Lakić S., Šehović D., Ćetković J. (2016), An analysis of the official dollarization regime in Montenegro: theoretical approaches and empirical evidence, *Journal of International Studies*, Vol. 9, No 2, pp. 48-64. DOI: 10.14254/2071-8330.2016/9-2/3

Journal of International Studies

Scientific Papers

An analysis of the official dollarization regime in Montenegro: theoretical approaches and empirical evidence

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Abstract. Through official unilateral dollarization, the economic system of Montenegro faced the records of real costs and benefits, which finally resulted in economic indicators. The absence of sovereignty, i.e. independence of monetary policy and exchange rate policy, decreases monetary factors' effects which are measured by realized macroeconomic performances. Because official dollarization should promote credibility, macroeconomic stability and sustainable growth, it is necessary to make a distinction between monetary regime calculus in Montenegro before initiating crisis structural disorder from the period of the effectuation of adverse trends, for the purpose of providing final evaluation of the functioning of dollarized economy. Empirical research conducted to show the effects of the official dollarization in Montenegro explicitly emphasized the specific weight of costs and benefits, suggesting that achieved macroeconomic performances are not exclusively the result of monetary regime functioning.

Received: November, 2015
1st Revision: January, 2016
Accepted: May, 2016

DOI: 10.14254/2071-8330.2016/9-2/3

Keywords: Dollarization/euroization, monetary regime, monetary aggregates, interest rates, seigniorage, monetary sovereignty, monetary approach to the balance of payments.

JEL Classification: E52, E61, E62.

INTRODUCTION

A special issue in the academic debate over the past two decades has been the implementation of the strategy for achieving the ultimate goal of monetary policy. Starting from a high degree of consensus on maintaining price stability as a primary task, it has been emphasized that an efficient strategy must be closely linked (harmonized) with the ultimate goal of achieving price stability. Furthermore, this goal is not an end in itself, but a basis for economic growth and creation of a favorable context in terms of employment. The medium-term context was adopted as a framework for the determination and maintenance of price stability. An effective and clear strategy should meet the criteria of transparency and intelligibility to general public, including also the responsibility of monetary authorities. When applied to monetary policy, the principle of continuity guarantees its long-term validity. In order to come up with a solid strategy, it is paramount to avoid adjusting strategy too abruptly.

There are several monetary policy strategies that can produce a nominal anchor that limits in a credible manner the discretion of the central bank over the medium term. The nominal anchor is the limit on the value of domestic currency, which helps restrain inflationary constraints, and thus, promote price stability. Montenegro has implemented the strategy of the exchange rate targeting based on the official (full) dollarization. This implies "importing" the monetary policy of a larger and more stable trading partner. The idea is that in developing countries the loss of monetary policy independence can be an advantage, and better performances are achieved through the monetary policy of another country.

Exchange rate targeting has proved to be a successful strategy for rapid lowering of inflation in developing countries. The experiences, however, leave enough space for criticism of the official dollarization as a strategy (regime) lacking a monetary policy and an exchange rate policy, i.e. unable to use the exchange rate as an instrument for coping with external shocks.

1. LITERATURE REVIEW

In the process of the official dollarization, Montenegro replaced the German Mark by the Euro, which has become the only legal tender. Until the 2000s, authors who have studied the issue of monetary arrangement (Hanke, 1998; Schuler, 1999; Berg and Borensztein, 1999; Moreno-Villazas, 1999; Bogetić, 2000; Mack, 2000, etc.) increasingly supported official dollarization. The main example and argument was the experience of Panama, where official dollarization was maintained the longest, though this monetary arrangement survived mainly due to the support of the IMF. With the introduction of new dollarized regimes, the experiences – including the one of Montenegro – could lead to opposite conclusions. In this regard, interesting research was done by Edwards and Magendzo (2001), Cespedes and Chang (2001), Klein (2002), Chang and Velasco (2002), Mendoza (2002), Duncan (2003) and others. Later studies focusing on official dollarization are included in the works of Jacome and Lönnberg (2010), Swiston (2011) and so on.

According to Fischer (1996, 2001) the gross costs of dollarization are considerable. Dollarization implies the loss of seigniorage as a source of real income – of revenue from the creation activities of the central bank (seigniorage), through the losses arising from the initial acquiring of cash in the currency of dollarization, as well as the loss of seigniorage over the years. The monetary authorities' loss of function as lenders of last resort, which can potentially increase financial vulnerability, may be replaced by a credit line of another institution (e.g. foreign commercial banks), or with a monetary agreement with a foreign country or a multilateral institution. What is more, there is no possibility to devalue the currency or to finance budget deficits by creating inflation, which would sometimes be desirable. During the nineties, the importance of fostering trade integration with the country of dollarization was highly emphasized (through linking the business cycles). Frankel and Rose (1998), for example, estimated a significant increase in the trade-to-GDP ratio. However, Klein's model (2002) does not confirm the stance that a currency union strengthens bilateral trade between Member States, nor does it validate the opinion that this effect might be great and statistically significant.

Among the benefits of official dollarization, the significant reduction in inflation is the most cited one. Monetary stability is the essential element of the recipe for growth and prosperity. There is often the opinion that dollarization will lead to the stability (decrease) in real interest rates. On the other hand, the model of Chang and Velasco (2002) clearly showed that there is no assumption (probability) that dollarization in itself would reduce interest rates. Edwards and Magendzo (2001) analyzed the relationship of full dollarization with a lower inflation and faster growth. They concluded that inflation was significantly lower in dollarized economies, but that the rate of economic growth was higher in the non-dollarized economies. The lower growth rate is partly caused by the problem of adapting to external imbalances. Klein (2012) has shown that there is virtually no evidence that dollarization enhances the trade between non-industrial countries with the anchor country. Eichengreen (2001) also believes that there is no confirmation that dollarization – like any other exchange rate regime – is an important determinant of growth. The evidence is contrary to the position of Dornbush (2001), who claims that dollarization implies lower interest rates, higher investment and faster growth.

Elimination or a significant reduction of the currency risk of the domestic currency would be an advantage of dollarization, if the exchange rate risk with other zones did not remain. Empirical studies show that rational expectations imply an increase in the country risk. Although dollarization might increase real revenues or improve fiscal discipline and position, Edwards (2001) suggests that dollarization itself does not ensure fiscal solvency and prudence. Stopping the redistribution of wealth accumulated during the period of inflation, as a dollarization benefit, at the expense of those who live on fixed income, has no theoretical and practical footing. Even though a potential benefit is the reduction of transaction costs, the irrelevance of this argument is found in the small amount of the costs. Extending the range of financial options which increase financial stability (reduction of market imperfections) cannot be considered in the context of the standard models. The theory only points to the consequences of such expansion on the allocation and wealth.

In the fully dollarized economy there is no domestic monetary authority or special domestic monetary base. It leaves out the possibility of creating and adjusting the monetary policy in response to the domestic economy. The Central Bank is not constituted as the manager of monetary system. The simplicity of the monetary system which prevents the implementation of monetary policy is based on three elements: the absence of a central bank in the conevntional sense, the absence of an independent exchange rate and the absence of an independent monetary policy. According to the so-called monetary approach to the balance of payments, the quantity of base money changes in the amount of the balance of payments (e.g. Johnson, 1972; Polak, 2001; Ribnikar, 2004). The steady surplus in the balance of payments (both current and capital/financial part) is the condition for ensuring the necessary growth of the quantity of base money. By reducing the domestic prices and /or increasing the interest rates, the required amount of the balance of payments is achieved. The mechanism does not function when there is a downward rigidity of prices and/or no adequate elasticity of international capital flows with regard to interest rates.

Besides theoretical ones, in literature there are numerous empirical studies on the topic of the effects of the implementation of dollarization (Edwards, 2001; Edwards and Magendzo, 2006; Arellano and Heathcote, 2007; Swiston, 2011).

2. STRATEGIC CHOICE OF THE MONETARY REGIME IN MONTENEGRO

A strategic choice of the monetary regime amounts to an adequate choice of the nominal variable that will serve as the monetary policy target. The importance of intermediate targets is explained by the fact that central banks are not able to directly influence the ultimate goal of monetary policy. For this reason, the most commonly applied methods are: exchange rate targeting, monetary aggregates targeting, inflation targeting and nominal GDP targeting. Selection of the appropriate monetary policy strategy is particularly important in the context of the fact that a large part of it will depend on the level of inflation expectations, which must be kept low, given that the success of the central bank as the manager of the monetary system is measured, in the final analysis, in basis of the average rate of inflation.

Official dollarization (euroization), which is applied in Montenegro, implies the acceptance of foreign currency as the only legal tender. However, it must be emphasized that the official euroization in Montenegro was not implemented as a consensual euroization, but as a unilateral euroization: without an agreement with the ECB, but through a specific kind of subsequent recognition by the European Commission during the negotiations on the Stabilization and Association Agreement, which took into account the exceptional circumstances that were present in the country at the time of the introduction of euroization.

It is a fact that unilateral euroization applied in Montenegro is not in accordance with the relevant European legislation, which provides for the possibility of introducing euro as the endpoint of the process of structural convergence with the multilateral framework, and the possibility of introducing euro after fulfilling all the necessary criteria, which was not the case in Montenegro. The ECB rules prohibit unilateral euroization; however, euroization in Montenegro was a specific case which was carried out before a clear decision was made by the ECB. Based on this, we can conclude that the implications of monetary regime in Montenegro will be finally worked out during the accession negotiations.

Economic theory has provided sufficient answers to the question of advantages and disadvantages of the implementation of the aforementioned monetary policy regime, while on the other hand, there is little consensus on when to recommend this regime. This is because the answer to this question largely depends on a range of factors characteristic for individual countries, such as size, financial structure, economic and monetary history, the level of foreign exchange reserves, economic and trade relations with foreign countries, and the like.

With the implementation of full euroization, Montenegro was supposed to face, in the theoretical sense, a whole range of advantages and disadvantages characteristic for the said monetary policy regime. Earlier relevant literature has shown that the application of euroization may result in a range of positive effects, such as:

- Limitation of the possibility of misuse of the monetary policy;
- Reduction of the inflation rate and its approximation to the inflation of the country of the reserve currency;
- Development of the banking system;
- Stabilization of outputs;
- Increase of the fiscal discipline and facilitation of the introduction of hard budget constraint;
- Development of the domestic financial sector;
- Decrease in real interest rates;
- Elimination of currency risk and instability of the exchange rate;
- Enhancing of international trade (Rose, 2000);
- Elimination of transaction costs, and the like.

Bogetic (2000) suggests that euroization could positively affect the distribution of income, since it would reduce inflationary expectations and thus the levels of observed inflation in the economy, which would have a positive impact on redistribution so that it would not be necessary to use new property in order to protect the existing one from debasement.

On the other hand, the costs of applying dollarization are not negligible, and they relate to:

– Loss of monetary policy independence;
– Loss of seigniorage (usually around 1% of the annual GDP in non-inflationary conditions);
– Possible loss of foreign exchange reserves;
– Lack of the possibility of using the inflation tax in exceptional circumstances;
– Reducing opportunities for functioning as the lender of last resort;
– A whole series of one-off costs, and the like. (Quispe-Angoli, 2002; Berg and Borensztein, 2000; Winkler, Adalbert, et al, 2004).

For the most part, Montenegro fulfilled the theoretical preconditions for the successful implementation of euroization, such as the size of the country or the openness of its economy, but whether or not it would achieve better results by applying the monetary and exchange rate arrangements based on the currency board remains an open issue (Lakic, 2004, pp. 395-412; Lakic, 2006). Taking into account earlier more than dramatic experiences that this area faced in the past, and the consequential low credibility of monetary policy makers, it appears that Montenegro has rightly given up introduction of its own currency.

3. PRACTICAL RESEARCH ON EFFECTS OF FULL EUROIZATION IN MONTENEGRO

In accordance with previously determined subject and goal of the empirical research of monetary regime in Montenegro, the following basic hypothesis of the research have been defined:

H1: The economic system in Montenegro, in the last five years, is characterized by a reduced impact of considerably limited monetary factor, and increased impact of other internal and external factors on macroeconomic performances, and

H2: In the period of financial crisis and structural disorder, effects of the monetary regime in Montenegro are exacerbated, by increasing costs and reducing benefits.

The data that the research is based on are provided by the relevant Montenegrin monetary and statistical institutions. By using available data some calculations have been done and they were the basis for determining trends in the sector of public finances, while maintenance of public debt in Montenegro has been analyzed by using the forecasting scenario.

3.1. The research on potential benefits of the official dollarization regime in Montenegro

Seen from this perspective, euroization in Montenegro brought a considerable number of positive effects, which could have been expected based on previous theoretical and empirical knowledge on this monetary regime. The most salient ones are: lowering of the inflation rate, development of the banking system, improvement of fiscal discipline, stabilization of outputs, increased inflow of foreign direct investments, the growing trend of savings, as well as a number of other factors that became evident after the introduction of euroization.

In the initial stage of euroization, the Montenegrin economy was characterized by a severe form of inflation – slump inflation: the rate of economic growth of 1% and below, with an inflation rate above 10%. Inflation provided a larger amount of money in the hands of the state and "entrepreneurs", while due to the growth or prices the population was forced to a reduced participation in the distribution of income. The behavior of different social groups, large companies, monopolies, associations and the decisions of state authorities were the crucial factor in the price movement and the development of inflation. Officially, the inflation in Montenegro usually occurs as a result of cost inflation and structural inflation, or as a result of external factors, and usually has the character of imported inflation (Central Bank of Montenegro, 2010). The focus is on internal and external factors that can affect the price growth. An adequate reaction is achieved through tight fiscal (discretionary) policy, in order to limit aggregate demand in the function of achieving the countercyclical effect. The period 2007-2008 saw an inflationary growth significantly higher than normal, indicating that fiscal policy in this period had the character of easy fiscal policy. This had a powerful impact on demand inflation, while the fiscal policy did not have the necessary countercyclical character.

In a word, the inflation rate was drastically lowered from 28% recorded in 2001 (measured by the retail price index), to get closer in the medium term to the inflation of the country whose currency is used. Annual inflation, as measured by consumer prices in December 2013 amounted to 0.3%. Figure (1) shows that the inflation rate lowering, as another of the advantages of introducing euroization, was also achieved in Montenegro:

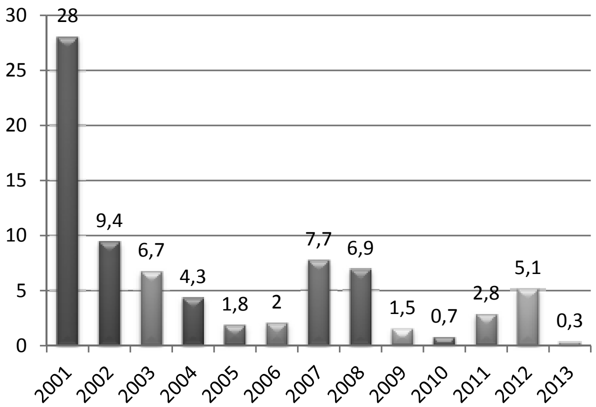


Figure 1. Inflation rate movement in the period 2001 to 2013
Source: Monstat.

In parallel with the trends that have rendered the inflation relatively acceptable, in Montenegro a significant development of the banking system was also accomplished. Banks' assets from 2003 to the end of 2014 increased 9 times, and the banking assets to GDP ratio increased from 23.2% in 2003 to 88.6% at the end of 2013, as can be seen in the following graph:

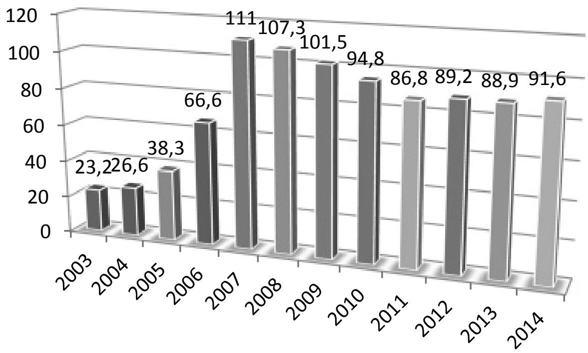


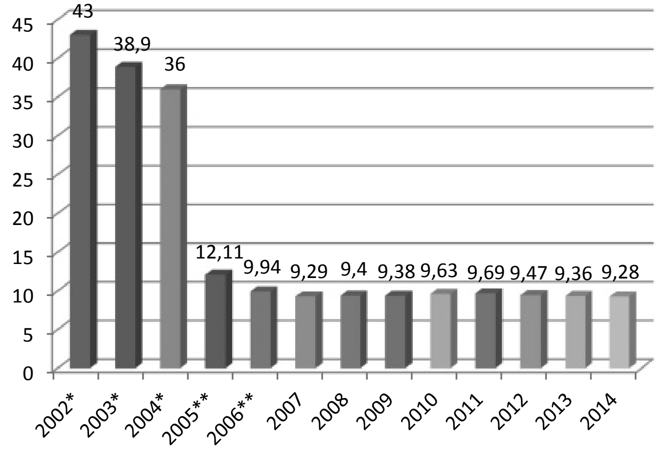
Figure 2. Banking assets to GDP ratio from 2003 to 2014

Source: Authors' calculation based on data of the Central Bank of Montenegro.

Another expected positive effect of euroization in Montenegro was the significant decrease in interest rates and their alignment with the interest rates in the world, especially in the European Monetary Union. Nevertheless, the impression remains that unlike the expectations related to the decline in interest rates, which is supposed to be a real consequence of euroization, the expectations of their alignment with the interest rates of the European Monetary Union appears to be unrealistic. This is because in the case of Montenegro there are also the influences of the budget deficit, financial system, labor market, legal system, and the overall credibility of the state itself, and all this makes the said alignment of interest rates quite unlikely, which was finally confirmed also in practice.

Interest rates are at an extremely high level, which is primarily a consequence of internal economic disruptions in the conditions of an oligopolistic structure. It is obvious that the credit risk, as the formal cause of the rise of interest rates, was higher in the period of the increase of economic activity. High interest rates have also been one of the causes of the negative performance of the financial system and the economy, especially when it comes to economic activity and unemployment. In the period of the rise of interest rates, the Central Bank of Montenegro did not undertake measures from the range of its competencies in order to limit interest rates. The lack of instruments and tools of the monetary policy is a limiting factor for the determination of prices of banking assets. In the absence of sovereignty over monetary policy, the Central Bank of Montenegro may perform the limited function of liquidity manager, based mainly on the management of the required reserve, without the function of the lender of last resort. The cost of losing a flexible monetary policy and exchange rate policy is a serious shortcoming of the monetary regime in Montenegro.

In the first years after the implementation of the aforementioned monetary regime, the decrease in interest rates actually occurred, but not at the expected level, so that interest rates remained at a very high level where they have remained up to now. The reasons for this situation are numerous: the monopolized market, inadequate functioning of institutions for the collection of receivables, inadequate creditworthiness of borrowers, high country risk, high inflation (in the first years after the introduction of euroization), high operating costs of banks, and many others.



*Shown level of interessts rates for 2002, 2003 and 2004 are maximimum nominal active interests rates on one year level on short term credit

**Shown level on interests rates for 2005 and 2006 is based on old methodology, on which statwement of interests rates is based on credit above 3000 euro. New methodology from 2007. is based on all credit.

The fact that the level of interest rates is not at the expected lower level actually speaks in favor of some studies (Calvo, 1992; Mann, 1999; Goldfajn and Olivares, 2000) which concluded that official dollarization does not automatically lead to the equalization of domestic and international interest rates due to the country risk and other risk, particularly because the risk premium depends on the fiscal deficit, the sophistication of the financial system, the labor market flexibility, etc; even if there is a reduction in interest rates, it rather occurs due to financial liberalization than to the dollarization. It is unrealistic to expect in the near future any significant changes in interest rates, due to the fact that Montenegro in the medium term will continue to face severe fiscal deficits and a high burden on public finances, which in the Montenegrin conditions do not allow significant reduction in interest rates. The reason for this is that the application of the following equation (Lojschova, Rodriques-Vives and Slavik, 2011):

$$\frac{Debt(t)-Debt(t-1)}{GDP(t)}=\frac{Public\ expenditure(t)-Public\ revenue(t)}{GDP(t)}+\frac{Deficit\ debt\ adjustment}{GDP(t)}$$

and the debt sustainability criteria:

$$s \geq (r-g) * d$$

where:

s – primary budget balance;
r – real yield on long-term government bonds;
g – real GDP growth rate;
d – public debt to GDP ratio.

Leads to a high burden of public finances in the coming period, which does not support the expectation of a significant reduction of interest rates in the medium term (Šehović, 2014):

Table 1

Debt sustainability scenario in Montenegro from 2013 to 2016

	2013	2014	2015	2016
Primary budget balance, in % GDP	-4,4%	0,17%	-4,64%	-4,08%
Real yield on long-term government bonds, in %	5,56%	5,56%	5,56%	5,56%
Real GDP growth rate	3,3%	2,5%	3,5%	3,8%
Public debt to GDP ratio	57,95%	58,8%	60,3%	62,3%
s ≥ (r - g) d	-4,4 ≥ 1,3	0,17 ≥ 1,79	-4,64 ≥ 1,24	-4,08 ≥ 1,09
	high burden on public finances	high burden on public finances	high burden on public finances	high burden on public finances

Source: Author's analysis.

Introduction of euroization also resulted in enhancing fiscal discipline in Montenegro in the pre-crisis period. In the years after the introduction of euroization, budget deficit and public debt were stabilized, while the dynamics of public debt and the budget deficit starting from the 2008 crisis were causes for worry. The period from the introduction of euroization to the emergence of the crisis was characterized by positive trends in public finances of Montenegro, partly the merit of euroization, which were reflected in the increase of the budget revenue, reduction of the budget deficit and the gradual transition into a surplus, as well as a significant reduction of the public debt. However, in the period of the crisis completely opposite trends arose, as seen in the graph:

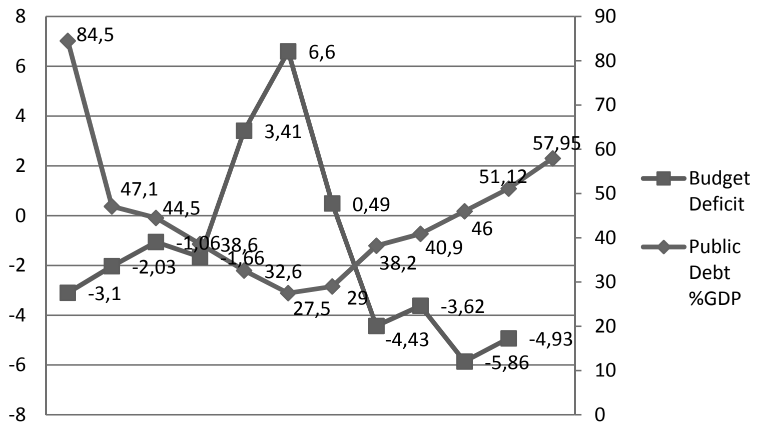


Figure 4. Movement of budget deficit and public debt from 2002 to 2014

Source: Ministry of Finances and authors' calculation.

Fiscal consolidation influences economic inequality by reducing outputs and increasing unemployment in the short term, which is usually associated with salary reductions. This encourages an increased inequality, due to the relatively higher ratio of lower-income earnings in the total revenue. Income inequality will tend to increase if the country relies more on tax revenues from indirect taxes characterized by regressive effects. Applying a single flat-rate tax rate eliminated the automatic stabilizers from the tax system, which significantly amplified the elements of pro-cyclicality in the tax system. Critical and definitive redistributions occurred in favor of the richer and the "financially more sophisticated", while poverty became an urban problem affecting the middle class that mainly lives on fixed income and suffers from a high tax burden. There was also the ability of some social groups to amend their participation in the revenue, and thus to cause an imbalance.

Macroeconomic equilibrium is sought through fiscal policy and public expenditure policy. The fiscal position was not clearly maintained, while financial indiscipline represented a chronic problem. It is important to remember that fiscal policy is the only relevant instrument of macroeconomic management aiming at the economic growth in the long term and the increase in employment. Relevant stabilization and development goals are, therefore, difficult to attain. There is a dynamics of growth of fiscal deficits, public debt and the government debt level, with a significant deterioration of fiscal parameters. Montenegro will continue to record fiscal deficits in the coming period, with a limited access to the capital market. The income tax and the lack of burden on financial and non-financial activities with the extra profit (including interest) are unjustifiably low. The implementation of fiscal policy can be characterized as ineffective and inefficient.

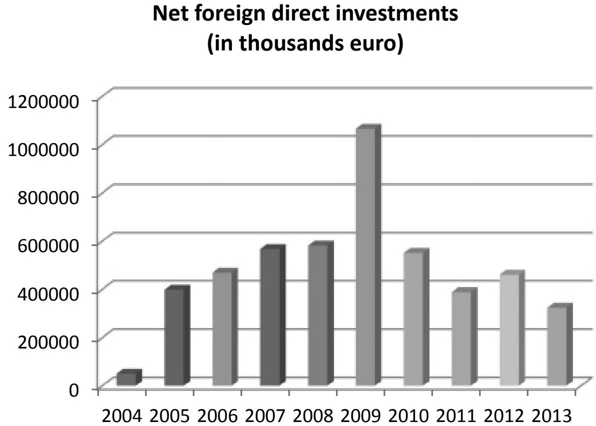
Euroization in Montenegro has certainly had a positive impact on GDP, not only in terms of its stabilization but also on establishing the trend of its growth, which was accompanied by a significant inflow of foreign direct investments and the presence of a significant amount of portfolio investments. Such tendencies can be seen in particular from the period of the introduction of euroization until the facing with the consequences of the Great Financial Crisis, when the abovementioned indicators showed a significant trend of growth. In the period from 2002 to 2008, the average GDP growth rate[1] was 5.6 %, while in the period from 2002 to 2013 it was 3.8%.

Considering that euroization contributed to the increased credibility of the state, and the reduction of the exchange rate risk and the transaction costs, this led to the liberalization of the financial system and the significant presence of foreign participants in the financial markets, resulting in a significant inflow of foreign direct investment per capita in Montenegro.

After a longer period of positive impact of euroization on GDP, the period of deteriorating macroeconomic indicators, including GDP, began in 2008. The lower rate of economic growth was partly the result of facing the adjustment to external imbalances, such as the exchange rate and the capital outflow shocks. In terms of structural disturbances, the government borrowing for financing of basic activities caused a substantial decrease in economic activity. In addition to the deterioration of deficit of the current account of the balance of payments, the GDP growth rate was lower than expected in 2014, and it was not possible to give an adequate response to the external circumstances.

Due to the lack of surplus in the balance of payments, only a small amount of money was available, so that there was an adjustment of interest rates (very high) and the level of GDP (no increases or decreases). Permanent inflow of capital should be higher than deficit on the current account on the balance of payments in order to create conditions for increasing the quantity of the base money, which is not realistic. At least to the point of escalation of the crisis there was a positive correlation between net foreign direct investments and the money supply. It is then possible to follow this connection through the ratio of total deposits to net foreign investments. Since 2009, there has been a continuing decline in foreign direct investment, but also a growth in total deposits.

[1] The greatest GDP growth rate was registered in 2007 (10,7%), and the lowest in 2009 (-5,7%).



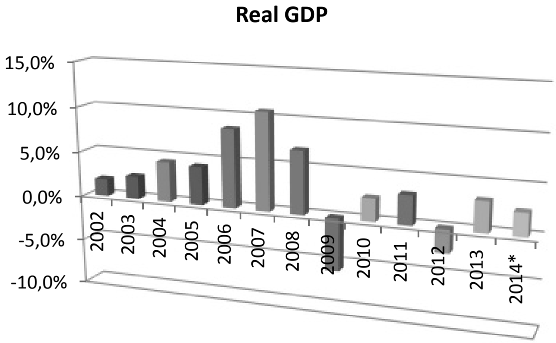


Figure 5. Movement of Net Foreign Direct Investments and Real GDP from 2004 to 2014

Source: Central Bank of Montenegro and author's calculation.

With the introduction of euro as the sole and official legal tender in Montenegro the monetary and the overall economic environment was mainly stabilized, favoring also the development of financial markets. The capital market in Montenegro, despite having a significantly smaller role in financing the economy, registered record growth rates in the period from the start of the euroization regime till the confrontation with the consequences of the crisis. Of course, the development of the financial market in Montenegro during this period was only partly the result of the monetary regime, since other factors also contributed to it, and primarily the record inflow of foreign direct investment recorded in this period, which was also partly a consequence of the euroization itself.

One of the benefits of euroization in Montenegro is also a reduction of the transaction costs of currency conversion and the elimination of exchange rate volatility, which altogether becomes the basis for a better integration with the euroized countries and for improving international trade. The positive effects of reduced transaction costs in a country that is committed to the regime of euroization are expressed as follows:

$$\text{Transaction costs}\left(\%\text{GDP}\right)=\frac{\text{Average fee for currency conversion}\left(\%\right)*\text{Amount of foreign exchange transactions}}{\text{Gross Domestic Product}}$$

In any case, it would be wrong to ignore the positive trends present in Montenegro in the period after the introduction of official euroization. However, it would be even more erroneous to relate all the positive developments which characterized the period after 2002 solely to the monetary regime implemented in Montenegro.

3.2. The research on costs of the dollarization regime in Montenegro

Another reason for opting for euroization was the low credibility of monetary policy makers in these areas, and the dramatic experiences in the implementation of its own currency. The best way to arrive to the conclusion whether or not euroization in a given country has achieved results is to compare the benefits with the costs it brought to the state which adopted this monetary policy regime. When dealing with the effects of euroization, the main points of analysis are the changes in macroeconomic indicators up to the emergence of the great financial crisis. This is because this large-scale crisis, which started to affect the Montenegrin economic system in the second half of 2008, triggered a series of disruptions, which, objectively speaking, reduce the possibility of really considering the effects of dollarization after the aforementioned period.

One of the significant pitfalls of euroization is the loss of the issuing revenue (seigniorage), which represents the central bank's revenue from creating money with real commodity coverage, i.e. the difference between the nominal value of notes and the costs of their production. Since the implementation of euroization in Montenegro, seigniorage is attained by the European Central Bank, and its level in inflationary conditions ranges from 0.5 to 1% of the annual GDP (Barro and Grilli, 1999; Burda and Wyplosz, 2001). In the case of Montenegro, the loss related to seigniorage is certainly higher, given the inflationary conditions in which the country was in the first years after the introduction of euroization. In the context of the unilateral euroization in Montenegro, the loss of seigniorage is significant on the basis of both its components - obtaining of foreign currency at the time of conversion and printing of money over the years for the purpose of dealing with cash demand. Loss related to the latter is particularly pronounced. If we resort to the conservative assumption about seigniorage amounting to 1% of GDP in the period from 2002 to 2014, Montenegro has lost about 334.6 million only based on the second component of seigniorage:

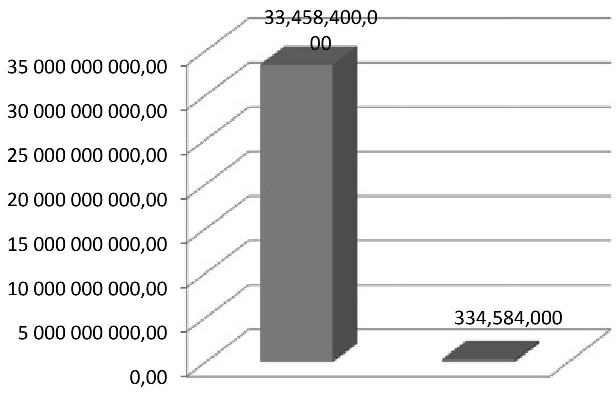


Figure 6. Expenses related to the second component of seigniorage in Montenegro in the period 2002-2014
Source: Author's calculation.

Among the costs of euroization, a significant place is occupied by the one related to the complete loss of monetary sovereignty, i.e. the loss of opportunities for action through instruments of monetary policy and the exchange rate policy in the cases of potential confrontation of the economy with specific shocks, which is especially emphasized in literature by Gwartney, Schuler and Stein (2001), Edwards and Magendzo (2004) and many others. The problem increases if the actions between the Montenegrin business cycles and those located in the Member States of the European Monetary Union are not harmonized, as it is often the case. The impact of implementing an expansionary fiscal policy, in the form of increasing public expenditure so as to achieve a positive impact on the economic growth in Montenegro, is almost minimal, and the room for its application is more than limited. The exposure to the risk of external shocks in demand is significant, due to the increasing reliance on imports as a significant source of fiscal revenues, mainly related to the value added tax.

An unavoidable cost of applying the regime of full dollarization is the loss of possibility to act as the guarantee of liquidity in the banking system, i.e. impossibility for the Central Bank of Montenegro to act as a lender of last resort. This is particularly important when there is an emergence of a crisis situation for the banks in which they urgently need money to cover their current lack of liquidity, in order to avoid compromising the stability of the entire banking system. True, in Montenegro the pressure arising from the loss of function as the guarantor of liquidity in the banking system was expressed predominantly in the first years after the introduction of euroization, given that afterward the problem of securing the necessary resources for coping with current illiquidity was handled though the foreign parent banks, due to the fact that virtually the entire banking system is at present owned by foreign banks.

The key risk which was often mentioned relates to the assumption of the "euro outflow" from Montenegro, because of its characteristic traditional budget and foreign trade deficit. However, the share of the money supply in the gross domestic product after the introduction of euroization grew from year to year, so that only in the period from 2003 to 2007, the M2/GDP ratio increased four times and Montenegro became the country "most supplied with money" in the region, and even in the EU (the M2/GDP ratio in Montenegro in 2007 amounted to 114.3%; to 98% in the EU; to 71.6% in Croatia; to 36.4% in Serbia). This only means that the remonetization of the economy went very quickly. (The broadest monetary aggregate in Montenegro, the M21, increasingly grew after the introduction of euroization – in 2004 by 10.6%, in 2005 by 58.7%; in 2006 by 82.9%; in 2007 by 71.9%). In its official publications after 2007, the Central Bank no longer shows the amount of monetary aggregates). This can be partly attributed to the increased confidence brought by the euroization, but it would be wrong to conclude that it is the only and the key factor that contributed to these trends.

We think Montenegro does not have the conditions for functioning of the „monetary explanation of the balance of payments" in the sense it can be found in literature. Until now, Montenegro has financed the deficit of the current part of the balance of payments primarily through different forms of assistance from abroad. Only import of capital will remain, and the amount of the imported capital should be higher than the deficit of the current part of the balance of payments in order to find room for an increase of the base money quantity. Generally speaking, a high degree of capital mobility in a dollarized economy, as measured by the flow of inward FDIs, increases the likelihood that dollarization will be successful.

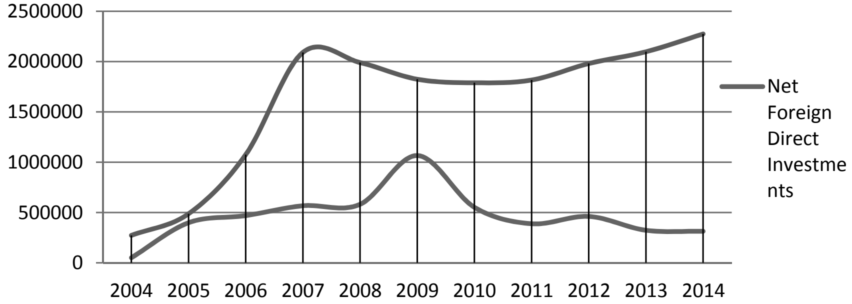


Figure 7. Movement of Net Foreign Direct Investments and Total Deposits from 2004 to 2014
Source: Central Bank of Montenegro and author's calculation

It's obvious that an economy more open to and integrated in the world market may enhance export activities and enlarge economic growth (Kharlamova & Vertelieva, 2015). Full euroization benefits from a stable flow of euro to facilitate domestic transactions, relying rather on a broad base of exports (Lakic, Jacimovic, 2014; Lakic, 2015). Also, euroized countries may benefit from a diversified base of trade partners. The overall trade reforms, regulatory framework aimed at fostering capital mobility inflows and encouraging FDIs are crucial for the availability of the legal tender and for the appropriate functioning of euroized arrangement.

CONCLUSIONS

Montenegro adopted the strategy of targeting the exchange rate based of the official dollarization, which entails introduction of the monetary policy of a stable trading partner. This is a unilateral euroization that was not created on the basis of an agreement with the ECB, nor as a result of convergence within a multilateral framework. In a theoretical sense, the full euroization was supposed to produce in Montenegro a number of positive effects: limitation of the possibility to abuse the monetary policy, development of the financial and banking systems, stabilization of outputs, increase in fiscal discipline, and reduction in inflation rates, interest rates, foreign exchange risk and transaction costs. In theory, the expected adverse effects should have been linked to: the loss of monetary policy and revenue from seigniorage, lack of possibility to resort to inflation tax, disabling the function of lender of last resort, reduction of foreign exchange reserves.

Empirical studies unequivocally confirm that the adopted official unilateral euroization brought about a number of positive effects in Montenegro. The inflation rate has been reduced – from slump to an inflation which is approximately at the same level as in the member states of the European Monetary Union. Euroization influenced the development of the banking system, under which the assets of the banks increased 9 times from the introduction of the euro till today. Fiscal discipline was improved in the pre-crisis period, facilitating the introduction of hard budget constraints, but subsequently there was a significant deterioration in fiscal indicators. There was a decrease in interest rates in the first years after the introduction of euroization, but they were still at a significantly higher level than expected. Taking into account the high burden of public finances in the medium term, it is not realistic to expect a significant reduction in interest rates. Despite many positive tendencies present in Montenegro after the introduction of euroization, it would be wrong to connect all of them exclusively to the applied monetary policy regime.

Costs of euroization are also pronounced, the most significant of which relates to the loss of monetary sovereignty, i.e. the elimination of the possibility to use monetary policy and exchange rate policy in order to deal with possible external shocks – which is particularly evident in the case of a small open economy as is the Montenegrin one.

By checking previously determined hypothesis and carrying out empirical research of the costs and benefits of the monetary regime in Montenegro, the following conclusions have been made:

1. The crisis of the economic system in Montenegro affected negatively key macroeconomic variables (macroeconomic volatility) with the increasing costs and reducing benefits of the implementation of the official dollarization regime, and aggravating final concluding on the effect of monetary regime which is not based on conducting monetary policy and exchange rate policy. Based on the abovementioned conclusion it follows that:
   – the case of official dollarization regime in Montenegro represents an empirical evidence that it is necessary to redefine the benefits of the regime arising from the academic debate, taking into account political and other non-economic internal and external factors,
   – the effects of the monetary policy strategy in Montenegro show that dollarization does not guarantee firm economic policy.
2. In the dollarization regime in Montenegro, in the conditions of deteriorating economic environment, costs of the monetary regime exceed benefits. The empirical checking of hypothesis confirmed the following:
   – monetary approach to the balance of payments has practical foundation in Montenegro, but structural disorder and distortions in the economic system derogate monetary approach to the balance of payments,
   – the lower rate of economic growth in Montenegro is partly a result of the difficulties Montenegro is facing in adjusting to external imbalances such as shocks of capital flow.

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