"ALEXANDRU IOAN CUZA" UNIVERSITY IASI FACULTY OF ECONOMY AND BUSINESS MANAGEMENT DOCTORAL SCHOOL OF ECONOMY AND BUSINESS MANAGEMENT DOCTORAL AREA: ECONOMY

THE IMPACT OF THE MONETARY POLICIES ON THE INFLATIONIST PROCESS

DOCTORAL THESES ABSTRACT

Paper coordinator: Univ. Prof. Dr. Ion Ignat

> PhD student Marcu Zina married Cioran

Iasi 2015

Abstract

Mr./Mrs.

We inform you that on 09.18.2015, 12:00, in room **B417**, Mrs. **Marcu Zina married Cioran** will present, in public meeting, the diploma paper with the title **THE IMPACT OF THE MONETARY POLICIES ON THE INFLATIONIST PROCESS**, in order to obtain the scientific title of PhD in **ECONOMY**.

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Univ. Prof. Dr. Vasile Cocris, "Alexandru Ioan Cuza" University Iasi

Coordinator:

Univ. Prof. Dr. Ion Ignat, "Alexandru Ioan Cuza" University Iasi

Referents:

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Univ. Conf. Dr. Vasile Işan

Gabriela Costin

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Introduction

The main aspects raised by the monetary policy have been and still are returning regularly in the center of attention and debate, especially from the perspective of full integration of the national monetary systems, of the objectives which it should propose itself, of the legislative, logistical and organizational framework, of the tools likely to be used by the European Central Bank and of the transmission mechanisms of this common monetary policy.

I approached the monetary phenomenon because it is a topic of actuality, with a high degree of relevance, which was and still is permanently tormented by anxiety and uncertainty. Even though in the future, the interest in the monetary policy will no longer be that high compared to the interest on financial policies, however, presently, the monetary policy is an active area of the whole research dedicated to macro-economy.

The PhD thesis, "**The impact of the monetary politics on the inflationist process**" was chosen because I considered it important to analyze how the monetary policy applied so far in the Eurozone has influenced the political decisions in our country. The scientific knowledge on the monetary phenomenon, confronted with the complexity of monetary problems, with the diversity of currency and its more complex role within the economy, with the tremendous evolution of financial institutions, of the monetary and financial structures and products, has witnessed a divergent, competing or complementary historical evolution, which determined the monetary theory to always be at the beginning of a new research program.

In the paper entitled "**The impact of the monetary policies on the inflationist process**", I will present **a symbiosis between theoretical and empirical aspects of monetary policy**. What I want to show is that **monetary policy can have a significant time influence, both on prices and on other macroeconomic indicators** such as economic growth, occupation and other important aspects of financial and non-financial economic activities. In this regard, I will try to make a clear analysis at the European and national level through the main macroeconomic indicators. I will study the way in which the Eurozone countries manage their monetary policy and

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the monetary policy difficulties that the existing members or the European Central Bank are facing in this period.

The main **purpose** of this paper was focused on the inflation dynamics at a national and European level and the links between inflation and several important macroeconomic indicators. In the empirical study in the third chapter, I will present an inflation prognosis model for both Romania and the Eurozone (UE19) and in chapter four, dedicated to the monetary policy in Romania, I will make a VAR analysis of the inflation rate compared to dynamics of the money supply, of the unemployment rate, interest rate, leu / euro exchange rate and the economic growth during 1992 - 2014.

As a result, the formulation of the following research objectives was imposed:

 \checkmark presentation and detailed analysis on the aspects referring to the importance of achieving price stability as a central objective of the monetary policy both at a national and an European level;

✓ analysis of the inflation rate evolution in opposition to money supply dynamics, unemployment rate, interest rate, leu / euro exchange rate and industrial production during 1992-2014 by using statistical models - auto-regression vector model;

 \checkmark estimation and prognosis of inflation in Romania and the Eurozone, proceeding to completion and validation of some statistical models, making a time analysis, the considered period being January 2000 - March 2015;

 \checkmark a comparison between the inflation trend in Romania and the one in the Eurozone which may put up to discussion Romania's HICP convergence towards the HICP and the UE19.

 \checkmark identify the main effects generated by the **new ECB actions referring to the QE** (quantitative easing) program in the eurozone.

 \checkmark identify measures that are required to be taken by that central banks given that most euro area countries have negative inflation and the monetary policy interest rate close to the zero limit.

In addition to these objectives, I have also approached other issues of interest, although they have not reached but very little the issue proposed for analysis. Thus, we can mention:

 \checkmark implications of the global economic – financial crisis started in 2008 on the European monetary policy;

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 \checkmark NBR's monetary policy orientations in view of the transition to the euro currency

 \checkmark advantages and disadvantages of the transition;

 \checkmark the importance of the solution areal extension for the problems which the economy is facing at a national and European level.

The scientific research methodology is based on a thorough interdisciplinary approach, because the production of a more relevant thesis on the monetary policy, inflation, interest rate implies knowledge and information from the field of economic disciplines such as: general economics, finance, economic statistics, econometrics, etc. Our research covers a wide range of qualitative and quantitative methods and techniques, processes and tools (tables, graphs) adequate and properly constructed for the purpose and objectives of this research. The methodology used in the research has taken into account the study on the inflation rate compared to the dynamics of money supply, unemployment, interest rates, leu / euro exchange rate and economic growth expressed by industrial production during 1992 -2014 as well as the forming and analysis of time series, for the inflation modeling and predicting in Romania and the Eurozone. We have proceeded to use a mixed analysis, that is a temporal and comparative analysis, and as statistical models I used vector autoregression model (VAR) and the ARIMA model for analysis of and predicting a time series.

The monetary policy is an active area in the whole research dedicated to macro economy. In the recent practice of central banks, and in that of the current economic theory, a major role is assigned to the currency and monetary analysis in formulating and implementing the monetary policy. It comes from the relevance of information offered by central bank monetary analyzes generated by statistical and econometric techniques, the most significant ones being the information on price developments, risks on price stability and economic growth dynamics. To meet similar requirements outlined in terms of the monetary policy in Romania, this paper seeks to expand the area of information that the monetary analysis can provide in the current context of the Romanian economy.

In the past decade, the interest in knowing the transmission mechanism of the monetary policy has increased considerably. Various empirical studies confirm the importance of knowing

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the monetary policy transmission mechanism, and the existing literature in the field admits it.

Knowing the inflation dynamics and a deep monetary analysis provides important information both for consumers and investors but also for decision factors. The scientific approach is based on the investigations and the study and research results of both classical and contemporary economists from the international and national literature.

The dilemma of choosing between liberal or neo-conservative economic politics and the interventionist ones in the economic, banking and tax sphere, is even greater as in this period dominated by the consequences of the crisis we are facing different degrees of economic, social, national attachment of the various states to the global economy.

Keynes's disciples, I am referring here to Krugman and Stiglitz, opponents of the austerity policies, urge us rather to "a fundamental change of direction in politics and to adopt strategies that produce results" (Krugman, 2012, p. 10), measures to guide us out of this prolonged crisis. In regard of the monetary policies, in their opinion, if inflation is allowed to slightly rise, it can lead to a higher production level and a lower unemployment level. For Krugman, the inflation target of two percent or less, fixed by the ECB, is much too low. If you do not set higher targets for inflation, together with the declining demand, one could encounter deflation, in many economies, which always leads to a lower production and rising unemployment. Krugman said that high inflation is the only way to tackle the eurozone crisis, "a decreasing inflation, or even worse, maybe even deflation, will make it more difficult the recovery from this depression. Our target should be the exact opposite: a moderately higher inflation, let's say basic inflation of about four percent. "(Krugman, 2012, p. 203).

Subordinated to the paper's title, the approach of the aspects it involves was modularized into four chapters, beginning with a theoretical approach on contextualizing the presenting issues.

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I. Incursion into the monetary theory

The central objective of the first chapter was **to provide a vision on the origin and content of monetary theory, the study following the historical thread from the mercantile pragmatism to the emergence of liberalism**. The details of the debates and controversies between monetarists, Keynesians, classical and Austrian School, concerning the objectives and means of state intervention in the monetary area led to providing a more detailed and more relevant aspects related to monetary theory, monetary policy and inflation.

The monetary theory has emerged and developed in close connection with the economic reality and dealt with the nature and functions of money within the economic and social relations. The essential problem is the money demand in the economy, which is determined by the behavior of economic agents, be they economic agents, that is, it is determined by the factors influencing their decisions in their relationship with the currency. This creates a state of uncertainty concerning the exact determination of the currency need, at a certain time in the economy. In fact, the balance between money supply and money demand is the central issue of the monetary theory, which tries to explain permanently the causal relations of the variables involved in the achieving balance process.

Throughout time, the thoughts of economists have been based around the center of the monetary theory, which consists of: highlighting the role of money in the economy, measuring the money, the money supply and demand with their factors of influence, the theory of monetary equilibrium, ways of transmitting the monetary impulses and the monetary behavior from the economic agents. We can see that the monetary theory deals with a wide range of issues, from the nature and functions of money to the effects that the modifications of the money supply exercise in the economy. The economic development, no matter which way and how it was regarded, implied the use of money and we can find the inflationary phenomenon manifested through a rampant increase in prices since the mercantilists. The most important **mercantilist writers,** such as Antoine de Montchrétien, Jean Bodin, Thomas Mun, argue that monetary abundance has very favorable effects: stimulating economic activity and allowing the drecrease in the price of money, ie interest rate. In their point of view, the state interventionism in the foreign trade must exist not because the monetary abundance stimulates economic activity, but also because export

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development is itself favorable to the flourishing national industry and employment. The state should intervene in the economic life to create public and manufactures and to give aid and subsidies to private entrepreneurs.

The quantitative theory of money can be considered a fundamental pillar in analyzing the monetary policy theories. It has known over the years many adjustments and transformations, from the sixteenth century to the early twentieth century being accepted both by **classical economists**: Adam Smith, David Ricardo, Jean-Baptiste Say, etc., and the neoclassical Leon Walras, William Stanley Jevons, Alfred Marshall, Arthur Cecil Pigou, Irving Norton Fisher, etc. In the vision of the classic writers, the engine of the economic development is the freedom and initiative of homo-economicus, based on private property. The classics advocated for the lack of state intervention at the level of the economic balance being automatically settled by market forces. The economic theory of the neoclassical liberalism or the **marginalism** has the characteristic of preserving the fundamental assumptions of the classical theory, that is, the automatic balance, non-interference of the state and the neutrality of money, but it has brought several new elements: in the general economic equilibrium (L. Walras, V. Pareto, I. Fisher) the marginal theory of value was launched and the dynamic analysis of achieving economic balance was introduced.

The last quarter of the century has been dominated by the dispute between tax and monetarist theories. On one side are the followers of Milton Friedman, who says that the most important factor that can regulate the dynamics of the economy is the money supply, and on the other side are the Keynesian and Neo-Keynesian economists, which state that incomes are especially affected by the measures affecting the aggregate demand components: taxes, public expenses and consumption. Monetarists deny the power of fiscal policy intervention in the economy and examine long-term economic policy measures and the Keynesians support the priority of the fiscal policies compared to the monetary policy and make predominant short-tem analyses.

According to the **Keynesian theory**, changing the money supply through monetary policy measures leads to changes in the structure of aggregate demand, which will result in full use of the workforce without generating inflation. Keynes considered that the full employment is the main goal that cannot be achieved for itself and on which all economic system depends. Also, the

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Keynesian theory argues that central banks should pursue a compromise between inflation and unemployment, but the latter objective has often been favored.

The early 70s throw into shade the Keynesian theories and the monetarist ones progress. **Monetarism** enters a stage of its evolution as a syndrome and doctrine. During 1970 - 1972, despite numerous efforts, prices have continued to rise, inflation was generalized, unemployment increased and the economic growth slowed down, so the first monetarist attempt ended in failure. Monetarism manifested itself as an important opponent of the Keynesian theories, both theoretically and practically. Keynes's theory, which monetarists resemble to the Phillips curve, unadjusted to expectations, fails to explain the problem of inflation, particularly the acceleration of inflation. The coexistence of high rates in inflation and unemployment brings up to discussion the failure of the Keynesian policy. The main feature of monetarist policy is the primary role that the currency has in the fight against inflation. Monetarism believes that the economic policy of the state is identified with the monetary policy and the latter focuses on controlling the money supply growth within the established limits.

The Austrian School appears precisely as a result of the reaffirmation of the research program towards the other schools of economic thinking. The Austrians attacked the so-called possibility of the economic calculation in a socialist state and propose a new theory of the business cycle. In the view of the Austrian School, the monetary phenomenon is purely monetary. The Austrian School representatives believe that the currency is never neutral, neither on short-term nor on the long or medium term. In their opinion, the banks must be built on universal principles that would prevent false increase in relative prices on strict monetary ways. These false increases lead, inevitably, to triggering crises and recessions. Mises, Hayek, Rothbard, etc blame the maintaining of central planning performed by the central bank, called the printing press money, the state monopoly by legislating the forced course and the massive interventionism in the economy through numerous regulations.

Starting from the effects of the longest recession in the postwar history, where the whole world was engaged, we ask which movement of economic thinking best evokes today's economic reality and what adjustments must be made in economic thinking, so that the new economic model based on rationality, moderation and morality demanded by the global crisis, in order to change the current economic laws? Today, regardless of the paradigmatic or methodological direction, we

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observe that the standard macroeconomic model should be improved to allow economic science not only to explain but also to predict the current economic phenomena. An important step has been made in this respect, a number of papers showing that economic science could enter a new already existing phase. Time will show which of the research programs that are currently proposed will be most likely to contribute in the coming years to a better understanding and management of contemporary economies.

II. Price stability - the primary objective of monetary policy

Chapter II of the thesis focuses on the connection between the **main objectives** of monetary policy and tries to answer questions concerning **monetary policy instruments** that must be put into action to install in the economy a state of balance between the need for liquidity and possession of the inflationary phenomenon.

Monetary policy, as the main component of economic policy, together with fiscal and budgetary policy contribute to a balanced economic growth, ensuring a greater degree of employment to the objective on price stability, the interest rate and financial system stability and to ensure the balance of external payments. The monetary policy must ensure the correlation means of payment volume available in the economy with its needs. Given the fact that the amount of money in the economy is insufficient, businesses cannot develop activities and investments and this is reflected in a slowdown in economic growth. A money supply lower than the demand determines the interest rate increase and also an increase in loans, and therefore reduce the demand for goods and services. If the money supply is higher than the demand, producing a series of imbalances in the chain. The decrease in interest rates causes the cheapening of credits, which, thus involve increased demand for goods and services. If the supply of goods does not meet the demand, a general price growth appears, leading to an acceleration of the inflationary process with all its consequences. An effective monetary policy contributes to achieving the economic policy through its specific objectives, namely: increasing the money supply to an optimum level; determining an appropriate interest rate level; practicing an optimum exchange rate level; optimal allocation of financial resources in the economy. Over the past years, the objective of price

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stability, instead of the oriented ones, has become increasingly popular and most observed by the central bank, thus stimulating production and reducing unemployment.

As part of economic policy, monetary policy includes all the rules, measures and instruments adopted by the state through the central bank to achieve a balance between supply and demand for money, assuring the optimum liquidity, controlling inflation or orienting economic activity in a certain direction. It is believed that there may be two categories of intervention of the monetary authority: interventions at strategic level seeking to achieve the final objectives of macroeconomic policy and interventions at the tactical level, which take into account operational procedures applied by the central bank to achieve its objectives. I pointed out some contradictions and complementarities between the general and the interim objectives. Monetary shocks or rapid monetary expansion and contraction are a major cause of cycles in the economy. As a result, the rules of economic policy are imposed so that they no longer are at the mercy of those who practice politics.

In this chapter, I analyze the intervention tools used to achieve monetary policy objectives grouped into: direct intervention tools, such as direct control of prices, salaries, foreign trade, credit capping, foreign exchange controls, etc. and indirect intervention tools, achieved through economic and financial policies, fiscal policy, budget policy, income policy, trade policy, monetary policy, employment, etc. The main monetary instrument for stopping the inflation is the money supply and its control. In this regard, money supply growth within the economic circuits must be done with great care. The increasing speed of money and reducing production can however reduce or compromise the ability of monetary policy to control inflation. Monetary policy needs to consider in what manner the control or reduce the amount of money in circulation affects the speed of rotation of money and especially the production and supply of goods on the market. It also highlights a number of limitations of monetary policy instruments. Among those related to the rediscounted fee include: a single fee and without basis influences the effectiveness of monetary policy of the Central Bank, "the funding effect", the Central Bank's impossibility unable to discourage excess demand for loans. Among the limitations that diminish the effectiveness of applying the required reserve ratio, it is reminded that the Central Bank uses this instrument rarely, unlike open-market policy - it is not selective. Although the open-market policy is more effective, it has a number of limitations: the inelasticity of demand for loans reported to the interest may

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diminish the price-effect of that transaction; an increase in the public effect market volume increase the size of the public debt and deficit budget perpetuation. For an effective monetary policy, one must take into consideration the correlation of price stability - financial stability, which requires an appropriate macroeconomic policy mix.

I stressed the role of cooperation between the fiscal policy and monetary policy that have a significant influence on financial and economic development, being considered harmonizing tools at a macroeconomic level. Under a functioning market economy, the financial and monetary instruments play an important role. They were designed to automatically generate some economic phenomena or just put them in motion through decision makers. The mechanism of action of the two tools can be described by measures taken both at the central bank and government level. Thus, the central bank acts through its policy of increasing the reserve requirements of commercial banks that seeks to reduce inflation while reducing money supply in circulation. Through the tax policy, the government affects the GDP growth. The state increases consumption, reduces taxes, the available income increases. The increase of the consumption demand stimulates producers to expand for goods and services. The increase of the consumption demand stimulates producers to expand production and hire more workers. Unemployment will be reduced. GDP will increase. Increase in market demand will lead to price increase. The demand for foreign currency will grow. As a result, the economy will face an inflationary effect. Therefore, the government's mission to combine these two policies on time.

III. Ensuring and maintaining price stability - a fundamental objective of the European Central Bank

Chapter III focuses on the **euro area** and on the main issues of monetary policy in the recent years. I analyzed the threat of **deflation** that befalls the euro area and the non-conventional measures which are more and more debated, to whom the ECB had to appeal. 7 years after the financial crisis, Europe still faces big problems. On the economic level, the confidence in the euro area decreased more than expected. Inflation decreased the most in Spain in the last five years and unemployment in Germany unexpectedly increased which warns us that it would take several measures to stimulate the economy. Germany's economy decreased pretty much in the last year.

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The labor market is still strong in the euro area, but if the economic outlook worsens further, the effect on employment will be felt considerably. Inflation decreased sharply in Europe since the end of 2011. Currently, inflation is lower than that fixed by the objective of price stability in the euro area adopted by the ECB or by the Central Banks of other European countries. In several European countries, this current low inflation turned into pure deflation. This thing, in the words of Krugman (2009, p. 196) "short-circuits" the process that can lead to an economic boom and eventually to inflation. Therefore, the objective of price stability refers not only to combat the rising prices but also to prevent a general decline in prices. We advocate for a moderate inflation and the main arguments refer to: the higher inflation rates relax the constraints imposed by the fact that the interest rates may not fall below zero, the situation faced by some countries in the euro zone; the fact that the workers are not willing accept wage cuts through austerity measures taken by several European countries. Usually, the employees are more willing to accept the same salary, but whose purchasing power decreased with rising inflation; the prolonged effect of the excessive debt, excessive amounts of private debt.

There are many concerns about deflation. First, it is often said that deflation reduces aggregate demand for goods and services because consumers will postpone purchases of supplies, anticipating a decrease in future prices. Secondly, the unanticipated deflation increases the debt burden for borrowers (which probably reduces borrowers' consumption more than lenders increase their consumption). Nobel laureate in economics, Milton Friedman, argued that central banks should seek not to avoid having deflation as an objective (moderate). There is a third fear associated with deflation. The opinion that the decrease prices will force companies to cut wages and jobs because of reduced profits is common. This is possible if deflation is associated with a reduction in aggregate demand for goods and services (as occurred during the Great Depression). But this is not possible if deflation is associated with an increase in aggregate supply of goods and services (as happened in the US between 1989 and 1996). Deflation associated with an increase in aggregate supply is achieved when there is a sharp increase in the productivity of firms, contributing to the widespread price decline. What conclusion to draw on the current deflationary experience of the European Union? It all depends on the U.E. and the ability of each country to stimulate the aggregate demand in the short term.

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Moreover, the general director of the International Monetary Fund, Christine Lagarde, has warned repeatedly that deflation is a real threat to the economic recovery of the eurozone. Being more than 6 months below the 1% level of the inflation rate growth (well below the 2% target set by the ECB in the medium term), the slow evolution of inflation may discourage economic recovery. Lagarde has requested the ECB to reduce monetary policy interest rate or to adopt other monetary stimulation measures, "including through unconventional measures" to allow price increases in the euro area. Central Bank's room for maneuver is reduced, since the interest rate is already at a historical minimum of 0.25%. In these circumstances, the leadership of the ECB should cut interest rate or adopt other measures of monetary stimulus, "including through unconventional measures" to allow price increases in the euro area, as the trend toward deflation in advanced economies risks undermining a recovery already fragile of the global economy. Analysts generally agree that the ECB's commitment to use non-standard monetary policy tools had a role of calming the markets, laying down uniform lending conditions between Member States in the euro area, to improve bank lending and generally to take away fears of a collapse of the euro. The unintended consequences of these measures have been expressed in particular in regards to the present moment and there are complains that these measures would have led to a delay in the fiscal discipline, to a blur regarding the distinction between monetary and fiscal policies, to reduce pressure on painful structural reforms and the appearance of inflation or another active bubble. For the euro area, the unconventional monetary policy instruments have become a rescue, at the moment, when the interest rates are near zero and the monetary policy transmission channels are still not fully functioning. In times of crisis, non-standard monetary measures can be effective at least to prevent generalized collapse of the system. However, stability in the euro area cannot be ensured for now, only by monetary policy. With these measures, the head of the ECB expects inflation to accelerate towards the end of 2015. Although the program lasts until September 2016, measures may be maintained beyond that date if inflation does not reach the level desired by ECB until it finds a sustained adjustment of the inflation trajectory, which is consistent with the objective of keeping low inflation rates, but close to, 2% over the medium term.

However, there are reasons to be optimistic about deflation, as indicated by historical records and economic theory. In the last 150 years, there were many deflationary periods in a variety of countries. With the exception of the Great Depression, these periods coincided with a

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positive economic growth. For example, between 1869 and 1915, US prices decreased by approximately 38%, while real GDP has tripled. Moreover, between 1920 and 1929, the UK, Sweden, Norway, Japan, Denmark and Argentina have faced a strong deflation associated with an increase in GDP. At the other extreme is the Great Recession, when between 1929 and 1933 prices decreased by about 25% and the real GDP decreased by almost 27%. A more recent example is deflation in Japan, which began in 1994. This case is generally seen as a negative example of deflation. However, things are not so clear. The real GDP growth in Japan is slow, but positive.

The empirical part of this chapter focuses on inflation developments in the euro area and in Romania in the next period. We have done this through a prognosis model using statistical data of the inflation from January 2000 to March 2015. By comparing the results with those published by the ECB, I could see that the QE measure has positive effects in the euro area, the inflation rate reported by the central bank being higher than that provisioned by the model. In Romania, the inflation decreased more than projected by the model, meaning that the VAT reduction was felt in the CPI calculation.

IV. Monetary policy in Romania

The fourth chapter examines especially the transmission efficiency of the monetary policy impulses in Romania. In this chapter, I emphasized **inflation dynamics and the impact of a monetary shock on a set of variables.**

Understanding the way in which monetary policy decisions influence inflation and other macroeconomic variables is extremely important. Therefore, in this chapter we have considered the implications of monetary policy in the context of inflation regime in Romania. To capture the dynamic interactions between variables and to estimate the effects of monetary policy shocks we used the vector autoregression model. In Romania, the evaluation of the monetary policy performance started with the challenge generated by the radical change of the Romanian economy orientation which occurred in the early 90s. The positive effects of monetary policy in fighting inflation was limited by its structural roots and by the fact that - given the lower efficiency of other policies to support the performance of the external sector - NBR had to subordinate its objective on the price stability need to ensure external balance. The delay with which inflation was controlled

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in the case of Romania has a series of conjuncture explanations, such as: the gradual nature of the liberalization of prices, a rigid structure and hardly adaptable to the productive apparatus, the influence of the political factor during election years that led to a difficult achievement of economic and monetary stability. In the case of the Romanian economy, bringing inflation to a level compatible with price stability was possible only after we managed to overcome the period of economic decline, that is, overcoming the period of high inflation and financial instability, when monetary policy began to be managed in an inflation targeting regime.

The inflation rate was a negative indicator for the Romanian economy immediately after the initial large swings. The inflation control through monetary expansion was complicated by the phenomenon of acute economic demonetization, which occurred in 1990 - 1993. At that time, because the practice of negative interest rates in real terms and the collapse of production, there has been a dramatic decrease demand for money, manifested by increasing the money speed rotation. In 1993 the inflation rate has reached the highest peak in the country's history, 256%. A deflationary trend has emerged in the coming years, and after that it reached another extreme value in 1997, that of 155%. In 1997, the monetary policy has succeeded considerably to curb inflation, which, in the dominated economic context of price liberalization and structural imbalances, threatens to meet dangerous rhythms. The progress in reducing inflation occurred particularly in 1998, but this was in terms of insufficient progress on structural reforms. Progress in reducing inflation was particularly in 1998, but this in terms of insufficient progress on structural reforms. Since 2000, the process of disinflation began; the consumer price index has not reached hyperinflationary values. The improving price volatility was supported by the transition to inflation targeting regime of the Romania Central Bank on August 1st 2005, when inflation reached a single digit. It reached the multi-annual target set in 2012 and 2014. Even if the inflation target was not reached every time, it is estimated that the monetary policy strategy in Romania was a successful one.

Considering the fact that in the early '90s we were faced with a galloping hyperinflation, in 2014, the annual inflation rate was below 1%. According to analysts, the annual CPI inflation rate would reach 0.2% at the end of 2015 and 1.9 percent at the end of 2016. After dissipating the initial effect of reducing the VAT on food, the annual inflation rate would return to increasing

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positive values, entering within the target range of 2.5% plus / minus 1% only in the fourth quarter of 2016.

According to the structure of **the transmission mechanism of monetary policy**, the National Bank of Romania cannot directly influence price levels, but there are other means by which it can control inflation in Romania: **the interest rate**. The monetary policy interest rate can serve both as a tool to accelerate the economy and as a way to decelerate it. Even if the central bank exerts some control over short-term interest rates, the decisive impact on the real economy is given by the interest rates on medium and long term that commercial banks practice for deposits or loans to their clients. Although interest rates levels on medium and long term depend largely on the monetary policy interest rate, they depend on a number of other factors such as economic growth, expectations on inflation, etc. Always, low interest rates have spurred investment and consumption rather than saving, while higher interest rates have stimulated savings, making it difficult to make short-term consumption and investment. In addition, the foreign demand can make a significant contribution to the national economic activity.

The empirical part of this chapter emphasizes the inflation dynamics and the impact of a monetary shock on a set of variables: **inflation**, **interest rates**, **money supply**, **unemployment**, **economic growth and the exchange rate in Romania during 1992 - 2014.** To capture the dynamic interactions between variables and to estimate effects of the monetary policy shocks we used the vector autoregression model.

The paper concludes with a set of **Final conclusions and personal contributions**, which complete the scientific content of the thesis by pointing out the most representative aspects that the policy analysis captures at a national and European level.

Conclusions

The complex phenomenon of the monetary policy and inflation are issues of great interest and topicality, therefore the study of inflation and monetary policy, and their impact on the evolution of macroeconomic variables has always constituted a problem, which has troubled the human society. Over the last decades, the monetary expectations had a significant influence on the macroeconomic balance. Some monetary policy strategies have decided to exploit this relationship

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using materialized targets in macroeconomic variables with a substantial impact on inflationary expectations. The level considered for these variables is made public, which can support through the influence on expectations, the central bank's efforts to maintain price stability.

The complex issue of the research leads to the relevant conclusions that can be summarized as follows:

- 1. By making an **incursion into the monetary theories**, beginning with the mercantilists to the modern theories, we could see that each economic thinking movement has made its mark on the economic, social and political life for a certain period of time, each school criticized or supported the ideas of its predecessors, helping to improve the monetary theory and thus to the economic development. Even if we cannot talk about universal dogma, the economic life has an acute need for structure and order. It requires taking ideas from different doctrines, combining them with the experience and with innovative ideas to find viable, reliable and globally accepted solutions.
- 2. Monetary policy has historically demonstrated that its fundamental role is to reduce inflation and to control the prices. Modern monetary policy essentially aims to provide the liquidity necessary for the functioning of the economy in terms of growth and economic stability. The monetary policy is achieved through the balance between the amount of means of payment and price level, resulting in the place of the monetary policy between the need for liquidity and the concern to master the inflation phenomenon. If the goal is reached, in the economy a state of credibility is installed, which is absolutely necessary to the climate where the healthy, efficient and sustainable economic growth appears.
- 3. **Monetary policy and its instruments** have evolved according to the historical conditions of each period but their main goal remained the price stability. The monetary policy instruments act both internally and externally. The monetary policy demonstrates its efficiency when the central bank intervenes in mitigating imbalances in the economy. In most cases we rely on a mix of monetary policy tools because, acting in a complementary way, they have a better effect. In this way, the shortcomings specific to each type of monetary policy instrument may be compensated by complementary actions of another instrument.

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- 4. After more than 7 years after the financial crisis, Europe is unable to restart after the difficulties. In the euro area, the GDP has not reached the quota it had before the recession, unemployment remains very high in many countries, inflation is at an alarming low rate and the monetary policy interest rate has reached historic low levels to stimulate economic growth. The eurozone is at risk of slipping into the deflationary spiral that can undermine financial stability of the monetary union. Therefore, unconventional monetary policy instruments have become a salvation for the euro zone in the current situation, when the interest rates are near zero and the monetary policy transmission channels are still not fully functioning. In times of crisis, non-standard monetary measures can be effective at least to prevent the generalized collapse of the system.
- 5. Today, after more than 14 years since the creation of the Economic and Monetary Union, the prerequisites of a successful economic and monetary union were not met. Outside the capital, which have a high degree of mobility, workforce in the euro area sphere has reduced mobility and prices and wages are regulated in most countries. The evolution of most market economies both in the developed and in the developing countries present a dynamic characterized by rapid course, sudden and large fluctuations in price developments and production. All these changes, no matter their nature changes in raw materials prices such as oil, after some military conflicts, changes in economic policy after modifying the power relations in a political arena raises a very important economic policy to be applied in the future.
- 6. Based on models built for the inflation prognosis, we could observe the deterministic trend for the period of January 2000 March 2015. According to the chart we can see that in Romania there is a different behavior of the HICP developments for specific pre-accession time-frame, 2003 to 2007, which is characterized by a sharp decline in inflation due to the standards imposed by the EU accession, and that post-accession developments that can be easily described by a linear development, but with rather large fluctuations. For EU19, a true influence of the crisis period, 2007-2010, followed by a sharp drop of inflation in 2011 is obvious, reaching between November 2014 to April 2015 negative values, which motivate the EU policy to increase the volume of money supply in 2015 2016 to compensate the deflation. The results of the two ARIMA models, moreover the prognosis

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on the next four months, shows that: for EU19, HICP enters a zone of negative inflation (deflation), increased compared to prior periods, from - 0.90% in March 2015 to - 1.84% in July 2015, which motivates the EU policy to inject money supply on the EU market, to counter the negative effects of deflation; for Romania, there is a strong decrease in inflation from 0.81% in March 2015 to 0.60% in July 2015 but this reduction may be larger in terms of taking measures to reduce the VAT.

- 7. Starting August 2005, the Romania National Bank has adopted the strategy of inflation targeting as a monetary policy strategy. Like other countries, the strategy was chosen because of the impossibility of practicing other strategies, such as the targeting of monetary aggregates, targeting exchange or other intermediary targets. It was found that after implementing inflation targeting strategy, a progress has been made in terms of price stability as well as ensuring greater transparency in monetary policy decisions. Even if the inflation target was not reached every time, it can be said that the monetary policy strategy in Romania has been a success as a result of implementing the strategy of inflation targeting, analyzing the disinflation trend and taking into account internal and international background.
- 8. In Romania, the intention to adopt the common currency on January 1st 2019 is a subject of unfinished controversy. The dilemma is even more pronounced since in the euro zone problems similar to those in Romania have been accumulated, especially in some economies that are driven in an identical optics. Setting this in 2019 is not impossible provided that there be an appropriate training of the economy until the moment of adopting the euro, and the whole process to be properly managed. In the context of the growing challenges arising from the moment of creating of Economic and Monetary Union until now, the relatively low capacity of the states in the Union to maintain economic balance within it, determines us not to use the term optimum currency area but rather functional currency area, which defines a group of countries that may join the monetary union on the basis of minimum conditions. For Romania, the change to the euro currency is a powerful incentive for accelerating real convergence, but it is accompanied by a considerable risk of macroeconomic instability increase, which could be controlled by adopting fiscal and structural policies that promote stability and competitiveness. Such an objective feasible

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but ambitious - is an anchor for coherent macroeconomic policies and also a catalyst for the necessary structural reforms.

- 9. As a general conclusion, Romania must not precipitate in entering the euro zone because it has important gaps still to be recovered and adopting the euro should not be treated as a purpose in itself. Romania adoption of the single currency must be the end of a complex process of macroeconomic convergence and not its beginning. In essence, the euro does not solve the imbalances between Member States, but on the contrary, it may worsen them. The decision to postpone the deadline set by Romanian authorities to join the euro area in the period 2017-2020 will be useful only if this time will be harnessed by pursuing real and nominal convergence processes.
- 10. The VAR analysis of the inflation rate evolution compared to the money supply growth, unemployment rate, interest rate, leu / euro exchange rate and economic growth during 1992-2014, highlights the following aspects: it appears that changes of inflation exchange rates precede a modification in the interest rate; it can be said that a change in the evolution of the interest rate and the unemployment rate precedes a change of the inflation rate; the money supply variation is preceded by changes in interest rates, exchange rates and unemployment; significant changes in the interest rate based on the inflation rate, and vice versa, as a result of co-integration relation between variables; industrial production index changes precede the unemployment and exchange rates changes; a change in the evolution of the interest rate precede a change in the index of industrial production.