

# THE CREDIT INFLUENCE ON THE ECONOMIC GROWTH IN ROMANIA

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## **Abstract:**

*The purpose of this paper is to highlight the correlations existing between credit and GDP; it will be shown, as well, which is the credit influence on the economic growth. The motivation for this work derives from the fact that, at the national level, has been discussed countless ways for ensuring economic growth. The objectives followed within the present paper takes into account, mainly, to: introduce the main theoretical aspects related to credit; present the main theories of economic growth; analyze and interpret the macroeconomic indicators, relevant for economic growth at the macro level; analyze the existing relations between credit and economic growth as well as the credit influence on GDP. The paper focuses on the existing correlations between credit and economic growth, determined using the SPSS program.*

**Key words:** credit, economic growth, GDP, economic sectors, outstanding loans

**JEL classification:** E44, O47

## **1. THEORETICAL ASPECTS REGARDING THE CREDIT INFLUENCE ON THE ECONOMIC GROWTH**

Analyzing the lately situation of the Romanian economy, we can say that its evolution was influenced by a number of factors that led either to its increase, referring to the economic boom before 2008, either to what happened in the years ahead when Romania entered recession. We observed so, that after this increase, followed a period of economic crisis that has left its mark on the future of economic development. A number of factors have influenced directly or indirectly the economic growth in Romania. We find that the development/growth of an economy (Armeanu et. al., 2015, p.6) is determined by the stability and development of the banking sector, especially given that the financing of our economy depends largely on the lending activity.

### **1.1. THE CREDIT IN THE ECONOMIC THEORY**

The credit notion (Moroșan, 2009, p.11) can be approached from many points of view, due to the fact that is used in accounting, banking activity, trade activity as well as in the relationship between humans. Furthermore, credit has a broader use in the financial – banking domain as well as in the commercial one; for this reason the term refers implicitly to the relationship between the bank and the *individuals* or *legal entities*. Over the time, have been developed a number of theories regarding the credit concept by which have been noted that the credit relations have gradually developed based on merchandise production, based on merchandise-money ratio.

We can emphasize that the money genesis and its importance has been discussed by many theorists over time, for which we shall analyze the impact of the quantitative theory of money on credit in economy. Thus, by this theory we deduce the importance of monetary and fiscal policy for the economic development and growth. Based on this theory (Chirleşan, 2010, p. 49), are debated

the ideas conceived by *Keynesians* and *monetarists* regarding the monetary policy, this having effects on the economy, since the monetary policy (Chirleşan, 2010, p. 37) envisages to control: the expansion or the capping loans, granting directed loans and to support the labor full employment.

*Expansionist theory*, which has been shaped by the English economist John Law, who believes that the economy lacks proper monetary means/ways for the economic cycle to dispose of unused resources arising from unused lands. According to John Law, "credit means money" and with its help can be created the means that economy needs *to be put into motion*. Referring as well to the ideas of John Law, Mac McLeod echoed those ideas and found that the one which gives purchasing power is the credit; the banks are creating credit, reason for which leverage can be made based on credit, but the credit itself cannot create capital.

Based on the *theories of Keynes* (Chirleşan, 2010, p. 81), an advocate of the quantity theory of money, we find that money had a secondary role, but the instability of money value can have negative effects on the economy. J. M. Keynes highlights the regulated credit theory upon which concluded that it is possible to increase the solvable demand by means of loans, stimulating in this way production and investment. By regulated credit, Keynes wants to ensure stabilization of the market economy for a future good economic development. Based as well on the regulated credit, Sumner Slichter maintains that it is necessary that, in periods of revival and expansion of the economy, the credit granting to be limited; during the crisis occurrence, to increase loans granting in order to be able to use both, saved resources as well as resources created by monetary emissions.

Another theory that occurs over time is the *loan funds theory*, according to which the market participants are individuals and legal entities, the government and foreign investors. In addition, the theory of loan funds develops around the supply and demand of loan funds because the need for money determines the demand for credit, as well as the availability of those who give loans determines the credit supply, reason for which the changes occurred on the level of these funds are reflected on interest rate level. According to this theory, the interest rate level *will rise* when the loan funds demand exceeds the supply and *will fall* when the loan funds supply will exceed the demands. Thereby, the application of this theory takes into account the forecast and determination of the market interest rates evolution, because changes that occur in the loans volume affects interest rates, therefore between credit and interest rate there is an inverse relationship. Later, the credit importance (Moroşan, 2009, pp. 18-23) has been highlighted in the economic thought by the *monetarist theory* appearance.

We believe that, through the credit is increased the productive power of capital, are made available liquid funds for investments or current activities, contributing in this way, greatly, to the economy development. In other words, the credit represents a connection center between banks and market participants, being an indispensable link in the process of sustainable economic growth.

## 1.2. MAY THE ECONOMIC DEVELOPMENT EXIST WITHOUT CREDITING?

Regarding the relationship between the economic growth and credit we can say that this is one of the most discussed concepts at the moment, due to the fact that more specialists wants to highlight the existing correlations between economic growth and credit. Economic growth is defined "*as a measure of the positive GDP change in an economy*" (Howitt, Weil, 2008), reason for which the production increase is associated with improved living standards. According to Joseph Schumpeter (Schumpeter, 2011) economic growth is associated with economic development which is concretized by a spontaneous economic change that will highlight the general economic growth. In the vision of Simon Kuznets "*the economic growth is, essentially, a quantitative concept*" (Kuznets, 1996, p.16) which sustain the progress.

The economic growth process (Mihuţ 2013, p.19) is influenced by political, economic (human resources, human capital, technological progress, foreign investments, the degree of economic openness) institutional, cultural and social factors. Economic growth is accompanied by a high degree of convergence showing that, through it, the GDP components will be increased, generating, thereby, quantitative and qualitative changes at the economy level. In addition, when we talk about economic growth in Romania, we have to take into account the risks that may occur,

reason for which are considered to be found three traps involved in this process. According to Daniel Dăianu the three traps (Daianu, 2015, p. 203) show mainly that:

- the first trap is related to the interest rates, namely if the credit will be more fragile and more expensive, interest rates tend to increase gradually
- the second trap is related to the average income per capita (middle level income trap), which highlights the idea that the level of human and physical capital, is not sufficiently advanced to be able to reach the level of developed countries, even though the workforce of our country has lower costs compared to developed countries;
- the third trap refers to the inability to increase the domestic savings rate and to mobilize internal resources (reserves), due to the fact that it is important for the country development to be based on internal efforts/domestic savings.

### 1.3. THE CREDIT ACTIVITY IN ROMANIA IN THE PERIOD 2007 - 2015

In the following, we intend to highlight the credit evolution in Romania to show how much it influences the economy. The following table illustrates the credit evolution by sectors and by currencies types.

**Table no.1. The credit evolution in the period 2007-2015**

Years	Total Credit (millions lei)	From which			
		Private sector (millions lei)	Governmental sector (millions lei)	Lei (millions)	Currency (millions)
2007	157.751,3	148.180,7	9.570,6	67.713,0	80.467,8
2008	215.260,9	198.055,7	17.205,2	83.643,2	114.412,5
2009	246.697,9	199.887,1	46.810,8	79.711,7	120.175,4
2010	270.668,0	209.293,6	61.374,5	77.358,5	131.935,1
2011	293.952,9	223.037,1	70.915,8	81.658,7	141.378,4
2012	304.689,0	225.836,2	78.852,8	84.722,8	141.113,4
2013	298.922,5	218.462,3	80.460,2	85.354,0	133.108,3
2014	297.710,8	211.164,1	85.546,6	92.100,0	119.064,1
2015	307.149,6	217.532,3	89.617,3	110.285,9	107.246,4

Source: Processed by NBR monthly bulletins 2007-2015

Based on the above data, it can be seen that in the period 2007- 2012 the volume of loans granted by banks in Romania has a growing trend. This increase is especially manifested in the private sector which registers 74.12% of total credit. The period 2012-2015 shows that the total volume of loans is slightly down due to the decrease in private sector credits and the credits in currency. We can see that, in this period, currency credit decreased by 24.14% since 2012. This decrease was due to the NBR imposed measures to curb the imports rising and to reduce credit risk. By existing regulations, NBR requires that when loans in currency are granted to legal entities to be considered sources of income, in the same currency, for repaying the loan. By adopting these measures, currency loans has diminished and caused increases in the lei (RON) component.

In 2015, the loans demand is increasing. According to NBR statistics this increase is due to the expansion of consumer credit granted to the individuals, as a result of their confidence in the earnings growth. As noted above, the credit granted to the private sector has a higher share than the one granted to the state sector, highlighting the fact that the credit process is mainly addressed to this sector. The *credit maturity structure* to the private sector shows that the most important components are the medium and long term loans. In the period 2007-2012 medium-term loans decrease in importance in the disfavor of the long - term loan. The cause may be found in the investments made by firms and households, requiring these types of loans. In the next period it can be seen that the trend of the medium-term credit is raising and the long-term credit is declining, mainly due to the restrictions on long-term lending imposed by NBR as well as by the lower appetite of the private sector in making investments. In the case of long-term loans it can be seen

that they have a downward trend starting with 2011. Regarding short-term credit, it maintained its importance around 30% of the total, throughout the considered period. Through this type of loan is ensured the current activity of companies and individuals.

## **2.1. THE EVOLUTION OF CREDITS GRANTED TO INDIVIDUALS**

It is well known that, at the moment most of the individuals need a loan, to meet their different needs, and when cash is needed they often appeal to a bank. There is a wide range of loans that can be granted to individuals depending on their request. Basically, the rules of crediting applied to individuals are valid in the case of the legal entities as well but, for individuals, the amounts borrowed are lower and the risk of bank is lower than in the case when the credit would be given to the legal entities. When an individual requests a loan he must have sources of repayment, to guarantee the repayment of the required loans and to not have outstanding obligations to banks. Therefore (Moroşan, 2009, p.165) an individual is applying for a loan when it has to pay a number of debts or if he wants to acquire an asset (household goods, houses, cars etc.).

Regarding Romania, the types of credits to individuals is reflected in credits on cards; personal credits; credits for consumer goods; credits for automobiles purchasing; credits for personal needs unnamed, secured by mortgage; credits for construction, purchasing or upgrading homes and vacation homes. Through consumer credits granted to individuals, the banks are participating in: raising living standards, increasing the country prosperity and increasing the economy demand. Therefore, in terms of lending to individuals, the role of banks (Neagu, 2015) will highlight the satisfaction of social needs, by increasing the endowment of households with durable goods and houses, without being able to calculate exactly how this sector can generate added value and, default, economic growth. Based on existing data NBR Monthly Bulletin (2007-2015) we notice that they have the tendency to increase until 2011, followed by a slight decline by the end of 2014. This evolution is supported by the growth of consumer credit and housing credit. In 2015, household credit growth is due to, on the one hand consumer credits (0.03%) and housing credits (11%) especially those in RON. The rising of household credit means that the population is estimating sufficient income in the future thus, trusting in their repayment options. The growth registered in 2015 is mainly due to the consumption component, being supported by lower interest rates. Therefore, individuals have purchased homes and they need money to arrange them; most of the consumer credit volume is required for the housing development and modernization.

According to Dragos Cabat ([www.economica.net](http://www.economica.net), 2016), a cause which led to growth in lending to individuals is the fiscal relaxation which induced to Romanians the feeling that their incomes will increase in future and that they can afford new indebtedness. This highlights the idea that the population trusts the evolution of the economy and the GDP ability to support the loans repayment

## **2.2. THE EVOLUTION OF CREDITS GRANTED TO BUSINESS**

Regarding the credits granted to legal entities, we deduce that their destination is to meet the current financial needs and the financing of investments, reason for which this type of loan is more correlated with the economic cycle than the one to the population, due to the fact that lending the companies will have a significant contribution in the development and growth of the country. According to Florin Neagu (Neagu, 2015), companies are calling more often to bank resources; due to this fact that at the level of 2014, approximately 10-15% of companies had a credit. In addition, based on the cycle of credit granted to companies, we could assist to an economic growth because their contribution will generate added value needed by the economy. Thereby, to have a sustainable economic development we should focus on lending to companies that will generate the necessary potential to finance and support the country economy. According to the data from NBR Monthly Bulletin (2007-2015), it can be observed that the volume of loans granted to firms has an upward trend until 2012 and, starting with this year, has a downward trend. A main cause of reducing credit volume granted to firms is considered the production cuts, which induce the stagnation of this type

of loan. It can be seen that the structure of credit is largely influenced by the credit component in RON which increases by 8.9% in 2015 compared to 2014, while the currency component (euro) decreases by 9.9%.

NBR governor (Isarescu, 2016) claims, in a press release, that the increase of loans in lei (RON) is mainly due to the conversion of foreign currency loans and not due to the lending in RON. Although the loan granted to companies is slightly higher, in the Romanian economy there is a potential for sustainable lending that is not exploited. This slight growth highlights the capacity of the Romanian performing companies, which through a significant lending volume can influence the economic situation. In addition, these companies (Neagu, 2015) contribute with 22.2% to the added value that is generated in the economy and they have a production capacity of approximately 18.5% of the turnover. Therefore, the potential of these companies must be exploited mainly for the prosperity and efficient growth of the Romanian economy.

In the following, we will highlight a comparative situation of the total credit evolution, lending to companies and to households/population. It can be seen that in 2015 household loans (107.960,2 million RON) exceeds lending to businesses (105.333,1 million RON), indicating that the pace of lending to population is higher than to companies. However, analysts claim that we are facing a situation highlighting the idea that the economy puts the credit moving, as Florin Cîțu stated (www.economica.net, 2016), observing the situation of the two types of loans, we can deduce that from 2011 to 2014, the volume of loans granted to companies was higher than the one granted to population. At the same time, we can take into account that the process of crediting in lei grew rapidly and became major due to the decrease of monetary policy interest rate and due to the increased appetite for first home credits, which are granted exclusively in lei, but also due to the conversion programs of currency loans, particularly the loans in Swiss francs. Therefore, this situation is caused, mainly, by an increased consumption based on reviving the mortgage lending.

### **2.3. THE EVOLUTION OF NON-PERFORMING LOANS**

The non-performing loans represents payment commitments that the client, individual or legal entity, do not respect, thereby creating outstanding loans or unpaid interest that will have negative effects on the banks asset, solvency and costs. That's why a non-performing loan (NPL) is an ordinary loan that is or can be recorded by banks as a credit which brings loses. Therefore these types of loans are considered to be one of the main causes leading to the national economy stagnation. Thus, non-performing loans represents "the amount of money borrowed from a bank, for which the borrower did not made payments related to loan in less than 90 days" (www.investopedia.com, 2016). Once a loan is considered nonperforming, the possibility that it will be repaid in its total amount is very small. Consequently, the institutions that record nonperforming loans in their portfolios they have the possibility to sell them to other investors for escaping from future risks and also to clear their balance sheets, influencing positively the entity-s profit.

The national definition, used by NBR for the non-performing loan indicator, considers the outstanding loans over 90 days and the ones in the case of which were initiated judicial proceedings, non-performing loans being calculated on their gross value (respectively, accounting value undiminished with adjustments for depreciation or the value of associated guarantees). According to Petre Bunescu (Bunescu, 2015), nonperforming loans in the Romanian banking system, were generated, on the one hand by the bankers mistakes and secondly, by the economic crisis, reason for which a balance sheets cleaning is necessary to can held the economic development.

Non-performing loans evolution in Romania is calculated based on NPL rate (the ratio of nonperforming loans to total credit). This indicator is showing the banking system state. Therefore, in the following, we highlight the evolution of NPL in Romania.

**Table no. 2. The evolution of non-performing loans**

Years	2008	2009	2010	2011	2012	2013	2014	2015
NPL rate (%)	2,75	7,89	11,85	14,33	18,24	21,87	13,94	13,61

Source: Processed by NBR, Interactive database

Analyzing the data above, it can be seen that after the economic boom, the trend of non-performing loans is growing, reaching in 2013 to 21.87% of total loans, as a result of the base effect occurrence (decreased volume of loans to 195.1 billion in December 2013 respectively 194.2 billion lei in 2014) but also due to the economic situation of 2009-2012 period characterized by stagnation and crisis. This highlights the fact that a large proportion of non-performing loans (Vioreanu, 2015) is due to the fact that companies became insolvent or bankrupt but also due to the household incomes decline which could not repay the loan. Due to this situation, the central bank NBR, decides to implement a restructuring plan for eliminating the NPL from the assets portfolios and banks capitalization. Therefore, we can observe in 2014 and 2015 a significant decline in the stock of non-performing loans (NBR, 2014) which were passed off the balance sheet or have been sold for recovery. In 2015 the rate of non-performing loans continued to decline, reaching 13.61%, which proves that the process of balance sheet cleaning has been efficient. We will approach non-performing loans analysis by sector of activity for 2014 and 2015, to determine whether certain economic sectors have generated this type of loan.

**Table no. 3. The volume of performing and non-performing loans depending on the sector of activity (2014)**

Sector of activity	Volume of performing loans (2014) billions lei		Volume of NPL (2014) billions lei		The share of NPL in performing loans (%)	
	2014	2015	2014	2015	2014	2015
<b>Agriculture</b>	5.8	5.9	1.2	1.2	21,03	20,38
<b>Industry</b>	21.7	23.1	5.9	4.5	27,05	19,56
<b>Trade</b>	19.4	20.1	6.1	4.5	31,62	22,41
<b>Services and utilities</b>	19.3	19.1	3.3	2.8	17,18	14,53
<b>Constructions and real estate</b>	19.3	19.0	7.6	6.0	39,21	31,34

Source: Processed by NBR, Interactive database

In 2014, the NPL related to construction and real estate sector, as well as trade sector, makes a strong pressure on banks recording a significant share in the total. We can see that these economic branches have been the most affected by crisis, that's why the NPL volume is not a surprise. Another sector which recorded a high value is the agriculture. We can say that, although agriculture is a contributor to the creation of GDP, due to NPL and to production fluctuation recorded (due to climatic conditions) its influence on the economic growth is weak and unpredictable. According to the analyzed data, as in 2014, the construction and the real estate sectors continues to present the highest credit risk, the volume of NPL recorded a value of 5.9 billion lei. We can see that a significant share of nonperforming rate has been recorded in the service and utilities sectors, followed by agriculture.

According to those analyzed, credit institutions are moving towards sectors which brings added value to the economy, those supporting Romania's economic growth model, respectively those having the ability to honor their debts to banks compared with the rest of the economy. Therefore, non-performing loans represents an element which generates negative effects for the economy because, as we have shown, their decrease lead to value increases at the national level, instead their alert growth leads to: economic imbalances, insolvency of firms, to their bankruptcy and to negative effects on credit institutions. Therefore, the Romanian economy needs an efficient

lending process to awake the company's credit appetite, especially due to the significant potential which can lead to a sustainable resumption of lending. For this, we need a greater funding for companies operating in innovating industries, generating added value. In this way we can bring, on the one hand, benefits to the banking system and on the other hand to the economy.

### 3. THE EVOLUTION OF ECONOMY IN THE PERIOD 2007 – 2015 IN ROMANIA

As far as we know, the economic growth is associated with the gradual increase of the GDP components, namely the consumption, exports and investment increase. Furthermore, we can talk about economic increase when the GDP growth rate, registers positives values. The GDP highlights the final value of products and services obtained by the economic entities which develop their activity on the Romanian territory, having as destination the final consume. This indicator brings forward the size of the gross added value generated by the products and services produced within a country. As such, GDP may be defined as being the sum of added values generated by the goods that have been created by the economic entities within a country (Năstase et.al. 2008).

GDP is an economic indicator which analyzes the wealth produced annually in a country. This indicator highlights the total value of goods and services produced in a country and aims to measure the economic growth of the country. GDP is made up of: effective consumption, gross capital formation, the value of the exports of goods and services and the value of imports of goods and services. These components, through their evolution and their contribution to GDP, will influence the situation of the national economy.

Looking at the economy through this indicator we can highlight that in the last years it indicates economic growth. However, economy evolution is not free of risks, because the economic growth began to be determined mainly by consumption, while the potential level of GDP is still affected by the poor state of the transport infrastructure, the insufficient level of European funds absorption, the payment indiscipline of companies or by the budgetary adjustment which was mainly achieved through expenses cuts, on the background of investment planned failure. Another risk that occurs at the level of these evolutions is reflected by the inflation reduction which was especially, due to, internationally decrease in fuel prices and domestic decrease of VAT on food, marking the persistence of inflationary pressures manifesting after the exhaustion of the base effect.

Economic growth takes into account the lending process because, as we showed in the previous chapter, the credit contributes to the national economy development. Forwards, we will show the GDP evolution and the share of economic sectors to GDP growth. Therefore, as can be seen from the data bellow, GDP maintains its upward trend, which shows that the production of goods and services is growing. This GDP increase is mainly due to the results from agriculture, in some years, services and construction in the others.

**Table no. 4. GDP evolution in the period 2007-2015**

GDP (millions lei)					
Years	I Quarter	II Quarter	III Quarter	IV Quarter	Total
2007	78.168,1	95.567,1	112.064,1	132.458,6	418.257,9
2008	99.042,4	121.805,6	143.875,8	159.664,9	524.388,7
2009	98.906,9	119.631,6	136.070,5	155.913,8	510.522,8
2010	103.791,6	125.279,8	145.033,7	159.776,0	533.881,1
2011	110.356,9	131.176,9	156.218,5	167.345,5	565.097,9
2012	113.796,0	140.715,6	164.408,8	176.446,9	595.367,3
2013	121.620,7	148.256,7	176.151,3	191.427,3	637.456,0
2014	129.643,5	156.353,5	183.672,1	197.908,3	667.577,4
2015	140.355,7	162.661,5	197.252,5	209.996,9	710.266,6

Source: Processed by Eurostat

Although GDP has met an upward trend, Romania is facing a paradox: the economy is growing but the standard of living does not have the same tendency. This phenomenon can be

explained through the fact that Romanian society is strongly influenced by income, which makes people perceive an improvement in living standards only if their revenues increase. In other words, their growth comes from those gains that were made abroad or other revenues that were never reported and, therefore, they could not be taken into the calculation of these indicators. Better said, without the existence of this data, the indicators would show another situation nationally. Forwards, we will show the participation of each economic sector to GDP creation.

**Table no. 5. The participation of economic sectors to GDP creation**

Years	Agriculture (%)	Industry (%)	Construction (%)	Services (%)
2007	-26,8	0,0	28,6	12,9
2008	28,1	6,1	32,0	3,9
2009	-8,7	-1,1	-14,5	-6,5
2010	10,0	4,6	-3,0	-4,8
2011	13,9	0,1	-19,1	2,7
2012	-26,1	-7,0	-1,1	9,2
2013	33,7	4,0	4,4	1,4
2014	2,4	3,7	2,3	2,5
2015	-9,4	2,0	8,8	4,6

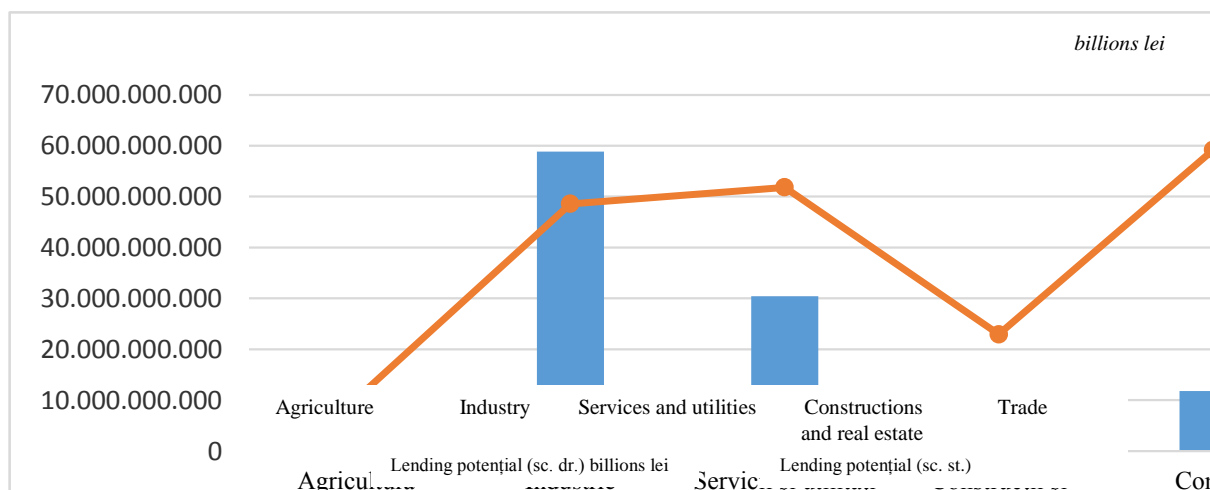
Source: Processed by MFP

According to the above data, we can observe that in some years, agriculture has contributed to GDP growth in high proportions and the other sectors less. This highlights the fact that in terms of GDP value growth, agriculture has a significant influence. From the perspective of agriculture sector lending we can say that it has not a significant influence because the loans level granted to this sector is low. Starting with 2014 we can note that this sector participate less and less to the GDP creation letting the industry to bring a plus to the economy. In 2015, the agriculture sector recorded negative values (- 9.4%), while the construction sector (8.8%) and services (4.6%) shows signs of recovery, which means that the economy was based on these sectors to generate growth.

Based on the above data we can see that in the recent years the sectorial structure of the economy, measured by their contribution to GDP, was close to that of the euro area (in particular by the decreasing of agriculture sector), a favorable evolution for the mitigation effects of some possible asymmetric shocks.

In the following, we analyze which sectors participating in GDP creation were credited, to highlight whether the economy has grown or not, by crediting activity. Regarding the lending potential of these sectors, we can see that credits are granted in industries that have had a significant impact on economic growth. We note that the main sector which has a high volume of loans is the industry, with a value above the aggregate value of the other economic sectors, namely 51.34% of the total lending potential, followed by services and utilities sectors with a share of 26.6% and trade with a plus of 10.3%. Therefore, we identify that there is a high potential in lending companies despite the fact that the economy has developed based on consumer credit growth.





**Chart no. 1. The volume of lending granted to firms depending on sectors of activity in 2014**

Source: Processed by NBR, Financial Stability Report, 2015

It can be noted that the sectors which have significant influence on economic growth (industry, construction and trade) are the most credited, resulting that the credit evolution in economy has a direct influence on the macroeconomic situation. In conclusion, the bank loan is one which promotes economic progress both, through companies from the economic sectors participating in the creation of GDP, as well as by the consumer credit generated by the population.

Today we are facing a GDP increase and, implicitly an economy increase on the background of a very low inflation rate of -0.6% in 2015. Hence, the above idea of inverse relationship is applicable. Thus, low inflation rates generate a high purchasing power which stimulates the production of goods and services that leads to a GDP increase and also of the economy. As Mugur Isărescu stated (Isărescu, 2016), low inflation is not a reason to be concerned because to have higher economic growth we must encourage work, productivity, innovation and the performing management.

Regarding the unemployment rate it can be observed the slightly downward tendency which shows that the population is open to work. This is mainly due to the net salary increase which has boosted the population to occupy a job. Therefore, the labor market is an important factor in the Romanian economy because if there is labor there is a demand that will spur the investments and thus, will be observed a positive influence at the national level. Based on realized studies (Țoțan, et. al., 2016) demonstrates that, while the GDP value is growing the number of unemployed is lower. Thus, as can be seen, in 2015 the unemployment rate is declining (6.5%) and GDP is growing (3.8%).

#### **4. THE CREDIT INFLUENCE ON ECONOMIC GROWTH IN THE PERIOD 2007 – 2015 IN ROMANIA**

The assumption on which this study was conducted is based on the fact that the economic growth is influenced by credit in high proportions. Therefore we will analyze the existing correlations between GDP and credit indicators based on the results of the SPSS, a program for statistical analysis of data used for data editing, results processing and their presentation, either numerical or graphical form. We analyzed the GDP values and credit volume in the economy. The analyzed values are presented in national currency, respectively millions RON, and were collected from NBR statistics. These values have been entered into the SPSS program and the means used is the regression method.

The regression function is analytically describing a mathematical relationship between a dependent variable and independent variables. In this case the dependent variable (effect) is the GDP, and the independent variable (cause) is the lending volume. The regression model is highlighted by the linear regression function which has the following form:  $y = a + bx$  where  $y$  is the dependent variable,  $x$  is the independent variable,  $a$  and  $b$  are the regression coefficients. In this

paper, the regression model has the form:  $GDP = a + b * Total\ credit$ . The main issues arising from the performed analysis are:

- ✓ Economic growth is based mainly on credit in the economy, especially on the consumer credit that began to grow in the recent years (2015).
- ✓ Lending/crediting is an important means for financing the Romanian economy both, for the state and for the private sector (firms and individuals/households).
- ✓ A negative influence on economic growth is caused by the non-performing loans existence.

To prove that the economy is influenced in high proportions by the credit volume and development/evolution, an analysis has been performed using SPSS software program. The data used in the study are the quarterly amounts of GDP and credit values. The credit volume and its evolution were analyzed by sector, whereas we try to highlight the extent to which the lending to state and private sector made a contribution to the economic growth. It was found that by applying the regression method, the model chosen is significant and deserves to be analyzed because the correlation coefficient (R-Square) is located within the limits ( $0 \leq R \leq 1$ ) and the reduced value, significantly different from 0, of Significance F strengthens the premise underlying this study. The results are shown in Annex 1.

## 5. CONCLUSIONS

According to the results generated by SPSS, regarding the implications of credit, on the economic growth was found that:

- ✓ the link between economic growth and lending is of medium intensity, because due to the correlations established, the determination coefficient (R-Square) settled at the level of total credit, is contributing to GDP growth in a 40% share.
- ✓ the level of GDP is influenced both, by the private sector with a share of 35% and by the public sector with a share of 40%. This highlights the fact that the share of government credit is 5 percent higher than the non-government credit.
- ✓ household loan affects GDP growth in a rate of 34%.
- ✓ the level of loans granted to companies have made a positive contribution of 32% to GDP, lower than credit granted to individuals.

It appears that in 2013 it has been registered an economic growth despite the decrease of bank credit volume, and in 2014 and 2015 this increase was based on the production capacity, which marks the fact that there has been a break between lending and economy, but this decoupling takes place under certain conditions (those circumstances show that new loans will condition the economic revival, but not any revival is the equivalent of growing). However, when we talk about the decoupling between credit and economic growth we must distinguish between the loan stock and production, because their decoupling occurs when banks operate with write-offs (deletions of some assets from the balance sheet), even if they are granting new loans. Another requirement takes into account the "liquidity trap" because some banks, although they have "piles of money", they are reluctant to grant loans.

This decoupling occurs due to the fact that financing the economy does not mean only bank component, because the liquidity that is not caught in the monetary statistics can help to finance the economy, reason for which the economic recovery is easier. Thus, we can talk about economic growth without credit if the country's financing is supported by other factors, such as imports and exports for example, attracting European funds that will determine the infrastructure modernization, increased competitiveness and, implicitly, creating additional liquidity for the economy. In other words, it becomes necessary, for medium and long term, to have adequate funding, being bank or other sources, so that we can economically revive. Therefore, it is necessary to maintain a balanced credit stock and to not impede new loans development because the growth of these loans will also increase the credit stock. Therefore, the national economy has grown mainly due to household loans and due to consumer loans. Within this study we found that the loan process is an essential factor and without it an economy cannot develop. Thus, we can say that once with the lending activity increase, the economy will record growth, whereas it is one of the important development factors.

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