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**PHD THESIS**

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**MUTATIONS AND TRENDS IN MONETARY POLICY  
IN THE CONTEXT OF FINANCIAL CRISIS**

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## INTRODUCTION

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Financial crises, despite the fact that they marked the 90s through their frequency of occurrence (especially in the developing countries), are not new phenomena. Resulting from the irrational exuberance of one or several markets and in the context of the intensification of globalization, financial crises appeared as money evolved and financial markets developed, and some of them managed to go down in history because of the violent force with which they hit economies. The financial crisis triggered in the USA in the autumn of 2007 and propagated worldwide, through the contagion effect, led to the accelerated deterioration of economic activity in most world economies. Its occurrence reopened debates concerning the real and monetary effects of a financial crisis (irrespective of their manifestation form) on economies and their duration in time (especially in the case of emerging countries, which are more vulnerable to the factors leading to the occurrence of crises).

Globalization is similar to a two-sided coin: on the one hand, it offers huge opportunities to those joining it and, on the other hand, it involves major changes (sometimes actual mutations); and perhaps the most representative example, at present, that comes to support this statement, is the global financial crisis triggered in the summer of 2007 and the international economic crisis that followed it. Despite all these, in the period prior to the triggering of the current financial crisis – the so-called period of the “Great Moderation” – most developed states registered a stable economic growth, whereas emerging and developing economies registered an accelerated economic growth in a context characterized by a low and stable inflation rate (an economy of the type *nice – no inflation & continuous expansion*). Thus, if the „Great Moderation” was the positive part of globalization, the financial crisis of 2007/2008 and the Great Recession that followed it represented the reverse of the coin or the negative side of globalization. And the fact that a bubble which appeared in a sector which is basically the sector of non-tradable assets (the real estate sector, although not an exhaustive cause) turned – just like the “snowball effect” – into a global financial crisis with devastating effects on economic growth and wealth is only the manifestation of the forces of globalization.

At present, the structural mutations and unprecedented perturbations which appeared within the financial systems of national economies, as well as the effervescence of the contemporary financial markets which became visible under the impact of financial innovations, bring once again to the fore the

importance of the monetary policy adopted by central banks in the area of systemic stability. In the economic context created by the international financial crisis triggered in 2007, central banks were called to face an additional challenge to the traditional one – that of maintaining the stability of the prices – namely: the creation and maintenance of a stable financial environment (*financial stability*) and the laying down of the premises necessary for obtaining *macroeconomic stability*.

If, in the economy before 2007, the mission of central banks (including that of the European Central Bank (ECB) was generally a simple one or at least a clearly defined one – *to maintain inflation at low and stable levels* – the events in the past years raised a new challenge for the monetary authorities, namely the challenge of maintaining *financial stability*. Furthermore, in the context of the crisis of sovereign debt in the Euro zone, ECB is called to actively engage in ensuring the stability of the states in this zone.

Following the intensification of the international financial crisis as a result of the bankruptcy of Lehman Brothers in the autumn of 2008, the financial system and real economy were strongly affected and the monetary policy transmission mechanism was seriously damaged, thus endangering central banks' capacity of attaining their fundamental monetary policy objective (which, for most central banks, consists in keeping prices stable in the medium term). For these purposes, monetary authorities gave a firm answer, reducing the key interest rates at historically minimum levels. However, the fast and quantitatively significant relaxation of the monetary policy of most central banks did not generate the expected effects. The monetary authorities' incapacity of restoring the functionality of the financial system to optimum parameters, at a time when the key interest rate was of almost ten percentages, showed the limitations of the *mainstream* monetary policy.

In the new context created by the international financial crisis, the authorities with decision-making powers in the field of monetary policy were forced to adopt a series of measures broadly referred to as “unconventional (or “non-standard” or “unorthodox” monetary policy measures”). Given the fact that it is the first time that the central banks have resorted to such innovative instruments, we can perceive this behavior as a “mutation” of the monetary policy, following the international financial crisis from the 2007-2009 period. These are, however, the only mutations which occurred at the level of monetary policies, the other forms being discussed in detail in the paper.

## SCOPE AND SPECIFIC OBJECTIVES

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*The motivation of the choice of this research topic is precisely the necessity of getting to know and understand the dynamics of the economic environment to which we belong, as well as the need to provide pertinent answers to questions that are of real interest in literature, in academic circles and in everyday life. The necessity of studying and understanding the major changes (mutations) which have occurred in the architecture of monetary policies in the context of international financial crises (with emphasis on the current crisis) is also given by the fact that there are very few studies in this direction.*

*The objective of the research is to conduct a qualitative, as well as a quantitative analysis of the major structural modifications (mutations) and of the tendencies which occur at the level of the monetary policy as concerns the objectives of the monetary policy, the used instruments and the channels of transmission towards the real economy in the context of the manifestation of some financial crises at the level of the economy and especially in the context of the most recent global financial crisis and of the recession that followed it.*

In order to attain this objective, we have established a series of steps under the form of *specific objectives*:

1. Description and analysis of globalization, primarily from the perspective of the economic and financial components.
2. Theoretical analysis of financial crises (with focus on prevailing theories, conceptual aspects, factors that triggered the crisis and existing typologies), as well as of their effects on real economy (by means of an econometric study).
3. Clear determination, by using the terminology in the field, of the theoretical universe concerning central banks, with special emphasis on issues related to the monetary policy.
4. Qualitative and structural evaluation of the mutations which occurred at the level of the monetary policy measures in the context of the current financial crisis.
5. Delimitation of any tendencies that may occur in relation to the orientation of the monetary policy in the current context by using real casuistry.
6. Determination and quantification of the mutations and tendencies with regard to the monetary policy transmission mechanism through the interest rate channel, taking Romania as an example.

## STRUCTURE OF THE THESIS

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As concerns the *structure of the thesis*, the paper is divided into six chapters in the attempt to fulfill the criteria that are specific to a complex and – to the extent possible – complete analysis of the previously mentioned issues.

In the first chapter, *Analysis of economic globalization and financial crises*, we identify the elements pertaining to globalization, with its components and effects on economy. We also examine in detail the stability of the financial system, as well as the “perverse effects” of financial globalization.

In the second chapter, *Financial crises – definitions, controversies, theories and casuistry*, we deal with the various approaches of the financial crises portrayed in the literature and, apart from the traditional vision of the dominant economic theory, we also present the ideas of the trend of economic thought of the Austrian School. Also, we elaborate a synthesis of the most important factors that trigger financial crises, as well as a taxonomy of the crises. This chapter also deals with the study, based on some econometric models, of the effects of financial crises on real output for eight states from Central and Eastern Europe.

The third chapter, *Central banks and the orthodoxy of the monetary policy*, commences with an analysis of the central banks and especially of the *monetary policy*, one of the macroeconomic levers that plays an important role in ensuring financial stability, as well as in ensuring the stability of the prices, interest rate, foreign exchange market and, at the same time, in ensuring a small unemployment rate. The chapter under discussion ends with the presentation of the philosophy of the Austrian School with regard to the monetary policy interventions (with emphasis on the place and role of the central bank and the difference between the “natural” and the “artificial” interest rate).

Chapter 4, *Mutations at the level of monetary policy measures in the context of the current financial crisis*, comprises a short theoretical description of the non-standard monetary policy and an enumeration of the main forms of these policies and continues with a comparative analysis of the “unorthodox” monetary policy measures adopted by some central banks. In the final part of the chapter we present a short criticism of the Austrian School with regard to these measures.

The fifth chapter, *Tendency of the monetary policy orientation in the context of the current financial imbalances*, aims at finding solutions to the problems related to the integration of the responsibilities concerning financial



stability and the stability of the states in the structure of responsibilities of the central bank. The arguments underlying this chapter focus were built starting from the situation of the European Central Bank and the stability of the states in the Euro zone.

Chapter six analyzes, taking Romania as an example, possible mutations and tendencies that occur in relation to the monetary policy transmission mechanism through the interest rate channel. After a short description of the Romanian financial system, the chapter presents a complex econometric study which focuses on the two sub segments of the *pass-through* of the interest rate: on the one hand, the transmission of the impulses from the monetary policy interest rate towards the interest rates on the interbank monetary market and, on the other hand, the transmission of these modifications in the interest rates to the credits and deposits offered by the crediting institutions to the two main segments of customers, the population and businesses.

The PhD thesis ends with some general conclusions in which the author makes a summary of the main ideas and findings derived from the theoretical research and the empirical analyses that were conducted.

## FINAL CONCLUSIONS AND FUTURE RESEARCH DIRECTIONS

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In the period when this research paper was proposed, the financial perturbations triggered in the summer of 2007 were already felt at a global level through the contagion effect and the economic crisis that followed threw some economies into the “sin of recession”, thus interrupting the “sweet sleep” of the Great Moderation. This is the very reason why we have chosen to study, to get to know and understand the major changes and the dynamics of the economic environment to which we belong and to provide pertinent answers to questions of real interest in the literature, academic circles and everyday life given their impact on economic and social well-being. By focusing primarily on the *monetary policies*, perceived as macroeconomic levers of utmost importance (especially in the current context) and on the *central banks*, seen as main actors in the current economy and first line participants to the attack against financial crisis, we strive to clarify some aspects with deep implications on the way economy functions and to better understand issues that are currently of real interest.

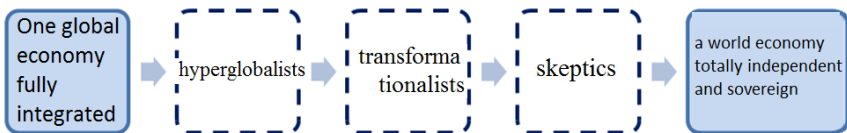
Our endeavor was not an easy one, given the fact that the theoretical universe related to this subject is sufficiently broad and the empirical approaches that were taken into consideration are not amongst the most accessible ones, for the resources in this field are limited.

The ensuring of some degree of stability of the economic engine is a natural concern of the central banks, resulting from their specific attributions with regard to the elaboration and implementation of the monetary policy, their role of bank of the banks and their regulation and monitoring duties with regard to payments. The events that occurred in the past years have shown us in a very clear manner which the costs of financial globalization and of the financial instability episodes are: the financial system was on the point of collapsing in the autumn of 2008 and the financial crisis led to the triggering of the most severe economic recession of our times (after over a decade of permanent growth). When the financial markets failed, the authorities were called to intervene and, amongst them, the monetary authorities played a key role.

## Chapter 1

### Analysis of economic globalization and financial crises

During a first research stage, we focused on the *clarification of some conceptual aspects* that are specific to the process and phenomenon of globalization – seen as an important (and not exclusive) element in the triggering and spreading of the financial crises – paying special attention to the following issues: drawing a clear distinction between what *globalization* involves and other terms that derive from this concept, such as: *globality, global, globalution or globalism*, thus avoiding the fate of its predecessor, “international”; the identification of the various policies and reactions to globalization (significant in this respect is the delimitation of the three schools or trends of thought: the “hyperglobalists”, the “skeptics” and the “transformationalists” made by Held, McGrew, Goldblatt and Perraton); clarification of various approaches with regard to globalization (internationalization, liberalization, universalizing, westernizing, deterritorialization).



*Globalization of the economy – ideological disputes*

Subsequently, in the same part of the PhD thesis, we have outlined the *defining characteristics of the main components of globalization*, without denying the fact that some of its most visible and influential aspects pertain to the economic sphere. We have focused primarily on the *economic component* of globalization, we have discussed the main approach of theoreticians and practitioners in the field and, from the multitude of definitions and conceptions concerning the analyzed phenomenon, we have synthesized the main topics dealt with in the literature; also, we have made an *overview* of global (and Romanian) *economy* with the help of some relatively new economic indicators: the KOF index of globalization, the globalization indices proposed by A.T. Kearney (respectively the *ATKFP-GI* and *M-GI indices*) and the CSGR index of globalization.

The epicenter of economic globalization is the very component at the level of which the movements of the flow of capital occur, namely financial globalization. However, the benefits that may occur in the case of a

strongly globalized economy, from a financial perspective, are associated with a series of risks. Focusing our attention on the risks, we have noticed that most economists emphasize the possibility of occurrence of financial-monetary instability and/or financial crises. In the absence of a functional and stable financial system, the efficiency of economic policies (including the monetary one) in relation to the attainment of the proposed objectives is limited. However, the risks of globalization are associated most of the times with financial crises and the crisis from Asia or the 1997 – 1998 crisis from Russia or the 1999 crisis from Brazil or the 2000 crisis from Ecuador or the 2001 crises from Turkey and Argentina or the 2002 crisis from Uruguay and even the international financial crisis triggered in the summer of 2007 in the USA are just a couple of relevant examples that come to support the previous statement.

From our perspective, we have chosen to perceive *financial stability* not as a fixed point that must be reached, but rather as an interval (illustrated with the help of well-defined margins) in which financial stability can fluctuate, and which has the tendency of moving towards a controlled state of balance. Situated in this “tunnel”, controlled financial balance is always exposed to the risk of being hit by endogenous and exogenous shocks, but it must enable the financial system to exercise various defining functions: efficient allocation of capital, accurate evaluation of the prices and functionality of the system of payments and transfers.

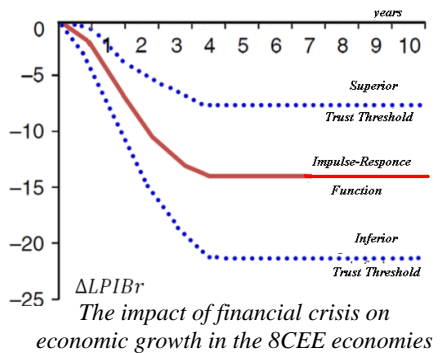
## **Chapter 2**

### **Financial crises – definitions, controversies, theories and casuistry**

In the second chapter of this paper we have dealt with financial crisis episodes by: clarifying *some conceptual aspects* specific to financial crises; outlining *the factors that trigger financial crises* and briefly discussing the *main taxonomies of financial crises* expressed in economic literature (which we have decided to take into consideration in our paper).

The econometric study conducted at the end of this chapter comes to support the statement that financial crises, regardless of their forms of manifestation, have devastating effects on economic growth. The study focused on the *effects of financial crises* on real output for eight states from Central and Eastern Europe. The findings obtained as a result of the empirical analysis have shown that all the analyzed financial crises had a significant and lasting (in the long and short term) effect on economic growth. In the case of the 8CEE economies, in particular, the occurrence of financial crisis led to a decrease of

the real *output* by approximately three percentages after a year (the contemporary effect) and to a 12-14 % increase after a 4 year interval. The findings of this study were in agreement with the ones obtained by Furceri and Zdzienicka (2011), who quantify a cumulative loss of output of 17% following the manifestation of financial crises in 11 countries from Central and Eastern Europe.



### Chapter 3

#### Central banks and the orthodoxy of the monetary policy

Before mentioning the main contributions of this chapter, we want to underline the fact that our PhD thesis (and this chapter in particular) is not aimed at enumerating in an exhaustive manner all the economic doctrines or monetary theories on which it relies, but rather at succinctly analyzing them in order to better understand the changes that occur in the context of financial crises. As stated at the end of the previous chapter, it was necessary to first analyze the situation of normalcy or “orthodoxy” of these policies in order to be able to speak about major structural changes or mutations at the level of monetary policies.

Thus, given the above-mentioned considerations, we have made a brief analysis of the most important monetary theories (with emphasis on the ideas of the Keynesian, monetarist and Austrian schools of thought) and of the central banks in their capacity as monetary authorities; starting from the premise that all monetary theories provide the conceptual fundamentals of monetary policy, we have focused on *outlining the main characteristics of the fundamental monetary theories* which took shape throughout the years. At the same time, we have examined the main features of the monetary policy (major component of economic policy), seeing it as a macroeconomic lever that contributes to ensuring financial stability, the stability of the prices, of the interest rate, of the exchange market, economic growth and a small unemployment rate. We have tried and managed, starting from the examination of the architecture of the monetary policy, to analyze the constitutive elements that enable central banks to elaborate monetary policies; for these purposes, we have studied the *monetary policy strategies and instruments* used by the monetary authorities in

order to fulfill the final objectives, the *intermediary and operational targets* of the monetary policy that enable the latter to attain the proposed *final objectives*. The study of the transmission mechanism of the *mainstream* monetary policy commenced in this chapter is completed in the other chapters which focus on real cases.

The following three chapters of the thesis deal with the analysis of the mutations and tendencies specific to the constitutive elements of the monetary policy (in the context of the most recent global financial crisis), namely: *monetary policy measures* (comparative approach of eight important central banks), *monetary policy orientation* (the case of the European Central Bank) and the *monetary policy transmission mechanism* (the case of the interest rate channel in Romania).

## **Chapter 4**

### **Mutations at the level of monetary policy measures in the context of the current financial crisis**

Following the intensification of the international financial crisis as a result of the bankruptcy of Lehman Brothers in the autumn of 2008, the financial system and real economy were strongly affected and the monetary policy transmission mechanism was seriously damaged, thus endangering central banks' capacity of attaining their fundamental monetary policy objective (which, for most central banks, consists in keeping prices stable in the medium term). For these purposes, monetary authorities gave a firm answer, reducing the key interest rates at historically minimum levels, but the fast and quantitatively significant relaxation of the monetary policy of most central banks did not generate the expected effects. The monetary authorities' incapacity of restoring the functionality of the financial system to optimum parameters, at a time when the key interest rate was of almost ten percentages, showed the limitations of the *mainstream* monetary policy.

In the new context created by the international financial crisis, the authorities with decision-making powers in the field of monetary policy adopted a series of less "orthodox" measures; subsequently, this turned into a controversial subject for the representatives of scientific circles, as well as for policy makers.

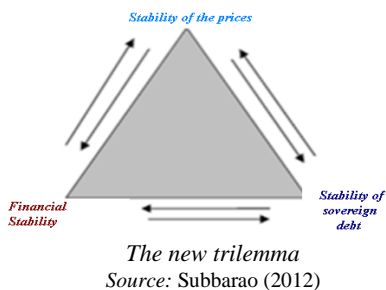
In this chapter we have managed to outline the conceptual frame of analysis of these unconventional measures of monetary policy starting from two approaches: that of Ricardo R. (which divides monetary policy interventions into measures specific to the interest rate-based policy, to the quantitative policy and to the credit policy) and that of Borio C. and Disyatat P. (which distinguish between the standard monetary policy based on the interest rate and the monetary policy based on the balance sheet). Based on these approaches, we have analyzed various concepts that are used in the mass-media and literature in order to define the non-standard measures of monetary policy (such as *credit easing*, *quantitative easing* or *enhanced credit support*) and we have conducted a qualitative analysis of the main unconventional monetary policy measures adopted by 8 important central banks. At the same time, we have assessed the impact of some of these measures on the balance sheets of the central banks under discussion, as well as a couple of risks for the current economy.

The final conclusions of this chapter show that, although there are inflationist pressures and the balance sheets of the central banks “inflamed”, reaching unprecedented levels, the unconventional measures adopted by the monetary authorities restored nevertheless the functionality of the financial markets (at parameters close to normalcy) and restored the capacity of the monetary policy of efficiently sending signals in the real economy (mainly through the interest rate channel). The monetary authorities also managed to revive the economy, to improve financing terms and to support the fluidity of the flow of credits towards the economy.

## Chapter 5

### Tendencies of the monetary policy orientation in the context of the current financial imbalances

As concerns the mutations that may occur at the level of the orientation of the monetary policy, the fifth chapter was conceived precisely to study them. We have focused on the case of the European Central Bank (ECB) and on the problems that it is dealing with at present, namely the integration of



the responsibilities related to financial stability and the stability of the states in the Euro zone in its structure of responsibilities.

In the Euro zone, in order to deal with the challenges raised by financial instability, ECB was forced to aggressively intervene by using some non-standard instruments, thus exposing itself to several risks, among which: risks related to balance expansion, risks related to the dissipation of the limits between monetary and fiscal responsibilities, risk of creating confusions (maybe the most significant risk precisely because of the fact that a multitude of interventions may be construed as a relative dilution of the objectives). ECB is protected to a certain extent against these risks due to its robust institutional frame. However, in order to ensure *financial stability*, ECB should take into consideration the following: a) the stability of the prices should remain the primary objective of the monetary policy (this objective and the independence of the central bank are two essential features that still remain valid during the period following the triggering of the financial crisis; b) financial stability should be the main objective of macroprudential policies, leaving the monetary policy with the objective of keeping the prices stable; c) when elaborating and implementing macroprudential measures, one should avoid situations which may prevent ECB from implementing its monetary policy of ensuring the stability of the prices.

As concerns the involvement of ECB in ensuring the stability of government debts, ECB could take a series of measures that would enable it to preserve a strict delimitation between the monetary and the fiscal policy: a) the main monetary policy objective of the central bank should continue to be the ensuring of the stability of the prices; b) the central bank should impose on itself certain restrictions concerning the types of assets in its balance (thus, it would limit its capacity of engaging in credit policies or in policies related to the reallocation of resources, which are normally the task of tax authorities or of private markets); c) the monetary policy may be implemented in systemic manner based on exact rules, thus limiting the scope of the prudential actions that may interfere in monetary and fiscal policies.

A possible solution to the problems of the economies in the Euro zone may consist in an institutional rearrangement, at a national, as well as at an international level: the restructuring of the financial system of the Euro zone through its *bipolarization* (the two poles being ECB and the European Authority of Financial Markets – an independent entity which has a clear term and a solid institutional frame for assessing the implementation of tax regulations at a



national level) and the use of the support of the already created instruments and institutions (satellites).

## **Chapter 6**

### **Mutations and tendencies concerning the transmission mechanism of the monetary policy through the interest rate channel in the context of the recent financial crisis – econometric study with Romania as example**

In this chapter of the thesis we have aimed at *performing a qualitative and especially a quantitative analysis, taking Romania as a case study, of the functionality of the interest rate channel* in the context of the tensions generated by the recent financial crisis on the monetary markets, in the attempt to identify the possible mutations and tendencies that occur in relation to the mechanism of transmission of the monetary policy through this channel. In other words, the purpose of our scientific approach consisted in the quantification of the speed and magnitude of the reactions of *retail* interest rates or of the reactions on the interbank monetary market to the modifications made by the main instruments at the disposal of the National Bank of Romania, with focus on the modifications at the level of the monetary policy interest rate; we have aimed, at the same time, at analyzing the impact of the global financial crisis on the efficiency of the *pass-through* of the interest rates and on the potential mutations that may occur at the level of this transmission channel.

In this respect, this part of the paper comes to cover another topic that has been scarcely exploited by economists, namely: the transmission of the interest rate impulses from the zone of the monetary policy towards the interbank monetary policy, taking Romania as a case study and focusing on the conditions created by the current financial crisis. The wish to analyze this specific segment of the interest rate channel in Romania was determined by the findings that other studies (concerning the mutations which occurred at the level of the interest rate transmission mechanism) revealed by examining other economies. According to these studies, although the mechanism of the *pass-through* of the interest rates from the interbank to the retail market functioned relatively well during the period of financial turbulences, we cannot say the same thing about the transmission of the impulses of the interest rates from the monetary policy zone to the interbank market which has been seriously affected by the perturbations/short-circuits which occurred on the monetary and finance markets.

The study commences with a detailed analysis of the main coordinates of the Romanian financial system, relevant to the mechanism of transmission of the

monetary policy impulses. The findings of this analysis revealed the *cessation of the phenomena of financial disintermediation and demonetization starting with 2001 and their redirecting on an ascending trend*. Referring strictly to financial intermediation, although it evolved significantly over the 2000-2010 period from 9.30 to 40.74%, slightly decreasing to 39% in 2011, the level continues to remain low, with significant differences in relation to other countries from Central and Eastern Europe, respectively in relation to the Euro zone. Antohi *et al.* (2007) speak about a low value of the financial depth of the Romanian economy in comparison with the EU states for the 2000-2006 period, despite the extremely high dynamics registered by the monetary indicators in the analyzed period. The findings also reveal *the prevailing role of crediting institutions* in the Romanian financial system (they owned over 80% of the total assets of financial institutions, respectively over 90% of the financial sector, together with non-banking financial institutions, towards the end of 2010, and no major changes were registered at the end of 2011). Thus, bank crediting is at the core of the Romanian financial system, situation which is not at all different from that of the European Union. As concerns the level of competition between crediting institutions, the analyzed indicator (the degree of concentration of the banking system) registered a decreasing value over the 2004-2009 period (with a slight increase in 2010 and 2011), situation also confirmed by the evolution of the Herfindahl – Hirschmann index.

*Transmission of the impulses of the monetary policy interest rates in the interest rates of the interbank monetary market*

Coefficient RdPI	E1			E2			E3		
	Pass-through imediat	Pass-through pe term. lung	Viteza de ajustare	Pass-through imediat	Pass-through pe term. lung	Viteza de ajustare	Pass-through imediat	Pass-through pe term. lung	Viteza de ajustare
	$\mu_0$	$\beta$	$\gamma$	$\mu_0$	$\beta$	$\gamma$	$\mu_0$	$\beta$	$\gamma$
ROBID_3M	0,47*** (0,129)	0,77*** (0,117)	-0,11*** (0,036)	0,47*** (0,139)	0,76*** (0,107)	-0,15** (0,060)	1,59*** (0,491)	1,88*** (0,078)	-0,62*** (0,134)
ROBID_6M	0,48*** (0,109)	0,68*** (0,122)	-0,09*** (0,031)	0,47*** (0,124)	0,64*** (0,123)	-0,12** (0,053)	1,61*** (0,371)	1,76*** (0,063)	-0,56*** (0,123)
ROBOR_3M	0,72*** (0,219)	1,04*** (0,107)	-0,20*** (0,068)	0,46*** (0,119)	1,02*** (0,049)	-0,16* (0,085)	3,48*** (1,240)	2,32*** (0,106)	-1,17*** (0,217)
ROBOR_6M	0,72*** (0,212)	0,95*** (0,111)	-0,19*** (0,068)	0,43*** (0,102)	0,963*** (0,053)	-0,10 (0,080)	3,63*** (1,184)	2,18*** (0,094)	-1,26*** (0,221)

Note: \*\*\*, \*\*, \* refers to the significance at the levels of 1%, 5% and 10% and the standard deviations are presented in brackets ()

The empirical findings concerning the *analysis of the pass-through of the interest rates from the monetary policy decisions to the interbank monetary*

*market* revealed the fact that the reaction of the interbank interest rates to the changes operated by BNR in the monetary policy interest rate was sluggish over the May 2003 – September 2008 period, which shows that the adjustment process was rigid. Although the contemporary responses of ROBOR (*Romanian Interbank Offer Rate*) and ROBID (*Romanian Interbank Bid Rate*) are almost equal, only the ROBOR rates manage, in the long term, to receive completely (for a 3-months maturity rate) or almost completely (for a 6-months maturity rate) the shocks transmitted by BNR. Despite all these, the ROBID rates are not far behind either (in the long term, they receive almost 76% of the volatility of the monetary policy interest rate). Up to this point, the obtained empirical findings are in agreement with the conclusions reached in other works that studied the case of Romania (Radu, 2010), as well as the case of other countries from Central and Eastern Europe (Tieman, 2004).

As concerns the period after October 2008, the findings concerning the operability of the interest rate channel (on the first sub-segment) in Romania are rather unusual and reveal a “violent” reaction in the adjustment process (we preserve a certain level of skepticism with regard to these results for they may have been distorted because of the much too reduced temporal dimension of the data set). In the short term, the immediate responses of the interbank rates are very significant, fact that can be explained by: the lack of liquidity on the interbank monetary market or in the central banks (when external liabilities were no longer an option), the constraints related to long-term financing and the increase of risk perception and of mistrust between banking institutions). Although in the long term the *pass-through* is complete (with a  $\beta$  index bigger than one), the coefficients are *abnormally* high (thus indicating an exaggeration in the reaction of the credit institutions to any change in the monetary policy interest rate). We thus notice an *overshooting* comprised between 180% and 230%. The hunt for *cash* and the period specific to the post-October 2008 period also determined the increase of the  $\gamma$  parameter, thus suggesting the increased adjustment speed of the short-term dynamics towards a relation of long-term balance. Also, the asymmetries noticed in the mechanism of the *pass-through* of the interest rate for the ROBID rates suggest a faster adjustment of these rates when they are below the long-term point of equilibrium in comparison with when they are above it and when the monetary policy interest rate decreases in comparison with when it increases. Consequently, we may notice the accentuation of a phenomenon of *downwards asymmetric adjustment* rather than that of one of the *upwards* type.

The empirical results with regard to *the analysis of the pass-through of the interest rates from the interbank market to the retail banking market* revealed the fact that the variations at the level of the interbank interest rate were transmitted gradually or slowly on the interest rates of the retail banking products before and after October 2008. Consequently, we can only confirm that in the case of Romania the mechanism of the *pass-through* of the interest rates from the interbank market to the retail one functioned relatively well during the period of financial turbulences. We notice low values of the immediate responses for the segment of the population (values of 14% and 6% for the credits, respectively the deposits) and higher values for the segment of businesses (values of 14% and 6% for credits, respectively deposits) at the level of the analyzed period. A brief analysis conducted on the segment of the population may reveal the fact that, although short-term reactions are more visible in the case of the interest rates on deposits, in the long-term we witness an ampler adjustment in the case of the interest rates on credits.

*Transmission of the impulses of the ROBOR rate (3 months) on the interest rates of banking institutions*

Coeficient RdPR	E1			E2			E3		
	<i>Pass-through</i> imediat	<i>Pass-through</i> pe term. lung	Viteza de ajustare	<i>Pass-through</i> imediat	<i>Pass-through</i> pe term. lung	Viteza de ajustare	<i>Pass-through</i> imediat	<i>Pass-through</i> pe term. lung	Viteza de ajustare
	$\mu_0$	$\beta$	$\gamma$	$\mu_0$	$\beta$	$\gamma$	$\mu_0$	$\beta$	$\gamma$
Rata dobânzii la creditele acordate clienței (segmentul populație și segmentul societăți nefinanciare)									
Rata dobânzii la creditele populației	0,056 <sup>1)</sup> (0,045)	1,09*** (0,084)	-0,12*** (0,034)	0,28** (0,131)	1,35*** (0,080)	-0,19*** (0,051)	0,001 <sup>2)</sup> (0,049)	0,84*** (0,124)	-0,20*** (0,052)
Rata dobânzii la creditele SN	0,37*** (0,042)	1,01*** (0,035)	-0,28*** (0,049)	0,32*** (0,106)	0,97*** (0,044)	-0,27*** (0,066)	0,42*** (0,054)	1,13*** (0,068)	-0,37*** (0,075)
Rata dobânzii la depozitele oferite clienței (segmentul populație și segmentul societăți nefinanciare)									
Rata dobânzii la depozitele populației	0,06** (0,027)	0,53*** (0,131)	-0,05** (0,023)	0,204** (0,076)	0,690		0,04** (0,017)	0,86*** (0,047)	-1,18*** (0,036)
Rata dobânzii la depozitele SN	0,27*** (0,040)	0,61*** (0,137)	-0,07** (0,029)	0,548*** (0,110)	0,808		0,23*** (0,031)	1,01*** (0,055)	-0,25*** (0,060)

Note: \*\*\*, \*\*, \* refers to the significance at the levels of 1%, 5% and 10% and the standard deviations are presented in brackets ( )

According to the impulse-response function, the variations of the ROBOR rate are transmitted completely or almost completely in approximately 8 months for almost all interest rates (except for the interest rate on new deposits of the

population). Amongst the factors that affected the *pass-through* of the interest rates, it is worth mentioning: the visible change of attitude of BNR in relation to the banking system, the increasingly high mistrust among crediting institutions, the increase of risk perception, the deterioration of the expectations of the banking companies concerning the evolution of the monetary policy interest rate, the lack of financing sources, the deterioration of the macroeconomic indicators etc.

## MOST IMPORTANT PERSONAL CONTRIBUTIONS

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At the end of this scientific research paper, we can only synthesize the author's *most important personal contributions*:

1. *an overview of the global and Romanian economy* with the help of some relatively new indicators in economic literature: the KOF index, the *ATKFP-GI* and *M-GI* indices and the CSGR index in order to show the dynamics of these economies and the mutations that occur.

2. *the delimitation of the most important steps* taken in relation to financial stability (synthesizing institutional approaches, as well as the approaches of the authors) and *the proposal of a definition* in this direction with a view to subsequently performing *a more thorough analysis* concerning the imbalances of the financial system and the monetary policy measured adopted in order to correct them.

3. *the analysis* of the traditional views of the dominant economic theory, as well as of the *ideas of the trend of economic thought of the Austrian school* that have to do with the theoretical aspects of this thesis.

4. *quantification* of the medium and long term effects of the *financial crisis episodes* on real economy for eight states from Central and Eastern Europe (Bulgaria, Estonia, Latvia, Lithuania, Poland, The Czech Republic, Romania, Hungary), thus preparing the way for more detailed investigations of these effects on the dynamics and structure of monetary policy.

5. *the analysis*, by means of a comparative critical approach, of the *mutations at the level of the monetary policy measures and instruments* for eight important central banks and in the context created by the most recent financial crisis, focusing on the effects and risks of such decisions.

6. *the proposal* of a response variant to the issue concerning the integration of the responsibilities concerning financial stability and the stability of the states in the Euro zone in the structure of responsibilities of the European Central Bank through the *bipolarization* of the financial system of the Euro zone and the use of *satellites* (support of the already created instruments and institutions).

7. *the analysis* of the mutations in the *pass-through* of the interest rates in Romania in the conditions created by the current financial crisis and the *highlighting* of the dysfunctionalities that occurred on the Romanian interbank monetary market.

## REFERENCES (SELECTION)

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### Books (selection):

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1. Bagehot, W., (1873), *Lombard Street*, London: Henry S. King and Company
2. Bătrâncea, I. (coord.), (2008), *Analiză financiară în bănci*, Cluj-Napoca: Editura Risoprint
3. Bernanke, B.S., Laubach, T., Mishkin, F., Posen, A. (1999), *Inflation targeting: Lessons from the international experience*, Princeton: Princeton University Press
4. Cerna, S., Donath, L., Șeulean, V., Herbei, M., Bărglăzan, D., Boldea, B. (2008), *Stabilitatea financiară*, Timișoara: Editura Economică
5. Cocriș, V., Chirleşan, D. (2010), *Economie Bancară. Repere teoretice și studiu monografic*, Ed. a III-a revăzută și adăugită, Iași: Editura Universității „Alexandru Ioan Cuza” din Iași
6. Fisher, I. (1932), *Booms and Depressions-Some First Principles*, New York: Adelphi Company Publisher
7. Friedman, M., Schwartz, J.A. (1963), *A monetary History of the United States: 1867-1960*, Princeton: Princeton University Press
8. Hayek, F.A., (1941), *The Pure Theory of Capital*, London: Macmillan
9. Huerta de Soto, J. (2010), *Moneda, creditul bancar și ciclurile economice*, Iași: Editura Universității „Al. I. Cuza”
10. Isărescu, M. (2006), *Reflecții economice – Politici ale Băncii Naționale a României*, vol II, București: Editura Expert
11. Kindleberger, C.P. (2005), *Manias, Panics, and Crashes: A History of Financial Crises*, 5<sup>th</sup> edition, New York: Wiley
12. Krugman, P. (1988), *Financing vs. Forgiving a Debt Overhang*, Cambridge: National Bureau of Economic Research
13. Minsky, H. (1986), *Stabilizing an Unstable Economy*, 1<sup>st</sup> ed., New York: Mc Graw Hill Professional
14. Mises, Ludwig von (2010), *Economia în șapte lecții. Gânduri pentru cei de azi și cei de mâine*, București: Institutul Ludwig von Mises România
15. Mishkin, F.S. (2004), *The Economics of Money, Banking and Financial Market*, 7<sup>th</sup> ed., Paris: Pearson-Addison Wesley
16. Reinhart, C.M., Rogoff, K.S. (2009b), *This Time Is Different: Eight Centuries of Financial Folly*, Princeton: Princeton University Press
17. Rothbard, M. (1993), *Man, Economy, and State: A Treatise on Economic Principles*, ed. a III-a, Ludwig von Mises Institute, Auburn, Alabama
18. Schumpeter, J.A., (1972), *History of Economic Analysis*, Editura Ariel, Madrid
19. Trenca, I., (2006), *Metode și tehnici bancare – principii, reglementări, experiențe*, Ed. a 2-a, Cluj Napoca: Casa Cărții de Știință

### Specialized articles (selection):

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1. Allen, F. (2001), „Financial Structure and Financial Crisis”, *International Review of Finance* (mar.-iun.), vol. 2, nr. 1-2, pp. 1–19
2. Allen, M., Rosenberg, C., Keller, C., Setser, B., Roubini, N. (2002), „A Balance Sheet Approach to Financial Crisis”, *IMF Working Paper* (dec.), WP/02/210, (disponibil la <http://www.imf.org/external/pubs/ft/wp/2002/wp02210.pdf>)
3. Allen, W., Wood, G. (2006), “Defining and achieving financial stability”, *Journal of Financial Stability*, June, pp. 152-172
4. Antohi, D., Udrea, I., Braun, H. (2003), “Mecanismul de transmisie a politicii monetare în România”, *BNR Caiet de studii*, no. 13
5. Apostoaie, C.M., (2009), „The role of the monetary policy in the current financial and economic crisis”, în I. Pohoacă, A. Prodan, A. I. Vodă, B. Ilut, M. Asandului (coord), *Institutions and Economic Performances*, Editura Universitatii "Al. I. Cuza", Iasi, pp. 13-25
6. Apostoaie, C.M., (2010), „Challenges to Inflation Targeting in the Context of the post-August 2007 Period”, *Annals of the University of Constanta, Economic Sciences Series*, Nr. 2 (10), Editura Ovidius University Press, pp. 11-16
7. Apostoaie, C.M., (2010), „Considerations on the price stability – financial stability relationship in the context of financial globalization”, în revista *Studii și Cercetări Științifice*, seria Științe Economice, p.3-11, Universitatea “Vasile Alecsandri” din Bacău
8. Apostoaie, C.M., (2010), „The role of monetary policy in insuring financial stability in the context of the current financial and economic crisis”, în *Ninth International Conference of Business and Employment Proceedings*, nr. 9, Editura Kosava Finance Institute, pp. 801-815
9. Apostoaie, C.M., (2011), „Measuring globalization. The case of Romania”, în *Tenth Jubilee International Conference of Business and Employment Proceedings* “The impact of the economic growth and innovation on business development, reduce unemployment and poverty in Kosova, in countries in transition and developing countries as well”, nr. 10, pp. 386-398, Editura Kosava Finance Institute
10. Apostoaie, C.M., (2012), „Measuring Economic Globalization using Synthetic Indices. A Case Study of Romania”, paper presented at the *International Scientific Conference "ICT for Competitiveness 2012"*, the Silesian University in Opava, Karviná, Republica Cehă
11. Apostoaie, C.M., (2012), „The Euro Dilemma – A Romanian Point of View”, speech held at the Symposium *The Euro: (Greek) tragedy or Europe's destiny? Economic, historical and legal perspectives on the common currency*, Bayreuth, Germania
12. Apostoaie, C.M., (2012), „The Interest Rate Pass-Through from Policy Rates to Interbank Interest Rates in the Romanian Financial System”, paper presented and awarded at the *3rd EABH Workshop for Young Scholars “Public Policies and the*



- Direction of Financial Flows*”, the European Association for Banking and Financial History (EABH) e.V. & GREThA, Bordeaux University, Franța
13. Apostoaie, C.M., (2012), „The Monetary Policy Interest Rate Channel in Times of Financial Turbulence: Case Study on Romania”, *Metalurgia International*, 17-3, pp. 133-140;
  14. Apostoaie, C.M., Ciortescu, G., (2011), „Implications of the Financial Globalisation on the Financial Stability – Price Stability Relationship”, *Theoretical and Applied Economics*, Supplement, Editura Academia de Studii Economice din București, pp. 569-576
  15. Apostoaie, C.M., Matei, Ș., (2012), „Mutations at the level of the measures adopted by monetary authorities”, *Risk in Contemporary Economy*, pp. 349-357, nr. XII, Editura Dunarea de Jos University of Galati
  16. Apostoaie, C.M., Roman, A., (2010), „The particularities of the monetary policy transmission mechanism in Romania”, *Analele Universității din Oradea, Științe economice*, Tom XIX, Nr. 2, pp. 658 – 664
  17. Bernanke, B. (2006), *The Benefits of Price Stability*, discurs susținut la „The Center for Economic Policy Studies” cu ocazia „Seventy-Fifth Anniversary of the Woodrow Wilson School of Public and International Affairs”, Princeton University, New Jersey, 24 feb. 2006
  18. Bernanke, B.S. (1983), „Nonmonetary Effects of the Financial Crisis in the Propagation of the Great Depression”, *The American Economic Review* (iun.), vol. 73, no. 3, pp. 257-276
  19. Cerna, S. (2010c), „Criză și reglementările financiare”, *Oeconomica*, nr. 1, p. 77-105
  20. Cocris, V., Apostoaie, C.M., (2011), „The interest rate pass-through in Romania”, in D. Airinei, C. Pintilescu, O. Stoica, O. Mihai, D. Viorică, M. Asandului, A.M. Andrieș (coord.), *Globalization and Higher Education in Economics and Business Administration*, pp. 621-629, Iași, Editura Universității „Alexandru Ioan Cuza”
  21. Isărescu, M.C., (2006), Stabilitatea prețurilor și stabilitatea financiară, Disertație susținută cu ocazia decernării titlului de Doctor Honoris Causa al Universității din Pitești, la adresa <http://www.bnr.ro/>, accesat în data de 17.03.2010
  22. Kaminsky, G. L., Reinhart, C.M. (1999), „The twin crises. The causes of banking and balance-of-payments problems”, *American Economic Review*, 89, pp. 473-500
  23. Mishkin, F.S., (1991), Anatomy of Financial Crisis, *NBER Working Paper no. 3934*.
  24. Mishkin, F.S., (2009a), Is Monetary Policy Effective during Financial Crises?, *NBER Working Paper Series*, nr. 14678, National Bureau of Economic Research, ianuarie 2009, la adresa <http://www.nber.org/> accesat în data de 10.03.2010
  25. Mishkin, F.S., (2009b), Monetary policy flexibility, risk management, and financial disruptions, *Journal of Asian Economics*, 29 iulie 2009, (pp. 1–5), la adresa <http://www.sciencedirect.com> accesat în data de 2.10.2009
  26. Radu, R. (2010), „Mecanismul de transmisie a ratelor dobânzilor”, *BNR Caiet de studii*, no. 28, București: Banca Națională a României

27. Radu, R. (2011), „Mecanismul de transmisie a ratelor dobânzilor”, Banca Națională a României, *Colocviile de politică monetară, ed. A IV-a*, „Elemente ale cadrului de analiză și prognoză al politicii monetare”
28. Reinhart, C.M., Rogoff, K.S., (2008), „Banking Crisis: An Equal Opportunity Menace”, *NBER Working Paper 14587*, National Bureau of Economic Research
29. Reinhart, C.M., Rogoff, K.S., (2009a), „The Aftermath of Financial Crises”, lucrare susținută în cadrul conferinței „International Aspects of Financial Market Imperfections”, American Economic Association, San Francisco
30. Roubini, N., (2001), Debt Sustainability: How to Assess Whether a Country is Insolvent, Stern School of Business, New York University, December 20, 2001
31. Sander, H., Kleimeier, S. (2004), „Interest rate pass-through in an enlarged Europe: the role of banking market structure for monetary policy transmission in transition countries”, Maastricht Research School of Economics of Technology and Organization, *Research Memoranda*, no. 45
32. Sander, H., Kleimeier, S., (2002), „Asymmetric adjustment of commercial bank interest rates in the euro area: An empirical investigation into interest rate pass-through”, *Kredit und Kapital*, 35 – 2;
33. Sander, H., Kleimeier, S., (2004), „Convergence in euro-zone retail banking? What interest rate pass-through tells us about monetary policy transmission, competition and integration”, *Journal of International Money and Finance*, 23 (3), pp. 461–492
34. Schinasi, G., (2004), “Defining Financial Stability”, *IMF Working Paper No. WP/04/187*, October.
35. Soros, G., Bofinger, P., (2011), The ECB must step in to save the eurozone - <http://blogs.ft.com/the-a-list/2011/11/21/the-ecb-must-step-in-to-save-the-eurozone/>
36. Stiglitz, J., Weiss, A. (1981), „Credit rationing in markets with imperfect information”, *American Economic Review* 71 (3), pp. 393–410
37. Subbarao, D., (2011), „Financial stability mandate of central banks issues in the international and indian context”, welcome adress at the SAARCFINANCE Governors’ Symposium, Kumarakom, Kerala
38. Taylor, J.B., (1995), „The monetary transmission mechanism: An Empirical Framework”. *Journal of Economic Perspectives*, nr. 9, nr. 4, p. 11-26, disponibil la <http://ideas.repec.org/a/aea/jecper/v9y1995i4p11-26.html>
39. Tobin, J., (1982), “Discussion”, Saving and Government Policy, Proceedings of a Conference, New Hampshire: Federal Reserve Bank of Boston.
40. Trichet, J-C., (2010), „Risk and monetary policy Lunch”, prelegere susținută la *Stanford Institute for Economic Policy Research (SIEPR) Economic Summit*, Stanford University.
41. Volcker, P., (iulie 1984), „The Federal Reserve Position on Restructuring of Financial Regulation Responsibilities”, *Federal Reserve Bulletin*, vol. 70, disponibil la <http://ideas.repec.org/a/fip/fedgrb/y1984ijulp547-557nv.70no.7.html>

42. Weidmann, J., (2011), "The crisis as a challenge for the Eurozone", Speech at the Association of Family Enterprises, Cologne, 13 September 2011.
43. Wolf, M., (2011), "Fear and loathing in the Eurozone", *Financial Times*, 27 September 2011.
44. Wolf, M., (2011), „To the eurozone: advance or risk ruin” - <http://www.ft.com/cms/s/0/4dc988ca-14fd-11e1-a2a6-00144feabdc0.html#ixzz1shf6mbFd>
45. Wyplosz, C., (2011b), "They still don't get it", *VoxEU.org*, 22 August.
46. Wyplosz, C., (2011c), „A failsafe way to end the Eurozone crisis”, *VoxEU.org*, 26 September
47. Wyplosz, C., (2012), „The ECB's trillion euro bet”, *VoxEU.org*, 13 February
48. Mishkin, F.S., (2000), "Inflation Targeting in Emerging-Market Countries," *American Economics Association Papers and Proceedings* 90(2): 105–9.
49. Mishkin, F.S., (2000), What should central banks do?, *Federal Reserve Bank of St Louis Review*, Nr. 82, pp. 1-13
50. Mishkin, F.S., (1999), The Causes and Propagation of Financial Instability: Lessons for policy makers, în *Global Financial Instability: Framework, Events, Issues, Journal of Economic Perspectives*, nr. 13, p.7
51. Mishkin, F.S., (2000), "Financial Stability and the Macroeconomy", Central Bank of Iceland Working Paper No. 9, May.
52. Mishkin, F.S., (1995), „Symposium on the monetary transmission mechanism”, *Journal of Economic Perspectives*, 9 – 4
53. Mishkin, F.S., (1991), „Asymmetric Information and Financial Crises: A Historical Perspective”, in Hubbard, R.G. (ed.), *Financial Markets and Financial Crises*, University of Chicago Press, Chicago, pp. 69-108
54. Minegishi, M., Cournède, B., (2010), „Monetary Policy Responses to the Crisis and Exit Strategies”, *OECD Economics Department Working Papers*, 753
55. Meier, A., (2009), „Panacea, Curse, or Nonevent? Unconventional Monetary Policy in the United Kingdom”, *IMF Working Paper* WP/09/163 (disponibil la <http://www.imf.org/external/pubs/ft/wp/2009/wp09163.pdf>)
56. Lowe, P., Rohling, T., (1992), „Loan Rate Stickiness: Theory and Evidence”, *Reserve Bank of Australia Research Discussion Paper*, 9206
57. Levitt, T., (mai-iunie 1983) „The Globalization of Markets”, *Harvard Business Review*, pp. 92-93.