# EVOLUTION OF INTERBANK INTEREST RATES AND THEIR INFLUENCE ON INTERESTS FOR DEPOSITS AND LOANS

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#### Abstract:

This research aims to analyze in dynamics and structure the evolution of interbank interest rates, as well as their influence on interest rates on deposits and loans granted by credit institutions. Unlike the interest rates on fixed term deposits in lei and euro of the customers, which experienced a decrease in the analyzed period, the interest rates on loans granted by banks show an increase. Fixed term deposits of customers are an attractive source for banks, a relatively cheap source compared to interbank loans.

Key words: interbank interest rates, deposits, loans, commercial banks, monetary policy

JEL classification: G 21, G 23

### Introduction

Starting from the fundamental objective of the National Bank of Romania, to ensure and maintain price stability, it can be appreciated that a fundamental role in ensuring price stability, in the medium and long term, is played by monetary policy. The Central Bank influences the dynamics of prices in the economy and aggregate demand through the following main instruments of monetary policy:

- open market operations;
- standing facilities granted to credit institutions;
- minimum reserve requirements.

All these monetary policy instruments aim mainly at guiding interest rates. The standing facilities granted by the national Bank of Romania to credit institutions are aimed at stabilizing short-term interest rates on the interbank money market.

The two standing facilities that can be accessed by credit institutions on their own initiative are:

- the credit facility;
- the deposit facility.

According to the regulations of the National Bank of Romania, for these standing facilities, the interest rates are symmetrically around the interest rate of monetary policy, like a corridor.

Starting from the purpose of the standing facilities granted by NBR (National Bank of Romania) to credit institutions, respectively the stabilization of short-term interest rates on the interbank money market, this research aims at an analysis in dynamics and structure of the evolution of interbank interest rates and their influence on interest rates on deposits and loans granted by credit institutions.

"In the case of insurance companies " *Bank deposits in lei* are evaluated on the basis of nominal value, which represents the amount of the deposit without interest and liquidity in foreign currencies, constituted as fixed-term deposit according to the contracts concluded with the banks and liquidity in foreign currency held in current accounts will be assessed at the exchange rate of the currency market established and communicated by the National Bank of Romania at the end of the financial year.

Liquidity and deposits at credit institutions can not exceed 90% of the total reserves, but not more than 10% of the gross technical reserves in one credit institution".

At the beginning of 2018, the issue regarding the increase of the ROBOR interbank interest rate was much discussed, to which is related the cost of loans in lei, granted at a variable interest rate. Following media pressures from banking customers and beyond, the NBR introduced in 2018, a new benchmark for consumer credit (RICL - reference index for consumer loans). The value of the RICL index published for the first time was the one related to the 4th quarter of 2018, respectively of 2.36%. This value was lower than the three-month ROBOR index (3.32%), the ROBOR index being the most widely used reference indicator for loans granted to customers of commercial banks in Romania.

The new RICL index was calculated based on the actual transactions performed by banks on the interbank market in the 4th quarter of 2018. ROBOR is an index calculated based on the quotations displayed by 10 banks at 11.00 on trading screens, minus the extremes. At the time of its introduction, the RICL value, lower than ROBOR, has won the long-time cause, to those who claimed that ROBOR is an artificial index, based only on quotations from which no transactions are made, and those with bank loans in lei would pay more than they should have.

There are many theories and debates in literature and in the press that pay special attention to interest rate and its fluctuations.

When the offer of loan funds increases compared to the demand for loan funds, the interest rate decreases, and if the demand for funds is higher than the loan funds, then the interest rate increases.

If the risk of inflation is higher, interest rates also increase, and if the situation is reversed, interest rates are lower.

## Materials and methods

In the research conducted on the evolution in dynamics and structure of interbank interest rates, as well as their influence on interest rates on deposits and loans granted by credit institutions, methods of scientific research were used, such as: identifying and collecting clear, accurate and complete information, analysis, synthesis, induction, deduction, data collection, classification, systematization, comparison, generalization and interpretation of data.

Scientific research has been used in the research carried out on the evolution in dynamics and structure of interbank interest rates, as well as their influence on interest rates on deposits and loans by credit institutions. Some of the methods applied involved: identification and collection of clear, accurate and complete information, analysis, synthesis, induction, deduction, data collection, classification, systematization, comparison, generalization and interpretation of data.

The rules and principles underlying the calculation of interest on deposits and loans granted by credit institutions were also identified.

After the selection of the issue under investigation, the following were used: clear information, correct interpretation and analysis of the data, deductive identification of the information and their selection.

The data regarding the dynamic evolution of the ROBOR interbank interest rate, of the interest rates on bank deposits and loans were selected from the statistical data presented by the National Bank of Romania in its Monthly Bulletins and Annual Reports published.

<sup>&</sup>lt;sup>1</sup> Nagy, Cristina Mihaela, Cotlet, Bogdan. Cotlet, Dumitru., Marina Uher (2012). The ability of Romanian insurers to cover technical reserves under present conditions. Annals. E conomic Science Series Vol XVIII/2012, p. 395

In this research was analyzed the evolution of nominal and real interbank interest rates over the period 2015–2018, as well as the evolution in dynamics and structure of interest rates on fixed term deposits in lei and foreign currency, and of interest rates on loans granted during 2017-2018. The analysis period of the evolution of interest rates on bank deposits and loans was selected in the time horizon 2017-2018, because the discussion on the value of ROBOR occurred when the ROBOR index started to increase, in autumn 2017, with the increase of inflation. During the period when the ROBOR index also registered values of 0.67% per year, there were no discussions and suspicions regarding its artificial character. When ROBOR started to grow, reaching over 2% in a few months and then over 3%, discussions began to appear, commercial banks and the National Bank of Romania being accused of artificially raising interest rates in order to gain more, given that interest rates on deposits did not have the same growth rate.

#### Results and discussion

Monetary policy aims at long-term economic growth, price stability, the establishment of interest rates and the exchange rate, as well as the sustainability of balance of payments. Interest is the price that must be paid by a debtor for a loan taken from a creditor in exchange for money.

A bank pays interest on the amounts deposited by its customers. For the amounts it lends to customers, in the form of bank loans, the bank collects interest from customers receiving these loans. The mechanism of the minimum required reserves also has as its main function, in addition to the monetary control, the stabilization of interest rates on the interbank money market.

In order to analyze the influence of interbank interest rates on deposits and loans interest, these banking indicators must be looked at dynamically over a certain relevant period.

The evolution in dynamics of the nominal and real interbank interest rates, during the period 2015 and the 1st quarter of 2018, is presented as in the figure below:

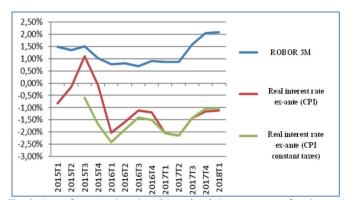


Figure 1: Evolution of nominal and real interbank interest rates for the period 2015–2018, 1st quarter

Source: Dumitrescu Bogdan, Cited Work., and <a href="https://www.bnr.ro/Baza-de-date-interactiva-604.aspx">https://www.bnr.ro/Baza-de-date-interactiva-604.aspx</a>

The real interest rate started with an increase in 2015. In the 1st quarter of 2016 there is a decrease, followed by a new increase in 2018. The three-month ROBOR index (3M ROBOR) shows a sharp increase in the 3rd quarter of 2017, until the beginning of 2018.

In comparison to this evolution of the ROBOR index, the interest rates on fixed term deposits in lei of households evolved according to Table 1.

From the table presented above it is noted that interest rates on all categories of households' fixed term deposits in lei between January 2017 and January 2018 decreased significantly, between 0,07 and 0,28 percentage points per year. The highest decrease in interest rates during this period, respectively 0,28% per year, is recorded for deposits between 6 and 12 months. This leads to a discouragement of savings, especially among households. The evolution of these interests is shown in the figure below:

Table 1. The evolution of interest rates on households' fixed term deposits, for the period 2017-2018

	Interest on fixed term deposits in Lei of households			
	(% p.a.)			
	Initial maturity			
	Up to 1	Over 1 month	Over 3 months	Over 6 months
Period	month	and up to 3	and up to 6	and up to 12
	inclusive	months	months	months inclusive
		inclusive	inclusive	
January 2017	0,41	0,69	1,03	1,40
January 2018	0,34	0,54	0,78	1,12

Source: Own processing after https://www.bnr.ro/Publicatii-periodice-204.aspx pp.49.

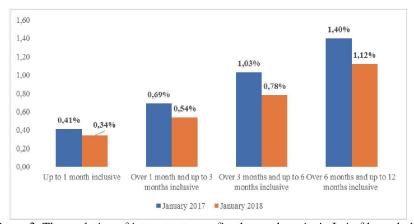


Figure 2. The evolution of interest rates on fixed term deposits in Lei of households

Between January 2017 and January 2018, the evolution of interest rates on term deposits in Euro, of households, registers the same decreasing trend, respectively between 0.03% and 0.10% per year. This evolution is reflected in the table and figure below:

Table 2. The evolution of interest rates on households' fixed term deposits in Euro, for the period 2017-2018

	Interest on fixed term deposits in Euro of households			
	(% p.a.)			
	Initial maturity			
	Up to 1	Over 1 month	Over 3 months	Over 6 months
	month	and up to 3	and up to 6	and up to 12
Period	inclusive	months	months	months
		inclusive	inclusive	inclusive

January 2017	0,14	0,19	0,34	0,57
January 2018	0,11	0,14	0,24	0,40

Source: Own processing after https://www.bnr.ro/Publicatii-periodice-204.aspx pp.50.

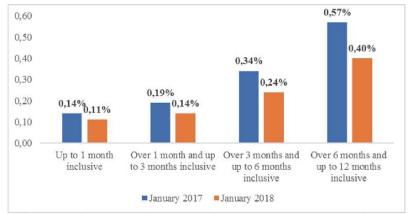


Figure 3. The evolution of interest rates on fixed term deposits in Euro of households

The decrease in interest rates on fixed term deposits in lei and foreign currency of households is likely to discourage savings and stimulate consumption. In the short term, banks benefit from these very cheap resources, attracted from customer, in the form of bank deposits with a term maturity.

The evolution of interest rates on loans is presented in Table 3:

The evolution of interest rates on loans in Lei granted to households, for the period 2017-2018

Table 3.

Ddd	interest rates on loans in Lei granted to households (% p.a.)			
	Initial maturity			
Period	Up to 1 year	Over 1 year and up	Over 5 years	
	inclusive	to 5 years inclusive	-	
January 2017	8,89	10,10	4,12	
January 2018	10,36	10,19	4,96	

Source: Own processing after https://www.bnr.ro/Publicatii-periodice-204.aspx pp. 53.

Interest rates on loans in Lei granted to households, during January 2017-January 2018, registered an increase between 0,09% and 1,47% per year. The highest increase is found in short-term loans, in which the interest rate increased from 8,89% to 10,36% per year, respectively by 1,47 percentage points per year. During the analyzed period, the smallest interest rate increase, respectively of 0,09%, is registered for loans granted to households, for a period from 1 to 5 years. This evolution of interest rates is shown in Figure 4, presented below:



Figure 4. Evolution of interest rates on loans in Lei granted to households

Unlike the interest rates on term deposits in Lei and Euro of the customers, which experienced a decrease in the analyzed period, the interest rates on loans granted by banks show an increase. Fixed term deposits of customers are an attractive source for banks, a relatively cheap source, compared to interbank loans.

If we analyze the evolution of interest rates on Euro loans granted to households, the situation is as in the table below:

Table 4. The evolution of interest rates on loans in Euro granted to households, during the period 2017-2018

during the period 2017 2010				
Period	Interest on loans in Euro granted to households (% p.a.)			
	Initial maturity			
	Up to 1 year	Over 1 year and up to	Over 5 years	
	inclusive	5 years inclusive		
January 2017	10,42	5,11	4,31	
January 2018	8,50	5,34	4,21	

Source: Own processing after <a href="https://www.bnr.ro/Publicatii-periodice-204.aspx">https://www.bnr.ro/Publicatii-periodice-204.aspx</a> pp.54.

Over the period under review, it is found that the interest rates on short-term loans, in euro, granted to households decreased from 10.42% in January 2017 to 8.50% in January 2018. These interest rates are well above the interest rates charged on euro loans in many countries from the European monetary area. For long-term loans, over 5 years, in euro, interest rates are lower (respectively 4,31% and 4,21%), because banks are careful not to overburden the degree of indebtedness of customers. Although the long-term credit risk is higher, so the cost of the credit, as in interest, should be higher, there is a prospect of purchasing cheaper credit resources.

The evolution of interest rates on loans in Euro granted to households, by loan categories (short, medium and long term), for the period January 2017 - January 2018, is presented as in the following figure:

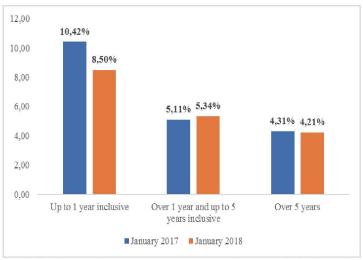


Figure 5. Evolution of interest rates on loans in Euro granted to households

From the figure presented above it can be observed that interest rates on short-term loans in Euro granted to households are twice as high as the interest rates on long-term loans over 5 years. It is very clear that banks are speculating on their customers' demand for loans in Euro.

## Conclusions

The monetary policy instruments used by central banks are mainly aimed at guiding interest rates. The standing facilities granted by the National Bank of Romania to credit institutions aim at stabilizing short-term interest rates on the interbank money market.

Analyzing the evolution of interbank interest rates, it is found that they have an influence on interest rates on deposits made by customers and on interest rates on loans to bank customers. Commercial banks are interested in attracting resources as cheap as possible from customers and interbank market, and then placing them in loans with higher interest rates.

Unlike the interest rates on the fixed term deposits in Lei and Euro of the customers, which experienced a decrease in the analyzed period, the interest rates on loans granted by banks show an increase. Fixed term deposits of customers represent a source which is attracted by banks and is a relatively cheap source compared to interbank loans.

Therefore, banks are borrowing from customers more and more cheaply, with lower interest rates, but they grant loans at higher and higher interest rates. This pursuit for bank enrichment can be stopped by imposing and complying with strict rules in the European monetary area.

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