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STRATEGY OF THE BANK FOR REDUCING NON-PERFORMING LOANS

The article examines the theoretical, normative, and methodical aspects of the formation of banks' strategies for reducing non-performing loans, systematizes, supplements, and details the system of factors that cause non-performing loans in domestic banks. The purpose of the study is to systematize and detail the list of possible factors for the emergence of problem loans and to develop an appropriate strategy for reducing non-performing loans in domestic banks. The systematization of literary sources and approaches to solving this problem indicates the absence among scientists and experts in the banking sphere of a generally accepted system of factors for the emergence of non-performing loans in banks, which would take into account the different nature and subjects of their influence at the micro and macro levels. In addition, the study showed the need for the formation or revision of existing strategies for reducing non-performing loans, which will enable banks to be operationally ready for the settlement of particularly large volumes of non-performing loans in current realities. The urgency of solving this scientific problem lies in the fact that in the current conditions of a significant increase in the volume of non-performing loans, improving the quality of bank loan portfolios and ensuring the financial stability of the banking system as a whole is impossible without the development of a comprehensive strategy for reducing non-performing loans. The study of the problem covered in the article is carried out in the following logical sequence: identification of the factors of the occurrence of non-performing loans in banks at the micro- and macro-levels, their systematization, addition and detailing by the nature and participants of credit relations that caused their occurrence; development of the bank's strategy for reducing non-performing loans, which includes the main stages of a comprehensive action plan and appropriate measures for the settlement of problem credit debt at each of these stages. The methodological toolkit of the research was a complex of complementary methods: analysis and synthesis, cause and effect analysis – for systematization, detailing and addition to the list of internal and external factors of the occurrence of non-performing loans in banks, system-analytical, logical generalization – for the development of a strategy for reducing non-performing loans in domestic banks, etc. The object of the research is portfolios of non-performing loans of domestic banks, as well as a set of factors of their occurrence and measures to reduce them. The article presents the results of a cause-and-effect analysis, which made it possible to systematize, detail, and supplement the list of internal and external factors of the occurrence of non-performing loans in banks. The results of the system analysis and logical generalization are presented, which serve as the basis for the formation of a strategy for reducing non-performing loans in banks. The results of the research can be useful for Ukrainian banks, allowing them to minimize credit risks in the future.

Keywords: banks, non-performing loans, factors of non-performing loans, bank strategy.

СТРАТЕГІЯ БАНКУ ЗІ СКОРОЧЕННЯ ПРОБЛЕМНИХ КРЕДИТІВ

У статті досліджено теоретичні, нормативні та методичні аспекти формування стратегії банків зі скорочення проблемних кредитів, систематизовано, доповнено та деталізовано систему чинників виникнення проблемних кредитів у вітчизняних банках. Метою дослідження є систематизація та деталізація переліку можливих чинників виникнення проблемних кредитів та розробка відповідної стратегії зі скорочення проблемних кредитів у вітчизняних банках. Систематизація літературних джерел та підходів до вирішення цієї проблеми свідчить про відсутність серед науковців та експертів в банківській сфері загальноприйнятої системи чинників виникнення проблемних кредитів в банках, що враховувала б різний характер та суб'єктів їх впливу на мікро- і макрорівнях. Крім того дослідження показало необхідність у формуванні або перегляді існуючих стратегій зі скорочення проблемних кредитів, які дадуть можливість банкам бути операційно готовими до врегулювання особливо великих обсягів проблемних кредитів в теперішніх реаліях. Актуальність вирішення даної наукової проблеми полягає в тому, що в теперішніх умовах суттєвого зростання обсягів проблемних кредитів, підвищення якості

кредитних портфелів банків та забезпечення фінансової стійкості банківської системи в цілому неможливе без розробки комплексної стратегії зі скорочення проблемних кредитів. Дослідження висвітленої у статті проблеми здійснюється в такій логічній послідовності: ідентифікація чинників виникнення проблемних кредитів в банках на мікро- та макрорівнях, їх систематизація, доповнення та деталізація за характером та учасниками кредитних відносин, що спричинили їх виникнення; розробка стратегії банку зі скорочення проблемних кредитів, що включає основні етапи комплексного плану дій та відповідні заходи щодо врегулювання проблемної кредитної заборгованості на кожному з цих етапів. Методологічним інструментарієм дослідження став комплекс взаємодоповнюючих методів: аналізу та синтезу, причинно-наслідкового аналізу – для систематизації, деталізації та доповнення переліку внутрішніх і зовнішніх чинників виникнення проблемних кредитів в банках, системно-аналітичний, логічного узагальнення – для розробки стратегії зі скорочення проблемних кредитів у вітчизняних банках та ін. Об'єктом дослідження виступають портфелі проблемних кредитів вітчизняних банків, а також сукупність чинників їх виникнення та заходів щодо їх скорочення. У статті представлено результати причинно-наслідкового аналізу, які дозволили систематизувати, деталізувати та доповнити перелік внутрішніх і зовнішніх чинників виникнення проблемних кредитів в банках. Подано результати системного аналізу та логічного узагальнення, що виступають основою формування стратегії зі скорочення проблемних кредитів в банках. Результати дослідження можуть бути корисними для українських банків, що дозволяють їм мінімізувати кредитні ризики у майбутньому.

Ключові слова: банки, проблемні кредити, чинники виникнення проблемних кредитів, стратегія банку.

Introduction. Today, the domestic banking system is forced to function in difficult conditions. The prolonged full-scale war on the part of the Russian Federation in Ukraine continues to have a negative impact on the state of the country's economy, complicates the conditions for the work of enterprises and financial institutions, leads to the loss of property, provokes a further increase in inflation, a fall in the incomes of both business entities and households, an increase in unemployment, causes uncertainty of financial institutions and business entities in the future. Against the backdrop of the uncertain recovery of the economy during martial law, borrowers' financial difficulties are increasing, which entails an increase in the volume of problem loans in the loan portfolios of banks. Regardless of the difficult economic conditions in which both borrowers and lenders find themselves, it is important for each specific bank to deal with the factors that can cause the growth of problem loans in its loan portfolio in a timely manner. Therefore, banks must be ready to adjust in a timely manner, and sometimes develop new strategies for reducing non-performing loans, taking into account the challenges and threats of today.

Literature review. The identification and analysis of various causes of non-performing loans in banks and the possible ways of their settlement are given constant attention among experts and scientists in the banking sector. A typical list of factors for the emergence of non-performing loans of banks was compiled and supplemented by the International Monetary Fund (*IMF, 2005, 2007*), as well as highlighted in the publications of experts on problem lending (*BIS, 2022, et al.*), scientific works of many domestic and foreign scientists such as Bolhar T. M. (*Bolhar, 2013*), Zaitseva I. Yu., Malyshko N. V. and Palii O. V. (*Zaitseva et al., 2019; et al.*), Zatvornytskyi K. S. (*Zatvornytskyi, 2020*), Krukhmal O. V., Pavlenko L. D. and Tarasenko Y. Yu. (*Krukhmal et al., 2021*); Yaremenko O. R. and Kostylyova O. M. (*Yaremenko et al., 2016*) and many others. Taking into account the challenges and threats that exist at one time or another, financial sector consultants of the World Bank Group, the Bank for International Settlements, specialists of the National Bank of Ukraine, etc., constantly revise and develop recommendations for banking institutions regarding the management of non-performing loans. At the same time, the system of possible factors for the emergence of non-performing loans, which would take into account the different nature and subjects of their influence, and the construction of an appropriate strategy for reducing non-performing loans in domestic banks, require further in-depth research.

The purpose of article. The purpose of the article is to systematize and detail the list of possible factors for the emergence of non-performing loans, which would take into account the different nature and subjects of their influence at the micro and macro levels, and the development of an appropriate strategy for reducing non-performing loans in domestic banks.

Research methodology and methods. The methodological toolkit of the research was a set of complementary methods: analysis and synthesis, cause and effect analysis – for systematization, detailing and addition of the list of internal and external factors of the occurrence of non-performing loans in banks, system-analytical, logical generalization – for the development of a strategy for reducing non-performing loans in domestic banks, etc.

Generalization of main statements. In today's difficult operating conditions, domestic banks should pay considerable attention to analyzing the quality of their own loan portfolios, identifying and differentiating the factors that increase the share of non-performing loans, and developing a strategy to reduce them in order to be ready to settle particularly large amounts of problem debt.

Usually, the factors of the occurrence of non-performing loans are divided into external (or macroeconomic) factors, which affect the occurrence of debts regardless of the actions of the main participants in the credit process and which cannot be avoided, and internal (or microeconomic) factors, which, in turn, are divided into those caused by themselves banks-creditors and borrowers-debtors. The negative impact of these factors can be minimized. Systematization and detailing of the factors of the occurrence of non-performing loans are given by the author in Table 1. At the same time, if the list of internal factors, in our opinion, is generally typical for various domestic banks, and has been worked out by them for a long time, then the list of external factors is more dynamic, not always predictable in terms of duration of influence, and depends on current challenges and threats to business, population, the financial sector and the country's economy as a whole. Thus, among the relevant external factors in our time is the full-scale military aggression by the Russian Federation, which can be protracted in nature, and which negatively affected the stability of the work of enterprises and households, the receipt of income and the preservation of property by borrowers. Also, until recently, banks both in Ukraine and in other countries had to take into account such external factors of the emergence of non-performing loans as quarantine restrictions due to the COVID-19 pandemic and the danger of new lockdowns in the country. Since these factors are of a systemic nature, under these circumstances it is important to develop targeted state policy measures that complement the efforts of banks to reduce problem loans.

Non-performing loans are the main generator of credit risk. Effective management of the bank's loan portfolio involves not only qualified and stable and balanced formation of it according to the "risk-return" criterion, but also full, timely repayment of loans, in particular problematic loans. The bank's strategy for reducing non-performing loans should ensure the operational readiness of banks to settle particularly large volumes of non-performing loans, contain a comprehensive bank action plan and quantitative targets for reducing non-performing loans agreed with the regulator. Such a strategy is usually developed in the context of a risk and capital management strategy and should be reviewed at least once a year. An example of a schematic representation of the main elements of such a strategy is shown in fig. 1.

Thus, in order to solve the problem of growth in the volume of non-performing loans, the bank must organize and ensure the effective work of specialized settlement departments responsible for working with non-performing loans. They should work separately from credit processing departments. As soon as it becomes clear that non-performing loans cannot be settled in a reasonable time frame, they should be transferred to the settlement department for more careful monitoring and resolution of the problems. The settlement department is entrusted with the main role in choosing the appropriate action plan for non-performing loans. At the same time, separate groups of specialists are responsible for managing primary debt (up to 90

days); overdue debt, restructuring and concessions; legal actions against borrowers whose financial condition or level of cooperation does not allow for restructuring; as well as management of pledged assets without the right of redemption. The resolution department may also recommend disposal of problem loans by sale or transfer to a third party (such as a service company) that can manage the debt collection process more effectively than bank resolution departments.

Table 1. Factors of the emergence of non-performing loans in banks*

Internal factors (influence on the micro level)				External factors (impact on macro levels)	
Caused by the borrower –		Caused by the bank		of a socio-political nature	of an economic nature
a legal entity	physical person	related to organization and control	related to personnel		
<ul style="list-style-type: none"> – miscalculations in the business plan under which the loan was granted; – mistakes in planning and tactical management already after receiving the loan; – low diversification of suppliers and buyers; – deterioration of financial condition; – decrease in demand for products (goods, works, services) and as a result "loss of the market"; – decrease in the market value of the collateral; – low quality of management; – force majeure (loss of property); – deliberate concealment of information; – cases of fraud, etc. 	<ul style="list-style-type: none"> – temporary loss of work; – decrease in income; – low level of financial literacy; – deliberate concealment of information; – cases of fraud; – force majeure (loss of property), etc. 	<ul style="list-style-type: none"> – insufficiently thought out credit policy; – predominance of foreign currency loans in the loan portfolio; – use of benefits when lending to persons related to the bank; – insufficient and inaccurate information about the borrower; – incorrect assessment of the value of the collateral; – improper monitoring of changes in the borrower's financial condition and the value of his collateral; – insufficient verification of guarantors and guarantors; – improper control of the fulfillment of the terms of the credit agreement; – lending to risky areas of business (venture, innovation projects, etc.); – refinancing of loans provided by other banks, etc. 	<ul style="list-style-type: none"> – insufficient level of qualification; – little (insufficient) work experience in this field; – a superficial check of creditworthiness and information about the borrower; – efforts to "fulfill the credit plan"; – abuse of employees of the credit department, etc. 	<ul style="list-style-type: none"> – full-scale active military actions on the territory of Ukraine; – prolongation of the military conflict; – quarantine restrictions due to the pandemic (COVID-19) and the danger of new lockdowns; – political instability; – the growth of the unemployment rate; – negative changes in legislation; – dishonesty of judges, etc. 	<ul style="list-style-type: none"> – financial and economic crises; – economic decline, fall in GDP; – increase in prices for energy carriers and electricity for business; – inflation growth; – hryvnia devaluation; – decrease in business activity in the industry; – unjustified increase in taxes; – lack of business support from the state, especially in "difficult times", etc.

* Systematized, detailed and supplemented by the author based on sources (BIS, 2022; Bolhar, 2013; Zaitseva et al., 2019; Zatvornyytskyi, 2020; Krukmal et al., 2021; Yaremenko et al., 2016; et al.).

The operationalization of the department involves the creation of a fully functional department for the settlement of non-performing loans and allows to reduce the risk of future burden on banks in the form of growth of non-performing loans. In order to ensure the full efficiency of such departments, banks need to staff them with specialists and provide them with the necessary financial resources. Providing adequate information systems is of primary importance for the effective functioning of settlement departments.

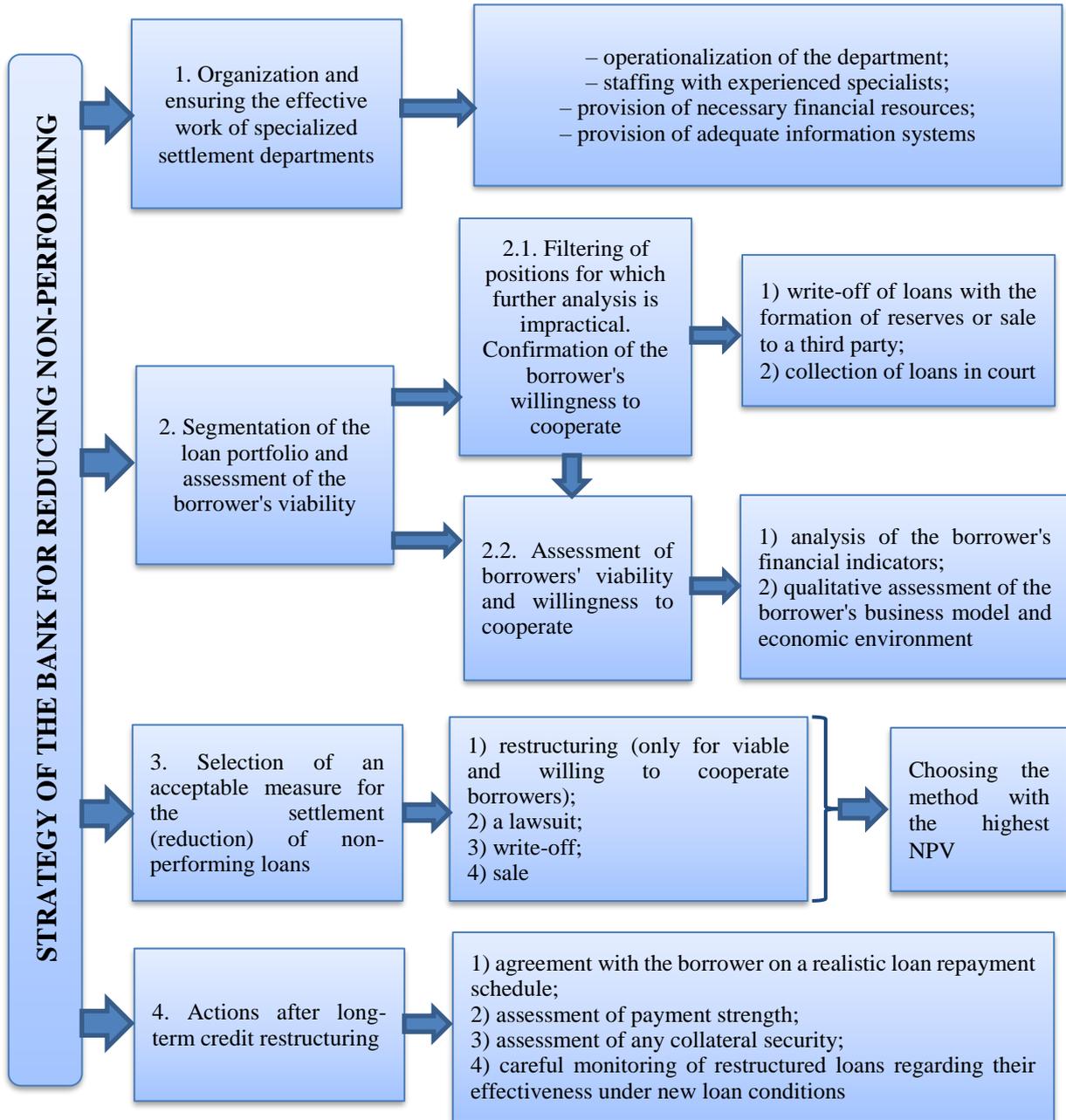


Figure 1. The bank's strategy for reducing non-performing loans *

* developed by the author based on the processing of sources (World Bank Group, 2020; BIS, 2022; European Central Bank. Banking Supervision, 2017; NBU Regulation № 97, 2019; NBU Regulation № 351, 2016; IMF, 2021)

The second step in developing a cost-effective and efficient approach to resolving non-performing loans is portfolio segmentation. The segmentation of the loan portfolio includes two stages, the first of which is focused on filtering positions for which further analysis is

impractical. This category includes microloans with small outstanding amounts that can be quickly written off with the formation of reserves in full and (or) sold in parts to a third party, as well as loans that are already under litigation. At this stage, the settlement department must also confirm the borrower's willingness to cooperate.

The second stage involves assessing the borrower's viability. When developing an internal methodology for assessing the financial viability of borrowers, domestic banks are guided by regulatory provisions of the NBU, in particular (*NBU Regulation № 351, 2016*). Such an assessment should include a thorough analysis of indicators of the borrower's financial condition, as well as a qualitative assessment of its business model and economic environment. After screening out the borrowers who are clearly not viable, it is necessary to conduct a further analysis of the remaining group of borrowers.

The next stage of the strategy should be the selection of an acceptable measure for the settlement (reduction) of non-performing loans. At the same time, financial restructuring is carried out only for viable borrowers who are ready to cooperate with the bank. For all other borrowers, the options include lawsuits, write-offs, or sales. Commercial banks can sell non-performing loans at discount auctions, as the Deposit Guarantee Fund of Individuals does, cooperating with the electronic auction system ProZorro.Sale. Banks' decisions regarding the choice of method of settlement of non-performing loans should be based on a comparison of the amount of expected compensation with the use of net present value (NPV) calculations.

The strategy of reducing non-performing loans also involves the bank's actions after the long-term restructuring of loans. If the bank's resolution department decides in favor of long-term loan restructuring, it will need to agree with the borrower on a revised realistic repayment schedule that the borrower can adhere to. A key factor in developing a viable long-term restructuring plan is assessing the borrower's ability to pay.

Banks also need to assess any collateral. This is especially true in wartime, when the collateral object may be damaged, destroyed, or lost. Typically, a collateral reassessment should be done before the loan is restructured to ensure that the amount of the loan collateral remains adequate. It is also necessary to carefully monitor the restructured loans regarding their effectiveness under the new loan conditions.

Conclusions, discussion and recommendations. Thus, the presented systematization and detailing of the system of factors of the occurrence of non-performing loans, which takes into account the different nature and subjects of their influence at the micro and macro levels, will allow domestic banks to thoroughly analyze the quality of their loan portfolios, clearly identify the nature of internal and external factors of the growth of the share of non-performing loans, as well as the circumstances and persons responsible for their occurrence in order to minimize credit risks in the future. In our opinion, the proposed strategy for reducing non-performing loans characterizes the bank's comprehensive action plan, the observance of which in practice will enable banks to be operationally ready to settle particularly large volumes of non-performing loans in the current realities, which will significantly improve the quality of loan portfolios.

Author's contributions.

Conceptualization: Nikolaieva Anzhela

Data storage: Nikolaieva Anzhela

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Purchase of funding: Nikolaieva Anzhela

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References:

1. The Treatment of Nonperforming Loans. International Monetary Fund. Eighteenth Meeting of the IMF Committee on Balance of Payments Statistics. Washington, D.C., June 27–July 1, 2005. 15 p. [in English].
2. Pokazately fynansovoy ustojchyvosty. Rukovodstvo po sostavlenyju. MVF [Indicators of financial stability. Compilation guide. The IMF], 2007, 324 p. [in Russian].
3. BIS. Research & publications. URL: https://www.bis.org/search/index.htm?globalset_q=NPL (accessed 24 September 2022). [in English].
4. Bolhar, T. M. (2013). Problemni kredyty u bankivskij dijalnosti v umovakh finansovoji kryzy : monohrafiia [Non-performing loans in banking in the conditions of the financial crisis]: monohrafiia. Kremenchuk : Vydavnytstvo PP Shcherbatykh O.V. 372 p. [in Ukrainian].
5. Zaitseva, I. Yu., Malysko, N. V. & Palii, O. V. (2019). Upravlinnja problemnymi kredytamy bankiv [Management of problematic bank loans]. *Visnyk ekonomiky transportu i promyslovosti – Herald of the economy of transport and industry*, 68, pp. 199-207. DOI: <https://doi.org/10.18664/338.47:338.45.v0i68.188917> [in Ukrainian].
6. Zatvornytskyi, K. S. (2020). Upravlinnja problemnymi kredytamy bankiv [Management of problematic bank loans]. *Prychornomorsjki ekonomichni studiji – Black Sea Economic Studies*, 51, pp. 181-188. DOI: <https://doi.org/10.32843/bses.51-29> [in Ukrainian].
7. Krukhmal, O. V., Pavlenko, L. D. & Tarasenko, Ya.Yu. (2021). Problemni kredyty: sutnist ta prychny vynyknennia v suchasnykh umovakh [Non-performing loans: essence and causes of occurrence in modern conditions]. *Elektronne naukove fakhove vydannia z ekonomichnykh nauk «Modern Economics» – Electronic scientific publication on economic sciences «Modern Economics»*. 27. pp. 56-64. DOI: [https://doi.org/10.31521/modecon.V27\(2021\)-08](https://doi.org/10.31521/modecon.V27(2021)-08). [in Ukrainian].
8. Yaremenko, O. R. & Kostylova, O. M. (2016). Problemni kredyty bankiv: vyznachenja sutnosti ta tendenciji jikh rozvytku v umovakh bankivskoji kryzy [Non-performing loans of banks: determination of the essence and trends of their development in the conditions of the banking crisis]. *Globalni ta nacionalni problemy ekonomiky – Global and national economic problems. Mykolajiv: MNU im. V.O. Sukhomlyns'kogo*, 10, pp. 900-905 [in Ukrainian].
9. COVID-19 y ureghulyrovanye problemnykh kredytov v stranakh Evropy y Centralnoj Azyy. Uroky globaljnogho fynansovogho kryzysa v kontekste pandemyy [COVID-19 and the regulation of problem loans in the countries of Europe and Central Asia. Lessons from the global financial crisis in the context of a pandemic]. Konsul'tacyonnyj centr po fynansovomu sektoru: Analytycheskaja zapyska. World Bank Group. 2020, 88 p. [in Russian].
10. Guidance to banks on non-performing loans. European Central Bank. Banking Supervision. March 2017. 130 p. [in English].
11. Polozhennia pro orhanizatsiiu protsesu upravlinnja problemnymi aktyvamy v bankakh Ukrainy [Regulations on the organization of the process of managing problem assets in banks of Ukraine]: zatverdzheno Postanovoiu Pravlinnia Natsionalnoho banku Ukrainy vid 18 lypnia 2019 r. № 97. URL: <https://zakon.rada.gov.ua/laws/show/v0097500-19#Text> (accessed 25 September 2022) [in Ukrainian].
12. Polozhennia pro vyznachenja bankamy Ukrainy rozmiru kredytnoho ryzyku za aktyvnymi bankivskymi operatsiiamy [Provisions on the determination by banks of Ukraine of the amount of credit risk for active banking operations]: zatverdzheno Postanovoiu Pravlinnia Natsionalnoho banku Ukrainy vid 30 chervnia 2016 r. № 351. URL: <https://zakon.rada.gov.ua/laws/show/v0351500-16#n33> (accessed 25 September 2022). [in Ukrainian].
13. Oficijnyj sajt Mizhnarodnogho valjutnogho fondu. Doslidzhennja [Official website of the International Monetary Fund. Research]. URL: <https://www.imf.org/en/Search#q=NPL&sort=relevancy> (accessed 26 September 2022).

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