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EFFICIENCY OF THE BANKING SYSTEM FUNCTIONING AND ITS IMPACT ON THE DEVELOPMENT OF POLTAVA REGION

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This article deals with the efficiency of the banking system functioning in Ukraine (income, expenditures, result of activities, profitability of assets, profitability of capital) and analyses the indicators of the banking institutions in Poltava Region (the weighted average rate on loans to non-financial corporations, the weighted average rate on loans to households, the weighted average rate on deposits to non-financial corporations, the weighted average rate on deposits to households). The authors substantiate the internal and external impact factors on the development of the banking system in Poltava Region. The pair correlation analysis is used to estimate relationship between the activities of the banking institutions and the development of Poltava Region.

Key words: banking system, efficiency of the functioning, impact factors, indicators of the development, correlation analysis.

ЕФЕКТИВНІСТЬ ФУНКЦІОНУВАННЯ БАНКІВСЬКОЇ СИСТЕМИ ТА ЇЇ ВПЛИВ НА РОЗВИТОК ПОЛТАВСЬКОГО РЕГІОНУ

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В статті визначено ефективність функціонування банківської системи України (доходи, витрати, результат діяльності, рентабельність активів, рентабельність капіталу), а також проаналізовано показники діяльності банківських установ Полтавського регіону (середньозважена ставка за кредитами нефінансовим корпораціям та домогосподарствам, середньозважена ставка за депозитами нефінансових корпорацій та домогосподарств). Автори обґрунтували зовнішні та внутрішні фактори впливу банківської системи на розвиток Полтавського регіону. З метою оцінки тісноти зв'язку між обсягом наданих кредитів та обсягом залучених депозитів у діяльності банківських установ та розвитку Полтавського регіону використано парний кореляційний аналіз.

Ключові слова: банківська система, ефективність функціонування, фактори впливу, показники розвитку, кореляційний аналіз.

PROBLEM STATEMENT. Macroeconomic development of the regions is mostly determined by the efficiency of the banking system herein. The banking system provides the basis for sustainable activities of the national economy and households in the region by ensuring investment needs, the need for additional funding, financing receivables of the enterprises in the process of savings and financing its current needs. The issue of the impact of the banking institutions' activity on the regional development is becoming especially topical in times of difficulties of the economic situation of the country, financial and economic crises, instability of the external processes that contribute to the regional problems.

Proceedings of G. Azarenkova, V. Bazylevych, O. Baranovskiy, B. Bytrymenko, I. Britchenko, S. Vedernikova, I. Petrov, N. Saliy, A. Stepanenko, B. Khlivnyi, D. Sharaievskiy, O. Shynder [1–12] are devoted to the problems of the banking system functioning and its impact on the development of the economic processes of the country. However, one should note the dual character of such research, as many researchers pay attention to the impact of the economic development on the activity of the banking system («recovery potential banking sector of the

economy, and hence the global market of the banking services in general, strongly depend on the effectiveness of the measures that will be used in order to stimulate the development of the industries in different countries ...» [2]). Other researchers concentrate on the impact of the banking sector on the development of the economy («... in the market economy the activities of the banks located in the center of the whole mechanism of the financial system, because they have concentrated large mass of financial resources, effective use of them, using a balanced banking system activity, promotes economic and financial strength of the country» [11]).

In our view, the dependence «the efficiency the banking system functioning – the development of the economy» is more relevant in modern, as a growing number of unprofitable enterprises and deterioration of the social security of the population determine the need for additional financing from the banking sector.

The aim of this article is substantiation of the impact factors of the banking system on the development of Poltava region.

EXPERIMENTAL PART AND RESULTS OBTAINED. For the substantiation of impact factors of the banking system on the development of region

first of all we need to define the indicators of the banking system functioning and indicators of the development of the region.

The efficiency of the banking system functioning is defined by dividing the result of their activities to the

capital and to the asset (profitability of the capital and profitability of the assets). According to the National Bank of Ukraine (Table. 1) for the last 7 years, the banking system of Ukraine functioned the most effectively in 2007, the least effectively – in 2009.

Table 1 – Indicators of the efficiency of the banking system of Ukraine * mln. UAH

Indicators	2007	2008	2009	2010	2011	2012	2013
Income	68185	122580	142995	136848	142778	150449	168888
Expenditures	61565	115276	181445	149875	150486	145550	167452
Result of activities	6620	7304	-38450	-13027	-7708	4899	1436
Profitability of assets,%	1,50	1,03	-4,38	-1,45	-0,76	0,45	0,12
Profitability of capital,%	12,67	8,51	-32,52	-10,19	-5,27	3,03	0,81

* according to NBU reports [13]

Effective functioning of the banking system till 2008 had been driven by macro-economic parameters such as price stability, increase of the production efficiency, decrease of the unemployment.

During this period there was a rapid increase in the number of banks (the number of banks that had NBU license on banking operations amounted to 153 in 2000 and 175 in 2007), the involvement of foreign capital in the banking business (the share of foreign capital in the banks was 35% in 2007, and only 13.3% – in 2000), the own capital increased on 76% and assets – on 63.4%.

It is known that 2008-2009 were characterized by the global financial crisis, which greatly impacted on

the efficiency of the banking system functioning as a result of his inflation, the decline in real wages, falling solvency of the real sector.

Considering the internal factors that affect efficiency of the activity of the banking system there should be noted the volume of loans and lending rates (which influence the formation of interest income and have the largest share in the income of the bank), and deposits and deposit rates (which influence the interest expense of the bank formation and the resource base, possibility of providing loans). Statistics for these indicators for Poltava region are given in Table. 2.

Table 2 – Indicators of the activity of the banking institutions in Poltava region*

Indicators	2008	2009	2010	2011	2012	2013
Total loans, mln. UAH, of which:	11280	9657	8203	7830	7948	7870
- to non-financial corporations, mln. UAH.	6168	5446	4617	4427	4736	4675
- to households mln. UAH.	5112	4211	3586	3403	3212	3195
Total deposits, mln. UAH, of which:	7051	6520	9942	10939	13546	14010
- to non-financial corporations, mln. UAH.	1867	1460	3003	3054	3811	3 975
- to households mln. UAH.	5184	5060	6939	7885	9735	10035
The weighted average rate on loans to non-financial corporations,%	15,5	18,0	14,0	13,3	14,5	13,2
The weighted average rate on loans to households,%	18,7	22,3	25,2	26,5	27,4	27,3
The weighted average rate on deposits to non-financial corporations,%	7,5	11,5	7,0	5,8	10,5	6,7
The weighted average rate on deposits to households,%	8,7	12,2	11,4	9,1	11,9	12,5

* according to NBU reports [13]

As shown by statistics in the Table. 2, the volume of loans has been decreasing in Poltava region since 2008 in their total amount and by non-financial corporations and households. At the same time, the volume of deposits increases from year to year (except in 2009, when it was quite risky to invest money on deposit as a result of the unpredictability of inflation

expectations, distrust in the banking system due to the financial crisis, the limited funds available).

The tendency to exceeding deposits over loans may cause a decrease net income and efficiency of activity of the banking institutions. So, the banks are facing the task of determining the effective interest rate policy, promoting the interest of the real sector and households

obtaining credit by market incentives, creating of the competitive advantages.

However, we should emphasize the interrelation of the socio-economic status of the region and the efficiency of the banking system.

As G. Azarenkova says, «the key function of the banking system in general and banks in particular should be the accumulation of the financial resources and their effective placement in the real economy, that is, lending to legal entities» [1].

Lending process of the industrial enterprises contributes to their development, expansion of the activities. Also, if the economic efficiency of the enterprise exceeds the rate on the loan, then the effect of the financial leverage will be observed (increasing the efficiency of activity and generating additional income). At the same time, the unemployment rate will decrease due to financial provision cash gaps. The

overall investment of the temporarily idle funds on the bank deposits allows reducing impact of the inflation and earning additional income.

The social aspect of the impact of the banking system envisages the raise of the living standards by mortgage loans, car loans, funds protection from the effects of inflation, safety of their conservation that will have an impact on the socio-economic development of the region and is important for creating GRP.

Thus, the development of the region is suggested to be considered in terms of GRP and development of the real sector of the economy (indicators of sales, profitability, operational activity of the industrial enterprises, exports and imports, unemployment) and of the households (total costs per household and disposable income per person). Dynamics of indicators for 2007-2013. are shown in Table. 3.

Table 3 – Indicators of the development of Poltava region *

Year	Indicators							
	GRP mln. UAH	Volume of the industrial products (goods and services), mln. UAH	Operating profitability of the enterprises, %	Unemployed population in the working age, %	Export of goods, mln. USA	Import of goods, mln. USA	Total expenses on average per month per household, UAH	Disposable income per person, UAH
2008	34118	37286,8	5,7	6,9	2472,8	1308,6	2171,0	13922,0
2009	33629	30657,4	1,4	11,2	1083,5	592,2	2278,2	14742,6
2010	44291	47612,2	6,8	10,5	2007,8	1307,9	2758,5	17990,9
2011	52252	56509,3	10,4	9,9	2993,1	1254,0	3196,1	20917,4
2012	56580	58885,8	9,0	9,2	3183,3	1766,8	3168,1	24027,2
2013	-**	57674,8	-**	8,7	2412,4	1227,1	3615,8	24958,3

* - according to the Central Statistical Office of Poltava region. [14]

** - data are not published

For determination closeness of the connection between indicators of activity of banking institutions and development of Poltava region it is suggested to use the pair correlation analysis by means of Excel (function KORREL). Closeness of the connection is estimated by intervals of values of the correlation coefficient: no [-0,09, 0,09]; low [-0,3, -0,1] and [0,1;0,3]; average [-0,5;-0,3] and [0,3;0,5]; high[-1,0;-0,5] and [0,5; 1,0].

For GRP the correlation coefficient with indicators of activity of banks is listed in Table. 4: the closest relationship with the volume of loans and deposits of the households, the deposits of non-financial corporations and rates on loans to the households; the average power communication with loans to non-financial corporations and the interest rate on them; low and absent connection with the rate on deposits.

Table 4 – Correlation coefficient for GRP and indicators of the activity of the banking institutions of Poltava region

	Loans to non-financial corporations	Loans to households	Deposits of non-financial corporations	Deposits of households	Interest rate on loans to non-financial corporations	Interest rate on loans to households	Interest rate on deposits of non-financial corporations	Interest rate on deposits of households
GRP	-0,423	-0,786	0,754	0,908	-0,437	0,821	0,054	-0,196

The close connection of GRP with loans and deposits of the households and non-financial corporations is explained by its economic content, which reflects the development of the real economy and its socio-economic situation. In its turn, the amount of GRP and its qualitative structure is a factor that

influences the attractiveness of the region for the development of the banking system herein. Let us analyze the correlative connection indicators of the development of the real sector of the economy with their corresponding indicators of the banking activities in Poltava region (Table. 5).

Table 5 – The correlation coefficient of indicators: the development of the real sector of the economy and the activities of banking institutions of Poltava region

Indicators	Loans to non-financial corporations	Deposits of non-financial corporations	Interest rate on loans to non-financial corporations	Interest rate on deposits of non-financial corporations
Volume of industrial production	-0,788	0,960	-0,883	-0,437
Operating profitability	-0,629	0,851	-0,944	-0,608
Unemployed population in the working age	-0,505	-0,098	0,261	0,333
Export of goods	-0,358	0,676	-0,736	-0,414
Import of goods	-0,302	0,701	-0,660	-0,249

Quite tight connection between indicators of the sales and the volume of deposits (we cannot say that this is a decisive impact of banking factors, it is quite natural tendency of channeling funds of enterprises during realization increase which are aimed at deposits).

Reverse effect of the interest rates on loans to profitability of operational activity is also significant. As noted above, the efficiency of the enterprises depends on the price of the credit resources – a significant gap between operating profitability and the rate of loans towards the latter restrains the process of attracting loans for the companies. This explains the feedback sales with amount of credits and loan rate – with increasing sales rates fall and vice versa.

The close connection between the operational profitability and the volume of deposits is absolutely predictable, because in this case the company gets additional income that can be directed to the development of the operating activity.

There is enough close feedback between unemployment and the loans granted to the real sector of the economy (unemployment decreases to the attraction of the credits and vice versa). This connection has a positive influence on the efficiency of the banks (by increasing the volume of the loans the interest income increases), and on development of the region, its socio-economic condition.

Exports and imports affect GRP and depend on the volume of the deposit and loan rates. As in the case with sales, direct relationship with the volume of deposits is explained by channeling funds of the enterprises from the increase of realization on deposits. When the interest rates on the loans increase, it limits the production and export (due to inefficiency of attracting additional financial resources) and decreases the solvency of the enterprises to purchase imported goods. Let us analyze the impact of the activities of the banking institutions on the social situation in Poltava region (Table 6).

Table 6 – The correlation coefficient for the indicators of the social development and the indicators of the activities of the banking institutions of Poltava region

Indicators	Loans to households	Deposits of households	Interest rate on loans to households	Interest rate on deposits of households
Total expenses on average per month per household	-0,893	0,952	0,912	0,347
Disposable income per person	-0,889	0,995	0,912	0,419

The dependence of the expenses and incomes of the households from indicators of the banking system is unidirectional and almost equivalent. Thus, income and expenses of households vary in the inverse proportion to the loans. This situation is caused by the fact that households are turning to credit at the time when their incomes are falling; there is not enough money for the current financing of consumer needs, which affects more economical spending. Direct and tight connection expenses and the income of the households with the amount of deposits due to the fact that free funds appear while increasing revenues. They are invested in the bank and the expenses are also increasing due to the improved solvency of the population.

CONCLUSIONS. During the correlation analysis we established the dependence of the social and economic development of Poltava region from the indicators of the activities of the banking institutions:

1) ultra high rate of loans to non-financial corporations relative to their operating profitability negatively affects the development of the region, reduces both GRP and the possibility of the production development, exports and imports in the region. As the reverse reaction, the industrial enterprises take credits only in extreme cases, it limits the interest income of the bank;

2) households in the region take loans which rate is also significantly high, at the period when their incomes are falling, there is not enough money on current financing of consumer needs, which affects more economical expenditure of funds also negatively affects the socio-economic development of the region;

3) bank deposit policy doesn't have significant impact on the development of Poltava region, because the deposit rate in the region is not a tool that encourages depositors. The volume of deposits is increasing only during periods of increasing income of non-financial corporations and households with no free funds.

It is thus possible to draw a conclusion about the inefficiency of the banking system in terms of its impact on the development of Poltava region. This is due to the invalid instruments for stimulating the real sector to expand production, and promoting the conditions for the activity of households that adversely affects GRP of Poltava region. Prospects for the further research should be the development of an effective credit-deposit policy aimed at affordability of credits and deposits and the interest both from businesses and individuals.

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ЭФФЕКТИВНОСТЬ ФУНКЦИОНИРОВАНИЯ БАНКОВСКОЙ СИСТЕМЫ И ЕЕ ВЛИЯНИЕ НА РАЗВИТИЕ ПОЛТАВСКОГО РЕГИОНА

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В статье определена эффективность функционирования банковской системы Украины (доходы, расходы, результат деятельности, рентабельность активов, рентабельность капитала), а также проанализированы показатели деятельности банковских учреждений Полтавского региона (средневзвешенная ставка по кредитам нефинансовым корпорациям и домохозяйствам, средневзвешенная ставка по депозитам нефинансовых корпораций и домохозяйств). Авторы обосновали внешние и внутренние факторы влияния банковской системы на развитие Полтавского региона. С целью оценки тесноты связи между показателями деятельности банковских учреждений и развития Полтавского региона использован парный корреляционный анализ.

Ключевые слова: банковская система, эффективность функционирования, факторы влияния, показатели развития, корреляционный анализ.

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