trading controls and hedging policies | Strong standards for counterparty selection, hedging, and monitoring | Adequate standards for counterparty selection, hedging, and monitoring | Past deals have experienced no or minor problems | Trader has experienced significant losses on past deals |
| 4.Sub-factor: quality of financial information | Excellent | Good | Satisfactory | Financial disclosure contains some uncertainties or is insufficient |
| **Factor: security package** | | | | |
| 1.Sub-factor: asset control | First perfected security interest provides the lender legal control of the assets at any time if needed. | First perfected security interest provides the lender legal control of the assets at any time if needed. | At some point in the process, there is a rupture in the control of the assets by the lender. The rupture is mitigated by knowledge of the trade process or a third party undertaking as the case may be. | Contract leaves room for some risk of losing control over the assets. Recovery could be jeopardised. |
| 2.Sub-factor: insurance against damages | Strong insurance coverage including collateral damages with top quality insurance companies | Satisfactory insurance coverage (not including collateral damages) with good quality insurance companies | Fair insurance coverage (not including collateral damages) with acceptable quality insurance companies | Weak insurance coverage (not including collateral damages) or with weak quality insurance companies |