

ECB'S MONETARY MEASURES DURING THE FINANCIAL CRISIS

Magdalena RADULESCU

Faculty of Economics, University of Pitesti, Romania

magdalena.radulescu@upit.ro

***Abstract:** This paper presents the main developments of the eurozone during the crisis period and the measures adopted by ECB in this context. The paper specially aims the countries that were the most affected by the crisis, namely: Greece, Cyprus, Ireland, Portugal, Spain and Italy. The public debt of those countries increased greatly and they faced many pressures on the international financial markets.*

***Key words:** financial crisis, ECB's measures, European countries' experience.*

***JEL Classification Codes:** E44, E52, E58, F36, F43, H63.*

1. INTRODUCTION

The crisis in Europe began when the financial markets lost their confidence in the solvency of Greece and of other peripheral countries and the increased level of the interest rates on state bonds forced the governments of these countries to seek help from the international communities, including the European Community and IMF. A deeper analysis of the elements that characterized the euro crisis reveals that the liberalization and financial deregulation represented the major cause of the crisis in the periphery of the euro area. Like in the United States, the two elements encouraged the development of new financial instruments and derivatives, allowing the banks within the main states of the euro area to increase the leverage and stimulate loans, causing a boom in consumption and real estate. Also, this boom was sustained by the adoption of the single currency, given the amplified level of European economic and financial integration, which reduced the currency risk in the peripheral countries and allowed the interest rates within the main countries to converge toward a much lower level. The credit utilization increased both in the euro area as well as in the states outside the euro area such as Iceland, Hungary and countries in Eastern Europe (Lin and Treichel, 2012a)

The experience of the crisis proved that the Economic and Monetary Union had a free coordination regime and an inefficient system of penalties, while the euro disadvantaged the Member States' governments through the economic management of the ECB regarding the monetary instruments and the exchange rate. The imposition of a single monetary policy and the same basic interest by the ECB for all Member States caused asymmetrical impulses on their economies, with above or below average effects in terms of economic growth and inflation rates, since the euro area did not develop as an optimum monetary area. Some Member States especially Portugal, Ireland, Italy, Greece and Spain recorded significant increases in terms of budget deficits and public debt whilst the banking system deteriorated. Moreover, their competitiveness in the euro area decreased and they recorded severe macroeconomic imbalances. Consequently, these economies became extremely vulnerable to the potential disruption on the international financial markets which induced the migration of capital followed by liquidity crises and, as it the case of Greece, the solvency crisis. All these led to serious concerns with regard to the fiscal sustainability in the euro area.

2. ECB'S MEASURES ADOPTED DURING THE RECENT FINANCIAL CRISIS

The crisis in the euro area highlighted a series of issues. Firstly, the crisis emphasized a strong pursuit of the national interests which usually comes to the fore in times of crisis. At the same time, it highlighted the weaknesses of different European authorities, mainly those of the European Commission, which failed to assume a central role in managing the euro crisis. Even the European Parliament had a marginal role in formulating the economic policies and decisions. But above all these, the European citizens became aware that their influence on the European politics, expressed through voting, was virtually non-existent and the crisis amplified the frustration and helplessness feeling at the level of population (Schiliro, 2013).

Apart from these, the presence of large trade imbalances between the Member States within the euro area showed that there is not a mechanism to ensure the convergence of the competitive positions of its members. This aspect reveals the fact that the economic policies (fiscal, social, salary policies etc.) remain inflexible in the hands of the member governments that do not properly coordinate such policies. On the other hand, the euro area crisis also revealed the weaknesses of the banking system within the Euro system. Even now, most banks are not strong enough and at the same time they are tied to sovereign debts. The fragility of banks and their attitude towards the debt crisis created the risk of banking failures in several member countries of the euro area and caused serious macroeconomic problems. In short, the euro area governance revealed the lack of a properly coordinated banking policy, which is crucial for the crisis management (Lin and Treichel, 2012b).

Moreover, another relevant aspect of the crisis is the fact that southern European countries such as Greece, Portugal, Spain and Italy had to face prolonged recession. In addition, since the onset of the crisis, the weak economic growth in the EU hindered the attempts to recover competitiveness and regain control over the public finances of the highly affected economies in southern Europe. The difficulties encountered by these countries had a major influence in political terms, to the extent in which the EMU project is based implicitly on the idea of deeper integration, which depends, in turn, on the presence of a certain degree of convergence. Unfortunately, the crisis contributed to a greater divergence of the economies in the countries of the Euro system. The divergence of the southern euro states, in particular, proved to be not only cyclical, but also structural, acting on productivity and economic growth and, therefore, the indicator GDP per capita in each member country evolved in different directions (Darvas et al., 2013).

The states in the euro area continue to seek a modality to overcome the crisis that has affected the Economic and Monetary Union since 2010. The economic conditions that contributed to the magnitude of this phenomenon at the level of the euro area were based on difficulties in the banking system, the sovereign debt crisis and large current account imbalances, which forced many countries in the euro area to enter a phase of slow economic growth or even decline. All these have jeopardized the sustainability of the European Monetary Union.

All euro area countries suffered because of the crisis which spread worldwide in 2009, when the growth rate of the real gross domestic product was negative throughout the area, although the states were differently affected. For example, Slovenia, Finland, Estonia, Ireland and Italy faced more difficulties than other countries, such as Belgium, Austria, Spain, Portugal and Cyprus. But with year 2010, the situation changed and the divergences between the states amplified exclusively due to the crisis. Consequently, states like Greece, Spain, Portugal, Italy and, later, Slovenia and Cyprus entered a phase of recession. In certain cases, such as the case of Italy, Spain, Portugal and Greece, GDP reduction persisted over time preventing the recovery of the respective country, which deepened the divergence degree compared to the more powerful states (Germany, Luxembourg, Austria). The situation of the euro area (17 countries, except for

Latvia - member since 1 January 2014) in terms of real GDP evolution on the course of the onset and the extension crisis years was as follows:

Table 1. Growth rate of real GDP among euro-zone countries

	2007	2008	2009	2010	2011	2012	2013	2014
Eurozone	3,0%	0,4%	-4,4%	2,0%	1,6%	-0,8%	-0,4%	0,9%
Austria	3,7%	1,4%	-3,8%	1,8%	2,8%	0,9%	0,2%	0,3%
Belgium	2,9%	1,0%	-2,8%	2,3%	1,8%	-0,1%	0,3%	1,0%
Cyprus	5,1%	3,6%	-1,9%	1,3%	0,4%	-2,4%	-5,4%	-2,3%
Estonia	7,5%	-4,2%	-14,1%	2,6%	9,6%	3,9%	1,6%	2,1%
Finland	5,3%	0,3%	-8,5%	3,4%	2,7%	-0,8%	-1,3%	-0,1%
France	2,3%	-0,1%	-3,1%	1,7%	2,0%	0,0%	0,3%	0,4%
Germany	3,3%	1,1%	-5,1%	4,0%	3,6%	0,4%	0,1%	1,6%
Greece	3,5%	-0,2%	-3,1%	-4,9%	-7,1%	-6,4%	-3,9%	0,8%
Ireland	5,0%	-2,2%	-6,4%	-1,1%	2,8%	-0,3%	0,2%	4,8%
Italy	1,7%	-1,2%	-5,5%	1,7%	0,5%	-2,8%	-1,7%	-0,4%
Luxemburg	6,6%	-0,7%	-5,6%	3,1%	1,9%	-0,2%	2,0%	-
Malta	4,1%	3,9%	-2,8%	4,0%	2,3%	2,5%	2,7%	3,5%
Nederland	3,9%	1,8%	-3,7%	1,5%	0,9%	-1,6%	-0,7%	0,9%
Portugal	2,4%	0,0%	-2,9%	1,9%	-1,3%	-4,0%	-1,6%	0,9%
Slovakia	10,5%	5,8%	-4,9%	4,4%	3,2%	1,6%	1,4%	2,4%
Slovenia	7,0%	3,4%	-7,9%	1,3%	0,7%	-2,6%	-1,0%	2,6%
Spain	3,5%	0,9%	-3,8%	-0,2%	0,1%	-2,1%	-1,2%	1,4%

Source: Eurostat Database

The noticeable decline in real GDP within the states of the Euro system, preceded by the global crisis, may be seen as a consequence of the more aggressive budgetary consolidation applied to a private economy still underdeveloped. In addition, a major change also occurred in the case of the unemployment rates which reached alarming levels in Greece, Portugal, Spain, Cyprus, Italy and Ireland, but Germany, Austria and Luxembourg managed to maintain these rates at low levels. The high unemployment levels in the peripheral countries is the result of the insufficient structural reforms of the labor market, the unemployment assuming the role of main “shock absorber” in the way of the shocks occurred during the adjustment process. Besides all these, the spread of the states in the euro area is in line with the hypothesis that the initial form of the single currency associated with the lack of country-specific monetary policies and stabilization or risk-sharing policies, may be a factor which influences the unemployment rates to a great extent. Last but not least, the current account imbalances in the balance of external payments within peripheral countries widened in the context of the crisis revealing a gap in the level of competitiveness of the debtor states. Moreover, the capital flows in the euro area are closely linked to these current account imbalances and the worsening of the economic conditions in the peripheral countries was due to the fact that they were forced to bear the adjustment burden in order to balance the current account (Estrada et al., 2013).

The European Central Bank through the measures taken in its capacity as central monetary authority at the level of the Euro system, had an extremely important role in managing the financial crisis. At the onset of the crisis, the ECB did not resort to changes of the rates specific to the monetary policy instruments, but after the fall of Lehman Brothers, the bank lowered the key interest rates to all-time lows. In addition, the Governing Council adopted a series of non-

standard temporary measures, generally called Credit Support Enhanced – support lending, which is a programme that mainly concerned the banking system. Because of the uncertainty regarding the creditworthiness of each bank, it led to the malfunctioning of the interbank market in the euro area. In September 2008, following the Lehman bankruptcy, the interbank market effectively collapsed, and given this consequence the demand for liquidity increased sharply while the interbank lending declined rapidly. For this reason, the “Credit Support Enhanced” programme implemented by the ECB, was founded on five main pillars:

1. Providing unlimited liquidity through fixed rate tenders and integral allocation, used both for the main refinancing operations as well as for long-term refinancing operations.

2. Extension of the guarantee assets list (which was already quite comprehensive) so that the weight of assets within the private sector increased up to 56% of the nominal value of the listed securities;

3. Extending the maturity for the long-term refinancing operations to 6 months initially and then, at the end of June 2009, to 12 months in order to reduce the uncertainty related to planning the liquidity of the commercial banks;

4. Provision of liquidity in foreign currencies, particularly US dollars, through swap operations with the USA Federal Reserve. This measure supported the banks that otherwise would have faced a significant deficit in terms of USD financing during the financial crisis;

5. Guaranteed bond purchase programmes aimed at reviving the guaranteed bond market which is a primary financing source for the banks and an important financial market in Europe.

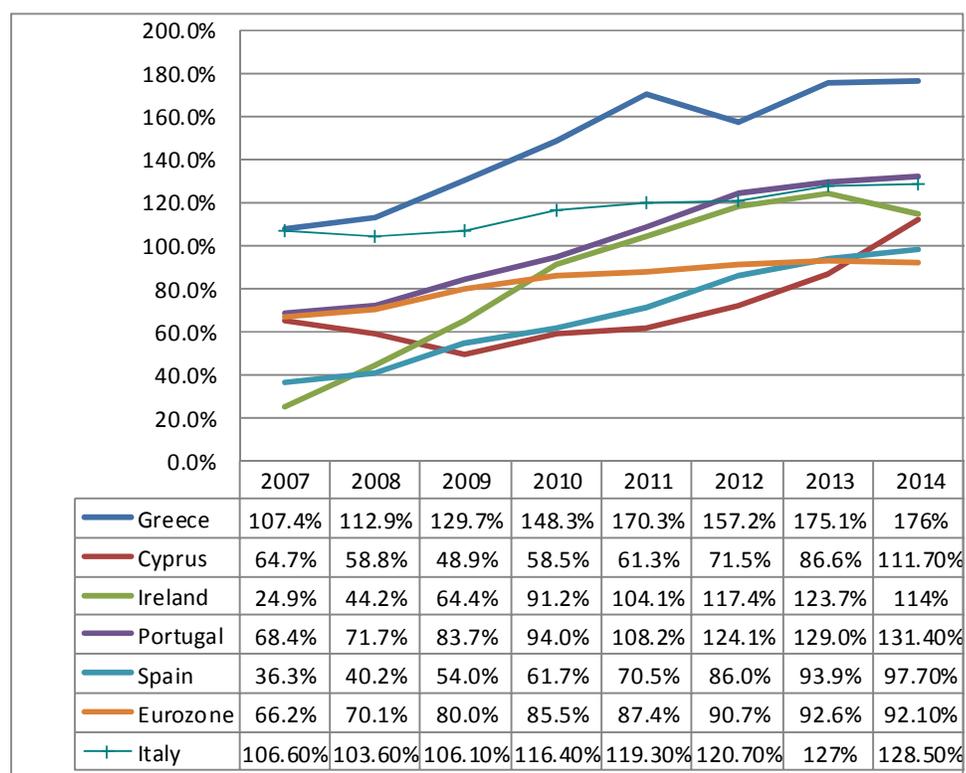


Figure 1. Governmental debt (share of GDP)

Source: Eurostat Database

At the same time, the ECB began to intervene on the secondary government bond markets of some euro area countries to provide liquidity and to restore an appropriate monetary policy transmission mechanism. Therefore, on 10 May 2010, the ECB launched the Securities Market Program, directed to securities market, addressing malfunctions present in certain market segments and tensions existing within the securities market, which would have resulted in the unacceptable dimensioning of risk which was putting pressure on price stability. The ECB decision to implement this programme was not justified through explicit targets regarding the amount of securities to be acquired or yield ratios to be achieved but it was only mentioned that it did not aim at reorienting the monetary policy by adopting this decision.

Despite all the measures adopted by the European Central Bank to protect its Member States against the impact of the financial crisis, some of these countries were a lot more affected, according to the data in Table 1 and Figure 1 (Greece, Cyprus, Portugal, Spain, Ireland, Italy).

With reference to **Greece**, the crisis revealed two negative aspects in its national economy: macroeconomic imbalances and the structural weakness of the economy. Over the past three decades, the Greek government has recorded excessive budget deficits. Focusing on the period 2001-2009 (respectively, after the adoption of the euro) the data on fiscal deficits prove the fact that the weight of government expenditures in GDP recorded continuous growth. The way the crisis manifested at the level of the Greek economy had a significant impact on the decisions of the European Central Bank. Moreover, the ECB decided to purchase bonds issued by the Greek government and several other debtors, in order to support the liquidity which formed the base for these national markets. Accepting the Greek debt, with doubtful value guarantee together with direct debt coverage on the secondary markets subjected the ECB balance sheet to a major risk. Broadly, the sovereign debt crisis was caused by the poorly consolidated fiscal policy, the Greek government financing social programmes in the context of increased budget deficit (Seyler and Levendis, 2013).

Despite the fact that the ECB was the most competent and successful European institution, surprisingly, many experts state that it made three major mistakes with regard to Greece:

a) The decision to accept Greece into the euro area in 2000 because this state was not compatible from the geographical point of view nor in terms of the economic point of view, given that it hardly fulfilled the Maastricht criteria, especially the criterion related to the weight of budgetary deficit in GDP;

b) It allowed that the interest rate for the government bonds issued by Greece and other peripheral countries to fall to near zero during the period 2002-2007. Although the budgetary deficits and debt levels have exceeded by far the limits of the Stability and Growth Pact, Greece was able to borrow nearly as easy as Germany.

c) The third mistake was to refer Greece to the IMF after the onset of the crisis, which was unnecessary because until January 2010, the financing need of this state would have been obvious and the leaders from Frankfurt and Bruxelles would have viewed the crisis as an opportunity to establish a precedent for the long term evolution of the euro (Frankel, 2011).

In **Ireland**, banks lost about 100 billion euros, a great part of the amount representing outstanding loans granted to owners or real estate developers, the market collapsed in 2007. While the level of banking losses increased, as well as the public debt, the Irish government was forced to seek assistance from the EU and IMF, therefore the bailout plan of 67.5 billion euros initiated on 29 November, 2010. Apart from this amount, Ireland contributed with 17 billion euros from non-borrowed reserves, in total EUR 84.5 billion out of which approximately 34 billion were used to support the financial sector. Instead, the government agreed to reduce the deficit to below 3% of GDP by 2015. In July 2011, the European leaders agreed to reduce the interest rate on the loan granted to Ireland from 6% to values between 3.5% -4% and doubled the

loan period to 15 years. For the first time since September 2010, on 26 July 2012, Ireland was able to return on the financial markets, by selling state bonds of EUR 5 billion. After three years of assistance and financial support, in December 2013, this state abandoned the bailout programme, although the unemployment level was high and the public debt reached 123.7% (O'Donovan, 2012).

Cyprus is another state which suffered due to the euro area crisis, but, unlike the Greek people who protested against the austerity measures imposed by the monetary authorities, the Cypriots were aware of the serious problems faced by their economy and understood that the bailout was inevitable. Thus, on 25 June, the Cypriot government requested a bailout plan from the European Financial Stability Fund, invoking difficulties in supporting the banking sector due to the exposure related to Greece's debt. On 30 November, Troika (consisting of the European Commission, IMF and ECB) and the Cypriot government agreed on the austerity measures associated to the bailout plan; it was to be decided the amount of money necessary for bailout. The final agreement was concluded on 25 March 2013, with the proposal to close down several banks, which contributed significantly to the reduction of the credit necessary for the general bailout package, so that the sum of 10 billion euros was sufficient, without the necessity to impose a tax on bank deposits. The final conditions to activate the bailout package were recorded in a memorandum of Troika, which was fully endorsed on 30 April 2013 by the House of Representatives of Cyprus.

In **Portugal**, the credit risk, the increase in public debt and the European structural and cohesion funds had been incorrectly managed for nearly four decades, which in 2011 pushed the state on the edge of bankruptcy and incapacity to improve this situation. On 16 May 2011, the euro area leaders officially approved a bailout package of EUR 78 billion for Portugal which became the third country in the euro area after Greece and Ireland, which received emergency funds. The loan amount was constituted through equal contributions from the European Mechanism for Financial Stabilization, Financial Stability Facility and the International Monetary Fund. As part of this agreement, Portugal agreed to reduce its budgetary deficit from 9.8% of GDP in 2010 to 5.9% in 2011, 4.5% in 2012 and 3% in 2013 but the statistics show that at the end of year 2013 Portugal's budget deficit reached the value of 4.9% of GDP. At the same time, the country rating determined by the international rating agency Moody's on 6 July 2011 placed Portugal in the "junk" category. According to the bailout programme, the state had to regain full access to the financial markets beginning from September 2013, the first step being successfully completed on 2 October, 2013 when it partly succeeded in reentering the market, the ECB was to provide support through its interventions in order to reduce government interest rates to sustainable levels. On 18 May 2014, Portugal left the EU bailout programme and a month before, it had returned on the capital markets by selling state bonds with maturity in 10 years, at an interest rate of 3.59%. However, it will be possible for the state to pay the loans in full and to stabilize the budget deficit in 2040 (Institute of Management Technology, 2012).

Spain had a relatively low debt level among the economies affected by the crisis, hovering at around 60% in 2010, this value increasing in the subsequent years. In June 2012, this state became a primary concern of the euro area when interest rates on state bonds reached 7% and difficulties occurred in accessing the bond markets. This determined the Euro system to grant Spain a financial support package of 100 billion euros, funds which did not go directly to the Spanish banks but were transferred into the government account and used for banking recapitalizations. In September 2012, the ECB removed some of the restrictions imposed to Spain with regard to the financial markets when it announced that if the country signed a new bailout agreement, an "unlimited bond acquisition plan" would be initiated. Once the investors

regained confidence in this country, on 23 January this year Spain officially left the EU and IMF bailout plan.

Italy had succeeded to reduce its public debt in the 1990s recording consecutive budget surpluses for several years, but its high indebtedness persisted. Italy is a country with a public deficit lower than that of Spain, but with a higher public debt. It may face the same problems as Spain, where the unemployment is high, but the wages rose, given the fact that GDP decreased and shall decrease in the context of the tight fiscal measures adopted. Therefore, the ECB aims to reduce the interest on the debts of these countries, but this measure is not sufficient and it should be accompanied by economic growth. However, the experience of Ireland and Spain show that the private sector debt (especially the banks') is crucial, the weight of private debt in GDP rising sharply since the 1990s.

In the crisis context, the European Central Bank adopted a series of measures aimed at reducing the volatility on the financial markets and improving liquidity at the level of the Euro system. In 2010, the ECB launched monetary market operations by purchasing state bonds and debt instruments worth 219.5 billion euros until February 2012. At the same time, it absorbed the same amount of liquidity to prevent inflation from rising and reactivated the dollar swap lines, with the support of the Federal Reserve. Its lending policy changed, accepting as guarantee debt instruments in circulation and newly issued or guaranteed by the Greek government, regardless of the respective state's rating (Lybeck, 2012).

Aiming the recovery of economy in the euro area by lowering interest rates for enterprises, the ECB lowered the rates related to monetary market operations in several stages in 2012-2013, some rates reaching all-time lows. This caused the euro to fall compared to other currencies, contributing to the stimulation of exports from the euro area. In November 2011, the ECB together with the US Federal Reserve and the central banks of Canada, Great Britain, Switzerland and Japan provided the international financial markets with additional liquidity to ward off the debt crisis and to support the real economy. Through the long term refinancing operations, the ECB lent 489 billion euros to 523 banks for a period of three years at an interest rate of 1% only, out of which 325 billion euros went to banks in Greece, Ireland, Spain and Italy. The second tender was held in February 2012, by which cheap loans were granted to 800 banks in the euro area, amounting to a total of 529.5 billion euros.

ECB and other European leaders established in June 2012 that this bank would become a banking regulation authority and proposed further reforms to promote economic growth and employment for the labour force. Later, in September 2012, the ECB announced that it would provide additional financial support through the purchase of bonds of the countries involved in the bailout programme and would continue the actions to improve the economic situation at the Euro system level.

After the first decade of euro, significant changes have occurred within EMU. The openness of the economies within this area increased. Also, there has been significant economic growth and greater price stability for a longer period of time. The weight of the euro has risen within the extra-community trade of different euro area countries, but also within the countries' official foreign currency reserves. Public finance management also improved as reflected by the fiscal balances within the euro area countries. The strengthening of the euro area depends on the implementation of the provisions of the Stability and Growth Pact, on increasing the credibility of ECB's monetary policy and on the competitive policy in the euro area (Voinea et al., 2010).

3. CONCLUSIONS

The paper highlights the importance of the European Economic and Monetary Union, as well as of its functioning mechanism and the way these influence the development of many European states members of the euro area or in the process of adopting the single currency. In relation to the challenges of the European integration process and compared to the realities of globalization, ECB's monetary policy is not a regionally isolated policy, but a policy deeply marked by the international factor. The future success of the European project is mainly based on the success of adapting the policies to new global economic and social realities. The European monetary institution is to define the new structural and functional architecture of the international monetary financial framework.

Large public debts are also associated with low economic growth and persistent public deficits. Therefore, the fiscal consolidation measures must be accompanied by measures to stimulate the economic growth against the background of a favorable monetary framework and solution to structural issues in the economy.

Although the European Central Bank is, to a certain extent, a viable model of the globalization strategy through integration and it successfully adapted the regional consensus to the global level, this institution will have to make a change in its monetary policy strategy taking into consideration the consequences of the financial crisis on the euro area. ECB created its own monetary policy, which it implemented through the monetary policy instruments, its success proved to be incomplete due to the outbreak of the crisis in the euro area.

In accordance with the evolution of the European single currency over the 15 years since its launch, one may conclude that the creation of an economic and monetary union of such dimensions requires significant efforts and maintaining stability in such a configuration represents a challenge. Above all these, the policies used at the level of all the component countries must be optimally coordinated and have to completely harmonize for such a union, as it is the euro area, to have continuity and to gain more comprehensive forces worldwide. Although, along with the outbreak of the financial crisis in several Member States of the Euro system, this union was shaken to its foundations, at present the situation appears to improve. It is worth mentioning that the improvement of the economic environment of the Euro system depends largely on future decisions of the European Central Bank with regard to the fate of the countries still facing difficulties.

REFERENCES

1. Darvas Z., Pissany F.J., Wolff G. (2013) *Europe's growth problem (and what to do about it) (Problemele de creștere economică ale Europei (și ce este de făcut))*, Bruegel Policy Brief, Bruegel, available at <http://www.bruegel.org/publications/publication-detail/publication/776-europes-growth-problem-and-what-to-do-about-it>
2. Estrada A., Gali J., Lopez-Salido D. (2013) *Patterns of convergence and divergence in the euro area (Trăsăturile convergenței și divergenței în zona euro)*, IMF Economic Review, available at <http://www.crei.cat/people/gali/egl2013imfer.pdf>
3. Frankel Jeffrey (2011) *The ECB's three mistakes in the Greek crisis and how to get sovereign debt right in the future (Cele trei greșeli ale BCE în problema crizei Greciei și cum să ai un deficit public corect în viitor)* available at <http://www.voxeu.org/article/greek-debt-crisis-ecb-s-three-big-mistakes>
4. Lin J.Y., Treichel V. (2012a) *The crisis in the Eurozone (Criza în zona euro)*, The World Financial Review, available at <http://www.worldfinancialreview.com/?p=2303>

5. Lin J.Y., Treichel V. (2012b) *The unexpected global financial crisis: researching its root cause (Criza financiară globală neașteptată: în căutarea cauzei ei fundamentale)*, Policy Research Working Paper Series 5937, World Bank.
6. Lybeck A. J. (2012) *Global history of the financial crisis 2007-2010 (Istoria globală a crizei financiare 2007-2010)*, Polirom Publishing House, Iași.
7. O'Donovan D. (2012) *Ireland borrows over €5bn on first day back on bond markets (Irlanda se împrumută 5 miliarde de euro în prima zi în care s-a reîntors pe piața obligațiunilor)*, available at <http://www.independent.ie/business/irish/ireland-borrows-over-5bn-on-first-day-back-in-bond-markets-26880212.html>
8. Schiliro D. (2013) *Changes in the Eurozone governance after the crisis and the issue of growth (Schimbările intervenite în guvernarea zonei euro după criză și problema creșterii economice)*, Catholic University of Milano.
9. Seyler E., Levendis J. (2013) *What was the role of monetary policy in the Greek financial crisis? (Care a fost rolul politicii monetare în cadrul crizei financiare a Greciei)*, South-Eastern Europe Journal of Economics, available at <http://www.asecu.gr/Seeje/issue21/issue21-levendis-seyler.pdf>
10. Voinea Gh., Roman A., Chirleşan D. (2010) *Ten years after the launch of euro. Changes and the future of this currency in the international crisis context (10 ani de la lansarea euro. Prefacerile și viitorul monedei în contextul crizei mondiale)*, Publishing House of the Al. Ioan Cuza University, Iași.
11. * * * *Eurocrisis (Eurocriza)*, The Business and Economic Forum Okonomos, Institute of Management Technology, Nagpur, 2012, OKONOMIST Volume 1 Issue 3 January 2012, available at <http://okonomos.weebly.com/uploads/4/8/3/6/4836267/okonomist.pdf>