



Trg hrvatskih velikana 3, HR-10000 Zagreb  
T. +385 1 4564 555 · F. +385 1 4610 551  
[www.hnb.hr](http://www.hnb.hr)

**The Croatian National Bank hereby adopts and publishes this Methodology pursuant to Article 306 of the Credit Institutions Act (Official Gazette 159/2013, 19/2015, 102/2015, 15/2018, 70/2019, 47/2020, 146/2020, 151/2022 and 145/2024).**

## **METHODOLOGY FOR THE COMPUTATION OF THE NATIONAL REFERENCE RATE (NRR)**

### **1 Introduction**

The National reference rate (NRR) of the average cost of financing of the Croatian banking sector is an implicit interest rate computed and published by the Croatian National Bank (CNB)<sup>1</sup> on its webpage pursuant to Article 306, paragraph (3) of the Credit Institutions Act (Official Gazette 159/2013, 19/2015, 102/2015, 15/2018, 70/2019, 47/2020, 146/2020, **151/2022 and 145/2024**). It serves the role of an index for determination of the variable part of the variable interest rate in the Republic of Croatia.

The NRR is the rate of the average cost of funding of the Croatian banking sector (banks, savings banks and branches of foreign banks<sup>2</sup>; hereinafter referred to as 'banks'), given the reference period under review (3, 6 or 12 months), the type of source (deposits of natural persons, deposits of legal persons from the non-financial sector, all other sources of bank funding) and the relevant currency (euro and US dollar).

According to the scope of funds, there are three types of NRR:

1. **NRR1** – NRR for funds of natural persons (computed for euro)
2. **NRR2** – NRR for funds of natural persons and legal persons from the non-financial sector (computed for euro)
3. **NRR3** – NRR for all funds received by all natural and legal persons, including those from the financial sector (computed for euro and US dollar).

Each of the three NRRs is computed for a reference period of 3, 6 and 12 months. The name of each NRR contains a clear indication of the scope of funds (scope **1**, **2** or **3**), an indication of the duration of the reference period to which the original data based on which the NRR is computed refer (**3M**, **6M** or **12M**)

---

<sup>1</sup> The CNB computes and publishes the NRR beginning with the reporting date of 31 March 2020. By the reporting date of 31 December 2019 inclusive, the NRR had been computed and published by the Croatian Banking Association (HUB), based on the statistical data published on the CNB's webpage in the file named ["Table SP5: Costs of banks' funding"](#).

<sup>2</sup> The data of branches of foreign banks were gradually included in the NRR computation in 2021 and 2022, as follows: 1) the published 3M NRR includes the data of branches of foreign banks starting from the computation for the third quarter of 2021; 2) the published 6M NRR includes the data of branches of foreign banks starting from the computation for the fourth quarter of 2021; 3) the published 12M NRR includes the data of branches of foreign banks starting from the computation for the second quarter of 2022.

and an indication of the currency of funds (**EUR, USD**), a total of 12 indices<sup>3</sup>. Funds in euro indexed to the US dollar are included in the US dollar funds.

For instance, the six-month NRR computed on the basis of data on the deposits of natural and legal persons denominated in US dollar and in euro, with a currency clause in US dollars is indicated as "**6M NRR3 USD**".

## 2 Costs of banks' funding

**Indicators for NRR computation.** To compute the NRR, the CNB computes, on a quarterly basis, the indicators of interest expenses of the Croatian banking sector for the main funding over the preceding quarter (hereinafter referred to as 'computation quarter'), as well as the indicators of the position of such funding as at the end of each month of the computation quarter to which the interest expenses refer. The data on positions as at the end of the month are reported on a gross basis and refer to the principal (interest excluded).

**Main funding.** Main funding includes financial liabilities allocated to the portfolio carried at amortised cost, excluding the following funding: electronic money, liabilities arising from financial lease, liabilities based on fees, liabilities based on announced dividend, liabilities to employees and other (unclassified) liabilities. They also exclude the funding denominated in or indexed to currencies other than the euro and the US dollar<sup>4</sup>. The scope of financial instruments depends on the scope of the respective NRR. The scope of funds in Scope 1 (Natural persons) and Scope 2 (Natural persons and non-financial sectors) is limited to transaction accounts and deposits, only for those that cannot be classified as a subordinated or hybrid instrument in banks' liabilities and that are not margin deposits. Scope 1 includes only the funding of natural persons, both domestic and foreign. Scope 2 includes the funding of both natural and legal persons, domestic and foreign, except for legal persons from financial sectors. Scope 3 (All natural and legal persons) includes all natural and legal persons (including those from financial sectors), domestic and foreign, and all main funding (transaction accounts, all deposits, including margin deposits, hybrid and subordinated instruments as well as loans received and debt securities issued). Perpetual debt instruments are not included in the scope of instruments used in the computation of the NRR.

**Division of indicators.** Indicators are computed for three scopes (Natural persons, Natural persons and non-financial sectors and All legal and natural persons) and two currencies (euro and US dollar). Indicators for US dollar also include banks' funding in euro indexed to US dollar.

**Sources of data.** Indicators are computed on the basis of data from non-consolidated preliminary reports (NP) for banks, i.e. monthly and quarterly data submitted by banks to the CNB as part of the "AA – Balance sheet and off-balance sheet items" and "RA – Income statement" reports as set out in the Decision on statistical and supervisory reporting. To compute interest expenses, quarterly indicators are first computed for each reporting institution separately (by subtracting the amount reported in the preceding computation quarter from the amount reported for the reference period, except for the first quarter in a calendar year)

---

<sup>3</sup> In the past, the CNB computed 24 indices, 9 for HRK, 9 for EUR, 3 for USD and 3 for CHF. The last computed and published values for HRK indices refer to the data for the reporting period of 30 September 2022, while the last computed and published values for CHF relate to the data for the reporting period of 30 June 2022.

<sup>4</sup> With the exception of the kuna and Swiss franc currencies in the period mentioned in footnote 3.

and then by calculating their sum (aggregating them). To compute funding positions, the sum of data is computed (data are aggregated) for all reporting institutions in a given month.

**Population covered.** Banks, savings banks and branches of foreign banks constitute the reporting population for the computation of the NRR. Branches of foreign banks include branches of credit institutions from other member states which provide services within the territory of the Republic of Croatia and branches of third-country credit institutions authorised by the CNB to establish a branch in the territory of the Republic of Croatia. Housing savings banks are not included in the NRR computation. Furthermore, only the data of banks operating over the entire computation quarter (from the first to the last day of the quarter) are included in the computation of monthly aggregates of main funding and quarterly aggregates of interest expenses on main funding, i.e. the data of banks that ceased or began to operate in the computation quarter (due to bankruptcy, liquidation, merger, acquisition, etc.) are excluded from the computation.

**Data covered.** Computation is performed based on the data available at the moment of computation provided they have passed all logical input data checks prescribed in Section 4.1 of this Methodology. If the data are missing or fail to pass a logical check at the moment of computation and there is no explanation provided by the bank for the failure, the data are replaced with the relevant data from the quarter preceding the computation quarter. In all other cases, the expert judgement is used prior to NRR computation to decide whether such input data may nevertheless be used in the computation or whether it is better to replace them with relevant data from the quarter preceding the computation quarter.

The technical specification of the computation of indicators is provided below:

	Scope 1	Scope 2	Scope 3
	Natural persons	Natural persons and non-financial sectors	All natural and legal persons
<b>Institutions</b>	Banks, savings banks and branches of foreign banks		
<b>Relevant record</b>	AA (for funding) and RA (for expenses)		
<b>Relevant report</b>	NP		
<b>Reporting date</b>	AA reports: last day of each of the three months in the computation quarter RA report: last day of the computation quarter		
<b>Portfolio</b>	ATR		
<b>Amount type</b>	AA report: 1 + 2 – 7 + 8 + 12 RA report: 53		
<b>Instruments</b>	P0201, P0202, P0203, P0204, P0205, P0206		P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0209, P0211, P0212, P0213, P0501, P0502, P0505, P0506
<b>Capital characteristics</b>	–, N, D		all except E
<b>Country</b>	All countries		
<b>Sector</b>	14	11, 13, 14, 15	11, 12, 13, 14, 15
<b>Currencies</b>	<b>euro:</b> EUR without indexing to f/c		<b>euro:</b> EUR without indexing to f/c

	Scope 1	Scope 2	Scope 3
	Natural persons	Natural persons and non-financial sectors	All natural and legal persons
			US dollar: (USD) + (EUR indexed to USD)

The following applies:

**Relevant report:**

**NP** – indicates that the report concerned is a non-consolidated preliminary (unaudited) report

**Amount type:**

"1" – outstanding amount; "2" – overdue amount; "7" – discount; "8" – premium; "12" – embedded derivative – fair value; "53" – cumulative interest expense by interest-bearing instrument

**Portfolio:**

**ATR** – portfolio of financial instruments measured at amortised cost (IFRS 9, paragraphs 4.1.2 and 4.2.1)

**Instruments:**

**P0201** – Transaction accounts; **P0202** – Savings deposits; **P0203** – Time deposits; **P0204** – Deposits with notice period; **P0205** – Restricted deposits; **P0206** – Blocked deposits; **P0207** – Loans based on overdrafts on transaction accounts; **P0208** – Received overnight loans; **P0209** – Reverse repo loans; **P0211** – Received syndicated loans; **P0212** – Other received loans; **P0213** – Margin deposits; **P0501** – Bonds; **P0502** – Commercial papers; **P0505** – Certificates of deposit; **P0506** – Non-transferable instruments (debt securities)

Non-interest bearing instruments and instruments that are not relevant are excluded from the computation: Fees and provisions payable (P0602), Declared dividends payable (P1002), Derivative financial instruments payable (P9998), Other liabilities (P9999), Financial lease (P0210), Operating lease (P9980) and Electronic money (P0301, P0302)

**Capital characteristics:**

"–" – not applicable

"N" – instrument does not have capital characteristics

"D" – where, on the liabilities side, a reporting institution reports an instrument having the characteristics of capital in accordance with the description of modality "A" which was not referred to in the Decision on own funds of credit institutions or is not recognised under Regulation (EU) No 575/2013

"E" – only for instruments on the liabilities side with no fixed maturity, perpetual bonds and/or similar instruments having the characteristics of additional own funds according to Regulation (EU) No 575/2013.

**Sector:**

"11" – non-financial corporations; "12" – financial institutions; "13" – government; "14" – households; "15" – non-profit institutions serving households

Detailed descriptions of attributes referred to in the table above are available in the CNB's [Decision on statistical and supervisory reporting](#).

### 3 Computation of indicators

Only the data of banks that operated over the entire computation quarter are included in the computation of indicators.

### **3.1 Interest expenses**

The amount of interest expenses on main funding in a computation quarter is computed in the following manner:

Amounts are taken from the "RA" report. Data are available on a quarterly basis. First, cumulative interest expenses are computed and their value from the period ending at the end of the computation quarter is subtracted from the amount for the period ending at the end of the previous quarter. In this way, "quarterly interest expenses" are computed in the computation quarter separately for each bank in line with the rules set out in the preceding section of this Methodology. By way of exception, "cumulative interest expenses" equal "quarterly interest expenses" if the computation quarter is the first quarter of a calendar year. Finally, by calculating the sum of the "quarterly interest expenses" their aggregate value is computed for all banks in the computation quarter.

The computation results in four quarterly values of aggregate "quarterly interest expenses" for the computation quarter.

### **3.2 Main funding**

Main funding amounts in the computation quarter are computed in the following manner:

The amounts are taken from the "AA" report. Data are available on a monthly basis. For each bank, the "position amount" is computed first for each month in the computation quarter, after which the monthly aggregate of such "position amounts" is computed, also separately for each month in the computation quarter.

The computation results in four monthly values of aggregate "position amounts" for each of the three months of the computation quarter.

## **4 Data checking procedures**

### **4.1 Checks prior to NRR computation**

The CNB performs the following input data checks: the first level of formal and logical input data checks is an integral part of the Decision on statistical and supervisory reporting. These checks are carried out immediately upon the receipt of files from reporting institutions at the point of entry.

The second level of data checks consists of verifying whether all banks delivered "AA" and "RA" reports in the computation quarter in the manner and within the time limits set out in the Decision on statistical and supervisory reporting. By way of exception, this check, as well as other checks, do not apply to banks that did not operate over the entire duration of the quarter under review (because they began or ceased to operate in that quarter) as they are not included in the population covered by the computation of the NRR in the observed computation quarter.

The third level of data checks consists of additional input data checks, which include the verification of the temporal consistency of a bank's interest expenses, and are conducted as part of the supervisory review of the validity of data. Interest expenses in the income statement are verified to determine whether they are lower in the computation quarter than in the preceding quarter, with the exception of the first quarter of the year for which this verification is meaningless. The check is performed at the level of combination of the following characteristics: customer type, capital characteristics, instrument, currency, indexation and portfolio.

The fourth level of checks consists of those performed individually for each bank at the level of combination of currency and scope referred to in Section 2 of this Methodology:

- 4.1.1 For each bank, data on quarterly interest expenses are checked to determine whether they are meaningfully related to the data on relevant funding. Specifically, if funding is reported in the computation quarter in a particular combination of scope and currency, quarterly expenses are expected for the same combination, and vice versa. The check is performed by calculating, for each bank, quarterly interest expenses and the average funding position for all months in the computation quarter. Where the data fail to pass the check, the CNB will request of the bank to provide a clear explanation of the difference and (following appropriate verification) to confirm the accuracy of the data relevant for the given combination. The explanation of the reasoned difference should focus on the largest and the most important changes that led to the mismatch and describe them in detail.
- 4.1.2 The data are checked to see whether a bank participates with more than 25% of aggregate quarterly interest expenses of the population covered or with more than 25% of aggregate average funding positions of the population covered with regard to any combination of currency and scope. Where this is the case, in the computation quarter, the CNB will request of the bank to confirm the accuracy of data relevant for the given combination.
- 4.1.3 The data are checked to see whether the ratio between a bank's quarterly expenses and the average position of relevant funding to which the expenses refer at the level of a given combination of currency and scope in the computation quarter is much lower or much higher than the appropriate ratio at system level (the ratio between aggregate expenses and the aggregate average funding position for the same combination of currency and scope in the same quarter), in the following manner:
  - 1) The standard deviation of the mentioned ratios in the population of banks is computed for each currency and scope. The highest and the lowest value of the ratio in the population of banks are excluded from the computation of the standard deviation.
  - 2) Where the ratio for a bank is more than one and a half of the standard deviation lower (lower limit) or higher (upper limit) than the appropriate ratio at system level.
  - 3) In all cases above under (2), the CNB expects from the bank to provide the possible reason for the deviation and (following appropriate verification) to confirm the accuracy of the data relevant for the given combination. In this case, it is acceptable to provide the possible reasons for the deviation because it concerns the comparison of a bank's practices and reference values in the system.
  - 4) Irrespective of the defined range of tolerated values, the CNB may also exclude additional high or low levels from the computation of the standard deviation if judged to have a major impact on the range of tolerated values, all with the aim of also covering additional values that should be subject to verification.
- 4.1.4 The data are checked to see whether the ratio between a bank's quarterly expenses and the average position of relevant funding at the level of a given combination of currency and scope in the computation quarter is more than 5% higher or more than 5% lower relative to the same ratio for the average of the covered population computed excluding the data

for that bank. Where a bank has a ratio that exceeds the threshold of +5% or –5%, the CNB expects from the bank to provide the possible reason for the deviation and (following appropriate verification) to confirm the accuracy of the data relevant for the given combination. In this case, it is acceptable to provide the possible reasons for the deviation because it concerns the comparison of a bank's practices and reference values in the system.

- 4.1.5 The temporal consistency of monthly funding data is checked. The rate of change relative to the preceding month is computed for all three months in the computation quarter at bank, month, scope and funding currency level to determine whether the rate of change is higher than the upper limit or lower than the lower limit in one of these months. For euro the upper limit is +5% and the lower limit is –5%; for the US dollar the upper limit is +10% and the lower limit is –10%.

Where a bank's rate of change exceeds the defined thresholds, the CNB will request of the bank to provide a clear explanation of the deviation and (following appropriate verification) to confirm the accuracy of the data relevant for the given combination. The explanation of the reasoned deviation should focus on the largest and the most important changes that led to the mismatch and describe them in detail.

- 4.1.6 The temporal consistency of data on interest expenses is checked in the following manner:
- 1) Quarterly interest expenses according to scope and currency are computed for the computation quarter at bank level and the rate of change is determined relative to the preceding quarter.
  - 2) The rate of change is also computed at system level (rate of change of aggregate expenses) as well as the standard deviation of the mentioned rate of change in the population of banks for each currency and scope, and the highest and the lowest value of the rate in the population of banks are excluded from the computation of the standard deviation.
  - 3) At the level of currency and scope, the bank has not satisfied the check if any of the following two conditions are met:
    - bank's rate of change is by more than one and a half standard deviation lower or higher than the appropriate rate at system level,
    - bank's rate of change equals or is higher than 15%.
  - 4) In all of the above cases under (3), the CNB expects from the bank to provide the possible reason for the deviation and (following appropriate verification) to confirm the accuracy of the data relevant for the given combination. In this case, it is acceptable to provide the possible reasons for the deviation because it concerns the comparison of a bank's practices and reference values in the system.
  - 5) Irrespective of the defined range of tolerated values, the CNB may also exclude additional high or low levels from the computation of the standard deviation if judged to have a major impact on the range of tolerated values, all with the aim of also covering additional values that should be subject to verification.

Where a bank's appropriate verification establishes that the bank is unable to confirm the accuracy of data and the previously submitted data should be corrected, the bank is expected to submit the correction and the appropriate explanation.

By way of exception, where non-compliance with any of the checks from 4.1.2 to 4.1.6 with regard to a combination of scope and currency is established for a bank in the computation quarter, the CNB will not request of the bank to confirm the accuracy of the data or to provide a statement on non-compliance where all three of the following conditions are met:



1. a bank participates with less than 1% in the aggregate average funding position of the population covered with regard to this combination of scope and currency in the computation period;
2. a bank participates with less than 1% in aggregate quarterly interest expenses of the population covered with regard to this combination of scope and currency in the computation period; and
3. a bank has no influence on the change of any of the NRR values (where for the observed reference period the NRR calculated including the bank's data is equal to the NRR calculated without including the bank's data, rounded to two decimal places).

The described checking procedure carried out by the Croatian National Bank prior to the publication of the NRR ensures the quality of input data and timely publication of the NRR. However, since a certain number of errors in the data may, be detected after the deadline for the submission of quarterly reports on the basis of which the NRR is computed, either by banks or by the Croatian National Bank, the Croatian National Bank shall take into account the corrections to quarterly reports relating to the reference period for the computation of the NRR in the same way as the original data, i.e. in accordance with the provisions of Section 4 of this Methodology, until the end of the time limit for the last data check before the computation of the NRR.

#### ***4.2 Additional checks of input data for accuracy***

The fifth level of checks consists of those performed individually for each bank at the level of a combination of currency and scope referred to in Section 2 of this Methodology, which, however, do not have any impact on the NRR computation:

4.2.1 After the publication of the NRR for the second quarter of the current year and the fourth quarter of the previous year, it is verified that for the individual bank the data on quarterly interest expenses correlate with the data on the related sources of funds<sup>5</sup>, in the following manner:

- 1) for each bank, the data on quarterly interest expenses and average quarterly sources of funds are correlated in a combination of scope, instrument, sector, capital characteristics and currency (EUR or USD) for the reference quarter;
- 2) at the level of details referred to in sub-item 1 the bank has not satisfied the check if any of the following three conditions is met:
  - in a combination of scope, instrument, sector and currency the bank's average quarterly sources of funds are higher than zero, but its quarterly expenses equal zero;
  - in a combination of scope, instrument, sector and currency the bank's quarterly expenses are higher than zero, but its average quarterly sources of funds equal zero;
  - in a combination of scope, instrument, sector and currency the bank has negative quarterly expenses;
- 3) for all the cases identified in sub-item 2, the CNB will request of the bank to provide a clear explanation of the deviation and (following appropriate verification) to confirm the accuracy of the data relevant for the given combination.
- 4) the CNB will not request an explanation of the deviation from the bank if its average quarterly sources of funds or quarterly interest expenses in combinations identified in accordance with sub-item 2 are less than one euro.

---

<sup>5</sup> In contrast to the check under 4.1.1, this check additionally covers the instruments, capital characteristics and sectors of counterparties.



4.2.2 The consistency of reporting on interest expenses and on the main sources of funds for the end of the year is verified in the following manner:

- 1) after the legal time limit for the delivery of audited reports expires, cumulative interest expenses (i.e. for the entire year) and the amount of the source of funds as at 31 December are compared at the level of a combination of currency and scope, in such a manner that audited data are compared with preliminary data;
- 2) where, after the comparison of data, it is determined that audited data differ from preliminary data by more than 1%, the CNB will request of the bank to provide a clear explanation of the deviation and (following appropriate verification) to confirm the accuracy of the data relevant for the given combination; the explanation of the reasoned deviation should focus on the largest or the most important changes that led to the mismatch and describe them in detail;
- 3) where necessary, the CNB initiates the supervision of internal controls established in the systems of preparation of the bank's supervisory reports.

#### **4.3 Persons submitting explanations**

The Croatian National Bank shall accept explanations pertaining to checks submitted in accordance with Sections 4.1 and 4.2 of this Methodology only from persons appointed by the competent member of the bank's management board or the person competent to represent a foreign founder in the operation of the branch.

### **5 NRR computation**

The NRR is computed in the following manner for a currency, funding scope and reference period to which the data refer:

- total banking sector interest expenses are computed for the entire period with regard to the selected currency and funding scope;
- the average main funding position is computed for the entire period with regard to the selected currency and funding scope;
- the ratio between the previously computed total interest expenses and the average main funding position is computed and then divided by the total number of days in the entire period and multiplied by 365 (or 366 if the reference period includes leap year February) to obtain the NRR expressed on an annual basis.

The NRR is computed according to the following generic formula:

$$NRR(N, S, C) = \frac{\text{Total expenses } (N, S, C)}{\text{Funding average } (N, S, C)} \times \frac{365 \text{ or } 366}{\text{Number of days } (N)}$$

where the following applies:

N – number of months for which the NRR is computed (3, 6 or 12)

S – scope of funding and expenses (1, 2 or 3)

C – currency of funding and expenses (EUR or USD; where C=USD, then S=3)

Average funding position – regular arithmetic average of relevant data (last N months)

Total expenses – regular sum of relevant data (last N/3 quarters)

Number of days (N) – actual number of days in the last N months

The NRR is computed by applying the convention of the actual number of days, and in each step of the computation, all values are rounded to two decimal places (euros and cents).

Example:

The computation of 6M NRR2 EUR as part of the release of data on the costs of banks' funding for the first quarter of 2022 would be performed as follows:

$NRR(6, 2, \text{EUR}) =$

$$\frac{[(\text{costs in the first quarter of 2022} + \text{costs in the last quarter of 2021 for euro funding of natural persons and legal persons from the non-financial sector}) / (\text{sum of funding positions at the end of each of the first three months of 2022 and the last three months of 2021 for funding of natural persons and legal persons from the non-financial sector}) / 6]}{[(\text{number of days from (including) 1 October 2021 to (including) 31 March 2022}) \times 365]}$$

the "computation quarter", which for this NRR equals the first quarter of 2022, is also published for information to users (indicated as 2022/I) as well as the "reference period" that for this NRR equals the period from 1/10/2021 – 31/3/2022.

## 6 Publication

In the file "[National reference rate \(NRR\)](#)", the CNB publishes on its website aggregated indicators of costs of financing ("EXPENSES" sheet) and funding sources to which these costs refer ("FUNDING" sheet) as well as the NRR computed for the observed computation quarter ("3M NRR", "6M NRR" and "12M NRR" sheets). The new values are published according to this Methodology, while keeping the old values (for HRK and CHF) previously computed and published according to former versions of this Methodology in the same file, i.e. they are only shown for those computation quarters for which their values were calculated previously<sup>6</sup>. The monetary amounts on Expenses and Funding are expressed in euro in this file, using the fixed irrevocable conversion rate to convert the previously published amounts from kuna to euro. New data are published on a quarterly basis in line with the publication calendar available on the CNB's website.

The file is published at [www.hnb.hr/en/nrr](http://www.hnb.hr/en/nrr) on the CNB website.

It contains quarterly costs, end-of-month stocks of funding sources and the NRR computed for the reference periods starting from the 1st quarter of 2020. Explanations of any interventions by the CNB in source data for the computation of any of the published aggregated indicators of costs or sources of funding are also published in the same file, in line with this Methodology, without specifying the name of the banks concerned.

---

<sup>6</sup> Pursuant to the Act on the Introduction of the Euro as the Official Currency in the Republic of Croatia, the CNB published on 29 November 2022 the provisional NRR (Article 60, paragraph (1)), computed on the basis of all sources of funds and costs in the kuna (excluding currency clause) and the euro (including the kuna with euro currency clause), for all coverage and maturities and for all reference periods, i.e. computation quarters, for which the CNB has previously computed and published the NRR.

The CNB computes the NRR based on the data available to it at the moment of computation. The CNB undertakes all measures within its competence, as described in Sections 4, 7 and 8 of this Methodology, to ensure that the data available to the CNB at the moment of NRR computation are accurate and complete. Once published, the data are final.

## **7 Internal control system**

The CNB expects from banks to establish an adequate internal control system to ensure the quality of data as a basis for their computation and to prevent conflict of interest.

First, the CNB expects from the bank to establish internal procedures and control systems that guarantee that the input data submitted to the CNB are complete, accurate and reliable. This includes verification before data are submitted to the CNB as well as data review after their submission to the CNB.

Second, the CNB expects from the bank to establish an internal system connected with the authorisations for the submission of reports to the CNB. This includes procedures for appointing the employees who are authorised to submit data to the CNB on behalf of the bank (also including, where necessary, the manner in which the senior person gives approval for such a submission), the system of informing employees about relevant internal procedures and the system of monitoring whether these persons adhere to the internal procedures.

Third, the CNB expects from the bank to adopt measures for managing conflicts of interest. This includes, where necessary, recognising a potential conflict of interest (e.g. data manipulation with the aim to manipulate the NRR) and defining measures to prevent it.

Fourth, the CNB expects from the bank to establish adequate internal notification systems. This includes the establishment of internal procedures for reporting on misuse or attempted misuse of input data, the establishment of internal procedures for reporting on operational issues and keeping a record on the communication connected with the submission of input data to the CNB, including any information used for the entry of data and information about any existing or potential conflict of interest.

If the bank fails to fulfil the described expectations with regard to the establishment of an appropriate system of internal controls on which the NRR computation is based and prevents conflict of interest linked to NRR computation, the CNB may undertake appropriate activities in accordance with its powers.

## **8 Internal procedures used by the CNB to ensure legal compliance of NRR computation**

Internal procedures used by the CNB to ensure the legal compliance of NRR computation may be classified into three categories.

First, the CNB performs the checks of input data used in NRR computation and referred to in Section 4 of this Methodology. Where some data fail to pass the checks and the bank concerned fails to deliver a correction of such data, a special body within the CNB decides on the manner in which the data are to be treated in NRR computation. In doing so, the body relies on the comments provided by banks whose data failed to pass some checks and on the analysis and judgement of CNB's expert services responsible for the analysis of bank reports. In that way, the CNB ensures that all data relevant for the accurate quantification

of average costs of funding of the Croatian banking sector are included in NRR computation and that unreliable data or data that could distort the quantification are excluded from the computation.

Second, the CNB established internal procedures for the assessment and prevention of conflict of interest to which CNB employees linked to NRR computation could be exposed should they, or persons close to them, have credit obligations connected with interest rates that depend on one or more NRR indexes. Such potential conflicts of interest are subject to ongoing assessment in line with the Code of Ethics of the CNB's Employees.

Third, the procedures used to check the data used for the NRR computation, as well as the NRR computation itself, are subject to regular audit by the Internal Audit Office of the CNB to ensure their compliance with global best practices.

## **9 Entry into force**

This Methodology shall enter into force on 1 January 2026.

Governor  
**Boris Vujčić**

Ref. No.: 450-091/12-25/BV  
Zagreb, 23 December 2025