

NBG Regulation on Calculation of the TIBR Indices

Article 1. Definition of TIBR Indices

1. TIBR indices regulation describes the criteria for interbank transactions used in the calculation of TIBR indices, as well as the calculation, publication and other procedural issues of the TIBR indices.
2. The TIBR indices of the Georgian interbank money market are determined based on the GEL interest rates operating in the interbank money market of Georgia. Indices are indicative indicator of the GEL money market interest rates and includes:
 - a) Tbilisi Interbank Interest Rate - TIBR Rate;
 - b) Tbilisi Interbank Term Interest Rate –TIBR Term Rate;
 - c) Tbilisi Interbank Interest Rate Compounding Index – TIBR CI.
3. TIBR Rate is the weighted average interest rate on overnight unsecured loans issued in the national currency between commercial banks operating in Georgia (hereinafter interbank).
4. TIBR Term Rate is rate calculated using backward looking term rate compounding methodology based/linked to the historical TIBR rate.
5. The TIBR CI is a TIBR interest rate calculated over a period of time by a compound interest accrual technique.

Article 2. Eligible Interbank Trades for TIBR Rate Calculation

1. Interbank trades, which meets the following criteria are eligible for TIBR Rate calculation:
 - a) Trades are unsecured overnight Loans/Deposit;
 - b) Trades are in national currency;
 - c) Trades are uncollateralized;
 - d) Trades are conducted on Bloomberg trading system;
 - e) Trades are made with same settlement date;
 - f) Settlement of the conducted trades are done during the operational hours of Real Time Gross Settlement (RTGS) system of National Bank of Georgia (NBG). RTGS operational hours is defined by the RTGS system rules.
2. TIBR rate calculation does not include s.c. Deposit SWAP trades (exchange of two deposits in two currencies between parties). If the identification of the Deposit SWAP transaction requires additional clarification, the staff of the NBG requires additional information from treasuries of respective commercial banks.

Article 3. TIBR Rate Calculation Methodology

1. Every business day, NBG receives conducted interbank trades of the current business day from the FXTB<GO> page of Bloomberg system.
2. For TIBR Rate calculation purposes, from the conducted trades only those trades are taken into consideration, which satisfy the requirements of the 2nd article of this regulation.
3. Using the eligible trades for TIBR Rate calculation, NBG acts as following:
 - a) All eligible transactions that took place on current business day are ranked from the smallest to the largest with respect to the nominal interest rate of each transaction.
 - b) The top and the bottom 15 percent of the transactions are detected as outliers and removed from the observations. Should 15 percent of the total number of transactions be not a whole number, then the calculated value is rounded to the nearest whole number.
 - c) TIBR Rate is calculated as the weighted average of the remaining transactions.
 - d) Weighted average interest rate is computed as follows:

$$\text{TIBR} = \sum_i^n Ri \frac{Vi}{V}$$

Where:

Vi- is the volume of the trade;

Ri - is the interest rate of the trade;

V - is the total volume of the trades made for the day.

- e) Calculated TIBR Rate is reported on an act/365 day count convention and is displayed to two decimal places.

Article 4. TIBR Term Rate Calculation Methodology

TIBR Term Rate Indices are calculated using following formula:

$$\left[\prod_{i=1}^{d_o} \left(1 + \frac{\text{TIBR} \times n_i}{365} \right) - 1 \right] \times \frac{365}{d}$$

Where:

d - is the number of calendar days in the relevant Interest Period;

d_o - is the number of business days in the relevant interest period;

i - is a series of whole numbers from one to d_o, each representing the relevant business day in chronological order from, and including, the first business day in the relevant interest period;

n_i - for any day "i", means the number of calendar days from and including such day "i" up to but excluding the following business day;

Article 5. TIBR CI and TIBR Compounded Interest Rate Calculation Methodology

1. The TIBR CI is calculated based on the TIBR rate.
2. The TIBR CI is a TIBR rate calculated using a compound interest accrual method over a period of time, with an initial rate of 100. The initial indicator is the TIBR rate as of August 1, 2018, when the NBG started publishing the updated TIBR rate.
3. The TIBR CI reflects the impact of compound interest accrual on each business day at the TIBR rate and allows the result of complex interest accrual at the TIBR rate to be calculated standardly and easily over a period of time.
4. TIBR CI is calculated using following formula:

$$TIBR CI_i = TIBR CI_{i-1} \times \left(1 + \frac{TIBR_{i-1} \times d_{i-1}}{365}\right)$$

Where:

$TIBR CI_i$ - is the TIBR compounding index for i business day, published on the i business day, displayed to eight decimal places;

$TIBR CI_{i-1}$ - is the TIBR compounding index for i-1 business day, published on i-1 business day, displayed to eight decimal places;

$TIBR_{i-1}$ is the TIBR rate for i-1 business day and published i business day;

d_{i-1} is the number of calendar days from i-1 business day to i business day, during which $TIBR_{i-1}$ applies.

5. The TIBR CI rate for any period can be calculated using the TIBR CI values for the start and end dates of this period using the following formula:

$$TIBR CR_{Period} = \left[\frac{TIBR CI_{End date}}{TIBR CI_{Start date}} - 1 \right] \times \frac{365}{T}$$

Where:

The $TIBR CR_{Period}$ - is the TIBR compounded interest rate for the calculation period, displayed to four decimal places;

$TIBR CI_{End date}$ - is the TIBR compounding index for the last day of the calculation period;

$TIBR CI_{Start date}$ - is the TIBR compounding index from the day of the calculation period;

T - is the number of days in the calculation period.

Article 6. TIBR Rate Contingency Plans

1. In the case of having less than 5 trades and/or the total volume of the eligible trades is less than 20 mln GEL, NBG calculates the TIBR rate using a contingency methodology.
2. According the first contingency plan, TIBR rate is computed from BID/ASK interest rates of Interbank loans quoted by commercial banks in Bloomberg system as following:
 - a) Georgian commercial banks` overnight unsecured BID/ASK quotations, updated between 17:00 and 18:00 on Bloomberg Page GEDR1T <GO>, are used for the calculation of TBIR rate.
 - b) All BID quotations are ranked from the smallest to the largest with respect to the quoted nominal interest rates. The two smallest and the two largest quotations are removed from the observations, and simple average of the remaining BID quotations is calculated as the average BID rate.
 - c) All ASK quotations are ranked from the smallest to the largest with respect to the quoted nominal interest rates. The two smallest and the two largest quotations are removed from the observations, and simple average of the remaining ASK quotations is calculated as the average ASK rate.
 - d) TIBR rate is computed as arithmetic mean of BID average rate and ASK average rate for a given day and published.
3. If there are less than 5 BID/ASK rates on interbank loans updated between 17:00 and 18:00 on Bloomberg page GEDR1T Curncy <GO>, NBG uses the second contingency plan.
4. According to the second contingency plan, TIBR rate is calculated as the level of NBG Monetary Policy Rate plus the mean of the spread differences of TIBR index to NBG Monetary Policy Rate over the previous 3 publication days.

Article 7. Publication of TIBR Indices

1. On every business day, no later than 9 a.m. NBG:
 - a) Publishes the previous business day TIBR indices on Bloomberg page NBGB <GO>, which is available to all its terminal users;
 - b) Publishes the previous business day TIBR Indices on NBG web-site.
2. After publication, TIBR Indices are final and any change is prohibited.
3. However, if NBG discovers errors in TIBR Indices calculation, where revised data is three or more basis points (>0.03%) different from the earlier calculated and published TIBR Indices, on the same day NBG corrects the TIBR Indices and publishes them. Corrected TIBR Indices are published once for a given day, no later than 10 a.m. of next business day with "corrected" status.
4. In cases where TIBR Indices calculation is not possible due to some technical circumstances it is possible to calculate those rates on following business day no later than 10 a.m..

Article 8. TIBR Indices Audit and Regulation Changes

1. Once a year, NBG Internal Audit reviews the accuracy of TIBR Indices calculation and publication according its methodology.

2. Once a year, NBG reviews TIBR Indices calculation methodology in order to compare and evaluate whether that methodology reflects the current market practices.
3. If NBG determines, that TIBR Indices calculation methodology does not reflect market reality and market demand, NBG makes relevant changes in this regulation after consultation with interbank market participants.