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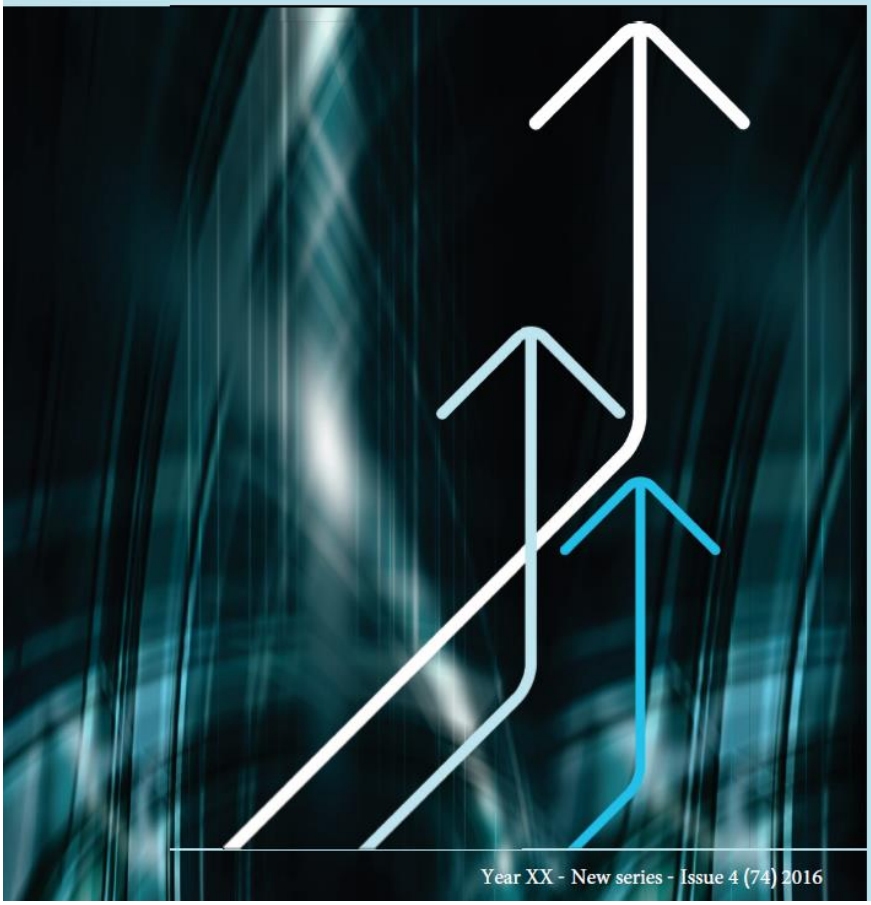

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“VICTOR SLĂVESCU” CENTRE FOR FINANCIAL
AND MONETARY RESEARCH

FINANCIAL STUDIES

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CONTENTS

SYSTEMIC RISK AND COJUMPS IN HIGH FREQUENCY DATA

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Abstract

Univariate jump detection procedures have been widely studied in the field of statistics of high frequency data, whereas the extension of jump detection to a multivariate framework, in order to understand the correlation between asset returns, is more recent. Cojumps refer to the joint occurence of extreme price movements. The identification of cojumps is extremely important for investors who usually own portfolio of assets. Decisions regarding portofolio allocation, risk management, hedging and pricing can be based on this analysis. The objective of this paper is to investigate the existence of cojumps in European financial market, employing data on the shares of 12stock market indexes. The situations with identified cojumps will be used to identify simultaneous reactions of these markets in order to develop a measure of the systemic risk.

Keywords: jumps, cojumps, simultaneity indicator, high frequency data

JEL Classification: C10, C20, C30, C49

1. Introduction

Risk quantification is one of the most important research fields in finance and financial econometrics which received special attention in the academic literature enjoying, therefore, rapid advances during the last decades. Recently, most of the studies are focusing on the exploitation of high frequency data in order to measure the financial assets price volatility whose understanding and estimation have an important role in financial management. In their activity, investors should bear in mind not only the expected return on investment, but

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also the exposure of their strategy to risk, especially during periods of high volatility.

During the last decades, more and more studies based on high frequency data have developed tools in order to measure volatility, which have proved to be extremely efficient form the statistical point of view, helping policymakers, traders and regulators. Thus, a new strand of techniques has emerged, capable of disentangling the so-called "jumps", i.e. sudden and sharp price discontinuities, generally determined by the arrival of new information in the market. These new developments suggest a clear distinction between the continuous component in asset prices which generates a type of risk that can be easily modelled and predicted and the discontinuous or unpredicted one, generated by jumps.

The empirical evidence suggests that investors should price the expected variation in assets returns differently based on their nature, sharp or continuous price movements. Since these two types of risks have distinct implications, they need to be analyzed and managed accordingly.

The identification of jumps in asset prices is essential for various reasons. Aït-Sahalia (2004) has identified some of them. First of all, in the area of derivatives pricing they play an essential role since investors must take into consideration the presence of a discontinuous price component when establishing their hedging strategies. Moreover, they have a significant role in portfolio allocation. Both continuous and discontinuous components of the risk associated to financial assets should be treated with special attention when deciding the appropriate portfolio management technique. The discontinuous component is uncertain and is usually triggered by the information that flows into the market. Sometimes, more assets are responding the news that enter the market. In this case, we can talk about financial instruments that display common jumps, this phenomenon being called co-jumping among researchers. In this case, it is also extremely important to determine how news affects assets prices, what kind of information is relevant, and how markets process that information. Last, jumps involve major changes in asset prices leading to an increase in the distribution tails. The presence of jumps actually means the existence of fatter tails. Therefore, when researchers need normally distributed time series, the best solution is to identify, estimate and separate jumps from the continuous component.

2. Literature Review

The importance of sudden changes of price dynamics was studied for the first time by Merton (1976) in continuous time processes with jumps and their identification has always been considered an important econometric problem requiring sophisticated numerical estimation techniques. The paper written by Bardorff-Nielesen and Shephard (2004) however, opened a new stage in the process of jump identification methodology. They introduced the usage of bi-power variance as nonparametric volatility estimator. Their main contribution is the use of bi-power variance as nonparametric volatility estimator and their research has been acknowledged mostly for the technique used in order to detect daily jumps. This methodology is based on the fact that the difference between realized variance (as a measure of integrated volatility for a trading day) and the bi-power variation (as integrated volatility measure and robust estimator for jumps) is a stable distribution variable and allows the identification of jumps in case of statistical significance. Lee and Mykland (2008) developed another test which is using simple logarithmic returns that are standardized with a robust jumps estimator and the obtained results are compared with an adequate threshold in order to detect jumps. Thus, intraday jumps (calculated at 5minutes frequency) are determined by comparing returns with a local volatility measure. What can be defined as an abnormal high return depends on the prevailing volatility level.

Also the analysis of the link between discontinuous price changes and macroeconomic news has been at the heart of research in finance lately. Empirical research shows that macroeconomic news affects financial markets. Andersen et al. (2003, 2007) confirmed the importance of jump detection and the fact that most major jumps can be associated with some macroeconomic events. Duffie, Pan and Singleton (2000), Liu, Longstaff and Pan (2003), Eraker, Johannes and Polson (2003) and Piazzesi (2005) emphasize the importance of understanding the causes which lead to jumps in the financial management.

Although there is a relatively large number of non-parametric jump tests, only a limited literature has extended the analysis to a multivariate framework, focusing on the detection of cojumps. Cojumps refer to the joint occurence of extreme price movements. The identification of cojumps could benefit the owners of portfolios since assets prices may display similar or different patterns. Progress in this regard has been made by Barndorff-Nielsen and Shephard

(2003), Gobbi and Mancini (2007), Jacod and Todorov (2009), Bollerslev, Law, and Tauchen (2007) who developed tests for identification of cojumps in a pair of asset returns. In addition to these tests, more research has been made in order to divide cojumps into systematic, meaning cojumps involving the market and idiosyncratic, cojums which exclude the market.Gilder, Shackleton, Taylor (2014) demostrate the connection between jumps in the market portfolio and the cojumps in the independent underlying stocks. They prove that market-level news are able to cause significant cojumps in individual assets.The only event that was associated with systematic cojumps was the Federal Funds Traget Rate announcement. Also, Lahaye, Laurent, Neely (2010) search evidence for cojumps in asset prices and relate them to macroeconomic news announcements. Moreover, Dungey and Hvozdyk (2011) examined the behaviour of bonds, both spot and futures markets, in order to determine the existence of common jumps. The results showed that joint jumps occur mostly in the case of instruments with shorter maturities. The authors also determined that the probability of simultaneous jumps is affected largely by news surprises in non-farm payrolls, consumer price index (CPI), gross domestic product (GDP) and retail sales. Another example of cojumps test is proposed by Liao and Anderson (2011) who use a return-based cojump test developed by Bollerslev et al (2007), a range-based cojump test and a first-high-low-last (FHLL) price based cojump test in order to analyze the cojumps in each stock and the cojumps across the two stock exchanges.

3. Data and methodology

The data used for the analysis consists of five-minute stock market index returns from some of the developed European markets such as: Germany (DAX), France (CAC), United Kingdom (UKX), Portugal (PSI20), Spain (IBEX), The Netherlands (AEX), Sweden (OMX), Italy (FTSEMIB), Austria (ATX), Switzerland (SMI), Belgium (BEL20) and Ireland (ISEQ). We took into account a period of approximately 6 months, starting from 21st of April 2016 until the 2nd of November 2016. Price data was obtained through Bloomberg platform, and the analysis was performed in Matlab.

The purpose of this study is to determine the existence of cojumps in the data series of previously mentioned indexes prices. This methodology involves, first, the identification of jumps moments for each individual data series. Then we identify the common jumps (cojumps) among the 12 European indexes and based on these results we build an indicator of simultaneity.

However, in order to offer an accurate jump estimation, it is necessary to eliminate first the periodicity component from the data series. A time series is periodic if it has a regular, time-dependent structure. Volatility in assets prices could display a periodic pattern determined by regular trading trends. Financial assets price volatility usually displays a periodic pattern caused by regular trading trends or effects of regular macroeconomic news as pointed out by Erdemlioglu, Laurent and Neely (2012).

Because of these regular variations, the variance of returns computed for high frequency data, $\sigma_{t,i}^2$, has a periodic component, $f_{t,i}^2$. Erdemlioglu, Laurent and Neely (2012) assume that $\sigma_{t,i}^2 = s_{t,i} f_{t,i}$, where $s_{t,i}$ is the stochastic part of the intraday volatility which is constant within one day, but varies form one day to another and $f_{t,i}$ is the standard deviation periodicity.They propose the following estimator of the standard deviation periodicity: $\hat{f}_{t,i}^{SD} = \frac{SD_{t,i}}{\sqrt{\frac{1}{M}\sum_{j=1}^{M} SD_{t,i}^2}}$, where $SD_{t,i} = \sqrt{\frac{1}{n_{t,i}}\sum_{j=1}^{n_{t,i}} \bar{y}_{j;t,i}^2}$. Therefore the log-returns used in this analisys are periodicity-adjusted returns, i.e. returns divided by the $f_{t,i}$ measure of periodicity.

After the data is adjusted and the periodic component is removed, the next step in our analysis consists in the identification of jumps.

In order to determine whether a return is very high (it has an "abnormal" value), we need to analyze the prevailing level of volatility in a given period of time. Thus, in periods of high volatility, an "abnormal" return is higher than an "abnormal" return in periods with low volatility.

The technique used for jump identification is based on the methodology proposed by Lee and Hannig (2010). The test applied in this this section is used in order to determine jumps at a certain moment t_j, where *t*is the day and *j* is the 5-minute interval within that day. The test is built starting from the null hypothesis which assumes that there are no jumps at a given moment in time t_j. This allows the identification of the exact time of jump occurrence. This procedure is called "intraday" test as it can detect jumps at any time during a trading day, and not only at a daily level.

The specification of the test is the following:

$$J_{t,i}^{LH} = \frac{|y_{t,i}|}{\hat{\sigma}_{t,i}}$$

where $J_{t,i}^{LH}$ is the jump test, *t* is the time-frame used for the computation of our analysis, i.e. the time sample (usually it has the size of a day), while *I* counts the moments in this time-frame. The $\hat{\sigma}_{t,i}$ is the standard deviation computed for this time sample and is actually replaced by the estimated standard deviation$\hat{s}_t = \sqrt{\frac{1}{M-1}TV_t}$, according to the methodology used by Lee and Hannig.$TV_t$is the Truncated Variation and is given by the following equation:

$$TV_t(\Delta) \equiv \sum_{i=1}^{M} \left(y_{t,i}\right)^2 1_{|y_{t,i}| \le g(\Delta)^{\bar{\omega}}} \rightarrow \int_{t-1}^{t} \sigma^2(s)ds$$

where g > 0and $\bar{\omega} \in (0, ½)$ are used for the computation of the thresholds needed to eliminate the large returns from the series used in the computation of the volatility and use only those that are lower that the specified threshold. For the estimation of TV_t we use the following values g = 0,3·9 and $\bar{\omega}$ = 0,47, according to the methodology proposed by Aït-Sahalia and Jacod (2009b).

For a more accurate estimation of the prevailing volatility, we brought an improvement to this methodology. We eliminated also the returns with 0 value. Thus, the resulting prevailing volatility does not take into account neither the returns with an extremely high value which exceeds the threshold previously imposed, nor the very low returns that could cause an erroneous estimation of the prevailing volatility within a certain time frame.

Also, to minimize the risk of detecting false jumps, the authors try to establish how big the statistic can become in the presence of jumps. If the statistic exceeds a plausible maximum, the null hypothesis of no jump is rejected. Under this framework and the absence of jumps within [*i-1, i*] from day *t*, then when Δ→ 0the sample maximum of the absolute value of a standard normal variable (that is the jump statistic $J_{t,i}^{LH}$) follows a Gumbel distribution. Therefore, the null hypothesis (no jump) is rejected if:

$$J_{t,i} > G^{-1}(1-\alpha)S_n + C_n$$

where $G^{-1}(1-\alpha)$is the quantile function$1-\alpha$ of the standard Gumbel distribution, and

$$C_n = (2\log n)^{0.5} - \frac{\log(\pi) + \log(log\ n)}{2(2\log n)^{0.5}}$$

$$S_n = \frac{1}{(2\log n)^2}$$

After we compute the jumps for the data series of each company, we identify the common jumps.

The analyzed period is divided in 26 weeks. Every week, within the same time frame at five-minute frequency, we computed the number of cojumps for the 12 European indexes. We remove from the analysis the moments when no cojumps were detected, i.e. at a given moment we found zero or only one jump among the share returns of the 12 indexes. We consider only the moments when we detected at least two simultaneous jumps.

For each week ($week_i$) we compute the simultaneity indicator which takes the following form:

$$Simultaneity\ indicator_{week_i} = \frac{\sum_{j=1}^{12} co-jumps \times \frac{n_{co-jumps}}{N}}{12}$$

where $co-jumps$ is the number of common jumps which can be obtained in a certain time frame. This takes values from 1 to 12, where 12 is the total number of companies in our sample. $n_{co-jumps}$ corresponds to the number of situations in which we had a number of simultaneous jumps equal to the value of $co-jumps$ and N is the total number of situations in which we acknowledged at least two jumps happening simultaneously in one week.

Computed in this way, the indicator can take values between 0 and 1, being a measure of simultaneity within the share prices of the 12 indexes in our sample and also a measure of systemic risk in the European financial market. For example, if we determine only individual jumps, i.e. none of the jumps identified in a specific time frame was simultaneous among indexes, then the indicator would have the values 1/12. It will be equal to zero when no jump is detected and equal to one when we identify cojumps among all the 12 data series, at the same moment. Therefore, the value of 1 represents perfect simultaneity while the value of 1/12 perfect independence.

Moreover, this indicator is computed both for the situations when we identify negative jumps and for the situations when we identify positive jumps.

4. Results

The results which were obtained from the previously presented models are exhibited in Figures 1 and 2. These figures show the evolution of simultaneity indicator for each week of the analyzed period. In the first figure we present the indicator computed for negative cojumps, while the second one shows the same indicator

computed for positive cojumps. It can be observed that in both cases the simultaneity indicator tends to be in the same range of values for the entire period. Moreover, both indicators are displaying similar values, which demonstrates the existence of simultaneity.

Figure 1

The evolution simultaneity indicator for negative cojumps across the 26 weeks in our sample

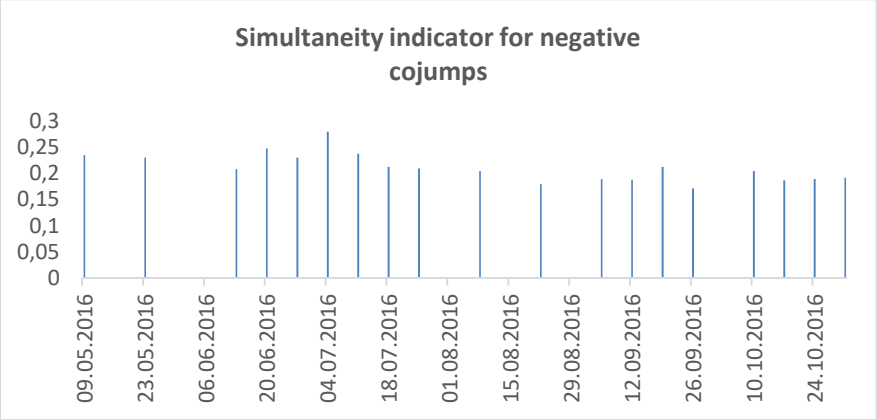
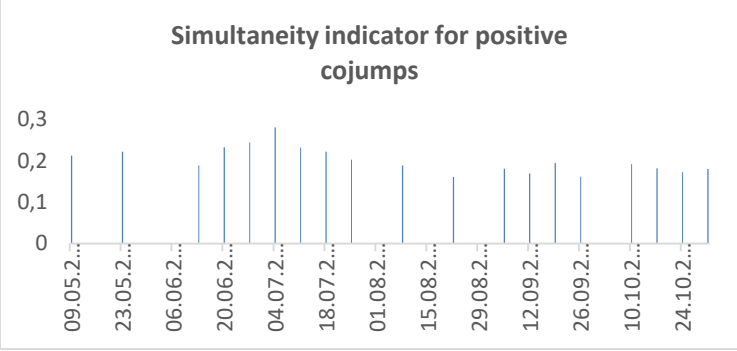


Figure 2

The evolution simultaneity indicator for positive cojumps across the 26 weeks in our sample



The simultaneity indicator displays higher values for both positive and negative jumps during weeks when major economic events took place. For instance, the speech given by European Central Bank's president generated substantial movement across the European financial market in April and June. Macroeconomic events

such as publication of inflation rate, economic sentiment index or consumer confidence also caused common jumps among the analyzed index prices.

Moreover, previous theoretical and empirical literature on asset returns demonstrate that usually markets respond more to negative news in good times. Even though our analysis is based on jumps rather that returns, it can be observed from the presented results that negative jumps are more persistent. These results are consistent with the ones confirmed by Lupu (2014) in a previous study that approaches this topic.

5. Conclusions

The decision making process in finance is very complex because of the high level of uncertainty in any financial market. Therefore, the accuracy of the models used to estimate the volatility has increased recently. The analysis presented in this paper highlights the great importance of using high frequency data in order to estimate volatility and correlations among financial assets. Jumps have an important role in the quantification of financial risk because they allow the separation and the differential analysis of the continuous and discontinuous price components. Moreover, the phenomenon of market co-dynamics has gained a lot of attention lately, cojumps being important indicators of systemic risk in a financial market.

This paper contributes to identification of co-dependence for a sample of 12 index returns and it proposes a new methodology for the estimation of simultaneity in the stock market. This type of analysis can be extremely useful to investors in the management of local portfolios and risk management.

The results computed both for positive and negative jumps display a relatively high level of simultaneity among the shares of the 12 European indexes in our sample which indicates the fact that prices adjust rapidly and respond simultaneously to any new information that enters the market.

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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.

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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:

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

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

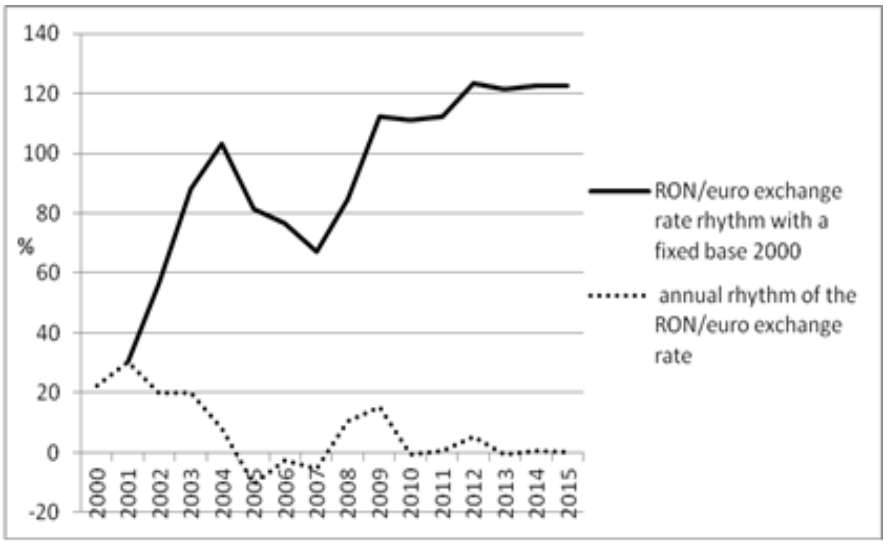
I intend to verify the results reported by Nagy (2013), by analysing also the stability of RON/EUR exchange rate.

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.

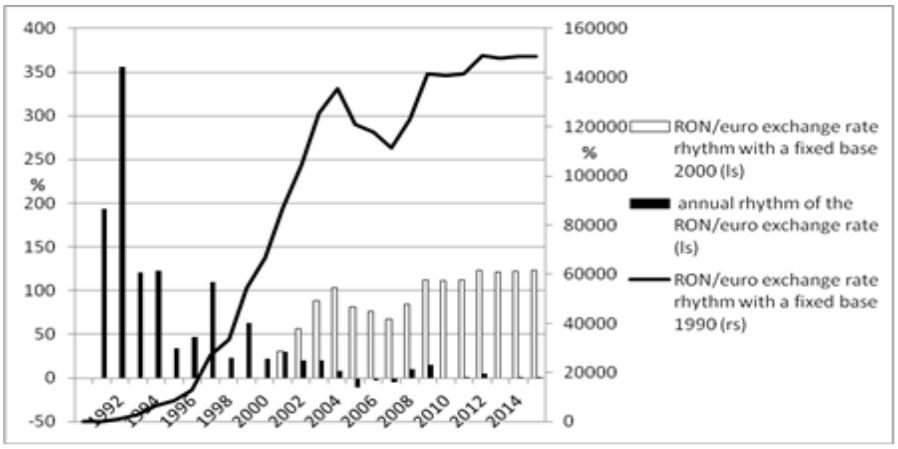
I have also calculated the growth rates, with fixed basis and with chain basis, of the nominal RON/EUR exchange rate for the period 1991-2015, taking 1990 as reference for the fixed basis growth rates (see Figure 2). Analysing the evolution of the growth rate, taking 1990 as reference, one may see that 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.

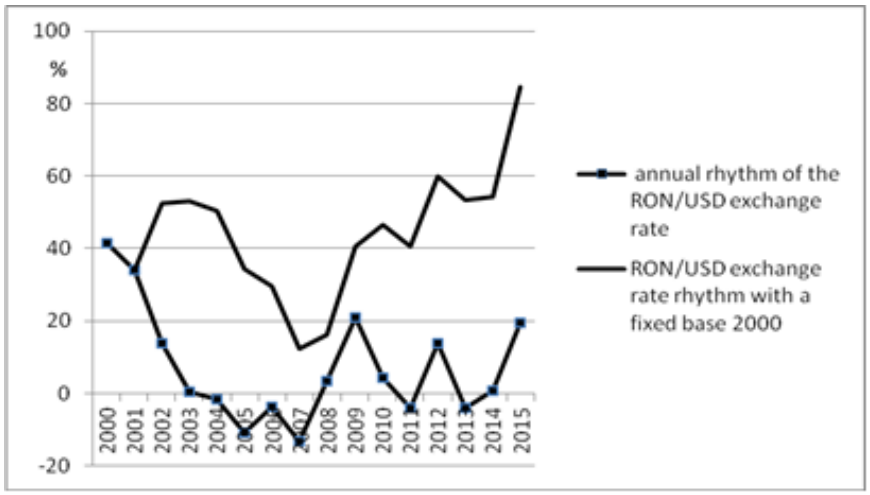
I have also calculated the growth rates with fixed and chain basis of the nominal RON/USD exchange rate. First, I have analysed the data (annual average exchange rate) covering the period 2000-2015. I have taken the year 2000 as reference. Figure 3 shows that as of 2002, the fluctuations of the RON/USD 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



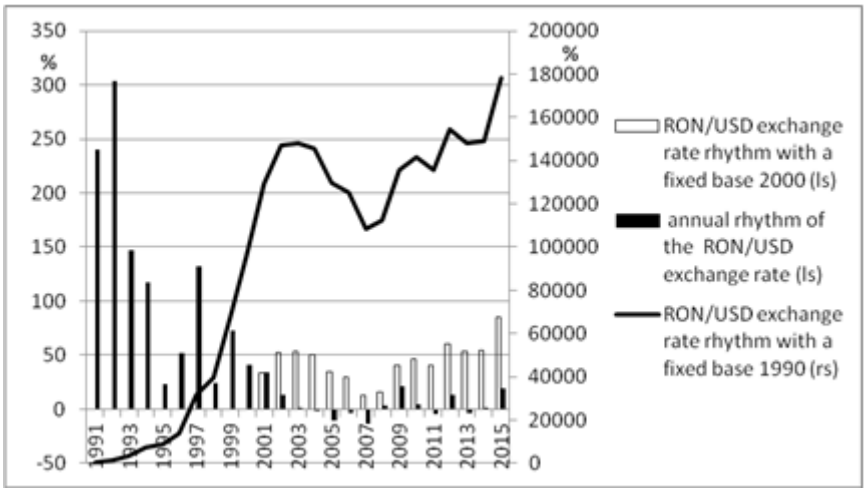
Source: NBR data and author's calculations

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



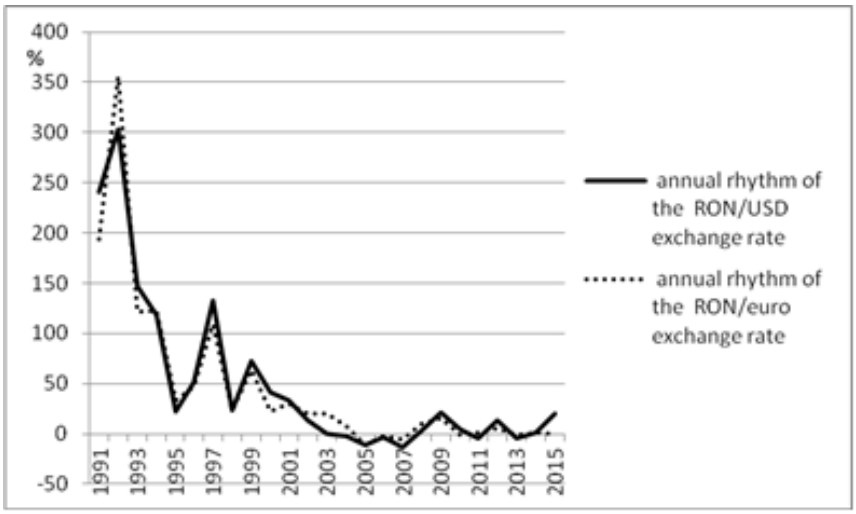
Source: NBR data and author's calculations

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).

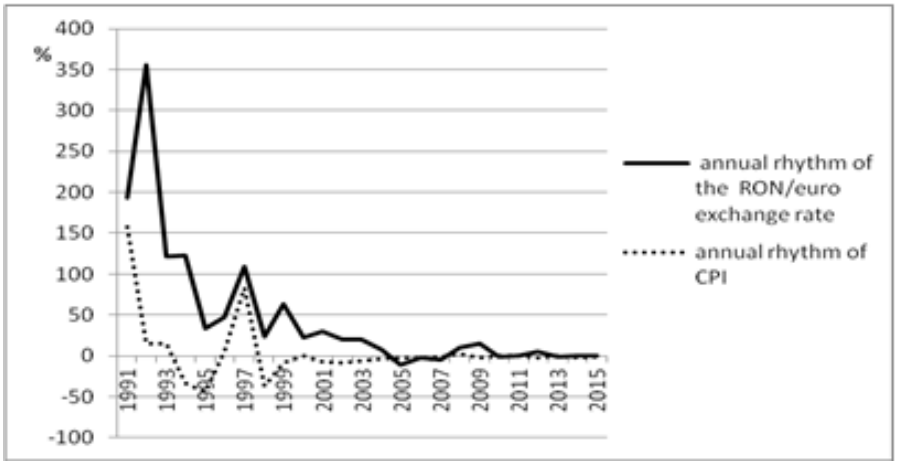
Therefore, I compare the annual growth rates of both indicators (see Figure 7), as well as their growth rates compared to 1990 (see Figure 8).

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

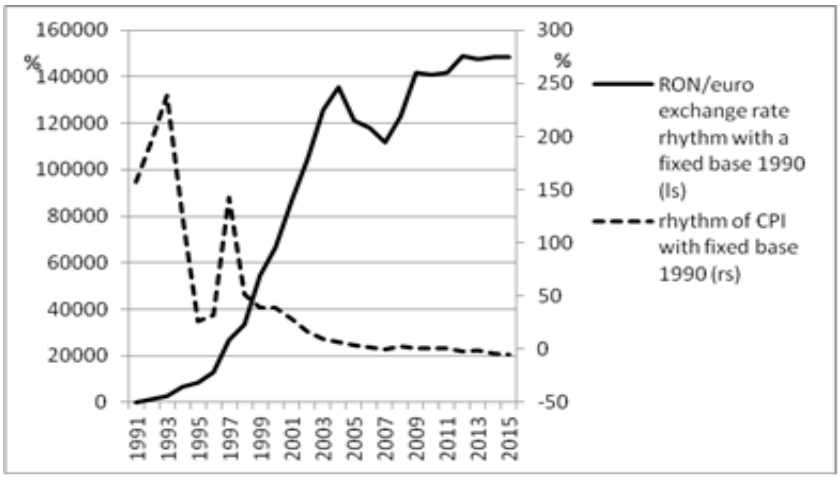


Source: NBR data and author's calculations

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

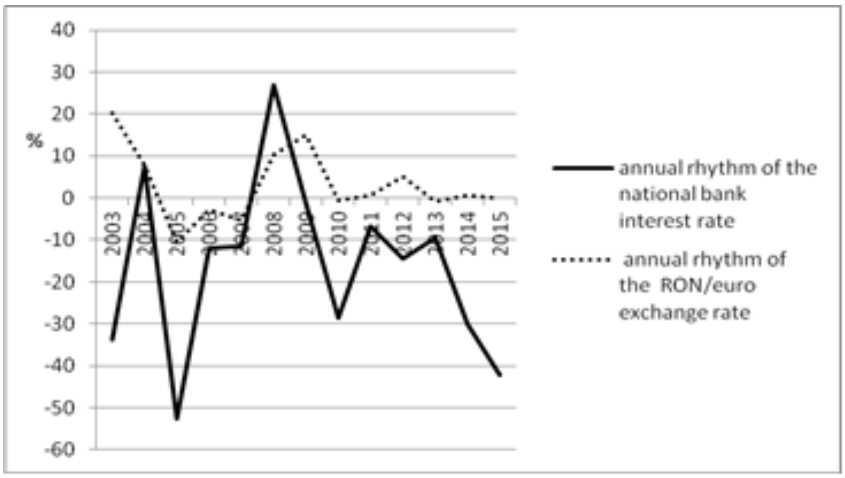
In conclusion, on the background of an almost continuous depreciation of the national currency, the CPI oscillated widely during the early years of the analysed interval, after which it decreased and stabilised. One may say that there has been no strong interdependence between the evolutions of these 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.

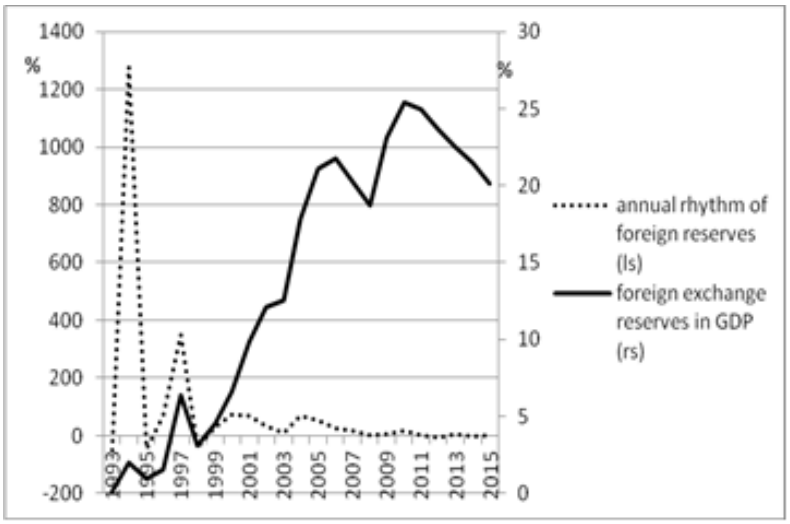
The fact that the monetary policy interest rate in Romania was higher than in other EU countries, has made Romania attractive for the foreign capitals, particularly for the speculative ones, at least until

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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THEORETICAL ASPECTS REGARDING THE TAX FACILITIES FOR ENTERPRISES IN ROMANIA AND SOME EU MEMBER STATES

Nicoleta MIHĂILĂ, PhD*

Abstract

Fiscal facilities are essential to the enterprise, because they influence the fiscal burden, reducing it, through mechanisms that act on the taxation basis, through the taxation rate or through the value of the actual fiscal payments.

The article aims to analyse conceptually the fiscal facility, which a specific form of economic facility. The paper also makes a typology of the facilities and compares them within the regional context. We used a descriptive methodology relying on several sources of information from specific journals and reports of European Commission.

Keywords: fiscal mechanisms, tax incentives, economic agents, European Union.

JEL Classification: G38, H25, H71

1. Introduction

The intervention of the state within the economy is requested because of the deficiencies encountered within it, by the economic and social contradictions. The fiscal measures hold an important place within these measures of intervention; their purpose is to stimulate investments and to adapt the economy to the requirements of the domestic and foreign markets, to ensure the economic stability and growth.

The fiscal mechanisms that influence the level of investments are rather different between the developed countries and the poor or developing countries.

The fiscal mechanisms include tax exemption or reduction or even reorganisation of the levying systems by fiscal reforms, in

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relation with the economic and social situation that exists in a particular country at a given time, and the desired economic and social situation.

The regime of granting fiscal facilities to influence investments through tax exemption and reduction, as well as the manner of applying the taxation rates of the taxable matter, aims to stimulate the phenomena that are favourable to the economic activity (in agreement with the socio-economic and financial objectives of Romania), and to inhibit those phenomena that are hindering growth.

2. Theoretical aspects on the concept of facility

Generally, the role of a facility is to stimulate, motivate the accomplishment of an action. In time, the literature has given multiple definitions of the term of facility, but most definitions focus on the stimulation, enticement and motivation of people to perform a particular activity (Sargent, 1994, Enters 2001). At the same time, within the context of projects development, facilities have been described as “bribe” or “sweetener” (Smith, 1998).

Therefore, facility means motivating for the accomplishment of an action. Facilities differ, depending on the particular legislation, type of enterprise, aims, context of the action, expected behaviour (Easson, 2001).

According to FAO (2004), a facility must have several characteristic traits:

- It must be related to the size of the enterprise, to the nature and complexity of its activities,
- It must be properly documented and transparent,
- It must be in agreement with the business strategy, objectives, values and long-term interests of the enterprise.

There are several types of classification criteria for facilities:

a. According to the manner of granting:

- Facilities granted on the basis of directives, regulations;
- Facilities granted case by case – usually, these are additional incentives, granted for specific projects, following negotiations.

b. According to the aimed purpose:

- Universal facilities – aiming to boost the general economic activity, with no reference to particular activities or projects;
- Facilities dedicated to explicit purposes, such as:

• Regional development, particularly for the regions with poor economic situation;
• Job creation;
• Transfer of technology (in research-development related areas);
• Promotion of exports;
• Explicit drawing of foreign investors (incentives only for the foreign investors).

c. According to the impact on the users of resources:
- Direct facilities – designed to have immediate impact on the users of resources, with direct influence on the incomes; they are granted directly by the governments, development agencies, non-governmental organisations and the private sector,
- Indirect facilities - with indirect effect, by setting or modifying the general framework conditions within or outside the particular sector where the enterprise operates.

d. According to the content, we have economic, technological, managerial, social, environmental, commercial facilities.

e. According to the economic branch where the enterprise works: facilities in agriculture, extractive industry, processing industry, energy, constructions, transportation, education, healthcare.

f. According to the time horizon, we have long-term facilities and short-term facilities.

g. According to the interests of the users of financial information, there are facilities for the managers, for the investors, for the clients, for the employees.

h. According to the level of aggregation: individual and group, collective facilities.

Usually, the facilities have the following objectives:
- Economic development of the regions where the standard of living is very low, or which are severely affected by unemployment;
- Promote the accomplishment of an important project of joint European interest, or remediation of a serious economic disturbance within a member state;
- Facilitate the development of particular economic activities or of particular economic regions;
- Promote the culture and preserve the patrimony.

3. Fiscal facilities – definition and typology

The fiscal facility is a form of economic facility. According to the Fiscal code, it represents the amount of tax or of the tax not paid to the budget, according to the forms set by article 6, paragraph 9, letter g, i.e. the elements taken into consideration when estimating the taxable object, when determining the amount of the tax or due, as well as when cashing it, as partial or total tax exemption, or lower taxation rates, lower taxation basis, delay of the payment term, instalments.

For a SME, the fiscal facility means deduction, exclusion or exemption of a fiscal duty, provided as incentive to get involved in a specified activity (such as investment in capital goods) for a given period of time. Another definition presumes the application of fiscal incentives, credit, reform and regulation programs to clear the hindrances met when starting or developing a business (Van Parys, 2012).

In the specialized literature, Smith (2003) defines tax facility as deduction, exclusion, or exemption from a tax liability, offered as an enticement to engage in a specified activity such as investment in equipment goods for a certain period. Clark, Cebreiro and Bohmer (2007) define tax facilities as those special exclusions, exemptions, deductions or credits that provide special credits, a preferential tax treatment or deferral of tax liability. Klemm (2010) defines them as measures that provide for a more favorable tax treatment of certain activities or sectors compared to what is granted to the general industry.

According to Zee, Stotsky and Ley (2002), when investigating corporate taxation in developing countries, it is difficult to ignore the use of tax facilities. Although tax incentives are by no means unique to developing countries, it is worthwhile to address their role in developing countries separately, because some incentives are especially common in developing countries, as are some unique institutional features. Developed countries generally use targeted incentives that are embodied in the income tax law, while developing countries tend to use a combination of targeted and more general incentives, which may be included in the income tax law, the investment and other laws, or simply government decrees. Tax facilities do not require upfront use of government funds, which make them for developing countries preferable to financial incentives such

as grants or subsidized loans that are more frequently employed in developed countries (UNCTAD 2000).

The fiscal facilities come in different forms, as follows:

- General / particular (specific),
- Qualitative (simplification/ reduction of statements) or quantitative,
- Input (fiscal credits and increased allowances, tax accelerated depreciation), and output facilities,
- Growth/incremental facilities,
- Temporary/permanent facilities,
- Depending on the type of tax: facilities for the profit, for personal income, wages, value added, property,
- Depending on company characteristics:
  - by size (micro, small, medium, large), number of employees, turnover;
  - by the geographical area where the company operates, area which can be favoured or disfavoured;
  - by the field of activity - agriculture, tourism, constructions, services, etc.
  - depending on company's „health" (as shown by the economic-financial indicators): good, in difficulty. There can be bailout facilities or reorganisation facilities.

The main objectives of the fiscal facilities are:

- Regional development, higher rate of labour force employment, consolidation of a stronger economic environment, more attractive for the investors;
- Supporting the development of SMEs sector, support the youth to start small and medium enterprises, stimulate the economic agents which undertake economic processes with multiplication economic and social effects, making long-term fiscal benefits for the local budget;
- Increasing the revenues from collected taxes;
- Stimulate the tax compliance, maximizing the collection of taxes to the budget, stimulation of the economic environment and decrease of budget arrears, which is beneficial to the whole society.

However, these fiscal facilities may also have adverse effects (risks):

- The companies might relay too much on the fiscal facilities instead of finding, by own forces, or by other support means, ways to start/continue/expand their activity;
- A rather low number of enterprises which don't give up functioning after the facilities end; most of such companies operating in disfavoured areas cease their activity;
- The risk of failing to develop particular sectors of activity, or to specialise/ change of profile in particular economic sectors, and isolation of the activities performed within those areas.

The research-development incentives for SMEs are limited to the enterprises that meet the eligibility criteria according to EU Regulation 2003/361, which classifies the different incentives and their availability for large, middle, small and micro enterprises. According to this recommendation, classification is done by three main criteria: number of employees, annual turnover and total balance sheet. While the total number of staff is a compulsory limit, the enterprises must meet just one of the other two eligibility criteria to qualify as SME.

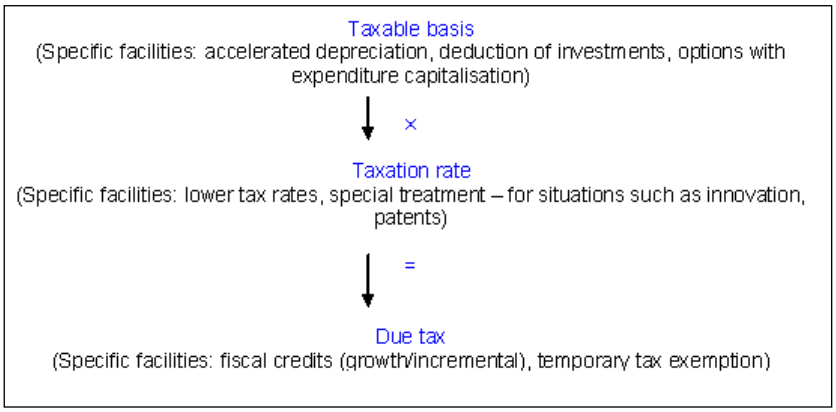
Most fiscal incentives target the microenterprises and the small enterprises. The medium enterprises generally receive research-development incentives.

Tax facilities for the SMEs are not implemented as much as those for research-development. The fiscal credits, the additional deductions, the accelerated depreciation are rare and often conditioned by the criterion of restrictive eligibility.

Most of the fiscal facilities target the microenterprises and the small enterprises. The medium enterprises generally receive research-development incentives. They should not depend on enterprise size; rather they should encourage innovation and investments.

The manner of "action" of the fiscal facility when calculating the fiscal duty is as follows (European Commission, 2015a):

Taxable basis × Taxation rate = Due tax



Source: European Commission, 2015a

The different fiscal facilities differ in the mechanisms by which they influence the fiscal burdens. They may reduce the taxation basis, the taxation rate or the value of the actual fiscal payments. The special depreciation rates, the options to capitalise the expenditures and the additional allowances/deductions according to the volume of investments change the taxation basis. The fiscal credits have similar effects with the allowances, but are deducted directly from the due tax, instead from the taxation basis (Brezeanu, 2009).

The special tax rates and treatments for particular types of incomes differ from the above-mentioned facilities, because they are related to the result of the company. Both measures are usually granted irrespective of the level of investment.

In terms of good practices, the applied measures should be evaluated on the basis of the following criteria:

- Efficacy: the fiscal incentive should allow the enterprise to increase the liquidity and to make additional investments.

- Neutrality of the fiscal system: the enterprises should benefit of the incentive irrespective of their legal form. The eligibility thresholds regarding the size of enterprises are a stimulus to remain small, because the enterprises want to remain eligible. Therefore, the fiscal incentives targeting the SMEs introduce undesired distortions into the fiscal system.

- Transparency for the investors: the size of the facility should be predictable for the investors. This allows them to consider properly the facilities when making the decision to invest.

- Flexibility for the fiscal regulators: the losses of fiscal revenues should be predictable for the legislators. Moreover, the administrative costs should be easily to manage.

4. Fiscal facilities in the regional context

In Romania, the main fiscal facilities, according to the Fiscal Code, are:

- Exemption for the reinvested profit – the profit reinvested in the production or purchase of technological equipment is exempt from taxation. The method of accelerated depreciation cannot be applied for these assets. The taxpayers must keep them in their patrimony at least for a period equal with half their economic life, according to the applicable accounting regulations, but no more than 5 years; otherwise, the tax on profit is recalculated, plus interests and delay penalties for the particular amounts.
- Research-development expenditure, 50% additional deduction of the eligible expenditures, when calculating the taxable profit. The method of fast depreciation is applied for the instruments and equipment intended for research-development activities.
- Reinvested dividends. They are exempt from the payment of the tax on dividends:
  - Dividends reinvested starting with 2009, with the purpose to preserve and create new jobs for the development of the activity performed by the Romanian legal persons distributing dividends, according to their object of activity recorded with the National Commerce Registry.
  - Dividends invested in the social capital of another Romanian legal person, with the purpose to create new jobs and to develop its activity, according to their object of activity recorded with the National Commerce Registry. Although in force since January 1st, 2009, no additional norms for the application of this incentive have been issued.
- Employment facilities. Incentives granted for the employment of unemployed persons, specific incentives for the employment of particular social categories (for instance, young graduates, unemployed persons, single parents supporting their families, unemployed people who meet the legal requirements for partial early retirement or for the age limit retirement, people with disabilities, students working during the holidays). These incentives are granted on condition of meeting the legal eligibility criteria.

- Incomes from wage, for the creation of software. Tax exemption for the incomes resulted from writing software, according to the legal stipulations.
- Local taxes. The local authorities can grant tax exemption for the tax on land and buildings.

The main fiscal facilities granted to the enterprises, in the European Union, are:

- Accelerated depreciation;
- Deduction of investments and allowances;
- Fiscal credits;
- Special treatment for particular types of incomes;
- Special tax rates.

Of these, the special tax rates are most common within the surveyed countries. The schemes for accelerated depreciation, the deduction of investments, the exemptions and fiscal credits are less frequently used.

The table below (Table 1) shows that most EU member states have fiscal facilities both for the SMEs and for the research-development activities.

Table 1

Facilities for research-development and for SMEs within some European Union countries

	Country	SME	R&D
1.	Austria		
2.	Belgium		
3.	Bulgaria		
4.	Croatia		
5.	Estonia		
6.	Finland		
7.	France		
8.	Germany		
9.	Greece		
10.	Ireland		
11.	Italy		
12.	Lithuania		
13.	Luxemburg		
14.	Poland		

Country		SME	R&D
15.	Romania		
16.	Slovenia		
17.	Spain		
Total		**12**	**14**

Source: European Commission, 2015b.
Notes: the grey-coloured cells means that the country has fiscal facilities

Taking into consideration the frequency of utilization, the deductions for investments and the fiscal credits are the most common ways to stimulate the research and development activity. Generally, the incentives are volume-based, which means that the expenditure for qualification is taken into consideration when determining the deductible amounts.

Most credits and allowances refer to the occasion expenditures, such as material costs and costs for the employees. Also considered are the capital expenditure (investments in fixed assets). Several types of expenditures are frequently included. There are dispositions referring exclusively to the expenditure with the staff employed in research-development activities.

Regarding the deductible percentage, most fiscal credits vary between 10% and 40%, while the deductions exceed 50% on many occasions. The deductions are particularly high when only the occasional expenditure is taken into consideration (99,5% in average, in contrast with 67,1% for allowances, including the capital expenditure). Some countries grant fiscal credits and allowances/ bonuses as exclusive mutual alternative solutions (for instance, Austria and Belgium).

The accelerated depreciation regimes are another usual measure taken to stimulate research and development activities. Since the scheme refers to different assets, it is difficult to identify a typical interval of depreciation instalments. The percentages vary from 10% (Spain, just for buildings), and 100% (linear depreciation). The eligible assets include equipment and instrumentation in almost all the countries, as well as non-corporal assets, buildings or land.

The income tax exemption and the special tax rates form the last important group of fiscal incentives for research-development activities. In Europe, these forms of facilities are usually set for the incomes from intellectual property rights. The fiscal payments are

deducted by 50% to 80% (Netherlands, Spain have recently expanded their incentives).

Overall, most countries set various forms of fiscal incentives for research-development activities (except for Bulgaria, Estonia, Germany and Spain). The existing incentives became more generous lately. Expanded incentives are available particularly in Belgium, France, Netherlands and Spain.

Table 2 and Table 3 (see the Appendix) provide an overlook of the tax incentives that are in force in EU countries. The same five types of incentives used for research-development activities can also be noticed for the SMEs. The special tax rates are the most used form used by the surveyed countries. The accelerated depreciation schemes, the deduction of investments, tax exemption and fiscal credits are less frequently used.

The use of fiscal credits for the SMEs is even less common than the deduction of investments. The eligibility for the latter is usually limited to specific regions and activities. The rates vary between 5% and 20%, and the credits are mainly for capital or for revenue expenditure. In some cases, fiscal credits are conditioned by the employment levels.

The special taxation rates are, by far, the most popular forms of fiscal facilities for the SMEs. However, they differ significantly in terms of generosity. While Luxemburg, for instance, grants a very small reduction (1%) up to a comparable lower threshold of 15.000 Euro, the small and micro enterprises from other countries, might have taxation rates of 50% from the standard rate. In most cases, the lower rates amount to 50%-80% from the taxation rate for the large companies. Compared to other incentives, the special taxation rates are less frequent, limited to particular activities or regions. However, all of them are directed exclusively towards microenterprises in most countries (not to small and medium enterprises). Romania has a special situation: the microenterprises can choose to pay taxes according to the turnover. (starting with 2016, the criterion is the number of employees).

The income tax exemption is less used than the special tax rates. Same as with other incentives, they are mainly restricted to very limited situations. Generally, they appear as investment reserves that have to be reinvested.

Comparing the fiscal incentives for the SMEs with those for research-development activities, it can be seen that the SMEs benefit

of less fiscal exemptions. The countries with acting various incentives are Belgium, Spain and France. Several noteworthy trends are visible:

• Despite their unfavourable properties, the special taxation rates are the predominant fiscal measure supporting the SMEs. All the other instruments are very limited in their area of application. Therefore, they are expected to serve the promotion of very specific activities, specific areas and taxpayers. The research-development activities benefit more frequently of fiscal credits and allowances, which have more favourable characteristics for the fiscal legislators and for the investors (European Commission, 2014).

• The member states don't limit uniformly the eligibility for fiscal incentives for the SMEs by referring to the criteria used in SMEs definition by the European Commission (i.e. number of employment, turnover and total balance sheet). The special taxation rates are usually related to particular income levels.

• There is discrimination between the middle, small and microenterprises. In the EU member states, 12 incentives target all the SMEs, 16 target mainly the small and microenterprises and 9 target just the microenterprises. Exclusive eligibility for microenterprises appears mainly for the specific tax rates.

• There are countries which grant incentives for the SMEs according to criteria regarding the employment rate, or incentives for the newly-established enterprises.

• The qualitative analyses cannot determine whether the fiscal incentives for research-development SMEs decrease the actual fiscal burden of the SMEs, and how much.

5. Conclusion

The paper presented the concept of facility and the derived concept of fiscal facility, its typology and the main incentives granted in EU member states.

The fiscal facilities are usually granted by the governments in order to support the activity of enterprises. Their purpose also is to help the establishment of a company, to pass over specific barriers/obstacles caused by a specific economic situation, unforeseen event, or when the company is confronted by unfavourable financial situation.

The fiscal facilities refer to the type of economic agent (micro, SME, large), type of region, branch, sub-branch, type of taxation basis, income, expenditure, profit.

The fiscal facilities differ in the mechanisms by which they influence the fiscal burdens. They may decrease the taxation basis, the taxation rate or the value of the actual fiscal payments. The fiscal facilities for the SMEs are not that frequently implemented as those for research-development. The fiscal credits, the additional deductions and the accelerated depreciation are rare and often conditioned by criteria of restrictive eligibility.

Most fiscal facilities target the microenterprises and the small enterprises. The medium-size enterprises benefit of facilities for research-development. These facilities should not depend on the company size; they should promote innovation and investments.

All fiscal incentives must meet several basic requirements such as transparency, efficacy and neutrality.

In the European Union, the main fiscal facilities granted to the enterprises are: accelerated depreciation, deduction of investments and allowances, tax credits, special treatment of particular incomes, special taxation rates. Of them, the special taxation rates are most common among the EU member states. The accelerated depreciation schemes, the deduction of investments, exemptions and fiscal credits are less frequent.

Still, tax facilities do have some drawbacks, as:

- they will not benefit a company in its early stage because such a company will still be making losses anyway.

- they are short term whilst investments are long term, thus the use of tax incentives will not benefit the company in the long run when support is really needed.

- they are prone to abuse by authorities in charge of approving or monitoring the applications for such incentives.

- an alternative will be to apply minimal tax rates to all industries as compared to resorting to tax incentives to targeted industries.

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APPENDIX

Table 2

Fiscal facilities for the SMEs

Country	Accelerated depreciation	Deduction of investments	Fiscal credits	Tax exemption	Special tax rates
Austria	-	-	-	-	-
Belgium	200%	11.5% 3.5% (3%)	-	37.500 euro	24,25%-33,33% (33%)
Bulgaria	-	-	-	-	-
Croatia	-	70%/35% (50% /25%)	-	-	10% (20%)
Estonia	-	-	-	-	-
Finland	150%	-	-	-	-
France	-	-	20% 0%-15% 50% 20%	100%/50% 100%/50%	15% (34,43%) 13%/23% (34,43%)
Germany	20%	40%	-	-	-
Greece	-	-	-	25%-45% (15%-40%)	15%/20% (25%)
Ireland	-	-	-	0-40.000 euro	-
Italy	-	-	-	-	-
Lithuania	-	-	-	-	5% (15%)
Luxemburg	-	-	-	-	20%-21% (21%)
Netherlands	-	0-28%	-	-	-
Poland	100%	70%/60% (50%)	100% 75%	-	-
Romania	-	-	-	-	3%
Slovenia	-	-	-	-	-
Spain	100% 300%/200%	-	3000 euro 10% 6%	-	20%/25%/24% (30%-28%)
Sweden	-	-	-	-	-

Source: European Commission, 2015b

Table 3

Fiscal facilities for research-development in SMEs and large companies

Country	Accelerated depreciation	Capitalization of R&D expenditure	Investment deduction	Tax credits	Tax exemption	Special tax rates
Austria	-	-	25% 35% 25%	10%	-	-
Belgium	33.33%	-	14.5%	100%	80%	-
Bulgaria	-	-	-	-	-	-
Croatia	-	-	150%/125%/100%/75%	-	-	-
Estonia	-	-	-	-	-	-
Finland	20%	2-10 years	100%	-	-	-
France	250%/200%/150%	2-5 years	-	30%/5% 60%/10% 20%	100%/50%	15,5% (34,43%)
Germany	-	-	-	-	-	-
Greece	-	2-5 years	50%	-	-	-
Ireland	100%	-	-	25%	100%	-
Italy	-	5 years	100%	35%/90%/10%/40%	-	-
Lithuania	≥ 50%	-	200%	-	-	-
Luxemburg	133.3%	-	-	-	80%	-
Netherlands	Free depreciation	-	54%	-	-	5% (25%)
Poland	-	≥1 year	50%	-	20%/100%	-
Romania	50%	-	50%	-	-	-
Slovenia	33.33%	-	100%	-	-	-
Spain	Free depreciation 10%	5 years	-	8%/12%/25%/17%	60%	-
Sweden	-	-	-	-	-	-

Source: European Commission, 2015b

FISCAL RESPONSIBILITY WITHIN AN UNSTABLE ECONOMIC AND POLITICAL ENVIRONMENT

Tudor CIUMARA, PhD*

Abstract

It is hypothesised that the economic and political environments from Romania are characterized by instability. Also, election cycles represent a major source of volatility for economic policies, particularly for fiscal policy. However, it is very difficult to observe accurately which fiscal proposals/changes have electoral motivations and which are backed by ideologies or technical considerations. The paper presents a theoretical analysis of fiscal responsibility and a conceptual analysis of economic and political stability. The paper is completed by a series of analyses and observations based on the situation of Romania, related to stability and responsibility.

Keywords: government, elections, stability, political party

JEL Classification: D72, E62, G18

1. Introduction

An important hypothesis for this paper is that the election cycle is a major source of volatility for the economic policies, particularly for fiscal policy, which can be manipulated by the governing parties to gain election advantages. The manipulation of the fiscal policy with electoral purposes may lead to distortions concerning "fiscal responsibility". As show before (Ciumara et al., 2015), there are many election cycles (parliamentary, presidential, local) that overlap in a manner that is not always synchronized. This situation induces significant difficulties in the process of analysing the impact of the election cycle on economic policies, and this makes it difficult to discern the potential political objectives of the economic measures and to determine the election cycle that can be their cause. Anyhow, it is interesting to notice what was observed (Mierau et al., 2007) that the gradual fiscal adjustments are influenced by the

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ideology of the governments and by the number of political parties from the governing coalitions, while the fast fiscal adjustments are influenced only by the impending elections.

Another starting hypothesis is that the economic and political environments from Romania are characterized by instability. It is assumed that a rational political actor doesn't necessarily make fiscal changes of one type or another during an election year taking into account the lag between the draft proposition, its implementation and its effects on the voters. Therefore, significant changes take place in the years proceeding the election year (we may thus consider, within this context, the major changes of the Romanian Fiscal Code in 2015).

Finally, it is obvious that it is extremely difficult, if not impossible, to notice accurately which fiscal proposals/changes have election motivations and which are backed by ideologies or technical considerations. It is clear, however, that an economic and/or political context characterized by instability, with ambiguities and undefined areas, favours behaviour lacking responsibility.

2. The concepts of fiscal responsibility and economic and political instability

2.1 Fiscal responsibility

There are many variants of defining fiscal responsibility, but our analysis relies on the manner in which the principle of fiscal responsibility is defined by the Romanian laws. Thus, the principle of fiscal responsibility concerns the duty of the Government to conduct in a prudent manner the fiscal and budgetary policy and to manage the budgetary resources and obligations, as well as the fiscal risks in a manner which ensures the sustainability of the fiscal position, on the medium and long-term, so that the Government can be able to administrate the financial risks and the unforeseen events without making significant adjustments of the expenditures, revenues and budget deficit, with destabilizing economic or social effects (Law 69/2010). The definition is rather broad and clear, and it doesn't require further clarifications. We should notice, however, the reference to economic and social stability, terms whose legal definition would be useful for our arguments. The responsible management of the fiscal policy is closely related to the observance of the rules set by the law, which are detailed in Lupu (2015).

Regarding this notion, we may also observe the initial intention of the initiators of the law (Government of Romania, 2010) which stated that the main principles of the fiscal-budgetary responsibility include:

a) Maintaining a prudent level of the public debt, so as to maintain fiscal sustainability;

b) Ensure the balance of the consolidated general budget throughout the entire economic cycle;

c) Prudent management of the fiscal liabilities, assets and risks afferent to the public sector to avoid burdens for the following generations;

d) Ensure the predictability of the taxation system;

e) Maintaining an adequate level of fiscal reserves for the service of the foreign debt.

Some of these principles have been preserved in the final form of the law, with some changes, as “objectives of the fiscal and budgetary policy”; the one regarding the “economic cycle” was not maintained because of difficulties in its interpretation.

We discuss here the Fiscal responsibility law strictly with the purpose of using some definitions. The actual law, generous in its objectives, has some practical limitations. Corbacho and Schwartz (2007), noticed that the laws regarding the fiscal responsibility cannot be a replacement for a prudent fiscal policy.

The definition mentioned before has a serious blind spot, acknowledging the Government as the only institution with attributions in the field of fiscal responsibility. As we will discuss this at a later stage, the Parliament should be introduced as a key institution in this field. In our interpretation, it is possible that the executive is hindered in the fulfilment of its duties by the legislative, if laws are adopted which don’t allow, for instance, the prudent administration of the fiscal resources. A similar point of view can be found in the paper of Lienert (2010).

There is a certain controversy regarding the role of the Parliament in the management of fiscal policy. There are many evidences, not only in Romania, but also worldwide, about the “parliamentary indiscipline and irresponsibility in budgetary matters” (Santiso, 2005). Of course, we don’t mean that this is a permanent characteristic of the parliamentary activity. On the other hand, the literature also supports the idea that the Parliament has an essential

role in the development of the fiscal policy and in monitoring its implementation by the Government.

In addition to the previous researches we consider that there are distinct sources for the manipulation of economic variables with political purposes. Such sources can be the (central or local) Government and the Parliament. Formally, the economic policies are the actions undertaken by the Government in economy. Sometimes, the Government undertakes such actions following its own plans, while other times it is compelled to take measures to comply with the legislation adopted by the Parliament. And the composition of the Parliament is political by definition. The Government also has a well-defined political orientation, but sometimes it relies on technocrat merits.

Posner and Blöndal (2012) speak of the unprecedented fiscal challenges confronting the developed countries, which claim proactive initiatives and behaviour in this field. According to their opinion, there is dissociation between the political requirements and the requirements of the fiscal responsibility. On the other hand, Caceres et al. (2010) found limited empirical evidence regarding the connection between fiscal responsibility laws and the change of the fiscal behaviour. At the same time, Li and Webb (2011) showed that the political situation specific to each individual country influences the implementation of the fiscal responsibility laws.

2.2 Economic stability versus instability

While not aiming to analyse extensively the notions of political and economic stability or instability, we think it is necessary to clarify the manner in which we interpret them in this paper.

Stability or instability are states of fact, unlike stabilization or destabilization, which are processes. Both stability and instability are states of fact which have both advantages and disadvantages. Generally, stability refers to the property of a particular element to revert to its original state of balance after being disturbed. Another possibility to interpret stability refers to the capacity of dissipating the imbalances, endogenous or exogenous, and to absorb the shocks using self-corrective mechanisms (GFDR, 2013).

The economic stability may be a state of the economic system in which there are just minor fluctuations of its main elements, irrespective of the causing stimuli. An economic system in which the gross domestic product, inflation, unemployment and other

macroeconomic indicators remain unchanged in time might be considered as "stable". Obviously, such a state can seldom be considered as desirable. We would rather accept a definition in which the economic stability refers to an acceptable "tunnel" of fluctuations, the economic system displaying an evolution in which the economic parameters improve. If the fluctuations become too large, adverse effects may arise, such as deterred investments, because of the lack of system predictability. We can adopt a similar vision regarding the political system.

The relation between economy and the politics is more difficult, however. There is well defined research field dealing with this, popular mainly in the 90s, which studies the relation between political instability and the economic growth. Papers such as those of Barro (1991), Alesina et al. (1992) or Mauro (1993), noticed, predictably, an inverse relation between political instability and the economic growth. We may also notice the "unorthodox" opinions regarding the destabilizing role of the state for the economic environment (Cîţu, 2016).

Economic stability is rarely approached as such; usually economic stability it is considered equivalent with financial stability. Therefore, we analysed the manner in which the issue of financial stability is treated. The European Central Bank (ECB, 2016), considered financial stability as a state which prevents the build-up of systemic risk, while systemic risk is the risk that the supply of financial products and services necessary to the financial system is affected up to the point in which economic growth and welfare are affected significantly. According to the ECB, systemic risk can derive from three sources: endogenous build-up of financial imbalances possibly associated to a booming financial cycle, large aggregate shocks affecting the economy or the financial system, or contagion effects between markets, intermediaries or infrastructures. The National Bank of Romania (NBR) too, uses ECB definition, completing it with the idea that financial stability involves the capacity of efficient, spatial and intertemporal allocation of the economic resources, financial risks management and self-correction in the case of extreme shocks (NBR, 2015).

2.3 Political stability versus instability

The issue of political stability is more difficult to capture. A definition suggested by Ake in 1975, indicated political stability as the

regular flows of political exchanges. Thus, Ake considered that there is political stability if these exchanges are regular, or if the members of the society limit to the behavioural patterns that fit within the limits set by their expectations regarding the political role. Ake tried to develop a quantitative pattern of interpreting political stability which, although interesting, exceeds the object of this paper. We may wonder, however, whether some concerted actions of the main political actors from Romania, fit the "legitimate expectations" of the voters.

There are, of course, other approaches of political stability or instability. Alesina et al. (1992) defined political instability as the inclination towards the change of the executive power using constitutional or unconstitutional means. The literature provides several distinct approaches of political stability (Hurwitz, 1973, Dowding and Kimber, 1983):

1. Stability as absence of violence;
2. Stability as governmental longevity or resilience;
3. Stability as existence of a legitimate constitutional order;
4. Stability as absence of structural changes;
5. Stability as multifaceted societal attribute;
6. Stability as behavioural pattern.

3. Analyses and observations in the case of Romania

Regarding the case of Romania, our analysis starts from three questions: 1) Is the fiscal policy designed and administrated in a responsible manner? 2) Is the Romanian economy stable? 3) Is the political environment in Romanian stable? The responses to these questions will help us answering the basic question of the research project: what interdependencies exist between economic and political stability and the application of the fiscal policy while observing the principle of fiscal responsibility.

Some notes are necessary when analysing the situation in Romania. We started the research with the hypothesis that the economic and political environments from Romania are unstable. This instability is, however, relative, so that it could have been preferable to describe it in the hypothesis as precarious stability.

The interpretation of political (or economic) environment fluctuations can be done (I) observing the evolution of the domestic context or (II) observing the global context and determining the place of the national system within the international framework. For each of

these two perspectives we may have the following structure of the analysis:

1. Elements of political stability;
2. Elements of political instability;
3. Elements of economic stability;
4. Elements of economic instability.

3.1 Economic stability in Romania

First, we try to evaluate the economic stability or instability in Romania based on its limited definition which refers to the absence of significant fluctuations. Below are just several significant macroeconomic evolutions. Obviously, in-depth analyses are possible, but we consider that these few elements are enough to show that, at least during the past decade, the economic evolution of Romania fluctuated between growth and decline and vice versa. Given the amplitude of these fluctuations we may say that, at least for the mentioned interval, the Romanian economy was characterized by a rather high level of instability.

(I) In the first approach, if we look at the domestic situation of the recent years, we may notice both elements of stability and instability:

1. Elements of economic stability:

a. The national economy had a rather constant path, if we monitor shorter time intervals;

b. At the regional level, or in the different economic branches, there is a high capacity of detachment from the elements that induce instability;

2. Elements of economic instability:

a. The sustained economic growth from the years before the crisis, followed by a period of decline and by fresh start of economic growth (at a rate that may be unsustainable). In 2007, Romania reported 8.5% GDP growth rate, followed the next year by a 7.1% decline. After a period of rather small rates of growth and decline, a high growth rate was reported for 2016. Most predictions give a lower rate of GDP growth for the subsequent years. This shows that GDP evolution fluctuated during the past decade.

b. Inflation decreased strongly, with some oscillation of the CPI over the last decade, from 6.6% in 2006, to a maximum of 7.9% in 2008 and -0.6% in 2015. The prognoses show a resumed growth towards 3% in 2018.

c. The RON/EUR exchange rate fluctuated from 3.52 in 2006, to 3.34 in 2007, and 4.45 in 2015. The fluctuations of the RON/USD exchange rate were even wider.

d. The unemployment rate fluctuated between 5.2% in 2006, 4% in 2007, 7.8% in 2009 and 5% in 2015.

e. After the strong increase, particularly in 2016, the prognoses (European Commission, 2016), show a significant lower rate of increase in public and private consumption.

f. Currently strong economic growth is recorded, largely based on consumption, which may cause macroeconomic imbalances, such as higher commercial deficit or higher inflationist pressure.

g. The fiscal policy is changed frequently.

h. The expenditure for investments decreased for the last few years, which erodes the resources for future economic growth.

i. Significant macroeconomic imbalances can be caused by the net international investment position, which is negative, by the limited exporting capacity, by the vulnerabilities of the banking sector, by the risks generated by the internal legislative evolutions (European Commission, 2015, 2016).

j. The political environment interfered into the economic environment both through legislative means, and by actions pertaining to corruption.

(II) In the second approach, if we look at the economic and politic situation of Romania within the international context:

1. Elements of economic stability:

a. The evolution of the national economies of the main foreign partners of Romania is generally (barely) positive, which consolidates the particular national sectors that are involved.

2. Elements of economic instability:

a. Romania is a small actor on the international scene, the turbulences on the international financial markets being able to have significant effects on the national economy.

b. Romania deploys efforts to integrate within a European Union which is currently experiencing a process of “disintegration”.

c. Most banks from the Romanian banking system have foreign capital, which is a significant vulnerability if financial crises occur.

d. The low prices of the raw materials supported the economic growth, but this situation is not predicted to continue on the long term.

3.2 Political stability in Romania

The discussion of the political environment stability in Romania is based on the theoretical definition of the concept. The analysis of economic stability was evaluated on a span of 10 years. The same interval, with some exceptions, will also be used for the analysis of the political stability. Some observations can be, nevertheless, made to evaluate the situation according to the previous definitions. Beyond these general considerations, we considered that the interpretation of the fluctuations of the political environment in Romania can be done (I) looking at the evolution of the domestic context or (II) looking at the global context and determining the place of the national system within the international framework.

(I) In the first approach, if we look at the domestic situation of the recent years, we may notice both elements of stability and instability:

1. Elements of political stability:

a. There are several cycles of peaceful political succession, with free elections and with a, generally, good organisation. This shows the existence of a sustainable democratic environment.

b. There were no violent attempts to overturn the political order, and the extent of the manifestations and strikes is generally low. We may consider that the political environment in Romania is not characterized by (physical) violence. However, significant elements of violence can be traced in our recent history – the 1989 revolution, the changes or attempts to change the government by the miners, the street fights from Târgu Mureş and Bucharest in 1990.

c. The governmental longevity expands, sometimes, throughout the entire election cycle, but the change of several governments has been also noticed during this interval.

d. For the past 27 years there has been a legitimate constitutional order.

e. There is a rather clear separation of the powers within the state.

2. Elements of political instability:

a. There are situations in which the governments are changed under „street pressure" (for instance, the Ponta government, in 2015).

b. Political succession, by the alternative governance of parties with different political views, which shows a state of instability. The electoral struggle makes the governing parties or the parties

having parliamentary majority to attempt imposing populist economic measures, which are extremely relevant within the context of analysing the fiscal responsibility.

c. There have been political movements labelled as attempted coup d'état (July 2012).

d. There are semi-permanent conflicts between the main political institutions (Presidency, Government and Parliament).

e. There is at least one flagrant situation of disregarding the popular will expressed by referendum (2009).

f. The trust of the population in the political institutions is very low.

(II) In the second approach, if we look at the politic situation of Romania within the international context:

1. Elements of political stability:

a. Romania consolidated a system of political and military alliances and joined the European Union.

b. Romania was not involved in direct military conflicts with other states.

2. Elements of political instability:

a. Brexit – British exit from the European Union is an event of major importance that will likely affect Romania too.

b. Regional geopolitical tensions – relations such as Russia-Ukraine, Russia-Turkey, Russia-Baltic States, Russia-European Union, Russia-NATO, Russia-Romania, Russia-Moldova, Hungary-European Union, Hungary-Romania.

c. Terrorist attacks in Europe, which cause deep changes both domestically and in the relations between states.

d. The refugees' crisis.

e. Attempted coup d'état in Turkey.

f. Political polarization in Europe and the USA (an updated and detailed description can be found in World Bank, 2016).

Beyond these observations, several other elements can be used to describe a political environment understood to be unstable. For instance, in a classification of political stability conducted by The Global Economy, Romania is on position 95 out of 191 countries, with a score of +0.08 (Lichtenstein is on the top position, with a score of +1.54, while Syria is on the last position, with a score of -2.76. In this case, the indicator of political stability measures the perceptions regarding the possibility of political instability occurrence using

different sources, and includes elements such as manifestations and riots, acts of terrorism, civil war or interstates war.

3.3 Fiscal responsibility in Romania

We know well that the populist economic measures taken in the elections year 2008, just before the economic crisis broke out in Romania, had adverse and long-lasting economic and social consequences. The elections year 2016 is a good platform for comparison, making it easier to see how strong the inclination of the political environment to manipulate the economic policies is.

The effects of the populist and electoral measures are most often ambiguous and difficult to analyse. Therefore, the investigation of the relation between the election cycles (and the election years, particularly) and the impact of the changes in the economic policies done with political purpose, is a rather complex effort. Such attempt has been done in Ciumara, Lupu and Criste (2015).

Attempts have been made to impose fiscal responsibility, for instance, through legislative measures. This was certainly a step forward, but the use of derogations is a common governmental practice, which makes the limitations imposed by law to be rather useless. To implement the fiscal policy particularly, and the economic policies in general, it is not enough to have a responsible Government, which carry out the legal fiscal requirements; a Parliament acting in a responsible manner is also necessary.

In defining the notion of fiscal responsibility, the idea of ensuring the sustainability of the fiscal position has also been introduced. It was recently noticed (Dumitru, 2016), that a third of the pensions paid in 2016 are covered by borrowed money. In other words, the young generations start in life with the financial burden of the fact that their forerunners lived on debt. If this is the state of facts, a proof of responsibility would be at least assuming the situation, covering the current deficits by dedicated loans and resetting the system so that these adverse evolutions can stop.

The fiscal responsibility law in Romania refers to the obligation of the Government to administer in a prudent manner the fiscal policy and to manage the budgetary resources and obligations, as well as the fiscal risks, in a manner that supports the sustainability of the medium and long-term fiscal position. Thus, the Government must legally meet a set of fiscal-budgetary policy objectives:

a) Maintaining the public debt at a sustainable medium and long-term level;

b) Prudent administration of the resources and obligations assumed by the public sector and of the fiscal-budgetary risks;

c) Maintaining, at an adequate level, the budget resources covering the payment of the public debt service;

d) Ensuring the predictability of the rates and bases of taxation.

However, the theory (in this case, the law) is often contradicted by the reality (or practice), and the Government frequently fails to operate in a manner fitting the definition of the principle of responsibility, both due to reasons pertaining to own mechanisms and to conditions imposed by additional laws. In support of this statement, the 2015 Annual Report of the Fiscal Council of Romania noticed that elements in flagrant contradiction with the principles of the fiscal responsibility law were introduced in the budget framework for 2016-2018. It also noticed that the Government frequently failed to present in a proper manner the fiscal problems for analysis within the Council.

For instance, the fiscal responsibility law stipulates, under article 15, that when proposing legislative initiatives whose adoption involves increasing budget expenditures, the initiators must also describe the financial effects of the particular initiative, taking into consideration the expected changes in the budgetary revenues and expenditures for the subsequent 5 years, as well as realistic proposals to cover the increased expenditure or the lower revenues (Law 500/2002, art. 15). Furthermore, the initiators must also include a statement according to which the additional expenditure is compatible with the strategic objectives and priorities specified in the fiscal-budgetary law, with the annual budget law and with the ceilings of expenditure stated in the fiscal-budgetary strategy (Law 69/2010, art. 15). However, the analysis of the legislative propositions shows that the members of the Parliament systematically ignore the legal requirements mentioned above.

Looking at these matters within the context of elections, we also notice the very important problem of article 17 from Law 69/2010, which stipulates that normative acts that lead to higher expenditures with personnel or with the pensions from the budgetary sector can be promoted with at least 180 days before the mandate of the acting Government expires, in agreement with article 110,

paragraph 1 from the Constitution of Romania, republished. To exemplify, the mandate of the current Government lasts up to the date of validation of the 2016 elections, which will take place in December. Thus, according to the law, such normative acts should have not been promoted starting with June.

Taking a brief look at the actions of the last year, we may notice that the legislative process was confronted with several proposals that had a significant potential impact on the economy and which are susceptible of having an election and populist dimension.

The year 2016 raised additional challenges to the responsible management of the fiscal policy, given the elections. As far as we know, the politicians ware not interested by the possibility provided by the fiscal responsibility law to calculate the financial impact of the policies proposed in the electoral programs of the political parties. However, besides the electoral programs of the parties, which require dedicated analysis, many legislative proposals have been submitted in 2016, whose content affects fiscal policy and which may also be interpreted in an electoral key. Part of them reached the stage of implementation.

It is not our opinion that all of these legislative proposals are incorrect, but the manner of their formulation might have preponderant electoral motivations and only in (small) part are based on coherent economic policies. We should understand the context in which these legislative proposals are developed. Some of them are in clear breach of legislation or are susceptible of affecting substantially the economic and social development of Romania, but these facts do not determine their initiators to submit the proposals accompanied by proper impact analyses. Some of these proposals were submitted even though their initiators were well aware that they cannot be adopted, the only purpose being to add to the resume of the initiators, which is to be shown to the voters during the elections campaign. It is a sure fact that these proposals target “receptive” electoral segments, which the initiators perceive as being ready to give their votes to people offering them something concrete, even though at a disproportionate cost for the rest of society.

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