EXCHANGE RATE EVOLUTION IN ROMANIA - EFFECTS ON THE FINANCIAL-MONETARY MARKET

Camelia MILEA, PhD*

Abstract

In this article I analyze if the evolution of the RON/EUR and RON/USD exchange rates, in the period 1990-2015, has been characterized by volatility or by stability. I also study the relationship between the evolution of the exchange rate of the national currency and some of the Romanian financial-monetary market indicators. The results obtained show that both the RON/EUR and RON/USD exchange rates were stable after 2004, and, therefore, they didn't generate tensions on the financial-monetary market in Romania. The evolution of the national and international economic and political factors (the crisis, the speculations, the distrust of investors, the policy interest rate and the exchange rate policy) has influenced the behaviour of the Romanian national currency. The analysis shows that mostly the monetary market tensions have influenced the evolution of the exchange rate of the national currency rather than vice versa, because the volatility of the exchange rate has appeared after 2004, only on the short-term, not as a general trend.

Keywords: national currency, interest rate policy, stability, evolution, influence, fluctuation

JEL Classification: F31, E59

1. Introduction

Each central bank chooses the final objectives of its exchange rate policy depending on the actual situation of the economy.

The exchange rate policy is considered to be a defining characteristic of the national sovereignty. Together with the balance of payments, the evolution of the exchange rate reflects the position of the national economy in the world economy as well as the competitiveness of the national economy.

* *Scientific Researcher III, "Victor Slavescu" Center for Financial and Monetary Research, Romanian Academy.*

The National Bank of Romania (NBR) has taken charge of the management of the exchange rate regime and policy as of May 1991. As of 1994, the exchange rate of the national currency had no longer been used as an anti-inflation anchor, and the National Bank has tried to peg the exchange rate by creating the fundamental economic conditions, instead of the administrative intervention. By this approach, the exchange rate became itself an indicator of the public evaluation of the economic policy coherence (Goloşoiu, 2006).

The national currency stability depends on several conditions at the macro- and microeconomic level, among which:

• the structure of the production, the technological level of the products and their added value;

• the volume of the exports and imports, with effects on the balance of the current account;

• the level of the broad money compared to the production of goods and services;

• ensuring the financial discipline;

• the level of the interest rates;

• the volume of the capital inflows and outflows (which depends on the level of financial integration of the country/the degree of control on the cross border movement of the capitals), as foreign payments, particularly to payback the foreign debt, as portfolio investments of the residents abroad and of non-residents in Romania, as foreign direct investments as well as loans and credits)

• the objective of the monetary policy.

In this article I intend to analyze if the evolution of the RON/EUR and RON/USD exchange rates, in the period 1990-2015, has been characterized by volatility or by stability, using data from the National Bank of Romania. I have also studied the relationship between the evolution of the exchange rate of the national currency and some of the Romanian financial-monetary market indicators: CPI (consumer price index); the policy interest rate, the foreign exchange reserves of the central bank.

2. Literature review and General Framework

The problem of the exchange rate volatility, of its causes and influence on the financial-monetary market has been much debated in the economic literature.

In Romania, immediately after 1994, among the causes of instability on the exchange rate market there have been the dysfunctionalities generated mainly by: the low level of foreign currency liquidity within the banking system (due to the current account deficit, to the small inflows of capital and to the promotion of the domestic credits in foreign currencies); the insufficient level of the foreign currency reserves of NBR, which didn't allow it to have operative interventions on the market to remove the tensions when they appeared; the rigidities generated by the structure of the banking system; the political sensitiveness to the depreciation of the RON.

After 1998, the foreign exchange market has been sensitive to several economic phenomena: the volatility of the flows of investment portfolios; the fluctuation of the interest rates on the monetary market; the increase in the demand for imports; the temporary pressures due to seasonal factors (Dobrotă, 2009).

The shift to Euro as reference foreign currency, in 2003, has led to the significant decrease of the volatility of the Romanian national currency towards the Euro, and the opposite towards the USD.

Starting with August 2005, when the National Bank of Romania has adopted the strategy of direct inflation targeting, the relative stability of the national exchange rate had been obtained, even though some adverse factors have appeared (the increase of the current account deficit; the foreign payments, particularly for foreign debt; the higher outflows of the residents; more private current transfers towards Romania; the higher volume of the foreign direct investments and of the loans and credits; lower outflows of foreign currency due to portfolio investments of the residents) (Dobrotă, 2009).

In the context of the realities of the Romanian economy, the shift to free flotation has caused wide fluctuations of the exchange rate, but it has remained however, in a certain fluctuation band (Dobrotă, 2009).

The most dangerous for the monetary-financial stability are speculative capitals, which are extremely volatile and constantly seeking profit opportunities. Their prompt and fast reaction to interest rate changes generates volatility, sometimes high, on the foreign exchange market.

The level of the exchange rate is influenced also by the structure of production through the volume of foreign currency obtained from exports, depending on their quality and on the amount of technology incorporated, as well as through the amount of hard currency paid for imports. The volume and quality of imports depend on the structure of the production because the demand of the companies and of the population can be met or not by the offer of the domestic market.

The purpose of the financial discipline is to deter the short-term speculative investments, through the surveillance authorities and the instruments available to them.

The volume and terms of capital inflows and outflows influence the stability of the exchange rate of the national currency, bringing about either its appreciation, or its depreciation. Thus, the large short-term inflows or outflows of capital cause significant variations of the exchange rate.

If the level of the broad money is larger than the production of goods and services, the national currency depreciates.

In Romania, the stability of the exchange rate has been accomplished also through the official foreign exchange reserves of the National Bank of Romania. This idea is also supported by Aizenman et al., (2008); Aizenman and Senrupta (2012); Devereux and Yetman (2014); Goloşoiu (2006)[1].

The evolution/stability of the exchange rate of the national currency also depends on the level of integration of the financial market and of the goods market in that particular country. The higher is the level of integration, the higher is the influence of the capital inflows on the exchange rate of the national economy, whose stability can be secured only by the efficient use of adequate instruments. The index of financial integration is low in Romania (Milea, 2014).

In the case of open economies, the existence of three objectives (monetary independence, exchange rate stability and liberalization of the capital account of the balance of payments), which can be accomplished using the monetary and fiscal policies, is one of the most important factors that generate tensions on the monetary market. According to Tinbergen's rule, the number of objectives to be accomplished must be equal or lower than the number of instruments available to the authorities, to meet those objectives.

The partially accomplishment of the three objectives seems to have characterized the framework of economic policy, particularly in the case of the emerging economies. In Romania, the main purpose is to maintain the stability of the exchange rate through a controlled floating exchange rate regime (Nagy, 2013), but also the partial

[1] *According to Goloşoiu (2006), the foreign exchange reserves support and defend the exchange rate when it fluctuates largely on the currency market (by selling or buying some reserve instruments on the market, a temporary balance of the demand and offer may be reached).*

accomplishment of the objective of monetary policy independence, and less, the accomplishment of the objective of financial integration.

Capital mobility is a prerequisite for exchange rate flexibility, the banks and economic agents requiring specific financial instruments in order to cope with the volatility of the international prices. But the liberalization of the capital account is possible when institutional, legislative and macroeconomic reforms have been implemented, in order to support the development of the financial markets. The path toward the flexibility of the exchange rate must be accompanied by the deregulation and liberalization of the capital markets.

The controlled floating exchange rate policy existing in Romania is a compromise between the free floating and the objective of exchange rate stability.

According to Benassy-Quéré and Coeuré (2000): the optimal exchange rate policy is not necessarily the fixed peg, or the free floating, rather somewhere in-between, depending on the structural characteristics of the particular national economy and on the preferences of the government. Starting from this statement, I may say that in Romania, the exchange rate policy is optimal.

Following there is an analysis of the results of a study by Nagy (2013). Thus, in this study, it is measured the stability of the exchange rate (ERS) using the quarterly standard deviations of the nominal daily exchange rate (log) (from the first quarter of 2005 to the third quarter of 2012), according to the methodology of Cortuk et al. (2012). The index is obtained according to the following equation:

$$\text{ERS} = \frac{0{,}01}{0{,}01 + \sigma_{\Delta(\log(\frac{EUR}{RON}))}} \in (0.1],$$

Where $\sigma_{\Delta(\log(\frac{EUR}{RON}))}$ is the standard deviation of the daily change of the nominal exchange rate *EUR/RON* (log).

ERS takes values from 0 to 1.

The following premises are taken into account:

- The higher is the value of the index, the higher is the exchange rate stability.

- The larger is the square average deviation of the daily change of the nominal EUR/RON exchange rate (log), the higher is the volatility of the exchange rate, and implicitly, the higher is the exchange rate instability.

- If the exchange rate volatility increases, the value of the index of the exchange rate stability decreases.

- If the exchange rate is stable, the value of the index is equal with the unit.

The results reported by Nagy (2013) for the analyzed period (the first quarter of 2005 - the third quarter of 2012) show that the index of the exchange rate stability ranged between 0.5 and 0.9, therefore the RON/EUR exchange rate stability was high in Romania during that period.

Subsequent calculations based on Nagy's regression (2013), show that the exchange rate stability had the highest weight for a policy throughout the analyzed period. The conclusions of the study show that in Romania, during the surveyed period, the objectives targeted have been the exchange rate stability and the monetary independence.

3. The evolution of the national currency nominal exchange rate in the period 1990-2015

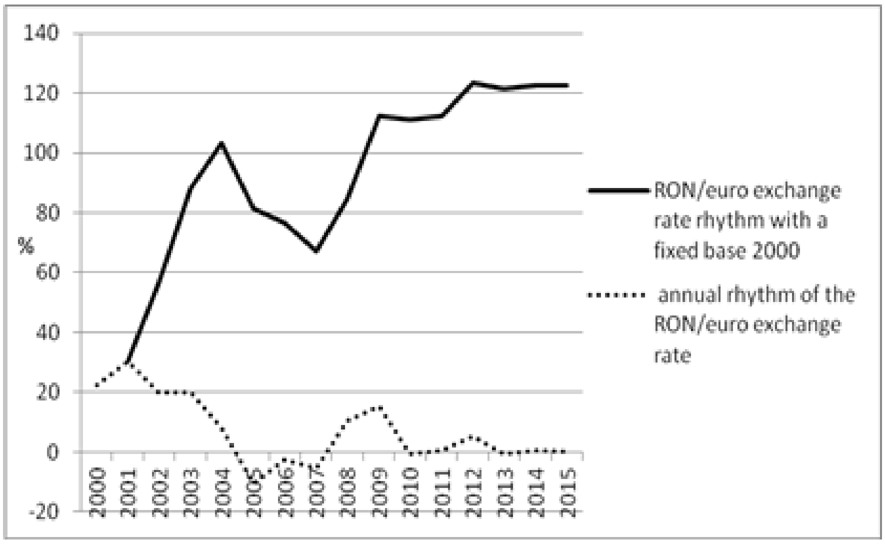
I intend to verify the results reported by Nagy (2013), by analysing also the stability of RON/EUR exchange rate.

I have calculated the fixed base and chain base growth rates of the nominal RON/EUR exchange rate. First, I have analysed the data (average annual exchange rate) covering the period from 2000 to 2015. I have considered the year 2000 as reference for the fixed base growth rates.

Figure 1 shows that starting with 2004, the annual fluctuation of the nominal RON/EUR exchange rate was below 15%, the level set by the European Union for the criterion of nominal convergence of the exchange rate. An explanation for this "turning" point in the evolution of the nominal RON/EUR exchange rate can be the fact that in 2003 the Euro has become the reference currency for the RON, replacing the USD, which decreased significantly the national currency volatility towards the Euro.

Figure 1

The evolution of the nominal exchange rate RON/EUR in the period 2000-2015



Source: NBR data and author's calculations

This evolution is also due to the exchange rate policy adopted by NBR starting with November 2004. Thus, towards the end of 2004, the exchange rate policy became operational strategy, which meant a higher flexibility of the exchange rate, while maintaining the administered flotation (the central bank maintained some control with the purpose to avoid extreme shocks on the domestic prices), the exchange rate market gaining importance in setting the exchange rate. The interventions of the National Bank of Romania on the exchange rate market have become less frequent and less predictable, which deterred exchange rate speculations. The flexibilization of the exchange rate starting with November 2004, has been necessary as preparatory stage in the liberalization of the capital account and for the implementation of the inflation direct targeting strategy, introduced in August 2005.

Thus, starting from 2005, the monetary policy strategy of Romania has changed, being given up the targeting of the monetary aggregates and passing to the inflation direct targeting. This has happened due to the weakening relation between the monetary aggregates and the inflation, due to the need to calibrate the monetary policy in function of the inflation rate, not in relation with an intermediary target, and due to the risks associated to the use of the exchange rate as nominal anchor within the context of the capital account liberalization.

However, in 2008 and 2009, more severe depreciations of the nominal RON/EUR exchange rate have occurred, due to the tensions on the international markets, to the increasing mistrust of foreign investors, to risk aversion and to the lower volume of liquidities.

When I analyse the rate of growth of the fixed base indicator, taking the year 2000 as reference, I notice a rather important discontinuous nominal depreciation of the nominal RON/EUR exchange rate (see Figure 1).

One may also notice that, starting with 2010, the fluctuations of the nominal RON/EUR exchange rate have decreased.

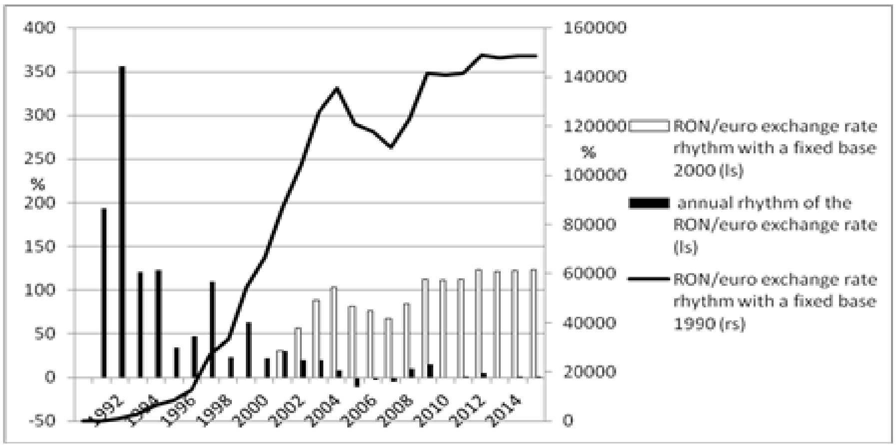
I have also calculated the growth rates, with fixed basis and with chain basis, of the nominal RON/EUR exchange rate for the period 1991-2015, taking 1990 as reference for the fixed basis growth rates (see Figure 2). Analysing the evolution of the growth rate, taking 1990 as reference, one may see that up to 2003, included, the nominal RON/EUR exchange rate increased continuously and sharply (it depreciated)[2].

These conclusions are also supported by the evolution of the annual growth rate of the nominal RON/EUR exchange rate, which shows significant increases until 1999, included. These results are alike the ones obtained above and show us that the current nominal RON/EUR exchange rate is rather stable, its annual fluctuations being below the 15% limit. Therefore, I consider that, starting with 2005, the nominal RON/EUR exchange rate (as annual average) didn't produce major tensions on the financial-monetary market in Romania.

[2] *These evolutions are also accounted for by the fact that after 1990, the exchange rate policy is a field that has shown the largest fluctuations and inconsistencies, thus sending an unfavourable message, both inside and outside the country (Goloşoiu, 2006).*

Figure 2

The evolution of the nominal exchange rate RON/EUR in the period 1991-2015



Source: NBR data and author's calculations

Both figures show that the stability of the RON/EUR exchange rate has improved.

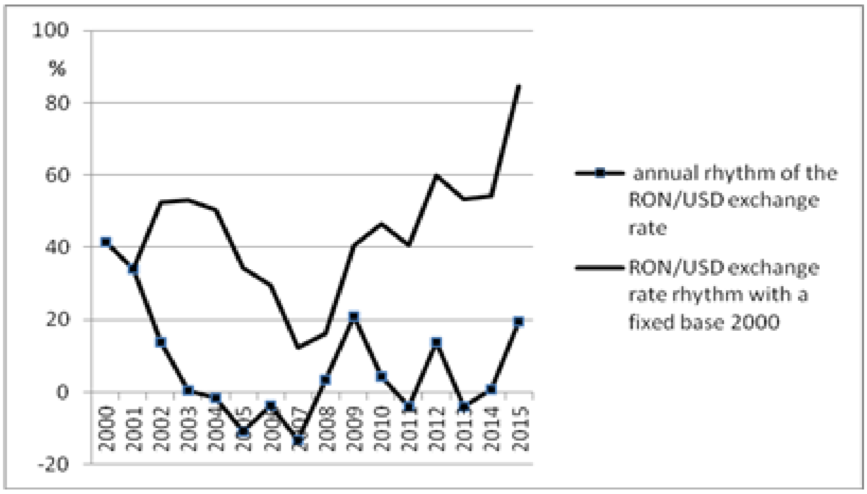
I have also calculated the growth rates with fixed and chain basis of the nominal RON/USD exchange rate. First, I have analysed the data (annual average exchange rate) covering the period 2000-2015. I have taken the year 2000 as reference. Figure 3 shows that as of 2002, the fluctuations of the RON/USD exchange rate have decreased, being below the ±15% limit, except for 2009, when there has been a strong depreciation on the background of the international tensions generated by the economic and financial crisis and due to the increasing risk aversion of the investors.

Thus, although in 2003 the Euro has replaced the USD as reference foreign currency, the volatility of the national currency has decreased in relation with both currencies analysed.

Therefore, both the evolution of the RON/USD exchange rate, and of the RON/EUR exchange rate, can be explained by the exchange rate policy adopted by NBR starting with November 2004, which deterred the currency speculations.

Figure 3

The evolution of the nominal exchange rate RON/USD in the period 2000-2015



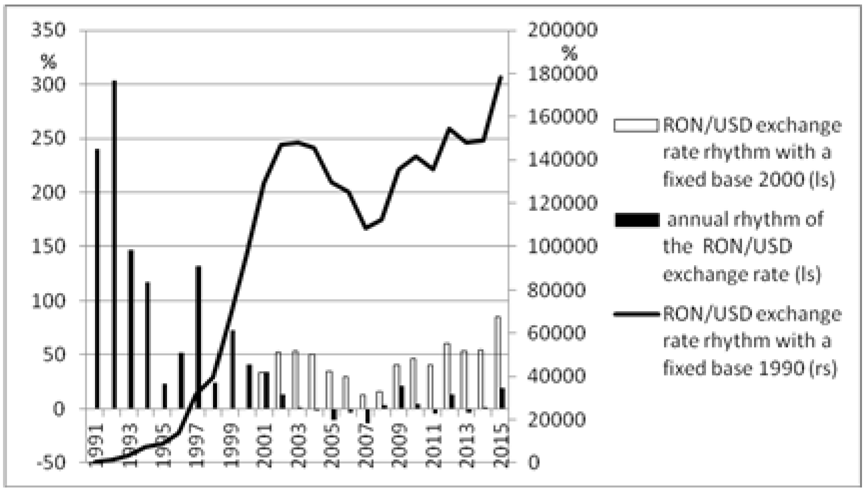
Source: NBR data and author's calculations

I have calculated the growth rates, with fixed basis and with chain basis, of the nominal RON/USD exchange rate for the period 1990-2015, taking 1990 as reference (see Figure 4). Analysing the evolution of the growth rate, taking 1990 as fixed base, one may see that up to 2002, included, the nominal RON/USD exchange rate increased continuously and sharply (it depreciated)[3]. These conclusions are also supported by the evolution of the annual growth rate of the nominal RON/USD exchange rate, which shows significant increases until 2001, included. These results support the ones from above and show us that the current nominal RON/USD exchange rate is rather stable, its annual fluctuations being below the 15% limit, except for 2009, when the Romanian currency has depreciated by 21% against the USD, as a result of the economic and financial crisis. Therefore, I consider that, starting with 2002, the nominal RON/USD exchange rate (as annual average) didn't produce major tensions on the financial-monetary market in Romania.

[3] *These evolutions are also accounted for by the fact that after 1990, the exchange rate policy is a field that has shown the largest fluctuations and inconsistencies, thus sending an unfavourable message, both inside and outside the country (Goloşoiu, 2006).*

Figure 4

The evolution of the nominal exchange rate RON/USD in the period 1991-2015



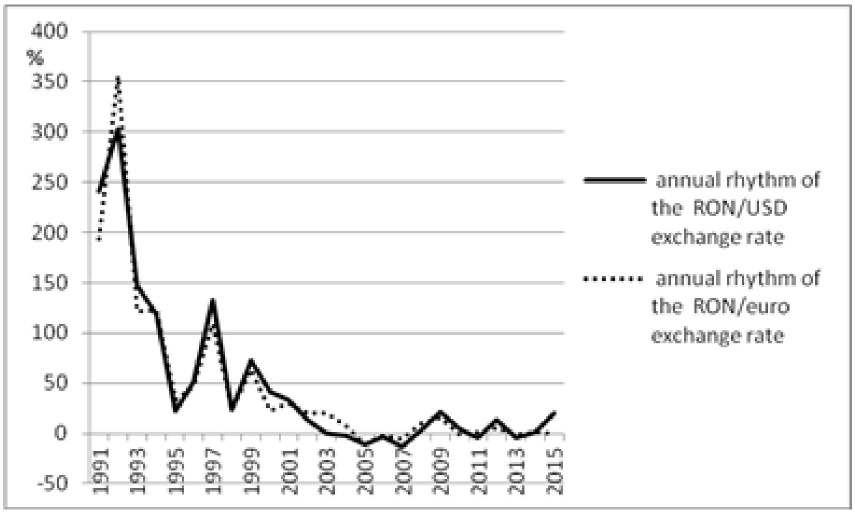
Source: NBR data and author's calculations

Figure 5 shows that the exchange rates against the Romanian leu of the two hard currencies which have represented the benchmark for the Romanian national currency after 1990, had a similar evolution compared to the value of 1990, irrespective of the hard currency taken as reference. Therefore, there have been national and international economic and political factors (the crisis, the speculations, the distrust of investors and the exchange rate policy), whose evolution has influenced the behaviour of the Romanian national currency**.**

The same idea is also supported by the evolution of the annual growth rates of RON/EUR and RON/USD exchange rates (see Figure 6)

Figure 6

The evolution of the nominal exchange rate RON/USD and RON/EUR in the period 1991-2015



Source: NBR data and author's calculations

Therefore, the data obtained by analysing the evolution of the RON/EUR and RON/USD exchange rates over the period 1990-2015, are the same with those reported by Nagy (2013), presented above. Thus, both the RON/EUR and RON/USD exchange rates were stable after 2004 and, therefore, they didn't generate tensions on the monetary market.

4. Connections between the exchange rate trend and some elements of the financial-monetary market in Romania

For the beginning, I shall try to see whether there is any correlation between the evolution of the exchange rate of the national currency and the CPI, starting from the conclusions of the research made by Bénassy-Quéré and Coeuré (2002).

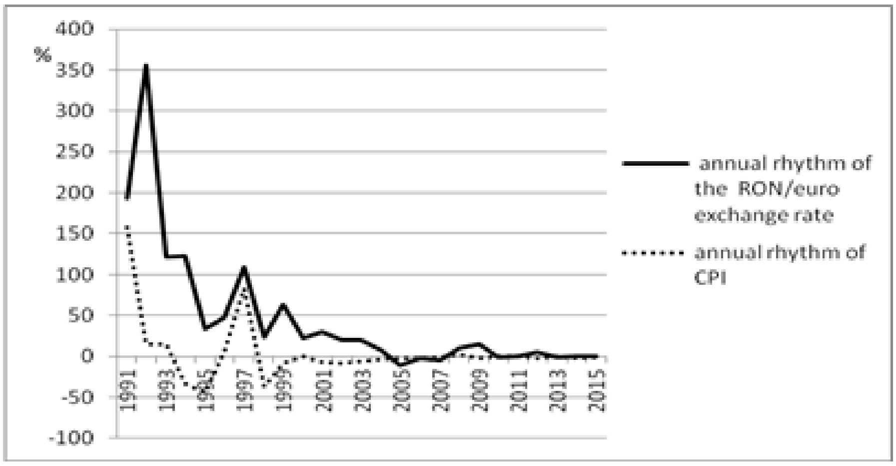
Therefore, I compare the annual growth rates of both indicators (see Figure 7), as well as their growth rates compared to 1990 (see Figure 8).

Figure 7 shows that starting with 2000 both the exchange rate of the national currency against the Euro, and the CPI displayed lower oscillations from year to year, compared to the previous period. This figure shows a positive relation between the increasing stability of the exchange rate and the decreasing rate of inflation in Romania.

Also, Figure 7 shows that the evolution of the exchange rate was not a factor which determined the trend of prices in Romania during the surveyed period; there were several years in which the exchange rate depreciated, but the inflation decreased.

Figure 7

The evolution of the nominal exchange rate RON/EUR and of CPI in Romania

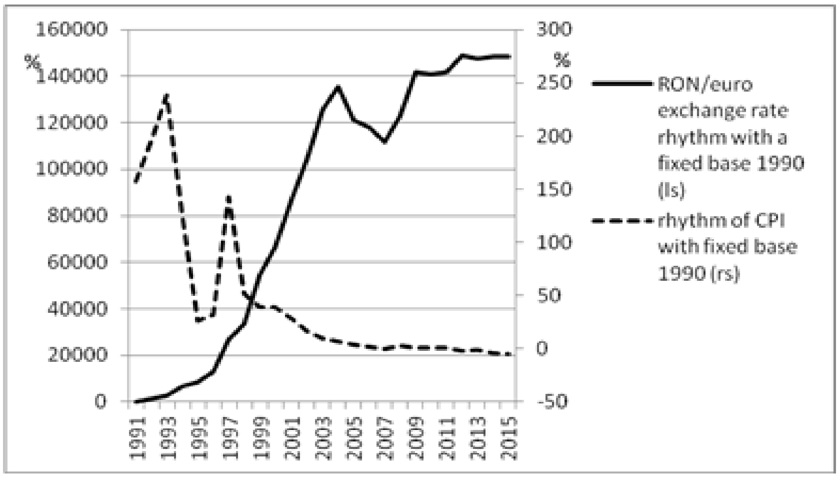


Source: NBR data and author's calculations

These results are also supported by Figure 8, which shows that the exchange rate displayed a discontinuous increasing trend, compared to the 1990 value, while CPI oscillated widely until 1997, after which it decreased almost continuously, compared to 1990.

Figure 8

The evolution of the nominal exchange rate RON/EUR and of CPI in Romania



Source: NBR data and author's calculations

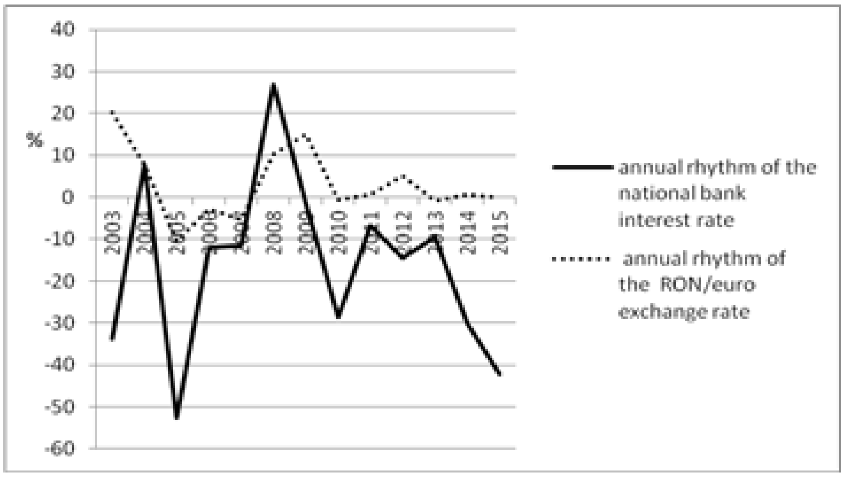
In conclusion, on the background of an almost continuous depreciation of the national currency, the CPI oscillated widely during the early years of the analysed interval, after which it decreased and stabilised. One may say that there has been no strong interdependence between the evolutions of these two indicators, the behaviour of the exchange rate influencing only slightly the trend of prices in Romania, during the analysed period, on the background of the increasing control on the inflation rate of the National Bank of Romania.

Next I shall try to see whether there is any correlation between the evolution of the exchange rate of the national currency and the monetary policy interest rate in Romania. I shall use average annual data for both indicators.

In order to do this, I compare the annual rate of growth of the two indicators (see Figure 9).

Figure 9

The evolution of the nominal exchange rate RON/EUR and of policy interest rate in Romania



Source: NBR data and author's calculations

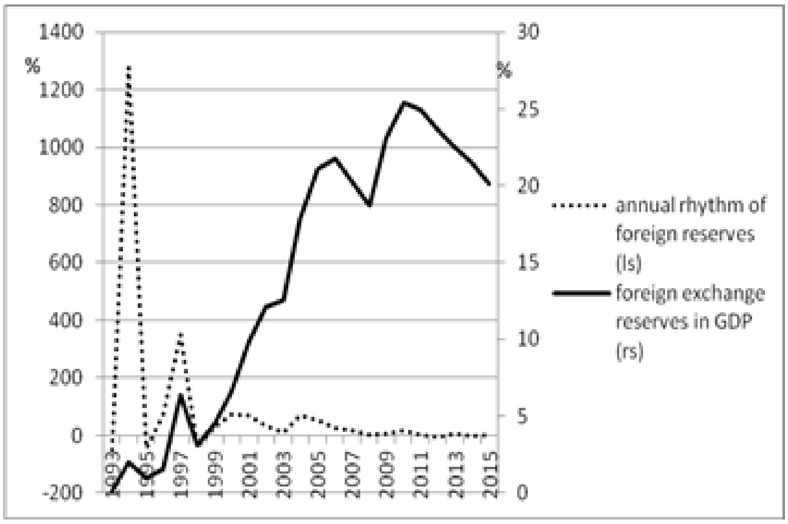
Thus, one can notice that the policy interest rate has fluctuated widely from one year to the other, generally displaying an increasing trend, except for 2004 and 2008. According to the economic theory, the decrease of the interest rate makes the national currency less attractive both for the domestic and for the international capitals, which causes the national currency to depreciate. One may say that there is some influence of the policy interest rate, of the National Bank of Romania, on the evolution of the national currency exchange rate. There have been years when the RON depreciated on the background of a decreasing monetary policy interest rate, and, following the increase of the policy interest rate, in 2004, the RON has appreciated in the following years (the reaction has a certain lag). However, this correlation didn’t show up after 2007, when the exchange rate evolution has been predominantly influenced by other factors, mainly by those pertaining to the turbulences on the international financial market. Therefore, the policy interest rate is one of the factors which influence the evolution of the RON exchange rate, but not a fundamental one.

The fact that the monetary policy interest rate in Romania was higher than in other EU countries, has made Romania attractive for the foreign capitals, particularly for the speculative ones, at least until the international financial crisis outburst, when the risk aversion of the investors annihilated the attraction of the interest rates from Romania. Therefore, the level of the monetary policy interest rate influenced the evolution of the RON exchange rate, particularly by causing short-term volatility.

At the beginning of the analysed period, the insufficient level of the foreign exchange reserves of NBR didn't allow it to have operative interventions on the market in order to eliminate the tensions when they appeared. However, as the foreign exchange reserves increased gradually, particularly starting with 1999, and stronger between 1999 and 2007, included, (Figure 10), the interventions of the National Bank of Romania on the foreign exchange market became an instrument which NBR has used to annihilate the significant oscillations of the national currency exchange rate. Therefore, after 1999, the evolution of the RON exchange rate has not been anymore a cause of tensions on the monetary market.

Figure 10

The evolution of the official foreign exchange reserves of Romania during 1992-2015



Source: NBR data and author's calculations

One may notice that also the share of foreign exchange reserves to GDP increased discontinuously after 1992, with values above 20% after 2004 (except in 2008). Therefore, the international foreign exchange reserves represent an instrument which the National Bank of Romania could use and can still use to temper the possible major fluctuations on the foreign exchange market. The use of this instrument must, however, take into consideration the costs of a too high level of the official foreign exchange reserves.

5. Conclusions

A factor which fuels the tensions, vulnerabilities and risks on the financial-monetary market, is the detachment of the price from the intrinsic value of goods and services, in this case, of the nominal value of the RON/EUR exchange rate from its actual real value. A natural measure meant to reduce the tensions, vulnerabilities and risks, would be to correct or normalize, in a rational manner, the exchange rate, in order to reach the real value given by the market, as well as more firm measures from the market surveillance and control authorities.

The policy of controlled floating of the exchange rate implemented by the National Bank of Romania, aims, among others, to deter the short-term speculative investments. Giving predictability to the real exchange rate on a medium term (1 year and more), but allowing unpredictable short-term nominal evolutions (one to three months), the exchange rate policy of the National Bank of Romania, after 2004, hinders the actions of those who would like to speculate the evolution of the exchange rate, because it cannot be predicted.

The analysis shows that the two foreign currencies against which the RON has been quoted after 1990, had a similar evolution compared to the value of 1990, irrespective of the foreign currency used as benchmark. Therefore, there have been national and international economic and political factors (the crisis, the mistrust of the investors, the exchange rate policy, the volatility of the cross-border capital inflows – portfolio investments -, after the liberalization of the capital account, the fluctuation of the interest rates on the monetary market, to some extent; the higher demand for imports; the temporary pressures induced by seasonal factors), whose evolution influenced the behaviour of the RON. After 2008, the evolution of the exchange rate has depended on the lower external financing and on the incertitude on the international markets due to the economic-financial crisis, which have caused depreciations that could not be explained by the action of the basic factors affecting the exchange rate (inflation rate, interest rate, current account balance).

The results obtained by the analysis of the RON/EUR and RON/USD exchange rates during 1990-2015, show that the evolution of the two exchange rates has been stable after 2004; therefore, the exchange rate of the national currency has not been a factor that generated tensions on the monetary market.

Thus, one may notice that the relative stability of the exchange rate has been accomplished even though there have been some factors with adverse action (higher current account deficit, foreign payments, particularly to pay back the foreign debt, higher volume of investments abroad of the residents, more private current transfers towards Romania, higher volume of foreign direct investments and of loans and credits, lower outflows of portfolio investments by residents).

The most dangerous for the monetary-financial stability are the speculative capitals, which are extremely volatile and continuously seeking opportunities for capitalization. Thus, their prompt and swift reactions to the changes in the interest rate cause volatility, sometimes high, on the exchange rate market.

The analysis shows that there is no strong interdependence between the evolutions of CPI and of the exchange rate, on the background of the increased control of the National Bank of Romania over inflation, the evolution of the exchange rate influencing only to some extent the trend of prices in Romania during the analyzed period. Thus, in the context of the almost continuous depreciation of the national currency, the CPI has oscillated widely during the early years of the analyzed period, then it has decreased and settled. One may notice, however, a positive relation between the higher stability of the exchange rate and the decrease of the inflation rate in Romania.

Although there is some influence of the policy interest rate of the National Bank of Romania on the evolution of the RON exchange rate, this correlation was not noticed after 2007, when the international financial crisis outburst. Also, the level of the Romanian monetary policy interest rate has influenced the RON exchange rate, through the capitals attracted, particularly generating short-term volatility, at least until the international financial crisis started, when the risk aversion of the investors annihilated the attraction of the interest rates in Romania. Therefore, the policy interest rate is one of the factors that influence the evolution of the RON exchange rate, but not a fundamental factor.

The analysis shows that mostly the monetary market tensions have influenced the evolution of the exchange rate of the national currency rather than vice versa, because the volatility of the exchange rate has appeared after 2004, only on the short-term, not as a general trend.

The National Bank of Romania responded to the wide fluctuations of the exchange rate by interventions on the monetary market. The success of these operations has been important, particularly after 1999, when the official foreign exchange reserves have been sufficiently large.

Thus, in Romania, the stability of the exchange rate was secured also through the official foreign exchange reserves available to the National Bank of Romania, after 1999, when they had a level that allowed NBR to intervene successfully on the foreign exchange market. Thus, the National Bank of Romania annihilated the strong oscillations of the exchange rate starting with 1999. Therefore, the evolution of the RON exchange rate was no longer the cause of tensions on the monetary market after 1999.

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