# Paradigm Changes that Strengthen the Financial Security of the State through FINTECH Development

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Abstract—The comprehensive development of the state's innovation potential (through the creation of mass innovative products, the development of high-tech production, the achievement of research benefits, the rapid development of fintech) can become the basis for strengthening Ukraine's financial security in a globalized environment. Trends in the field of financial technologies have been systemized, that form opportunities to strengthen the financial security of the state, including: blockchain technologies (affecting centralized business models); cloud technologies (contribute to adaptability, economy and reduction of cyber risks); platforms (form new opportunities); Internet of Things (provides access to user values); BigData technologies (helping to deepen the analysis of user behavior in the behavioral approach to financial security monitoring); artificial intelligence and automation (reduces the amount of human labor, creates new possibilities for analysis); digital platform; Banking API (promotes affiliate and market integration), mobile technology, robotics and more. The strategic directions of strengthening the financial security of Ukraine in the conditions of globalization changes have been grounded, they have been developed within the results of the conducted SWOT-analysis of the financial security system of Ukraine in the conditions of globalization, features of the orientation vector of this system development and systematic trends in the field of financial technologies that affect the system of strengthening the financial security of the state, and directions of their application. The algorithm of functioning of the P2P lending platform is presented in detail with a comprehensive analysis of the advantages and disadvantages of its potential functioning in the context of the borrower, investor and financial security of the state, which should be created taking into account the behavioral research conducted within the behavioral approach to the formation and monitoring of financial security.

Keywords—financial security; P2P; fintech; globalization.

#### I. INTRODUCTION

Transforming the Ukrainian economic system and financial sector is a reality, connected with the new needs of the state, globalization in the global financial space and new

challenges and threats. A clear vision of the preconditions and consequences of this transformation may be the basis for forming a reasonable set of directions to minimize or eliminate the negative factors influencing the financial security of the state, its development in a modern globalized world and, therefore, financial development of securitology as a scientific system for developing the problems of financial security.

The need to create favorable conditions for the functioning and development of the state's financial system r means that strengthening the state's financial security through FINTECH as is a top priority. This problem needs to be solved in the form of paradigms that meet the complex requirements of modern science.

An essential contribution to the formation of the scientific development paradigm mechanisms of formatting, evaluating and strengthening the financial security of the state in terms of economic reforms have been made by domestic and foreign scientists: C. Biener, M. Eling, J. Wirfs [1], Yu. Kondratenko [2; 19; 20], I. Korol [3], N. Prokopenko [4], A. Bouveret [5], B. Buzan, O. Waever [6], V. Cable [7], J. J. Cebula, L. R. Young [8], J. R. Donaldson, E. Micheler [9], M. Eling, J. H. Wirfs [10], R. Floyd, S. Croft [11], S. Gygli, H. Florian, S. Jan-Egbert [12], S. W. Hlaing, M. Kakinaka [13], S. Hollis [14], Zh. Li, L. Liu [15], S. Schmukler [16], Li Sheng [17], O. Vyshnevska, O. Kaliuzhna, I. Banyeva [18] and other scientists, whose studies cover relevant aspects of security theory, systematization of factors and conditions, which are a prerequisite for the formation of threats to financial security, the role and place of financial security in theories of international relations.

Considering previous scientific research, a number of which note the problem of reforming state financial security, it should be noted that existing approaches to providing process security in the financial sector require a systematic approach, building a sequential and logical set of scientific knowledge, which would reflect financial security in its multidimensionality, the formation of scientific approaches and principles of knowledge are the designated problems. This

requires the scientific community to continue extensive research in this area, and the importance of this problem influenced the topic of this study, defined the purpose, objectives, structure, contents and directions of research.

The *purpose* of this study is a systematic justification of theoretical and methodological foundations and practical approaches concerning a change of paradigm concerning the formation of a modern strategy to strengthen the financial security of Ukraine through FINTECH development.

Methodology. The methodological and theoretical basis of this research is a complex of scientific provisions of fundamental and applied research by domestic and foreign scientists in the field of economic theory, strategic management development theory, international relations theory, to reform and strengthen the financial security of States. The following methods have been used to solve a set of tasks in the research system-structural analysis and synthesis to highlight trends in financial technology, which influence the system to strengthen the financial security of the state; historical and dialectical methods, the method of scientific abstraction - in the process of specification of concepts; monographic method – while a systematic study to form the processes of financial security; expert evaluation; abstract-logical method - when forming generalizations and conclusions.

# II. ASSESSMENT OF THE UKRAINE'S FINANCIAL SECURITY FORMATION IN THE CONDITIONS OF GLOBALIZATION

In today's globalized world, there is an increasing interest in the future, which is caused not only by its uncertainty, but also by its increasing global risks and dangers. The financial security of Ukraine is under the influence of many completely new factors, without which the doctrinal model of strengthening the security of the financial system will be ineffective [1].

Globalization and the rapid development of FINTECH in this aspect form new opportunities for the development of innovative enterprises in Ukraine, despite the low purchasing power of consumers and technological backwardness, through the inclusion in the chain of added value creation at an international level [2]. In our opinion, given the limited institutional and financial viability of Ukraine, it is necessary to focus available resources on supporting scientific research, therefore promoting the development of innovation that will positively affect the development of small and medium business in Ukraine and will strengthen its financial security.

We apply SWOT-analysis as an important method of strategic planning to assess the system of ensuring Ukrainian financial security through globalization, to analyze internal resources and external factors influence on the development of a strategic action plan aimed at the efficient use of competitive advantages based on the development of strengths and opportunities and convert threats into opportunities, or protection from them in order to create a modern doctrinal vision system providing reliable state of financial security in Ukraine.

As a result of the in-depth analysis of the factors identified by the experts, which are characterized by a significant impact on the level of financial security of Ukraine, by the Pareto principle, 5 factors were identified that have the most significant impact [19]. The results of the survey, which respondents received as a result of the analysis of questionnaires, allowed us to select these factors to produce a table of the SWOT analysis safeguarding the financial security system of Ukraine in conditions of globalization (table. 1).

TABLE I. SWOT-ANALYSIS OF THE ENSURING FINANCIAL SECURITY SYSTEM OF UKRAINE IN CONDITIONS OF GLOBALIZATION

Elements	The weighting factor	Scoring	Work	Elements	The weighting factor	Scoring	Work	
	S – Str	engths		W – Weakness				
$S_1$	0,26	3	0,78	$\mathbf{W}_1$	-0,20	4	-0,80	
$S_2$	0,27	5	1,35	$\mathbf{W}_2$	-0,21	4	-0.84	
$S_3$	0,26	4	1,04	$W_3$	-0,22	4	-0,88	
$S_4$	0,10	3	0,30	$W_4$	-0.14	5	-0,70	
$S_5$	0,11	3	0,33	$W_5$	-0,23	5	-1,15	
	Т	otal:	3,80	Total: -4,37				
Internal factors (Y) = $S-W = 3.80-4.37 = -0.57$								
	O – Opp	ortuniti	es	T – Threats				
$O_1$	0,29	4	1,16	$T_1$	-0,26	4	-1,04	
$O_2$	0,17	4	0,68	$T_2$	-0,26	3	-0,78	
$O_3$	0,19	3	0,57	$T_3$	-0,18	3	-0,54	
$O_4$	0,14	4	0,56	$T_4$	-0,18	3	-0,54	
$O_5$	0,21	3	0,63	$T_5$	-0,12	3	-0,36	
	Т	otal:	3,60	Total: −3,26				
External factors $(X) = O-T = 3,60-3,26 = 0,34$								

- $S_1$  Intellectual and educational potential;
- $S_2$  Geographical and geopolitical position and natural resources of the state;
- $S_3$  The economic potential of the market, the greatest potential in Europe at GDP growth;
- $S_4$  Highly qualified and relatively inexpensive labor force;
- S<sub>5</sub> The development of a doctrinal model for long-term strengthening the financial security and its implementation to the system of public administration;
  - $W_1$  Shadowing the economy;
  - $W_2$  Corruption;
  - W<sub>3</sub> Debt Dependency;
  - W<sub>4</sub> Labor migration and the outflow of capital;
  - W<sub>5</sub> Low technology, commodity, weak economy;
- $O_1$  The development of FINTECH innovation potential of the state;
  - O<sub>2</sub> International cooperation;
  - O<sub>3</sub> Facilitate access to venture capital;
  - O<sub>4</sub> Gender and behavioral considerations:
  - O<sub>5</sub> The development of small and medium business;
- $T_1$  The influence of other States and international organizations as creditors, their uncertain position to Ukraine;
  - $T_2$  The rise of cyber risk;
  - $T_3$  Competition in the global market;
- $T_4$  The strengthening of the oligarchic system of social relations;
  - $T_5$  Social conflicts in the country.

Having been analyzed the data presented in table. 1, we presented the direction vector of development the ensuring financial security system of Ukraine in conditions of globalization, lighted in Fig. 1, which allows us to understand both strengths and weaknesses exercise influence on the full realization of their opportunities and elimination of threats [3; 4], which are formed in the external environment.

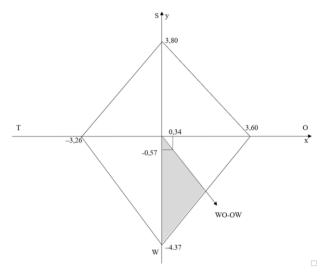


Fig. 1. The orientation vector of development of safeguarding the financial security system of Ukraine in conditions of globalization

Therefore, the orientation vector of development of safeguarding the financial security system of Ukraine in conditions of globalization (Fig. 1) is contained in the WO quadrant, which indicates that despite the significant weaknesses of the financial security of the state, there are significant opportunities to address them. The results of the SWOT analysis of development of safeguarding the financial security system of Ukraine in conditions of globalization re transformed into a TOWS matrix, which is formed on the basis of available combinations: opportunities – strengths; opportunities – weaknesses; threats – strengths; threats – weaknesses (tabl. 2).

TABLE 2. OUR CHANCES-ANALYSIS OF THE ENSURING FINANCIAL SECURITY SYSTEM OF UKRAINE IN CONDITIONS OF GLOBALIZATION

factor		Strengths					Weaknesses				Implemen tation	
		$S_1$	$S_2$	$S_3$	$S_4$	S <sub>5</sub>	$W_1$	$W_2$	$W_3$	$W_4$	$W_5$	Imple tati
ies	$O_1$	0,6	0,2	0,5	0,4	0,4	0,6	0,6	0,4	0,5	0,6	0,5
	$O_2$	0,4	0,6	0,5	0,5	0,3	0,5	0,5	0,5	0,5	0,5	0,5
Opportunities	O <sub>3</sub>	0,6	0,3	0,5	0,5	0,5	0,3	0,5	0,4	0,6	0,6	0,5
Op	$O_4$	0,3	0,2	0,3	0,4	0,5	0,3	0,5	0,4	0,5	0,4	0,4
	O <sub>5</sub>	0,5	0,4	0,6	0,5	0,5	0,4	0,5	0,5	0,6	0,6	0,5
	T <sub>1</sub>	0,2	0,5	0,5	0,4	0,5	0,4	0,5	0,7	0,6	0,5	0,5
	T <sub>2</sub>	0,3	0,2	0,5	0,4	0,5	0,3	0,4	0,4	0,4	0,5	0,4
Threats	T <sub>3</sub>	0,6	0,2	0,7	0,6	0,5	0,5	0,4	0,5	0,6	0,6	0,5
	T <sub>4</sub>	0,5	0,3	0,7	0,6	0,5	0,5	0,6	0,4	0,6	0,5	0,5
	T <sub>5</sub>	0,5	0,5	0,5	0,7	0,5	0,4	0,4	0,3	0,6	0,5	0,5
Po	tential	0,5	0,3	0,5	0,5	0,5	0,4	0,5	0,4	0,6	0,5	Х

Therefore, according to experts, the greatest potential among the strengths are: economic potential of the market and highly skilled and relatively inexpensive workforce, which can be strengthened through the development of fintech, and the innovative potential of the state and support of small and medium businesses [6]. They are most at risk of competition in the world market, the strengthening of the oligarchic system of public relations and social conflicts in the country. Among the weaknesses, the experts identified labor migration, capital outflows and a low-tech economy that could be eliminated

through effective use of fintech development, easier access to venture capital and small and medium-sized businesses [9; 10]. Choosing a strategy based on the usage of new technologies and stimulating the development of small and medium-sized businesses will help to mitigate these negative factors.

Therefore, we developed tools for determining the orientation vector of development of safeguarding the financial security system of Ukraine in conditions of globalization based on the basis of SWOT and TOWS analysis and expert evaluation results allow us to define strategic directions to strengthen the financial security of Ukraine in conditions of globalization based on the analysis of influencing factors.

One such factor is the rapid development of financial technology and the digital economy. In this situation FINTECH companies as relatively new subjects of the financial market are serious competitors to the traditional banking system, which tries to maintain its position and to find optimal solutions [7]. We believe that without the timely introduction of innovative financial products and technologies in banking practices FINTECH-companies can significantly change the financial system of Ukraine. Key trends in financial technology, which influence the system to strengthen the financial security of the state, represented in Fig. 2.

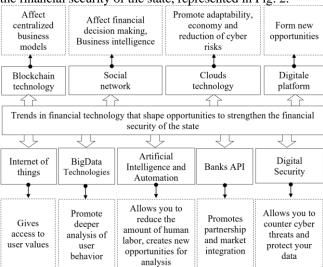


Fig. 2. Key trends in financial technology that affect the system of strengthening the financial security of the state

## II. ALGORITHM OF FUNCTIONING OF THE DIGITAL P2P LENDING PLATFORM AS TO STRENGTHENING THE STATE FINANCIAL SECURITY

Small and medium-sized businesses need new sources of private investment, given the high level of interest rates in Ukrainian banking institutions, as well as the complicated procedure of accessing credit for small and medium-sized businesses. Budget deficits and other difficult conditions do not allow us to lend new ideas effectively, so we believe that it's time to find new sources of credit for new projects.

Financial technology opportunities will partially address this problem by creating a P2P lending platform in Ukraine, the essence of which is that ordinary people will apply for loans [11; 12]. The functionality of the site should include: a system for determining a credit rating according to the Ukrainian Credit Bureau and internal indicators; payment module; own offices of the lender and the borrower, as well as application forms for granting or receiving loans.

The creation and operation of such a P2P lending platform creates a number of significant benefits for the lender, the borrower, and the financial system of Ukraine as a whole. By doing all the operations online, the borrower saves money and time, because he can apply for a loan without a queue, at a convenient time, without contact with staff in a banking or credit institution, which significantly simplifies communication, at a lower rate, since P2P lending eliminates the need for an offline office and redundant staff.

For the lender, in our opinion, there are several advantages too. With free money, the lender has the opportunity to register his / her office on the P2P lending site and replenish his / her own account, as well as to choose the conditions under which he / she plans to provide these funds for use according to his / her own needs. After registration, access to the existing credit applications database is opened. When choosing a financing project, the lender can find out about the borrower's credit history, average income, age and purpose of the loan, the level of profitability of the transaction, as well as the credit risk. The rate on such transactions will be higher than the deposit rate with a banking institution. In fact, such a platform can become a meeting place for borrowers and lenders.

This platform, in our opinion, can contribute to attracting excess liquidity (actual — investment) currency into the financial system of Ukraine, given the general tendency to reduce deposit rates in developed countries, that makes them unprofitable and consequently leads to the search for new directions of investment. This, in turn, will help to strengthen currency security, debt security (including through the decline in the average weighted yield of government bonds), monetary security and overall financial security of Ukraine.

For using the P2P lending website, a one-time fee for issuing a loan for each completed application is charged (within 10% depending on credit terms) and charges during loan repayment and withdrawal of funds (for the lender) (within 1%). One of the functioning principles of this P2P lending platform should be the guarantee of quality and solvency of the borrowers, as well as the increased speed of transactions. It is understood that before submitting the application from the borrower, the submitted information must be carefully verified: photos and documents of the borrower must be verified using leading services (Clarifai, Microsoft Face API), credit history confirmed by the Ukrainian and International Credit Bureau and previous site operations.

The loan agreement should be drawn up on the basis of Ukrainian law "On Consumer Lending" between the lender and the borrower, contains information about the loan amount, terms of its full repayment and payment schedule, terms of payment to the lender, penalties, liability of the parties, rights and obligations of lenders and borrowers. This contract must be concluded by the parties using the P2P lending platform.

Consent to the terms of the contract (confirmation of the transaction) can be provided by electronic signature with a one-time identifier (OTP – one time password), which is legally (according to the Law of Ukraine "On E-commerce") considered as an electronic-digital signature. Accordingly, a third party (P2P lending platform) provides access to the services, controls the signing of the contract by electronic

signatures, allows and implements the exchange of requests and messages, informs about changes in payment details, participates in determining the amounts of fines and interest.

One of the first countries to introduce P2P lending services was the United Kingdom, which began using its capabilities back in 2005 through the Zone of Possible Agreement (ZOPA) platform, which now works well with over 500,000 customers. Today the model of P2P lending is effectively used in Europe, the USA (Prosper, Lending Club: the volume of loans granted exceeds \$ 1.5 billion), China, the Russian Federation (Fingooroo, MirDeneg.ru, Vdol.ru), Belarus (Kubishka). In Ukraine, individual P2P lending attempts are being implemented through the Finhub platform.

Foreign and domestic experience shows that the effectiveness of the possible functioning of the P2P lending platform in Ukraine also depends on the process of financial state regulation of such activity. It is necessary to regulate the peculiarities of the functioning of P2P platforms, especially in terms of their liability to investors, counteracting financial fraud, as losses from non-compliance with the terms of P2P lending are not guaranteed by the Deposit Guarantee Fund.

In our opinion P2P lending platforms, with effective public financial regulation, have a great future and compete with traditional lending in banking institutions, however, they will not be able to completely replace the function of classic traditional banking offices, because for the vast majority of people, especially the elderly age, human communication is an important value.

Collaboration with the P2P lending platform can also be beneficial for banking institutions, given the possibility of expanding the customer base, receiving fees when transferring funds between bank cards of individuals and more [13; 14]. Below the author's view on the algorithm of the P2P lending platform is presented in fig. 3.

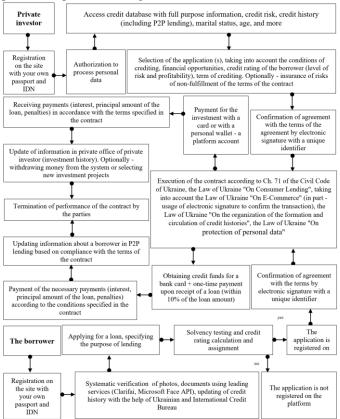


Figure 3. The algorithm of functioning of the digital P2P lending platform

In our opinion, a digital P2P lending platform should be created with a behavioral research framework that is appropriate to conduct as part of a behavioral approach to building a state's financial security. The research should include in-depth work with audiences of all ages, social groups and the different scenarios of engagement with business models and users [15; 16]. One of the areas of customer engagement and increased collaboration between individuals and banking institutions is the widespread use of BigData technologies, which examines consumer behavior, forming a psychological portrait of them, and identifies a group of services that are likely to be needed. As a result of such research, it is possible to make certain services more accessible to certain categories of individuals.

It is also worth pointing out that PrivatBank tried to realize the possibilities of P2P lending in 2016, however, the NBU issued an order forbidding the promotion to clients in accordance with the programmer "Beneficial Investment Service", after which the development of this innovation was discontinued.

As already mentioned, there are advantages and disadvantages to the possible introduction of a digital P2P lending platform for both private investors and borrowers, as well as for the financial system of the state and strengthening its financial security, which are summarized in Table. 3.

TABLE 3. SYSTEMATIZATION OF THE ADVANTAGES AND DISADVANTAGES OF FUNCTIONING OF STATE DIGITAL P2P LENDING PLATFORM

Side	Advantages	Disadvantages
Private	Ability to independently select the terms of	Increased risk of non-
investor	the loan and the borrower, taking into	repayment of funds
	account his credit rating, level of risk and	provided for use, given
	profitability. Access to the credit	that non-compliance with
	application database with information on	P2P lending conditions is
	the solvency of the borrowers, expansion of	not guaranteed by the
	the investment portfolio. Provide P2P	Deposit Guarantee Fund.
	lending with analytical information on the	Absence of a
	performance of the investment portfolio.	comprehensive
	Save time, convenience. The possibility of	legislative and regulatory
	receiving higher cash compared to the bank	framework for regulating
	deposit rate. The speed of execution of the	P2P lending activities
	contract by electronic signature with a	
	unique identifier	
The	It saves money and time because all	Entering the information
borrower	transactions are done online.	of the borrower into the
	Ability to apply for a loan without a queue,	credit history of the
	at a convenient time, without contact with	Ukrainian and
	the staff of a banking or credit institution	International Credit
	Possibility to obtain funds at a lower, than	Bureau.
	the bank, lending rate, given the absence of	The inability to obtain or
	the need to operate an offline office and excess staff of the banking institution.	significantly deteriorate the conditions of
	Possibility of lowering the lending rate with	obtaining credit with a
	a positive credit history, no hidden	bad credit history.
	payments and promotional interest. The	bad credit filstory.
	speed of execution of the contract by	
	electronic signature with a unique identifier.	
The	Attracting additional sources of foreign	Need for P2P lending
financial	exchange earnings into the financial system	platform maintenance,
system of	of Ukraine and, accordingly, strengthening	control of electronic
the state	the national currency.	signature signing
and the	Extra income in the form of a one-time	process, realization of
formation	payment upon issuing a loan for each loan	possibility of exchange
of its	application, payment on loan repayment and	of requests and messages
financial	processing fee for secure withdrawal of	of the parties, informing
security	funds on the card (from the investor).	about change of payment
	Forming an alternative to bank lending,	details, participation in
	which has low public confidence.	determination of amounts
	For banking institutions, cooperation with	of fines and interest.
	the platform forms the possibility of	Implementation of the
1	expanding the client base, receiving	process of financial state
1	commissions when making payments	regulation of P2P lending
1	between bank cards of individuals.	activity in terms of
1	Expanding the volume of credit history of	securing investors' rights,
1	borrowers at the Ukrainian Credit Bureau.	counteracting financial
1	Promotes the development of financial	fraud
1	technologies and innovations that generally	
1	improve the quality and speed of service to	
	both private investors and borrowers	

Therefore, the new requirements of today and technological innovations are significantly changing the structure of the financial and banking services sector. The financial technologies behind these innovations are continuing their rapid development [17], respectively, and outdated banking systems will either gradually disappear with the expansion of P2P and B2B banking, or move to a new level by introducing innovations. We believe that state regulation in the field of advanced use of financial technologies is impossible without creating the conditions for their effective through improving implementation the comprehensive protection of users' rights of digital financial services, improving the adaptability and convenience, protection of personal data.

# III. MAKING P2P MUTUAL PROTECTION PLATFORM AS TO STRENGTHENING THE STATE'S FINANCIAL SECURITY

We consider the next line of application of fintech development opportunities in the process of strengthening the financial security of Ukraine to create a P2P mutual protection platform. The most well-known example of P2P insurance is the Israeli-American Lemonade service, which uses artificial intelligence (AI) and machine learning, works on a subscription basis, and generates insurance payments through user contributions. The result is increased speed (90 sec. for the insurance contract and 3 minutes for payment). A successful startup in the field of P2P-insurance is the German project Friendsurance, which according to the needs of insurance brings together potential consumers into groups (community). Due to the fund created by community contributions, payments are made, and in the absence of significant insurance payments in the group up to 40% of the contributions are returned in cashback to the members of this group. Other examples include the InsPeer (France), Peercover (New Zealand), Tong Ju Bao (China), Bought By Money and Guevara (UK) projects and others.

In our opinion, the P2P Mutual Protection Platform should be subject to the financial regulator and facilitate the customization of certain insurance products. Activities of the P2P Mutual Protection Platform may occur on the basis of registered mutual insurance companies (in accordance with Article 14 of the Law of Ukraine No. 85/96-BP of 07.03.1996 and CMU Resolution No. 132 of 01.02.1997), as a separate direction classic insurance company or in another form provided that the specifics of regulating such activity are legislated.

Let us present the author's view on the algorithm of the P2P platform activity of mutual protection in Ukraine, created on the basis of the registered society of mutual insurance, in fig. 4.

We believe that the P2P Mutual Protection Platform should become a decentralized blockchain-based organization that enables project participants to play the role of both insurers and policyholders. In our opinion, in such circumstances it is important to take into account the behavioral and psychological characteristics of the participants, because their empathy allows them to make fair and adequate decisions about proper payments, and the transparency of such solutions is ensured by blockchain technology.

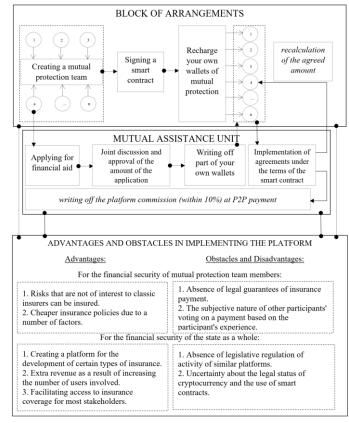


Figure 4. The General scheme of the P2P platform functioning of mutual financial protection in Ukraine

#### IV. CONCLUSION AND FUTURE WORK

- 1. The SWOT-analysis of the Ukrainian financial security system in the context of globalization was carried out in order to assess the internal resources and external factors of influence, which resulted in the formation of the TOWS matrix and the vector of orientation of the development of the Ukrainian financial security system in the conditions of globalization, which made it possible to realize how the strengths and weaknesses influence the full implementation of opportunities and the elimination of environmental threats. It has been found that the vector of orientation is contained in the WO quadrant, which indicates that, despite the significant weaknesses in the formation of the financial security of the state, there are significant possibilities for their elimination. It is found that the comprehensive development of the state's innovation potential (through the creation of mass innovative products, the development of high-tech production, the achievement of research benefits, the rapid development of fintech) can become the basis for strengthening Ukraine's financial security in a globalized environment.
- 2. Trends in the field of financial technologies have been systemized, that form opportunities to strengthen the financial security of the state, including: blockchain technologies (affecting centralized business models); cloud technologies (contribute to adaptability, economy and reduction of cyber risks); platforms (form new opportunities); Internet of Things (provides access to user values); BigData technologies (helping to deepen the analysis of user behavior in the behavioral approach to financial security monitoring); artificial intelligence and automation (reduces the amount of human labor, creates new possibilities for analysis); digital

platform; Banking API (promotes affiliate and market integration), mobile technology, robotics and more.

- 3 The algorithm which determines the functioning of the digital P2P lending platform has been developed, the introduction of which (subject to effective financial state regulation), will generate new sources and simplify the procedure of obtaining private investments for small and medium-sized businesses, will become the focus of lending of new innovative ideas in Ukraine, which will contribute to attracting foreign currency funds from excess actual investments) into the financial system of Ukraine. The advantages and disadvantages of this digital P2P lending platform for lenders, borrowers and financial security of Ukraine as a whole have been systematized.
- 4. The schemewhich dictates the functioning of the P2P platform of mutual financial protection in Ukraine has been developed, which should obey the financial regulator and facilitate the customization of certain insurance products. In accordance with the needs of insurance, this platform will bring together potential consumers into groups (community), at the expense of the fund created by the contributions of the group, make payments, and in the absence of significant insurance payments in the group up to 40% of the contributions will be returned in cashback to participants of this group. The advantages of the P2P Mutual Financial Protection Platform over traditional insurance operations are the consideration of participants' behavioral and psychological financial characteristics, benefits, transparency understandability of rules through the use of blockchain technology and absence of conflicts of interest.

The strategic directions of strengthening the financial security of Ukraine in the conditions of globalization changes have been grounded, they have been developed within the results of the conducted SWOT-analysis of the financial security system of Ukraine in the conditions of globalization, features of the orientation vector of this system development and systematic trends in the field of financial technologies that affect the system of strengthening the financial security of the state, and directions of their application. The algorithm of functioning of the P2P lending platform is presented in detail with a comprehensive analysis of the advantages and disadvantages of its potential functioning in the context of the borrower, investor and financial security of the state, which should be created taking into account the behavioral research conducted within the behavioral approach to the formation and monitoring of financial security.

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