

THE IMPORTANCE AND EVOLUTION OF THE ROBOR REFERENCE RATE

HAPENCIUC SORIN VASILE¹, HARANGUȘ DANIELA*¹

¹ "Aurel Vlaicu" University of Arad, Faculty of Economic Sciences, Romania

*Corresponding author's e-mail: d_harangus@yahoo.com

Abstract: Romanian Interbank Offer Rate (ROBOR) influences variable interest rates on bank loans, therefore the cost of financing resources. Lately, the growth of the ROBOR was influenced by contextual factors (market-related factors) as well as by internal or external factors. Among the contextual factors, the best known are: the need for liquidity and the state need to borrow to cover budget deficit. This research aims to analyze the dynamic evolution of ROBOR reference rate and its impact on bank lending. The role of the NBR as a regulatory and supervisory authority in managing interest as a monetary policy instrument is also analyzed.

Key words: ROBOR, interest rates, bank credits, banks

INTRODUCTION

In the Romanian banking system a topical issue is the evolution of the ROBOR reference rate, as well as its influence on the variable interest rates on bank loans. Thus it influences the cost of funding resources. Each country has its own monetary market and its own reference rates, which are included in the calculation formulas of variable interest rates on loans in their national currency [3].

The Romanian Interbank Offer Rate (ROBOR) represents the benchmark of the interbank money market for placed deposits, or more precisely, the average interest rate at which Romanian banks lend to each other.

Deposits placed are banks' liquidity offer on the interbank money market. There are 10 banks participating in determining the index value; these are selected according to the performance criteria and their list is updated every 6 months.

This research aims to dynamically analyze the evolution of the ROBOR reference rate and its impact on interest rates on bank loans. This rate is added to the interest charged by the bank, which represents the bank's gain or profit. Customers who wish to contract credits should also take into account this ROBOR reference rate. It is added to the interest rate charged by the bank, so the person who wants to take a credit must repay more money to the bank.

We also analyzed the role of the National Bank of Romania as a regulatory and supervisory authority in managing interest rates as monetary policy instruments [5]. As regard to lending policies, commercial banks must take into account the ROBOR index, published by the National Bank of Romania.

In the Romanian economic environment, the pessimistic scenarios regarding the evolution of the ROBOR reference rate have created many tensions, uncertainties and risks for customers who wanted to access bank loans.

MATERIALS AND METHODS

In order to carry out this analysis we used the following research methods: analysis and synthesis, induction and deduction, data collection, classification, systematization, comparison, generalization, scientific abstraction, as well as identifying rules and defining the principles for determining ROBOR reference rates.

We selected and analyzed the national indices (ROBOR, LIBOR, EURIBOR, and so on), the currency to which they refer, as well as the number of participants required to determine them.

The ROBOR reference rates and the Agreements of participation for credit institutions have been identified and analyzed [4].

We analyzed the mechanism for establishing the ROBOR reference rates for deposits in Lei on the interbank monetary market as well as the way in which ROBOR is included in the formula for calculating variable interest rates on bank loans.

The internal, external and conjectural factors that influence the overall tendency of the monetary market have been identified and analyzed. All these factors led to the recent increase in the ROBOR index. Conjectural factors were presented in detail, emphasizing their influence on the ROBOR reference rates. We also analyzed the structure, significance, representativeness, importance and influence of these factors.

We performed the collection, analysis and interpretation of data and information on the issue of the importance and evolution of the ROBOR reference rate. Data and information analyzed were those published by the Reuters Agency, the National Bank of Romania, the European Central Bank, the commercial banks and banking associations [8].

RESEARCH RESULTS

The National Bank of Romania has established a number of rules defining the principles, the method of calculation and publication of the ROBOR reference rates, as well as the rights and obligations of the parties involved during the establishment of these rates. The National Bank does not actually calculate the value of these indexes [13]. This is done by the Reuters Agency, which sends these data to the National Bank of Romania every working day at 11.00 a.m., the bank being the one that publishes this data [14]. The mechanism by which reference rates are established, ROBID and ROBOR for deposits in Lei in the interbank monetary market, is called FIXING. The ROBOR rate for each maturity is calculated by the Representative as the arithmetic average of the last quoted rates for each Fixing Participant, for deposits placed within 15 minutes before fixing, after the elimination of the extremes. The rate quoted by a Fixing Participant represents the rate at which Lei deposits are offered to another Participant, for 15 minutes, after the publication of ROBOR rates by the Representative.

The Romanian Interbank Offer Rate (ROBOR) is better known as it is part of the formula for calculating variable interest rates on bank loans, both for individuals and for legal entities. The method of setting the variable interest rates came into force in 2010, according to the Government Emergency Ordinance no. 50/2010. The index has become more and more popular with the increase in the share of loans granted in Lei [12].

ROBOR is not an abstract index but, on the contrary, it is used by all commercial banks in the Romanian banking system to establish variable interest rates. It also influences the value of the monthly rates of loans granted in Lei [9].

Each country has its own indexes that show the value of the reference rates of each country's monetary markets [10]. These are taken into account in setting variable interest rates when granting loans to the citizens of those countries.

The national indexes, the currency to which they refer [1], and the number of participants to determine them is presented in the following table:

Table 1.

National reference indexes

Index		Currency	No. of Participants
ROBOR	Romanian Interbank Offer Rate	RON	12
BUBOR	Budapest Interbank Offered Rate	HUF	12
WIBOR	Warsaw Interbank Offered Rate	PLN	14
PRIBOR	Prague Interbank Offered Rat	CZK	6
CIBOR	Copenhagen Interbank Offered Rate	DKK	6
STIBOR	Stockholm Interbank Offered Rate	SEK	7
TIBOR	Tokyo Interbank Offered Rate	JPY	15
EURIBOR	Euro Interbank Offered Rate	EUR	20
LIBOR	London Interbank Offered Rate	CHF/EUR/GBP/ USD/JPY	11/15/16/ 16/12

Source: ACI Polska, BNR, Danish Banker's Association, EMMI, ICE, JBA, Swedish Banker's Association

The ROBOR index is established on the interbank monetary market, based on demand and supply [6]. It represents the price the banks pay to borrow between them. This price is not established administratively, is not imposed by anyone. Banks come with liquidity offers and requests, and the price is determined by the overall liquidity level in the market at a certain time and by the individual liquidity needs of the participants.

A series of factors act on the monetary market, namely:

- internal factors;
- external factors;
- conjunctural factors.

These factors, which influence the overall tendency of the monetary market, have led to the increase of the ROBOR index in the last period.

Internal factors, the most important are inflation and the state of the economy as a whole, which can influence the ROBOR with a longer maturity, of at least 3 months. If inflation is rising, interest rates will follow the same trend [11].

In the period 2015-2018, the evolution of inflation according to the consumer price index is presented in the following table and figure (Table 2 and Figure 1).

From the table and figure above, the trend of inflation growth in the period February-November is clearly observed in all 4 years of the analysis, from 2015 to 2018.

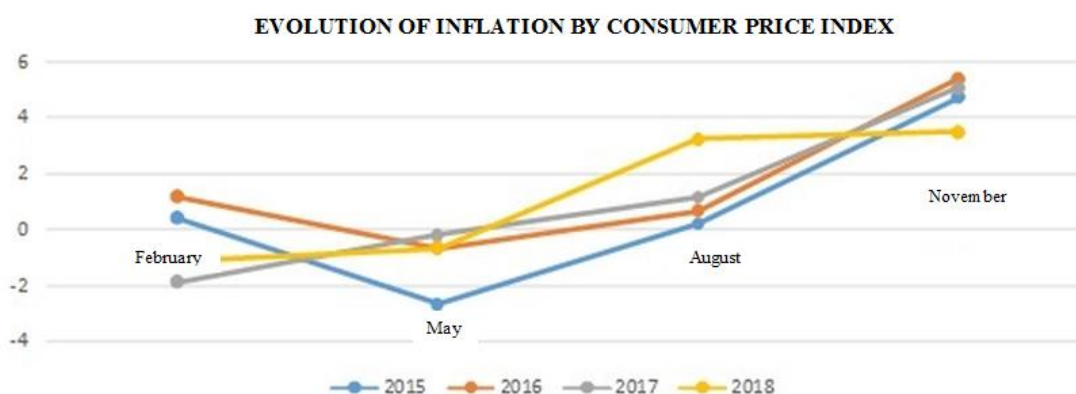
In addition to internal factors, there may also be a number of **external factors**, such as the general upward trend in international interest rates, especially for certain regions of Europe, which may influence the trend in Romania's monetary market.

Table 2.

Evolution of inflation by consumer price index

Year / Month	February	May	August	November
2015	0.4	-2.68	0.2	4.72
2016	1.16	-0.7	0.64	5.41
2017	-1.87	-0.2	1.15	5.06
2018	-1.14	-0.67	3.23	3.5

Source: <http://www.bnr.ro/Raportul-asupra-inflatiei-3342.aspx>



Source: Own processing of data available at: <http://www.bnr.ro/Raportul-asupra-inflatiei-3342.aspx>

Figure 1. Evolution of inflation by consumer price index

Conjectural factors, the most well-known are:

- *The need for liquidity*, for granting loans, customer payments, and the establishment of minimum reserves required at the central bank. If the demand is higher than the offer, the ROBOR index increases, and if the offer is higher than the demand, then the ROBOR index decreases;
- *The need of the state to borrow* to cover the budget deficit. Banks credit the state by buying government bonds, for which banks need liquidity [7];
- *The unpredictability of banking legislation*, which may threaten the stability of the banking system, implicitly the evolution of ROBOR. This will affect not only the ROBOR development but also the variable interest rate margins, as it will increase the risk of not recovering debts from borrowers.

The National Bank of Romania, as a regulatory and supervisory authority of the Romanian banking system, has a very important role on the interbank monetary market. The National Bank of Romania, as the central bank of the Romanian state, aims to ensure and maintain price stability. As a supervisory authority, it also aims to ensure financial stability. Through its monetary policy instruments, the National Bank of Romania can influence the liquidity in the banking system and interest rates, but it cannot interfere with the interest rates on the interbank monetary market [2].

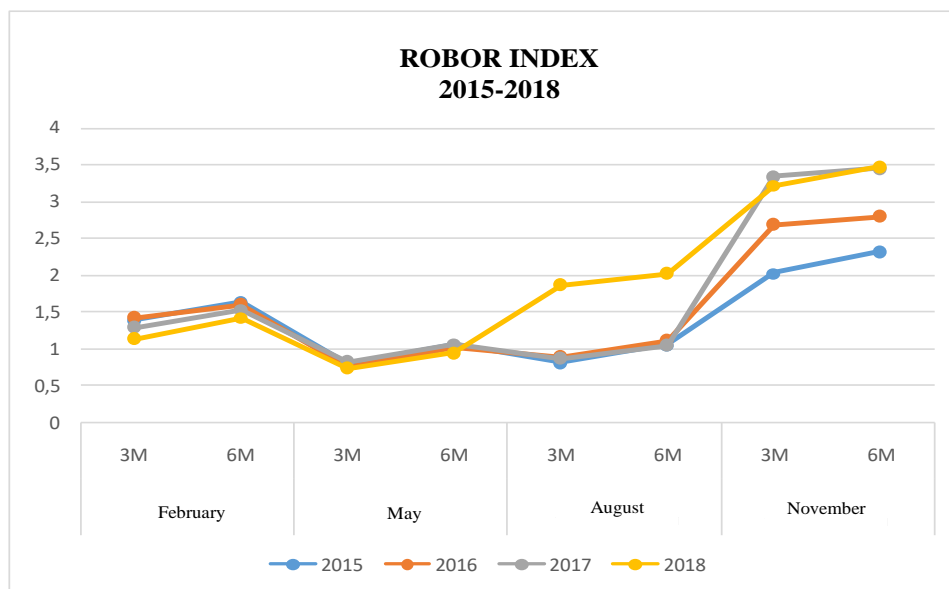
The evolution of inflation and factors generating the overall trend of the monetary market led to the next evolution of the ROBOR index at 3 months and 6 months during the period 2015-2018, as shown in the Table 3 and Figure 2.

Table 3.

ROBOR index at 3M and 6M

Year / Month	February		May		August		November	
	3M	6M	3M	6M	3M	6M	3M	6M
2015	1.4	1.64	0.79	1.05	0.81	1.05	2.03	2.33
2016	1.42	1.61	0.76	1.03	0.89	1.11	2.68	2.80
2017	1.29	1.52	0.82	1.06	0.87	1.05	3.33	3.45
2018	1.13	1.41	0.73	0.94	1.86	2.02	3.21	3.47

Source: <http://www.bnr.ro/ROBID-ROBOR-5672.aspx>



Source: Own processing of data available at: <http://www.bnr.ro/ROBID-ROBOR-5672.aspx>

Figure 2. Evolution of ROBOR index at 3 months and 6 months (3M and 6M)

From the data presented above, it can be observed that there is a significant increase in the ROBOR reference rate to 3M and 6M between August-November 2017 and 2018. The ROBOR reference rate at 3M increased from 0,87 in August 2017 to 3,33 in November 2017. The same ROBOR at 3M rose from 0,73 in May 2018 to 3,21 in November 2018. This significant increase affected interest rates on bank loans, respectively the cost of funding resources.

CONCLUSIONS

In the current international context, financial stability is a newer concept introduced into the vocabulary of central banks. Financial stability is a very important component of a central bank's activity, just like the inflation rate or exchange rate. As a supervisory authority, the National Bank of Romania has responsibilities in the area of financial stability and its institutional competencies as well as the structure of the Romanian financial system indicate the important role of the NBR in maintaining financial stability. In Romania, credit institutions hold about 84 percent of the net assets of the financial system [15]. Through its monetary policy instruments, the National Bank of Romania can influence liquidity in the banking system and interest rates.

A major vulnerability of the Romanian banking system is the financing of long-term assets with short-term resources.

Legislative imprudence in banking can threaten the stability of the banking system, implicitly also the evolution of ROBOR. This will affect not only ROBOR's evolution, but also the margins of variable interest rates, as it will increase the risk of non-recovery of debts from borrowers.

The dynamic evolution of the ROBOR reference rate has a particular importance for commercial banks in substantiating the lending decision and the cost of loans.

REFERENCES

- [1]. **ANGHELACHE GABRIELA-VICTORIA, OBREJA CARMEN**, 2017, Relații monetare internaționale – concept, interdependențe, tranzacții (International monetary relations - concept, interdependence, transactions), ASE Publishing House, București
- [2]. **BISTRICEANU G.**, 2011, Optimizarea utilizării ratei dobânzii ca indicator de politică monetară (Optimizing the use of interest rates as a monetary policy indicator), ASE Publishing House, București
- [3]. **BOIȚAN IUSTINA ALINA**, 2011, Crize bancare și sisteme de avertizare timpurie (Banking crises and early warning systems) ASE Publishing House, București
- [4]. **CĂPRARU B.**, 2018, ROBOR: între realitate și mit! Celebrul indicator explicat în 5 întrebări și răspunsuri (ROBOR: between reality and myth! The famous indicator explained in 5 questions and answers, published in HotNews.ro, 22.07.2018
- [5]. **HARANGUS DANIELA**, 2017, Organizarea și operațiunile instituțiilor de credit (Organization and Operations of Credit Institutions), EUROBIT Publishing House, Timisoara, pp. 191-196
- [6]. **ILIE M.**, 2015, Piața financiară. Componenta fundamentală a pieței globale (Financial Market. Fundamental Component of the Global Market), Fundația România de Mâine Publishing House, București
- [7]. **IMBIEROWICZ B., RAUCH C.**, 2014, The relationship between liquidity risk and credit risk in banks, Journal of Banking & Finance, No. 40 /2014, pp. 242–256
- [8]. **MOCAN M.** et al., 2015, Impact of corporate social responsibility practices on the banking industry in Romania, in Procedia Economics and Finance Journal, Vol. 23, pp. 712-716
- [9]. **NIȚESCU D. C., BOIȚAN IUSTINA ALINA**, 2017, Guvernanta și auditul intern în domeniul bancar (Governance and Internal Audit in Banking), ASE Publishing House, București
- [10]. **NIȚOI M.**, 2016, Eficiență și productivitate în sistemele bancare din Uniunea Europeană (Efficiency and Productivity in Banking Systems in the European Union), Economica Publishing House, București
- [11]. www.bnro.ro (accessed on 19.10.2018)
- [12]. www.cec.ro (accessed on 19.10.2018)
- [13]. www.HotNews.ro (accessed on 19.10.2018)
- [14]. www.reuters.com (accessed on 19.10.2018)
- [15]. <http://www.bnr.ro/Sistemul-bancar-din-Romania---pilon-de-baza-al-sistemului-financiar-7333.aspx>