

THE IMPORTANCE OF MONEY MARKET INTEREST FORMATION AND ITS ROLE IN CREDIT COST

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Abstract

In the contemporary period the place and role of banks in economy is very well defined, they mainly acting as main intermediary in savings-investment relationship, critical relationship to economic growth. Although the current financial crisis demonstrates that the banking system is no longer the foundation of the economic system, yet banks continue to be the most important institutions that intermediate monetary affairs. Through bank credit institutions in our country continues to attract large sums of money from the public and offer banking products and services. Banking market is dominated both by opening accounts for all the people who do acts of trade, debt collection and debt repayment, and especially the provision of services on product placement credit institutions. Each institution has its own strategy and is constantly concerned about cost sources of credit drawn and placed. This cost is calculated based on the interest rate plus any fees. This study attempts to make an analysis of how the interest rate is fixed at the products offered by bank to customers.

Key word: interest rate in the interbank market ROBOR, ROBID, EURIBOR, EURIBID, LIBOR, LIBID

JEL Classification: E52, E58

1. Introduction

Banks have essentially assert as monetary intermediaries, whose key feature is the ability to circulate their own claims on the means of payment which increases the weight and volume of monetary circulation. Significant feature of these intermediaries is to transform intangible assets in currency and performing banking services to individuals.

It should be noted that within banking groups were included during time also the non-monetary intermediaries whose main functions are: collecting savings and loans granted on short term, directly to beneficiaries (for investments, external trade, mortgage, consumption) or by employing capital for lending.

Monetary savings from individuals or legal persons were determined legal credit institutions to promote new banking products through active operations. And the role of the banking unit of the economic system is given by the place and role of credit institutions in the economy, which are closely linked to their role as intermediaries in the savings-investment relationship, critical relationship to economic growth.

In this framework, any credit institution, depending on the strategy adopted by the evolution of the money market and bank sets the interest rate assets and liabilities that are to be practiced in transactions with customers.

To the negotiation and conclusion of contracts with customers for loans respectively in domestic or foreign currency deposits is justified to consider interest rate risk strategy established by the bank for a certain period in order to ensure bank liquidity.

In fact, interest is primarily a basic element of the loan agreement, accepted by both parties (lender and borrower) on the understanding agreed.

There have been and continue to be developed many theories about interest, but, essentially nominal interest rate is the "price" of bank credit to individuals or legal persons.

In the narrow sense, the interest is surplus capital incumbent to loaned owner, borrowed capital is the price risk, being considered as a reward for the use of cash for a fixed time yielded (price of money) [2]. The size of the interest can be considered as relative value (interest rate) and the absolute dimension (interest mass)

In this paper work, we intend to analyze how the credit institutions set the size of interest rate for different currencies and how they produce operations (active or passive) and the time evolution of these rates.

2. Average interest rates on interbank monetary market

In all countries with consolidated market economy has emerged a nominal based interest rate that is a concentration of multiple levels of these relative sizes. It can be seen that fixed rate by the bank in average settled conditions and will be used as reference base in order to calculate the other rates.

Interest is calculated based on the interest rate that represents the percentage that is applied by banks on loans or to availabilities that are kept in bank accounts, according to the contract between the creditor and debtor. The size of the interest rate is influenced by the supply and demand of resources in the banking market, the discount rate, the economic power of a state, the inflation rate and the policy adopted by each credit institution in part.

The pricing of bank loans establishment (Fig.no.1), the credit institution in addition to the reference interest rate plus a fixed margin that can not be changed by the creditor during the contract than to the consumer. The time period at which the nominal interest rate is recalculated are provided in the contract.

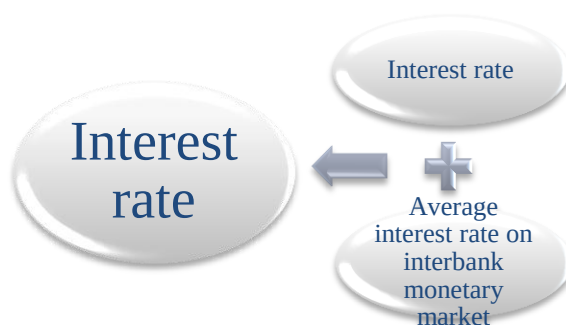


Fig.no.1 The formation of the nominal interest rate

Credit institutions attract resources from financial market and use them mainly to the granting of loans, placement securities (treasury bills, treasury bills, etc..) or formation of deposits to other credit institutions. Setting resources involve costs for banks, evidenced by interest paid on deposits and borrowings.

In order to safeguard the credibility principle, the credit institutions are required to calculate interest in transparently manner. For given loans that are variable interest bearing formula should have as reference ROBOR / LIBOR / EURIBOR (depending on the currency in which the loan is granted), and deposits must have reference ROBID / LIBOR/ EURIBID. These are the average interest rates on interbank published by the National Bank of Romania

(Fig.no.2).

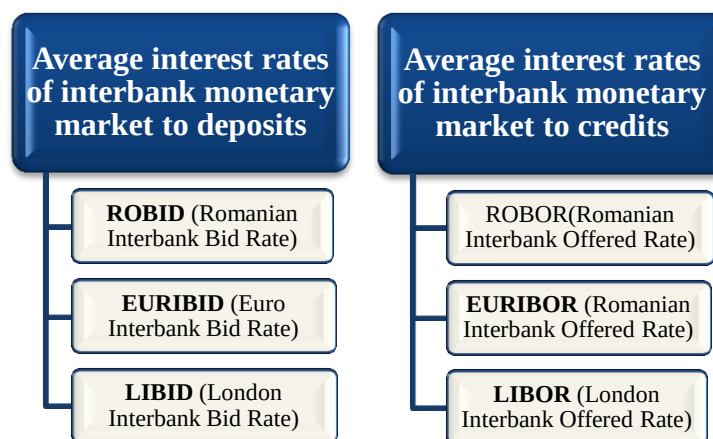


Fig.no.1 Average interest rates of interbank monetary market

a) The interest rates on the romanian interbank market ROBID and ROBOR are reference rate that synthesize the work carried out during the operative bank day.

So ROBOR is the interest rate received for credits in ron granted by credit institutions to other credit institutions for a period of time and ROBID is the interest rate to be charged for deposits in lei attracted for a time by credit institutions from other credit institutions in Romania, on the interbank market.

The interbank role is to balance the positions of credit institutions in national currency. Those banks who finish working day with excess liquidity can place these amounts in bank deposits at other credit institutions that need cash in order to get interest income.

ROBOR rate is used in the formula for determining the interest rate on loans from banks to non-bank customers. The most used indexes for determining variables interest rates are ROBOR 3M (three months) and ROBOR 6M (six months).

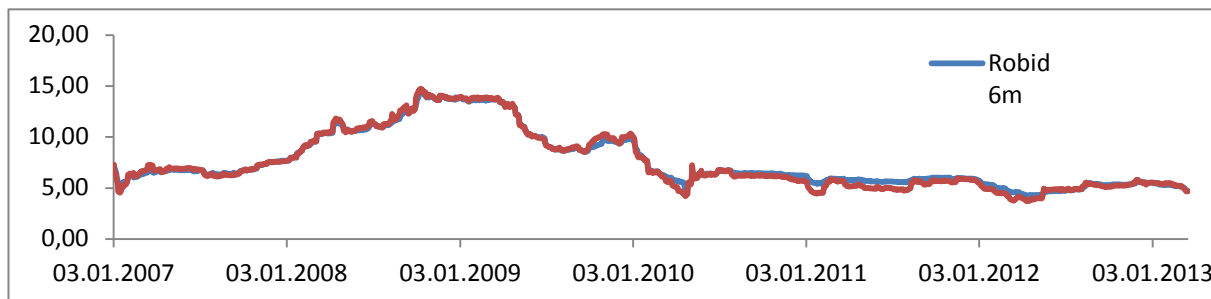


Fig.no.1 Interest rates on deposits from romanian interbank market

Source: National Bank of Romania

It can be seen that the reference rates of interest on interbank deposits in 2007-2013 had an interquartile range between 4% and 15%. The highest value of indexes ROBID 6M and ROBID 3M began in January 2008 (approximately 7,65%) showed a peak in October 2008 (approximately 14,55), will decrease gradually, reaching in December 2010 at a rate about 6%. The high values recorded in 2008-2009 are explained by the fact that credit institutions on the background of the global economic crisis needed cash, and one of the fastest ways to attract money availability both the interbank market and non bank customers is the offered price increasing for the growing loans received as deposits. In March 2013 the ROBID 3M indexes, respectively ROBID 6 M oscillates around 4,6%.

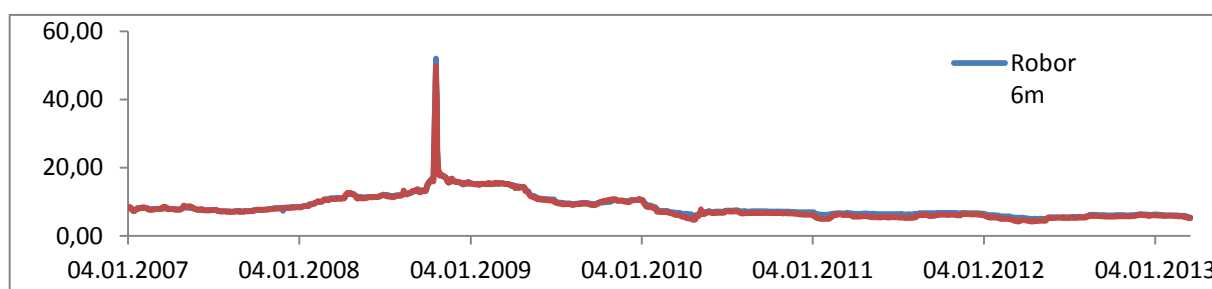


Fig.no.2 Interest rates on credits from romanian interbank market

Source: National Bank of Romania

If we follow the evolution of index ROBOR (Fig.no.2) it can be seen that from 17 to 24 October 2008 it increased by about 34 percentage points from a peak of ROBOR 6M to 51.97%, respectively ROBOR 3M to 49,81%. Rising interest rates on interbank loans was explained by some economists as an anomaly NBR so on 27.10.2008 indices decreased to 18.9% value. As a precaution measure some banks have "frozen" ROBOR values so that potential customers will not be affected. In the next period the trend was slightly lower in 2013 reached the amount shown to be about 5.30%.

The constant development of ROBOR rates since 2010 should increase the customer confidence in credit institutions to apply for loans in national currency. In 2013 ROBOR rates have declined slightly.

b) Interest rates to interbank monetary market in euro are EURIBOR and EURIBID.

EURIBOR is the rate used by a first-order bank in order to give money availability of other banks in the euro area. EURIBOR rate is published every day at 11.00 a.m, for the spot value.

Setting this rate is supervised by the European Banking Federation (EBF), which represents the interests of 4.500 banks from 24 European Union countries, Iceland, Norway, Switzerland, and Financial Markets Association (ACI). EURIBOR affects only the variable interest and not fixed interest, the variables being used to calculate nominal interest rates on credits in euros.

This rate has appeared in 1999 same time with the introduction of EURO coin in the European Union, when the European credit institutions considered necessary a common interbank rate money to market banks

operating in the EU. It is listed on the period of 1 month (EURIBOR 1M), 3 months (EURIBOR 3M), 6 months (EURIBOR 6M) and one year (Euribor 12M).

Most used indices in calculating variable interest euro for loans are EURIBOR 3M and EURIBOR 6M. Increasing the value of EURIBOR index leads to an increase in the credit rate and decreasing the value of this leads to lower prices in euro loan.

In order to determine EURIBOR index is conducting a survey of 39 banks (Tab.no.1), which should provide estimates of the cost of financing in mutually euro for periods from one day to one year.

Tab.no.1

State	Banks	State	Banks
Austria	- Erste Group Bank AG	Italia	- Intesa Sanpaolo, - Monte dei Paschi di Siena, - Unicredit, - UBI Banca
Belgia	- Belfius, - KBC	Luxemburg	- Banque et Caisse d'Épargne de l'État
Finlanda	- Nordea, - Pohjola	Olanda	- ING Bank
Franța	- Banque Postale, - BNP-Paribas, - HSBC France, - Natixis, - Crédit Agricole S.A., - Crédit Industriel et Commercial CIC, - Société Générale	Portugalia	- Caixa Geral De Depósitos (CGD)
Germania	- Landesbank Berlin, - Deutsche Bank, - Commerzbank, - DZ Bank, - Norddeutsche Landesbank Girozentrale, - Landesbank Baden-Württemberg Girozentrale, - Landesbank Hessen Thüringen Girozentrale	Spania	- Banco Bilbao Vizcaya Argentaria, - Banco Santander Central Hispano, - CECABANK, - CaixaBank S.A.
Grecia	- National Bank of Greece	Other EU banks	- Barclays Capital, - Den Danske Bank, - Svenska Handelsbanken
Irlanda	- AIB Group, - Bank of Ireland	International Bank	- UBS AG, - J.P. Morgan Chase & Co, - Bank of Tokyo Mitsubishi

List of credit institutions which contribute to the EURIBOR index to 28.01.2013

Source: <http://www.euribor-ebf.eu/euribor-org/panel-banks.html>

These banks are of first order and were selected in order to ensure that the diversity of the euro money market is adequately reflected, thereby making the EURIBOR an efficient and representative benchmark.

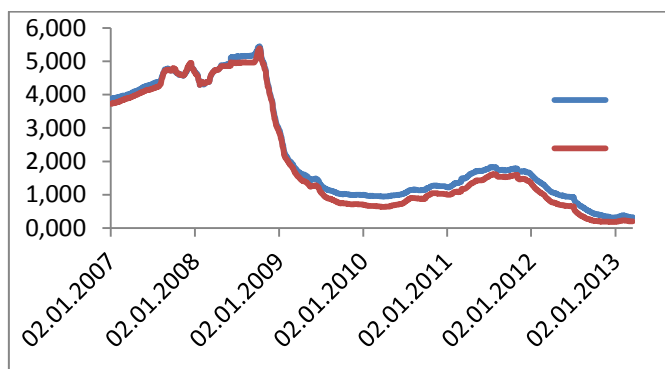


Fig.no.3 Interest rates on interbank monetary market of European Union

Source: <http://www.euribor-ebf.eu/euribor-org/euribor-rates.html>

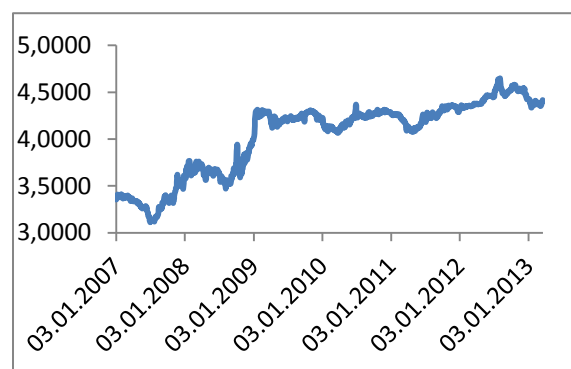


Fig.no.4 Exchange rate evolution

Evolution of the main barometer of the interbank market, EURIBOR 3M, recorded in the analyzed period a gradual decline reaching about 0.20% currently. If we analyze the evolution of this indicator in 2013 there was a slight increase. We can not perform an analysis of how price affects EURIBOR the loan to Romania without observe also the evolution exchange rate ron -euro.

A first conclusion of the two graphs would be that variable interest rate and exchange rate are inversely proportional. EURIBOR rate decrease occurs when the European interbank market increases the amount of money offered.

Increased exchange rate in Romania has emerged as a result of currency depreciation has been influenced by a number of internal and external factors both economic and political.

c) LIBOR rate is known in England as the daily reference rate prevailing on the London market by leading banks providing loans to each other. LIBOR rates are used mainly as reference rates for derivatives such as forward contracts, futures (short-rate) swaps, syndicated loans, currency exchange (especially USD). It is the

most active rate in the world that characterizes market rate bank and is calculated as the arithmetic average of the interest rates charged by major banks and foreign currency (pounds, euros, U.S. dollars, Swiss francs, Japanese yen). London as an international financial center, LIBOR is calculated for both the British pound and the U.S. dollar, Canadian dollar, Japanese yen, Swiss franc and other major currencies in the financial market. LIBOR is calculated by Thomson Reuters and published by GTM 11:00 London time (generally at around 11:45) every day. The interest rate on interbank deposits is the LIBID.

The cost of a mortgage in euros versus the cost of credit in lei!

The question often asked, "What is cheaper credit in ron or credit in euro?". In order to answer this question we compared the demand for mortgage / real estate of 14 credit institutions (Tab.nr.2).

Tab.nr.2

Credit institutions	Interest rate in ron				Interest for a currency unit in ron	Interest rate to euro				Interest in Euro for the consideration* * of one currency unit	The value in ron of interest calculated in Euro**
	Fixed margin	Robor 3m*	Robor 6m*	Total		Fixed margin	Euribor 3m*	Euribor 6m*	Total		
-	%	%	%	%	-lei-	%	%	%	%	-euro-	-lei-
Taransilvania	3,00	5,18		8,18	0.0068	5,60	0,21		5,81	0.0011	0.0048
Bancpost	4,25		5,49	9,74	0.0081	5,75		0,33	6,08	0.0011	0.0051
Raiffeisen Bank	3,50		5,49	8,99	0.0075	6,00	0,21		6,21	0.0012	0.0052
Piraeus Bank	4,70		5,49	10,19	0.0085	5,25		0,33	5,58	0.0011	0.0046
OTP Bank	4,80		5,49	10,29	0.0086	7,67		0,33	8,00	0.0015	0.0067
Banca Românească	4,00		5,49	9,49	0.0079	5,75		0,33	6,08	0.0011	0.0051
Unicredit Tiriack Bank	4,00	5,18		9,18	0.0077	5,90	0,21		6,11	0.0012	0.0051
BRD	2,50		5,49	7,99	0.0067	4,50		0,33	4,83	0.0009	0.0040
Volksbank	4,50	5,18		9,68	0.0081	6,50		0,33	6,83	0.0013	0.0057
Millennium Bank	3,40	5,18		8,58	0.0072	6,25		0,33	6,58	0.0012	0.0055
Alpha Bank	4,00		5,49	9,49	0.0079	6,00		0,33	6,33	0.0012	0.0053
BCR	1,50	5,18		6,68	0.0056						
ING	1,00		5,49	6,49	0.0054						
CEC Bank	1,90		5,49	7,39	0.0062	4,99		0,33	5,32	0.0010	0.0044

The banks credit costs in Romania (analyzed for 14 banks)

*Reference indexes on 18.03.2013

**1euro=4,4170 ron

From offer of credit institutions analyzed and the previous calculations can see that the short term the euro price of borrowed loan is lower than the RON. It still put the question "What happens in the long term?". The cost of credit in euro for a period of time is influenced by two variables: the reference index EURIBOR and the foreign coin exchange rate, while the cost of credit in lei is influenced only by index ROBOR.

We consider two possible assumptions for vary both reference indices used to determine the interest rate on loans to the best credits from the previous table, and a possible increase in ron-euro exchange rate.

Hyphotesis 1. In the event that the exchange rate would reach a value of 5 ron / euro, the European currency mortgage would be equal to the loan in USD if ROBOR rate decreases by 0.49 percent, while the EURIBOR rate increase by the same percentage

Hyphotesis 2. In the event that the exchange rate would be as high as 4.5 ron / euro, the European currency mortgage would be equal to the loan in USD if ROBOR rate decreases by 0.77 percent, while the EURIBOR rate increases by the same percentage.

Of the two hypotheses presented as the one that is devaluing against the euro, the difference between the present value and future value ROBOR and EURIBOR index should fall to the price of mortgage loans in RON to be equal to the foreign currency mortgage credit.

Conclusion

In all countries with consolidated market economy is one basic rate of interest. This is considered to be the rate set by bank in medium conditions, which is used as a reference for calculating the other rate of around the core rate.

Using the average interest rates on the Romanian interbank market in determining the cost of a credit occurred following the introduction of an emergency ordinance in order to protect consumers [4] in relation to credit institutions. To limit the abusive intervention of banks to borrowing costs change as a result of contracts with variable interest rate, NAPC established by this ordinance as variable interest during the contract may be used only if the use of benchmarking as changes beyond the control of creditors will. As a result of this action the banks were obliged to resort to average interest rates on the interbank market: ROBOR loans in RON, EURIBOR for loans in euro, LIBOR for loans in dollars and francs.

The indicator that distinguishes the cost of a credit product after its kind and the credit institution that is granted is the fixed margin. When a private person or juridical agent choose a lender must consider how the credit institution specified in the contract formation cost of credit offered.

Against the backdrop of economic crisis, in order to support the economy in the European Union have been serious euro injections that decreased Euribor index, it reaching historic lows by the end of 2012. This amount of European money will be withdrawn from the European market when inflation index will increase. This action will have an impact on the EURIBOR index which will grow in the medium term.

În situația în care Euriborului va avea nivelul atins în 2008, creditele contractate în euro vor deveni mult mai scumpe decât cele în lei.

In situation when Euribor will reached the level in 2008, euro loans will become more expensive than the RON.

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