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# ECONOMICS: TIME REALITIES

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## FINANCIAL MARKET DURING PANDEMIC: A BANKING SECTOR

### ФІНАНСОВИЙ РИНОК В УМОВАХ ПАНДЕМІЇ: БАНКІВСЬКИЙ СЕКТОР

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*Химич І.Г., Тимошик Н.С. Фінансовий ринок в умовах пандемії: банківський сектор. Науково-методична стаття.*

В даній статті висвітлено особливості функціонування фінансового ринку в умовах пандемії, зокрема, стан діяльності банківського сектору. Адже, саме ця його складова забезпечує ефективність мобілізації, нагромадження, розподілу та руху наявних фінансових ресурсів у загальній економічній системі країни. Досліджено, що однією із важливих умов забезпечення ефективної діяльності фінансового ринку являється усестороння підтримка його фінансової стабільності. Представлено оцінку впливу основних факторів на рівень ризику в фінансовому секторі, яка засвідчила, що саме: корупція, діяльність правоохоронних органів та судової системи, виступили головними джерелами ризику для фінансового сектору України за 2020 рік. Виявлено, що банківський сектор країни зумів втримати власні стійкі позиції протягом 2020 року на основі вчасно впроваджених НБУ чітких антикризових інструментів.

*Ключові слова:* фінансовий ринок; банківський сектор, НБУ, фінансова стабільність, ризик, надійність банку, «зомбі-банк»

*Khymych I.G., Tymoshyk N.S. Financial market during pandemic: a banking sector. Scientific and methodological article.*

This article highlights the features of the financial market during pandemic, in particular, the state of the banking sector. After all, this component ensures the efficiency of mobilization, accumulation, distribution and movement of available financial resources in the overall economic system of the country. It is investigated that one of the important conditions for ensuring the effective operation of the financial market is comprehensive support of its financial stability. An assessment of the key factors impact on the level of risk in the financial sector was presented, which showed that corruption, activities of the law enforcement authorities and judiciary system were the main sources of risk for Ukraine's financial sector in 2020. It was found that the country's banking sector managed to maintain its stable position during 2020 on the basis of clear anti-crisis instruments timely implemented by the National Bank of Ukraine (NBU).

*Keywords:* financial market, banking sector, NBU, financial stability, risk, bank reliability, "zombie bank"

The financial market is considered to be a basis of effective functioning of all economic system of the country. These are conditions of its proper operation that will determine further development of the banking sector, which is designed, above all, to effectively "work" with available financial resources – to borrow and provide funds for individuals and legal entities.

The activities of the banking sector during pandemic, based on COVID-19, faced unexpected threats and crisis factors of global negative impact. However, it still managed to maintain its own stable position. This situation was facilitated by the efficiency and effectiveness of sound financial policy of the NBU and the country in general. However, it should be noted that during the crisis, not all banking institutions were able to stay afloat. Only profitable ones managed to ensure their own viability in terms of reliability.

#### Analysis of recent researches and publications

Research in the field of the financial market, based on the activities of the banking sector, was conducted by such scientists as: Iorgachova M.I. [1], Karcheva G.T. [2], Kovalova O.M. [1], Kotsiurubenko G.M. [1], Rudevskaya V.I. [3], Yaroshevskaya O.V. [4] and many others.

*The aim of this article is* to study the financial market functioning during pandemic, based on an assessment of the banking sector. To achieve this goal, a number of the following issues have been identified for consideration, namely:

- study the state of the financial stability in relation to the Ukrainian financial market efficiency;
- the importance of ensuring the financial stability of the country's financial market;
- assessment of the impact of key factors on the level of risks in the country's financial sector;
- analysis of the most reliable banks of Ukraine for 2021 based on the results of the main indicators of

- their activity;
- study of the efficiency of the banks based on the assessment of such risks as: credit risk; capital adequacy risk; liquidity risk; legal risk; currency risk, profitability risk;
- coverage the essence of the concepts of "zombie bank" and "viable bank", taking into account the specifics of their activities on the basis of key financial data;
- presentation of the main data to identify the state of reliability and responsibility of the bank: operating profit; cost-to-income ratio; liquidity; reserves.

The main methods of the presented study were: analysis of economic phenomena (by assessing the of the country's financial market functioning, based on the activities of the banking sector); tabular (by the study of the key factors impact on the level of risks in the financial sector of the country; by analyzing of the most reliable banks in Ukraine for 2021; by the study of the banks effectiveness based on the certain risks assessment); graphic (when presenting a risk map of the banking sector); comparison (by determining the essence of the concepts of "zombie bank" and "viable bank").

### The main part

An important condition for its activity and ensuring its constant development for the financial market of the country both at the national and international levels is its financial stability. After all, stability and efficiency of the country's financial system promotes trust both on the part of business and citizens, in particular. Also, this is one of the necessary conditions for the development of the entire economy as a whole.

Assistance in ensuring financial stability, as well as assisting the financial system in the effectiveness of its basic functions and ensuring its resilience to various crises and crisis phenomena is provided by the National Bank of Ukraine.

It is the NBU that takes various measures to minimize the impact of existing risks on the entire financial system, as well as helps banks to resist the so-called systemic risks and so on. To do this the NBU is constantly improving its own tools to promote and ensure financial stability in the country as a whole.

Financial stability is important for the financial sector, because it allows [7]:

- the financial system to effectively convert available free funds into loans and investments for citizens and businesses;
- the financial system to remain liquid and capitalized, which will contribute to resilience to various crises;
- make timely payments and settlements in full;
- all participants of the financial system carefully assess the impact of risks and effectively manage them;
- not to extend the existing difficulties of individual

financial institutions to the financial system as a whole.

It is worth noting that the actions and decisions of the National Bank of Ukraine, the Ministry of Finance, the National Commission on Securities and Stock Market, as well as the Deposit Guarantee Fund of individuals have the status and formation of the level of financial stability. In addition, the financial system development and stability are also influenced by the activities of: the Verkhovna Rada of Ukraine, the Cabinet of Ministers of Ukraine and other government agencies [7].

The NBU regularly analyzes and assesses the existing risks that arise on the way to the financial sector and the economy as a whole. Therefore, to achieve a certain level of financial stability, the following approaches are used [7]:

- conducting macroprudential policy;
- support for banks, from the point of view of the creditor of last level;
- promoting the financial stability of the banks, especially systemically important;
- supervision (oversight) of the banks, payment systems and settlement systems;
- stress testing of the banking system and the largest bank borrowers.

In addition, to achieve financial stability, the NBU works with other regulators in such areas as [7]:

- prevention of crises (crisis phenomena) and their spread;
- development of the financial system to strengthen its resilience to various crises;
- elimination of the consequences of crisis phenomena.

It should also be noted that the effects of the crisis, which led to a general recession, will be felt by the global economy for a long time, so the recovery will be very slow. Based on this, analysts of banking and brokerage company CharlesSchwab note that 2021 will bring five major risks for international investors, in particular, such as [5]:

- problems with vaccines and vaccination;
- continuing geopolitical and trade tensions;
- rigidity of monetary policy;
- growth of "zombie companies";
- "shock" due to the dollar exchange rate decline.

And, even if some of these risks do not manifest themselves in full, each subsequent year always brings certain "surprises". Therefore, given this aspect, it is necessary to provide some kind of training for a well-balanced and diversified portfolio. This, in turn, will be a variant of the contingency plan and will be a kind of key to successful investment.

An important element of this study is the analysis of the situation in the financial sector of Ukraine as a whole. This situation can be determined on the basis of the results of the factors impact assessment on the level of risk in the financial sector [8], which are presented on the official website of the NBU (Table 1).

Table 1. Factors impact assessment on the level of risk in the financial sector as on 30.11.2020, %

Factor	Very high	High	Average	Low	Very low
Corruption, activities of law enforcement authorities and judiciary system	39%	52%	9%	-	-
Political and social situation in Ukraine	15%	61%	21%	3%	-
Cooperation status with international financial organizations	21%	52%	18%	6%	3%
Fraud and cyber threats	3%	58%	30%	9%	-
The state of protection of the rights of creditors and investors	12%	45%	24%	18%	-
Dynamics of foreign capital inflow (including direct investments) to Ukraine	-	42%	42%	12%	3%
Asset value and collateral quality	-	39%	39%	21%	-
Economic activity level	3%	36%	45%	12%	3%
Legislation and tax system quality	6%	30%	55%	9%	-
War with Russia (military action in the Eastern Ukraine)	3%	28%	50%	19%	-
Dynamics of world raw materials prices	-	30%	52%	18%	-
Competition in the financial services market	3%	21%	55%	21%	-
Dynamics and exchange rate volatility	3%	15%	64%	18%	-
State economic policy (monetary, fiscal, etc.)	-	18%	73%	9%	-
The quality of human capital in the financial sector	-	16%	50%	34%	-
The level and dynamics of real estate prices	-	15%	48%	33%	3%
Current and expected inflation	-	13%	41%	47%	-
Possibility of bankruptcy and / or significant financial difficulties of the financial institutions	-	12%	61%	27%	-
Access to funding	-	3%	61%	27%	9%

Source: compiled by authors on materials [8].

The presented results reflect that the influence of such factors as: corruption, activities of law enforcement authorities and judiciary system, were the main sources of risk for the country's financial sector in 2020. After all, 91% of respondents believe that these factors are significant risks.

The four leaders on the main threats were such risks as: aggravation of the political and social situation in the country (76%); state of cooperation with IFI (73%); fraud and cyber threats (61%); the state of protection of creditors and investors (57%).

However, a significant reduction in the level of risk, which reflects the economic situation of the

country, is positive. In particular, the most significant here is that the risks decreased due to adverse changes in economic activity (39%) and raw materials prices (30%). Also, despite the high assessment of threats to the financial system, the risks that reflect the possibility of bankruptcy (12%) and access to funding (3%) are the lowest.

It is advisable to present a list of the most reliable banks in Ukraine [9] for 2021, identified by the NBU according to the results of the main indicators of their activities (Table 2).

Table 2. Top-10 of the most reliable banks in terms of key indicators of their activities in 2021

Bank name	Assets, mln UAH	Credits, mln UAH	Deposits, mln UAH	Incomes, mln UAH	Share capital, mln UAH	Total capital, mln UAH
PrivatBank	469924.60	57959.88	161530.91	12362.39	206059.74	64706.24
Oshchadbank	160357.15	39336.06	107322.09	2785.08	49472.84	20419.53
Ukreximbank	108861.55	35637.60	45104.89	773.04	38730.04	10246.12
Raiffeisen Bank Aval	68811.72	32550.11	48051.22	1841.20	6154.52	13873.19
Alfa-bank	45988.68	21628.87	34004.64	1810.99	28726.25	8463.89
Sberbank	45409.79	9626.77	4179.70	441.45	24065.46	8607.21
PUMB	43665.50	22649.76	27835.01	1548.77	3294.49	9715.79
OTP bank	36574.04	16652.58	24945.55	878.19	6186.02	8143.85
UKRSIBBANK	33325.36	15255.24	25532.21	1020.67	5069.26	7103.35
CrediAgricolBank	29913.41	15940.24	22916.07	592.95	1222.93	5439.28

Source: compiled by authors on materials [9].

These key data include: assets, credits, deposits and income. An important condition for obtaining high position in this rating is that the dynamics of the amount of the bank's assets has a growing trend.

The overall reliability of the bank, which also reflects its financial stability and resistance to existing risks, is an important indicator that is necessary for individuals and legal entities. After all, it is the level

of the bank reliability, individuals and legal entities, as well as various companies, firms and organizations choose for their cooperation.

Thus, the presented rating of the Ukrainian banks reliability shows that the top three at the beginning of 2021 included: PrivatBank with assets totaling UAH 469,924.60 million; Oshchadbank (UAH 160,357.15 million); Ukreximbank (UAH 108,861.55 million).

Despite the crisis in the country's financial system, yet a banking sector has shown some resilience to it. After all, most banks remained highly liquid, profitable, well-capitalized, and with a sufficient margin of safety to properly perform their functions and support the economy with credit resources. This is the first time in the country's history that during the crisis, banks did not become a factor in increasing economic instability, but, on the contrary, were able to support business and help to restore economic growth in general.

The study on the state of the following types of risks, which most accurately characterize and highlight the efficiency of the banks, is taken as a basis:

- credit risk, which reflects the main prospects for change in the level of non-performing credits in banks' portfolios, as well as the need for additional reserves for such credits;
- capital adequacy risk, which assesses the existing capacity of the banks to provide a sufficient level of capital;
- liquidity risk, which demonstrates the ability of banks to fully and timely fulfill their obligations to depositors and creditors;
- legal risk, which assesses the ability of the banks to protect their own interests through certain legal instruments;
- currency risk, which reflects the extent to which foreign exchange market trends may affect the final financial result of the banks;
- profitability risk related to the ability of the banks to generate net profit.

In Figure 1 one can find the risks map of the banking sector [6], which showed that most of the risks remained relatively unchanged.



Figure 1. Banking sector risk map  
Source: compiled by authors on materials [6].

However, the results of credit risk and capital adequacy risk somehow decreased. This is due to the fact that June expectations were more conservative contrary to the real impact of the crisis on the banks activities.

Comparison of the risks affect that have the greatest impact on the activities of the banking sector [6] is given in the Table 3.

Table 3. Results of the risks impact of on the activities of the banking sector

Risk	December 2020	June 2020	December 2019	June 2019
Credit risk	6	7	5	5
Capital adequacy risk	6	7	6	5
Liquidity risk	3	3	4	4
Legal risk	8	7	9	9
FX risk	5	5	5	5
Profitability risk	6	6	3	3

Source: compiled by authors on materials [6].

Therefore, the result of credit risk decreased (-1). This risk was realized to a lesser extent than the NBU

expected in June. This situation was facilitated by the ability of banks to flexibly implement restructuring

policy on credits to borrowers who had temporary financial difficulties, as well as the availability of government programs to support business. However, part of the credit losses will be recognized only during 2021. In general, the level of credit risk remains moderately high.

The risk of capital adequacy also decreased (-1). This was facilitated by the recapitalization of a large state-owned bank. However, its result remains higher than average.

It is worth noting that the gradual realization of credit risk, as well as a moderate decline in profitability will weaken the ability of the banks to generate capital. Therefore, updated regulatory capital requirements will take effect soon. All this will require banks proper planning and effective management of the capital to avoid further violations.

The result of liquidity risk has not changed (const). The liquidity reserve remains high. There is a significant propensity of the population to save, as well as confidence in the banking sector, which contributes to the deposits inflow. However, the share of the term deposits is declining. This can complicate liquidity management in general.

The result of legal risk increased (+1). This was facilitated by the fact that the Constitutional Court, as well as courts of general jurisdiction, make contradictory decisions. In particular, anti-corruption reforms agreed with IFI have been canceled. Therefore, all this contributes to the strengthening of legal risks, which were temporarily reduced after the introduction of changes in the banking legislation, which made it impossible to restore insolvent banks.

The result of currency risk has not changed (const). This risk is assessed as average. The level of dollarization of banks' balance sheets has not increased since the beginning of the crisis, given: moderate devaluation of hryvnia, reduction of the differential of hryvnia and foreign currency deposit rates. However, opportunities to invest foreign currency are declining. Banks remain quite resistant to possible exchange rate fluctuations.

The result of the profitability risk has not changed (const). Along with the growth in demand for banking products, commission income also recovered. Interest income of banks in general did not decrease significantly. However, the interest rate spread will narrow and the loan portfolio will grow slowly. Therefore, the risks of declining bank profitability persist. They can be partially offset by increasing operational efficiency. Profits to reserves will also put pressure on the profit itself.

Thus, it should be noted that according to the report submitted by the National Bank, the banking sector managed to stay afloat, primarily through the timely use of a number of anti-crisis instruments. In particular, such as:

- postponement of the additional regulatory requirements introduction;
- suspension of the capital conservation buffers introduction, as well as systemic importance.

All this is done so that banks can use capital above the minimum level to absorb credit losses and

increase the credit portfolio. It should be noted that banks were advised to restructure the credits of debtors, who were experiencing temporary financial difficulties. Thanks to such effective measures of the regulator and the banks, credit risk was realized in smaller amounts than expected. An effective credit policy contributed to the fact that, starting from September, the credit portfolio gradually grew. The most rapid resumption of crediting was observed in the segment – small business credits, and, despite the crisis, in mortgage crediting. A key and favorable factor for crediting resumption was also reduction in the cost of loans to businesses and individuals due to the current situation. It should be noted that although the growth of consumer crediting has slowed down significantly, at the same time, consumer credits continue to provide the banks with a significant part of their income. In order to encourage proper consideration of the benefits and risks of working in this segment and increase banks' resilience to credit risks, the NBU confirms its intention to introduce higher risk weights for unsecured consumer credits that will also be an important condition for ensuring maintenance of the banking sector efficiency as a whole.

Because, the key risk to the banks profitability is narrowing of the interest spread. Therefore, in order to maintain macroeconomic stability, the level of crediting rates will continue to decline. At the same time, the space for reducing deposit rates, which are already the lowest in the history of the Ukrainian banking sector, is very limited. Therefore, banks need to work to maintain efficiency and profitability, which are important sources of capital support.

Considering today's crisis caused by COVID-19 pandemic, it is important to know how the bank works when it is elected. After all, at present there is a new concept of "zombie bank" [10], which reflects its viability and "healthy" state of affairs in relation to financial performance.

In general, there are four main indicators that you need to pay attention to when choosing a bank. This factor must be taken into account because about 75 % of banks have closed in the last few years.

Therefore, to begin with it is necessary to remind how the bank works – how exactly carries out its activity. In general, the specifics of the bank's activity is to make money. That is, the bank pays depositors for borrowing money from them. And provides this money on credit, respectively, taking a certain payment from borrowers for it. The bank pays more for the credit; it pays a little less for the deposit. The bank "lives" on this difference, managing the process of transferring money from one person to another. Banks also make money by selling currency, utilities and mobile bills, trading securities, investing in business, etc. So a bank is a business, and any business is built on calculation and seeks to make a profit. Therefore, a bank must be able to make money for its customers, leaving a few percent as a reward for the ability to handle money. Therefore, to begin with you need to understand – whether or not the bank can earn. This will be the first answer to the

question – whether the bank is reliable.

In order to assess the reliability of the bank, you need to understand the main financial indicators that reflect:

- the ability to make money;
- sufficient money to return deposits.

Such data can be found in the so-called financial and annual reports of the bank.

Check of the "viability" of the bank, its ability to make money, is reflected in the availability of operating profit. This indicator is extremely important. After all, it demonstrates whether a bank is able to earn for "living". If he it is not able, the bank will start "eating" money that the client has entrusted to it. Because it cannot earn, and it is necessary to live, such banks become "zombie banks" devouring money of its depositors.

The next step in the analysis of the bank's reliability is to assess how much the bank spends. This indicator reflects the ratio of operating costs and operating income, i.e. it is an indicator of the overall efficiency of the bank. The ratio of costs to income is important, because you need to make sure that the bank does not spend too much. It is known that in order to accept money for deposits, issue credits, keep money in customer accounts and trade currency, banks also need to pay salaries to thousands of people, pay rent, incur many other costs, and so on. It was studied that some of the bankrupt banks did not show vital factors for years: their operating income had a negative dynamics of decline, and they spent too much money for their existence. Therefore, the lower is the ratio of costs to the amount of bank income the better this becomes. After all, this reflects the efficiency of the bank in its ability to manage its funds.

In addition, you should be aware of the bank's ability to make an early deposit. That is, whether the bank will be able to return the deposit. After all, for this the bank must have a sufficient amount of money in its own reserves. This possibility is able to reflect the results of liquidity indicators. It is these liquidity indicators that reflect the bank's willingness to return every hryvnia that the client has put on deposit. In addition, checking the level of the bank liquidity is one of the easiest ways to determine whether the money will be lost. After all, liquidity itself reflects a certain amount of money that the bank puts aside.

Such a bank reserve is called a "liquidity cushion". In order for banks to be able to save money, the NBU has established a so-called "liquidity ratio". That is a certain percentage of the amount of the deposit to be deferred. If the bank complies with this standard, it

will be able to return money entrusted to it. Another important financial indicator that guarantees safety of the client's money is the bank's ability to pay the bills. That is, its solvency.

It is also important to pay attention to the bank's reserves. After all, this indicator shows that the bank will have enough money to pay deposit to the client, even if some depositors do not repay credits. In general, reserves are money, which the bank covers the possible lack of funds with, due to the fact that it stopped paying the credit. It will be able to earn from its own earned money – operating profit.

Thus, the main indicators of the reliability and responsibility state of the bank, i.e., coverage of its "viability" are the following [10]:

- operating profit, which reflects the bank's ability to make money;
- the ratio of costs to income, which shows whether the bank spends money effectively;
- liquidity, which indicates whether the bank will be able to return money on time;
- reserves, covering the general state of the bank's solvency.

Therefore, if such four indicators have high positive results in the dynamics – the bank is "viable", if not, then such a bank is a "zombie bank" which it is impractical to invest their own funds in. In general, the reliability of banks is a necessary condition for supporting both their own activities and a condition for ensuring support for the development of economic processes in the country as a whole.

### Conclusions

The effectiveness of the financial market of the country is not only under positive financial, economic and socio-political conditions. To a greater extent, this is facilitated by presence of crises and crisis phenomena, in particular. After all, they are the main factors that best highlight the correctness of the various strategic and tactical measures implemented in relation to the general concept of ensuring its development as a whole. And also, allow making correct administrative decisions concerning adjustment of the general financial policy of the country. Promoting the continuous development and ensuring the efficiency of the banking sector in the country is a key condition for maintaining financial capacity and improving opportunities for establishment of all business processes of the economic system as a whole. Therefore, the efficiency of the banking sector directly depends on the state of the country's financial market.

### Abstract

The financial market is considered to be a basis of effective functioning of all economic system of the country. These are conditions of its proper operation that will determine further development of the banking sector, which is designed, above all, to effectively "work" with available financial resources – to borrow and provide funds for individuals and legal entities. The activities of the banking sector during pandemic, based on COVID-19, faced unexpected threats and crisis factors of global negative impact. However, it still managed to maintain its own stable position. This situation was facilitated by the efficiency and effectiveness of sound financial policy of the NBU and the country in general. However, it should be noted that during the crisis, not all

banking institutions were able to stay afloat. Only profitable ones managed to ensure their own viability in terms of reliability.

An important condition for its activity and ensuring its constant development for the financial market of the country both at the national and international levels is its financial stability. After all, stability and efficiency of the country's financial system promotes trust both on the part of business and citizens, in particular. Also, this is one of the necessary conditions for the development of the entire economy as a whole. Assistance in ensuring financial stability, as well as assisting the financial system in the effectiveness of its basic functions and ensuring its resilience to various crises and crisis phenomena is provided by the National Bank of Ukraine. It is the NBU that takes various measures to minimize the impact of existing risks on the entire financial system, as well as helps banks to resist the so-called systemic risks and so on. To do this the NBU is constantly improving its own tools to promote and ensure financial stability in the country as a whole.

The presented results reflect that the influence of such factors as: corruption, activities of law enforcement authorities and judiciary system, were the main sources of risk for the country's financial sector in 2020. After all, 91% of respondents believe that these factors are significant risks. The four leaders on the main threats were such risks as: aggravation of the political and social situation in the country (76%); state of cooperation with IFI (73%); fraud and cyber threats (61%); the state of protection of creditors and investors (57%). However, a significant reduction in the level of risk, which reflects the economic situation of the country, is positive. In particular, the most significant here is that the risks decreased due to adverse changes in economic activity (39%) and raw materials prices (30%). Also, despite the high assessment of threats to the financial system, the risks that reflect the possibility of bankruptcy (12%) and access to funding (3%) are the lowest.

Despite the crisis in the country's financial system, yet a banking sector has shown some resilience to it. After all, most banks remained highly liquid, profitable, well-capitalized, and with a sufficient margin of safety to properly perform their functions and support the economy with credit resources. This is the first time in the country's history that during the crisis, banks did not become a factor in increasing economic instability, but, on the contrary, were able to support business and help to restore economic growth in general.

Considering today's crisis caused by COVID-19 pandemic, it is important to know how the bank works when it is elected. After all, at present there is a new concept of "zombie bank", which reflects its viability and "healthy" state of affairs in relation to financial performance. In general, there are four main indicators that you need to pay attention to when choosing a bank. This factor must be taken into account because about 75% of banks have closed in the last few years. The main indicators of the reliability and responsibility state of the bank, i.e., coverage of its "viability" are the following: operating profit, which reflects the bank's ability to make money; the ratio of costs to income, which shows whether the bank spends money effectively; liquidity, which indicates whether the bank will be able to return money on time; reserves, covering the general state of the bank's solvency. The effectiveness of the financial market of the country is not only under positive financial, economic and socio-political conditions. To a greater extent, this is facilitated by presence of crises and crisis phenomena, in particular. After all, they are the main factors that best highlight the correctness of the various strategic and tactical measures implemented in relation to the general concept of ensuring its development as a whole. And also, allow making correct administrative decisions concerning adjustment of the general financial policy of the country. Promoting the continuous development and ensuring the efficiency of the banking sector in the country is a key condition for maintaining financial capacity and improving opportunities for establishment of all business processes of the economic system as a whole. Therefore, the efficiency of the banking sector directly depends on the state of the country's financial market.

### Список літератури:

1. Іоргачова М.І., Ковальова О.М., Коцюрубенко Г.М. Фінансовий ринок України: сучасний стан основних сегментів. Ефективна економіка. – 2021. – № 2. DOI: 10.32702/2307-2105-2021.2.90.
2. Карчева Г.Т. Фінансовий стан банків України в умовах загрози світової фінансово-економічної кризи. Ефективна економіка. – 2020. – № 3. DOI: 10.32702/2307-2105-2020.3.9.
3. Рудевська В.І. Теоретичні підходи до визначення сутності банківської діяльності. Підприємництво та інновації. – 2020. – Вип. 12. – С. 194-199. DOI: 10.37320/2415-3583/12.34.
4. Ярошевська О.В. Проблеми розвитку фінансового ринку в категоріях сучасних економічних теорій. Економіка та держава. – 2020. – № 8. – С. 15-19. DOI: 10.32702/2306-6806.2020.8.15.
5. Експерти назвали 5 найбільших ризиків для світового ринку в 2021 році. [Електронний ресурс] – Режим доступу: <https://mind.ua/news/20220231-eksperti-nazvali-5-najbilshih-rizikiv-dlya-svitovogo-rinku-v-2021-roci>.
6. НБУ: Звіт про фінансову стабільність. [Електронний ресурс] – Режим доступу: [https://bank.gov.ua/admin\\_uploads/article/FSR\\_2020-H2.pdf?v=4](https://bank.gov.ua/admin_uploads/article/FSR_2020-H2.pdf?v=4).
7. НБУ: Фінансова стабільність. [Електронний ресурс] – Режим доступу: <https://bank.gov.ua/ua/stability/about>.
8. НБУ: Опитування про системні ризики фінансового сектору. [Електронний ресурс] – Режим доступу: [https://bank.gov.ua/admin\\_uploads/article/Risk\\_Survey\\_2020-H2.pdf](https://bank.gov.ua/admin_uploads/article/Risk_Survey_2020-H2.pdf).

9. Рейтинг надійних банків України в 2021 році. [Електроний ресурс] – Режим доступу: <https://banker.ua/uk/officialrating-uk/?fbclid=IwAR2MQii01Hq46uUXwr9rHkINJUfzIRqPfpLoWLLrjHS11ZyGJoPuOTxccfU>.
10. 4 показники, за якими можна відрізнити живий банк від зомбі-банку. [Електроний ресурс] – Режим доступу: [https://businessviews.com.ua/ru/finances/id/4-pokazniki-za-jakimi-mozhna-vidrizniti-zhivij-bank-vid-zombi-banku-2087/?fbclid=IwAR0K9rCPXG4Apugrap\\_JfGnIzQemun3Ki9KIAGxUnRS7pMxCEbuipomiiQ](https://businessviews.com.ua/ru/finances/id/4-pokazniki-za-jakimi-mozhna-vidrizniti-zhivij-bank-vid-zombi-banku-2087/?fbclid=IwAR0K9rCPXG4Apugrap_JfGnIzQemun3Ki9KIAGxUnRS7pMxCEbuipomiiQ).

#### References:

1. Iorgachova, M. & Kovalova, O. & Kotsiurubenko, G. (2021). The financial market of Ukraine: the current state of the main segments. *Efektivna ekonomika*, 2. DOI: 10.32702/2307-2105-2021.2.90 [in Ukrainian].
2. Karcheva, G. (2020). The financial condition of Ukrainian banks in the face of the global financial and economic crisis threat. *Efektivna ekonomika*, 3. DOI: 10.32702/2307-2105-2020.3.9 [in Ukrainian].
3. Rudevskaya, V. Theoretical approaches to determining the essence of banking. *Entrepreneurship and innovation*, 11, 194-199. DOI: 10.37320/2415-3583/12.34 [in Ukrainian].
4. Yaroshevskaya, O. (2020). Problems of financial market development in the categories of modern economic theories. *Ekonomika ta derzhava*, 8, 15-19. DOI: 10.32702/2306-6806.2020.8.15 [in Ukrainian].
5. Eksperty nazvaly 5 najbilshykh ryzykiv dlja svitovogho rynku v 2021 roci (25.12.2020). Retrieved from <https://mind.ua/news/20220231-eksperti-nazvali-5-najbilshih-rizikiv-dlya-svitovogo-rynku-v-2021-roci> [in Ukrainian].
6. NBU: Financial Stability Report. Official web-site. Retrieved from [https://bank.gov.ua/admin\\_uploads/article/FSR\\_2020-H2.pdf?v=4](https://bank.gov.ua/admin_uploads/article/FSR_2020-H2.pdf?v=4) [in Ukrainian].
7. NBU: Financial Stability. (2020). Official web-site. Retrieved from <https://bank.gov.ua/ua/stability/about> [in Ukrainian].
8. NBU: Systemic Risk Survey (2020). Official web-site. Retrieved from [https://bank.gov.ua/admin\\_uploads/article/Risk\\_Survey\\_2020-H2.pdf](https://bank.gov.ua/admin_uploads/article/Risk_Survey_2020-H2.pdf) [in Ukrainian].
9. Rejtyng nadijnykh bankiv Ukrainy v 2021 roci (2020). Retrieved from <https://banker.ua/uk/officialrating-uk/?fbclid=IwAR2MQii01Hq46uUXwr9rHkINJUfzIRqPfpLoWLLrjHS11ZyGJoPuOTxccfU> [in Ukrainian].
10. 4 pokaznyky, za jakymy mozhna vidriznyty zhyvyj bank vid zombi-banku (2020). Retrieved from [https://businessviews.com.ua/ru/finances/id/4-pokazniki-za-jakimi-mozhna-vidrizniti-zhivij-bank-vid-zombi-banku-2087/?fbclid=IwAR0K9rCPXG4Apugrap\\_JfGnIzQemun3Ki9KIAGxUnRS7pMxCEbuipomiiQ](https://businessviews.com.ua/ru/finances/id/4-pokazniki-za-jakimi-mozhna-vidrizniti-zhivij-bank-vid-zombi-banku-2087/?fbclid=IwAR0K9rCPXG4Apugrap_JfGnIzQemun3Ki9KIAGxUnRS7pMxCEbuipomiiQ) [in Ukrainian].

#### Посилання на статтю:

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