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Academy of Economic Studies Bucharest

October 2011

EYES ON ROMANIA: WHAT TO LOOK WHEN INVESTING HERE?

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Abstract:
In this paper we identify a framework of the main macroeconomic indicators an investor must look when investing in a country, depending on his activity business sector. Using a qualitative method of research on the Romanian case in period of 2000-2010, we establish that a series of leading indicators, as Gross Domestic Product (GDP) growth rate, inflation rate and industrial production, are appropriate to get a brief snapshot of the economic outlook of a country. The following period, since 2011 to 2014, confirm our results. Beside the traditional indicators, we set as significant the degree of business cycles synchronization with the European Union (EU) in order to predict the next path of the Romanian economy. We use a structural divergence index for assessing the similarity of economic structure between Romania and EU. The results of this study confirm that Romania lags behind EU, offering the possibility to decide the next step of an investor's business strategy.

Keywords: foreign direct investment, leading indicators, business cycles synchronization

JEL code: E31, F21, F41, F44

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1. Introduction

Foreign direct investment (FDI) flows in the world experienced their major shrank after years of growth when the economic and financial crisis hit the United States (US) and the EU. After reducing with 11.5% in 2008, the FDI flows fell sharply with 32% in 2009. In 2010 the world FDI flows are hardly growing again, but this is not also true for the EU. The most important decrease in FDI flows, of almost 43%, was felt in 2008. But after the peak of 850 billion dollars in 2007, the FDI felt sharply in 2010 with more than 63%, reaching almost 305 billion dollars. Unfortunately, Romania followed the same trend in FDI evolution. Still, a first sight minor differentiation can be seen: in Romania, the FDI peak of almost 14 billion dollars was reached in 2008, with one year delay as compared with the EU. The next year witnessed a total collapse: a reduction of 65% in FDI. No loss was recovered in 2010, as FDI are continuously decreasing. As the National Bank of Romania last data indicates, the situation is likely to be the same this year: the FDI in the first semester reached over 1 billion euro, down with 17.3% as compared to the first half of 2010.

The question that arises is whether an investor could predict this evolution or not. There are a lot of leading indicators for forecasting the economic outlook of a country, but usually for a typical investor, the data needed are not available and the costs to enjoy them are very high.

In this paper, we investigate the accuracy of the main macroeconomic indicators – GDP growth, inflation rate and industrial production – in keeping the pace with the FDI evolution and we propose a simple and easy way to watch a series of indicators for a foreign investor opening a business in Romania. We complete the well known series of indicators we mentioned above with the degree of business cycle synchronization. The data used to build this framework have a great availability and can be promptly assessed.

The investor will have two ways to appreciate the opportunity of his investment: on the one hand, through a sensitivity business cycle matrix and on the other hand, by identifying the potential of his activity sector by comparing its importance in Romania and EU. Finally, we make the first step in assessing the investor's opportunities to choose Romania as the next destination of his investments, by drawing the forecasts for 2011-2014.

The structure of the paper is organized as follows. Section two explains the data and presents the methodology used in this paper. Section three provides a brief review of related literature. Section four explains the calculations and the empirical evidence. Section five reports the results obtained and section six summarizes the paper's main findings.

2. Data and methodology

The paper is based on an exploratory data analysis in order to examine and identify the relation between the variables chosen as leading indicators and the FDI evolution in Romania in the last decade. The qualitative method of direct observation was considered appropriate in this case because it allows making connections between the indicators and it is proper for comparisons. The chart analysis is suitable for emphasizing the major conclusions and it also responds to the aim of drawing a simple framework that encompasses the main macroeconomic indicators for an

investor. The Romanian case is employed to test the hypothesis and to establish the information necessary to be taken into account when investing here. The analyzed period is 2000-2010 and the results are confirmed through the forecasts for 2011-2014.

In our paper we choose to analyze both the GDP growth rate and the industrial production index since these indicators are among the variables used by the National Bureau of Economic Research (NBER) when deciding the state of the business cycle in the US, by the Centre for Economic Policy Research (CEPR) when deciding the state of the business cycle in the Euro area and by the Economic Cycle Research Institute (ECRI) when measuring business cycles around the world.

For the EU and the Euro area comparisons, the data can be found on the EU database, Eurostat, annually (for 2000-2010) or quarterly (for 2011-2014) expressed. The source for the data concerning the FDI in Romania is the National Bank of Romania. The forecasts of the main macroeconomic indicators are provided by the National Forecast Commission of Romania. For the period 1990-1999, we used the UNCTAD data concerning the GDP growth rate and the FDI levels. In the coming section we point out the reasons for choosing these indicators and their relevancy for the analysis.

In addition, we use the index of structural divergence proposed by Krugman in 1991 and previously used in numerous other studies (Clark and van Wincoop, 2001; Imbs, 2004; Traistaru, 2005 etc.). The indicator construction shows that a country is more similar to the EU in terms of economic structure as its value is close to zero. The formula used to quantify the index in the case of Romania (in comparison with EU) is the following:

$$\textbf{SDI}_{\textbf{RO,EU}} = \sum_{k=1}^{K} \textbf{\textit{abs}} \left(\textbf{\textit{S}}_{k,RO} - \textbf{\textit{S}}_{k,EU} \right) \quad , \text{where:}$$

$\text{SDI}_{\text{RO,EU}}$ − measures the homogeneity degree of the economic structure between Romania and EU;
K − represents the number of sectors taken into account;
$S_{k,RO}$ − represents the share of the gross added value of the k sector in the total gross added value of Romania;
$S_{k,EU}$ − same interpretation for the EU.

3. Theory

3.1 Significant macroeconomic indicators for foreign investors

The literature trying to establish a series of significant and precise indicators for the future macroeconomic situation of a country is abundant. The last 50 years were marked by an intensive work in order to develop major leading indicators to signal the movements of the future economic activity and to provide some indications of their magnitude.

We will present the most known types of such indicators. First of them is based on quite a simple reasoning, but was appreciated as forecasting with accuracy the economic evolution. The second

one is also very well known, developed by an important international organization and its core is represented by an indicator available for everyone and easy to be found.

Firstly, the Economic Cycle Research Institute (ECRI) developed in early '90 a set of indicators allowing to quickly identify the economic outlook of a country and its business cycle. The main difficulties in trying to forecast an economic cycle are due to the high costs of constructing very complexes indicators and to the time disposal. Achuthan (2005) states that a couple of leading indexes, one indicating the economic growth and the other the inflation, are sufficient in order to have a complete outlook of the economic situation. Therefore, the ECRI institute recommends firstly the Weekly Leading Index (WLI). The great-parents of the WLI were developed in 1960, but since then, the original leading indicator was improved and now it takes into account the key drivers of an economy like credit, inventories and profits. WLI has a weekly update and forecast cyclical turns by around 8 months. The second indicator proposed by ECRI is the Future Inflation Gauge (FIG) that forecasts the turns in the inflation cycle. These indicators are developed for US and 19 other countries.

The other main set of leading indicators was developed by OECD – the OECD System of Leading Indicators. Although the system offers quite a rough forecast of economic activity, the method of constructing composite leading indicators (CLI) starting from a reference series that indicates the economic activity fluctuations can offer a broad picture of a country economic path. In all cases, the reference series is the index of industrial production. Moreover, for each country, the component series besides the index of industrial production are selected based on various criteria such as economic significance or cyclical behavior and the availability of data (Nilsson and Gyormai, 2007). The CLI system was developed in the mid '70 and the average time of forecast is between 6 and 9 months. The data are limited, being available only for 29 member countries of OECD and for 6 other most important non-members (Brazil, China, India, Indonesia, Russia and South Africa). The indicators are released on a monthly basis.

None of these composed leading indicators are available for Romania. Given the situation, we test the efficiency of GDP growth rate, inflation rate and industrial production as leading indicators for the FDI level.

It follows that an investor can very easily watch a simple set of indicators in order to have an overview of the future economic situation. Starting with the ECRI recommendation for every investor to closely watch the economic growth and the inflation rate in order to gain an overview of the macroeconomic situation of a country and the OECD method of developing its composite indicators, we analyze the evolution of these three indicators for Romania in the last 10 years.

3.2 FDI and business cycles in literature

In the literature, business cycle is described as the "oscillating motions of economic activities, which are visible as patterns of fluctuations of macroeconomic variables such as output, production, interest rates, unemployment and prices"[3]. A business cycle consists of expansion phases occurring at approximately the same time across multiple economic activities that are

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[3] Den Reijer, Ard H.J., Macroeconomic Forecasting using Business Cycle Leading Indicators (2010), US-AB Stockholm, pp. 3-5

similar in recession, contraction and recovery phases. The last phase also represents the expansion phase of the next cycle.

The literature referring to business cycles influencing the FDI is not as broad as other topics in economics. Recently, the research paper of Wang and Wong (2005) investigates the effects of business cycles over the FDI outflows using a sample of 45 countries, covering the period of 1970-2001. Considering the economic growth as an indicator of business cycles, the authors find that the volatility of the economic growth has a significant and negative impact over the FDI outflows. More specifically, the study states that the volatility of economic growth in the recession phase has a greater negative impact over the FDI outflows than economic growth volatility in the boom phase. This can be explained by the higher or lesser shrink in the levels of capital flows that a company encounters in these two different phases as a result of GDP evolution. Due to an increase of interest rate from lenders in periods of recession, business cycles have a negative effect on FDI. This situation is not true in times of boom. Investigating the correlation between the FDI host and the home countries' business cycles, their results show that FDI outflows are reduced when the business cycles in the host country is in an expansion phase. Moreover, the developed economies have the major share of world's FDI outflows, the effect of business cycles on FDI outflows is more pronounced here than in developing countries.

Yeyati, Panizza and Stein (2002) identify three channels through which business cycles could affect FDI outflows. The first one is the income effect in the expansionary period of the business cycle, as the firms have higher earnings to invest. At this level, FDI would have a procyclical behaviour. The substitution effect reduces FDI, as foreign investment prospects become less attractive. Finally, since the monetary authorities in the source country can run a countercyclical monetary policy by reducing or increasing financing costs on the financial markets (the major source where the FDI is financed), FDI should increase during recession at the source. Their research paper on the cyclical nature of FDI flows states that the FDI evolution from developed countries to developing economies differs according to the source: the FDI flows are countercyclical for the US and Europe, but have a cyclical behaviour in Japan. As FDI outflows and local investments are divergent and move in an opposite direction during the cycles in US and Europe, it is possible to increase FDI flows from industrial countries in recession, especially in the countries where European and American FDI prevails (such as Latin American countries). This is possible as the authors identify a high degree of substitutability between investments at home and abroad.

Using a sample of 12 countries during the period of 1982–2001, Jansen and Stockman (2004) conclusions are that FDI represent a significant channel that affects economies for a longer period than the trade channel. Regarding the correlations with business cycles, until 1995 there cannot be invoked any empirical evidence in favour of FDI explaining cross-country business cycle patterns. After this year, the situation changes, as a result of the FDI strong growth. Foreign investments are much able to explain the pattern of international business cycle linkages than foreign trade relations. A greater economic interdependence through FDI implies more synchronized business cycles. In addition, FDI gained in importance and become a relevant channel for the international transmission of disturbances. The two author's recommendations are to include the FDI in the macroeconomic models used for forecasting or public policy analyses.

Onen (2008) clarifies through bivariate regressions that economic growth, measured as GDP per capita growth, has a negative impact on net FDI in the developing countries analyzed (China and Turkey) and for the US. On the one hand, it is clear that in China and Turkey, being more FDI recipients than investors, FDI inflows are more affected than outflows. For US, the same thing is true: it is one of the most attractive markets for FDI in the developed world. On the other hand, for the countries in Euro area and United Kingdom (UK), economic growth affects FDI outflows more than FDI inflows, being established a positive relation between GDP per capita growth and net FDI. The same negative relation is kept as regards the business cycles impact on net FDI. Foreign direct investors' decision is not affected by the business cycle in emerging economies, as there are other factors more attractive, such as the low production costs or the growing market. US is again an exception, but for the same reasons. In UK and the Euro area, business cycles increase uncertainty on domestic market, so the domestic investments are more risky than investments at abroad. Therefore, there will be an increase in FDI outflows and net FDI. The dynamic panel regression concludes though that economic growth in host economies makes the country more attractive for foreign direct investors. GDP per capita growth and business cycles has negative impact on net FDI, so the FDI outflows are growing, as the abroad investments are more profitable.

4. Empirical Evidences

The first subsection describes the main leading indicators that are taken into account. According to the most known international practices, these leading indicators are: GDP growth rate, inflation rate and industrial production. The second one states the importance of taking into account the degree of business cycles synchronization between Romania, EU and Euro area. The final one tests the hypothesis by assessing the forecasts of these indicators in the next 3 years and encompasses in a nutshell the macro data for Romania, in order to help the investors taking the best investment decision.

4.1 Leading indicators

Real GDP growth rate (growth rate of GDP volume), expressed as percentage change on previous year, indicates the economic growth of a country and encompasses all the areas of economic activity. As defined by Eurostat, GDP is a measure of the economic activity, representing the value of all goods and services produced, less the value of any goods or services used in their creation. The compute of the annual growth rate of GDP volume is intended to allow comparisons of the dynamics of economic development both over time and between economies of different sizes. GDP is considered one of the most important variables indicating the expansion of the economic activity. We choose this indicator and not the nominal value in order to assess one country's economic evolution in its dynamics.
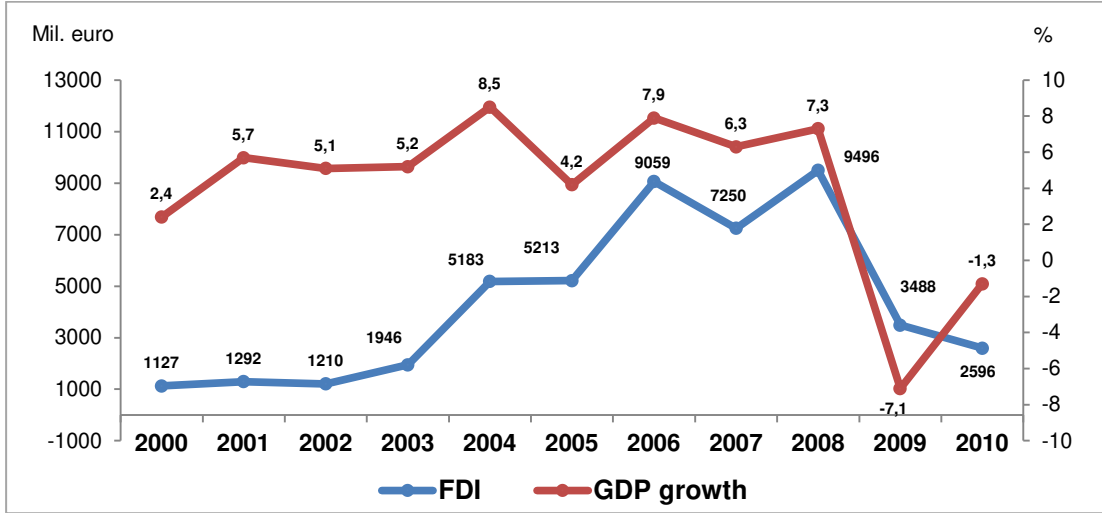
Inflation rate, expressed as the annual average rate of change in Harmonized Indices of Consumer Prices allows the international comparisons of consumer price inflation. Inflation is considered a decline in the real value of the monetary unit of account in an economy, equivalent with a loss of purchasing power of the internal medium of exchange (Den Reijer, 2010).

The industrial production is expressed as the annual percentage change of the industrial output volume. The specificity of the industrial production index is that it has a strong cyclical behavior.

Besides, it could better reflect the increase in correlations due to the improvement of economic integration, as a large share of the industrial production is assigned to foreign trade and represents tradable goods.

4.1.1 Empirical testing and results

Figure 1. FDI and GDP growth rate fluctuations

Source: Eurostat, National Bank of Romania, authors' analysis

As shown in the Figure 1 above, the FDI fluctuations closely followed the GDP fluctuations in the last 10 years. A direct relation can be established between the two macroeconomic indicators; therefore, every annual GDP growth triggered a FDI growth, while each reduction determined droppings in investments. This evolution of the two indicators confirms that GDP growth rate is an appropriate leading indicator for a foreign investor that must decide, on macroeconomic basis, to invest in Romania.

In this context one must take into account the political decisions that can directly influence the macroeconomic indicators dynamics. For example, 2006 is a year with massive capital inflows due to the improvement of the investors' perception as regards the country risk in the region. This year marked the completion of capital account liberalization and the confirmation of the impending accession of Romania to the EU. All these factors have led to a record level of FDI in 2006 (as compared to the previous years), of over 9 billion euro, exceeded only in 2008, when the FDI volume was almost 9.5 billion euro.

Compared to the last decade, FDI and GDP growth rate were less synchronized before 2000. Starting with 1991 until 1998, the FDI in Romania were at very low levels. The economic growth was unsustainable, with important fluctuations: from a peak of 7.13% growth in 1995, it sharply falls at -6% in 1997 (see Appendix B).

In the Romanian case, the economic and political context is decisive. The economic reform and the privatization of the public sector started later than in the other ex-communist countries. The privatization process was mainly carried under the slogan "we do not sell our country". Hence, there was no strategy towards attracting FDI and the privatization process progressed slowly and hesitatingly.

A period of large and important scale privatizations and changes in the business climate starts in 1998. The progress in fulfilling the criteria of EU adhesion has an important role on increasing investors' confidence. After a peak of over 2 billion dollars of FDI inflows in 1998, the FDI level halves in the next year, at 1.027 billion dollars. Since 1999, the FDI are continuously growing until 2006, reaching the peak of almost 14 billion dollars in 2008.

There is a wide literature, both theoretically and empirically, studying the relationship between FDI and economic growth. Still, on the one hand, there is conflicting evidence on FDI effects over economic growth. On the other hand, economic growth was considered as one of the main determinants of FDI inflows into the host country. Often, studies results identified the possibility of a two-way causality between the two variables.
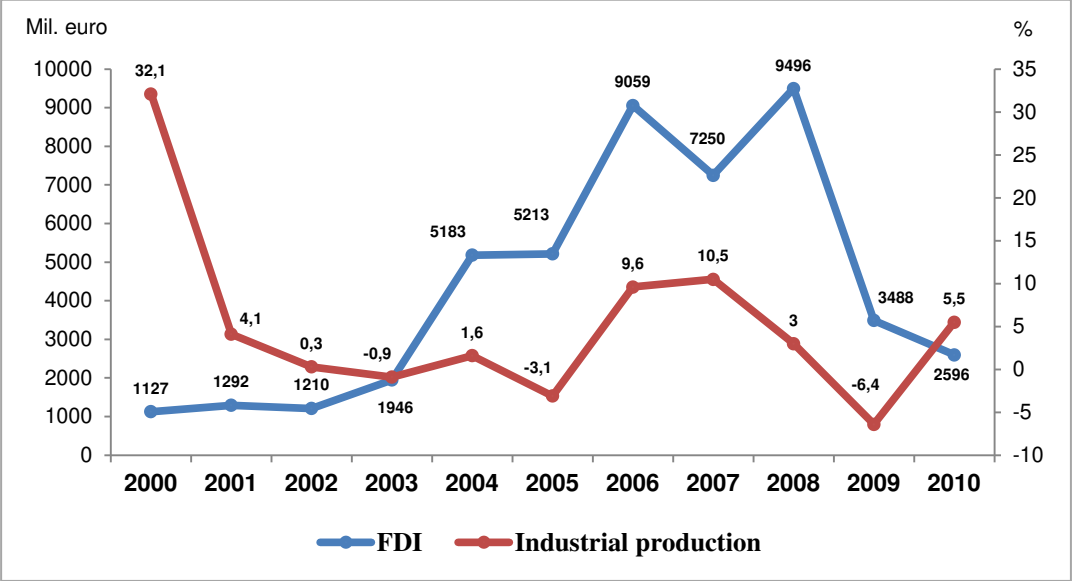
Tsai (1994) states that economic growth, expressed as the annual growth rate of GDP per capita is at the same time a determinant and a consequence of FDI flows. Based on a simultaneous equation model in which inflows of FDI and the rate of economic growth are jointly determined, the author establishes that economic growth affects the direction and the FDI volume. This result can be explained through the favorable signal that an impressive rate of economic growth gives to international investors. It is obvious that a rapidly growing economy offers relatively better opportunities for investors than countries with slow economic growth. This hypothesis is tested for the 1975-1978 period in 62 countries and for 1983-1986 in 52 countries.

Moudatsou and Kyrkilis (2009) use a heterogeneous panel analysis to identify the causal-order between inward FDI and economic growth (expressed as the growth of the GDP per capita) in the EU-15 and Association of South Eastern Asian Nations (ASEAN) over the period 1970-2003. Their results indicate that there is a GDP-FDI causality for the European countries. For the ASEAN countries, two ways causality between GDP per capita and FDI can be found in the cases of Indonesia and Thailand, while for Singapore and the Philippines economic growth induces FDI inflow.

Ozturk and Kalyoncu (2007) identify a strong evidence of a bi-directional causality between FDI and GDP for Turkey over the period of 1975-2004. Mahmoud Al-Iriani and Fatima Al-Shamsi (2007) find a strong causal link from FDI to GDP and vice versa in the six Gulf Cooperation Council countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates) between 1970-2004, indicating that while FDI promote growth, GDP growth also attract more FDI inflows.

More recently, Casi and Resmini (2010) analyze the determinants of FDI at regional level in EU-27 between 2005 and 2007. They find that GDP growth rate, usually employed to explain the determinants of FDI at country level, also influences FDI at regional level. Their conclusion is that foreign firms prefer to invest in dynamic regions.
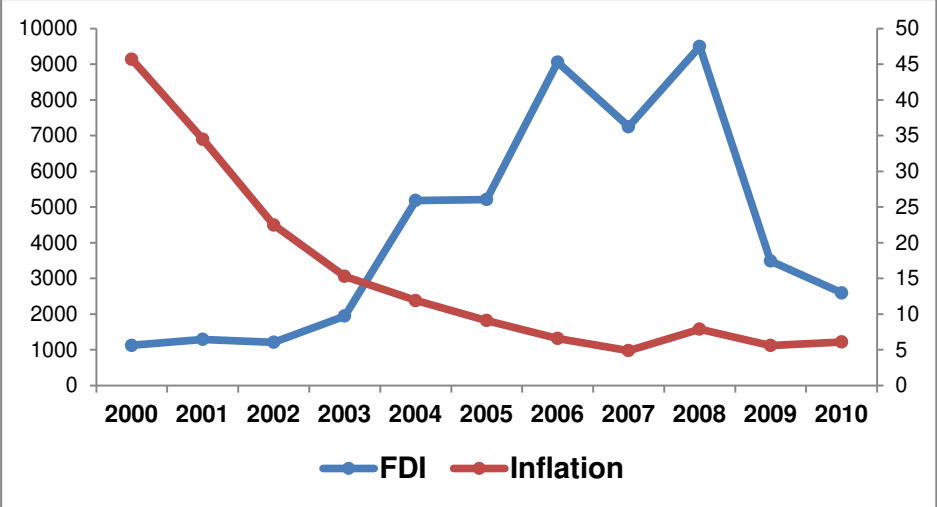
Figure 2. FDI and industrial production fluctuations

Figure 2 validates the hypothesis of considering the industrial production as leading indicator for every investor that seeks an outlook over the macroeconomic situation in Romania. The direct relation with the FDI levels can be observed especially between 2003 and 2010. For a deeper understanding of the two indicators dynamics, it is necessary to take into account the national and international conditions at the beginning, respectively at the end of the analyzed period. Until 2003, the sharp decline of industrial production is explained through a shift in the Romanian market economy to activity sectors with high added value, such as financial services. Since the end of 2008, international financial crisis was felt in Romania and determined the significant drop in the industrial production in 2009. However, the industry recovered in 2010, being now one of the main engines of the growth for the Romanian economy (together with the exports).

Figure 3. FDI and inflation rate fluctuations

Inflation represents another indicator that describes the general situation of a country. As Figure 3 indicates, for the Romanian case the lowest levels of inflation are synchronized with increases

in FDI, excepting the period of the international financial crisis. Any significant increase in the price levels coincide with a decrease in FDI and contrariwise. At this level, the FDI decline can be explained mainly through the lack of confidence of foreign investors in Romania's macroeconomic stability.

4.2 Business cycles synchronization and FDI

But these indicators offer only one side of the whole picture. In 2005, Achuthan provides a business sensitivity matrix to the economic cycle fluctuations, as shown in the Table 1.

Table 1: Business Cycle sensitivity matrix

Sector	Type of Goods	Type of Customer	Type of Expenditure	
			Low Discretionary	High Discretionary
Manufacturing	Durable & Capital Goods	Business/ Industrial	Moderate Sensitivity	Very High Sensitivity
		Consumer	Low Sensitivity	High Sensitivity
	Non-Durable Goods	Business/ Industrial	Low Sensitivity	High Sensitivity
		Consumer	Very Low Sensitivity	Moderate Sensitivity
Services		Business/ Industrial	Low Sensitivity	High Sensitivity
		Consumer	Very Low Sensitivity	Moderate Sensitivity

Source: Economic Cycles Research Institute

Before proceeding to analyze the macroeconomic indicators, an investor must take a look and find his place on this matrix that classifies the businesses types according to their vulnerability to business cycles fluctuations. Achuthan (2005) establishes the types of business most susceptible to changes in the economic cycles, taking into account the economic sector in which the company operates and the degree of arbitration in their consumers' spending.

The most vulnerable industrial sector is manufacturing, as a result of inventory-driven cycles, especially for the durable and capital goods. A high discretionary customer spending is associated with expenditure that can be avoided in times of recessions when the budget is low. It is clear that for a high discretionary expenditure, each sector is more sensitive in periods of recession. The risk is lower if the final destination of the goods and services is the consumer, and not a business or an industrial customer.
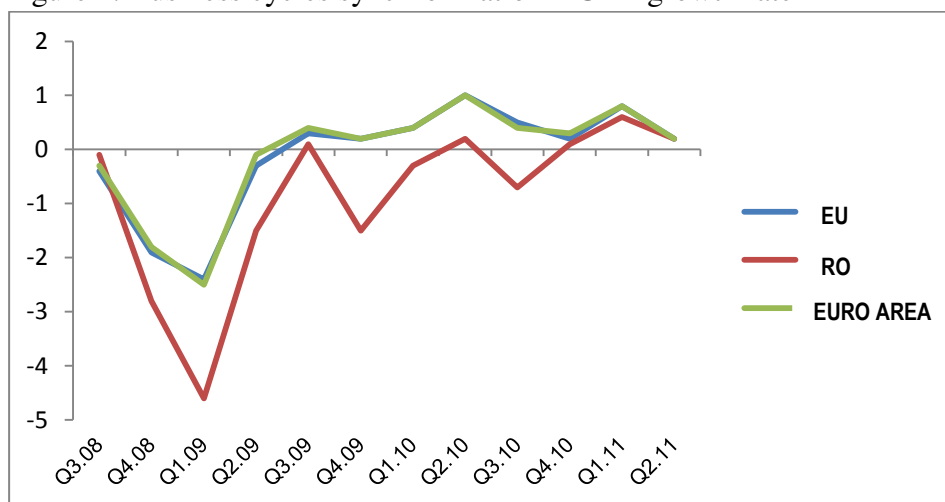
As shown above, the potential in services is high regarding the degree of business sensitivity. Only for the services with a high discretionary type of expenditure, the risk is higher, being associated with high sensitivity for a business or industrial customer. In the rest of the cases, the risk level is acceptable.

4.2.1 Testing business cycle synchronization for Romania

Business cycles synchronization is important for an investor especially when there is a certain lag between the two cycles. Therefore, the investor will be able to forecast the cycle's fluctuations in the host country for a period that equals the lag between the cycles.

Business cycles fluctuations are usually measured through GDP, as its evolution influence the other macroeconomic indicators, like unemployment rate, interest rate and inflation, the main concerns for every economist analyzing business cycles. It is already known that the GDP growth rates tend to be more synchronized as the linkages between countries expressed through international trade, capital flows and the operations of multinational corporations are higher.

Figure 4. Business cycles synchronization – GDP growth rate

Source: Eurostat, authors' analysis

The results obtained so far in the literature indicates that Romania is an atypical case in the EU member states picture, being low correlated both with the Euro area economy and EU economy (Berger, de Haan and Inklaar, 2002; Furceri and Karras, 2006; Afonso and Furceri, 2009; Dumitru, 2009). However, in general, the evolution of business cycles in Romania, quantified by the dynamics of GDP growth rates, is similar to the evolution of European business cycle, with some differences in magnitude or sign. The global effects of the economic and financial crisis implied similar evolutions for the business cycles in the most part of the European economies.

This result confirms the empirical evidences and the theoretical studies according to which strong correlation periods alternate with periods of lower correlation, depending on the business cycle phase (De Haan, Inklaar and Jong-a-Pin, 2007; Gayer, 2007). The strong correlation between the Romanian and EU economies during 2008-2011 can be mostly explained by the persistent effects of the economic crisis in the region, given that during this period any progress on the structural convergence plan have not be seen.

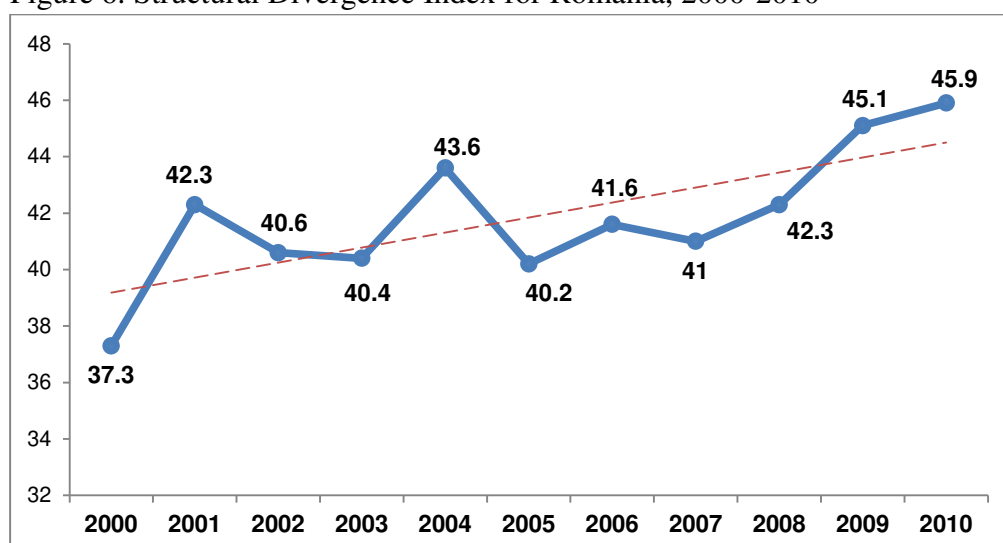Figure 5. Business cycles synchronization – industrial production

Source: Eurostat, authors' analysis

Romanian economy is positively correlated with the EU and Euro area economies as concerns the business cycles expressed through the industrial production index. However, a delay of two quarters can be seen in the dynamics of Romanian and European business cycles. One explanatory factor could be the favorable external circumstances from which several industrial segments in Romania have benefited, such as road transport industry and related industries, due to fleet renewal programs run mainly by Germany and France. In such conditions, industrial output reduction was less sharp and appeared in Romania two quarters later than in EU and Euro area.

In order to assess the similarity of Romania's economic structure with the EU, we used the index of structural divergence. The index of structural divergence was constructed by considering the added value generated by six main sectors[4] of economic activity in Romania's and in the EU's GDP. The results are shown in the Figure 6.

Figure 6. Structural Divergence Index for Romania, 2000-2010
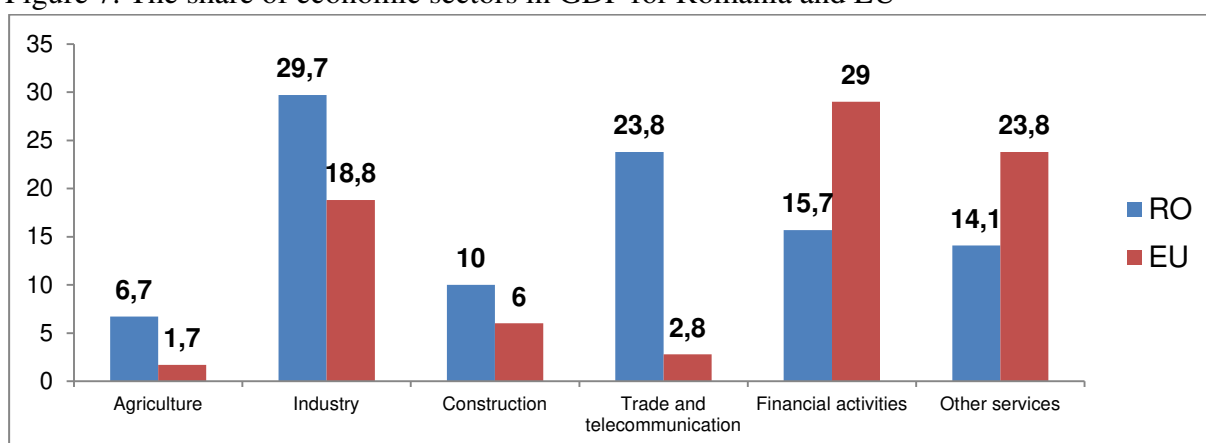

Source: Eurostat, authors' analysis

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[4] The six main sectors are: agriculture, industry, constructions, trade and telecommunication, financial activities, other services.

As it can be seen, the discrepancies between the Romanian and the EU economies are significant. The structural divergence index is registering a positive trend in the analyzed period, from above 37% in 2000 to 46% in 2010.The lack of structural similarity between the Romanian and the European economies implies that our country is more vulnerable to asymmetric shocks (e.g. adverse shock to agriculture) and also may react differently to common shocks that appear in the EU (such as a unanticipated change in interest rates).

The structural divergence is the main reason of the lack of correlation between the Romanian and the EU economies. Some possible explanations for the structural differences consist, for example, of the incipient development of financial markets, responsible for a different allocation of resources, or in the greater share of the agriculture sector as a result of the communist period.

These discrepancies to the EU economic structure does not necessary have a negative implication. Rather, the relatively higher importance of sectors such as industry was a moderating factor of the economic downturn over the past two years, given their favorable evolution. Also, the lower share of financial intermediation sector in Romania justifies the first lower impact of the international financial crisis in this country. Significant differences are observed in the services sector, indicating a huge potential of development and an opportunity for foreign direct investment, as shown in Figure 7.

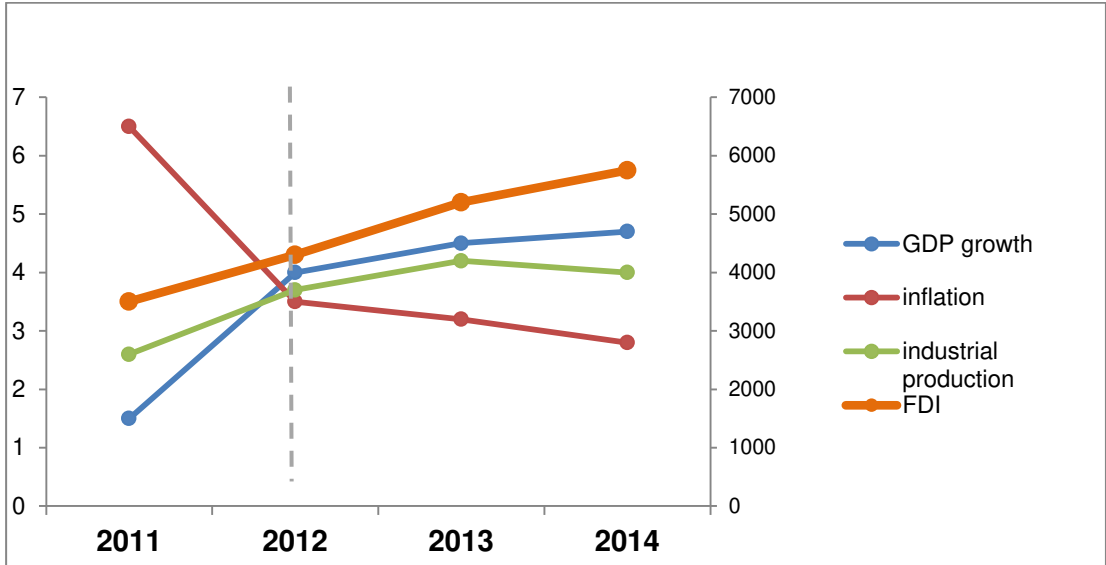Figure 7. The share of economic sectors in GDP for Romania and EU

Source: Eurostat, authors' analysis

4.3 Forecasts

The forecasts of the main macroeconomic indicators for the next 3 years are encouraging for any foreign investor who selects Romania as a destination country for his capital. Even starting with this year, 2011, Romania has achieved macroeconomic stability, despite the less favorable aspects facing the entire EU. The financial agreement with the international financial institutions restored investors' confidence in this country. In addition, positive developments are expected for the whole countries in the EU in the coming years and the international situation will have a positive impact over the Romanian economy's evolution. For this year a GDP growth of 1.5% is expected, but for 2014, the potential growth rate indicates an economic increase of 4.7%. Indeed, the pace of annual growth is not fabulous, but in economic terms this means sustainable economic growth, preferably to an unsustainable growth that could generate a new crisis in the future. Inflation is expected to reach less than 3% in 2014, while FDI forecast shows a moderate annual growth. It should be noted that at present, the European models for economic growth

have shifted from an alert pace that overheated the economies and resulted in international crisis whose effects are still felt in the whole Europe to moderate models, designed to achieve a sustainable economic growth.

Figure 8. Forecast for the main macroeconomic indicators 2011-2014

Source: National Forecast Commission

5. Results and discussions

An investor can take as indicators to watch when investing in Romania the real GDP growth, the inflation rate and the industrial production. Moreover, by keeping an eye on business cycles synchronization, he has the possibility to establish in advance the decisions that must be taken, as he knows his position on the business cycle sensitivity matrix.

The Romanian case proves that the FDI fluctuations closely follow the GDP fluctuations. The same is true for industrial production, but here the domestic and international conditions must be taken into account in order to have a deeper understanding of the two indicators' dynamics. The two leading indicators establish a direct relation with the FDI evolution. In contrast, inflation and FDI are negatively synchronized. In addition, the forecast of these indicators on the following period (2011-2014) confirms the relations between FDI and the three variables taken into account, certifying our hypothesis. Besides this evolutions, an investor must verify the degree of synchronization between Romania and other European countries, either where he has other business developed or simply for observing the evolution of Romanian economy.

At this point, he has two possibilities, in order to gain a complete economic image: to watch the synchronization of business cycles expressed as GDP growth rates for obtaining clues about the magnitude of the change; to watch the industrial production indexes in order to predict the trend in the Romanian economy after two quarters. This happens as Romania is low correlated both with the Euro area and EU. In addition, the discrepancies between Romania and the EU are growing, representing an easy way to identify investing possibilities and the way to react at shocks that appear in different economic sectors.

Starting this year, a favorable evolution is forecasted for the leading indicators we studied, encouraging the foreign investors to choose Romania for their investments. Moreover, the Government assumed the objective to continuously improve the business environment. Still, after 2014, the deadline for the Euro area accession, the actual state can suffer some changes. While now we can observe a lack of business cycles synchronization between Romania and the EU, respectively the Euro area, it is very possible that after the accession of Romania to the European Monetary Union, the two economies start to have a more convergent evolution.

6. Conclusions

The simple framework that investors can use to get a brief snapshot of the economic outlook of a country and to ground their next decisions consists of three leading indicators (GDP growth rate, inflation rate and industrial production index) and the business cycles synchronization.

Romania has significant and growing structural discrepancies as compared with the EU and a delay of one semester for the business cycle that allows the investor to forecast the future economic fluctuations.

Based on the GDP, inflation and industrial production forecasts, the next period (2011-2014) is favorable for investors that decide to choose Romania as their investment location.
This study contributes to the existing literature by taking into account, beside the traditional leading indicators, the degree of synchronization between business cycles in Romania, EU and Euro area. This information allows us to establish a more predictable framework an investor can rely on in taking the investment decision.

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Appendices

Appendix A **Main macroeconomic indicators for Romania, 2000 – 2014**

Year	GDP growth rate (%)	FDI (mil. euro)	Inflation rate (%)	Industrial production (%)
2000	2.4	1,127	45.7	32.1
2001	5.7	1,292	34.5	4.1
2002	5.1	1,210	22.5	0.3
2003	5.2	1,946	15.3	-0.9
2004	8.5	5,183	11.9	1.6
2005	4.2	5,213	9.1	-3.1
2006	7.9	9,059	6.6	9.6
2007	6.3	7,250	4.9	10.5
2008	7.3	9,496	7.9	3
2009	-7.1	3,488	5.6	-6.4
2010	-1.3	2,596	6.1	5.5
2011[f]	1.5	3,500	6.5	2.6
2012[f]	4	4,300	3.5	3.7
2013[f]	4.5	5,200	3.2	4.2
2014[f]	4.7	5,750	2.8	4

Source: Eurostat, National Bank of Romania
[f] forecasts by National Forecast Commission of Romania

Appendix B **GDP growth rate and FDI levels for Romania, 1991-1999**

Year	GDP growth rate (%)	FDI (mil. dollars)
1991	-12.92	40
1992	-8.77	77
1993	1.53	94
1994	3.9	341
1995	7.14	419
1996	3.95	263
1997	-6.05	1215
1998	-4.82	2031
1999	-1.15	1027.03

Source: UNCTAD

Appendix C **Industrial production and GDP growth rate for EU, Euro area and Romania, quarterly data, 3rd quarter 2008 – 2nd quarter 2011**

Period (quarters)	Industrial production (% previous quarter)			GDP growth rate (% of the previous quarter)		
	EU 27	Romania	Euro area	EU 27	Romania	Euro area
Q3 2008	-1,8	-2	-1,8	-0,4	-0,1	-0,3
Q4 2008	-6,6	-5,8	-7	-1,9	-2,8	-1,8
Q1 2009	-8,5	-2,5	-9,4	-2,4	-4,6	-2,5
Q2 2009	-1,2	0,7	-1,4	-0,3	-1,5	-0,1
Q3 2009	2,4	1,9	3	0,3	0,1	0,4
Q4 2009	0,9	2,2	1	0,2	-1,5	0,2
Q1 2010	2,3	-1	2,5	0,4	-0,3	0,4
Q2 2010	2,5	3,1	2,6	1	0,2	1
Q3 2010	1,3	1,3	1,1	0,5	-0,7	0,4
Q4 2010	1,4	3	1,8	0,2	0,1	0,3
Q1 2011	0,9	2	0,9	0,8	0,6	0,8
Q2 2011	0,1	-0,8	0,3	0,2	0,2	0,2

Source: Eurostat

Appendix D **Dynamics in economic structure of Romania and EU, 2000-2010**

Table 1. Romania – Gross value added by sector (%)

Year	Agriculture, hunting and fishing	Industry, including Energy	Construction	Trade, transport, communication services	Business Activities and financial services	Other services
2000	12.1	29	5.4	23.8	16.4	13.4
2001	14.7	29.4	5.9	22.6	15.1	12.3
2002	12.6	30	6.3	22	15.8	13.3
2003	13	27.8	6.4	22.8	13.8	16.1
2004	14.1	27.9	6.6	23.1	13.8	14.6
2005	9.5	28.1	7.4	24.5	15	15.5
2006	8.8	27.8	8.4	25.1	15	14.8
2007	6.5	27.5	10.3	25.6	15.5	14.6
2008	7.4	25.8	11.9	25	15	14.8
2009	7.1	27.2	11	24	15.2	15.4
2010	6.7	29.7	10	23.8	15.7	14.1

Source: Eurostat

Table 2. EU 27 – Gross value added by sector (%)

Year	Agriculture, hunting and fishing	Industry, including Energy	Construction	Trade, transport, communication services	Business Activities and financial services	Other services
2000	2.3	22.4	5.6	21.5	26.2	22
2001	2.3	21.8	5.7	21.7	26.5	22.1
2002	2.2	21.1	5.7	21.6	26.9	22.5
2003	2.1	20.5	5.7	21.5	27.4	22.7
2004	2.1	20.4	5.9	21.5	27.5	22.7
2005	1.8	20.2	6	21.3	27.7	22.8
2006	1.7	20.3	6.2	21.1	28	22.6
2007	1.8	20.2	6.4	21	28.4	22.2
2008	1.7	19.8	6.4	21.1	28.5	22.5
2009	1.6	18.1	6.3	20.8	29.2	24
2010	1.7	18.8	6	20.8	29	23.8

Source: Eurostat

Appendix E **Sources of the data**

	Variables	Source	Indicator	Unit	Observations
1	**Foreign Direct Investment**	UNCTAD	Foreign direct investment – annual data	Millions dollars	For the period 1991-1999
		National Bank of Romania	Foreign direct investment – annual data	Millions euro	For the period 2000-2010
		National Forecast Commission of Romania	Foreign direct investment – annual data	Millions euro	For the period 2011-2014
2	**GDP growth rate**	UNCTAD	Real GDP growth rate	Percentage change on the previous year	For the period 1991-1999
		Eurostat	Real GDP growth rate (Growth rate of GDP volume) – annual data	Percentage change on the previous year	For the period 2000-2010
		National Forecast Commission of Romania	Real GDP growth rate (Growth rate of GDP volume) – annual data	Percentage change on the previous year	For the period 2011-2014
		Eurostat	Real GDP growth rate (Growth rate of GDP volume) – quarterly data	Percentage change on the previous quarter	For the period Q3 2008 – Q2 2011
3	**Industrial production**	Eurostat	Industry production index - annual data	Percentage change on the previous year	For the period 2000-2010
		National Forecast Commission of Romania	Industry production index - annual data	Percentage change on the previous year	For the period 2011-2014
		Eurostat	Industry production index – quarterly data	Percentage change on the previous quarter	For the period Q3 2008 – Q2 2011

4	**Inflation**	Eurostat	Annual average rate of change in Harmonized Indices of Consumer Prices	Percentage	For the period 2000-2010
		National Forecast Commission of Romania	Annual average rate of change in Harmonized Indices of Consumer Prices	Percentage	For the period 2011-2014