### DYSFUNCTIONS OF THE EUROPEAN MONETARY UNION

**Tudor Mugurel Aursulesei**, Alexandru Ioan Cuza University of Iasi, Doctoral School of Economics and Business Administration Iasi, Romania, aursulesei.tudor.mugurel@gmail.com

**Liviu - George Maha**, Alexandru Ioan Cuza University of Iasi, Doctoral School of Economics and Business Administration Iasi, Romania, mlg@uaic.ro

We suggest you to cite this article as:

Aursulesei, T.M., Maha, L.G. 2020. Dysfunctions of the European Monetary Union. *Junior Scientific Researcher*, Vol VI, No. 1, pp. 82-91.

#### Abstract

Over time, the lack of a well-defined direction has made the project on which the entire functioning of the euro area and the European Union are based has undergone various transformations. The defaults of defining and functioning of the European Monetary Union have led to financial crises of the European single currency. The future of the European Monetary Union is uncertain at the moment. In order to avoid any new crisis in the euro area, politics should focus on synchronizing the economies of the member states and redefining the European project.

The purpose of this article is to identify the dysfunctions of the Eurozone and to formulate possible solutions for a deeper European integration. To achieve this goal, we need to reach a number of objectives that help us to conclude: to analyze the malfunctions that emerged in defining the European project, to analyze the dysfunctions that led to the emergence of crises inside the euro area and to identify a possible scenario to deepen European integration. In achieving the objectives, we will use qualitative analysis methods, namely text analysis, and scientific observation.

**Key words:** European Monetary Union; the euro area; integration; synchronized savings; the euro crisis.

JEL: E42, E52, F15, F33, F36, F45.

#### Introduction

For a monetary area to work optimaly the economies of member states need to resemble or converge towards the same goal. "Normally, this adjustment of the economy takes place through the exchange rate. To join a monetary area, states have to decide how the national economy wants to align with the economies of member countries" (Aursulesei and Maha, 2019). Thus, states can choose a nominal or a real convergence.

The two convergence criteria work together for a common purpose. Even though the European Commission and the European Central Bank are focusing on nominal convergence to join the euro area, the real convergence criteria are also analyzed in the relationship between the European Commission and national governments. This link between the two criteria is given in particular by the fact that without fulfilling the requirements of real convergence, states can't implement and support nominal convergence measures. The Eurozone is formed on the basis of a political decision,

precisely for this reason not all the criteria, whether nominal or real, are respected. The Member States put their interest first and then the interest of the whole union. We can see these differences between the measures adopted by the Member States of the European Monetary Union over time. Estonia, Latvia, Lithuania, Cyprus and Malta chose the exchange rate stabilization as the main target for accession. Unlike these countries, Hungary, Slovakia and Slovenia have chosen to stabilize their inflation and be more permissive with the fluctuation of the exchange rate. The Czech Republic, Poland and Romania are pursuing the inflation target in a context of fluctuating exchange rates. These differences are due to the economic specificity of each state.

Over time, the European project has gone through a series of crises that have been the result of a malfunction. The problems of the European Monetary Union have been and are very diverse. Bad timing economies of member states and other shortcomings in the European project led to the worst crisis within the EU: Eurozone crisis. The recent crises in the Eurozone, whether financially or in the area itself, have shown that the Member States of the monetary union have not tended towards a real sustainable convergence

Even if the financial crisis is over, its effects are felt today. That is why, at present, the European Monetary Union and the whole of the European Union are undergoing redefinition.

### **Background**

The theory of optimal monetary areas expresses the idea that as long as the economic cycle of a member country of a monetary union is not synchronized with that of the partner states, negative economic effects may be created at the moment when the monetary policy autonomy is dropped (Bojesteanu and Manu, 2011). Thus, one of the primary conditions for joining a monetary union is the synchronization of business cycles between member countries (Mongelli, 2002; Dumitru and Dumitru, 2010). If there is no synchronicity of economic cycles within a monetary union, there is a risk that the common monetary policy will have different effects in the member countries (Artis, 2003). Under these conditions, the possibility of conflicts between the members of the monetary union increases, when each monetary union develops a common monetary policy, each member wishes to benefit as much as possible when implementing the act.

Nevertheless, the literature of the field of optimal monetary theory helps us with solutions to protect the national economy in the event of an asymmetric shock as a result of renouncing the autonomous monetary policy. These criteria of protection are nothing more than the real convergence criteria: the mobility of production factors (Mundell, 1961), the economic opening of the state at international level (McKinnon, 1963), the extent to which there is a diversification of national production (Kenen, 1969; Ingram, 1973), the same level of inflation as in the other Member States (Fleming, 1971), political assumption, wage flexibility, etc. Specialist literature also shows that the countries that are best responding to abandoning their own monetary policy in favor of a common one are those whose income and prices are strongly correlated with the rest of the states in the union (Alesina, Barro and Tenreyro, 2002).

In 1991 the Maastricht Treaty was signed, which stipulates that the countries of the European Union have the obligation to renounce to the national currency and to join the single European currency.

All these measures, treaties and agreements led to the adoption on 1 January 1999 of the euro by 11 European countries: Belgium, Austria, Finland, France, Germany, Ireland, Italy, Luxembourg, Portugal, the Netherlands and Spain. In January 2001, the monetary union joined Greece, which also met the convergence criteria. On 1 January 2002, the national currencies of the Member States were withdrawn and replaced by the common currency: the euro. This was followed by waves of countries that have joined the euro area: Slovenia (2007), Cyprus and Malta (2008), Slovakia (2009), Estonia (2011), Latvia (2014), Lithuania (2015). In addition to the Member States, there are other countries that use the euro as a result of various agreements approved by the Council of the European Union: Vatican and San Marino (agreement with Italy), Monaco (agreement with France), Andorra (uses euro coins from France and Spain). Even if there is no agreement with the Council of the European Union, the euro is also used in Montenegro, Kosovo and in the former French, Portuguese and Spanish colonies that have remained dependent on European countries. Even though it meets all the criteria for joining the euro area, Denmark has refused to relinquish monetary sovereignty, so it has received a derogation from not joining the single currency. Although it has not formally received any derogation, Sweden does not want to join the single European currency (Aursulesei and Maha, 2019).

We can see that the euro area is not characterized by a unitary economic cycle between members (Acedo Montoya and De Haan, 2009). The recent crises that have taken place inside the Eurozone have shown that the Member States of the monetary union did not have real sustainable convergence (Dăianu et al., 2017).

In 2012, the British Prime Minister at that time, David Cameron, declared at the World Economic Forum in Davos that each successful monetary union has some common features: "a central bank that actually supports the currency and the financial system; a perfect economic integration that shows flexibility when faced with economic shocks; and a system of tax transfers and debts of common debts, able to control the tensions and instability between certain countries and regions within the union "(\*\*\*, 2012). In the same speech, Cameron points out that at that time, the euro area did not meet any of the conditions he listed.

The Eurozone is in a deadlock in terms of furthering the enlargement process. Against the backdrop of the multitude of crises and conflicts within the union, the decision to extend is extremely controversial. However, at the moment, a much more powerful European geopolitics than the rest of the world is more important than the harmful effects on the economy that are likely to arise in the event of an early accession of the candidate states (Mihailovich, 2017).

#### Methods

As a result of the study of the specialized literature in this field, we came to the conclusion that there are some criticisms in identifying the malfunctions inside the European Monetary Union and defining a solution to get out of this impasse. Therefore, the purpose of this article is to identify the main dysfunctions of the Eurozone and to outline a possible solution for a much deeper European integration. In achieving the objectives, we will use qualitative analysis methods, namely text analysis, and scientific observation.

### A political compromise project

The project on which the functioning of the European Union is based, as well as that of the European Monetary Union, lacks a concrete definition of its nature and the purpose it pursues. Also, the European project suffers from the "rigid complexity of its institutional structure" (Peet and La Guardia, 2017). By analyzing how the European Union has evolved with the Eurozone, it is easy to deduce where this complexity arises, but at the same time, the ambiguity of all the projects assumed.

The European project develops after "small step policy", which is not bad. This policy provides greater convergence between states as it can take place at the lowest levels of society. However, there is no constraint, a deadline to be met by states for achieving certain goals. We can say that there are no concrete objectives either. Over time, various common goals have been circulated: banking union, monetary union, financial union. But how many of these three projects have been completed? There is a banking union, but it is not an entity to which all Member States belong, the current members being the euro member states and the EU states that have opted for it. In addition, during the economic crisis, it was proved that this European body does not work in optimal parameters, and it needs great redefinition. Monetary Union does not include all EU countries. And the financial union still can not be said. At the moment, only France and Germany have begun steps to converge financial policy.

The European Union is a political pact that brings together under its umbrella two categories of members pursuing different interests and aiming at different outcomes. Firstly, we have the group of people who see the European Union as a future federation. They will strive for a deeper integration in all areas: a single currency, single fiscal system, single army, all tending towards a political union. On the other hand, we have the group of those who see in the European Union a confederation in which the states retain their increased independence, adhering only to certain common policies.

This lack of definition of the European Union directly affects the euro area. States of the "European Confederation" are not directly interested in joining a single currency. Let's not forget that the monetary system is a very effective and very used means by the state to influence the national economy.

Even though the Maastricht Treaty obliges all EU member states to aspire to nominal convergence after accession, and at the time the criteria are met to give up the national currency and to join the euro. Only 19 of the 28 member states have adopted the single currency. Some states have declared officially that they do not want to adopt the euro: following calls to the European Union, Britain and Denmark have been given a waiver of not adhering to the single currency, the two countries have decided not to give up the national currency. Although it has not formally received any derogation, Sweden does not want to join the European single currency.

We also have the case of states that, even if they joined the European Union, extend the moment of joining the Eurozone because of failure to meet the criteria of the Maastricht Treaty. At the same time, even if they meet the nominal criteria, states expect to see the "new euro zone," the post-crisis zone. Everyone is waiting for a new area, which also emphasizes the real convergence, which diminishes the development discrepancies between states.

#### A union of crises

Accession to the Eurozone is a political decision but must resonate with the economic reality of the state that wants to join. In the case of early adhesion, that synchronization of economic cycles is not formed, and the economy of the whole becomes vulnerable. This is precisely why the Eurozone crises have also emerged.

The Eurozone crisis has had very different triggering factors. Perhaps one of the first crises-triggering factors was initiated by Germany and France itself. They agreed to block any sanctions that could be imputed as a consequence of non-compliance with a point in the Maastricht Treaty. The two countries have allowed the budget deficit to exceed the 3% ceiling (Peet and La Guardia, 2017). Following a confrontation with the European Commission, a much more permissive version of the Stability Pact was signed in 2005. Effects have been seen over time; it is believed that that pact meant abandoning a tax discipline. This new pact also allowed states that have limited budget deficits to meet the euro membership criteria to relax their economy. With the new provisions, states managed to get out of the excessive deficit by 2007 and even have budget surpluses. The Eurozone states believed their finances were healthy, but they were dismantled by the economic crisis that was about to start.

Starting in 2015, Jean-Claude Trichet, president of the European Central Bank, has begun to alert Eurozone politicians. He claimed the growing financial instability. His main accusations for politics were that there was a divergence of labor costs within the union and that unsustainable increases in public sector salaries took place. In his opinion, when the competitiveness of the European Monetary Union is declining, economic growth is also affected. As the Eurozone is only a monetary union, there is no central budget that states can use in times of crisis. While Eurozone countries increased their indebtedness and public spending, Germany saved and lowered wages. Germany's prudence later proved to be the saving of the euro at the time of the crisis.

During the crisis, but also after, we could see how member states that did not have a synchronized economy with that of the entire monetary union have entered a real financial collapse. The countries with the most significant problems were: Greece, Ireland, Portugal, Spain and Italy (also known as PIIGS). Every economic decay of a state has affected the entire euro area. All five countries recorded high budget deficits, cumulated with increased indebtedness, social riots and political crises. Of all, Greece is remarkable; it has managed to bring the European Monetary Union closest to a collapse. Greece faced the external debt crisis, coupled with a mixed political crisis that led the country to bankruptcy. Its only escape is the aid coming from Germany, coupled with a series of extremely severe austerity measures imposed by the European Central Bank in cooperation with the International Monetary Fund.

## **Future of the European Monetary Union**

In a union of imbalances, if we were to imagine a future of the Eurozone, what would it be? In the book The Eurozone crisis and the future of Europe (Dăianu, Basevi, et al., 2016), Francesco Nicoli and Fabian Zulleg come up with three possible scenarios that the European Monetary Union might follow.

The first scenario, called the "permanent impasse", gives us the image of a monetary area blocked by veto actions adopted by member nations. At that time, the European institutions could no longer operate optimally. States' actions could be justified by political cycles at national level, the rise of various nationalist parties and the loss of confidence in the euro. Unfortunately, such a scenario could lead to the desire of some countries to leave the Eurozone, which would destabilize the entire union.

The second scenario refers to a "long transition". It emerges from the name that under this scenario, the European Monetary Union should start a series of reforms, but they should be implemented gradually. The central role in this scenario is played by the European Central Bank, which would coordinate and impulse states to reform. Such a scenario would be long-lasting, as a consequence of creating economic instability in Europe. Finally, the outcome could be a positive one, but with a high or negative implementation cost, if civil society in member countries would be happy to wait for the results of this small step policy.

The final scenario is that of a "comprehensive approach". This scenario would be radical, which would require reform of the European Monetary Union. The Eurozone would focus on much deeper integration, first to a fiscal union, and then to a federal state. This path would have the most beneficial results; the European Monetary Union would ultimately have a common but coherent policy. However, there are some impediments on the way to such a Euro Area. What would happen to the member states of the European Union but who refuse to adopt the euro? And the economies of the less developed countries could synchronize so quickly with the strong economies in Europe?

### Benefits and costs of joining the European Monetary Union

Accession to the European Union is also not conditional upon membership of the European Monetary Union. However, the Member States of the European Union have assumed that they will join the euro area at the appropriate time. To join the European Monetary Union, states must meet the nominal criteria set out in the Maastricht Treaty, but the most important thing is that they want this change. Abandoning the national currency and adopting the common currency is a political decision, and states do not make this a priority. Accession to the Eurozone comes with several costs for acceding countries. Most often, the literature shows the benefits of joining the Eurozone, leaving costs on the second level. Any monetary union also involves a cost. If the most benefits are felt at the microeconomic level, the costs have repercussions across the national economy. To consider the desire to join the monetary union as appropriate, the benefits must be higher than costs. In the following, we will present the main costs incurred by countries when joining the European Monetary Union.

Costs can occur at all levels of the economy. At the microeconomic level, entities will have to adapt to currency change. Abandoning the national currency and switching to a new currency, enforce the entrepreneur to adjust his business, leading to new accounting software or necessary expensive updates on the existing one, new equipment. At the same time, entities may also be affected by the emergence of new competitors on the market or the emergence of new risks. If the national economy is not perfectly synchronized with that of the monetary union to which it adheres, discrepancies may arise which may later alter the trade relations between domestic traders and those in the rest of the union. These discrepancies come on the background of a national currency depreciated or appreciated at the moment of accession, a phenomenon that will create imbalances and disadvantages for some market players (Golban and Silaşi, 2009, pp. 244-245).

At the macroeconomic level, the highest costs are observed. When countries choose to join a monetary union, they assume that they will lose some important economic and monetary policy instruments that will be controlled by a central institution, in our case the European Central Bank. Perhaps the most essential missed instruments are the handling of interest rates or exchange rates according to their own interests. Loss of control over the two economic adjustment tools can generate vulnerabilities to asymmetric shocks (Bovenberg, et al., 1991, pp. 389-391).

At the same time, at the level of the central authority, the influence of the Member States may be different. More influential states will have a harder say in making decisions than those with lower or less well-performing economies. So, in the case of economies that are not very important, it may be their inability to impose their policy at Union level if they are not supported by other member states (Mongelli, 2002, pp. 27-30).

In the case of a monetary union, any national changes that influence the economy can spread rapidly to other member countries. If external challenges, outside the union, states are more protected, members' crises are extremely vulnerable.

If a state renounces the national currency, and the central bank becomes only a member of the central bank of the union, then the influence of the respective bank in the world is also lost. A currency that is used in world trade offers an advantage to the issuing state and its influence in world politics. But when this advantage is abandoned and a union with a single currency moves, the state is also losing its influence (Golban and Silaşi, 2009, p. 246).

A final cost is related to the logistics to implement the change, namely the cost of changing the national currency with the common currency and adapting to the new currency. In case of a change of the national currency, the population and all institutions have to adapt to the new currency. For example, all software that involves cash payments should be modified to recognize the new currency. At the same time, costs also arise in creating a national education campaign for the new currency.

#### **Conclusions**

In our opinion, the European Monetary Union should aim for a deepening of integration. At present, there are many euro area dysfunctions, which are due to the lack of a future plan unanimously accepted by the member countries. The first step should be a redefinition of both the European Union and the European Monetary Union. A more explicit plot of the role of each European institution and the creation of new common policies in many areas. A next step would be to set a timeframe for adopting common policies within the Eurozone and for synchronizing member states' economies. At the same time assistance should be given to the adoption of the euro and EU Member States but not Economic and Monetary Union members. Only when we speak of a euro area that is moving towards an optimal monetary area should a process of enlargement of the area begin with the integration of the other European states.

Due to the synchronization of savings, there would be no disruptions between member states, and the risk of crises would be low. From now on, when the European Monetary Union overlaps with the European Union, the integration process should continue. The first step would be to establish a fiscal union, and then a political union.

As a result of our research into Euro Zone malfunctions, we can draw a series of conclusions on this phenomenon. These conclusions can be based on further research, but also on a general vision of the future of the European Monetary Union.

The European project is a compromise between those who want a federal Europe and those who want a confederal system. European institutions mostly have an advisory role. They can not force a state to take certain measures. This compromise in defining both the European Union and the European Monetary Union has led to their ambiguity. Over time, the project has undergone adjustments, depending on the momentum of the different member states.

The European project does not have a well-defined goal. The policy of small steps adopted by European officials is a good strategy that allows all states to synchronize their national economy with that of the union gradually. However, there is no purpose for these steps and no adoption timetable.

The Eurozone crisis is a cumulation of dysfunctions. The crisis whose repercussions are still felt today within the European Monetary Union has emerged amid a number of inappropriate decisions by the Member States: excessive indebtedness, rising public spending or refusal to save. The lack of synchronization of the economies during the accession and the poor definition of the project are other factors triggering the internal crisis.

The economies of European states are not synchronized. In order to join the European Monetary Union, the emphasis is on the nominal convergence criteria set out in the Maastricht Treaty. Because the real convergence criteria have not been given such a great deal of importance within the Union, countries with economies that have not yet been synchronized have also joined: Portugal, Italy, Ireland, Greece or Spain. As we have seen, these countries have also been the countries that have led to a crisis in the Eurozone.

There are several scenarios about the future of the European Monetary Union. Specialist literature offers us several scenarios that the European Monetary Union can follow in the future: stagnation, a long transition, or a total and bold reform. The Eurozone is currently in a redefinition deadlock and we can not predict what path to follow in the future.

The European Monetary Union must aim for a deepening of integration. In the future, the only option that the euro area and the European Union have is to define the European project, to set out a common goal to follow, with a well-defined calendar. All steps must result in a deepening of integration into a fiscal and political union.

# Acknowledgement

This work was cofinanced from the European Social Fund through Operational Programme Human Capital 2014-2020, project number POCU/380/6/13/125015 "Development of entrepreneurial skills for doctoral students and postdoctoral researchers" in the field of economic sciences"

### References

- 1. \*\*\*. 2012. David Cameron's speech at the World Economic Forum in Davos. Davos, 26 01 2012.
- 2. -. "The Treaty of Maastricht." Eeu-LEX, Access to European Union Law. 1992. http://eur-lex.europa.eu/legal-content/RO/TXT/?uri=LEGISSUM%3Axy0026 (accessed December 8, 2017).
- 3. Montoya, A., Lourdes, De Haan, J. 2009. Regional business cycle synchronization in Europe?. International Economics and Economic Policy. 29, 4, pp, 2996-3014.

- 4. Albulescu, C. T. 2008. Utilizarea unui indice agregat pentru măsurarea stabilității sectorului financiar din România. *OEconomica Magazine*. no. 02, pp: 67-87.
- 5. Alberto, A., Barro, R.J., Tenreyro, S. 2002. Optimal Currency Areas. Discussion Paper (Harvard Institute of Economic Research). no. 1958.
- 6. Artis, M.J. 2003. Is there a European business cycle?. CESifo Working Paper. no. 1053.
- 7. Aursulesei, T.M., Maha, L.G. 2019. Price stability a main objective of European Monetary Policy. European Union's structural challenges: The way forward, EURINT. Iași, pp. 55 - 74.
- 8. Bojesteanu, E., Manu, A.S. 2011. Empirical analysis of business cycle synchronization and shock similarity between Romania and the euro zone. Munich Personal RePEc Archive 31295, pp. 1-49.
- 9. Bovenberg, L., Kremers, J. Masson, P., 1991. Economic and Monetary Union in Europe and Constraints on national Budgetary Policies. Staff Papers, 38(2), pp. 374-398.
- 10. Bussiere, M., Fidrmuc, J., Schantz, B. 2005. Trade Integration of Central and Eastern European Countries, Lessons from a Gravity Model. ECB Working Paper, no. 545.
- 11. Câmpeanu, V. 2016. Social Progress in Romania and other Central and Eastern European Non-Eurozone States. *Global Economic Observer*, no. 4 (1), pp. 45-47.
- 12. Dăianu, D., Kallai, E., Mihailovici, G., Socol, A. 2017. România și aderarea la zona euro: întrebarea este ÎN CE CONDIȚII!. European Institute of Romania (Strategy and Policy Studies SPOS 2016).
- 13. Dăianu, D., Basevi, G., D'Adda, C., Kumar, R. 2016. Criza zonei euro și viitorul Europei. Translation by Cătălin Drăcsineanu. Iasi: Polirom Publishing House.
- 14. Dumitru, I. 2009. Euro adoption in Romania. Munich Personal RePEc Archive, no. 18612.
- 15. Dumitru, I., Dumitru, I. 2010. Business Cycle Correlation of the New Member States with the Eurozone - The Case of Romania. 4.
- 16. Dumitru, I., Dumitru, I. 2011. Similarity of supply and demand shocks between the new Member States and the Euro Zone. The Case of Romania. Romanian Journal of Economic Forecasting, No. 1.
- 17. Fleming, J.M. 1971. On Exchange Rate Unification. The Economic Journal. 81, pp. 467-488.
- 18. Golban, R., Silași, G., Eurosistemul O tensiune arhitecturală a convergenței. Bucuresti: Editura Economică.
- 19. Hodorogel, R.G. 2011. The Global Economic Crisis Challenges for SMEs in Romania. Theoretical and Applied Economics XVIII, no. 4 (557), pp. 129-140.
- 20. Hurduzeu, G., Constantin, L. 2007. Unele considerente privind pregătirea României pentru trecerea la euro. *Journal Economic*. X, no. 26, pp. 117-127.
- 21. Ingram, C.J. 1973. The Case for the European Monetary Integration. Essays in International Finance (Princeton University), no. 98.
- 22. Isărescu, M. 2008. Probleme ale convergenței reale în drumul spre euro. The euro adjustment strategy and the global financial crisis. Cluj Napoca: Romanian Academy.
- 23. -. 2013. România și zona euro. *The ESPERA International Conference*. Bucharest: National Bank of Romania.

- 24. Kenen, B.P. 1969. The optimum currency area: an eclectic view. In Monetary Issues of the International, Editor R.A. Mundell and A.K. Swoboda, 41-60. Chicago: University of Chicago Press.
- 25. McKinnon, R. 1963. Optimum currency areas. The American Economic Review 53, no. 4, pp. 717-725.
- 26. Mihailovici, G. 2017. Aderarea la zona euro: contează încotro se îndreaptă reforma zonei euro?. National Bank of Romania Conference. Cluj: BNR.
- 27. Mihalcea, A.D., Viţelar, A., Anghel, L.C. 2014. For or Against the Eurozone? Students' Perspective on the Economic Crisis and Their Future as European Citizens. Management Dynamics in the Knowledge Economy II, no. 2, pp. 355-375.
- 28. Mongelli, P.F. 2002. New views on the optimum currency area theory: What is EMU telling us?. ECB Working Paper 138.
- 29. Mundell, A.R. 1961. The theory of optimum currency areas. The American Economic Review 51, no. 4, pp. 657-665.
- 30. John, P., La Guardia, A. 2017. O uniune nefericită Cum poate fi soluționată criza monedei euro - și a Europei, Translation by Elena Butoescu. Bucharest: Comunicare.ro Publishing House.
- 31. Socol, C., Soviani, R. 2010. Experiențe ale ajustărilor fiscale largi în UE. Cazul României. Theoretical and Applied Economics XVII, no. 12 (553), pp. 21-28.
- 32. Voinea, L. 2017. România în zona euro: când și cum. Conference of the National Bank of Romania. Bucharest: BNR.