

UDC 336.71

Svitlana Tulchynska, Doctor of Economics, Professor**Anna Pohrebniak**, PhD in Economics, Senior Lecturer

National Technical University of Ukraine "Kyiv Polytechnic Institute named after Igor Sikorsky", Kyiv, Ukraine

ANALYSIS OF THE BANKING SYSTEM OF UKRAINE**С. О. Тульчинська**, д-р екон. наук, професор**А. Ю. Погребняк**, канд. екон. наук, ст. викладач

Національний технічний університет України «Київський політехнічний інститут імені Ігоря Сікорського», м. Київ, Україна

АНАЛІЗ БАНКІВСЬКОЇ СИСТЕМИ УКРАЇНИ**С. А. Тульчинская**, д-р экон. наук, профессор**А. Ю. Погребняк**, канд. экон. наук, ст. преподаватель

Национальный технический университет Украины «Киевский политехнический институт имени Игоря Сикорского», г. Киев, Украина

АНАЛИЗ БАНКОВСКОЙ СИСТЕМЫ УКРАИНЫ

The article analyzes the banking system of Ukraine. Established in recent history, a decline in commercial banks at the beginning of 2016 their number was 111 banks, including 43 of which are banks with foreign capital. At the beginning of 2016 the state share in the authorized capital of solvent banks was 37.9% and the share of foreign capital – 39.4 %. This means customers are the main source of banks' resource base, customer deposit portfolio amounted to 64 % of liabilities, including deposits from individuals – 33.8% (389 bln. UAH), Funds of legal entities – 30.2 % (348 bln. UAH). In recent years, banks' credit activity remained low, the share of foreign currency loans in the loan portfolio was 58 %. The devaluation of the hryvnia has led to problems with servicing of such loans by borrowers who do not have their own currency earnings. To improve the situation, many banks since 2015, began implementing programs to restructure foreign currency loans.

The analysis of indicators of the banking system for 2011-2016. The constant tendency to increase profits for the period 2011-2016. Observed in banks such as Citibank (UKRAINE) and ProCredit Bank. Privatbank during the period studied by contrast shows a decline in profits. Reduced profit in two years was almost 9 times. First by the number of assets in Ukraine is Privatbank. From 2011-2016 assets increased 2.3 times, 2.7 times Oshadbank. Commitments such as bank PrivatBank, Oshadbank, Ukreximbank, Prominvestbank, Sberbank, which is headed by the top five banks in Ukraine in terms of commitment, from 2011-2016 increase.

The main problems of ukrainian banking sector for 2016 was a significant outflow of resources from the banking system, the deteriorating quality of loan portfolios banks and unprofitable activities. The growth of the main indicators of the banking sector in the 2014–2015. There was only due to exchange rate revaluation of assets and liabilities due to depreciation of the hryvnia against major foreign currencies.

Established that the cost of credit for contracts concluded limited creditworthiness of borrowers and yield other active operations of banks and does not fully reflect the value of the objective to raise funds.

Key words: banking system; bank; commercial banks; profit; loss; assets; liabilities.

У статті здійснено аналіз банківської системи України. Встановлено, що за останній період спостерігається скорочення комерційних банків і на початок 2016 р. їх кількість становила 111 банків, у тому числі 43 з яких є банками з іноземним капіталом. На початок 2016 р. частка держави у статутному капіталі платоспроможних банків становила 37,9 %, а частка іноземного капіталу – 39,4 %. При цьому кошти клієнтів залишаються основним джерелом ресурсної бази банків: клієнтський депозитний портфель становив 64 % зобов'язань, у тому числі кошти фізичних осіб – 33,8 % (389 млрд грн), кошти юридичних осіб – 30,2 % (348 млрд грн). За останні роки кредитна активність банків залишалася низькою, питома вага валютних кредитів у кредитному портфелі банків становила 58 %. Девальвація гривні призвела до проблем з обслуговуванням таких кредитів позичальниками, які не мають власної валютної виручки. З метою поліпшення ситуації багато банків починаючи з 2015 р. почали реалізацію програм з реструктуризації валютних кредитів.

Проведено аналіз показників банківської системи за 2011-2016 рр. Постійна тенденція до збільшення прибутку за період з 2011-2016 рр. спостерігалася у таких банків, як СІПБАНК (УКРАЇНА) та ПРОКРЕДИТ БАНК. ПРИВАТБАНК протягом дослідженого періоду навпаки демонструє зниження прибутку. Зменшення прибутку за два роки становило майже 9 разів. Перший за кількістю активів в Україні є ПРИВАТБАНК. З 2011–2016 рр. активи зросли у 2,3 рази, у ОЩАДБАНКУ у 2,7 рази. Зобов'язання у таких банків, як ПРИВАТБАНК, ОЩАДБАНК, УКРЕКСІМБАНК, ПРОМІНВЕСТБАНК, СБЕРБАНК, що очолюють першу п'ятірку банків України за обсягом зобов'язань, у період з 2011–2016 рр. зростають.

Основними проблемами банківського сектору України протягом 2016 року були значний відплив ресурсів з банківської системи, погіршення якості кредитних портфелів банків та збиткова діяльність. Зростання основних показників діяльності банківського сектору у 2014-2015 рр. відбулося лише за рахунок курсової переоцінки активів та зобов'язань банків через зниження курсу гривні до основних іноземних валют.

Встановлено, що вартість кредитів за укладеними договорами обмежувалася кредитоспроможністю позичальників та доходністю інших активних операцій банків і не повною мірою відображала об'єктивну вартість залучення коштів.

Ключові слова: банківська система; банк; комерційні банки; прибуток; збиток; активи; зобов'язання.

В статье осуществлен анализ банковской системы Украины. Установлено, что за последний период наблюдается сокращение коммерческих банков и на начало 2016 их количество составляло 111 банков, в том числе 43 из которых являются банками с иностранным капиталом. На начало 2016 доля государства в уставном капитале платежеспособных банков составляла 37,9 %, а доля иностранного капитала – 39,4 %. При этом средства клиентов остаются основным источником ресурсной базы банков: клиентский депозитный портфель составлял 64 % обязательств, в том числе средства физических лиц – 33,8 % (389 млрд грн), Средства юридических лиц – 30,2 % (348 млрд грн). За последние годы кредитная активность банков оставалась низкой, удельный вес валютных кредитов в кредитном портфеле банков составляла 58 %. Девальвация гривны привела к проблемам с обслуживанием таких кредитов заемщиками, не имеют собственной валютной выручки. С целью улучшения ситуации многие банки начиная с 2015 г. начали реализацию программ по реструктуризации валютных кредитов.

Проведен анализ показателей банковской системы за 2011–2016 гг. Постоянная тенденция к увеличению прибыли за период с 2011–2016 гг. наблюдалась у таких банков, как СИТИБАНК (УКРАИНА) и ПРОКРЕДИТ БАНК. ПРИВАТБАНК в течение исследованного периода наоборот демонстрирует снижение прибыли. Уменьшение прибыли за два года составило почти 9 раз. Первый по количеству активов в Украине ПРИВАТБАНК. С 2011–2016 гг. Активы выросли в 2,3 раза, в СБЕРБАНКА в 2,7 раза. Обязательства в таких банках, как ПРИВАТБАНК, Ощадбанк, Укрэксимбанк, Проминвестбанк, Сбербанк, возглавляющих первую пятерку банков Украины по объему обязательств, в период с 2011–2016 гг. растут.

Основными проблемами банковского сектора Украины в течение 2016 были значительный отток ресурсов из банковской системы, ухудшения качества кредитных портфелей банков и убыточная деятельность. Рост основных показателей деятельности банковского сектора в 2014–2015 гг. Произошло только за счет курсовой переоценки активов и обязательств банков из-за снижения курса гривны к основным иностранным валютам.

Установлено, что стоимость кредитов по заключенным договорам ограничивалась кредитоспособностью заемщиков и доходностью других активных операций банков и не в полной мере отражала объективную стоимость привлечения средств.

Ключевые слова: банковская система; банк; коммерческие банки; прибыль; убыток; активы; обязательства.

Introduction. Currently economy a significant recession prevailing in Ukraine, considerable attention is paid to the banking system and in particular to commercial banks. Commercial banking activities imperfection complicated insurance system, public distrust in the activities of commercial banks, total non-payments crisis and so on.

Ensuring high efficiency of domestic banks is an important task of the modern stage of development of the banking system of Ukraine and a necessary condition for its further strengthening as a strategic component of the national economy. The study of this problem is especially important, as the state solves the problem of integration into the global financial market, for entering into which it is necessary to create a competitive infrastructure of financial services. Banking system is an organizational set of different types of banks in their relationship, which exists in one or another country in a well-defined historical period.

Banking relationships were foreign scientists in research, including: J. Gerar, J. Marshall, G. Kotler, K. Redherd, R. Rynutro P. Rose, W. Hankel on radial. Among Ukrainian scientists researching the banking system and banks should be noted: A. Baranovsky, S. Boynets [15], O. Vasyurenka [4], O. Gavrilyuk, A. Dzyublyuk, I. D'yakonova [6], and . Karbivnychoho [7] M. Kvasniy [8], A. Kyrychenko, V. Kozyuk, V. Lagutin, E. Lakosnyk [9] A. Mahayeva [11] A. Moroz, L. Prostebi [13] K. Rajewski, P. Reshetnikov [13] O. Rogach, M. Savluk, O. Stepanenko [14], S. Tulchynska [10] and others.

But, as shown by the review of the economic literature, number of issues concerning the banking system require more profound study.

Purpose of the article is an analysis of the banking system of Ukraine. To achieve this goal, it was decided the following objectives: performance analysis of banks of Ukraine from 2011–2016 of profit (loss), assets and liabilities; investigated the credit activity of banks, the total amount of customer funds (funds of legal and natural persons) of banks for the 2015–2016.

Main results. The functioning of the banking system in 2014–2016 has been accompanied by unresolved economic problems - chronic budget deficit and balance of payments, fiscal weakness for years reformed energy sector, significant deterioration of banks through an accelerated outflow of deposits and other. Of course, this macroeconomic situation adversely affected the performance of the banking sector.

As of 06.01.2015 in the State Register of banks were registered 182 banks, of which 162 were banking license (including 3 state – JSC “Oshadbank”, JSC “Ukreximbank”, JSC “Derzhzembank”) and 1 (JSC “Rodovid Bank”) – license curative bank. The number of banks

with foreign capital increased by 2 and was 51 banks, including 19 banks – with 100 % foreign capital. The banks had 133 operating branches (with 141 registered) 15 245 branches and 14 offices, of which 7 – in Ukraine [1].

As of January 1, 2016 NBU license to conduct banking activities had 120 banking institutions, which operate 117 institutions, and as of 06.01.2016 g. License had – 111 banks (including 43 banks with foreign capital). Thus, the number of banks for the year was reduced by 71 unit.

The results of operations of purification systems show that there have been qualitative and quantitative changes in the composition and structure of participants in the banking sector. Significantly increased the share of state banks and banks with foreign capital, as of early 2016, the state share in the authorized capital of solvent banks was 37.9 % and the share of foreign capital – 39.4 %. The share of assets of five largest banks increased to 54 % at the end of 2015 compared to 45 % in 2014. Increased and concentration of assets in funds of individuals – 62 %, due both to the withdrawal of many banks to market and increase confidence of depositors in the big banks.

Distribution of reserves and capital by groups of banks in Ukraine is presented in Table 1.

Table 1

Distribution of reserves and capital by groups of banks in Ukraine is presented in 2015–2016

Group of banks	2015		2016	
	Liabilities of banks		Capital of banks	
Banks with a state share (in which the state owns more than 75% of the share), UAH million.	333 915	365 118	65 818	65 818
% of the system	29,6	31,6	33,5	32,1
Banks of foreign bank groups (banks, owners of controlling blocks of shares in which there are foreign banking institutions), UAH million.	402732	383228	86465	94855
% of the system	35,7	33,2	44,0	46,2
Banks with private Ukrainian capital, Group I (banks with a share of assets of which more than 0.5% of assets of the banking system), UAH million.	330831	346823	30905	30905
% of the system	29,4	30,1	15,8	15,1
Banks with private Ukrainian capital, Group II (banks whose share of assets is less than 0.5% of assets of the banking system), UAH million.	59187	58728	13169	13555
% of the system	5,3	5,1	6,7	6,6
Total, UAH million	1 126 664	1 153 898	196 358	205 134

Source: compiled by the authors according to [2].

The data in Table 1 show that, according to the National Bank of Ukraine, the increase was observed for all groups of banks except for: groups of banks of foreign bank groups, where the decrease was UAH 19504 million. And the second group of banks with private Ukrainian capital, the decrease was UAH 459 mln. The total amount of liabilities at the beginning of 2016 amounted to 1 153 898 million UAH, its growth in relation to 2015 amounted to 2,725 million UAH.

Changes in bank capital also occurred for these two groups of banks. In the group of banks where the holders of controlling blocks of shares are foreign banking institutions, the capital has increased by 8390 million UAH. And in the group of banks with private Ukrainian capital, where the share of assets less than 0.5 % of the assets of the bank's capital increase amounted to UAH 386 mln. The total amount of capital at the beginning of 2016 amounted to UAH 205134 million, its growth in relation to 2015 amounted to UAH 8776 million.

Customer accounts remain the main source of banks' resource base, customer deposit portfolio amounted to 64% of liabilities, including deposits from individuals – 33.8 % (389 bln. UAH), Funds of legal entities – 30.2 % (348 billion. USD). Such a high proportion of the entities and individuals due to limited access to bank financing and other sources - including external debt markets. It is expected that the proportion of deposits banks' liabilities increase.

Gains (losses) of the first ten banks in Ukraine this indicator for 2011-2016 presented in Table 2.

Table 2

Profits (losses) banks in Ukraine in 2011–2016 at the beginning of the year, mln. UAH

Bank	2011	2012	2013	2014	2015	2016
CITIBANK (UKRAINE)	302	409	484	483	1380	1630
ING BANK UKRAINE	268	173	552	76	229	855
CREDIT AGRICOLE BANK	-23	46	409	369	90	441
BANK CREDIT DNIPRO	5	2	2	-23	-110	283
UKRGAZBANK	10	-3614	1100	1002	-2801	260
PRIVATBANK	1370	1426	1533	1873	749	216
RBC BANK	0	0	0	0	0	188
DEUTSCHE BANK DBU	-29	-33	36	22	28	132
KREDOBANK	-392	94	-61	0	5	112
PROCREDIT BANK	-13	22	48	59	79	79

Source: compiled by the authors according to [2].

Indicators of profit (loss) of banks Ukraine talk about the lack of common trends of increase or decrease. So constant tendency to increase profits for 2011–2016. Observed in banks such as Citibank (UKRAINE) and ProCredit Bank. PRIVATBANK during the period studied by contrast shows a decline in profits. Since the beginning of 2014 profit of 1.873 bln. UAH. And at the beginning of 2016, 216 mln. UAH, that is, reducing profits for the two years was almost 9 times.

Indicators of assets first ten banks in Ukraine this figure for the 2011–2016 are presented in Table 3.

Table 3

Assets of banks in Ukraine in 2011-2016 at the beginning of the year, mln. UAH

Bank	2011	2012	2013	2014	2015	2016
PRIVATBANK	113437	145118	172429	214491	204585	264886
OSCHADBANK	59019	73968	85996	103568	128104	159389
UKREXIMBANK	73172	75103	87949	94349	126000	141285
UniCredit (Ukrsotsbank)	41603	40207	38830	43057	48258	54219
Sberbank	9924	16933	27026	35095	46740	51807
RAIFFEISEN BANK AVAL	55100	51347	47694	43460	46859	51239
UKRSYBBANK	46128	32868	25888	24112	26337	43418
ALPHA BANK	26595	27965	25589	29293	36694	42363
PROMINVESTBANK	34613	38161	41318	39737	52656	41652
UKRHAZBANK	13837	18157	20997	23794	21028	41555

Source: compiled by the authors according to [2].

Analysis of data from Table 3 shows that most of the assets of banks increased. So the first by the number of assets in Ukraine PrivatBank 2011. in 2016 it increased 2.3 times, savings bank increased 2.7 times.

The indicators of obligations first ten banks in Ukraine this indicator for the 2011-2016 is presented in Table 4.

Table 4

Banking commitment in Ukraine in 2011–2016 at the beginning of the year, mln. UAH

Bank	2011	2012	2013	2014	2015	2016
PRIVATBANK	101557	128371	154128	194179	181889	237399
OSCHADBANK	42393	56321	67877	83113	105355	152049
UKREXIMBANK	55717	57374	70093	76266	112464	144413
PROMINVEST-BANK	30023	33079	36045	34353	46581	53922
SBERBANK	8819	14718	23925	31428	42836	49539
RAIFFEISEN BANK AVAL	48659	44876	41348	36223	40711	44971
UKRSYBBANK	41273	31609	23260	21461	24556	41615
UNICREDIT (UKRSOTSBANK)	35033	33599	31173	34389	42020	40482
ALPHA BANK	23474	23890	21489	25095	33184	39739
UKRHAZBANK	11846	15353	17183	19271	19457	37263

Source: compiled by the authors according to [2].

Analysis Table 4 shows that the obligations of such banks as PrivatBank, Oschadbank, Ukreximbank, Prominvestbank, Sberbank, which is headed by the top five banks in Ukraine in terms of obligations between 2011-2016 increased. So PrivatBank's obligations during this period increased by 2.3 times, and the greatest increase during this period took place in Sberbank of Russia in 5,6 times.

The dynamics of market interest rates on new loans against the background of the different phases of social and political tension during 2015 was diverse.

The credit activity of banks during the year remained low. By reducing the resource base and solvency deterioration of payment discipline of borrowers, banks have reduced lending to both businesses and citizens. The balance of loans (excluding accrued interest) of solvent banks in national currency decreased by 875 mln. UAH, And in foreign currency – by 2.6 bln. USD.

The devaluation of the hryvnia has led to problems with servicing of such loans by borrowers who do not have their own currency earnings. To improve the situation, many banks in 2015 began implementing programs to restructure foreign currency loans. The quality of bank assets in 2015 significantly deteriorated. The share of negatively classified debts in the loan portfolio of operating banks as of 01.01.2016 g. Was 28.2 % or 365.6 billion. UAH. (Compared to 18.4 % and 197.5 bln. USD. A year earlier). In most deteriorated quality of loans in foreign currency – growth of bad debts amounted to 3.8 bln. Dollars.

In the first half 2016 net assets of the banking system of Ukraine has increased slightly. Their volume as of 07.01.2016 was 1,260 bln. USD against 1.254 billion. UAH at the beginning of the year (ie an increase of 0.5 %).

The total customer funds (funds of legal entities and individuals) purified from changes due to revaluation of the currency in 2015 increased by 9.6 %. After a long period of panic retail deposits in domestic currency resumed growth since April 2015 (not including insolvent banks) at the end of the year their volume exceeded pre-crisis levels. However, investments in foreign currency decreased by December 2015, and a total of outflows during the year amounted to 2.3 bln. USD equivalent (excluding banks declared insolvent). In 2015, the banking system received 199.2 billion. UAH. revenues 33.2 bln. UAH more than in 2014.

The main source of income (67.8 %) are interest income. In terms of lending to narrow in 2015 banks expanded range of services and intensified banking operations that generate fee income. According to the 2015 commission income increased by 30.3 % and their share in total revenues was 14.3 %. Trading income compared to 2014 increased by 70.5 % – to 21.5 bln. UAH, Which was due to profits on trading of derivatives (growth by 15.7 bln. UAH).

Following the 2015 operating banks Ukraine received cumulative loss 66.6 billion. USD. The main reason for the losses was a significant increase in allocations to reserves, compared with the year 2014 increased by half and amounted to 114.5 billion. UAH (43.1% of total expenses) for 2015. In the first half 2016 revenues of banks in Ukraine continued to decline and amounted to 88.0 bln. UAH, expenses increased by 18.6 % – to 97.2 bln. UAH. This is primarily because of losses from trading operations, namely from foreign currency and precious metals and by reducing the interest income of banks. At the beginning of 2016 to 30 101 operating banks in Ukraine received damages totaling \$ 15.9 billion. USD. Other banking institutions have completed the reporting period with positive results, were collectively 6.7 bln. USD profits.

However, net operating income for 2015 was positive and amounted to 81.5 billion. UAH., which indicates the ability of most banks generate positive net operating cash flows in the future. Since 2014 the National Bank of Ukraine, taking into account the world practice, introduced regular diagnostic examination of banks to determine additional needs of banks in the capital. Diagnostic examination consists of two phases - analysis of asset quality of banks and stress testing. The increase in capital of banks on the results of diagnostic testing increases the financial stability of the banking system and create the necessary basis for the resumption of lending. In 2015, examined the twentieth largest in terms of assets banks. The result revealed that 16 of the 20 largest banks need additional capital. Most of them fulfilled the agreed program with the National Bank of capitalization and restructuring.

The main problems of the banking sector Ukraine for 2016 was a significant outflow of resources from the banking system, the deteriorating quality of loan portfolios banks and unprofitable activities. The growth of the main indicators of the banking sector in the 2014-2015 biennium. There was only due to exchange rate revaluation of assets and liabilities due to depreciation of the hryvnia against major foreign currencies.

At the end of 2016 in the banking system of Ukraine held a significant event, and it was nationalized PJSC CB «PrivatBank», which is the largest bank in Ukraine. So the Cabinet of Ministers of Ukraine December 18, 2016 was decided on the nationalization of the bank December 19, introduced a temporary administration, and only after the December 22 sale of 100% of the Ministry of Finance of Ukraine interim administration was launched. There is no doubt that the nationalization of the bank's major impact on the banking system of Ukraine as a whole.

Conclusions. Thus, carried out research makes it possible to say that the conditions in which functioning banking system of Ukraine is unstable and risky, which is reflected in the banks.

Because of the high risks of default loans and accumulated a significant portfolio of bad debts the banks in 2015 mainly focused on:

- debt restructuring (through the extension of credit, interest rate revision, etc.);
- maintaining constructive relations with existing creditworthy borrowers;
- assignable and sale of troubled assets.

The cost of loans concluded contracts for limited creditworthiness of borrowers and yield other active operations of banks and does not fully reflect the objective value of funds (due to rising dominance of qualitative parameters when making credit decisions). Banks increased the rigidity of standards and criteria for the selection of both the contractors and the possible collateral.

References

1. Analitichnyi ohliad bankivskoi systemy Ukrainy za I kvartal 2016 roku [Analytical review of the banking system of Ukraine for the 1st quarter of 2016]. *National rating agency «Rurik»*. Retrieved from http://rurik.com.ua/documents/research/bank_system_1_kv_2016.pdf.
2. *Bankivska statystyka [Banking Analyst]*. Retrieved from <http://bankografo.com/analiz-bankiv/bankivska-statystyka>.
3. Kyrychenko, O.A. (ed.), Hilenko, I.V., Rohol, S.L., Nemoi, O. (2013). *Bankivskiy menedzhment [Banking Management]*. Kyiv: Academy (in Ukrainian).
4. Vasiurenko, A.V., Podchesova, V.Yu. (2010). *Instrumentarii analizu v systemi kredytnoho ryzhuk-menedzhmentu [Analysis tool system of credit risk management]*. Kyiv: UB NBU (in Ukrainian).
5. Gutsal, I. (2011). *Bankivske kredytuvannia subiektiv rynku v transformatsiinii ekonomitsi Ukrainy: (pytannia teorii, metodyky, praktyky) [Bank lending market players in economy Ukraine: (questions of theory, methodology, practice)]*. Kyiv: JSC “Biblios” (in Ukrainian).
6. Diakonova, I.I., Mordan, Ye.Yu. (2011). Adaptivnist bankivskoi systemy ta yii proiav u dynamitsi ekonomichnoho rozvytku Ukrainy [Adaptability banking system and its manifestation in the dynamic economic development of Ukraine]. *Visnyk SumDU. Seriiia «118 Ekonomika» – Bulletin of Sumy State University. Series “Economy”, № 4*, pp. 118–126 (in Ukrainian).
7. Karbivnychy, I. (2006). Teoretychni aspekty formuvannia kredytnoi polityky banku [Theoretical aspects of loan policy]. *Problemy i perspektyvy rozvytku bankivskoi systemy Ukrainy – Problems and prospects of the development of the banking system of Ukraine*, vol. 17, pp. 264–270 (in Ukrainian).
8. Kvasniy, M.M. (2014). Intehratsiia metodiv modeliuvannia dlia prohnozuvannia yakosti kredytnoho portfeliu banku [Integration of modeling techniques for predicting the quality of the loan portfolio of the bank]. *Aktualni problemy ekonomiky – Actual problems of economy. № 4 (154)*, pp. 387–393 (in Ukrainian).
9. Lakosnik, E. (2014). Novye IT dlia finansovykh institutov [New IT for financial institutions]. *Bankovskaia praktika za rubezhom – Banking practice abroad*, no. 11, pp. 34–39 (in Russia).
10. Lindayev, D.V., Tulchynska, S.O. (2016). Analiz kredytnykh vidnosyn v Ukraini v umovakh transformatsiinoy ekonomiky [Analysis of relations in Ukraine in conditions of transformational economy]. *Suchasni problemy ekonomiky ta biznesu – Modern Problems of Economics and Business*, issue 18, pp. 95–103 (in Ukrainian).

11. Mahaieva, O. (2014). Elektronni hroshi v Yevropi ta Ukraini [Electronic money in Europe and Ukraine]. *Materialy Natsionalnoho banku Ukrainy – Proceedings of the National Bank of Ukraine*, № 9, pp. 22–24 (in Ukrainian).

12. Prostebi, L. (2013). Problemy rozvytku bankivskoi systemy ukrainy ta mekhanizmiv rehuliuвання yii diialnosti [Problems of the banking system of Ukraine and regulatory mechanism of its activity]. *Visnyk Odeskoho natsionalnoho universytetu. Ekonomika – Bulletin of the Odessa National University. Economics*, vol. 18, issue 2/1, pp. 109–112 (in Ukrainian).

13. Reshetnikov, P. (2014). Dosvid vykorystannia informatsiinykh tekhnolohii u bankivskomu sektori [Experience of information technology in banking]. *Visnyk Natsionalnoho banku Ukrainy – Bulletin of the National Bank of Ukraine*, № 4, pp. 40–43 (in Ukrainian).

14. Stepanenko, A.P. (2013). Otsinka efektyvnosti ta funktsionuvannia bankivskoi systemy [Evaluation of the efficiency and functioning of the banking system]. *Rozvytok ekonomiky – Economy Development*, № 1 (65), pp. 5–10 (in Ukrainian).

15. Wojnes, S., Oliynyk O., Adamenko, V. (2014). Credit rationing as a result of optimization of the loan portfolio provided a cautious attitude to risk. *Actual problems of economy*, № 10 (160), pp. 437–445.

References (in language original)

1. Аналітичний огляд банківської системи України за I квартал 2016 року [Електронний ресурс] / Національне рейтингове агентство «Рюрик». – Режим доступу : http://rurik.com.ua/documents/research/bank_system_1_kv_2016.pdf.

2. Банківська статистика [Електронний ресурс]. – Режим доступу : <http://bankografo.com/analiz-bankiv/bankivska-statystyka>.

3. Банківський менеджмент : навч. посіб. / О. А. Кириченко, І. В. Гіленко, С. Роголь, С. В. Сиротян, О. Немой. – К. : Знання-Прес, 2002. – 438 с.

4. Васюренко О. В. Інструментарій аналізу в системі кредитного ризик-менеджменту : монографія / О. В. Васюренко, В. Ю. Подчесова. – К., 2010. - 192 с.

5. Гуцал І. С. Банківське кредитування суб'єктів ринку в трансформаційній економіці України: (питання теорії, методики, практики) / І. С. Гуцал. – Л. : ВАТ «Біблос», 2001. – 242 с.

6. Д'яконова І. І. Адаптивність банківської системи та її прояв у динаміці економічного розвитку України / І. І. Д'яконова, С. Ю. Мордань // Вісник СумДУ. Серія «118 Економіка». – 2011. – № 4. – С. 118–126.

7. Карбівничий І. В. Теоретичні аспекти формування кредитної політики банку / І. В. Карбівничий // Проблеми і перспективи розвитку банківської системи України: збірник наукових праць. – Суми : УАБС НБУ, 2006. – Т. 17. – С. 264–270.

8. Квасній М. М. Інтеграція методів моделювання для прогнозування якості кредитного портфелю банку / М. М. Квасній // Актуальні проблеми економіки. – 2014. – № 4 (154). – С. 387–393.

9. Лакосник Е. Новые IT для финансовых институтов / Е. Лакосник // Банковская практика за рубежом. – 2004. – № 11. – С. 34–39.

10. Ліндаєв Д. В. Аналіз кредитних відносин в Україні в умовах трансформаційної економіки / Д. В. Ліндаєв, С. О. Тульчинська // Сучасні проблеми економіки та бізнесу. – 2016. – Вип. 18. – С. 95–103.

11. Магаєва О. Електронні гроші в Європі та Україні / О. Магаєва // Матеріали Національного банку України. – 2014. – № 9. – С. 22–24.

12. Простебі Л. І. Проблеми розвитку банківської системи України та механізмів регулювання її діяльності / Л. І. Простебі // Вісник Одеського національного університету. Економіка. – 2013. – Т. 18, вип. 2/1. – С. 109–112.

13. Решетніков П. Досвід використання інформаційних технологій у банківському секторі / П. Решетніков // Вісник Національного банку України. – 2014. – № 4. – С. 40–43.

14. Степаненко А. П. Оцінка ефективності та функціонування банківської системи / А. П. Степаненко // Розвиток економіки. – 2013. – № 1 (65). – С. 5–10.

15. Wojnes S. Credit rationing as a result of optimization of the loan portfolio provided a cautious attitude to risk / S. Wojnes, O. Oliynyk, V. Adamenko // Actual problems of economy: economic journal Science. – 2014. – № 10 (160). – Pp. 437–445.

Tulchynska Svitlana – Doctor of Economics, Professor, National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute» (37 Peremogy Av., 03056 Kyiv, Ukraine).

Тулчинська Світлана Олександрівна – доктор економічних наук, професор, Національний технічний університет України «Київський політехнічний інститут імені Ігоря Сікорського» (просп. Перемоги, 37, м. Київ, 03056, Україна).

Тулчинская Светлана Александровна – доктор экономических наук, профессор, Национальный технический университет Украины «Киевский политехнический институт имени Игоря Сикорского» (просп. Победы, 37, г. Киев, 03056, Украина).

E-mail: tuha@ukr.net

Anna Yuryevna Pogrebnyak – PhD in Economics, Senior Lecturer, National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute» (37 Peremogy Av., 03056 Kyiv, Ukraine).

Погребняк Анна Юрійвна – кандидат економічних наук, старший викладач, Національний технічний університет України «Київський політехнічний інститут імені Ігоря Сікорського» (просп. Перемоги, 37, м. Київ, 03056, Україна).

Погребняк Анна Юрьевна – кандидат экономических наук, старший преподаватель, Национальный технический университет Украины «Киевский политехнический институт имени Игоря Сикорского» (просп. Победы, 37, г. Киев, 03056, Украина).

E-mail: anna.u.pogrebnyak@gmail.com