

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/312245818>

THE IMPACT OF THE MONETARY – FISCAL POLICY MIX ON INVESTMENTS OF EURO AREA COUNTRIES IN THE CONTEXT OF THE FINANCIAL CRISIS

Article · December 2012

DOI: 10.15544/ssaf.2012.32

CITATIONS

5

READS

1,650

1 author:



Joanna Stawska

University of Lodz

24 PUBLICATIONS 52 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Policy mix [View project](#)

THE IMPACT OF THE MONETARY - FISCAL POLICY MIX ON INVESTMENTS OF EURO AREA COUNTRIES IN THE CONTEXT OF THE FINANCIAL CRISIS

Joanna Stawska

University of Lodz

Abstract

The study presents the impact of monetary-fiscal policy mix on economic growth, mainly for the investments of euro area in financial crisis. Fiscal policy and monetary policy play an important role in the economy, influencing each other and on a number of economic variables as well. In the face of the recent financial crisis, which turned into a debt crisis, fiscal and monetary authorities have been working together to revive economic activity. There was a significant economic impact on the level of government investments. The central bank kept interest rates at very low levels and used nonstandard instruments of monetary policy. Fiscal authorities have increased government spending to stimulate investment and economic recovery. The paper concludes that the management of the fiscal and monetary authorities in a crisis situation has been modified compared to the period before the crisis, when the coordination of these policies was clearly weaker.

Key words: monetary policy, fiscal policy, financial crisis

Introduction

Appropriate coordination of monetary and fiscal policy has a positive impact on many economic variables. The lack of cooperation between fiscal and monetary authorities can lead to many adverse effects on the economy. Using graphic presentation method there were analysed presented economic variables, reflecting the strength at which the financial crisis has affected the economy in the euro zone. It also highlights the impact of the policy mix for investment and economic growth. Analyzing in this article the macroeconomic policy mix, there is emphasized that the ECB (European Central Bank) focuses too much on low inflation target and price stability. The object of the research is the extent of cooperation between monetary and fiscal authorities in the face of the financial crisis. The purpose of the research is to highlight the importance of cooperation between monetary and fiscal policies for the growth of investment and economic activity. Tasks of research: to analyze the impact of monetary and fiscal decisions on the level of economic growth in euro area; to point to the size of government expenditure and investment during the financial crisis, to present the factors which influence on the level of the investment in the economy of the Eurosystem in the financial crisis. Following methods were used in this research: review of scientific literature, statistic research methods, graphic presentation methods and others.

Monetary – Fiscal Policy Mix in the Economy

In the economic literature is the concept of policy mix, understood as a combination of fiscal and monetary policy. K. Kuttner (2002) analyzing the monetary - fiscal interactions underlined the strategic interactions based on different goals and preferences of the independent authorities responsible for the conduct of monetary and fiscal policies. Economists, T.J. Sargent and N. Wallace (1981) developed the "theory of unpleasant monetarist arithmetic" based on the idea that at the time of occurrence of the dominance of fiscal, monetary authorities are no longer able to keep inflation under control, regardless of the strategy to use. K. Kuttner (2002) also showed that taking into account the interactions associated with intertemporal budget constraint thought that the form of financing the budget deficit can be a money issue, bonds or a combination of both. It was thought that the bond issue does not lead to an increase in the price level, which is not true, because at the time to take account of rational expectations, it appears that the bond issue may also have inflationary consequences. Hence the conclusion that fiscal policy limits the central bank making decisions, and therefore makes it difficult to stabilize the price level. Different objectives and preferences of the central bank and the fiscal authorities are difficult to stabilize the economy in the short term. The monetary and fiscal authorities set targets its policies and preferences that reflect their aspirations. Reconciliation of action is the right choice for both authorities. Conflict of both policies lead to an increase in the interest rate and the budget deficit. Harmonization of policies eliminates both sources of conflict, leads to minimize maintenance costs and price stability reduces criticism of the government related to the operation of the central bank. Coordination of monetary policy and fiscal policy contributes to greater stability of the financial system (Sargent, Wallace, 1981).

The economic literature emphasizes that low economic growth in the euro area is the result of a lack of coordination between monetary and fiscal policy. According to O. J. Blanchard and F. Giavazzi (2004) inadequacy of institutions of policy mix in the EMU is responsible for the low economic growth because it limits government spending, such as: infrastructure, research and development and higher education that enhance the growth potential of the economy. J. von Hagen, S. Mundschenk (2003) and C. Wyplosz (2002) believe that the lack of cooperation hinders the interactions of monetary and fiscal policy, which is reflected in inefficient policy mix. Thus, the monetary and fiscal policies act as strategic substitute rather than complement (Wyplosz, 2002).

In order to avoid uncoordinated national fiscal authorities' decision was introduced Stability and Growth Pact. The Pact commits the EMU (European Monetary Union) countries to maintain a balanced budget in the medium term, which includes a full economic cycle, which should prevent excessive loosening of fiscal policy in good times. According to O. Issing (2002) the assignment of responsibilities defined by the Maastricht Treaty and the Stability and Growth Pact provides the right incentives for conduct of sound and disciplined fiscal policies across all national governments. P. Jacquet and J. Pisani-Ferry (2000) conclude that the need for coordination between national fiscal policies and euro-zone monetary policy arises from potential costs of uncertainty regarding the direction of the policy mix at the euro area level. The subject of policy mix interactions in the euro area was brought up by R. Beetsma and X. Debrun (2004), M. Buti (2003), L. Onorante (2004), M. Buti, D. Franco (2005) and A. Hughes Hallet, P. Mooslechner, M. Schuerz (2001) and others.

In the theory and practice of economics, has increased the importance of price stability, thus monetary policy began to play an important role in economic policy. As a result, the approach to monetary policy had changed, which the long-term objective of price stability is facing confounding factors, mainly the lack of coordinated policy mix. Interdependence between monetary and fiscal policy began a thorough study focusing on the effects of potential conflicts between them, and the benefits of the coordination of decision-makers responsible for economic policy. Many models have been developed based on game theory, which was used to study the monetary -fiscal interaction and to showcase the implications that arise from the use of games for the design and implementation of economic policy. Despite the many opponents of the use of game theory in the context of coordination of policy-mix, however, these models are very clearly highlight the problems arising as a result of conflict, the central bank and the government. As indicated by T. Sargent and N. Wallace (1981), undisciplined fiscal policy affects the pressure of tightening monetary policy, which could worsen the situation in the market. On the other hand too restrictive monetary policy of the central bank can help to raise the cost of disinflation and increase the burden of fiscal policy. Among the conditions that can be read from models based on game theory shows that the coordination of decision-makers would benefit both authorities (Wyplosz, 2002). In order to present the importance of cooperation between the monetary and fiscal authorities, will be presented the example of a simple game matrix, so-called prisoner's dilemma. It is a zero sum game, which has called: Nash equilibrium.

	Tight monetary policy	Loose monetary policy
Tight fiscal policy	Outcome: low inflation and low employment Payoff: central bank: $6 + 1 = 7$ fiscal authority: $3 + 1 = 4$	Outcome: medium inflation and medium employment Payoff: central bank: $4 + 2 = 6$ fiscal authority: $2 + 4 = 6$
Loose fiscal policy	Outcome: medium inflation and medium employment Payoff: central bank: $4 + 2 = 6$ fiscal authority: $2 + 4 = 6$	Outcome: high inflation and high employment Payoff: central bank: $1 + 3 = 4$ fiscal authority: $1 + 6 = 7$

Fig. 1. The matrix of monetary-fiscal game (prisoner's dilemma) (Source: H. Bennett, N. Loayza, 2001)

It is based on the fact that none of the players is not going to give up its strategy, seeking to maximize the benefits, while awaiting a decision of co-player. It is a kind of stalemate, because Nash equilibrium, none of the participants in the game, can't unilaterally improve their situation, because each player believes that his strategy is optimal for him (known to all players) (Bennett, Loayza, 2001). Loose fiscal policy strategy is the most preferred by the government, and the hard monetary policy by the central bank. The central bank receives the following payments for inflation reached respectively: low (6), medium (4), high (1), while the fiscal authorities receive for low inflation (3), average (2), and high (1). The central bank has received payment for the following employment levels: low (1), medium (2), high (3), and the fiscal authorities receive for employment: low (1), medium (4), high (6) (Bennett, Loayza, 2001). If the bank chooses an expansive policy, the government would have done the same thing, and the central bank would receive the lowest of notes. Therefore, the central bank providing government's strategy selects tight policy. In this situation, the fiscal authorities wanting to be in a better position decide on the loose policy. These choices are not optimal, and the authorities would prefer other fields. Therefore, the above matrix illustrates the problem of lack of communication and co-operation of fiscal and monetary authorities, which results from their different economic preferences (Hein, Truger, 2006).

Financial Crisis and Policy Mix

The financial crisis is a phenomenon that significantly affects the economy, especially in the current era of globalization. In the Keynesian economic theory, the mechanism of interest rates transmission to real economy is relatively most effective in the downturn of economic conditions and in the final phase of recovery. In the first case, an expansive interest rate policy is a complement to the tools of fiscal policy. In the second situation, in order to continue the economic recovery phase, the best solution is to increase the money supply and thereby inhibiting the rise in interest rates (Taylor, 2009).

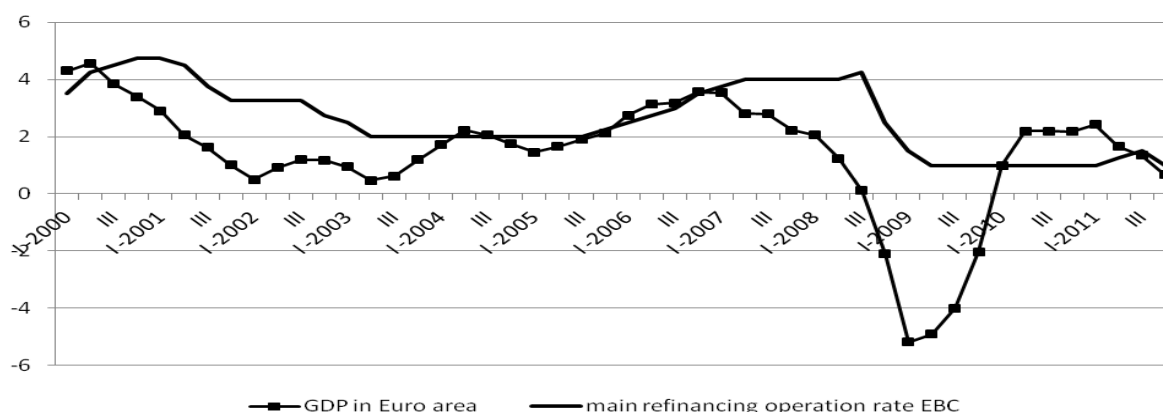


Fig. 2. GDP and the main refinancing operation rate EBC in euro area (Source: The author's calculation according to Eurostat warehouse database and ECB)

Changes in interest rates in the early recession, are often distorted by negative information about the state of the economy and its prospects, to some extent these changes weaken the interest rates impact on the real economy. An example of this situation is the financial crisis that emerged in mid-2007, mainly in the economies of the industrialized countries. The crisis started in the subprime market. As a result of disruptions in the mortgage market, many financial institutions particularly in the U.S. and the UK had serious solvency problems. In order to avoid paralysis of the banking sector during the Great Depression, it was decided to use the tools of monetary policy to prevent the financing constraints of the real sector of the economy by the commercial banks. Central banks strive to protect the liquidity of the banking sectors and to provide economies of money at the lowest possible cost. Implemented unprecedented changes in central bank refinancing policy, and lowering interest rates. As a result of these actions was a substantial increase in the money supply. The U.S. monetary base has grown by 78% from December 2007 to December 2008, the M1 money supply grew by 11.5% and M2 by 7.2%. So, going into next phase of recession, the U.S. economy recorded a significant monetary expansion with a decreasing transaction demand. The Federal Reserve from September 2007 began lowering phase of the basic interest rate by conducting 10 reductions in the federal funds rate (in total to December 2008). As a result of the end of 2008 the basic interest rate in the United States fluctuated at 0 - 0.25%. The European Central Bank also launched in July 2008 a series of interest rate cuts, reducing the base rate from 5.25 to 2.5% by the end of 2008 (Fig. 2). However, the greatest impact on the efficiency of the transmission mechanism of interest rates was a growing imbalance between changes in official interest rates and changes in short-term market rates. The phenomenon of the rise of the differences observed in the U.S. and the European Union before, and the financial crisis exacerbated these imbalances. As a result increased the cost of refinancing the banks at the central bank in relation to the costs that banks incur by using the resources available on the interbank market. The costs of raising capital, incurred by banks in the interbank market, affect the financing conditions of entities outside the banking sector (Taylor, 2009).

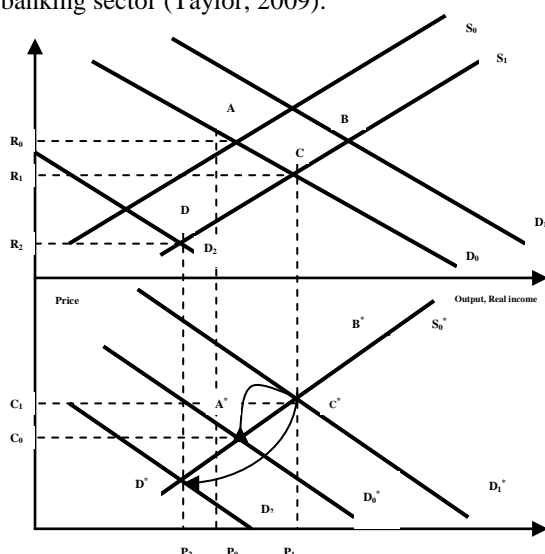


Fig. 3. Reduction in interest rate, as a means of countering the deepening economic recession (Source: J. L. Bednarczyk, 2009)

In Figure 3 was illustrated a situation that occurred since mid-2007 in the economies of the industrialized countries, as a result of reducing the interest rate (Bednarczyk, 2009). The upper part of the figure refers to the equilibrium conditions in the financial market, and the lower - the balance on goods and services

market. Point A represents a state of equilibrium with under-utilized production capacity and other problems characteristic of the economy in the early stages of recession. These are high unemployment, reduced levels of investment in fixed capital and consumer spending (Bednarczyk, 2009). The decisions of the central bank strives for increase the availability of money will shift the equilibrium level to point B, mainly as a result of increasing the transaction demand for money. The increase amount of money was used in part to purchase securities (bonds), what caused lower their prices and lower interest rates. Point of equilibrium in the financial market moves to point C, with higher production and prices (C1). When come the fast reaction of the real sector for interest rate cuts, equilibrium at point C would continue for a long time. Otherwise, traders are expecting a lower level of interest rates begin to buy securities, leading to a further increase in prices and a drop in interest rates. In addition, in terms of decreasing investment demand and demand for goods and services, there may be deflationary trends in the economy (decline in prices in the U.S., in the last months of 2008). Deflation contributes to an increase in real interest rates, which reduces the positive outcomes of the nominal interest rate cuts. Therefore, the equilibrium moves to point D*, which is characterized by a low level of production, high unemployment with low interest rates and low inflation (Bednarczyk, 2009).

The economic situation in the euro area largely depends on the policy of the ECB. There are important interest rates, inflation and exchange rate policy, on which the ECB has an impact. In addition, the ECB is one of the largest central banks in the world, and the GDP of the euro area is similar in size to that of the United States. The sum of these two GDP accounts for 40% of global GDP. Therefore, interest rates set by the U.S. Federal Reserve and the European Central Bank, significantly affect the economic situation around the world. Information on ECB interest rates announced at press conferences, translate into movements of stock indices in many countries. Hence, the positive evaluation of the ECB's decision are reflected in increases in stock and result in the strengthening of the euro versus other major currencies in the world. Therefore, the ECB is an institution of global importance (Panico, Purificato, 2010).

Table 1. General government deficit and debt in euro area (Source: Eurostat - online data codes: tsieb080 and tsieb090)

	Public balance (budget deficit)				General government debt			
	2008	2009	2010	2011	2008	2009	2010	2011
EU-27	-2.4	-6.9	-6.5	-4.5	62.5	74.8	80.0	82.5
Euro area	-2.1	-6.4	-6.2	-4.1	70.1	79.9	85.3	87.2

ECB influence on the economic situation of the euro area, as well as playing a key role in the monetary integration of Member States of the European Union. However, the economies of the euro area are different, and often would require a different economic policy towards these countries. For example, in mid-2008 there was a deficit in foreign trade of Spain amounting to 10.1% of GDP, while the German economy showed a surplus of 7.7% of GDP. It is recognized that the mismatched interest rates have led to "overheating" the Spanish economy. Low interest rates and cheap credit caused in Spain bubble economy, especially in the real estate market, which is based on this economy. In connection with the possibility of obtaining cheap credit in the bank, built a lot of the rising prices of real estate. In the face of the global financial crisis, there was a crack "bubble" and the economic recession. The unemployment rate has increased by 100% making it the highest in the EU (15%). On the other hand, there was a concern that the financial crisis will lead to such an economic slump that some countries, like Greece and even Italy, Portugal and Spain will be removed from the Eurozone. Currently (September 2012) this has not happened and the ECB (in conjunction with the EU, IMF and other institutions) trying to intervene to prevent the collapse of the euro zone. Paradoxically, the European economic model, which allows for a degree of state intervention turns out to be the solution used in the world. As a result, during the financial crisis, position of the euro as a reserve currency among many central banks are not weakened. The euro area, despite many threats and difficulties have a chance to get out of the recession but at the cost of restructuring public finances of individual countries in the Eurosystem (Panico, Purificato, 2010). Table 1 presents the public sector debt in the euro zone. The higher the budget deficit and public debt the more assistance and coordination of fiscal and monetary policies was required.

Objective of the European Central Bank and the National Central Banks operating in the euro zone comes down to price stability. It has been defined in Article 105 of the EC Treaty. ECB taking care of primary objective, should have to contribute to the achievement of the objectives of the Community. Supporting by the ECB's general economic policy of the Community and its goals: the high level of employment and sustainable and non-inflationary growth, should be without detriment of price stability (The Monetary..., 2004). The Treaty shows the hierarchy of the objectives of the ECB. The primary objective of the ECB is price stability, mainly due to the following theoretical premises (Price ..., 2011):

- belief in the neutrality of money in the long run, according to which the change in the quantity of money will contribute to long-term changes in the general price level, but not affecting the real variables (output, employment);
- belief that inflation is a monetary phenomenon, because in periods of high inflation usually only increased the money supply, while other factors, such as supply or demand shocks affect prices in the short term, which in turn can neutralize the changes in monetary policy in the long run;

- belief that in the long run the central bank can affect the acceleration of economic growth only through price stability.

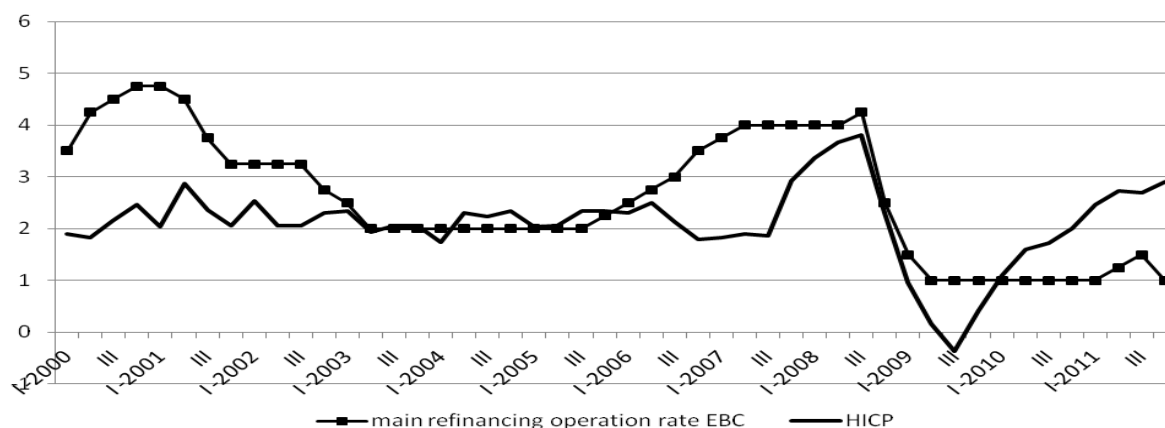


Fig. 4. Main refinancing operation rate EBC and HICP in euro area (Source: The author's calculation according to Eurostat warehouse database and ECB)

Monetary policy aimed at maintaining price stability was supported by a number of practical experience and theoretical work. They prove that such an approach of central bank helps to improve the economic outlook and the impact on raising the standard of living of citizens. Price stability is conducive to right investment and consumer decisions by businesses and individuals. This allows for lower the overall price level fluctuations, the prices are more stable relative to the operators. In addition, investors who have reason to believe that prices will remain stable in the future, do not require inflation risk premium as part of their remuneration for the risk of holding the nominal assets over the long term. Reliable maintenance of price stability also increases the likelihood that entities allocate their resources for production purposes rather than collecting them in the form of assets to hedge against inflation (The Monetary..., 2004). The Governing Council of the ECB in October 1998 presented a quantitative definition of price stability as "the annual increase in the price of the Harmonized Index of Consumer Prices HICP for the euro area of below 2%, adding that the price stability to be maintained over the medium period". In 2003, the Governing Council stated that it will try to keep inflation below 2%, but close to that level. This means that 2% is the upper limit of the HICP. In addition, the level of general price index close to 2%, allows to avoid the risk of deflation. The phrase "the medium term", it follows that it is impossible to precisely shape the rate of inflation in the short term. The reason for this situation is the inability to neutralize by the monetary policy in the short-term price shocks without unexpected delays. Thus, short-term volatility in inflation is to some extent justified. The quantitative definition of price stability provides greater transparency of monetary policy and provides a framework for assessing by public opinion if the ECB fulfills its objective. In addition, the purpose of this definition was also shaping the expectations of financial markets and the general public regarding price developments. Stable long-term inflation expectations prevent to higher inflation in the calculation of prices and wages set by the entities (The Monetary..., 2004).

In order to maintain price stability in the medium term, the ECB affects the price level through monetary transmission mechanism, affecting the level of money market interest rates. Monetary transmission process is a complex network of economic interactions. The ECB operates under even greater uncertainty than the individual central banks, because it is responsible for the multinational currency area. It is therefore important to determine the direction of monetary policy, which will maintain price stability in the future, effectively reducing the impact of unexpected shocks. Hence the adoption of medium-term horizon to maintain stable prices, associated with the conduct of monetary policy by the ECB in the long run. This allows avoiding the elements of volatility into the real economy and the excessive economic activism. The increase in the interest rate stimulates the growth of savings and decrease the demand for money and for investment, falling inflation and lower growth. However, its decline encourages enterprises to invest and discourages savings, what lead to improve the economic situation and cause higher inflation.

Concluding description of the interest rates will be raised the issue related to interest rate rule proposed by J.B. Taylor (1993). It is important for this study because it draws attention to the interest rate, as an important instrument of monetary policy. It was expressed in the form of equations, which later adopted in the literature called "Taylor rule" or "Taylor principle". It refers to the amount of short-term interest rates, which are related to the deviation of inflation from the target and the target level of GDP from potential GDP. This rule initially concerned the monetary policy of the Federal Reserve System after 1986, and presented it the following formula (Woodford, 2001):

$$i_t = \pi_t + 0,5y_t + 0,5(\pi_t - \pi^*) + r^* \quad (1)$$

where: i_t - the nominal federal funds rate at time t , π_t - rate of inflation in period t (in% per year), π^* - the inflation target in period t (in%), y_t - GDP gap in period t (deviation of GDP from its potential level, in%), r^* - real interest rate corresponding to the full employment (natural interest rate).

J.B. Taylor (2009) on the basis of the study put forward a number of important conclusions¹. First of all, said that monetary policy should respond not only to changes in economic activity, but also on the level of inflation, and the main instrument of the central bank influence on the economy should not be the money supply but the interest rate. In addition, J.B. Taylor (2009) acknowledged that the pursuit of monetary policy to stabilize the exchange rate could hamper the economic authorities in achieving stable inflation and high GDP growth. Taylor rule is called: flexible rule, and based on it, monetary policy is called: closed loop policy, because it takes into account the most recent information and data about the health of the economy. The rule developed by J.B. Taylor, based on the appropriate shaping of the interest rate level to stabilize inflation.

During the financial crisis, the use of the Taylor's rule was difficult. Central banks: the FED and the ECB have sought to stimulate more economic activity through a policy of low interest rates and by using quantitative easing policy, which involves buying financial assets from commercial banks to provide liquidity to the market. An example is the so-called operation LTRO (Long Term Operation Refinancing) through which the ECB provides the banking system significant amounts of money in the form of 3 - year loans with low interest rates.

The Policy of Fiscal and Monetary Authorities in Period 2008 – 2011

In 2008, HICP inflation in the middle of the year was 4%. Therefore, the ECB's monetary authorities have raised interest rates. However, in September 2008 escalated tensions in financial markets around the world, leading to a reduction in inflationary pressures and the risks to economic growth in the euro zone. In October 2008, the ECB announced a cut in interest rates (including from October 2008 to March 2009 by 275 basis points). Despite this, inflation in 2008 was 3.3% and 0.8% of GDP. A major challenge for fiscal policy in the euro area have become a growing public debt ratios and budget deficits. Thus, in December 2008 the European Council endorsed the European Economic Recovery Plan. The plan was to lead to economic recovery by boosting demand and accelerate the pace of structural reforms envisaged in the Lisbon Strategy. Average deficit of the general government in the euro zone rose to 2% of GDP in 2008, while public debt rose to 69.3% of GDP (Fig. 5). After two years of growth in 2008, there has been a sharp decline in the growth rate of total investment to approximately 0.6%. In order to stimulate demand in many euro area countries have initiated appropriate fiscal measures. These were the packages to accelerate growth in public investment, business support, so generally stimulate economic growth (*Annual...*, 2009).

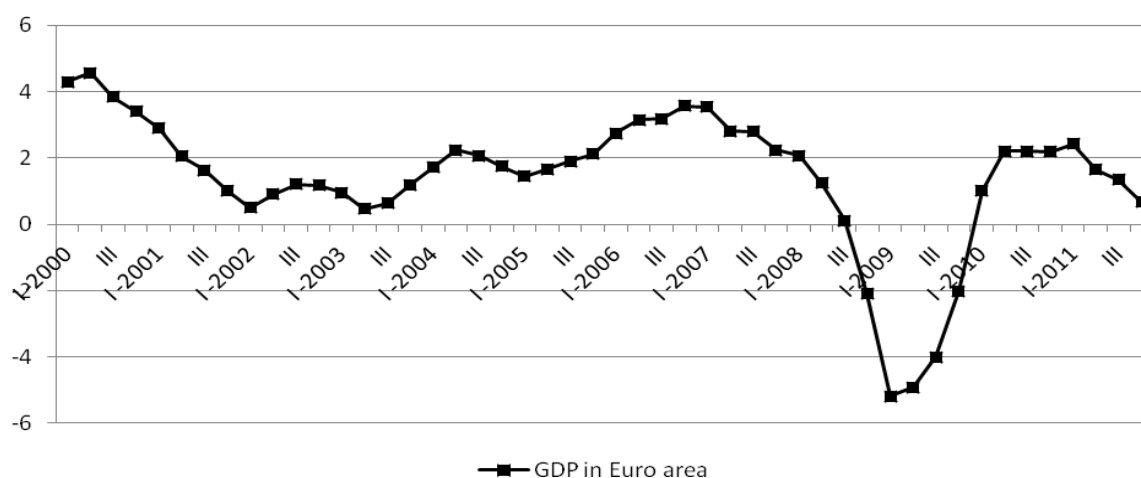


Fig. 5. GDP in euro area (Source: The author's calculation according to Eurostat warehouse database and ECB)

In 2009, HICP inflation has remained low 0.3%, with the decline in economic activity GDP - 4%. The Governing Council of the ECB cut interest rates in the euro zone, leaving the main refinancing rate at 1%. Moreover, the ECB continued launched in 2008, the plan of nonstandard means (extraordinary credit support) in order to master the problems in the money market and to improve the financing conditions of operators and enterprises. In the area of fiscal policy in the euro area there has been a significant deterioration in the budgetary situation. This was due to a large decline in the economy and expansionary fiscal policy, which included fiscal stimulus and government support measures for the financial sector. The budget deficit in 2009 in the euro area rose to 6.4% of GDP, while public debt was 78.2% of GDP. Investments in fixed assets in total have undergone sudden collapse, falling by 10% in 2009. However, public sector investment as opposed to the private sector

¹ Taylor rule relates to raising the federal funds rate by 0.5% when real GDP increases by 1% above potential GDP. On the other hand, if inflation increases by 1% above the target of 2%, then the federal funds rate should be raised by 0.5%. However, when real GDP equals potential GDP and the inflation rate is equal to the target, which is 2% then the federal funds rate should be about 4%, and the real federal funds rate 2%.

recorded a growth acceleration. Business investment in fixed assets fell by approximately 14% in 2009 (Figure 6) (Annual..., 2010).

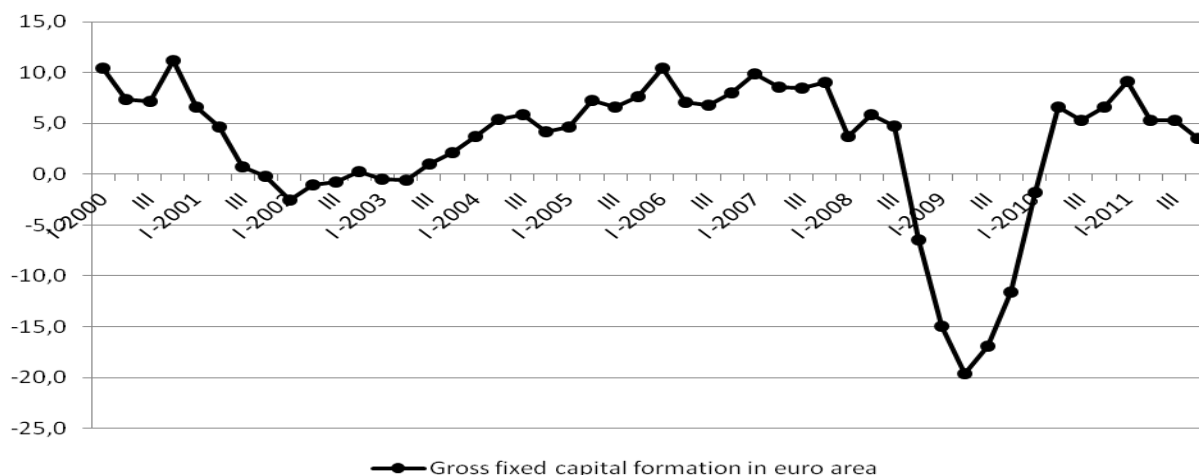


Fig. 6. Gross fixed capital formation by non-financial corporations in euro area as a percentage of GDP (Source: The author's calculation according to Eurostat warehouse database and ECB)

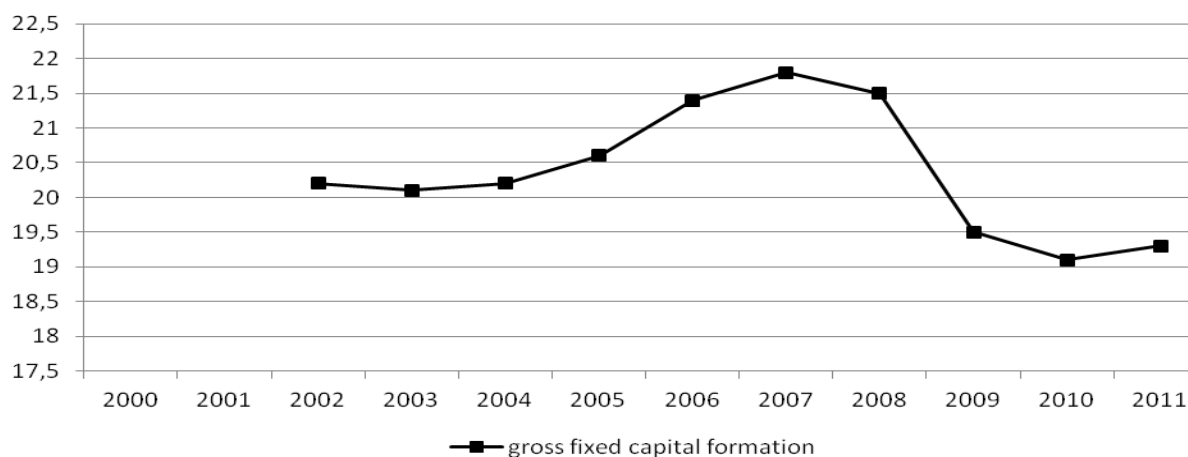


Fig. 7. Rate of investment in euro area (Source: The author's calculation according to Eurostat warehouse database and ECB)

In 2010, the rate of growth in the economy (GDP) was slightly higher 1.7%. As for the HICP inflation rose to 1.6%, but the ECB's Governing Council kept the interest rates unchanged due to a stable medium-term assessment of the outlook for inflation in 2010. Reducing in 2010 the rate of growth of government expenditure was due to the gradual withdrawal of fiscal stimulus measures, implemented by the end of 2008. Reducing spending was particularly pronounced in public investment (Figure 9). Investments in the third quarter of 2010 saw a slight increase after a significant decline in 2009 (Figure 6, Figure 7). Average rate of deficit of the general government of the euro area in 2010 amounted to 6.3% of GDP. The public debt in the euro area has increased significantly to 84.2% of GDP, mainly due to high deficits, and as a result of the support given to the financial sector and Greece (Annual..., 2011).

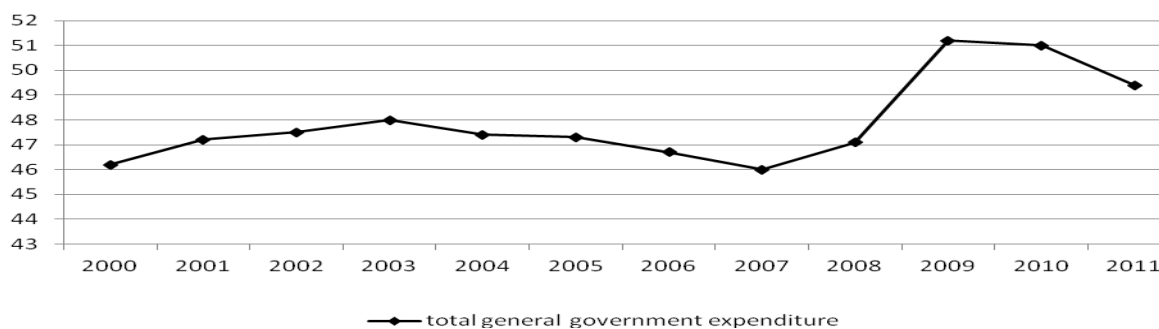


Fig. 8. Total general government expenditure in euro area (Source: The author's calculation according to Eurostat warehouse database and ECB)

In 2011, real GDP grew by 1.4%, increased also the growth rate of investment in fixed assets, while the HICP inflation rate was 2.7%. The ECB decided to raise interest rates by 50 basis points in the first half of the year. In the second half of the year have increased tensions in the financial markets, thus undermining economic activity. Thus, in order to maintain price stability, the Governing Council ECB lowered the key interest rates by 50 basis points. At the end of 2011, the main refinancing operations rate was 1%. Deficit of the general government of the euro area in 2011 decreased to 4.1% of GDP. The budget deficit reduction in the euro area influenced the reduction of investment and employment in the public sector (Fig. 8) as well as increase in indirect taxes. Debt ratio of general government increased to 88% of GDP in 2011 (Annual..., 2012).

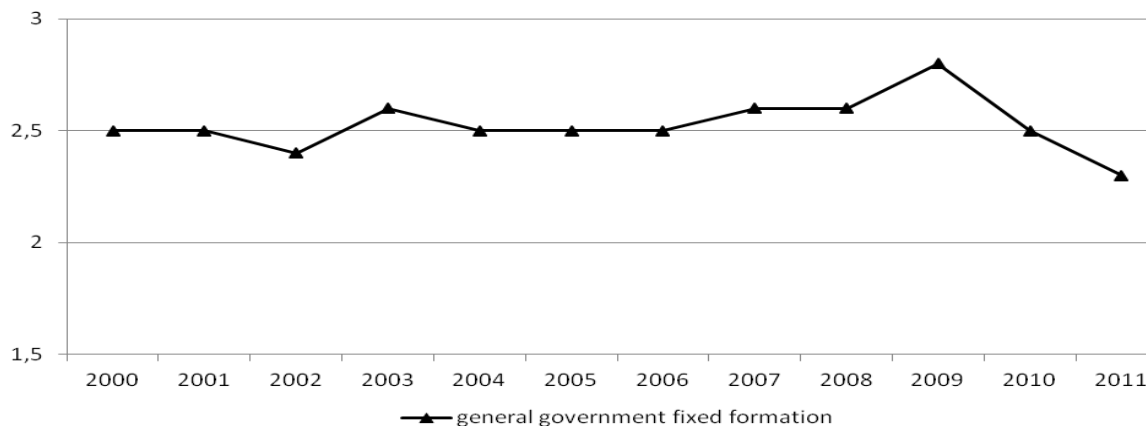


Fig. 9. General government fixed formation in euro area (Source: The author's calculation according to Eurostat warehouse database and ECB)

Conclusions

During the financial crisis it was observable, significant increase in budgetary expenditure in the euro area (Figure 8). This was associated with an increase inter alia in public investment expenditure (Figure 9). Fiscal authorities trying to stimulate the economy have decided to increase spending to inhibit the effects of the financial crisis such as the decline in investment, employment and overall GDP in the euro area. Also, the monetary authorities cutting interest rates to the lowest levels in history, aimed at encouraging businesses to borrow and invest. However, the financial crisis is causing too much uncertainty in the financial markets, causing aversion of entities to borrow, invest, increasing spending. Thus, the level of investment in the economy has been significantly reduced. Gross fixed capital formation of businesses fell up to about - 20% of GDP. During the financial crisis, despite a coordinated fiscal and monetary policy in the euro zone, the economic authorities did not prevent EMU, before a significant decline in investment and economic activity. However, it should be noted that without the ECB's anti-crisis measures and the fiscal authorities the recent financial crisis could even lead to the collapse of the euro zone.

References

1. ANNUAL REPORT 2008, European Central Bank, Frankfurt am Maim, 2009, p. 12 – 85.
2. ANNUAL REPORT 2009, European Central Bank, Frankfurt am Maim, 2010, p. 11 – 81.
3. ANNUAL REPORT 2010, European Central Bank, Frankfurt am Maim, 2011, p. 12 – 80.
4. ANNUAL REPORT 2011, European Central Bank, Frankfurt am Maim, 2012, p. 12 – 75.
5. BEDNARCZYK J. L., 2009, *Stopa procentowa jako narzędzie polityki banku centralnego*, [in:] *Studia z bankowości centralnej i polityki pieniężnej*, ed. Przybylska – Kapuścińska W., Difin, Warszawa, 171 -72.
6. BEETSMA R., DEBRUN X., 2004 *The Interaction between Monetary and Fiscal Policies in a Monetary Union: A Review of Recent Literature*, in: R. Beetsma et. al., eds., *Monetary Policy*, Cambridge.
7. BENNETT H., LOAYZA N., 2001, *Policy biases when the monetary and fiscal authorities have different objectives*, "Central Bank of Chile Working Papers", no. 66, p. 301.
8. BLANCHARD O.J., GIAVAZZI F., 2004, *Improving the SGP through a proper accounting of public investment*, CEPR Discussion Paper Series , no. 4220.
9. BUTI M., ed., 2003, *Monetary and Fiscal Policies in EMU: Interactions and Coordination*, Cambridge.
10. BUTI M., FRANCO D., 2005, *Fiscal Policy in EMU*, Cheltenham.
11. HEIN E., TRUGER A., *Monetary Policy, macroeconomic policy mix and economic performance in the Euro area*, Working Paper 6/2006, Macroeconomic Policy Institute in the Hans Boeckler Foundation, p. 1 - 26.
12. HUGHES HALLET A., MOOSLECHNER P., SCHUERZ M., eds., 2001, *Challenges for Economic Policy Coordination within European Monetary Union*, Dordrecht.
13. ISSING O., 2002, *On macroeconomic Policy Co-ordination in EMU*, JCMS 2002 Vol. 40, no. 2, p. 345-58.
14. JACQUET P., PISANI-FERRY J., 2000, *Economic policy co-ordination in euro-zone. What has been achieved? What should be done?*, [interactive] p. 1 - 32, Available from: < <http://www.pisani-ferry.net/base/re-00-cer-coord.pdf>>
15. KRUGMAN P., 2000, *Thinking about liquidity trap*, Journal of Japanese and International Economies no. 14.
16. KUTTNER K. N., 2002, *The Monetary – Fiscal Policy Mix: perspectives from the U. S.*, "Bank i Kredyt" no. 11 -12, *The Monetary Policy of the ECB*, 2004, European Central Bank, Frankfurt am Maim, p. 208-209.
17. ONORANTE L., 2004, *Interaction of Fiscal Policies in the Euro Area: How Much Pressure on the EBC?*, in: R. Beetsma et. al., eds., *Monetary Policy*, Cambridge.
18. PANICO C., PURIFICATO F., 2010, *European Policy Reactions to the financial crisis*, Studi Economici. *Price stability: Why is it important for you?*, 2011, European Central Bank, Frankfurt am Main January, 2 - 30.

19. SARGENT T. J., WALLACE N., 1981, *Some Unpleasant Monetarist Arithmetic. District Conditions*, Quarterly Review Fall 1981, Federal Reserve Bank of Minneapolis, Vol. 5. No. 3, p. 1-17.
20. TAYLOR J. B., 1993, *Discretion versus policy rules in practice*, Carnegie-Rochester Conference Series on Public Policy 39 (1993) North-Holland, p. 195 – 214.
21. TAYLOR J. B., 2009, *The financial crisis and the Policy responses: an empirical analysis of what went wrong*, Working Paper 14631, National Bureau of Economic Research, Cambridge, p. 2 – 32.
22. WOODFORD M., 2001, *The Taylor Rule and Optimal Monetary Policy*, Princeton University.
23. WYPLOSZ C., 2002, *Fiscal discipline in EMU: Rules or Institutions?* [interactive] Mimeo 2002. Available from: <http://www4.fe.uc.pt/jasa/m_i_2010_2011/fiscaldisciplineinmurulesorinstitutions.pdf>
24. VON HAGEN J., MUNDSCHEK S., *Fiscal and monetary policy coordination in EMU*, International Journal of Finance and Economics, 8, p. 279 - 95.

MONETARINĖS IR FISKALINĖS POLITIKOS DERINIMO ĮTAKA EURO ZONOS ŠALIŲ INVESTICIJOMS FINANSŲ KRIZĖS KONTEKSTE

Joanna Stawska
Lodzės universitetas

Santrauka

Stebint ECB ir euro zonos fiskalinių institucijų politiką, galima daryti išvadą, kad mišrios politikos koordinavimas finansų krizės metu pasiekė aukštą lygį. Bet ar tai buvo pakankama? Ar galima būtų išvengti skolų krizės euro zonoje? ECB, Europos Komisija ir nacionalinės vyriausybės siekia skatinti investicijas ir vartojimą. ECB reikšmingai sumažino palūkanų normas ir taikė kiekybines nestandartines sušvelninimo priemones. Nepaisant to, kyla klausimas, ar rinkos likvidumo palaikymo veiksmai buvo būtini ir efektyvūs. Žinoma, pinigų politika, apimanti tik palūkanų normų kontrolę, pasirodė esanti nepakankama. Tuo tarpu mokesčių institucijos darė stimuliuojantį poveikį ekonominei veiklai euro zonoje. Vykstant globalizacijos procesui, euro zonos finansų valdymo poveikis atsispindėjo ne tik Europos Sąjungoje, bet ir visame pasaulyje.