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**A Macroeconomic Assessment of
The European Monetary Union**

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A Macroeconomic Assessment of the European Monetary Union

Qin Wang*

Since the inception of Euro in 1999, a single currency and the Economic and Monetary Union (EMU) have past more than ten years. By and large, stepping into EMU represents one of the key aspects of EU's successful integration. For most of its short life, the European Union has been driven mainly by the goal of economic integration. From a limited experiment in economic cooperation during the early 1950s, boarded in the 1960s to become a custom union, wrestled during the 1970s with attempts to build common economic policies and exchange rate stability, focused on completing the single market during the late 1980s, to the Economic and Monetary union and a single currency at the present¹, the European Union has followed a tortuous path. The paper starts with the effectiveness of EU's monetary policy after the birth of Euro to explore the complex relationship between monetary policy and economic operation within the European Union.

A Brief Introduction to European Economic and Monetary Union

The latest – and perhaps riskiest – step in the process of European integration was taken in January 1999, when eleven EU member states locked in their exchange rates as a prelude to the final switch in July 2002 to a single European currency – the Euro. The issue of the single currency cuts to the heart of sovereignty and independence. After the collapse of the Bretton Woods System, breaking the peg of the U.S. dollar to gold, European leaders began to pay more attention to the idea of monetary union. The first attempt, to plan the transition to a single currency, derived from the Werner Committee during 1969-1970, but was derailed by the international currency turbulence in the wake of the energy crises of the 1970s.

During the 1980s, with the sense that something needed to be done to reverse the EC's relative economic decline, to respond to the superiority of the United States and Japan in high-technology industries, and to exploit more fully the potential of its own market, the mood of the community changed. It was believed that monetary union could reduce duplicate effort, encourage joint research, and remove the final barriers that prevented European companies from doing business in all the member states². The next important step on the road to the full monetary integration in Europe was the creation of the European Monetary System (EMS) in 1979. The core of this system are the Exchange Rate Mechanism (ERM) and the European Currency Unit (ECU) used as a unit of account in the intervention and credit mechanism and as a mutual means of settlement. For every member's currency, a central rate against the ECU was calculated and these rates were used to find out a grid of bilateral central rates. The fluctuation bands were set at 2.25% on either side of the central rate for most currencies but there was also another option for weaker currencies with margin of 6%. The Delors Report, one the most influential documents pertaining to the European Union in terms of monetary policy (in effect leading to the establishment of EMS) was published in 1989. According to the report, the crucial issue was to centralize monetary authority by establishing a whole new institution the European System of Central Banks (ESCB). That report is treated as a prologue to the first Stage of launching the new

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¹ McCormick, John. *The European Union Politics and Policies*. 1999.

² McCormick, John. *The European Union Politics and Policies*, 1999.

European currency³. Despite its near-collapse during 1992-1993, when Britain and Italy left the ERM and several other countries had to devalue their currencies, the Maastricht Treaty affirmed the basic principles behind the plan and adopted a three-stage plan for economic and monetary union which ratified by the European Council in December 1991⁴.

From an economic point of view, a monetary union is a rational choice for the majority of the EU members. The Mundell-Fleming model developed in the 1960s helps us understand the economic motive of EMU: “The Impossible Trinity” is the hypothesis in international economics that it is impossible to have all three at the same time: a fixed exchange rate, free capital movement and an independent monetary policy. “A country must pick two out of three. It can fix its exchange rate without emasculating its central bank, but only by maintaining controls on capital flows (like China today); it can leave capital movement free but retain monetary autonomy, but only by letting the exchange rate fluctuate (like Britain--or Canada); or it can choose to leave capital free and stabilize the currency, but only by abandoning any ability to adjust interest rates to fight inflation or recession (most of Europe)⁵”. To European Union, a single currency is imperative under the circumstance of such a highly integrated regional economy, common monetary policy means the loss of national monetary autonomy⁶.

On the other hand, however, some economists refuted the assertion that a single market needed a single currency, let alone monetary union. They argued that monetary union would not necessarily increase trade and that the success of the EMS weakened the anti-inflationary argument for EMU. In regard with the nature of EMU, they held that the main push for EMU was political, not economic. It emanated mainly from Paris, Brussels, and Bonn. By joining a federal monetary system, member states would wrest some power back from the Bundesbank of Germany. This was the reasoning behind French finance Minister Edouard Balladur’s influential advocacy of EMU in early 1988. By the same token, Germany should have been the least happy about monetary union. But the German government, which in any event supports monetary union for political reasons, could hardly argue in favor of maintaining a monopoly over monetary in the European Community⁷.

Regardless which is the real impetus of monetary union, the Euro-zone is the only de facto common currency area that exists today, which has become a reality due to effective coordination between both political and economic integration⁸. There are two main benefits of a single currency to be considered. One is the elimination of transaction cost and the other is the elimination of exchange rate risk. There are also two most important costs: one is a cost of institutions and individuals adjustment to a new currency and the other is a lack of national monetary policy as an adjustment tool when a member state experiences an economic asymmetric shock⁹.

The economic performance of the European Union after 1999

Adoption of the euro signifies that Euro-zone members lose the autonomy of using monetary policy to regulate their macro economies, instead turn to the European Central Bank (ECB) to implement unified monetary policy. Ten years after, how is the performance of ECB monetary policy? In particular, whether it has fulfilled the tasks of ensuring price stability, economic

³ IRENEUSZ PSZCZÓLKA: Advantages and Disadvantages of Introducing the Euro

⁴ Pascal Fontaine: Europe in 12 lessons

⁵ Paul Krugman. Synopsis: Applauds Mundell's work while cautioning on what this Nobel was for (<http://www.pkarchive.org/global/canada.html>)

⁶ Ginsberg, Roy. Demystifying the European Union, 2000

⁷ Dinan, Desmond. Ever Closer Union: An Introduction to European Integration, 2000

⁸ Maria Lorca: Is the euro, as a common currency, a tool for integration? Miami-Florida European Union Center of Excellence

⁹ IRENEUSZ PSZCZÓLKA: Advantages and Disadvantages of Introducing the Euro

growth, full employment, balance of international payment and etc. within the union has sparked controversy. Generally speaking, ECB well accomplished the primary objective of maintaining price stability, which stabilizes economies in the union, however, with respect to other macro-economic policy objectives, it has fulfilled rarely.

Inflation rate

Figure 1: Annual Inflation, 1999-2009

□	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Belgium	1.1	2.7	2.4	1.6	1.5	1.9	2.5	2.3	1.8	4.5	0.0
Netherlands	2	2.3	5.1	3.9	2.2	1.4	1.5	1.7	1.6	2.2	1.0
Germany	0.6	1.4	1.9	1.4	1.0	1.8	1.9	1.8	2.3	2.8	0.2
Ireland	2.5	5.3	4.0	4.7	4.0	2.3	2.2	2.7	2.9	3.1	-1.7
Greece	2.1	2.9	3.7	3.9	3.4	3.0	3.5	3.3	3.0	4.2	1.3
Spain	2.2	3.5	2.8	3.6	3.1	3.1	3.4	3.6	2.8	4.1	-0.3
France	0.6	1.8	1.8	1.9	2.2	2.3	1.9	1.9	1.6	3.2	0.1
Italy	1.7	2.6	2.3	2.6	2.8	2.3	2.2	2.2	2.0	3.5	0.8
Cyprus	1.1	4.9	2.0	2.8	4.0	1.9	2.0	2.2	2.2	4.4	0.2
Luxembourg	1	3.8	2.4	2.1	2.5	3.2	3.8	3.0	2.7	4.1	0.0
Hungary				5.2	4.7	6.8	3.5	4.0	7.9	6.0	4.0
Malta	2.3	3	2.5	2.6	1.9	2.7	2.5	2.6	0.7	4.7	1.8
Austria	0.5	2.0	2.3	1.7	1.3	2.0	2.1	1.7	2.2	3.2	0.4
Portugal	2.2	2.8	4.4	3.7	3.3	2.5	2.1	3.0	2.4	2.7	-0.9
Slovakia	10.4	12.2	7.2	3.5	8.4	7.5	2.8	4.3	1.9	3.9	0.9
Finland	1.3	2.9	2.7	2.0	1.3	0.1	0.8	1.3	1.6	3.9	1.6
Euro area (16 countries)	1.2	2.2	2.4	2.3	2.1	2.2	2.2	2.2	2.1	3.3	0.3
EU	1.2	1.9	2.2	2.1	2.0	2.0	2.2	2.2	2.3	3.7	1.0

(27 countries)											
United States	2.2	3.4	2.8	1.6	2.3	2.7	3.4	3.2	2.8	3.8	-0.4

Source: EuroStat¹⁰

The primary objective of the ECB's monetary policy is to maintain price stability. The ECB aims at inflation rates of below, but close to, 2% over the medium term.¹¹ Overall, euro-zone inflation rate after 2000 slightly exceeded the target range, but the deviation was not great. The Euro area average annual Inflation between 1999 and 2009 is 2.25, lower than 2.53 of the U.S. In order to achieve the primary objective of price stability, ECB applies M3 growth rate as reference to evaluate the role of currency and interest rate instrument to implement monetary policy, which consistent with the macroeconomic condition in the euro area as a whole during the past eleven years.

GDP Growth

As for economic growth, the performance of euro-zone is unsatisfactory, it has been lower than that of the U.S. for five years, and it didn't absolve the shock of financial crisis 2008. Moreover, we can see in Figure 3 that differences were reasonable to begin with, but that they have increased over the last decade. The productivity difference between the slowest and fastest growing countries on average (Ireland and Portugal) increased from 25 index points in 1999 to 66.2 in 2008; the difference in unit labor costs went from 5.4 percentage points to 31.8¹².

Figure 2: Annual Real GDP growth rate in percent, 2000-2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Euro area (16 countries)	3.9	1.9	0.9	0.8	2.2	1.7	3.0	2.8	0.6	-4.1
EU (27 countries)	3.9	2.0	1.2	1.3	2.5	2.0	3.2	2.9	0.7	-4.2
United States	4.1	1.1	1.8	2.5	3.6	3.1	2.7	2.1	0.4	-2.4

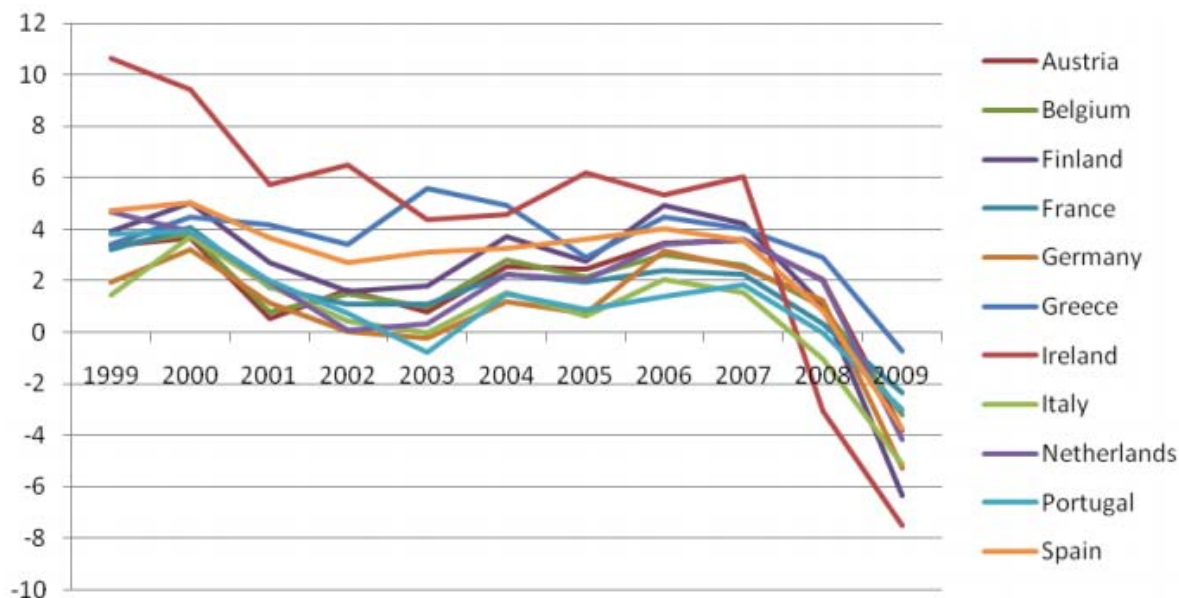
Source: EuroStat

¹⁰ EuroStat Website: <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>

¹¹ European Central Bank Website (<http://www.ecb.int/mopo/html/index.en.html>)

¹² Sylvester C.W. Eijffinger: Policy Implications of Increasing Debt and Deficits, European Parliament, Economic and Monetary Affairs, 2010

Figure 3: Annual GDP growth rate in percent in eleven Euro-zone members



Source: EuroStat

Unemployment Rate

The economic growth plays a dominant role in accounting for the main swing in EU unemployment¹³. The level of unemployment rate in the euro area is always high, particularly in Germany and France, these two major powers' domestic unemployment rates stay higher than euro-zone average for many years. The difference in the unemployment rate rose from 10.1 percentage points to 15.45¹⁴ in eleven years.

Balance of International Payment

The euro's rose against the dollar from 2003 was eroding demand for Europe's exports, making it hard for the region's economies to grow. In this case, as an export-oriented area and as imports and exports accounted for a huge proportion of its GDP, ECB should play the role of interest rate parity: make currency weaker to boost exports. However, confronted with the gradual warming of economy since 2000, ECB could only raise interest rate continuously as its priority of stabilizing prices in the euro area. This move ultimately forced Germany with such a low inflation rate became the "ballast" of euro-zone economy. As interest rates continued to increase, the euro has

¹³ Marika KARANASSOU, Hector, and Dennis J. SNOWER: Unemployment in the European Union: Institution, Prices and Growth

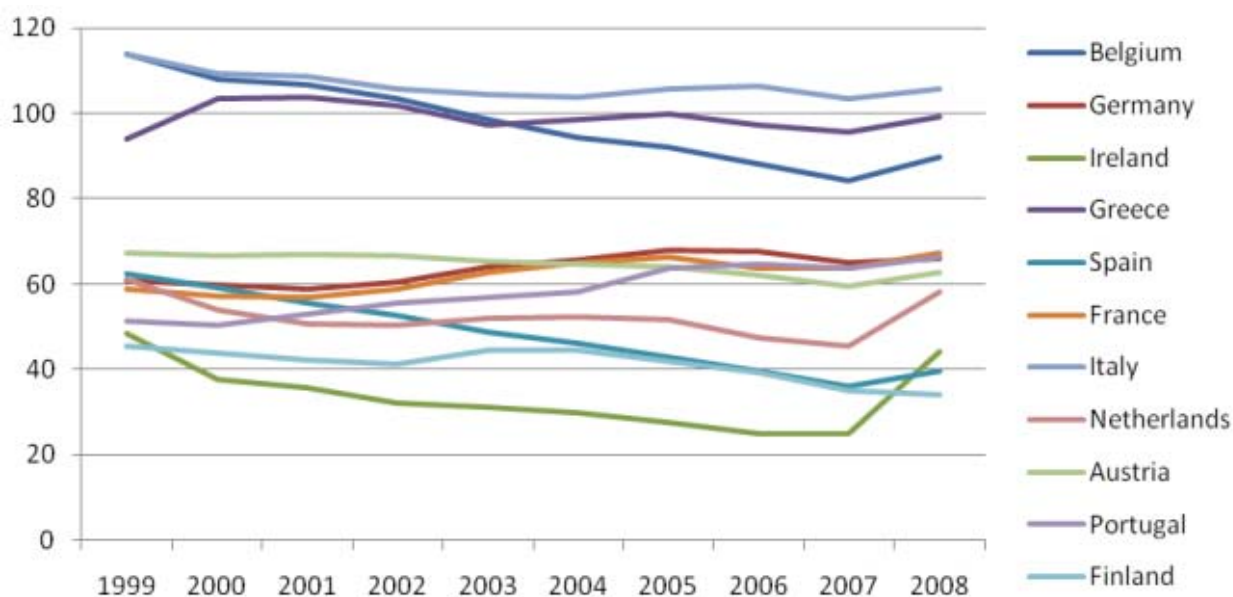
¹⁴ Based on data from Eurostat

become increasingly strong, statistics shows that euro-zone export growth rate has been lower than import growth rate since 2003¹⁵.

Government Debt

According to the convergence criteria, public debt is not allowed to exceed 60% of GDP. However, three members' (Greece, Belgium, Italy) government debt remained extremely long and high, which will cast long shadows over euro-zone's future (see figure 4). In addition, we cannot find any convergence regarding government deficits and debt. In 1999, Finland boasted the smallest government debt, equal to 45.5% of GDP. The difference with the largest debtor in the euro-zone, Italy, was 68.2%. Despite the most severe financial and economic crisis in almost a century, the Finnish national debt actually decreased by 2009, to 39.7%. Italy, meanwhile, failed to use the significant windfall from the steep decline in long-term interest rates caused by the introduction of the euro and a decade of rapid economic growth to repair its debt position. Italy's debt barely budged and stayed well above 100% of GDP. As a result, the difference between the debt positions of Finland and Italy, the most prudent and most profligate euro-zone members, shot up to 71.7 percentage points in 2008¹⁶.

Figure 4 Government debt as a percentage of GDP



In a nutshell, EMU's monetary policy succeeded in achieving price stability in the euro-zone as a whole, but as for economic growth, full employment and level of government debt, indicators did not match the macroeconomic goals. The introduction of the euro in 1999, it was claimed, would narrow the economic differences between the member countries of the monetary union. Unemployment rates would converge, as would other important macroeconomic variables, such as unit labor costs, productivity, and fiscal deficits and government debt. Ultimately, the differences in wealth, measured in terms of income per capita, would diminish as well. This was also hoped for, as from the outset it was clear that a monetary union without a political union or at

¹⁵ Yang Li: An Overview of the euro-zone monetary policy

¹⁶ Sylvester C.W. Eijffinger: Policy Implications of Increasing Debt and Deficits, European Parliament, Economic and Monetary Affairs, 2010

least something resembling a political union in Europe would find it difficult to survive in the long term. After the common currency's first decade, however, increased divergence has become the norm within the euro-zone, and tensions can be expected to increase. The differences between member states were already large a decade ago. The euro became the common currency of wealthy countries, such as Germany, the Netherlands and Finland, and much poorer countries, such as Italy, Greece and Portugal. Such differences were a highly complicating factor for the newly established ECB, which had to determine the appropriate interest rate for all members (the so-called 'one size fits all' policy)¹⁷. As ECB President Jean-Claude Trichet said, we can only wish member countries coordinate their fiscal policies to achieve a similar level of inflation. This tacitly approved that ECB is powerless before members' economic fundamentals convergence.

Challenges faced by EMU

Firstly, member states' different economic fundamentals affect the role of a unified monetary policy. "Maastricht Treaty" has given the great independence to ECB, which even today is considered the world's most independent bank. Nevertheless, the focus of monetary policy by the ECB as a whole rather than a specific country euro zone, so in theory the logic is that how the performance of its monetary policy, the key is whether the euro area macroeconomic convergence, which is an important "economic base."¹⁸ As the ECB's guiding interest rate is mainly based on the average price level of the euro area and the reference interest rate of Germany, its effect subject to the size of difference between the interest-rate target and the real equilibrium interest rate of members, the smaller the difference, the greater the effectiveness. The size of this difference depends on the degree of convergence of national economic fundamentals (in particular the price level), the more similar the member' inflation rates, the more effective the monetary policy. Despite of the convergence criteria, the undeniable economic characteristics, including interest rates, economic structure, income level and the previous objectives of monetary policy by central banks of member states still exists. After the launch of the euro, national differences in inflation rates have become very apparent by these factors, which led to the Balassa-Samuelson effect: the higher inflation countries had lower actual interest rate, as loose monetary policy favored their economic growth. In contrast, the lower inflation countries had higher real interest rates as the tightened policy restricted their economic growth.

Moreover, differences about the economic fundamentals also led to the dilemma in the formulation of monetary policy. For example in 1999 Ireland and several other small countries experienced a continued high inflation rate, requiring increases in interest rates to cool the economy, while other counties with low inflation rates needed to reduce interest rates to stimulate the economy. As a result, the successive interest rate cuts by the ECB between 2001 and 2003 were too lenient for Ireland-type countries in terms of monetary policy, while continuous interest rate hikes from 2005-2006 were too tight for Germany and certain other euro countries. The disparity in economic performance and inflationary pressures between Ireland and Germany (the wealthiest economy in the euro-zone) highlights a concern about EMU, the suitability of a one-size-fits-all monetary policy to a collection of national economies that in many respects seen to be diverging rather than converging¹⁹. The Euro-zone's economic development therefore shows an apparent imbalance between less and more fiscally responsible countries, such as Germany (with a lower level of inflation), having to endure tight monetary policy. Maintaining economic growth in the euro area now depends on smaller and relatively less developed member countries to comply with stability criteria.

¹⁷ Sylvester C.W. Eijffinger: Policy Implications of Increasing Debt and Deficits, European Parliament, Economic and Monetary Affairs, 2010

¹⁸ European Central Bank Website (<http://www.ecb.int/mopo/html/index.en.html>)

¹⁹ Dinan, Desmond. Ever Closer Union: An Introduction to European Integration, 2000

In addition, whereas economic policy could be formulated at different levels of government, responsibility for monetary policy would rest squarely with the European Central Bank. The Eurosystem comprises the ECB and the NCBs of those countries that have adopted the euro. It is responsible for defining and implementing the monetary policy of the euro area. This is a public policy function that is implemented mainly by financial market operations. Important for this task is the full control of the Eurosystem over the monetary base. As part of that, the ECB and the national central banks (NCBs) are the only institutions that are entitled to actually issue legal tender banknotes in the euro area. Given the dependency of the banking system on base money, the euro zone is thus in a position to exert a dominant influence on money market conditions and money market interest rates²⁰. Nevertheless, the task of economic adjustment is mainly carried out through fiscal policy while member states face asymmetric economic shocks, although member states cannot be too independent as they are subject to the constraints of the common fiscal discipline, as otherwise the foundation of the unified monetary policy will be undermined. Therefore, the solution to this contradiction between the unified monetary policy and relative independent fiscal policy of member states has become the key of macro-economic policy coordination during the process of economic integration.

Last but not least, the debt crisis exposed the existence of structural defects in the euro area, pointing to the euro's "soft rib". This crisis, if not handled properly, could trigger a chain reaction, potentially dragging down the pace of economic recovery of the entire EU. To forestall this, Greece and several other countries, despite their already high levels of national debt, were given the green light for joining the euro zone. This raised questions in the minds of Euroskeptics about the seriousness with which member states were approaching the convergence criteria, the wisdom of which had already been questioned by many economists²¹. Since the unified monetary policy without the unified fiscal policy, the euro area is like a "lame duck", lacks not only necessary means for binding member states to comply with the financial discipline, but also rendered helpless when member state plunged into crisis²². Greek debt crisis shows no rescue package after weeks of debate within the EU is a proof of this deficiency, which is also a blow to confidence of the euro. So far, the European debt problem has the possibility of further deterioration. Presently the national debt of Iceland (though not an EU-member state), some central and eastern European countries, Greece and Ireland, in addition to Italy, Spain, Portugal, and Belgium, does not lead to optimism. More importantly, of the 27 EU member states, the deficit in 20 countries exceeded the 3% of GDP security cordon. If these countries do not adopt the appropriate policies and measures, coping mechanisms to the debt problem may spread, leading to an additional negative impact²³.

Conclusion

One of the principle motives behind European integration has been the argument that Europe must create the conditions in which it can meet external economic threats without being undermined by internal divisions. For many, the single currency – if it succeeds – will represent the crowning achievement of exactly fifty years' worth of effort aimed at removing the barriers to trade among Europeans and the construction of a single market that will allow Europe to compete on the global stage from a position of strength. There is little question that the successful adoption of the euro makes the EU a substantial new actor in that international system²⁴.

However, the effects of EMU on the domestic economies of Europe are debatable. The analysis above illustrates that the degree of dispersion of the main economic indicators of the

²⁰ European Central Bank website/Monetary Policy (<http://www.ecb.int/mopo/html/index.en.html>)

²¹ Dinan, Desmond. *Ever Closer Union: An Introduction to European Integration*, 2000

²² Greece debt crisis Sina News (<http://finance.sina.com.cn>)

²³ Debt problems exposed the fiscal and monetary policy (www.realugg.com)

²⁴ McCormick, John. *The European Union Politics and Policies*, 1999

euro-zone members is still high, still need further convergence. Continuously strengthening policy coordination among countries to ensure a high degree of convergence of major economic indicators is the precondition of effective operation of the common monetary policy. In short, a monetary policy is effectively implemented in necessary conditions.

One of the important factors that decide the euro's future is the operating mechanism of monetary policy. Comparing the benefits of the single currency and unified monetary policy with their opportunity cost, if the former is more than the latter, the future of them will be bright; otherwise it could be bleak. Consequently, the coordination between the ECB, whose goal is to ensure the stable operation of the single currency policy and member states, which maintain relatively independent fiscal policy, becomes one of the key factors of economic stability and development in the euro-zone. The euro area monetary policy is formulated by the European Central Bank, while fiscal policy is distributed among member states under the Community financial discipline rules. The former is based on the requirements of the euro area's overall economic development, the ultimate goal is price stability in the euro area; while the latter is in response to asymmetric shocks confronted by member states on their own, the ultimate goal is giving full play of effective fiscal policy the as automatic stabilizers, pursuing their own economic stability and development. Since governments of the member states co-exist with the European Central Bank, conflicts are inevitable. Yet the advent of the euro as single currency for more than ten years of smooth operation proves the EMU to be successful to some extent; yet we cannot ignore its inherent instability and potential conflicts.

References

1. McCormick, John. *The European Union Politics and Policies*, 1999
2. Dinan, Desmond. *Ever Closer Union: An Introduction to European Integration*, 2000
3. Ginsberg, Roy. *Demystifying the European Union*, 2007
4. IRENEUSZ PSZCZÓLKA: *Advantages and Disadvantages of Introducing the Euro*
5. Pascal Fontaine: *Europe in 12 lessons*
6. Paul Krugman. Synopsis: *Applauds Mundell's work while cautioning on what this Nobel was for* (<http://www.pkarchive.org/global/canada.html>)
7. Maria Lorca: *Is the euro, as a common currency, a tool for integration?* Miami-Florida European Union Center of Excellence
8. Marika KARANASSOU, Hector, and Dennis J. SNOWER: *Unemployment in the European Union: Institution, Prices and Growth*
9. Yang Li: *An Overview of the euro-zone monetary policy*
10. Ignazio Angeloni, Anil Kashyap, Beboit Mojon, Daniele Rerlizzese: *Monetary Transmission in the euro area: Where do we stand?* European Central Bank Working Paper Series No.114
11. *Debt problems exposed the fiscal and monetary policy* (www.realugg.com)
12. EuroStat website: (<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>)
13. European Central Bank Website (<http://www.ecb.int/mopo/html/index.en.html>)
14. Sylvester C.W. Eijffinger: *Policy Implications of Increasing Debt and Deficits*, European Parliament, Economic and Monetary Affairs, 2010