
FORMATION OF A QUALITY CREDIT PORTFOLIO OF UKRAINIAN BANKS: STATE AND STRUCTURE OF THE CREDIT PORTFOLIO OF PRIVATBANK JSC BY DIFFERENT SECTORS OF THE ECONOMY

O.B. ZHARIKOVA

*Candidate of Economic Sciences, Associate Professor
Associate Professor of the Department of Banking and Insurance
National University of Life and Environmental Science of Ukraine
E-mail: ele0309@ukr.net*

I. VERBOVENKO

*Student (master) National University of Life and Environmental Sciences
of Ukraine
E-mail: ira.verbovenko@ukr.net*

Abstract. *The purpose of the article is to consider the state and structure of the credit portfolio of JSC CB "PrivatBank" in various sectors of the economy. Analyzing the financial indicators, it has been proven that one of the priority directions in the activities of this Bank is the development of lending while maintaining the high quality of the loan portfolio. The Bank's strategic goal is to build a high-quality credit portfolio of retail and SME loans.*

As a result of the research, an analysis of the main analytical indicators of credit portfolio management was carried out, the structure of the credit portfolio and the structure of the credit quality of the bank's portfolio were determined during 2019–2021. The practical activities of JSC CB "PrivatBank" were studied and it was established that large loans granted to large enterprises mean big risks for the bank and its millions of depositors. But adhering to this balanced credit policy, the Bank still manages to increase its own credit activity, as evidenced by analytical calculations.

To achieve the goal, the research used general scientific research methods: observation (systematic study of the bank, obtaining primary information in the form of financial reporting indicators for the analyzed period), comparison (comparison of the analyzed parameters, coefficients, balance sheet items with each other or with a basic indicator, normative value), abstraction (departure in the definition of categories from non-essential properties and selection of several essential characteristics), grouping method (when considering the classification of loans); various methods of statistical methods, in particular comparison - when comparing actual data for the relevant periods; observations were used to study and assess the financial condition of JSC CB "PrivatBank", methods of analysis and synthesis, induction and deduction.

It has been analyzed and proven that the decline in business activity since the

beginning of the full-scale war has led to a drop in business demand for loans. At the same time, the deterioration of macroeconomic expectations significantly reduced the risk appetite of banks. Accordingly, financial institutions have tightened lending standards for businesses. Therefore, the growth of the loan portfolio almost stopped: the amount of foreign currency loans decreased, while hryvnia loans increased several times slower than last year, and the hryvnia net corporate loan portfolio increased by 8% since the beginning of the full-scale war.

Ways to solve the problems of improving and improving the quality of the bank's credit activity remain prospects for further research.

Keywords: *bank, National Bank of Ukraine, loan, bank's loan portfolio, income, quality analysis, structure of the bank's loan portfolio.*

Introduction.

To successfully lend and increase the profitability of credit operations, banks are to implement a clear and flexible system of managing their own loan portfolio. High-quality loan portfolio formation is one of the primary tasks of Ukrainian banks. Today, there is a significant gap in studying theoretical and methodological issues of its analysis, and the profound investigating of the problem is important for economic development of Ukraine.

The quality of the loan portfolio significantly affects the level of riskiness and reliability of the bank, which is why credit activities are subject to regulation by supervisory authorities in many countries. The restrictions and regulations introduced, as well as rules for regulating banking activity, play a significant role in the process of credit portfolio formation. Lending is a priority economic function of banks. The economic condition of the regions served by banks largely depends on the way the banks implement their credit functions. Bank loans contribute to the establishment of new enterprises, increase the number of jobs, the construction of social and cultural facilities, and ensuring

the economic stability.[11, 12]

A loan portfolio is a collection of issued loans, which are classified on the basis of various criteria related to various factors of credit risk or methods of protection against it, therefore the management of the loan portfolio makes it possible to balance and contain the risk of the entire portfolio, to control the risk inherent in one or another markets, customers, loan instruments, credits and terms of business. Credit risk management requires a systematic quantitative and qualitative analysis of the credit portfolio and work with problem loans. The analysis of the loan portfolio requires the study of its structure in terms of risk groups, the degree of security, industry structure, forms of ownership of borrowers, etc., as well as the study of the dynamics of each group, the segmentation of the loan portfolio. In order to increase the reliability and stability of the banking system, to protect the interests of creditors and depositors of commercial banks, the Resolution of the Board of the National Bank of Ukraine No. 279 of July 6, 2000 approved the Regulation on the procedure for calculating the reserve for compensation of possible losses in bank credit transactions. [4, 7, 19, 23, 24].

Literature review.

The bank's credit activity is one of the important sources of attracting funds to the country's economy and supporting its optimal functioning. Banks increase the activity of the state and business sectors of the economy through lending activities. However, today the process of bank lending needs improvement. This also applies to the formation of a credit portfolio, which occupies a key place in the priorities of commercial banks, as it allows to more clearly develop their strategy and tactics, as well as to determine opportunities for lending to clients and developing business activity. An effective and high-quality loan portfolio helps to maximize the profitability of both an individual bank and the overall performance of the banking system. Scientific works of such scientists as Y. Bugel, O. Dzyublyuk, E.J. Dolan, O. Malakhova, O. Lavrushin, G. Panova, N. Rogozhnikova, E. Ryasnykh, Yu. Seryk, P. Chub and many others.

The theoretical and information base for the research is the legislation of Ukraine regulating the commercial banks operations, as well as the studies of domestic and foreign researchers in this field, namely: A.H. Honcharuk, O.D. Vovchak, V. I. Kapran, V.V. Kovalenko, Yu. G Kozak, S.Ya. Morinets, A.M. Moroz, L. P. Petrashko, L.V. Rudenko, L.P. Snigurska and others.

The aim of the article. There is a generalization of the theoretical, methodological and practical aspects of the formation and management of the bank's credit portfolio on the example of the commercial bank JSC CB "PrivatBank".

Materials and methods of research.

The following research methods

were used in the research process: observation (systematic study of the bank, obtaining primary information in the form of financial reporting indicators for the analyzed period), comparison (comparison of analyzed parameters, coefficients, balance sheet items with each other or with a basic indicator, normative value), abstraction (departure in the definition of categories from non-essential properties and selection of several essential characteristics), grouping method (when considering the classification of loans); various methods of statistical methods, in particular comparison - when comparing actual data for the relevant periods; observations were used to study and evaluate the financial condition of JSC CB "PrivatBank", methods of analysis and synthesis, induction and deduction.

Results of the research and their discussion.

The paper aims to give a profound analysis of the bank's loan portfolio and provide the explanation of the optimal management process ensuring maximum profitability at an acceptable level of risk. The level of profitability of the loan portfolio depends on the structure and volume of the portfolio, as well as on the level of interest rates on loans. The formation of the structure of the bank's credit portfolio is significantly influenced by the specifics of the market sector served by this bank. For specialized banks, the structure of the loan portfolio is concentrated in certain sectors of the economy. Consumer loans and loans to individuals make an essential part in the savings banks loan portfolio structure. [1-3, 24]

The development of lending alongside with maintaining the high quality

of the loan portfolio has always been one of the priority directions in the Bank activities. The Bank's strategic goal is to build up a high-quality credit portfolio of retail and SME loans. In order to achieve the set goal, the Bank carries out a balanced and careful credit policy, which consists in lending small amounts mainly to individuals, small and medium-sized businesses. The analysis carried out in the first part proved that the corporate segment is the most risky segment in lending due to large amounts of loans issued as a specific feature of lending in this segment - the previous practice of JSC CB "Privat-Bank" proved that large loans to large enterprises make big risks for the bank and its millions of depositors. However, adhering to this careful credit policy of the Bank (lending small amounts for fairly short terms), the Bank still manages to increase its own credit activity, as evidenced by the data in the table. 1.

Table 1 data reveal that over the past three years, the value of the Bank's loan portfolio has increased from UAH 38,335 million to UAH 59,544 million, i.e., by a total of UAH 21,209 million, or a little more than 55%, while the Bank's assets for the same period increased by

UAH 56,048 million or by 22%. So, as we can see, the credit portfolio value grew by UAH 21,209 billion in three years and ensured a 37% increase in the bank's assets themselves.

Therefore, the growth of the value of the loan portfolio during the three years of the period analyzed was slower than the institution assets value growth, which proves the careful and balanced credit policy of this Bank. Besides, such a small loan portfolio of the bank is explained by the fact that the consumer loans prevailing in the portfolio are of rather short credit period and small amounts. In fact, the bank issued a lot of loans, but due to their small value the Bank's loan portfolio is not large as evidenced by the data in table. 1.

The data of table 2 reveal that the share of the loan portfolio in the value of the Bank's assets is small - it did not exceed 20% during the three years, the positive thing is the slow but stable growth of the share, which increased by a little more than 4 percentage points in three years.

It should be noted that unlike other banks, the structure of assets is dominated by investment securities, which account for 49% of all assets of this Bank (Fig. 1).

1. Analysis of the value of the JSC CB "PrivatBank" assets and the position of their credit activities in 2019-2021, UAH million

Article	2019	2020	Deviation		2021	Deviation	
			Absol.	%		Absol.	%
Cash and cash equivalents, mandatory reserves	25 296	27 360	2 064	8.2	45 894	18 534	67.7
Banks indebtedness	2 903	-	-	-	27 118	-	-
Loans and advances to customers	38 335	50 140	11 805	30.8	59 544	9 404	18.8
Investment securities	126 676	180 081	53 405	42.2	152 157	-27 924	-15.5
Other assets	60 465	20 467	-39 998	-66.2	25 010	4 543	22.2
Total assets	253 675	278 048	24 373	9.6	309 723	31 675	11.4

Source: compiled by the authors based on their own research [22]. Privat Bank commercial bank joint stock company annual report. December 31, 2021.

2. Analysis of the loan portfolio position in the assets of JSC KB "PrivatBank" in 2019-2021, %

Article	2019	2020	Deviation	2021	Devoiation
Cash and cash equivalents, mandatory reserves	10.0	9.8	-0.1	14.8	5.0
Banks indebtedness	1.1	-	-	8.8	
Loans and advances to customers	15.1	18.0	2.9	19.2	1.2
Investment securities	49.9	64.8	14.8	49.1	-15.6
Other assets	23.8	7.4	-16.5	8.1	0.7
Total assets	100.0	100.0	0.0	100.0	0.0

Source: compiled by the authors based on their own research [22]. Privat Bank commercial bank joint stock company annual report. December 31, 2021.

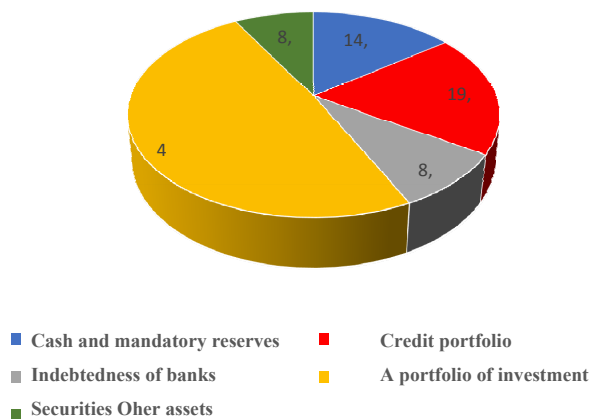


Fig. 1. Analysis of the JSC CB "PrivatBank" asset structure in 2021, %.

Source: compiled by the authors based on their own research

The data reveal that the structure of JSC CB "PrivatBank" assets is somewhat atypical for the Ukrainian banking system: the assets mainly consist of the value of the loan portfolio since the investment activity in the banking sector is developed very poorly. This peculiarity of the structure of this Bank assets is explained by the fact that this portfolio of investment securities consists of domestic state loan bonds the bank received during nationalization.

The banks indebtedness is not of a permanent nature. However, in 2021 it

made up a fairly significant share - up to 9% in the structure of assets. According to the Bank's financial statements in 2021, it was made up of certificates of deposit of the National Bank of Ukraine. These certificates were attracted by the bank at 11.5% rate and, therefore, we can not to attribute this amount to the total value of the loan portfolio. The analysis of the above data proved that the loan portfolio of this bank makes 1/5 of its assets. As we have already mentioned above, this Bank is mainly focused on providing services to

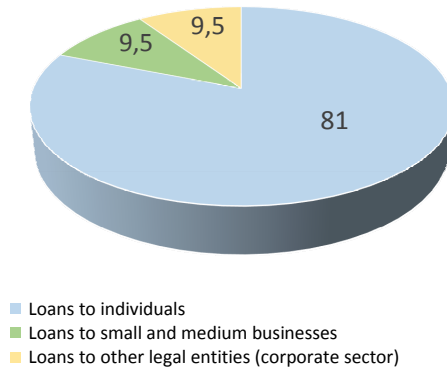


Fig. 2. Analysis of the JSC CB "PrivatBank" credit portfolio structure in 2021, %.

Source: compiled by the authors based on their own research

the population, and therefore consumer loans predominate in its credit portfolio, as evidenced by the data of figure 1.

Figure 2 data show that loans to the population accounted for 81% of the entire loan portfolio of the Bank in 2021, while the remaining 19% was evenly divided between the small and medium business sectors and the large corporate sector. As a rule, small and medium medium-sized business sector have the priority. However, the number of loans granted to this sector was greater, but the average value of the loan is lower than the amount of credit usually granted in the corporate segment. It should be noted that the analysis does not involve loans to individuals related to the former owners of the Bank, which are now mostly classified as problematic.

Thus, over the past three years, the value of the loan portfolio has increased by almost 64% - from UAH 34,647 million to UAH 56,722 million. According to the data of the table, the increase in the value of the loan portfolio throughout the analyzed period was ensured by the increase in the value of lending to the segment of individuals. In 2020, the increase in this segment ensured an in-

crease in the value of the loan portfolio by 80% (UAH 9,538 million of UAH 11,955) and in 2021 – 74%, respectively (UAH 7,468 million of UAH 10,120 million).

The total value of loans to individuals increased by UAH 17,006 million over three years, i.e., the growth rate as of three years made 58%. It is noteworthy that during the entire period under analysis there was a tendency to reduce the growth rate of the value of the segment of individuals while in 2020 the value of the segment of individuals in the total loan portfolio increased by UAH 9,538 million and the growth rate made almost 33%. In 2021 the value of this segment increased by only UAH 7,468 million, i.e. by 19%. This may indicate the satiety of the market with this type of banking products and the transition of this segment of the credit market to the stage of maturity - that is, lending to this segment will be carried out at approximately the same level and no significant volumes growth will occur.

Also, it can further result in significant changes in the very structure of the credit portfolio of this financial institution, as evidenced by the data of table. 3.

3. Analysis of the structure of the JSC CB "PrivatBank" loan portfolio by borrowers in 2019-2021, %

Article	2019	2020	Deviation	2021	Deviation
Loans issued to legal entities	7.8	8.3	0.5	9.2	0.9
Loans issued to individuals	84.0	82.9	-1.1	81.3	-1.6
Loans issued to SME	8.2	8.8	0.6	9.5	0.7
Total issues (excl. reserves and loans issued to individuals related to former owners)	100	100	0	100	0

Source: compiled by the authors based on their own research [22]. Privat Bank commercial bank joint stock company annual report. December 31, 2021.

4. Analysis of the structure of the JSC CB "PrivatBank" loan portfolio for the individuals in 2019-2021, UAH million

Article	2019	2020	Deviation		2021	Deviation	
			Absol.	%		Absol.	%
Credit cards	23 717	32 431	8 714	36.7	38 822	6 391	19.7
Mortgage loans	2 075	1 619	-456	-22.0	2 297	678	41.9
Consumer loans	3 092	3 908	816	26.4	3 892	-16	-0.4
Car purchase loans	6	2	-4	-66.7	1	-1	-50.0
Other loans	39	45	6	15.4	37	-8	-17.8
Financial leasing	181	643	462	255.2	1 067	424	65.9
Total (excl. reserves)	29 110	38 648	9 538	32.8	46 116	7 468	19.3

Source: compiled by the authors based on their own research [22]. Privat Bank commercial bank joint stock company annual report. December 31, 2021.

The data of table 3 reveal that the share of loans to individuals decreased from 84% to 81% over the analyzed three years, i.e. by almost 3 percentage points.

Currently, the product portfolio for individuals consists of the following 9 credit products:

- "Universal" Visa & MasterCard card
- Service "Payment in installments"
- "Instant installment" service
- "Instant installments. Cash loan"
- Financial leasing "Auto in installments"
- Housing on credit:
- "Mortgage at 10%"
- Deposit loan
- Loan secured by real estate

The structure of the credit portfolio by credit products of JSC CB "Privat-

Bank" for the individual's segment is presented in table 4.

Table 4 data reveal indicate the increase in the value of the "individuals" segment in the Bank's loan portfolio due to the increase in the value of credit transactions carried out with the use of the Bank's credit cards, in particular the "Universal" card. Thus, over three years, the value of credit operations carried out using this credit instrument increased from UAH 23,717 million to UAH 38,822 million, i.e. by UAH 15,105 million, or almost 64%, which ensured an increase in the value of loans to individuals by 89% (UAH 15,105 million of UAH 17,006 million for the entire segment).

The data of figure 3 reveal that over the past three years, the product structure

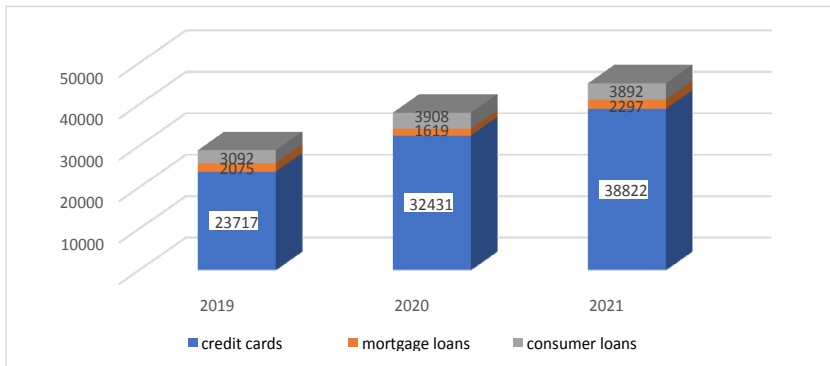


Fig. 3. Analysis of the structure of the JSC CB "PrivatBank" "individuals" segment credit portfolio by credit products in 2019-2021, UAH million.

Source: compiled by the authors based on their own research

of this segment has hardly changed, the largest share is occupied by card products - on average, their share is 83%, respectively, consumer loans account for 9%, and mortgage loans - about 5%. Recently, there has been a tendency for growing the share of financial leasing - in three years increased from 0.6% to 2%, respectively, the remaining 1% is accounted for by other loan products, in particular, loans for the purchase of cars.

The popularity of card products among the population is explained by their simplicity and availability, the popularity of consumer loans is explained by the low incomes of Ukrainians – they cannot afford to purchase necessary but quite expensive goods, such as household appliances and furniture, with their own funds. The popularity of this type of credit products is also explained by the instability of the national currency and inflationary processes, which make the process of targeted accumulation of funds for the purchase of household appliances and furniture very difficult - for example, in a year, due to the unstable exchange rate, the value of these types of goods can increase significantly, and borrowing allows purchasing these

goods at an acceptable price, or immediately as the need arises, gradually paying its cost to the bank. Ukrainian practice proves that, taking into account the instability of the exchange rate, the purchase of necessary goods on credit is sometimes much more profitable than a delayed purchase with one's own funds.

As for the corporate sector, it is divided into two segments in the bank's loan portfolio - the segment of small and medium-sized businesses (SMEs) and legal entities (large businesses). According to the Bank's development strategy, which was analyzed above, the priority in credit activities is given to the SME segment, as evidenced by the constant growth of the value of this segment in the Bank's loan portfolio, which increased from UAH 2,838 million in three years to UAH 5,392 million (Table 4), i.e. by a total of UAH 2,554 million, or almost twice.

Despite the fact that the SMEs are given the priority, their share hardly differ from the share of the segment of other legal entities (Table 4) and in 2021 they amounted to about 9.5% each. It should be noted that the dynamics of growth in the value of loans of other

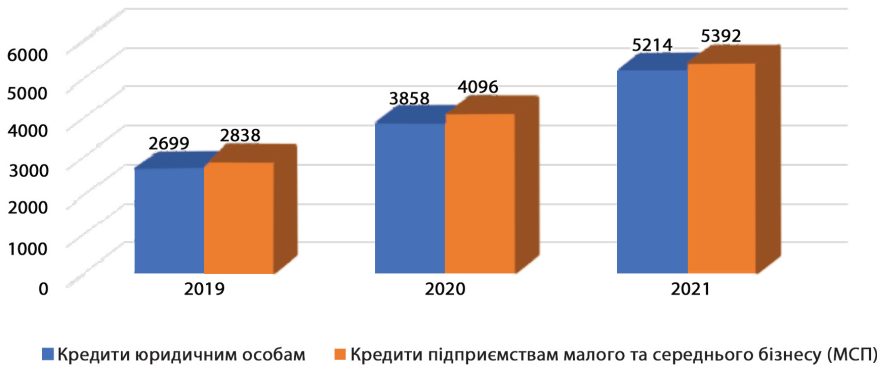


Fig. 4. Analysis of the dynamics of growth in the value of loans for SMEs and large businesses in the JSC CB "PrivatBank" loan portfolio in 2019-2021, UAH million.

Source: compiled by the authors based on their own research

legal entities is almost the same (Fig. 4) - in three years, their value increased by UAH 2,515 million or by 93% (from UAH 2,699 million to UAH 5,214 million). Therefore, according to the Bank's development strategy, these segments are more promising for the Bank today, because of the national economy can only grow under the condition of active development of the small and medium-sized business segment, and the latter requires certain financial resources. These resources, however, are mostly scarce and they cause deficit in this business segment. It should be noted that large Ukrainian commercial banks are very prudent in lending to this segment since it is the most vulnerable to the influence of adverse external factors and current economic and political situation in the country is not characterized by stability.

The product portfolio for the corporate sector is represented by the following credit products:

1) State compensation program "AVAILABLE LOANS 5-7-9%" – this program provides compensation from the state to the entrepreneur for a part of the credit load depending on the amount

of previous income received and the number of newly created jobs. Special conditions apply to agribusiness. This program also provides support for the following anti-crisis measures to prevent the COVID-19 pandemic and overcome its consequences: refinancing of existing debt at 0%, financing of investment goals/replenishment of working capital at a rate of 3%.

2) "Country of Successful Business" (KUB) – a program aimed to support the development of entrepreneurship in Ukraine. The program involved 28,400 entrepreneurs in 2021. This program provides for a loan for business development of up to 1 million hryvnias at 1.4–1.6% per month. In 2021, PrivatBank issued UAH 8.2 billion (including the value of mandatory reserves) of loans to small and medium-sized businesses, UAH 3.8 billion of which came under the Successful Business Country (SBC) program.

3) AgroSBC – the "SBC" program for farmers provides financing for the purchase of necessary agricultural machinery, fuel, seeds and other necessary components of agribusiness;

4) TurSBC – the "SBC" program for businesses related to seasonal tourism and its infrastructure (tourist enterprises, hotels, recreation centers, children's camps (non-budgetary), cafes, restaurants, canteens) located in the regions of the country with the most developed seasonal tourist business, namely: on the coast of the Black and Azov seas, as well as in the ski resorts of Prykarpattia and Transcarpathians;

5) Revolving credit line "Agroseason" for financing the needs of the agricultural cycle (the possibility of receiving "live" money starting with UAH 500,000, at 10.5% (for the corporate segment) to 13% (for SMEs) per annum, up to 36 months, with mandatory availability of security);

6) "Business mortgage" – a credit product only for the SME segment for the purchase of commercial or residential real estate (for the purpose of commercial use), starting with UAH 500,000 (75% of the value of the real estate purchased for conducting or expanding a business), from 12 to 60% at 13% per annum;

7) "Business installment" loan – a loan for business expansion – provided for purchasing or renewing outdated, low-quality fixed assets (commercial real estate, motor vehicles, new production equipment, agricultural machinery) and ensuring the effective development of the enterprise. It provides for the payment of loan obligations from the profit obtained from the use of purchased current assets (non-revolving credit line, which is provided for a period of 3 to 6 months, at 10.5%, from UAH 200 to UAH 1,000 thousand, advance payment from 30% to 50%, depending on the type of current assets);

8) Loan "guaranteed payments" – loan issued at 4% per annum – at the

expense of the limit set by the bank, the buyer can issue a guaranteed payment with a date of execution in the future (for a period of 10 to 365 days), and the supplier can immediately ship the goods (provide services) with the funds to be credited by the bank in full and on the specified date. In the case of making a payment from credit funds, the fee for using the credit is 13% per annum;

9) Loan secured by a deposit – the possibility of obtaining a business loan at the rate of 2% per annum, can be secured by the deposit of an individual, from UAH 10,000 up to 85% of the deposit value; terms of repayment: the body of the loan - at the end of the term of the loan agreement, interest - monthly.

10) Credit line for small and medium-sized businesses (to increase working capital) - allows the customer to receive the loan in installments within the established limit (from UAH 500 to 3,000 thousand or from \$18 to 105 thousand and from €15 to 90,000) and the term specified in the credit agreement (from 1 to 3 or 5 (non-renewable line for investment purposes) with or without restoration of the credit limit in the event that the client repays the received loan or part of it. Goods in circulation, real estate, equipment, motor vehicles, agricultural machinery act as security, additional requirement – a guarantee from an individual – the owner of the business; interest is charged only on the used amount of the line;

11) Credit limit on the current account – established without collateral under the availability of presence of a guarantee agreement signed by the head or founder of the enterprise in the amount UAH 10-500 thousand for entrepreneurs, and up to UAH 2 million for legal entities, at the rate of 16.5% (if there is a guarantee agreement) and

5. Analysis of the dynamics of interest rates on credit products by segments of the banking business of JSC CB "PrivatBank" in 2019-2021

Article	2019	2020	2021
Loans and advances to business entities	***	***	***
UAH	11	12	12
US dollars	6	6	6
Euro	3	3	3
Loans and advances to business entities	***	***	***
UAH	46	46	44
US dollars	17	17	17
Euro	18	18	18

Source: compiled by the authors based on their own research [22]. Privat Bank commercial bank joint stock company annual report. December 31, 2021.

34% (without an agreement), the commission for transferring funds from the credit limit to any accounts is 3%, grace period up to 55 days;

12) Leaseback - guaranteed investment - 50%–60% of the property value; the possibility of further exploitation of one's property, as after all payments the leased object is returned to the company's ownership; a profitable and convenient alternative to a mortgage loan;

13) Loan for the purchase of fixed assets (commercial vehicles, agricultural machinery, special machinery, equipment) - a loan for up to 5 years, from 5% per annum, from UAH 100,000, an advance payment of 20% of the property value;

14) Leasing for business - rate from 0.01% per annum - depending on the partner program, lease term - up to 5 years.

15) Overdraft - a short-term type of financing that allows meeting the needs of the enterprise in working capital for the purposes such as: payment of salaries; payment of taxes; payment of goods, works and services and making other urgent payments;

16) "Warm" loans for condominiums on preferential terms - compensa-

tion from 40 to 70% of the loan amount by the state, up to 7 years, from UAH 10,000 without an advance, up to 15.5% per annum.

Therefore, the product portfolio for the corporate segment is much larger than the product portfolio for the private individuals segment by almost two times - 16 credit products against 9. Many credit products include government compensation, which makes them even more affordable and attractive.

It is also noticeable that credit products for the segment of individuals cost much more than the products for the corporate segment (table 5), and, therefore, lending to individuals is more profitable, although the loan amounts here are much lower. It should also be pointed out that there have been almost no changes in credit rates for three years.

The concentration of the client credit portfolio in economic sectors and areas of commercial activity of the corporate segment is presented in Table 6. As can be seen from the table, the largest increase in the value of the loan portfolio of the corporate segment was ensured by the increase in the value of the loan portfolio of SMEs, which increased by UAH 4,637 million over the three years,

6. Analysis of the structure of the loan portfolio of JSC KB "PrivatBank" of the corporate segment by economic sectors in 2019-2021, UAH million

Article	2019	2020	Deviation		2021	Deviation	
			Absol.	%		Absol.	%
Loans to legal entities:	3 521	6 358	2 837	80.6	6 992	634	10.0
Agro-industrial complex and food industry	1 234	2 298	1 064	86.2	1 942	-356	-15.5
Consumer goods	570	771	201	35.3	1 192	421	54.6
Other	1 717	3 289	1 572	91.6	3 858	569	17.3
SMEs	4 336	8 499	4 163	96.0	8 973	474	5.6
Provision of household, individual and professional services	1 114	2 664	1 550	139.1	2 440	-224	-8.4
Agro-industrial complex and food industry	170	1 934	1 764	1 037.6	2 316	382	19.8
Consumer goods	79	1 240	1 161	1 469.6	1 651	411	33.1
Infrastructure	2 723	556	-2 167	-79.6	599	43	7.7
Other	250	2 105	1 855	742.0	1 967	-138	-6.6
Total loans and advances	7 857	14 857	7 000	89.1	15 965	1 108	7.5

Source: compiled by the authors based on their own research [22]. Privat Bank commercial bank joint stock company annual report. December 31, 2021.

taking into account the value of required reserves for this loan portfolio, which accounted for 57% of the total growth. The increase in the value of the loan portfolio of SMEs, in turn, ensured the growth of the volume of lending to the agro-industrial complex and food industry, which increased by UAH 2,146 million over three years, from UAH 170 million to UAH 2,316 million, i.e. by more than 13 times. Lending to the consumer goods industry also increased significantly - from UAH 79 million to UAH 1,651 million, that is, by UAH 1,572 million or almost 20 times.

The volume of lending and the provision of household, individual and professional services also increased, though the growth was slower and made only 119% - from UAH 1,114 million to UAH 2,440 million, i.e. by UAH 1,326

million. The volume of infrastructure lending has significantly decreased - from UAH 2,723 million to UAH 599 million, i.e. by UAH 2,124 million or 78%. The volume of lending to other industries increased by UAH 1,717 million over three years, that is, more than 7 times - from UAH 250 million to UAH 1,967 million.

As for loans to legal entities (large enterprises), their lending volume increased by UAH 3,471 million or almost 98%. This increase in the volume of lending was took place at the expense of other sectors of the economy, which in three years increased by UAH 2,141 million or almost by 124%. The volume of lending to the consumer goods industry increased by 109% or by UAH 622 million. The volume of lending to agriculture and the food industry increased

7. Analysis of the structure of the JSC CB "PrivatBank" corporate segment loan portfolio by economic sectors in 2019-2021, %

Article	2019	2020	Deviation	2021	Deviation
Loans to legal entities:	44.8	42.8	-2.0	43.8	1.0
Agro-industrial complex and food industry	15.7	15.5	-0.2	12.2	-3.3
Consumer goods	7.3	5.2	-2.1	7.5	2.3
Other	21.9	22.1	0.3	24.2	2.0
SMEs	55.2	57.2	2.0	56.2	-1.0
Provision of household, individual and professional services	14.2	17.9	3.8	15.3	-2.6
Agro-industrial complex and food industry	2.2	13.0	10.9	14.5	1.5
Consumer goods	1.0	8.3	7.3	10.3	2.0
Infrastructure	34.7	3.7	-30.9	3.8	0.0
Other	3.2	14.2	11.0	12.3	-1.8
Total loans and advances	100.0	100.0	-	100.0	-

Source: compiled by the authors based on their own research [22]. Privat Bank commercial bank joint stock company annual report. December 31, 2021.

by only 57% or UAH 708 million.

The structure of the credit portfolio of the corporate segment by economic sector is presented in table 7.

The data presented in table 8 indicate that agro-industrial complex and food industry take the largest share in both cases. The SME segment had a stable upward trend from 2.2% to 13% and to 14.5%, respectively, while in the segment of legal entities, on the contrary, it had stable tendency to decrease from 15.7% to 12.2%. In both cases, the share of consumer goods manufacturers also increased - from 7.3% to 7.5% and from 1% to 10%, respectively. During the entire analyzed period, the share of infrastructure experienced a significant reduction - from almost 35% to almost 4%. The structure of the credit portfolio of the entire corporate segment is presented in fig. 5.

Figure 5 data reveal that in three years the structure of the corporate segment's loan portfolio has undergone significant changes. In 2019 the share

of infrastructure lending operations prevailed, while in 2020 the primacy shifted to the agro-industrial complex and the food industry. In 2021, they hold the first position, but their share decreased somewhat - from 28.5% to 26.7%. This allows us to conclude that currently the development of the agro-industrial complex and food industry producers support are among the priority tasks. This is evidenced by the product portfolio of this sector, i.e. a sufficiently large offer of various credit products, and a large amount of state support for some loan products.

As of December 31, 2021, the total amount of loans issued to the Bank's 10 largest clients was UAH 2,191 million (December 31, 2020: UAH 2,164 million) or 3% of the total amount of loans (December 31, 2020: 3%). The provision for expected credit losses related to these borrowers amounted to UAH 663 million (as of December 31, 2020: UAH 1,290 million). The structure of the loan portfolio terms is presented in Table 8.

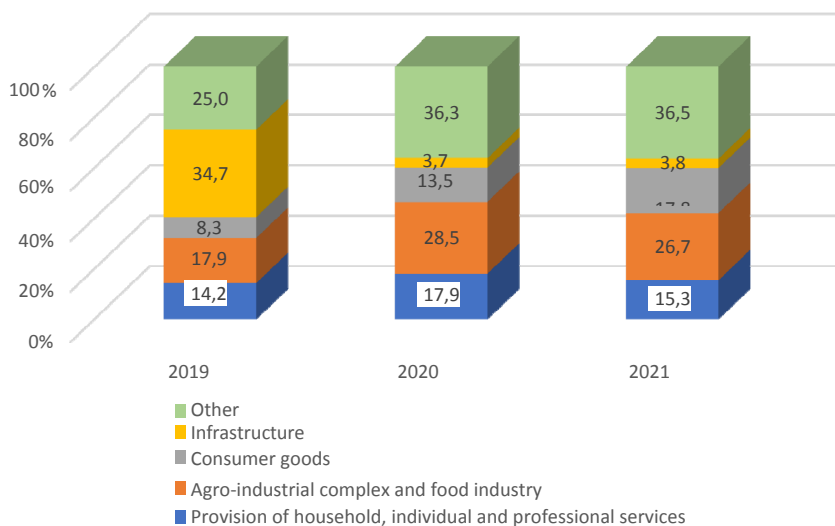


Fig. 5. Analysis of the structure of the JSC CB "PrivatBank" "individuals" segment credit portfolio by credit products in 2019-2021, UAH million.

Source: compiled by the authors based on their own research

According to table 8 data, growth in credit volumes was caused by the increase, first of all, in credit products on demand (revolving credit lines) with a term of up to 1 month - in three years' time their value increased by UAH 10,146 million, i.e., the growth rate was 66%. These credit products rates growth of slowed down somewhat in 2021,

which may indicate the gradual saturation of the market with similar products, in particular, card credit products. The highest growth rates over the past three years were in credit products with a credit term of more than 1 year, with their value increase by UAH 4,455 million or almost 96% over three years - from UAH 4,654 million to UAH 9,109 million.

8. Analysis of the structure of the loan portfolio of JSC CB "PrivatBank" by maturity dates in 2019-2021

Article	2019	2020	Deviation		2021	Deviation	
			Absol.	%		Absol.	%
On demand and up to 1 month	15 365	21 964	6 599	42.9	25 511	3 547	16.1
1-3 months	8 316	10 714	2 398	28.8	13 538	2 824	26.4
3-12 months	10 000	11 816	1 816	18.2	11 386	-430	-3.6
Over 1 year	4 654	5 646	992	21.3	9 109	3 463	61.3
Total loans and advances of customers	38 335	50 140	11 805	30.8	59 544	9 404	18.8

Source: compiled by the authors based on their own research [22]. Privat Bank commercial bank joint stock company annual report. December 31, 2021.

Conclusions.

The conducted research reveals that credit portfolio management is a fairly significant and necessary part of banking activity. Currently, the banking system of Ukraine is in a very difficult financial situation. A large number of overdue loans result in a loss of depositors and shareholders' confidence in the bank, as well as in problems with solvency and liquidity, deterioration of the bank's reputation. In addition, the bank bears additional costs associated with loan repayment requirements, part of the bank's assets are non-performing assets.

The decline in business activity since the beginning of the full-scale war has led to a drop in business demand for loans, as banks have noted in a survey of lending conditions. At the same time, the deterioration of macroeconomic expectations significantly reduced the risk appetite of banks. Accordingly, financial institutions have tightened lending standards for businesses. Therefore, the growth of the loan portfolio almost stopped: the volume of foreign currency loans decreased, while hryvnia loans increased several times more slowly compared to last year. The hryvnia net corporate loan portfolio has grown by 8% since the beginning of the full-scale war.

The growth of the value of the loan portfolio during the last three years was slower than the value growth of the assets of this institution, which proves the careful and balanced credit policy of the Bank. Also, a small loan portfolio of the bank is explained by the fact that consumer loans prevailing in it are characterized by a rather short credit period and small amounts. Therefore, the Bank actually issues a lot of loans, but their small value does not make the value of the Bank's loan portfolio large. The spe-

cific weight of the loan portfolio in GDP for the studied period decreases every year. According to the results of 2021, it makes only 24.41%, which is an indirect sign of a decrease in credit investments in financing sectors of the economy, and, consequently, poor lending restrains stimulation of economic growth.

References

1. Vasyurenko O.V. Banking operations: a textbook / O.V. Vasyurenko. K.: Znannya, KOO, 2017. 243 p.
2. Voytyshek A.V. Fundamentals of the Monte Carlo method: Manual / Voytyshek A.V. - Novosibirsk state uni. - Novosibirsk: NGU, 2010. 256 p.
3. Dzyublyuk O.V. Banking: Textbook / Ed. Doctor of Economics, Prof. O.V. Dzyublyuk. - Ternopil: TNEU Publishing House "Economic dumka", 2009. 696 p.
4. Yepifanov A.O. Commercial banks operations. Text: Manual / Yepifanov A.O., Maslak N.H, Salo I.V. - Sumy: VTD "Universitetska Knyha", 2007. - 523 p. ISBN 978-966-8958-85-4.
5. Law of Ukraine "On Banks and Banking" Law of 15.02.2022 № 1882-IX// Bulletin of the Verkhovna Rada of Ukraine. 2022, N 5-6, p.30.
6. Law of Ukraine "On securing creditors' claims and registration of encumbrances" // Law of 01.07.2021 № 738-IX// Bulletin of the Verkhovna Rada of Ukraine (BVR), 2021, N 11, ct.140.
7. Law of Ukraine "On Pledge" // Law of 14.01.2020 № 440-IX // Bulletin of the Verkhovna Rada of Ukraine (BVR), 2020, № 28, ct.188.
8. Law of Ukraine "On the Deposit Guarantee Fund of Individuals" of June 30, 2021 (as amended) № 1588-IX. URL: <https://zakon.rada.gov.ua/laws/show/4452-17>.
9. Law of Ukraine "On the Deposit Guarantee Fund of Individuals" of April 13, 2022

- (as amended) № 4452-VI. URL: <https://zakon.rada.gov.ua/laws/show/4452-17>.
10. Kirichenko T.V. Financial management: Manual for universities / T.V. Kirichenko. - M.: Dashkov & K, 2018. - 484 p.
 11. Lavrushin, O.I. Modern approach to the formation of the optimal loan portfolio [Text] / I.O. Lavrushin // Banking technologies. 2009. № 11. P. 52–65.
 12. Lavrushin O.I. Banking risks: Manual / Ed.: prof. O.I. Lavrushin, prof. N.O. Valentseva. - M.: KNORUS, 2018. P.37.
 13. Kotsovska R.R. Banking operations [Text]: manual / R.R. Kotsovska, O.P. Pavlyshyn, L.M. Khmil. K.: Znannya, 2015. 390 p.
 14. Zharikova O.B., Cherkesenko K.I. Integration of banks and insurance company's activities in Ukraine <https://doi.org/10.33445/sds.2021.11.2.5> DOI: 2.33445 / sds.2021.11.2.5.
 15. Nehoda, Y., Zharikova O., & Grebenyuk, T. (2022). Mortgage lending market: problems and development prospects. Political Science and Security Studies Journal, 3(2), 26-37. <https://doi.org/10.5281/zenodo.7230142>
 16. Yuliia Nehoda, Olena Zharikova, & Tetyana Grebenyuk. (2022). Foreign experience of the development of mortgage lending as one of the most important economic factors in Ukraine. Politics & Security, 6(3). <https://doi.org/10.5281/zenodo.7333956>
 17. Pashchenko O.V., Zharikova O.B. Increasing the competitiveness of Ukrainian dairy products in line with European standards. International Journal of Scientific and Technological Research www.iiste.org. [435-441]. - 2018. Vol 4. No 10.
 18. Pashchenko, O., Zharikova O., & Zharikova, A. (2022). Improving the competitiveness of dairy products of Ukrainian producers in accordance with European quality requirements. Political Science and Security Studies Journal, 3(3), 24-34. <https://doi.org/10.5281/zenodo.7271178>
 19. Zharikova O.B., Cherkesenko K.I. Bank assurance: new challenges and prospects for development in Ukraine //O.B. Zharikova / Scientific Journal "Bioeconomics and Agrarian Business". NUBiP. Issue 4. №3. 2020 pp. 76-87. <http://dx.doi.org/10.31548/bioeconomy>.
 20. Zharikova O., Pashchenko O.V. Financial and economic activity of agribusiness according to international standards // Zharikova Olena / Scientific Bulletin of Kherson State University. Series «Economic Sciences». №42 / 2021 P.64-72. <https://doi.org/10.32999/ksu2307-8030/2021-42-10/>.
 21. Pashchenko O.V., Zharikova O.B. (2021). Differentiation of household incomes in modern conditions of economic development. Scientific Journal "Bioeconomics and Agrarian Business" NUBiP. Iss. № 2. 2021. P.45-55. <http://journals.nubip.edu.ua/index.php/Bioeconomy/article/view/15420>
 22. PrivatBank commercial bank joint stock company annual report December 31, 2021. Access mode: <https://privatbank.ua/about/finansovaja-otchetnost>
 23. Yukhymenko, P., Sokolska, T., Arbuzova, T., Paska, I., & Zharikova, O., Khakhula, L., Zhytnyk, T. (2021). Formation of the model of state support for the Ukrainian agrarian sector in the market economy: change of the approach. Economic Annals-XXI, 187 (1-2), 75-81. <https://doi.org/10.21003/ea.V187-07>
 24. Zharikova O., Pashchenko, O. & Grebeniuk, T. (2022). Development of efficient mortgage landing in macroeconomic stability and economic equilibrium provision. Political Science and Security Studies Journal, 3(1), 44-57. <https://doi.org/10.5281/zenodo.7331916>
 25. O. Zharikova, O. Pashchenko, A. Korniienko (2022). Scoring structurization model of commercial banks borrowers' creditability assessment under the global financial crisis. Том 13, № 1 (2022). <http://journals.nubip.edu.ua/index.php/Bioeconomy/article/view/16250>

Жарікова О. Б., Вербовенко І. (2022).

**ФОРМУВАННЯ ЯКІСНОГО КРЕДИТНОГО ПОРТФЕЛЯ УКРАЇНСЬКИХ БАНКІВ:
СТАН ТА СТРУКТУРА КРЕДИТНОГО ПОРТФЕЛЯ АТ КБ «ПРИВАТБАНК» ЗА
РІЗНИМИ ГАЛУЗЯМИ ЕКОНОМІКИ**

BIOECONOMY AND AGRARIAN BUSINESS, 13(4): 61-70.

[https://doi.org/10.31548/economics13\(4\).2022.46-61](https://doi.org/10.31548/economics13(4).2022.46-61)

Анотація. Мета статті - розглянути стан і структуру кредитного портфеля АТ КБ «ПриватБанк» за різними галузями економіки. Аналізуючи фінансові показники, доведено, що одним із пріоритетних напрямків в діяльності даного Банку є розвиток кредитування з підтриманням високої якості кредитного портфелю. Стратегічною метою Банку є нарощування якісного кредитного портфеля роздрібних кредитів та кредитів МСП.

У результаті дослідження проведено аналіз основних аналітичних показників управління кредитним портфелем, визначено структуру кредитного портфеля та структуру кредитної якості портфеля банку протягом 2019–2021 рр. Досліджено практичну діяльність АТ КБ «ПриватБанк» та встановлено, що надані великі кредити великим підприємствам - то є великі ризики для банку та його мільйонів вкладників. Але притримуючись цієї зваженої кредитної політики Банку все одно вдається нарощувати власну кредитну діяльність, про що свідчать аналітичні розрахунки.

Для досягнення поставленої мети в ході дослідження були використані загальнонаукові методи дослідження: спостереження (систематичне вивчення банку, отримання первинної інформації у вигляді показників фінансової звітності за аналізований період), порівняння (зіставлення аналізованих параметрів, коефіцієнтів, статей балансу між собою або з базовим показником, нормативним значенням), абстрагування (відхід у визначеннях категорій від несуттєвих властивостей та виділення декількох суттєвих характеристик), метод групувань (при розгляді класифікації кредитів); різноманітні прийоми статистичних методів, зокрема порівняння – при зіставленні фактичних даних за відповідні періоди; спостереження були використані для вивчення і оцінки фінансового стану АТ КБ «ПриватБанк», методи аналізу та синтезу, індукції та дедукції.

Проаналізовано та доведено, що зниження бізнес-активності з початку повномасштабної війни призвело до падіння попиту бізнесу на кредити. Водночас погіршення макроекономічних очікувань значно знизило ризик-апетит банків. Відповідно фінансові установи посилили стандарти кредитування для бізнесу. Тож зростання кредитного портфеля майже припинилося: обсяг валютних кредитів зменшувався, а гривневих збільшувався в рази повільніше, ніж торік, а гривневий чистий корпоративний кредитний портфель із початку повномасштабної війни зріс на 8%.

Шляхи вирішення проблем удосконалення та підвищення якості кредитної діяльності банку залишаються перспективами для подальших досліджень.

Ключові слова: банк, Національний банк України, кредит, кредитний портфель банку, дохід, аналіз якості, структура кредитного портфеля банку.