

# THE INTEREST RATE ENIGMA



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## **Abstract**

*The interest rate has recently become a very volatile and widely discussed economic variable. Interest rate movements directly affect citizens' daily lives and have important consequences for the health of the economy. Thus, interest rate changes influence certain personal decisions, such as spending or saving, or buying government bonds or depositing money into the bank account. These variations also affect the economic decisions of businessmen and households, such as investing in new equipment or making various financial placements. It is then easy to understand that information concerning interest rate movements is selected, announced and commented in the media and often used by politicians as ammunition in political struggle, depending on opportunities and interests.*

## **THE NATURE OF INTEREST**

The interest attached to bank loans is a practice as old as the exchange of goods. However, granting interest-bearing loans was condemned by Aristotle, and later by the Catholic Church, and therefore it was mainly practiced only by foreigners (Jews, Lombard, Syriacs, etc.). Continuing the Aristotelian tradition, Toma de Aquino, for example, condemns the granting of interest-bearing loans, but beyond judging the moral aspect of this practice, stresses that interest is "the price of time." This characteristic was rather forgone in classical economists' works (A. Smith, D. Ricardo, J. St. Mill, etc.), for which the existence of interest is related to the productivity of the capital factor, but will be rehabilitated by one of the founders of the Austrian School,

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E. Böhm-Bawerk (1930), according to whom the interest rate can be defined as an "intertemporal price". This "price" appears in various forms, the analysis of which allows, on the one hand, the explanation of the plurality of interest rates observed in a modern economy and, on the other, the definition of the abstract concept of "interest" with which economic theory operates.

The idea that the phenomenon of interest is explained by the manufacture-related productivity of capital, which allows the debtor to pay the interest he owes for borrowed capital, was introduced into modern economic thinking by J.B. Say. This conception, focused on production credits, has the disadvantage that it cannot explain the interest rate on consumer credit. The inconvenience was overtaken by E. Böhm-Bawerk, who showed that interest is born from the current consumption of consumer goods for consumer goods that will be in the future, thus being a premium (*premium,agio*) specific to the former.

This premium results from the preference for the present, which is common to all people and which, according to Böhm-Bawerk, is explained by three series of considerations. The first series is economic: existing goods are preferred to future goods, as the former can meet both present needs and future needs, while the latter can only meet future needs. In order to be used to meet future needs, existing goods must now be kept in reserve, which is best done by turning them into money and then keeping said money. The second set of considerations is psychological: lack of imagination, human weakness and uncertainty about the future make people value the present more than the future. Finally, the third set of considerations is technological: existing goods can be used immediately in the production process, allowing for higher production compared to future goods, which will only be incorporated into the production process later, therefore, will result in lower production.

Consistent with the general subjective dimension of the Austrian School's economic doctrine, Böhm-Bawerk considers that each individual has his own preference for the present, and

hence his own intertemporal exchange ratio. These individual preferences interact with what might be called the "time market", establishing a "social exchange of time", a "time of the year".

The intertemporal exchange rate, named by another brilliant representative of the Austrian school, L. von Mises, is the ratio between the value attributed to meeting a need in the immediate future and the value attributed to meeting the same need in longer time frames. It follows that the interest rate is not a "price" in the usual sense of the word, but an "intertemporal price".

From a historical point of view, the "time market" (the market where the existing goods are exchanged for the future goods) has been greatly simplified, just like other markets, by adopting a general exchange tool: money.

Indeed, in the barter-based economy, there are as many 'different time markets', as many goods are there. In contrast, in the monetary economy, where the currency is the means of general exchange, including the means of intertemporal exchange, the "time market" is expressed in monetary terms (nominal), conferring a primordial role in the exchange between the existing money capital present and future money capital. This exchange between the current money capital and the future money capital is the essence of the lending process carried out in monetary form (not in kind).

Thus, in the process, the creditor "sells" the money he currently owns in exchange for the money he will get in the future, and the debtor "buys" a current amount of money against a promise to give a larger amount of money future. In this way, the interest rate can be assimilated to the "price" or "cost" of the credit, although such assimilation is quite simplistic. For, as we have seen, the interest rate exists even in the absence of the credit market.

On the other hand, in monetary economies where there is no financial market or in developing economies (emerging market economies), there is still a particular form of manifestation of the "time market", i.e. production itself. Indeed, the purchase of productive equipment and services to produce consumer goods

means the transformation of existing capital of physical goods (means of production) into future goods (consumer goods), a process that is carried out through physical, chemical, biological, etc., namely in other ways than through a lending operation.

Assimilation of the interest rate with the cost of credit is even more simplistic in the case of emerging economies where the financial intermediation process is less developed and bank credit is its main form, because in this case the formation of the credit cost is reduced to the unilateral setting by banks of the active bank interest rate, which borrowers can only accept or not (the adhesion contract).

### THE STRUCTURE OF INTEREST RATES

In modern economies, there is a large variety of interest rates. Among them, the following can be mentioned: the nominal rate (observed on the market); the real rate (nominal rate corrected by inflation rate); the "natural" rate (the rate that is neutral in relation to the prices on the goods and services market or, in other words, the rate at which demand and supply on the "real" market are equal); capitalization rate (the factor by which a current amount of money is multiplied to determine its future value); discount rate (divisor to which a future amount of money is divided to determine its current value); the *ex-ante* rate (the expected weighted rate with the probability of obtaining it); the *ex-post* rate (rate of change in the size of property by a decision that has already been made); gross rate (rate calculated before tax); net rate (rate calculated after tax); the lending rate (the rate of credits granted); the deposit rate (the rate of the loans received); and so on.

All these rates are differentiated according to the capital markets on which they occur (interbank market, credit market, stock exchanges, funds or effects, the government securities market, European countries, etc.), as well as the maturity of the afferent credit instruments. For the same type of credit, there is a certain correlation between longer maturity and shorter maturity

rates, but this is not a strict proportionality. Theoretically, long-term rates are geometric averages of the short-term rates observed so far and of short-term expected rates for all future short-term periods over the long-term period taken into consideration.

Although it is highly diversified, the range of interest rates still has a "guiding" rate, around which the other rates are articulated. In other words, the plurality of rates observed in the market unequivocally reflects a certain guiding rate, such as, for example, the monetary policy rate set by the central bank. As a result, this multitude of rates can be transcended to what is theoretically called the "general level of interest rate". And, in fact, most theorists use this reductionist method, although their assessments of the dynamics of the respective economic sizes differ depending on the choice of the rate and the different ways in which they analyze the factors that determine the observed interest rates.

In any case, the study of the interest rate's structure remains as interesting as the study of the relative price structure. Of course, such a study does not say anything about the general level of rates, and to be truly significant, it has to be corroborated with the results of the benchmark analysis, but this study constitutes a set of tools - theoretical and analytical - complementary, indispensable for the analysis of the determinants of the interest rate.

### **CHALLENGES OF RISING INTEREST RATES**

In the USA, the ten-year government bond yield is currently 2.5%, and given that the expected inflation rate is 2%, it means that the US government has a real cost of 0.5%. Until a year ago, in the US and other developed countries, real interest rates were even negative. But, because of these low interest rates, which have prevailed in recent years in developed countries, some economists have considered the world to be in an era of secular stagnation, and the Fed and the other major central banks have begun to increase monetary policy rates. As a result, long-term interest rates have increased in most developed countries as well as in

non-euro area European countries (around 1% in the Czech Republic and Sweden, between 2% and 3% in Bulgaria and Poland, over 3 % in Croatia, Hungary and Romania).

Lately, in Romania, the average interest rates applied by banks to new loans have increased to approx. 6%, while the average interest rates on new term deposits of non-bank clients remained at around. 1%. Corrected with the expected inflation rate of approx. 5%, these nominal rates are translated by a real cost of credit to the non-financial sectors of the economy of approx. 1%. With regards to the real cost of lending resources attracted by the banking sector, it is negative (-4%). It follows that both the cost of financing by bank loans to the non-financial sectors (the "real" economy) and the cost of financing the banking sector have been reduced in the last period. As a result, credit institutions' profitability improved, exceeding the euro area average. It should be noted that the substantial difference between demand and offered bank lending is a feature of the banking sector in most of the countries in the region, where the level of financial intermediation is low, the demand for credit is high and the credit risk is higher than that of the developed countries.

The increase in actual rates is more or less problematic depending on the causes that determine it. The dominant point in the literature is that the tendency to raise interest rates is mainly explained by the increase in the "natural" interest rate. The change in the latter is caused by the changes in the fundamental elements of the savings and investment decisions. Thus, the weakening of the propensity for saving leads to a reduction of the capital supply and, therefore, the increase of the "natural" interest rate. On the other hand, improving the prospects for economic growth and reducing uncertainty about the future leads to an increase in capital demand for investment and, therefore, to an increase in the equilibrium interest rate. In Romania, in the last decade, the investment rate was on average approx. 26.5% of GDP, and the saving rate, 22.5% of GDP. In other words, capital

demand has always been higher than supply, which has steadily pushed towards the growth of the "natural" interest rate.

In an open economy, domestic capital inflows are added to the international capital flows into which the country has entered: capital inflows are moving towards reducing the interest rate, and outputs in the direction of rising. In this way, in an open "small" (in the sense that it does not influence the yield on global financial investments) economy, the "interest rate differential" (the difference between the interest rate on the domestic capital market and the interest rate on the international capital market) tends to diminish. In Romania, international capital flows are now completely free, which makes foreign capital inflows an important factor in reducing the equilibrium interest rate. In the last decade, these inflows were on average approx. 4% of GDP, which shows the importance of foreign capital in maintaining the equilibrium interest rate at a bearable level. It is important to note that foreign direct investments are particularly important in this respect, which, in addition to not easily "running" in the event of a crisis, causing the sudden rise in interest rates and the strong depreciation of the national currency, have many positive effects on economic growth: technology transfers, introducing managerial knowledge, increasing indigenous workforce qualification, increasing productivity, access to new markets, and so on.

Increasing the "natural" interest rate is a major barrier to economic growth, as it limits the ability of monetary policy to sufficiently stimulate the economy by reducing real rates below the equilibrium level. This is because the nominal rates cannot be as low as the actual rate out of the danger of actual rates becoming negative. The really important issue is, therefore, the reduction of the "natural" rate of interest.

Considering the determinants of the equilibrium rate, mentioned above, Romania has two major types of solutions: 1) the increase in domestic savings; and 2) attracting foreign capital, including through increased absorption of European

funds. It is true, however, that both types of solutions are difficult to put in practice.

First, the increase in saving requires economic growth and/or reduced consumption (private and/or public). However, economic growth depends fundamentally on a number of objective factors such as natural resources, capital, labor, productivity, and so on. After all, economic growth is "creative destruction" (J. Schumpeter), not magic tricks. The reduction in private consumption and therefore the increase in savings for a population that, according to the latest data, 38.8% (7.69 million people) are exposed to the risk of poverty and social exclusion, it is also extremely difficult, if not impossible, socially and politically. Finally, reducing public consumption requires a profound reform of the state and administration and modernizing governance: constitutional change and a unicameral system, electoral reform, restructuring of government agencies and rationalization of public spending, regionalization and decentralization in public administration, reform of the public function and payroll in the budgetary system, reform of justice, education and health, pension system reform, etc. It is, therefore, a real intellectual revolution in the state concept, which Romanian elites have not yet proved capable of. (see the work of the author: *Are Romanian elites able to rethink the economic role of the state?*, Ziarul Financiar, August 23 2017).

Secondly, attracting foreign capital involves improving those features of the economy that are likely to provide incentives for foreign investors. Without going into detail, we mention that it refers to the competitive characteristics of the economic, political and legal, cultural and business environment. Although this process is not easy as it involves the completion of structural reforms which, for reasons we are not discussing here, have stagnated for so long in Romania, the authorities can take some measures to accelerate it: eliminating currency risk by adopting the euro as soon as possible (e.g. by completing the cadastral work), reducing bureaucracy, fighting corruption, etc.

As far as the inflow of European funds is concerned, the fact that Romania only fails to do so is well known and very much discussed. We will therefore not insist on this paradoxical situation, noting only that it has dramatic effects not only on interest but also on all other aspects of the recovery of real development and convergence gaps with EU countries.

It is worth noting that the role of the factors that determine the level and evolution of interest rates is almost absent from the discussions and disputes mentioned at the beginning. After all, interest rates are not determined by the forces of nature, but by people's behaviors. The central bank sets the interest rate called the "monetary policy rate" and limits the range of interest rates on the interbank market (the famous ROBOR and ROBID), which are generally short-term interest rates. In turn, financial market participants (credit institutions, non-bank financial institutions, depositors, companies, households, etc.) base their decisions according to their long-term return on long-term credits, as well as depending on the monetary policy responses they anticipate through inflation and future economic growth, taking into account the risks involved. As mentioned above, real interest rates are calculated by subtracting the expected inflation rate from these nominal rates observed on the market, which makes interest rates at any time reflect the interaction between the central bank's monetary policy on the one hand and assessments and expectations of the private sector, on the other. Linking the evolution of actual interest rates with the fundamentals of savings and investment decisions, the implicit assumption in this interpretation is that the central bank and financial markets can, to some extent, adjust to the evolution of the real equilibrium rate.

There is no guarantee that this is happening. To set the level of the 'natural' interest rate - an abstract, unobservable concept that - is a formidable challenge for central banks. In order to guide the evolution of rates in the desired direction, they are generally based on the estimation of unobservable variables, such as "potential" GDP, "natural" unemployment, "structural" inflation

etc. However, all of these estimates are very uncertain because they depend highly on the model used, the available data, the time horizon considered, etc. Therefore, they are often subject to major revisions. (see e.g., C. Borio et al., *Rethinking potential output: Embedding information on the financial cycle*, BIS Working Papers, No. 404, February 2013).

Also, the framework of the central bank's action may prove incomplete. Focusing primarily on short-term inflation and, in some cases, on stimulating economic growth and reducing unemployment, monetary policy may neglect the evolution of the financial sector. In addition, given that the financial cycle is longer than the political cycle, different time horizons may prevent authorities from taking sufficient account of the impact of their decisions on future financial stability. And in fact, this possibility was proven by the fact that the recent financial crisis occurred despite the fact that inflation was relatively stable in all developed countries.

Finally, if financial market participants are much less confident regarding the future than the central bank, things can go very badly, as has happened several times in the past. In developed countries, over the past three decades, several episodes of credit expansion and recession have occurred, causing major and sustained damage to the economy. In Romania, the rapid increase in the volume of bank loans to the non-government sector (in particular, the population: consumer credit), in the pre-accession and the immediate period after EU accession, led to an increase in aggregate demand faster than production, inflation, increasing imports, worsening the current account deficit with foreign currency and depreciation of the RON. Amplification of the current account deficit has, in turn, led to a decrease in external credit lines and other access routes to international capital. Under these circumstances, it is presumed that if measures were not taken in time to limit the rate of growth of consumer credit (see author's work, *Rapid Credit Growth: Dangers and Remedies*, *Oeconomica*, 3, 2006, pp. 5-20), the conditions of activity of the

domestic banking system would have worsened greatly, which would have favored the emergence of financial and economic crises.

However, it has to be said that a key factor that also contributed to avoiding these adverse consequences was that Romania obtained the promise of the first nine foreign banks - classified according to the assets held in Romania - that they would keep their exposures at the existing level (Vienna Agreement, 2009). It is most significant that this agreement was reached under the auspices of the IMF and the European Commission, because it shows the vital importance of the fact that, for the first time in its history, Romania is allied with the world's major industrial, financial and military powers.

Beyond this happy circumstance for Romania, it is difficult to reconcile the phenomena mentioned with the idea that the interest rates, which express the cost of the credit, were in all these periods and in all these cases at a level of equilibrium.

The focus of the present analysis on savings and investing as key determinants of interest rates is consistent with consecrated macroeconomic models, based on the hypothesis that financial and monetary flows do not influence long-term output (currency neutrality). However, successive crises have shown that financial phenomena can have lasting effects. These phenomena – in particular, the increase in debt rate - amplify cyclical fluctuations and may also cause a strong deviation of the economy from the sustainable growth path. And a large number of empirical studies confirm that a financial crisis can diminish production for a long time.

The conclusion that emerges from the above is that the trends of decrease or growth of actual interest rates do not just passively reflect the evolution of the fundamental macroeconomic variables, but also contribute to the evolution of the latter. Therefore, low interest rates, imposed by force through legal regulations or administrative decisions, may well constitute prerequisites for future financial crises.

The truth is that policies that prevent interest rates from evolving leniently towards equilibrium cause distortion of these important economic variables. The consequence is the excessive

increase in debt and the entry of the economy into a "debt trap" from which it cannot escape without measures likely to cause serious harm to participants in economic life: the cancellation or conversion of debts, the obligation for creditors to receive the goods for repayment which borrowers want to get rid of ("giving in lieu of payment"), chain bankruptcies, etc. The prospects for such an economy are grim: the disorganization of credit, the reduction of investment, production and living standards.

These dark prospects highlight the limits of state action in an economy based on private ownership and free enterprise. In such an economy, the state cannot overcome the obstacles to economic growth and structural adjustments of the economy. However, the actions of the authorities can affect the long-term real macroeconomic developments mainly through the impact of reckless measures on the self-regulation capacity of financial and monetary variables. These collateral effects – manifested in the medium and long term and therefore not immediately visible – they need to be well understood and carefully compared with the advantages of stimulating short-term economic activities. Although the reduction in interest rates may be a natural response to perceiving a chronic shortage of demand, this perception is not always fair - and it can prove very costly in the long term.

Achieving sustainable economic growth requires structural reforms to increase productivity and improve the potential of economic growth factors, as well as macro-prudential measures to limit the growth of private and public sector debt. Artificial stimulation of the economy may lead to an increase in production in the short term, but, on the other hand, it can aggravate many existing problems.

#### REFERENCE

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