

Destabilization of the Financial Market of Ukraine in the Conditions of Martial Law: Prejudice of Processes

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Abstract: - The purpose of the article is to form the process of biasing the destabilization of Ukraine's financial market in martial law conditions. Based on the research results, strategic maps of the effectiveness of the financial market of Ukraine were developed. It was established that the step-by-step descriptive-numerical presentation of data in dynamic programming models allows for determining adequate measures that must be implemented to achieve the target effectiveness. Therefore, the content of the strategic performance maps of the financial market of Ukraine should be aimed at determining the measures that will ensure the achievement of the priority structure of the distribution of funds by operations, provided that it will also contribute to the implementation of the strategy for the development of the financial sector of Ukraine until 2025.

It was determined that the strategic map provides a transformation of information about the structure and development trends of the financial market into team information focused on the production of effects. The developed set of dynamic performance models is focused on visualizing the processes of formation and redistribution of free financial resources and the growth of benefits for key financial market operations. It is illustrated that the outlined complex of dynamic models, based on the connection with stochastic models, ensures the scientific validity of the developed strategic measures, with the help of which it is possible to exceed the increase in benefits achieved in 2021 by the end of 2024. Such models determine adequate measures, such as sets of actions, that should be used to achieve the target performance, which in 2022 amounted to UAH 427,895.7 million. (which is 6.7% lower than the value of 2021), and in 2024 – UAH 575,549.75 million (which is 25% higher than the value of 2021).

Key-Words: - financial market, destabilization, prejudice processes, lending, deposits, martial law.

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1 Introduction

The problems of destabilization of the financial market are due to the large-scale invasion of the Russian Federation into Ukraine, as a result of which the resulting inflow (yield) of all types of operations has decreased. However, with timely actions to prevent destabilization processes by the end of 2024, it is expected that the financial market's performance

will exceed the value of 2021. Prevention of destabilization processes is possible with the help of complex strategic measures (given within the framework of the system of strategic maps), which will mathematically outline the sets of actions from the transition to the practical structure of the markets (by actions to redistribute free financial resources by sectors of the financial market within which the

absorption or absorption of destabilization processes was ensured). The development of sound strategic maps of the effectiveness of the financial market of Ukraine should be based on dynamic models formed based on a step-by-step descriptive-numerical representation of the processes of formation and redistribution of free financial resources and the increase in benefits for critical operations of the financial market to the Bellman function (by sector).

At the same time, to achieve the maximum illustrativeness of the data: the numerical component of the strategic maps must contain information regarding actual data regarding the movement of financial resources and target guidelines regarding the inflow of benefits by market capacity (or volumes of critical transactions that determine the performance of the financial market by its sectors) and by its performance (which is determined by the descriptive component of strategic maps, determined by dynamic models of performance). This presentation of data makes it possible to determine adequate measures to be taken by the NBU, the National Securities and Stock Market Commission, the MFU, and the Individual Deposit Guarantee Fund to achieve the target performance by 2024, the total capacity of the market (by its sectors) and its performance (by critical operations) determine the strategic values of strategic maps (according to stochastic performance models), but only on the condition that they contribute to the implementation of the Financial Sector Development Strategy of Ukraine until 2025, [1]. The deterioration of the structure of the financial market under martial law reflects official statistical information, [2].

Globalization factors affect the processes of destabilization of the financial market of Ukraine. The team of authors emphasizes that globalization processes affect the state of the national economy, including the financial market, [3].

The purpose of the article is to investigate the process of destabilization of the financial market of Ukraine under martial law and to identify ways of bias.

2 Methodology

Efficiency is an integral value that varies over time due to the formation and redistribution of free financial resources (in the form of an inflow of benefits). However, based on the state of the combinatorial structure of the financial market and its changes, it is possible to identify the nature of destabilizing processes and determine the directions of their bias. According to the available complex of dynamic models (Table 1 (Appendix), Table 2 (Appendix)), due to the descriptive-numerical representation of operations as flows of financial

resources in dynamics, such performance can be estimated by the resulting inflow for 2022-2024.

3 The Results

According to the results of the visualization of the scheme of movements of financial resources by financial market sectors, it is possible to focus on the following values of their growth (Table 3, Appendix) in 2022: UAH 427,895.7 million. (which is 6.7% lower than the value of 2021), and in 2024 – UAH 575,549.75 million. (which is 25% higher than the value of 2021). At the same time, significantly lower expected values regarding the effectiveness of the financial market of Ukraine in 2022 or the resulting inflow of income from the movement of financial resources (compared to the values of 2021) are obvious, which allow us to make assumptions about the possibility of destabilizing processes in the formation and redistribution of free financial resources. resources.

Price guidelines for the volumes of key transactions have been determined by us, focusing on the range of values set in the forecasts based on the average value. coefficient increase/decrease and adjusted forecast taking into account the reactivity of the environment (since the action of influencing factors must be taken into account). At the same time, the values are adjusted, taking into account that the target values directly depend not only on the trends and influencing factors, but also on the strategic actions that the NBU, the National Securities and Stock Market Commission, the IFI, and other authorities plan to take to achieve such goals. Let's consider the specifics of the result of measuring the performance of the financial market according to these components presented in the table and the content of strategic maps that determine adequate actions for the transition from actual performance to target performance due to the selection of measures that are the most effective (taking into account that it is important to achieve not only the target capacity the market or the maximum in terms of the formation of effects because in the complex these components provide the greatest effectiveness).

Such targets are important for the foreign exchange market, which according to the structure and volumes of key operations allow to ensure the declared capacity of the foreign exchange market. Currently, this capacity is established based on the average values in forecasts for the average. coefficient growth/decrease and adjusted for environmental reactivity, as the priority is to minimize the negative impact of factors such as the inflation index; money transfers to Ukraine from

abroad; the total assets of banks in foreign currency (in particular, the temporary impact of hostilities and their consequences on the performance indicators of banks should not lead to recognition of the most affected of them as insolvent) to prevent the processes of destabilization of the financial market. These are strategic measures that can support or increase the capacity of the foreign exchange market. However, to determine actual measures to increase profits for key operations, the basic element of the strategic map is the reproduction of the process of changes in performance from the rotation of specific currencies according to current/possible options for investments, since these processes directly affect the performance of the foreign exchange market. As a result of the combination of market capacity with options for effective investments, a dynamic model of the effectiveness of the foreign exchange market of Ukraine was formed (Table 1, Appendix), based on the content of which the content of the strategic performance map for 2022-2024 was determined (Table 4, Appendix).

The content of the strategic map allows us to state that, taking into account the reaction of the internal environment, to ensure the target capacity of the foreign exchange market (which has a specific expression in terms of volume and structure), it is necessary to implement supporting strategic actions. By 2024, the target capacity of the foreign exchange market is set at the level of UAH 327,304.9 million. by purchase and at the level of UAH 328,254.4 million. for sale For 2021-2024, a gradual transition to the following structure of operations with IP on the foreign exchange market is structurally required: anonymous cash transactions of clients of non-banking institutions with IP, exchange between private individuals (hereinafter AO) - a decrease in the share from 26% to 16.9%; transactions of bank customers with non-cash IP - support at the level of 37% (in connection with the war threat in Ukraine, cash exchange through bank cash desks will be in demand in the future by customers who are used to operating in cash currency); operations of banks, non-banking institutions with cash IP - increase in share from 6.6% to 13.1%; transactions of bank clients with non-cash foreign currency – share change from 30.2 to 33%. To achieve the outlined characteristics of the market, the authorities must provide: protection of the interests of bank clients (at the expense of their guaranteed access to own/credit funds, payments, and transfers); further currency liberalization (to reduce the share of anonymous cash transactions with IP, volumes of exchange between private individuals); maintenance of banks' activities and their liquidity (maintenance of banks' liquidity through refinancing instruments); honest reflection of the real financial condition of banks.

Based on these strategic principles, the NBU defines a list of operational measures to support the banking system. For example: 1) in connection with the introduction of martial law in Ukraine on February 24, 2022 (for 30 days with gradual relaxation) and a temporary restriction on the purchase of IP at an interbank or its issuance at the bank's cash desk during 2022 (with their relaxation from March 8, 2022); 2) refinancing of banks on "overnight" terms with collateral of highly liquid assets, in particular government securities, etc. Banks should carry out a number of the following operational actions: reduction of fees for services (in particular, to pay for goods and services without hindrance); carrying out cash and non-cash monetary transactions (in particular: carrying out non-cash purchase and sale of foreign currency in self-service terminals, in Internet banking, in cash registers; issuing cards to foreign currency accounts, for direct settlements, making deposits or withdrawing cash in foreign currency). Taking into account the above-mentioned features of maintaining the capacity of the foreign exchange market, the strategic map is focused on measures to stabilize and support the functionality of its internal environment for bank transactions with foreign currency (further - foreign currency), the features of which are complemented by a descriptive and numerical presentation of data on foreign currency purchase and sale transactions (Table 2, Appendix), [4].

Descriptive and numerical presentation of data on the purchase and sale of IP on the foreign exchange market of Ukraine for 2022-2024, UAH million, formed taking into account the target market capacity for each of the transactions on the foreign exchange market of Ukraine and the maximum possible income for each type of transaction, which are determined by the average values of the spread. The spread is determined separately between the buying and selling rates of foreign currency, banking metals, and investment coins. Variants of fluctuations of the spread between the best prices of purchase and sale of currencies are determined according to the projected field of its action in the currencies of PLN, USD, CHF, EUR, GBP, and CAD. For other currencies, such forecasting is not carried out due to the lack of data, [5]. The significance of data presentation is determined by the possibilities of forecasting changes in performance, taking into account the target state of transactions on the foreign exchange market of Ukraine. The description can be clarified by modeling the target conditions for the distribution of funds in the foreign exchange market because they determine the direction and content of achieving the highest effectiveness of such operations (Table 1, Appendix). In particular, according to the target

conditions for the distribution of funds, it is obvious that in the content of the strategic maps of financial market performance, only such a foreign exchange market of Ukraine can be developed, which will continue to operate in basic foreign currencies, including the US dollar and the euro.

With regard to the deposit market, target orientations are needed, which, based on the structure and volume of key operations, are most favorable for the formation of the resource base of banks (which forms the capacity of the deposit market) and ensuring the maximum effectiveness of the deposit market. The outlined target orientation is part of the strategy for the development of the financial sector of Ukraine until 2025, within which a course is taken to create the conditions most favorable for expanding the resource base of deposit corporations and increasing the effects dictated by it, at the expense of its price reduction (the expectation is because interest rates on term deposits were historically the lowest in hryvnia and foreign currency, [1]. In connection with the beginning of the Russian-Ukrainian war, the "pandemic" attitudes of depositors formed by it, and the existing specificity of the reaction of the domestic environment, it is difficult to realize the cheapening of the resource base. The priority is to minimize the decrease in balances on deposit accounts in national and foreign currencies. Therefore, target benchmarks have been established that allow to preserve the resource base of banks as much as possible (which forms the capacity of the deposit market) and ways of forming effects from the functioning of the deposit market (based on the results of the reproduction of the process of changes in the specifics of the circulation of the funds involved in terms of types of deposits without a focus on price reduction). Target specifics determine the formation of a strategic map of the performance of the deposit market, which is set out in Table 5 (Appendix).

According to the aggregate content of the strategic performance map, to ensure the target capacity of the deposit market (which has a specific expression in terms of volume and structure), it is necessary to implement supporting strategic actions. Until 2024, the target capacity of the deposit market is set at the level of UAH 1840697.5 million. To achieve the outlined characteristics of the market, the authorities should take measures to improve the deposit guarantee system and remove insolvent financial institutions from the market, [6], [7].

Deposit corporations should implement the following actions: 1) gradual increase in deposit rates; 2) convenience, innovative (availability of non-cash transactions) and reliable bank services (this is important for those customers for whom the

ability to instantly transfer funds from card to card, choosing the best service, remains a priority).

4 Problem Solution

The full-scale invasion of the Russian Federation into Ukraine intensified the processes of destabilization of the financial market. Freezing of lending, withdrawal of deposits, and withdrawal of funds from accounts, capital outflow increased the destabilization of the financial market, [8].

The measures of deposit corporations should be focused on preserving their resource base, however, taking into account the efficiency of the processes of circulation of the funds involved in terms of types of deposits aimed at forming the resource base of banks (on demand; up to the 1st year; from the 1st to the 2nd year; from 2 years old). Determining the efficiency of the processes of circulation of the funds involved, implemented within the scope of the descriptive-numerical presentation of data, is focused on the target state of fund-raising operations in the deposit market of Ukraine. The desire to maximize the effects requires sorting out the following target structure of the internal environment of the deposit market for 2022-2024: on demand - reducing the share from 67.08% in 2021 to 1.45% in 2024; by 1 year – increase in share from 23.2% in 2021 to 65.8% in 2024; from 1 to 2 years – a slight change in the share to 8.6 to 2.1%; from 2 years, the share will increase from 1.2% in 2021 to 30.7% in 2024. In particular, a gradual transition to the structure of operations is needed, which will allow for attracting more time and funds (hereinafter SC), [9], [10]. It is obvious that the formation of a descriptive-numerical representation of data on deposit operations, integrated into a strategic map of its effectiveness, allows you to determine the resulting inflow from the attraction of each type of deposit because a deposit is not only the acceptance of funds from depositors but also the income from the use of such funds, interpreted as the average income of banks from the use of such funds in the areas of accounting and credit operations; investment operations with securities. It is assumed that to preserve their resource base, deposit corporations should attract funds in the areas of greatest effectiveness, which are identified taking into account the fact that for stable financing they should have more term funds. This directly affects the terms of distribution of funds on the deposit market.

It should be noted that globalization processes also affected the structure of the financial market, [11]. According to the data of the National Bank of Ukraine, the demand for cashless payments is growing in wartime conditions, [12]. The role of

digital money is not appreciated by Ukrainian society today, but it is developing rapidly in Ukraine, [13]. In the conditions of war and processes of globalization, the use of modeling to determine the perspective of the future behavior of the model remains relevant, [14].

According to the strategy for the development of the financial sector of Ukraine until 2025 and trends in the development of lending, the formation of conditions that would contribute to the significant development of the credit market was not expected. The outline was due to expectations regarding the introduction of new quarantine restrictions and the beginning of the Russian-Ukrainian war, which in the complex should have a negative impact on the credit market.

5 Conclusion

According to the results of the development of strategic performance maps of the financial market of Ukraine, it was established that the step-by-step descriptive and numerical presentation of data in dynamic programming models allows for determining adequate measures that must be implemented to achieve the target performance, which in 2022 will amount to 440,688.2 million UAH. (which is 3.3% lower than the value of 2021), and in 2023 – UAH 570,784.3 million. (which is 25.3% higher than the value of 2021). The content of strategic performance maps of the financial market of Ukraine should be aimed at determining the measures that will ensure the achievement of the priority structure of distribution of funds by operations, provided that it will also contribute to the implementation of the strategy for the development of the financial sector of Ukraine until 2025.

Indeed, the strategic map ensures the transformation of information about the structure and development trends of the financial market into team information focused on the production of effects. The developed set of dynamic performance models focuses on visualizing the formation and redistribution of free financial resources and the growth of benefits for critical financial market operations. It is illustrated that the outlined complex of dynamic models, based on the connection with stochastic models, ensures the scientific validity of the developed strategic measures, with the help of which it is possible to exceed the increase in benefits achieved in 2021 by the end of 2024. Such models determine adequate measures, such as sets of actions, that should be used to achieve the target performance, which in 2022 amounted to UAH 427,895.7 million. (which is 6.7% lower than the value of 2021), and in 2024 – UAH 575,549.75

million. (which is 25% higher than the value of 2021).

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APPENDIX

Table 1. Dynamic model of the effectiveness of the foreign exchange market of Ukraine for 2022, 2024, UAH million. (formed through the descriptive-numerical presentation of data on IP transactions)

quarter	Maximum income including spread, \$. тис*						X _i ,\$млн	F, annual/restriction	Maximum income including spread, \$. тис*						X _i ,\$млн	F, annual/restriction
	2022 p.								2024 p.							
	PLN- UAH	CHF- UAH	EUR- UAH	GBP- UAH	CAD - UAH	USD- UAH			PLN- UAH	CHF- UAH	EUR- UAH	GBP- UAH	CAD - UAH	USD- UAH		
1	2	3	4	5	6	1	2	3	4	5	6					
The volume of non-cash bank operations IB																
1	241	108	216	126	94	1324	36012	2684/ базови IB	382	191	426	223	165	2338	3555,7/«...»	
2	327	154	192.1	168	125	399	48016		339	271	776	297	220	704		84779
3	540	245	1360	259	187	504	72024		954	432	1217	458	331	890		127168
4	1080	504	1252	533	375	1008	122268		1908	890	2213	941	661	1780		145186
Volume of operations with cash IP of banks and non-banking institutions																
1	19	9.7	29	8.4	6.8	129	3224	298,7/«...»	14	16	76.3	14.2	11	218	525/«...»	
2	26	13.8	49	18.6	11	250	4299		13.6	13.3	102.1	14.5	19	423		7266
3	29	21.9	120	16.8	12.9	58	6449		49	37.1	203.8	28.3	22	98		10899
4	70	45.1	258	26	20	78	28590,7		68.7	56.3	436	43.6	35	133		45976,1
The volume of transactions of bank customers with non-cash foreign currency																
1	163	109	507	73	76	1087	36234	2125,4/«...»	244	163	758	108	114	1625	3177,9/«...»	
2	217	45	676	97	102	1449	48312		325	217	1011	144	152	2167		72210
3	253	217	1015	45	152	652	72468		379	325	1516.	217	228	948		108315
4	507	434	2029	290	275	884	104817,7		758	650	3033	433.4	412	1321		132341
Anonymous cash transactions of clients of non-banking institutions with IP, exchange between private individuals																
1	99	110	220	196	44	960	22020	1486/ IB for demand	140	70.4	334	46.7	49	704	1389,7/«...»	
2	132	146	293	161	159	587	29360		188	93.7	437	66	66	625		31277
3	198	220	440	242	288	396	44041		281	140	656	93	99	422		46916
4	396	340	1223	484	476	748	72578,02		422	281	1313	187	178	798		69522,6
Maximum market performance –6594,2							Maximum market performance –8618,3									

Note: * The descriptive-numerical presentation of data on foreign currency purchase and sale transactions is implemented in terms of basic types of exchange transactions according to indicators of investment capacity and the maximum possible income for each type of transaction, which is determined by the average values of the spread (Spread by foreign exchange market transactions, 2022, 2024, %, 2023).

Source: formed according to data, [5], [1]

Table 2. Supplement to the dynamic model of the foreign exchange market performance, which determines the target conditions for the movement of financial resources for 2022, and 2024.

	2022		2024	
	Income function $F^{*1...n}$	Distribution of operations $u^{*1...n}$	Income function $F^{*1...n/}$	Distribution of operations $u^{*1...n}$
1	2	3	4	5
Bank operations with non-cash foreign currency (sale)*⁽¹⁾				
PLN-UAH	$F^*1(e0=122268)=1008,1$	$u^*1(e0=122268)=0$	$F^*1(e0=145186)=1780,3$	$u^*1(e0=145186)=0$
CHF-UAH	$F^*2(e1 = 122268)=1324$	$u^*2(e1=122268) = 0$	$F^*2(e1=145186)=2338,4$	$u^*2(e1=145186)=0$
EUR-UAH	$F^*3(e2 = 122268)=1448.8$	$u^*3(e2=50244)=72024$	$F^*3(e2 = 145186)=3555.7$	$u^*3(e2=127168)=127168$
...
USD-UAH	$F^*6(e5 = 50244)=1235,3$	$u^*6(e5=0)= 50244$	$F^*5(e4 = 18018)=3555.7$	$F^*5(e4=0)=18018$
Operations with cash foreign currency of banks and non-banking institutions (sale)*⁽²⁾				
PLN-UAH	$F^*_1(e0 = 28590.7)=78$	$u^*_1(e0 = 28590.7)=0$	$F^*_1(e0=45976.1)=133$	$u^*_1(e0=45976.1)=0$
CHF-UAH	$F^*_2(e1=28590.7)=129$	$u^*_2(e1 = 28590.7)=0$	$F^*_2(e1=45976.1)=218$	$u^*_2(e1=45976.1)=0$
EUR-UAH	$F^*_3(e2=28590.7)=137.4$	$u^*_3(e2=28590.7)=4299.3$	$F^*_3(e2=45976.1)=102,1$	$u^*_3(e2=45976.1)=7266$
...
USD-UAH	$F^*_6(e5 = 24291.7)=161,4$	$u^*_6(e5=0)= 24291.7$	$F^*_5(e4= 38710.1)=422,9$	$u^*_5(e4=0)= 38710.1$
Operations of bank clients with non-cash foreign currency)*⁽³⁾				
PLN-UAH	$F^*_1(e0=104817,7)=884$	$u^*_1(e0 = 144936.7) = 0$	$F^*_1(e0=132341)=1321,4$	$u^*_1(e0=132341)=0$
CHF-UAH	$F^*_2(e1=104817,7)=1087$	$u^*_2(e1 = 144936.7) = 0$	$F^*_2(e1=132341)=113,7$	$u^*_2(e1=132341)=0$
EUR-UAH	$F^*3(e2 = 104817,7)= 676,4$	$u^*3(e2 = 104817,7)=48312$	$F^*_3(e2 = 132341)=1010,9$	$u^*_3(e2=132341)=72210$
...
USD-UAH	$F^*_6(e5 = 56505,7) = 1449$	$u^*_6(e5=0)=56050,7$	$F^*_6(e5 = 60131)= 2167$	$u^*_6(e5=0)=60131$
Anonymous cash transactions of clients of non-banking institutions with IP, exchange between private individuals				
PLN-UAH	$F^*_1(e0 = 72578,02) = 748$	$u^*_1(e0 = 72578,02) = 0$	$F^*_1(e0 = 69522,6) = 798$	$u^*_1(e0 = 69522,6) = 0$
CHF-UAH	$F^*_2(e1 = 72578,02) = 526$	$u^*_2(e1 = 72578,02) = 22020$	$F^*_2(e1 = 69522,6) = 753$	$u^*_2(e1 = 69522,6) = 0$
EUR-UAH	$F^*_3(e2 = 50558,02) = 0$	$u^*_3(e2 = 50558,02) = 0$	$F^*_3(e2 = 69522,6) = 769,4$	$u^*_3(e2 = 69522,6) = 46916$
...
USD-UAH	$F^*_6(e5 = 50558,02) = 960$	$u^*_5(e4 = 0) = 50558,02$	$F^*_5(e4 = 22606) = 1359.7$	$u^*_5(e4 = 0) = 22606$

Note: * field of spread on foreign exchange market operations, [4]

Table 3. Results of the evaluation of the effectiveness of the financial market of Ukraine in 2021 with a forecast for 2022 and 2024, UAH million.

Combinatorial component (markets)	Purchase and sale operations, investment	Direction of strategic maps (SC) for 2022-2023.			Priority structure of markets	The basis for determining the target orientation of the SC *
		Efficiency (maximum resulting inflow)				
		Actual	targeted			
		2021*	2022	2024		
monetary	foreign currency	6623,8	6594,2	8618,3		step-by-step descriptive-numerical presentation of data in dynamic models, see Table 1 and Table 2 (allows to measure the resulting inflow of the financial market by assets, combinatorial components).
depository	deposits	83289,7	82688,6	95605,5		
credit	loans	86664	66295	106122		
securities	securities, except shares	261007	250421	340707		
	shares	3550,79	3363	3715		
derivative financial instruments and forward contracts	futures, forwards, options	7,89	10,02	11,02		
real estate	property rights	17769,1	18523,86	20770,93		
Together		458912	427895,7	575549,75		

*Note: *data are partially comparable, as the performance evaluation method is not disclosed.*

Source: [5]

Table 4. Strategic map of the effectiveness of the foreign exchange market of Ukraine for 2022-2024, UAH million.

Indexes	Mathematical interpretation of goals								Textual interpretation of ways to achieve goals		
	Fact	Target landmarks*			structure of operations			Target performance		market capacity	effect
					факт	цільова *		2022	2024		
	2021	2022	2024	2021	2022	2024	2022			2024	Measures strategic direction*
Operations of banks with non-cash IP									Decrease in the share of AO; increasing the share of non-cash/cash purchase/sale of IP / Stimulating the development of infrastructure for non-cash transactions /2	1,2,3,4, Based on these strategic measures and principles, the NBU defines a list of operational measures to support the banking system	7
purchase	117657,1	121048	142967	37,2	37,1	37	2684	3555,7			
selling	117657,1	122268	145186								
Volume of transactions with cash foreign currency of banks											
purchase	20297,8	32159,1	56594,1	6,6	9,3	13,1	298,7	525			
selling	21512,5	28590,7	45976,1								
Balance	-1214,7	-3568,4	-10618								
The volume of transactions of bank customers with non-cash foreign currency											
purchase	94951,9	100784,8	126289	30,2	31,4	33	2125,4	3177,9			
selling	96107,5	104817,7	132341								
Balance	-1155,6	4032,85	6052,71								
Anonymous cash transactions of clients of non-banking institutions with IP exchange between private persons (AO)											
purchase	82945,7	73313,44	66050,8	26	22,3	16,9	486	1359,7			
selling	81298,8	72578,02	69522,6								
Balance	-1646,9	-735,42	3471,78								
The total capacity of the market (or the volume of IP transactions on the foreign exchange market without NBU interventions)											
purchase	320758	327304,9	391901	100	100	100	6594,2	8618,3			
selling	316637	328254,4	393026	100	100	100					
Balance	-4121,1	949,48	1124,8	-	-	-					

Note: * Strategic direction: transparent financial sector (1); financial inclusion/availability of financial services in base currencies, bankable metals (2); Financial sustainability (3).

** strategic actions by authorities: (1) protection of the interests of bank clients; maintenance of banks' activities and their liquidity (2); reflection of the real financial condition of banks (3); currency liberalization (4); strategic actions on the part of corporations: (5) reduction of fees for payment services for goods and services; (6) carrying out cash and non-cash transactions; (7) operation of base currencies taking into account the maximization of the effect of operations.

Formed according to data: [6], [7], [9], [1]

Table 5. Strategic performance map of the deposit market of Ukraine, 2022-2024

	Математична інтерпретація цілей							Textual interpretation of ways to achieve goals			
	Fact., million hryvnias.	Target values., million hryvnias.		Structure of values,%			Target effectiveness, million hryvnias.		Market capacity	Result	
		2021	2022	2024	2021	2022	2024	2022	2024	Measures/CH*	Strategic actions**
	2021	2022	2024	2021	2022	2024	2022	2024			
Amount of deposits raised from other financial corporations											
In total	45824	40058,9	51336,2	100	100	100	2222.6	2395	Reduction of balances on deposit accounts in national and foreign currencies / 1	1 Based on the principles of these strategic measures, the NBU defines a list of operational measures to guarantee deposits 2,3	4
on request	24573	15362,9	26618,5	53,62	0,50	0,52					
up to 1 year	16763	0	0	36,58	0	0					
1 to 2 years	4105	0	0	8,96	0	0					
from 2 years	382	15362,9	24718,2	0,83	0,50	0,48					
The amount of deposits raised from non-financial corporations											
In total	633806	651945	864338	100	100	100	36817	42774			
on request	482804	0	0	76,18	0	0					
up to 1 year	121158	651945	864338	19,12	100	100					
1 to 2 years	22507	0	0	3,55	0	0					
from 2 years	7 337	0	0	1,16	0	0					
Amount of deposits raised from households											
In total	794152	608253,7	848841,2	100	100	100	38583	47024.5			
on request	473242	428692		59,59	70,5	0					
up to 1 year	209207	0	308550	26,34	0	0,363					
1 to 2 years	101748			12,8	0	0					
from 2 years	9955	179561	540291	1,25	29,5	63,65					
The volume of deposits of other deposit corporations											
In total	16001	17648,8	31741,4	100	100	100	2814	1070			
on request	14360	0	0	89,74	0	0					
up to 1 year	1175	0	38090,8	7,34	0	100					
1 to 2 years	458	0	0	2,86	0	0					
from 2 years	8	17648.8	0	0,05	100	0					
The amount of deposits raised from non-residents											
In total	29688	41406,8	38090,8	100	100	100	2252.7	2342			
on request	24306	0	0	89,74	0	0					
up to 1 year	3 908	0	0	7,34	0	0					
1 to 2 years	971	41406,8	38090,8	2,86	100	100					
from 2 years	502	0	0	0,05	0	0					
Market capacity or the total volume of deposits involved											

In total	1519471	1349980	1840697	100	100	100	82688,95605,5			
on request	1019285	444054,9	26618,5	67,08	32,89	1,45	6			
up to 1 year	352211	651945,1	1210979	23,2	48,3	65,8				
1 to 2 years	129789	41406,8	38090,75	8,5	3,1	2,1				
from 2 years	18 184	212573,4	565009,2	1,2	15,7	30,7				

Note: * strategic direction (SN): financial stability/increasing the liquidity of banks (1).

** strategic actions on the part of authorities: (1) improvement of the deposit guarantee system and withdrawal of insolvent financial institutions from the market; strategic actions by deposit corporations: raising deposit rates (2); convenience, innovative availability of non-cash operations and reliability of bank services (3); operation of deposit funds taking into account the maximization of the effect of transactions with them.

Source: formed based on (Non-cash currency market (monthly information), [7])

Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

Halyna Mykhalchynets, Nataliia Mykhalchynets carried out the simulation and the optimization.

Inna Irtysheva, Marianna Stehnei, Iryna Kramarenko was responsible for the Statistics. Oleksandra Liashenko has organized writing - original draft.

Natalia Hryshyna, Olena Ishchenko performed visualization.

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