

INTEREST IN ECONOMIC THINKING AND PRACTICE – NEW APPROACHES

- Abstract -

Over time there have been few subjects that have so much stimulated the academic environment. Lawyers, philosophers, theologians and sometimes engineers alongside economists have been instigated by price analysis in general, emphasizing in particular on the importance of the subject called interest. In this sense, a number of works of applicative or theoretical nature have been devoted to this subject. Taking into account the financial and economic reality both internally and from the perspective of the international plan, each state has as its main objective the creation of an economic system, based on a solid banking system, which can provide organizational support endorsing the progress of the financial mechanisms. It is extremely important to understand that a sound economic system means a monetary policy and implicitly an interest policy that supports the development and evolution of society, all of which are necessary in the context of the novelties imposed by the phenomenon called globalization which can lead to growth economic and financial results if well managed. Many economics professors and academics, including J. Stiglitz, considered the banking system to be the "heart of the economy", for the simple reason that it intervened as often as needed by pumping or withdrawing money from the economy where it was need the greatest (Stiglitz 2010, 195). Investigating the concept of interest has prompted the author to orient his approach to five study areas: the analysis of the monetary policy concept and the links between interest rates and other instruments for the implementation of monetary policy strategies; deciphering the evolution of interest through the classical, neoclassical and legal economic doctrines; the presentation of the interest structure, interest types in the economy as well as the real and nominal interest rate formation mechanisms; highlighting the implications of interest rates on the variables of the economic environment as well as the place and role it plays in macroeconomic therapies; analysis of the elements regarding the approach of the interest rate concept in the implementation of monetary policy for the emerging or developed economies, together with the elaboration of a necessary study to validate the correlations between the monetary policy rate and the GDP, exchange rate, inflation, the monetary aggregate M3.

The research begins in the first chapter called "**Monetary Policy: Controversies on Interest Role**", with a rigorous approach to monetary policy notions, the aim being to familiarize the reader with the attempts, primarily theoretical, which characterize and evaluate this concept in the specific literature. One can certainly say about monetary policy that it is one of the most influential instruments of economic policy, which, through the elements used, influences the evolution of the operational objectives, which in turn act on the intermediate objectives, and this whole circuit aims at reaching the final target established by the Central Bank. The way in which is done involves either a particular focus on the monetary mass in circulation and concrete actions on its volume or actions centered on the cost of credit. The author considers it appropriate to mention the three monetary policy strategies that have outlined and through which she attempted to achieve the objectives described above:

- ❖ the exchange rate policy, as well as the correlation between it and the interest rate, a policy that is difficult to achieve because it ultimately translates into a loss of monetary independence, which has led to the abandonment of shocks transmission aroused upon adoptive countries in the "anchor" countries;

- ❖ the monetary aggregate policy, whose genesis was located in the 1970s and which aims to monitor the growth of monetary aggregates. However, this policy proved to be ineffective because, due to the development of the economy, new forms of liquidity have emerged, which

were not attached to any monetary aggregate and thus, implicitly by monetary aggregate management, could not be verified or revised by the monetary authorities;

❖ the interdependence between interest rate and inflation, or how the two instruments need to co-exist for a well-functioning of monetary policy.

The author continued her research with the analysis and development of the correlation between interest rate and another monetary policy tool, the exchange rate, answering the question "What is the link between exchange rate and interest rate?" The literature in this field of study was inconclusive. The relationship between exchange rates and interest rates occupies an important place in theoretical and empirical literature in small open economies, and this relationship has been presented using a simple model that incorporates the importance of the exchange rate in domestic prices and at the same time distinguishes between economic growth situations compared to depreciation. The results of the *curs de schimb flotant* model used by the author will show that this correlation between exchange rates and interest rates, conditioned by an adverse risk premium shock, is negative during expansion periods and positive during the contraction periods. Specifically, the model predicts that interest rates will be raised to limit the negative effect of depreciation on real output as a result of unfavorable or real financial shocks. In contrast, Eichengreen (2005) estimates that interest rates are high in order to limit the negative effect of depreciation on real output. This model attempts to bridge the gap between theory and some empirical evidence. In particular, the interest rate behavior is analyzed in response to shocks that have an impact on the value of the national currency under different assumptions, in relation to the relationship between the exchange rate and the aggregate demand. The analysis carried out by the author aimed to better understand the economies operating in floating exchange rates, which are often faced with difficult decisions in how they manage financial stability in the economy in situations where the exchange rate exchange shows significant variations.

The second strategy under analysis refers to targeting monetary aggregates. This objective primarily involved defining a way to increase the level of neutral monetary mass that would result in a fixed price level, all in the context of a monetary policy interest rate that would stimulate economic development. Basically, in economic terms, the stability of the currency is aimed at price stability, meaning a certain level of inflation. A strong argument in support of the monetary policy use of the consumer price index is its high elasticity towards the limited effectiveness of monetary aggregates in the sizing of inflation expectations. The instability of the currency over time coupled with financial innovations has prompted monetary authorities to reconsider strategic monetary policy objectives so that a single main objective, namely price stability, was achieved by targeting a certain level of inflation. The first country to adopt this monetary policy objective was New Zealand in 1989, followed in 1991 by Canada, Israel in 1992, Sweden, Australia, Finland in 1993, France and Italy in 1994, Italy in 1995 and Portugal in the year 1997. The implementation of this new monetary strategy implies the existence of certain institutional and economic premises for the candidate state. These prerequisites relate to central bank independence, fiscal discipline, transparency of information, a floating exchange rate, a sufficient level of reserve, and, last but not least, a strong financial system to cope with these monetary changes.

Another subject analyzed by the researcher is the monetary policy instruments used by the Central Banks in the context of the challenge of the global financial crisis. State involvement in economic activity is done with the help of the Central Bank, and its actions can be done either directly through purely administrative elements or indirectly by influencing some co-ordinates that, as a domino effect, will have effects at the level of the whole economy. Irrespective of whether you choose the direct or indirect option of influencing the economy, the means used are called monetary policy instruments. The way in which these processes are used and combined

differs from one state to another and from one period to another depending on the level of economy development and the targets set for it. Analyzing the characteristics and impact of these instruments, we can say that the most used and having a dignified and constant effect on the economic activity is the manipulation of the interest rate alongside the open market operations. The system of minimum reserves has lost importance, but if we look at open market operations, we can say that they are becoming more influential in achieving the objective of price stability. The author embraces the idea that both price stability and financial stability must be pursued in parallel with the evolution of key macroeconomic indicators, all of which aim to avoid situations where disinflation reaches unsustainable levels.

The research continued with a monetary analysis based on the BVAR (Bayesian Vector Autoregression) model, an extremely important model within the monetary policy enforcement strategy, and the information provided is important not only for the Central Bank but also for economic agents and the population. So, conducting this analysis at the level of Romania has helped us better understand the mechanism by which monetary policy is transmitted in order to achieve the set target, namely inflation targeting, but has also provided us with relevant information on adherence to the Euro area. The BVAR model that the author proposes to test helps us to understand through the correlation between the interest rate, GDP and inflation rate, how monetary policy responds to shocks. The model follows the methodology presented by Sims and Zha (1998) in *Bayesian Methods for Dynamic Multivariate Models* and uses the Bayesian autoregressive vector. In the analysis of this model, the quarterly data of three variables are used over a period of at least ten years for the results to be relevant. The data needed to model the model are used in logarithmic form, except for the interest rate, and a final differentiated operator applies to the final result. Out of the variables used, the interest rate is the only one that does not allow seasonal adjustment. It is particularly important to have a correlation between the use of econometric models and the economic reality, as there may be factors that cannot be quantified through modeling. At the same time, the economy can capture data from econometric modeling, as was the case with the influence of GDP on the interest rate, from the model used by the author, and so it is particularly important to link them to the central bank's monetary policy objectives.

Moving the boundaries of research, in the context of the second chapter "**Interest in Monetary and Legal Doctrines**", a preponderantly theoretical chapter, the author considered it important to present the evolution of interest through the classical, neoclassical and juridical economic doctrines. The notion of interest is a particularly controversial term not only in the economic doctrine but also in the legal field. We sought to build our approach starting from this unanimously accepted observation. However narrow the study of specialized research, it requires dual treatment of interest: the deciphering of its nature and of the legal theorems accompanying it in the different stages of human development. In our opinion, the two approaches are complemented, giving a clearer sense to the notion of interest. We appreciate that by decoding the interest one can make an incursion into the essence of this important category of the market economy activity, and by synthesizing the legal elements it is possible to define in a rigorous manner the legal forms that it can put on. I consider that an important step in the complicated way of understanding the concept of interest was done with the appearance of J.M. Keynes' works. Although, in his approach, he starts from the classical notion of the link between supply and demand, Keynes states that these elements are not just investment and savings. Thus, the offer is represented by the money supply, and the demand for liquidity needs in the economy at a certain point. We can say that Keynes' new approach is a continuation of Bohm-Bawerk's research, a successful analysis of the factors that define the nature of the interest. The inclusion of the propensity for consumption and the preference for liquidity in Keynes' equation brought psychological factors into the limelight as key determinants of the interest rate. Another element

worth mentioning is the importance given to the ratio of income to interest. In view of the above, we feel obliged to point out Keynes' incontestable merits in the analysis of the nature of interest, merit what has been and is still the central element of many controversies. Many governments in the world have used the Keynesian theories of interest, along with the other elements of his doctrine, in an attempt to break out through the notion of "cheap money". The development of society along with the changes in the composition of the elements defining its manifestation have led to new theories regarding the interest expressed through the classical doctrines. Among the most acclaimed figures of this new trend are: Eugene von Bohm-Bawerk, E. Lindhall, J.M. Keynes, A. Marshall, D.H. Robertson, Irving Fisher and Knut Wicksell.

The context of the development of economic thinking forces us to notice the inclusion of interest in the maze of macroeconomic specific instruments. In particular, economist Eugene von Bohm-Bawerk appreciates interest as an important element of the capital involved in the development of social output. At the same time, it is he who discovered the factors that influence the way of expression and the existence of interest. According to the theory he exposed to the academic environment, time has a great importance in the evolution of value, and with the help of this new element, it is possible to distinguish between the future value and the current value. In fact, according to the academician, the difference between the two elements is the very origin of the interest. In our attempts to analyze economic trends that refer to the nature of the interest rate, we could not fail to mention Irving Fisher's contribution, which reveals the important link between inflation and the level of interest. At the same time it is still him the one who captures the interdependence that arises between real interest and nominal interest. Irving Fisher's views become milestones in the process of transforming economic thinking and practice that is at the heart of the interest rate analysis, with macroeconomic valences, and the center of its analysis takes into account two important, even essential factors: time and inflation.

Another theory worth mentioning, although its impact was not as great as those listed above is the theory promoted by D.H. Robertson, E. Lindhall and B. Ohlin, namely the theory of loan funds. The central point of this theory is to present the interest as a balance between supply and demand for money, namely interest is considered as the offset of supply with demand for credit. Practically this was the point in time that led to a closer analysis of the determinants of supply and demand for money. The notion of interest is particularly controversial in both economic and legal theory. G.O no. 13/2011 and the Civil Code are the ones to regulate the legal interest rate regime at this moment. The audit continued with the presentation of the concept of interest as it is legislated by the Civil Code in the obligation to give, as well as in the obligation to do, especially given the analysis of the correlation between interest and penalties or damages. Regarding the legal doctrine we noticed that, in the conception of the most dedicated specialists, the notion of interest allows at least three explanations with significant distinctions, namely: the moratorium interest, the paper profit that the injured party could not use until the date of the judgment, if we refer to the obligations that have as their source the crimes and the interest that characterizes the credit operations.

The third chapter, "*The Architecture of Interest Structure*", captures the fundamental elements of interest: its structure, interest types promoted in the economy, as well as its composition mechanisms. As is normal, the structure of interest differs depending on the relationship between creditors and debtors at times and different segments of the credit market. More precisely, aspects such as the destination of the loan, the way in which it is or not guaranteed, the maturity of the financing etc. act towards the difference in the interest rate, which leads to the emergence of a wide range of interest rates that resembles the initial rate to a greater or lesser degree. A particularly important element that leaves its mark on both the theoretical and practical aspects of the formation of interest rates is the yield curves. Moreover, the way in which

the various interest rate classes are structured, dependent or interdependent from one another, can create true mechanisms. In an attempt to find a definition of yield curves, they were presented through the functional bond that is formed between the number of years before maturity and maturity yield for fixed income instruments. For a clearer analysis of the presented elements, two other important elements had to be discussed in the establishment and formation of the yield curves: the yield of the income instruments that we can define as the result of the investment and the price of the claim that is actually the investment itself. Between these two elements, there is an inversely proportional relationship, the yield records higher values as the purchase price is lower. We believe that it was necessary to present the three hypotheses that emerged in order to explain the determinant causes of the change in the yield curves. The first hypothesis is that referring to market segmentation. According to this theory, fixed-income securities may be traded on three different markets: long-term, medium and short respectively, and yield is established in each of these markets by the confrontation between demand and supply. Another hypothesis used is that of liquidity preference. Most investors prefer securities that can be converted easily and quickly into cash without affecting their value or return. The latter hypothesis is the assumption that investors pay special attention to interest rate fluctuations, and the conclusions drawn are those that determine the preference for long-term or short-term investments.

At the same time, a great deal of importance was given to the different ways of classifying interest rates that arose as a result of the diversification of both the typology of debtors and creditors and the constant evolution of economic activity. Thus, we note that the notion of interest can take the most varied forms: charged interest or bonus interest, or we can discuss a classification of this at the level of supply and demand for capital, when we can speak of passive rate and active rate. Banking operations have constantly developed over time, being subject to innovation, which has led to the emergence of benchmarks. Another type of interest faced by the savings of 2016 and kept in 2017 is the negative real interest. This is an unconventional tool used by monetary policy in certain states of the world whereby the real interest is negatively rated, ending with a minus value. In strongly deflationary times, the population and economic agents tend to save money by giving up on trust in consumption and investment, which seriously affects the economic environment. The result of this behavior can easily be seen in the low level of demand for goods and services, slowing production and rising unemployment. Theoretically, interest rates below zero aim at reducing loan costs for companies and households, and stimulating demand for credit, investment, and spending for consumption. The first country to have this form of interest is Switzerland since the early 1970s, meant to counteract currency appreciation due to investors fleeing inflation elsewhere in the world. In 2009 and 2010, Sweden and Denmark, in 2012, used the negative interest rates to stop foreign money entering their economies, and as of 2014, the European Central Bank lowered interest rates below zero on bank deposits, thus intending to prevent the fall of the Eurozone in a deflationary spiral.

From ancient times to the present interest has been one of the most important elements in carving and supporting the trend of economic development. Thus, through innumerable forms of expression, it can mark more or less the activity of economic agents. It is therefore very important to know and analyze how it can evolve, as well as the determinants that influence this change. We believe that determining and understanding the determinants of interest rate developments is an element of particular importance for both the banking system and its participants, whether they are customers of banks, economic operators or investors. Therefore, for the issue bank, knowing these elements is important for establishing the future monetary policy strategy. For economic or potential investors, the interest rate determines the future decisions regarding the placement of the held capital. As for commercial banks, the situation is more complex, we can even say delicate. Their goal is to maximize active interest rates and

minimize passive interest rates, which is against the interests of customers seeking to maximize passive interest rates and minimize active ones. Thus, it is important to find a balance, and decisions must be made according to their own forecasts of interest rate developments.

The research continues with the analysis of the correlation between the inflation rate and the interest rate. Thus, in this case, we can speak of real interest and nominal interest, particularly important concepts, treated by the author within an axis of the chapter. Specialized work in the economic field attaches particular importance to the monetary equilibrium, namely the perspectives on interest are true in time as long as at the moment when the loan reaches maturity, the full value can be fully recovered, namely the purchasing power from the moment when loan is contracted is maintained. Thus, for example, a credit institution may pay a nominal interest rate of 8% per year. In this case, the real return on investment will be 8%, unless the purchasing power stays constant throughout the investment, the actual yield will be equal to the initial one only if the inflation rate for that period is zero. When inflation occurs, the purchasing power of money diminishes, and therefore the real rate falls below the nominal value. We can assume an inflation rate of 6% per annum for the entire investment period, leading to a real interest rate of only 2% per year. In other words, more than three quarters of the initial investment will only be used to cover the losses due to the decrease in the purchasing power of money. However, the inflation rate may be even higher, exceeding even the 8% rate on the nominal interest rate. In this case, we can say that the return on investment is negative, since the nominal interest rate is unable to cover the real value of the initial capital and is strongly influenced by the nominal prices of goods and services for the reference period. In the utopian situation where neither inflation nor deflation is recorded in the economy, the two interest rates are equal. It is necessary to point out that the real interest rate is difficult to measure by the fact that it is directly influenced by the inflation rate, an unpredictable element that can evolve differently compared to the expectations set by the economic environment. Only nominal interest rates are published.

We continue the research with the fourth chapter "Integrating interest in the Architecture of Therapeutic tools of Macroeconomics and Microeconomics" focusing on the integration of interest in the therapeutic tools of the macro and microeconomics as well as on highlighting and identifying the risk of the interest rate by means of the interest gap method. Thus, we considered it important to look at the main implications of the rise or fall in the interest rate on the economy at both micro and macro levels. The discovery of the economic doctrine with its millenary roots in interest, knowing that sometimes by its degree of "wear" it was transformed from a determined factor of economic development into a disruptive one, it encouraged us to investigate the impact that any change it suffers has on micro and macroeconomic management. I started researching by highlighting the impact of interest on the state balance of payments developments. An increase in interest rates on the domestic market while the other elements of economic nature remain unchanged, is likely to attract an influx of foreign investment funds and could encourage the repatriation of domestic funds held abroad. In addition, local investors looking at foreign investment funds, when they think they are not profitable, choose to invest resources held in branches of the national economy. These effects, relevant to portfolio investment items belonging to the balance of payments capital account, are likely to generate growth pressures on foreign exchange rates.

We further analyzed the influence of interest on the private sector, along with that on commercial banks. The impact of monetary policy on the real economy through specific channels was considered to be a truth that no longer requires any demonstration. That is why the author's efforts were focused on the clear presentation of how these channels work and the mix of effective measures that would ensure the resumption of good economic performance within a fairly short timeframe when we hit a negative impact on interest. The author then lowered her gaze on the

place and role of interest in macroeconomic therapies, appreciating J.M.Keynes's "IS-LM-BP" model, later developed by A. Hansen and J. Hicks as the most effective tool to analyze the impact of interest rate variations on macroeconomics. We assumed that there is no possibility for an economy to function independently, since it is linked to the outside world through capital and material flows. Therefore, our analysis has taken into account the effects of interest in two situations: on the one hand, we have researched the hypostasis in which we face an open economy that exhibits a perfect mobility of capital, and then the hypostasis in which the open economy is characterized by imperfect immobility of capital. Of course, as was normal, we also analyzed in our approach the fluctuations in the flexible or fixed exchange rate, as well as the impact it has on the two savings options.

The analyzed IS-LM-BP model helps us to demonstrate that both fiscal policy and monetary policy can generate significant fluctuations in the economic environment through floating exchange rates. Over time, economists have debated how to coordinate policies among the world's states. The high degree of capital mobility among developed countries suggests that tax actions that lead to a divergence in domestic interest rates will be canceled by the influence of the exchange rate and its implications on net exports. Some experts argue that a monetary policy designed to achieve fixed exchange rates within narrow target areas would reduce the destabilizing aspects of international trade in goods and financial assets when currencies become overstated or underestimated. This point of view highlights the existence of an integrated global economy and the desirability of a highly nationalized national economic policy in the international context versus one that focuses on internal policy objectives without taking into account international implications. Another point is that changes in exchange rates are due to real economic shocks, and in this case there are no overvalued or undervalued currencies, the exchange rates are always in balance with current economic conditions. One problem that the IS-LM-BP approach raises at the practical level is that each government has its own monetary policy and different objectives.

Analysis of exchange rate regimes led us to a simple conclusion: you cannot have everything. To be more precise, it is impossible for a nation to have free capital flows, a fixed exchange rate and an independent monetary policy. This phenomenon is often called the impossible trinity. A nation must choose a part of this triangle, giving up the institutional function in the opposite corner. The first option is to allow free flows of capital and to adopt an independent monetary policy, as we can see in the United States in the last years of the 21st century. This option makes it impossible to have a fixed exchange rate, it must be floating in order to balance currency fluctuations related to the foreign exchange market. Option number two is the existence of free capital flows that can set the exchange rate, a model that is found in Hong Kong's monetary policy in recent years. In this case, the nation loses its ability to adopt an independent monetary policy. Money supply and interest rate need to constantly adjust to the market to keep the exchange rate at equilibrium. Basically, when a nation determines its level of foreign exchange to the currency of another, it actually adopts the monetary policy of that state. The third option is to restrict the international flow of capital outside the country as well, as China has done in recent years. In this case, the interest rate is no longer fixed by world interest rates, but it is determined by internal forces, as is the case in a fully closed economy. At the same time, experience has shown that each state can choose different elements from this trinity. The choices come as a result of the answer to the following question: what does monetary authority actually want to achieve through monetary policy? Opportunities are represented by the acceptance of exchange rate volatility, monetary policy support in order to stabilize the national economy, or the free access of citizens to world financial markets. No nation can avoid making one of these choices.

The last part of this chapter was dedicated to management of interest rate risk. Over time, interest rate management has been particularly important in analyzing the methods of increasing a bank's profitability. The purpose of any economic agent, any finance and banking institution, is to make a profit. For most banking institutions, the interest rate method should generally show consistent results. And as long as its limits are understood, it remains an extremely effective measure of interest rate risk.

The scientific approach is finalized by the elaboration of the fifth chapter "*Interest Policies Promoted by Contemporary States*", focusing on the interest rate regimes practiced in the developed or emerging economies, as well as on the particularities of the interest policy promoted by the European Central Bank and the National Bank of Romania. Developed countries form the Western world, a term that expresses a way of life, a social-political philosophy, or a mentality, rather than a population or geographical area. At present, 29 countries are among the developed countries, out of which 22 are in Europe, 2 in Asia, North America and Oceania, one country in Africa. The Organization for Economic Co-operation and Development (OECD) is the one that governs developed countries. The world economy is dominated by developed countries, with the largest share in both foreign capital investment and exports as well as in world gross output. The researcher presented the monetary policy strategy of the Federal Reserve System between 1960 and 2017 and noted that it has a threefold end result in the following directions: interest rate stability and price stability as well as an unemployment rate as close to zero. Concerning Japan, the actions were focused on resolving the problems caused by the 1980 boom, the moderation of the crisis caused by the inflationary pressures and the breakdown of the 2007 financial bubble.

The author continued with the analysis of the interest rate policy addressed by countries with emerging economies. The former World Bank's Dutch economist Antoine Van Agtmael, president of Emerging Markets Management, a well-known investment fund, first mentioned the notion of emerging economies. The Dutch economist wanted to introduce an alternative to the concept of a "third world" that includes those developing countries that have potential for expansion. The International Monetary Fund nominated the following countries in 2012 as emerging economies: Peru, Venezuela, Latvia, Argentina, Thailand, Hungary, Mexico, China, Poland, Ukraine, India, Brazil, Romania, Bulgaria, Indonesia, Turkey, Chile, Lithuania, Russia, Colombia, South Africa, Pakistan, Estonia, Malaysia, Philippines. Currently, the term emerging economy is the one that produces at least 1% of world GDP. This new definition was introduced by American economist Jim O'Neill, creator of the BRIC acronym (this acronym is made of the initials of four states Brazil, Russia, India and China).

The impact of the interest rate on the economic environment is different in the emerging economies compared to the developed ones. Theoretical models have shown that interest rates are not a determinant factor of business cycle fluctuations for developed economies, as opposed to emerging economies, where the impact of the change is much greater. Emerging markets central banks react to major changes in interest rates or acceleration of financial operations in order to maintain financial stability even at the expense of financial disintermediation. The EDF and the European Central Bank are pursuing monetary policies that focus on internal objectives such as inflation, financial stability and economic growth. But the EDF and the ECB also provide the international monetary system with important reserve currencies, namely the dollar and the euro. The incompatibility of fixed exchange rates, international capital mobility and the autonomy of national monetary policy is a basic postulate of open economic macroeconomics (an impossible trinity). Based on the postulate, emerging markets with exchange rates fixed to the dollar or euro import the monetary policy of the anchor country, unless they impose capital controls. Our analysis has led us to conclude that the central banks of emerging markets are FED-

dependent, with long-term local interest rates being held hostage by the FED. Certainly this dependence of emerging-market interest policy on US policy is a source of dissatisfaction and frustration for decision makers of emerging markets. There is, however, a correlation of global interest rate cycles and, therefore, the extent to which the increase in financial globalization has aggravated domestic policy contracts is striking.

The last aspect researched by the author focuses on the particularities of the interest policy promoted by the European Central Bank and the National Bank of Romania during the analyzed period: 1990-2017. The author considers that through the interest policy promoted ever since establishment up to current time, the European Central Bank has attempted to ensure good economic performance throughout the euro area, so that more or less restrictive measures have intervened in the tense times of the economy, helping to recover it. Concerning the analysis of the particularities of the interest policy promoted by the National Bank of Romania during the analyzed period: 1990-2017, we can conclude that the economic activity of these years is visibly influenced by the NBR's involvement through the way in which the interest rate fluctuations are managed. The National Bank of Romania adopted a monetary policy based on intermediate objectives in the transition years to the market economy, with a special emphasis on monetary aggregates. As an operational objective of monetary policy we chose the monetary base, in other words this can be presented as follows: The NBR preferred to control the amount of currency in the circulation through the monetary base. The 1989-1993 period was characterized by a restrictive monetary policy due to the keeping of the interest rate under control, which led to the administrative ceiling of the credits, the funding increased in the economy, but it was not sustainable because the production of the credited companies did not ensure the market selling what led to inflation. The first moments of success of the new monetary policies promoted by the NBR were seen in 1994 and continued over the next two years, when the confidence of the population in national currency increased, inflation diminished, and the new interest rate policy led to de-dollarization and re-monetization of economy. The de-inflationary process was supported by the increase in the level of household savings in banks. The increase of money supply in circulation through a low interest rate on loans for agriculture in 1996 led to inflation re-inflammation. The evolution of the interest rate during this period can be appreciated as being "calm", without any oscillations that need to be mentioned. The interest rate applied by the Central Bank continues to be subject to government constraints through the promoted economic policy, and the interest rates of commercial banks have diminished as a result of the same restrictions. Excess liquidity in the market, a phenomenon that characterized the next period, 1997-2000, triggered changes in interest that consisted in the transfer of reference interest promoted by the Central Bank from the refinancing operations to the attraction of deposits.

Between 2001 and 2004, the Central Bank regained its role as an influential economy, the current account deficit improved, as well as its financing terms and those of public debt. Interest rates have fallen, but this has not called into question the achievement of the inflation target, with a downward trend. Capital outflows in the first half of 2003 forced the NBR to sell foreign currency, which intensified inflationary and exchange rate pressures. Since 2004, monetary policy has come to a new approach, we are now talking about a mix of economic policies and a new strategy to promote monetary policy. Since August 2005, the NBR has determined inflation targeting to be the main objective of the promoted policy. The disinflationary process continued over the next two years, the targets set by the NBR were extremely ambitious, but the objectives were reached and even overcome with interest rate interventions whose level was increased. The accession of our country to the European Union in 2007 was the result of sustained efforts to reform the Romanian economic environment as well as the society as a whole. The period 2007-2010 was characterized by economic turbulences that have transformed into one of the worst

economic crises worldwide, with effects on Romania's economy also. The budget deficit has reached the highest level since 1998 so far, and the wage policy alongside the fiscal and budgetary one has fueled the excess demand in the economy. The increase in the inflation rate to 9% forced the NBR to take measures to strengthen monetary policy, so the interest rate increased in five steps in the first seven months of 2008, reaching 8% to 10.25%. The level of the minimum mandatory reserves was maintained at 40% for the currency and 20% for the lei until September of the same year, when the liquidity surplus decreased it was decided to reduce the level of reserves in lei to 18%. The changes made by the National Bank of Romania had the expected effect, so 2008 saw an inflation rate of 6.3%, 1.7% lower than the one reported at the beginning of the year. The effects of the financial and economic crisis that has grown in all the countries of Europe have also been found in the Romanian economy during the period mentioned.

Starting with 2010, the monetary policy promoted by the Central Bank had as a general objective the resumption and consolidation of the disinflationary phenomenon in order to reach the annual inflation rates set. The recovery of the economy was sustained by the National Bank of Romania (NBR), by lowering the interest rate, which declined from 6% in December 2011 to 1.75% in 2015, and it is still maintained. Thus, the entire economic downturn recorded by the 2007-2009 financial crisis was recovered. I believe that the capacity of the domestic economic environment to resist external influences should be mentioned, so the effects of the crisis in Ukraine were only found in the low level of food imports from the countries affected by the embargo imposed by Russia. Neither the problems of the Greek state influenced the domestic banking system in view of the fact that all credit institutions with Greek capital complied with the requirements imposed by the NBR on prudence. The continued decline in the benchmark interest rate up to 1.75% was due to the NBR's desire to ensure medium-term price stability and to revive the economy by resuming the lending process. In support of this, the NBR reduced the level of minimum reserves by 2 percentage points to the level of 8% for lei, the interest rate on foreign currency liabilities remained unchanged. One thing is certain, the monetary policy and, implicitly, the interest rate policy promoted by the NBR has as its main objective the reduction of the annual inflation rate in the medium term and the calibration of the instruments used by it to achieve the proposed objectives. So we can see that the interest rate level is correlated with the intensity and the pressure of inflation on the economic environment. A fundamental role in the reasoning of decisions will still hold uncertainty about medium-term inflation expectations. The risks arising from the relaxation of the revenue policy and the fiscal policy in 2016 have led the NBR to promote a cautious interest policy, which also influences the policy promoted by commercial banks operating on the territory of Romania. In my opinion, the NBR gained some autonomy over the level of interest on its operations over the period under review, all due to the reconsideration of monetary policy and, above all, the policy of promoted interest.

Finally, the author considered it useful to join the analysis of the interest rate policy promoted by the NBR and an economic and mathematical model to highlight the correlations between the reference interest rate and certain macroeconomic indicators. This research was carried out with the help of the SPSS 17 statistical program. The study was started by analyzing the links between the reference interest rate, the dependent variable, and the indicators selected: GDP, exchange rate, inflation, M3 monetary aggregate and consumption, the independent variables. This was meant to emphasize the correlations existing between them, but also the way in which they influence each other directly or indirectly, the intensity of this correlation being the element that justifies the need to create the model. The researcher has analyzed the correlations built using the Pearson index. The selected indicators were entered into an Excel file from where they were imported into the SPSS program, in order to establish the correlations formed and their interpretation; the collected data are related to the period 2007-2016. As a way of introducing the

variables into the regression, the Backward method was used, which involves the step-by-step removal of the variables that are considered insignificant; thus analyzing the results obtained from the regression, we noticed that GDP, consumption, M3 monetary aggregate and exchange rate were considered as irrelevant variables in the model and were excluded. The final model resulting from the elimination of the insignificant variables has a very high probability of being a correct one - 93.4%, a conclusion resulting from the analysis of the values obtained through the SPSS 17 program in the R Squared (0.872) and Adjusted R Squared tests (0.856). The established regression model has given me the opportunity to establish a series of correlations between the variables considered. Thus, there was a significant indirect link between interest rate and GDP, money supply and consumption, and a strong direct link between interest rate and inflation, a situation that can be considered normal since the main monetary policy objective since 2005 inflation targeting, and all the steps of the NBR have channeled in this direction. The last stage of the modeling was the realization of the regression equation graph, resulting in almost perfect linear regression, the independent variables that the originator originally selected increased as the dependent variable increases. Thus, we can assert that a quantitative assessment must always be accompanied by a qualitative assessment by which we grasped factors that cannot be quantified by econometric modeling, and when we use the results of the econometric models, we must bear in mind that, although they use impressive mathematical calculations, they are merely simplifications of reality.