

## **BANK CREDIT AS A MEANS FOR COUNTERACTING THE ECONOMIC SLOWDOWN**

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### **Abstract**

*This paper attempts to identify the factors contributing to the limitation of lending which may stem from risk aversion of both banks and companies. It also presents the importance of credit as one of the main sources of funding the needs of companies, as well as one of the major means for counteracting the economic slowdown. Therefore, an empirical part of this paper comprises research on the correlation between gross domestic product and credit given to companies in general. Since investments made by companies have a significant impact on economic growth, the paper also presents the dependence of investments on investment credit. On the basis of research done, it has been ascertained that the main goal of economic policy should be to stimulate the activity of entrepreneurs by implementing various regulations that would increase lending by banks. Such actions would definitely improve the economic situation on the whole .*

**Keywords:** *limiting lending, the importance of bank loans for the economy, economic slowdown, the importance of entrepreneurial investments for the economy.*

### **1. Introduction**

An economic slowdown is a characteristic feature of every economy. However, in order to precisely define it, it is necessary to take into account the interdependencies between particular elements of the economic system and problems which stem from them. During an economic slowdown, entities existing in the non-financial market send out signals indicating an increased demand for support from financial institutions, mainly from banks. Therefore, the dependencies between institutions operating in the above mentioned markets increase during difficult periods (Puszer, 2012, p. 11-12).

Economic studies indicate that credit is a common method of financing the economic activity of companies, and for many of them also a way to cover the costs related to their development. The economic slowdown that can be

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currently observed will definitely have a negative impact on the real economy. Therefore, stimulating effective demand should be an important part of the operation of market entities. One of the methods of stimulating the economy is to provide inexpensive credit to market entities, the type of which is currently limited in Poland (Kluza, 2009, p. B13). Therefore, the question appears as to the reasons for the presently existing situation. Which factors determine bank policies of limiting lending to companies?

Credit is the major source of income for banks. Therefore this paper aims to identify the main reasons for banks limiting the availability of credit to companies, and to determine the importance for companies of lending as well as to the whole economy as it attempts to identify the link between the loans given to companies and economic growth measured by gross domestic product and by the size of investments made in the economy.

The definition of credit has been broadened in the paper to include credit and cash loans given to companies by banks, as required by the availability of statistical data. Despite the fact that the definitions of credit and loan differ, they will not be discussed, and for the sake of this paper will be referred to as credit. Due to the availability of statistical data the notion of entrepreneurs has been divided into two subcategories: the sector of companies that include state-owned enterprises and companies, private enterprises and companies as well as cooperatives, including private individuals operating their own business enterprises that employ more than 9 people. We will refer to individuals operating their own business enterprises that employ up to 9 people as individual entrepreneurs. (NBP. Instrukcja wypełniania..., 2013, p. 8-9). The Pearson correlation coefficient calculated in MS Office Excel was used to determine the relation between presented categories (Wierziński, 2006, p. 185-186). Also, a hypothesis was formulated which says that lending to companies by banks increases along with economic growth.

This paper is mainly based on reference books and papers, partly theoretical, as well as statistical data from various sources (i.a. Central Statistical Office, National Bank of Poland). The first section of the paper attempts to identify the factors that contribute to limiting lending by banks. It then presents factors that impact the demand for credit on the part of the companies. It is followed by an attempt to identify the influence of credit granted to companies on the macroeconomic indicators which may have positive impact on the economy in times of the economic slowdown.

## **2. Limiting lending by banks**

Multiple empirical research proves that stimulating economic growth depends on the efficiency of financial markets that provide funding both to

the companies and private individuals. At the same time, by limiting access to the sources of funding, the entire growth of the economy is hampered (World Bank..., 2008). Entities that do not receive external support are often unable to implement planned investments, which later impacts the state of the entire economy. Companies then do not have the chance for further development which results in decreased income, followed by limited budget revenues as well as the deterioration of conditions in the labour market and a decrease in innovativeness of the economy. This is due to the fact that companies that face low income attempt to limit their operating costs, including personal costs, and they also limit expenditure on research and development, thus having a negative impact on the innovativeness of economies and economic growth (Leicht, 2011, p.7).

Recently, we have observed persisting difficulties with obtaining external funding by the companies. Despite enormous resources supplied by the European Union to the financial system, banks have been taking a cautious approach to lending, which has led to a decrease in lending both for individuals and the companies (Dukat, 2013).

Publications point to various reasons for a policy of limited lending by banks. Among the major ones are:

- changes in the monetary policy of the central bank,
- imposing restrictive precautionary regulations on banks by supervising institutions,
- deteriorating situation in the banking system which results in increased risk of insolvency of banks,
- increase in credit risk,
- limited granting of preferential loan to borrowers (lesser support from the government),
- restrictive requirements of banks towards companies (among others: good credit standing and proper collateral security) (Tymoczko and Pawłowska, 2007, p. 48).

Limited credit needs on the part of the companies may exist due to:

- significant increase in costs related to obtaining the funding which is disproportionate to the real level of the risk of supporting the particular company,
- limiting the availability of financial products offered by markets, or their full withdrawal,
- an increase in the number of requirements with regards to documents supplied by the entities stemming from increased level of complexity of internal procedures of the banks,
- centralizing the banks' decision-making centers leading to uneven placement of capital (Leicht, 2011, p. 7).

Limited lending by banks may stem from companies' increasing reluctance to take risk. This basically means that when an economic downturn is anticipated, banks may reassess expectations in terms of the scope of their activity. As a result, they lower their demand for credit, even if its price is low. The years 2007-2011 have been acknowledged as a difficult period for the country during which the economy was subject to a test regarding economic stability. However, it is important to acknowledge the state of the Polish economy in 2012 as well as the prospects for 2013, during which we may experience an economic downturn to a much greater extent. In the fourth quarter of 2012, the economic and financial state of the industrial sector significantly worsened (NBP Instytut Ekonomiczny, 2013, p. 5). A slight deterioration with regards to the preceding quarter was also recorded in the first quarter of 2013. Companies believe that a slight improvement in the situation could be noticed no sooner than in the second half of 2013. However, in the second quarter of 2013 further deterioration is expected (Ibidem, p. 5). As a result of the persisting unfavorable situation in the economy, the percentage of the companies applying for credit in the fourth quarter of 2012 was very low. At the same time, the availability of credit remained at a low level compared to the third quarter of 2012 and it was significantly beyond the level from the previous year. The main reason, according to companies, as to why they were denied credit was lack of lending capacity (56%); the second reason was lack of proper security (16%). It is worth pointing out that the percentage of companies using credit as well as those applying for it, remained on one of the lowest levels recorded (21,6% of the sample).

The structure of the allocation of credit has remained stable. In the fourth quarter of 2012, similarly to the previous quarters, companies used mostly working capital facilities, mainly to fund their resources. Companies used bank credit to a much lesser extent in order to fund investments in fixed capital (slightly over 16% of new credit) when the long-term credit prices remained at relatively stable levels. What is interesting is that in the first quarter of 2013 a decline in the interest rate of long- and short-term credit was observed comparing to the previous quarter, (There was both an annualized and quarterly decline).

Risk aversion can also be seen on the part of the banks. Even though studies often focus only on the problems encountered by borrowers, it is equally important to consider issues from the perspective of credit providers. Problems encountered by banks affect the amount of credit available and what follows; the situation pertaining to the actual state of the real economy. Banks may considerably limit lending due to various reasons mentioned above. These in turn affect the situation in terms of potential borrowers (Puszer, 2012, p. 17). Limitations in lending may, among others, stem from banks'

requirements for liquidity as well as from capital requirements. Liquidity of banks should be considered both as current liquidity; i.e. the ability to meet the current commitments of the banks and their ability to continue their operations by ensuring proper balancing of assets and liabilities. Maintaining appropriate parameters by banks and other financial institutions is currently one of the major problems of the financial market (Hałaj 2008, p. 16).

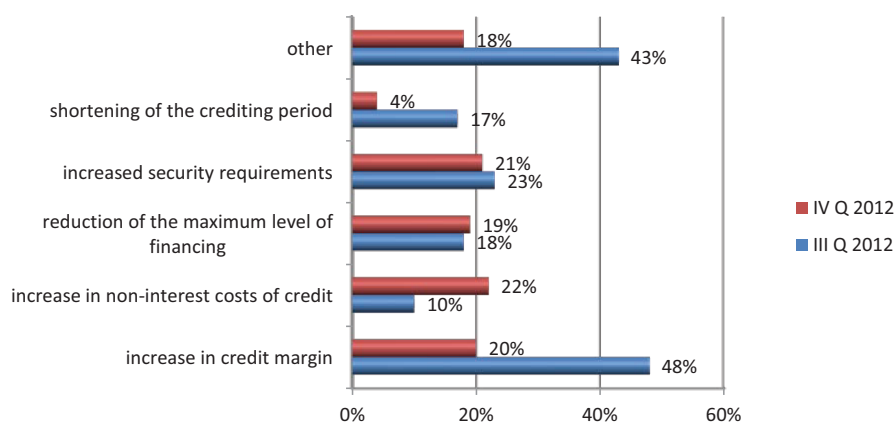
In order for the economy to grow in a stable manner, it is crucial that the banks do not reduce lending more than is required by the regulations imposed on them by the New Capital Accord that has been in place up until the present, but also by the requirements gradually introduced by the Basel III regulations (Kochaniak 2011, pp. 156 – 158). It is also possible to gain support from the central bank which, through monetary policy, can provide non-financial entities with capital necessary for the proper functioning of the market economy.

Even though the world-wide financial crisis in the years 2007-2011 did not have a significant influence on the Polish economy, it contributed to the slowdown of its development, and to the tightening of the credit policy by banks, including banks that operate in Poland, and which altered their operations significantly. One of the major changes was the introduction of a centralized European system of overseeing or supervising the entire financial system as a whole. It was implemented at a macro- and micro-prudential level and is designed to assess the situation of individual institutions in particular financial markets in order to ensure the stability of financial systems and protection for their clients. Implementation at the European level allows for the harmonization of national regulations and the unification of existing regulations, as well as facilitating risk assessment in financial systems of individual countries. However, it is worth pointing out that the main aim of the newly created system is supervision on a national level, since national institutions are to provide micro-prudential supervision and ensure protection for clients. Nevertheless, the ultimate decision-making and supervision remains at the European level (Hryckiewicz and Pawłowska, 2013, p. 16).

The crisis has affected the banks operating in particular countries of the European Union to a different extent. However, the Polish banking sector has proved to be relatively resistant both to the American crisis and the debt crisis in the Euro zone. This has resulted in the further functioning of the national banking system based on the traditional banking model; i.e. focusing on deposit and credit operations (Lepczyński and Penczar, 2012, p. 406). The level of the financial leverage of the Polish banking sector is still low compared to that of developed countries, which has sheltered Polish banks from certain problems. When granting credit, banks have to assess whether the security of deposits is put at risk. Up until 2005 the Polish banking sector

was characterized by a relatively steady balance sheet total, meaning that the amount of deposits was suffice to fund lending. The situation started to change rapidly in November 2007. The value of credit according to the data as of the end of 2008 significantly exceeded the value of deposits (respectively: 605.3 and 483.2 billion PLN) and this trend continued in the next years (at the end of 2011 it was 800.8 and 698.5 billion PLN respectively), and the quick rise in lending was funded mainly from foreign capital. At the end of 2005, foreign liabilities comprised 8% of the balance sheet total of the banking sector; in December 2008 they comprised 18% (Stefański, 2009, p. 299). This figure remained at a similar level in 2011 and it is not expected to change significantly in the coming years, which means that a considerable increase in lending is not very likely (KNF. Raport o sytuacji..., 2012, p. 5).

In 2012 credit policy was reshaped taking into consideration unfavourable forecasts of the economic situation and increased risk in particular sectors, especially in the construction sector (including construction, property development d related areas). These experienced a considerable downturn in 2012. Statistical information from banks confirm the above statements. In the fourth quarter of 2012 banks tightened the criteria for granting credit and loans to the companies, and this applied especially to small and medium-size companies. According to the information received from banks, in reality the scale of this process was smaller than it was expected to be (in the fourth quarter of 2012 banks forecasted bigger scale of restrictions). However, it is important to mention that considerable limitations were introduced as early as in the third quarter of 2012. The graph presented below reflects the situation (Fig. 1.)

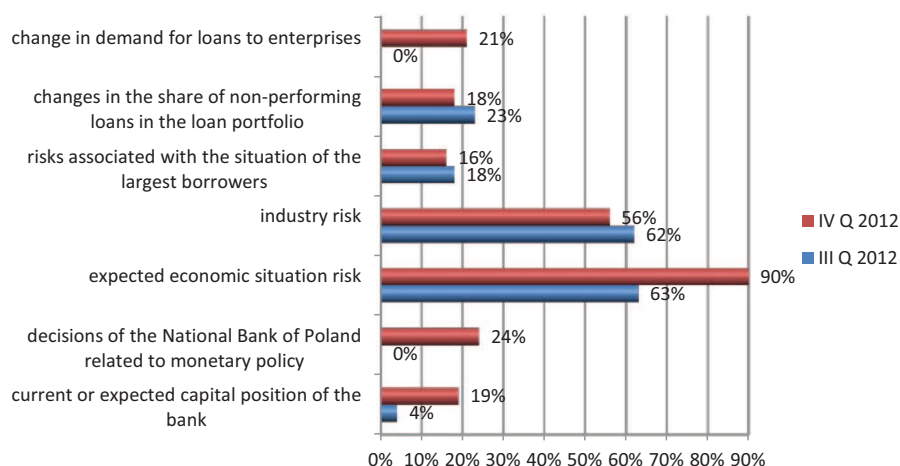


**Figure 1.** More stringent conditions of granting credit to companies

Source: self-study on the basis of: NBP. Sytuacja na rynku kredytowym... (2013).

In the second half of 2012 banks mainly introduced a policy of increased margins when dealing with companies and stressed the need to increase requirements and other conditions for granting credit, including a tightening of minimal market criteria. There was also an increase in the number of requirements for better forms of collateral as well as a reduction in maximum funding limits.

A lot of banks justified the tightening of their credit policy by pointing out the growing risk of deterioration in the economic situation in subsequent quarters. More than a half of all banks expect the risk factor to increase in particular sectors, especially the construction sector (which includes construction, property development and related areas), automotive industry and transport, retail and furniture production and woodworking. A tightening of credit policy was also a result of changes in the monetary policy of the National Bank of Poland: a negative impact of the lowering of the interest rates was mitigated by a rise of credit costs. However, in reality there were numerous reasons for changing credit policies (Fig. 2.) What is important to remember is that prospects for the future of the economic situation are difficult to forecast and the forecast by banks is not a positive one. Therefore, in the near future companies should not expect a credit policy to ease off. Uncertainty as to the future economic situation hampers correct assessment of credit risks and other risks faced by banks.



**Figure 2.** Reasons for changes in the credit policy of banks

Source: self-study on the basis of: NBP. Sytuacja na rynku kredytowym... (2013).

It is necessary to mention that companies which are aware of the general market downturn and lack of prospects of quick improvement in the economic



situation have a lower desire to increase their debt load, especially to take on more long-term credit as this results in postponing planned investments.

### **3. Credit as a source of funding for companies**

The Polish financial market is constantly developing and credit is one of the major sources of external funding for Polish companies. Therefore, limitation of credit availability by banks leads to problematic situations for companies when they find themselves lacking the necessary funds to support either their current activities or long-term investment projects. Without access to external funds, companies do not have the opportunity to fully use their production potential to extend the scale and scope of their production (Marzec and Pawłowska, 2011, p. 7).

Studies mention numerous functions of credit including issuing, income, distributing and stimulating functions (Bem, 2008), as well as the control function enabling the controlling of economic processes of the borrower (Stefański, 2009, p. 301). From the point of view of the borrower, the most important functions are the income and stimulating function. The stimulating function of credit refers to the purposes of the credit in the economy: to stimulate or reduce the economic activity of the companies. As far as the income function is concerned, it is related to the influence of credit on the income of the companies. Access to funding for company activities is one of the major factors which impacts the functioning and development of the company in the market. However, it is important that both sides show an interest in fostering mutual cooperation, i.e. the entrepreneurs should indicate a demand for credit and banks should grant this credit. The level of availability of financial resources and conditions under which companies can use credit are, at a later stage, the factors that contribute to the introduction of new products, services and technological solutions on the market (Brodowska-Szewczuk, 2009, p. 135).

The demand for bank products depends not only on the price that the company will have to pay the bank for granted resources. The decision on applying for credit is also influenced by such factors as the conditions of its granting, use and repayment. The bigger the requirements, the lower the demand for credit. Banks determine the form and size of the credit on such factors as the size of the company. Since the sector of small and medium-size companies is characterized by a low level of equity and simple organizational structure, usually the range of funds for such entities is smaller than in the case of large companies. However, as commonly known, the basic condition to be granted a loan is having creditworthiness (Wiatr, 2012, p. 146). Nevertheless, companies' credit applications are still most commonly rejected by banks due



to the lack of proper financial standing of the potential borrowers displayed through low liquidity and profitability (Tymoczko and Pawłowska, 2007, p. 48). Still credit is repaid from free cash flow gained from the borrower's operations and, therefore, past information has now more commonly become the starting point of assessment of the future financial standing of the borrower, taking into consideration the current and predicted economic situation (Dahmen and Jacobi, 2009, p. 83). Similarly, from the point of view of the companies, a vital factor influencing the demand for bank credit is the general economic situation which may be measured by a dynamic growth of the gross domestic product. Therefore, is it possible to observe a dependency between the gross domestic product and the companies' demand for credit?

The table below presents a comparison of statistical data related to the gross domestic product between March 2002 and December 2012 from a quarterly perspective and a comparison of credit and loans granted to companies and individual entrepreneurs within this period also from a quarterly perspective (Tab. 1.). Calculated Pearson correlation coefficients between gross domestic product and credit granted to companies and to individual entrepreneurs remain on very high positive levels which means that there is a very high relation between variables (Wierzbiński, 2006, pp. 185 – 186). Coefficients significantly exceed the critical value which needs to be reached by the absolute value of the correlation coefficient in order for it to be considered significantly greater than zero, depending on the sample size (Ibidem, p. 186). Moreover, the studies of the Pearson coefficient prove that within the discussed period, as many as 86% of changes to gross domestic product can be explained by the linear regression line of the relation with loans granted to companies ( $R^2$  – coefficient of determination) and as many as 88% of changes to gross domestic product can be explained by the linear regression line of the relation with loans granted to individual entrepreneurs. Very strong relation (almost a perfect linear correlation) occurs between credit taken by the companies and credit granted to individual entrepreneurs (Pearson coefficient of 0.9776), which may indicate the existence of strong connection between companies and individual entrepreneurs. Therefore, economic situation in the sector of companies may have considerable impact on the economic situation in the sector of individual entrepreneurs.

**Table 1.** Gross domestic product, credit in general granted to individual entrepreneurs and companies by banks in Poland between March 2002 and December 2012 (figures in millions of PLN, quarterly view)

Credit in general				
Quarter		Granted to individual entrepreneurs	Granted to companies	Gross domestic product
2002	March	53 644,74	354 115,92	187 570,00
	June	52 698,31	351 593,84	197 917,50
	September	47 471,04	364 478,27	200 185,10
	December	46 008,96	360 407,45	222 186,90
2003	March	46 268,64	364 046,55	193 842,50
	June	45 632,24	365 949,18	207 307,10
	September	45 875,66	367 459,48	208 268,40
	December	46 207,61	370 596,92	233 738,20
2004	March	46 363,48	368 936,10	213 035,60
	June	47 269,67	360 585,46	224 806,10
	September	47 445,28	353 441,93	228 044,80
	December	47 251,75	354 650,10	258 651,10
2005	March	47 365,93	353 592,20	229 395,80
	June	48 788,23	360 832,52	238 094,50
	September	50 089,66	359 550,49	241 759,80
	December	50 619,46	361 127,28	274 052,20
2006	March	51 125,35	367 550,30	242 784,90
	June	53 379,57	376 049,45	255 497,10
	September	55 786,25	389 954,32	261 510,90
	December	58 398,25	403 784,81	300 238,50
2007	March	62 054,11	422 407,24	269 686,00
	June	67 721,06	450 484,29	282 591,40
	September	72 402,67	479 095,62	290 657,70
	December	75 999,61	501 751,57	332 331,20
2008	March	81 832,33	528 753,10	299 147,70
	June	90 806,54	561 660,81	310 884,30
	September	96 199,71	595 425,98	314 741,70
	December	102 053,66	639 895,68	350 734,60
2009	March	107 207,62	672 410,50	313 058,10
	June	110 847,80	660 052,27	325 485,60
	September	112 263,14	642 205,88	332 478,90
	December	115 289,48	634 312,09	373 482,50
2010	March	117 457,42	621 235,16	323 206,60
	June	122 895,14	618 355,34	344 700,00
	September	126 312,94	619 013,76	350 607,20
	December	128 529,95	620 810,84	398 071,50

2011	March	132 433,97	624 333,75	348 537,60
	June	138 408,79	650 481,03	368 884,70
	September	142 199,53	680 103,54	375 355,60
	December	145 465,93	714 069,91	430 467,40
2012	March	146 585,94	722 836,53	370 721,00
	June	151 587,21	739 052,03	388 258,00
	September	153 517,02	748 100,18	392 078,00
	December	154 314,13	742 126,53	402 653,21
Pearson correlation coefficient		0,9355	0,9300	
Coefficient of determination		88%	86%	

Source: self-study on the basis of: GUS. Rachunki kwartalne... (2007); GUS. Rachunki kwartalne... (2012); NBP. Należności i zobowiązania... (2013).

The observed high variation of investments in fixed assets is considered one of the main reasons for cyclical changes of the volume of aggregate demand and, as a result, changes to the gross domestic product. The relationship between the volume of implemented investments and the state of the economy is noticeable. A large part of these investments is done by the companies, therefore, decline in the number of investments in the sector of companies is often a portent of the worse economic situation, and an increase in the number of investments is often confirmation of the upward trend. In order to cover the investment costs, companies use resources from financial institutions more and more often (Molo, 2009, p. 37). In relation to the above statements, this paper additionally examines the linear relationship between investments made in the national economy between March 2002 and December 2011 and investment credit granted to companies and individual entrepreneurs in this period from a quarterly point of view (Tab. 2.) The time range of the data is related to the availability of statistical data regarding the capital expenditures in the national economy. Calculated Pearson correlation coefficients point to the relationship between variables, and their values are higher than the critical value, therefore, there is an indication of a linear relationship between investments and investment credit granted to companies and individual entrepreneurs. These connections are not as significant as the connections between the gross domestic product and granted credit (Pearson coefficients on the level of 61% and 62% respectively; details presented in Tab. 2.) It is concluded that in the discussed period on average 37% of changes in investments could be explained by linear relationships with investment credit granted to companies, and respectively 38% of changes could be explained by the linear regression of the association with investment credit granted to individual entrepreneurs. On this basis it can be assumed

that the role of investment credit in funding investments of the companies is relatively significant. Strong linear correlation between investment credit of the companies and those of individual entrepreneurs (Pearson correlation coefficients of 0.9692) confirms the existence of strong relationships between companies and individual entrepreneurs, which allows to assume that the rise in demand for credit among companies influences the rise in demand for credit among individual entrepreneurs.

**Table 2.** Investments, investment credit granted to individual entrepreneurs and companies by banks in Poland between March 2002 and December 2011 (figures in millions of PLN, quarterly view)

Investment credit				
Quarter		Granted to individual entrepreneurs	Granted to companies	Investments
2002	March	5 571,42	33 977,31	25 942,80
	June	17 118,75	107 075,65	32 858,90
	September	16 072,95	112 924,88	35 023,00
	December	16 003,42	118 728,78	57 647,20
2003	March	16 476,91	120 814,04	25 309,90
	June	16 199,35	120 044,08	33 073,30
	September	16 255,55	121 016,87	36 305,90
	December	16 740,37	124 975,21	59 069,00
2004	March	17 215,13	122 899,72	26 444,80
	June	17 544,28	118 996,40	35 192,90
	September	17 315,98	114 670,36	39 204,30
	December	17 341,99	111 838,68	66 316,20
2005	March	17 216,89	110 341,29	28 057,30
	June	17 686,13	115 371,79	37 211,20
	September	18 271,04	115 668,17	41 815,40
	December	18 637,90	115 479,72	72 096,10
2006	March	18 625,37	115 801,03	30 577,20
	June	19 577,58	120 395,94	43 806,20
	September	20 788,49	125 413,15	49 831,70
	December	21 193,91	123 417,49	84 649,00
2007	March	22 407,79	130 387,54	38 501,10
	June	24 097,29	133 018,86	53 322,60
	September	25 022,52	137 198,71	60 030,70
	December	26 065,08	138 420,19	101 874,10
2008	March	27 357,42	139 163,71	45 771,80
	June	29 992,09	149 571,17	63 849,70
	September	30 997,90	160 616,97	65 386,90
	December	33 041,25	176 149,55	108 897,60

2009	March	34 621,70	188 170,59	46 569,40
	June	35 102,23	186 639,36	63 505,80
	September	34 837,95	182 558,45	66 033,50
	December	35 766,27	183 239,76	108 540,20
2010	March	36 522,62	180 312,65	40 031,90
	June	37 927,44	181 565,49	62 237,30
	September	39 234,12	183 711,23	67 223,30
	December	40 362,44	186 480,46	111 827,80
2011	March	41 099,59	188 104,90	42 613,30
	June	42 183,20	198 592,50	67 352,90
	September	43 697,38	210 113,30	74 030,30
	December	44 743,19	228 172,73	125 746,30
Pearson correlation coefficient		62%	61%	
Coefficient of determination		38%	37%	

Source: self-study on the basis of: GUS. Rachunki kwartalne... (2007); GUS. Rachunki kwartalne... (2012); NBP. Należności i zobowiązania... (2013).

#### 4. Conclusions

The analysis carried out in this paper enabled confirmation of the formulated hypothesis. Along with economic growth, there is a rise in the demand for credit among companies. A strong relation has been observed between the gross domestic product and credit granted to companies and individual entrepreneurs in general, which was measured by the Pearson linear correlation coefficient. On this basis, it can be inferred that actions aimed at stimulating the economic growth which will result in an increase in gross domestic product, will contribute to an increase in demand for credit among companies. At the same time, supporting companies with credit will improve the economic situation. Therefore, the aim of the macroeconomic policy should be to stimulate economic activity through various incentives, including governmental programmes, which would increase the interest of companies in credit and would result in an improved economic situation.

The analysis also provides evidence that in the discussed period investment credit was important in funding investments made by companies. However, strong relation among variables cannot be observed, which could indicate that apart from bank funding, companies gained resources for investments from different sources. From a historical perspective the use of investment credit is significant and points to an upward trend, which may be related to the development of the financial market and the banking system and which could result in systematic stimulation of the economy in the future.

Despite the current economic slowdown, companies in Poland have been coping surprisingly well with the situation. However, recently banks operating in Poland have introduced new restrictions related to granting credit, which may result in reducing lending resulting in an economic downturn. Therefore, the goal of the policy of the government and the supervising institutions should be to support the activity of companies through the use of appropriate instruments and regulations that stimulate lending. Such actions should mitigate the impact of the economic slowdown on the Polish market.

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