

Vynogradova, Olena; Pysar, Nadiia; Zakharzhevskaya, Alina

## Article

The formation of strategic portfolio of the development of risk management in telecommunications enterprises during martial law and post-war conditions

Technology audit and production reserves

## Provided in Cooperation with:

ZBW OAS

*Reference:* Vynogradova, Olena/Pysar, Nadiia et. al. (2022). The formation of strategic portfolio of the development of risk management in telecommunications enterprises during martial law and post-war conditions. In: Technology audit and production reserves 6 (4/68), S. 12 - 16.  
<http://journals.urau.ua/tarp/article/download/270860/267034/625934>.  
doi:10.15587/2706-5448.2022.270860.

This Version is available at:

<http://hdl.handle.net/11159/13176>

## Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics  
Düsternbrooker Weg 120  
24105 Kiel (Germany)  
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)  
<https://www.zbw.eu/>

## Standard-Nutzungsbedingungen:

Dieses Dokument darf zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden. Sie dürfen dieses Dokument nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen. Sofern für das Dokument eine Open-Content-Lizenz verwendet wurde, so gelten abweichend von diesen Nutzungsbedingungen die in der Lizenz gewährten Nutzungsrechte. Alle auf diesem Vorblatt angegebenen Informationen einschließlich der Rechteinformationen (z.B. Nennung einer Creative Commons Lizenz) wurden automatisch generiert und müssen durch Nutzer:innen vor einer Nachnutzung sorgfältig überprüft werden. Die Lizenzangaben stammen aus Publikationsmetadaten und können Fehler oder Ungenauigkeiten enthalten.

## Terms of use:

*This document may be saved and copied for your personal and scholarly purposes. You are not to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public. If the document is made available under a Creative Commons Licence you may exercise further usage rights as specified in the licence. All information provided on this publication cover sheet, including copyright details (e.g. indication of a Creative Commons licence), was automatically generated and must be carefully reviewed by users prior to reuse. The license information is derived from publication metadata and may contain errors or inaccuracies.*



<https://savearchive.zbw.eu/terms-of-use>

UDC 65.011.56; 334.021

JEL Classification: M21, M30, M31, O14, O32, H12

DOI: 10.15587/2706-5448.2022.270860

Olena Vynogradova,  
Nadiia Pysar,  
Alina Zakharzhevskia

# THE FORMATION OF STRATEGIC PORTFOLIO OF THE DEVELOPMENT OF RISK MANAGEMENT IN TELECOMMUNICATIONS ENTERPRISES DURING MARTIAL LAW AND POST-WAR CONDITIONS

*The object of research is the processes of interaction of components of the strategic portfolio of development of telecommunications enterprises, which are subject to the principles of economic security and highlight risk management measures, in terms of overcoming the negative consequences of any changes, conflicts, crises, management problems, and stresses from external influences on the development of telecommunications enterprises. One of the most problematic areas is to determine the actual risks of strategic development of telecommunications enterprises caused by threats and challenges due to the war in Ukraine, which resulted in the destruction of infrastructure, reconstruction works, demining, migration of personnel, reduced solvency of the population, investment risks. This requires an adequate response to preserve positions or minimize destruction. At the same time, an important task is the formation of strategic imperatives for the economic security of telecommunications enterprises. In addition, it is important not only to establish a list of such components, but also to substantiate the principles of ensuring the organisational and managerial stability and competitiveness of the telecommunications enterprise by forming a strategic portfolio for the development of risk management in conditions of instability and uncertainty during martial law and post-war conditions and the dynamism of the external environment.*

*In the course of the study, methods of detailed analysis of the current state of the problem, based on information search and methods of empirical research (observation, comparison) were used. As well as the method of synthesis and structural-genetic method (extraction from a complex phenomenon of such elements that significantly affect the rest of the research object, in the case of sustainable development tools). At the same time different sources of information, databases, secondary sources of information, company websites and analytical reports were used. As well as primary sources – interviews of company representatives.*

*The scientific and practical value of the study lies in the formation of the theoretical and methodological foundations of strategic risk management aimed at avoiding or reducing them and at the same time ensuring the desired level of economic security of the telecommunications enterprise. This will allow clearly building the management process in the risk management system in the long term and ensuring the desired level of economic security of the telecommunications enterprise.*

*This allows a reasonable approach to building a business, contributes to the improvement of strategic plans through the relationship with risk management, namely:*

- possibility of in-depth goal setting to achieve the ultimate goal;
- development of the least risky strategic set and an effective system of performance indicators;
- improving the efficiency of risk management;
- adaptation to changes in the external and internal environment;
- increasing the flexibility of the business model.

**Keywords:** risk, strategy, risk management, strategic approach, analysis, evaluation, economic security of telecommunications enterprises.

Received date: 19.11.2022

Accepted date: 29.12.2022

Published date: 30.12.2022

© The Author(s) 2022

This is an open access article  
under the Creative Commons CC BY license

## How to cite

Vynogradova, O., Pysar, N., Zakharzhevskia, A. (2022). The formation of strategic portfolio of the development of risk management in telecommunications enterprises during martial law and post-war conditions. *Technology Audit and Production Reserves*, 6 (4 (68)), 12–16. doi: <https://doi.org/10.15587/2706-5448.2022.270860>

## 1. Introduction

The relevance of the research is caused by the emergence of risks for the development of telecommunications

enterprises caused by threats due to the war in Ukraine, which resulted in the destruction of infrastructure, reconstruction works, demining, migration of personnel, reduced solvency of the population, investment risks. This requires

an adequate response to preserve positions or minimize destruction. Thus, the accumulated losses due to the loss of a share of profit (reduction in the number of customers, increase in the volume of unpaid communication services, expenses for repair work and relocation of specialists, etc.) Ukrainian fixed broadband providers amounted to more than 0.05 billion USD and mobile communication providers – 0.1 billion USD. Since the beginning of hostilities, Ukrainian telecommunications and digital sector has been damaged by more than 0.7 billion USD. This, in turn, negatively affected the development of other business sectors (especially in the field of services, logistics, e-commerce, IT technologies) and information and social support of citizens [1]. The calculated priority long-term needs for restoration works amount to 2 billion USD [1]. All this requires constant monitoring of risks and revision of the development priorities of telecommunications enterprises and is due to the necessity to focus on studying the needs of consumers to improve the quality of the offered services.

The study of risks in the management of telecommunications enterprises is presented in the scientific works [2–4] and the authors have made the significant contribution to the improvement of management processes of telecommunications enterprises. Taking into account the thorough scientific developments on the progress of telecommunications enterprises, require further research the theoretical and methodological principles of strategic management in the aspect of risk management. The task of forming a methodology that would allow the project manager to manage comprehensively, systematically, all deviations in the project at once, is constantly in demand, and in modern conditions of war is necessary. Since various influences lead to negative deviations in projects of actual parameters from the planned ones, and modern project and program management methodologies offer different approaches to managing the causes of deviations (separately to risk management, change management).

Therefore, the risks of strategic development of telecommunications enterprises, in conditions of instability and uncertainty during martial law and post-war condition and the dynamism of the external environment is the subject of research.

*The object of research* is the processes of interaction of components of the strategic portfolio development of telecommunications enterprises, which are subject to the principles of economic security and highlight risk management measures, in the aspect of overcoming the negative consequences of any changes, conflicts, crises, management problems and stresses from external influences on the development of telecommunications enterprises.

*The aim of the research* is to substantiate the principles of ensuring the economic security of a telecommunications enterprise in conditions of instability, uncertainty and dynamism of the external environment during martial law and post-war conditions by forming a strategic portfolio for the development of risk management.

The scientific and practical value of the study lies in the formation of the theoretical and methodological foundations of strategic risk management aimed at avoiding or reducing them and at the same time ensuring the desired level of economic security of the telecommunications enterprise. This will allow clearly building the management process in the risk management system in the long term and ensuring the desired level of economic security of the telecommunications enterprise.

This allows for a reasonable approach to a business building, provides perfection of strategic plans through the interconnection with risk management, as follows:

- possibility of in-depth goal setting to achieve the ultimate goal;
- development of the least risky strategic set and an effective system of performance indicators;
- improving the efficiency of risk management;
- adaptation to changes in the external and internal environment;
- increasing the flexibility of the business model.

## 2. Materials and Methods

In the course of the research, methods of detailed analysis of the current state of the problem were used, based on information search with extensive use of electronic computing machine. Also methods of empirical research (observation, comparison), method of synthesis and structural-genetic method (extraction from a complex phenomenon of such elements that significantly affect the rest sides of the object of research were used, in the investigated case of instruments of sustainable development). In this case, various sources of information, databases, and secondary sources of information, company websites and analytical reports were used. As well as primary sources – interviews with company representatives.

## 3. Results and Discussion

Risks management or changes influence on the deviation of actual parameters in projects from the planned ones, so the formation of a methodology that would allow the project manager to manage integrated, systematically, all deviations in the project at once, it is constantly in demand. Thus, in Fig. 1 we have systematised the main problems of the telecommunication and digital sector of Ukraine caused by the war and perspective directions of their solution.

The outlined means of overcoming the risks that may lead to unpredictable losses, or negatively affect the activities of a telecommunications enterprise, its ability to fulfill its obligations, can be used in the formation of strategic projects for the development of telecommunications enterprises, which should be based on solving the problems of their long-term development:

- transformation of corporate and competitive strategies;
- creating value for all stakeholders;
- formation of strategic behavior in a global environment.

At the same time, the integration processes of joining the EU telecommunication environment require taking into account the need to adapt to the conditions of a competitive external environment. Thus, under these difficult conditions, domestic companies with the support of the government and EU countries are steadily moving towards integration into the EU telecommunications and digital market. For example, during the war, Kyivstar built more than 400 new 4G base stations, upgraded 6.2 thousand existing base stations to increase the speed of mobile Internet [5].

Work is underway to approximate the provisions of national legislation to European requirements in the areas of electronic identification and electronic trust services. A significant result is the adoption as a basis of the draft law «On the National Informatisation Program», which prioritises the integration of Ukraine into the global information

space, the security of information activities, cyber defence, and the use of information and digital technologies in public administration and socio-economic relations [6]. It is very important to note the significant financial support from the EU for the processes of restoring, modernising, strengthening the security and reliability of Ukraine's digital infrastructure. As an example, the beginning of the action of the EU's program «Digital Europe», the European CEF funding program «Connecting the backbone for digital global gateways» from October 12, 2022 [7].

At the same time, it is known that even a carefully developed strategic plan will be valid as long as the assumptions underlying it hold true [8]. Works [9, 10] take into account the need for strategic risk management and identify the stages of this process and identify seven types of strategic risks.

In telecommunications enterprises, risks can be divided into three groups: as the probability of suffering losses and losses from the chosen decision and strategy of activity; as the probability of deviation from the set goals; as the occurrence of an undesirable event. At the time of forming the mission and strategic intentions of the telecommunications enterprise development, risks should be set that have time limits.

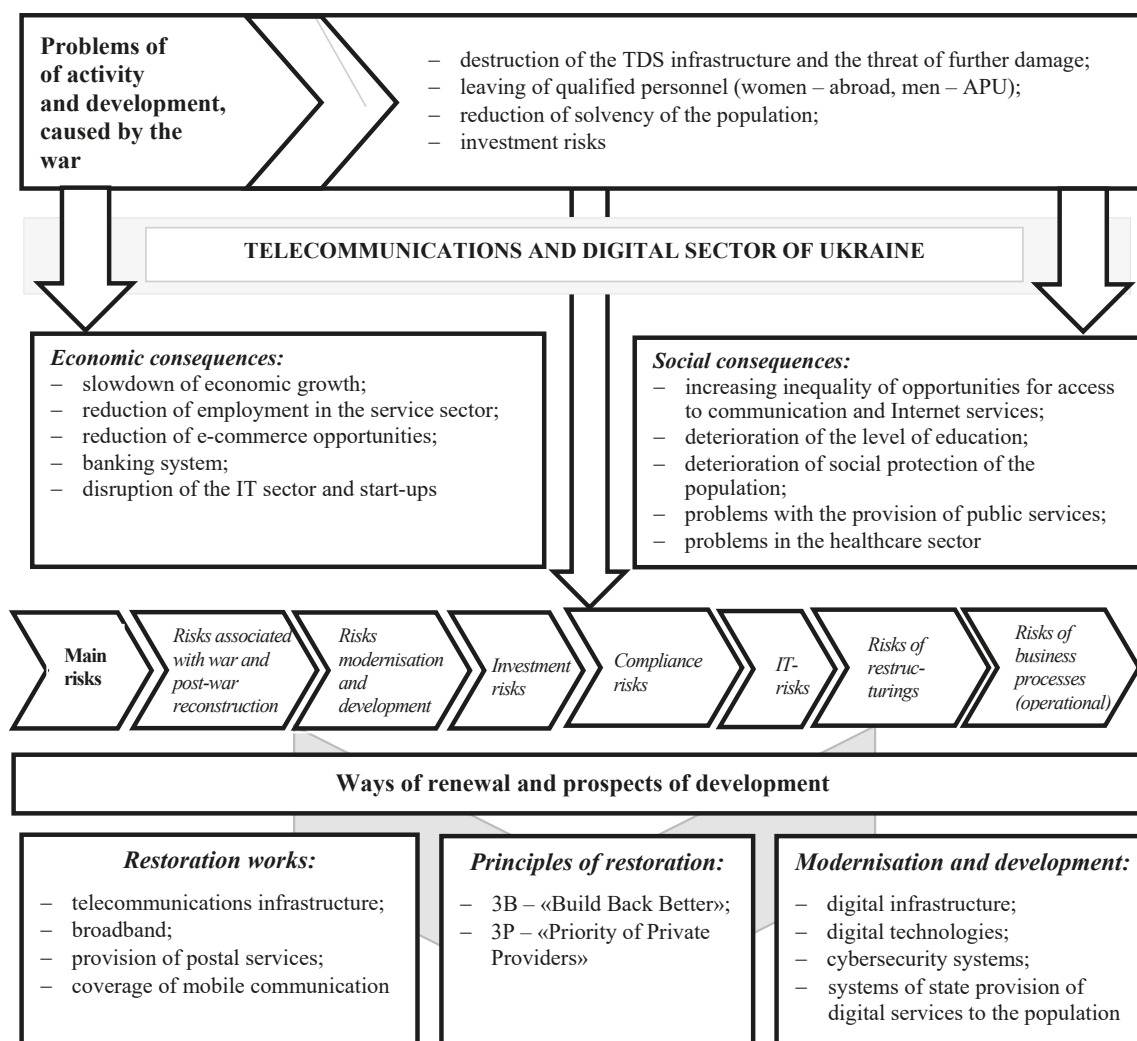
The model of the interconnection «strategic intentions-risks», which in [11] demonstrates that decision-making in

the plane of strategic intentions leads to risks emergence and on the contrary, risk management affects the process of achieving strategic intentions. We have developed this model with the specification of the peculiarities of the risks of strategic development of telecommunications enterprises at the moment, as follows: risks associated with war and post-war reconstruction, risks of restructuring, modernisation and development, investment risks, compliance risks, IT risks (Fig. 2).

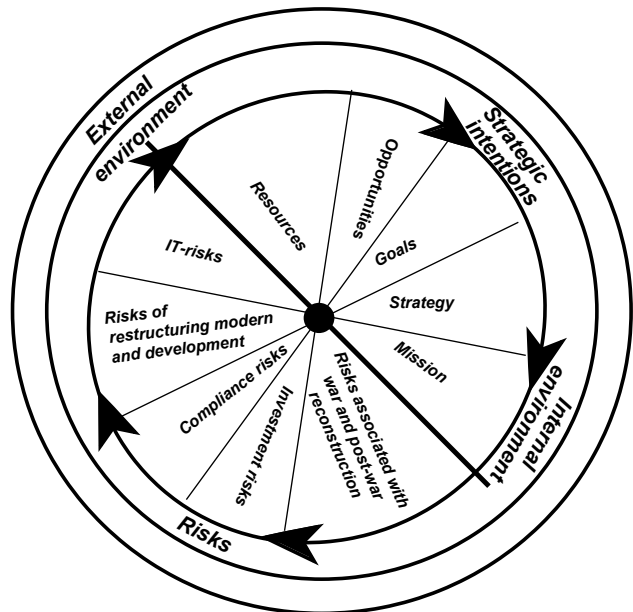
In the process of risk diagnostics in the formation of strategic intentions for each of the above aspects, it is necessary:

- to identify and classify risks according to the given criteria;
- to identify the main sources of risks;
- to determine the probability of causing losses, failure to achieve the goal or not receiving the result due to individual sources of risks;
- to determine the level of risk;
- to outline the main actions to reduce the level of impact of the analysed risks [8].

The methodology of researching risks, the solution of which is necessary in the process of forming strategic plans for the development of a telecommunications enterprise, should contribute to the solution of such tasks (Table 1).



**Fig. 1.** The main problems of activity and development of the telecommunication and digital sector of Ukraine caused by the war, relevant risks and promising directions of their solution (built by the authors according to [1, 5–7])



**Fig. 2.** Model of the interaction «strategic intentions-risks» with specification of risks of strategic development of telecommunications enterprises (built by the authors according to [8, 11, 12])

**Table 1**

Groups of tasks for risk analysis in the management practice of the enterprise

Group of analytical and management tasks	Group of executive tasks	Group of coordination tasks
<ul style="list-style-type: none"><li>– identification and classification of risks;</li><li>– identification of sources of risks;</li><li>– study of the dynamics of their interconnections and changes;</li><li>– determination of methods of analysis and assessment risks</li></ul>	<ul style="list-style-type: none"><li>– balancing the sequence of actions of all participants in the process of development and implementation of strategic intentions;</li><li>– controlling actions to achieve the minimum level of risks of the formed strategic intentions;</li><li>– prediction of unforeseen events</li></ul>	<ul style="list-style-type: none"><li>– application of urgent measures to adjust the adopted strategic sets and prevent the consequences of existing risks and identify methods of their management</li></ul>

The scheme of risk analysis, the completeness of the research of the factors of influence and the level of risk, their assessment depend on the information base, the financial capabilities of the enterprise, the degree of sensitivity of this business to risks, the attitude to risk of the stakeholders of the enterprise. In addition, the specific of risk analysis of strategic intentions is the fact that during their development and implementation, new types of risks can appear and change the degree of impact of already identified risks.

Thus, risk diagnostics of strategic plans involves the research of the process of development and implementation of goals and strategies together with the analysis of all factors that determine and influence the planned result. Therefore, strategic analysis is not a separate action, but is considered as a continuous process that allows optimising the degree of influence of risk.

Taking into account the process of implementing the defined strategy of the telecommunications enterprise, it is advisable to assess the level of risks that correspond to the five forces of M. Porter competition:

- 1) penetration of new competitors:
  - loss of sales market share;
  - threat of lower prices for products;
- 2) threat of emergence of substitute goods on the market:
  - loss of sales market share or loss of the sales market entirely;
  - risk of lower prices;
  - the risk of rising costs in order to improve product quality;
- 3) opportunities of buyers:
  - the risk of a decrease in the solvency of buyers and, as a result, the risk of a decrease in volume of production and marketing;

- risk of increased costs for the provision of additional services and guarantees;
  - destruction of the addiction barrier;
- 4) capabilities of suppliers:
    - risk of complication of conditions of supply of raw materials, which will increase the likelihood of the risk of cost growth;
    - decreasing quality of supply;
    - bankruptcy of suppliers;
  - 5) competition between enterprises that have already strengthened in the market:
    - risk of losing sales market share;
    - risk of price reduction;
    - risk of losing a certain nomenclature;
    - reduction of the degree of specialisation of the enterprise;
    - risk of increased costs for improving product quality and expanding additional services to the buyer.

The research of the telecommunications market allows evaluating and predicting the possibility of occurrence of risks associated with consumers of services. Thus, it is necessary to research the participants in the development and implementation of the strategy and the degree of their influence on the implementation of the plan in the process of strategic risk analysis; factors influencing the process of implementation of the plan, and a lot of data characterising the object [13].

The solution of the problem of measuring enterprise risks requires the formation of an appropriate information base for the diagnosis of possible risks, which contains primarily information on the dynamics of indicators characterising the results projected within the framework



of strategic intentions and the degree of their sensitivity to identified risks. Information characterising risk factors can be conditionally divided into the following groups: statistical information; credentials; normative data; intuitive information based on the experience and knowledge of specialists; subject description [13].

The calculation of the impact of each type of risk on the predicted result can be performed by knowing the probability of its occurrence and using the formulas for the interrelation of factors. From a reasonable assessment of the risks of the environment of the enterprise's functioning depends on the effectiveness of its activities and success in the market. In the course of risk analysis and measurement of their level, it is important to determine the interconnections of factors and business sensitivity to their changes. Therefore, the priority of assessment criteria should be clarified for each specific case of the research.

The applied significance of the research lies in the possibility of its use in the formation of the management strategy of a telecommunications enterprise, which will allow clearly building the management process in the risk management system in the long term and ensuring the desired level of economic security of the telecommunications enterprise. However, the issue of forming a strategic portfolio of risk management in telecommunications enterprises, which is raised in the article, requires further research and development of an appropriate mechanism and its structural elements in order to manage risks and ensure the desired level of economic security of the telecommunications enterprise.

The research results presented in this article may be of interest to theoretical scientists or practical researchers from other countries.

## 4. Conclusions

As a result of the research, the main problems of activity and development of the telecommunication and digital sector of Ukraine were identified caused by the war and the relevant risks and promising directions for their solution on the principles of restoration were highlighted: 3B «Build Back Better» and 3P «Priority of Private Providers». The existing model of interconnection «strategic intentions-risks» is developed with specification of risks of strategic development of telecommunications enterprises with specification of peculiarities of risks at the moment, as follows: risks related to war and postwar reconstruction, risks of restructuring, modernisation and development, investment risks, compliance risks, IT risks. The directions of risk analysis in the field of telecommunications are proposed.

The conducted research allows asserting that the theory of measurements can be used to assess the level of risk, which includes system analysis, construction of a special model, selection of the scale of risk measurement and the method of establishing the values of the risk indicator.

## Conflict of interest

The authors declare that they have no conflict of interest in relation to this research, whether financial, personal, authorship or otherwise, that could affect the research and its results presented in this paper.

## Financing

The research was performed without financial support.

## Data availability

The manuscript has no associated data.

## References

1. Minfin: Zvit «Shvydka otsinka zavdanoi shkody ta potreb na vidnovlennia Ukrainy» nadaie vysnovky shchodo vtrat Ukrainy vid viiny z rosiieiu z 24 liutoho do 1 chervnia ta okresliuie potreby krainy u rekonstruktsii ta vidnovlenni (2022). Available at: <https://www.kmu.gov.ua/news/uriad-ukrainy-ievropeiska-komisiia-ta-svitovyi-bank-prezentuvaly-zvit-shvydka-otsinka-zavdanoi-shkody-ta-potreb-na-vidnovlennia>
2. Rappa, M. (2001). *Business Models on the Web*. Available at: <https://fse.blogs.usj.edu.lb/wp-content/blogs.dir/31/files/2011/08/Rappa-Business-Models-on-the-Web.pdf>
3. Nielsen, C., Lund, M. (2018). Building scalable business models. *MIT Sloan Management Review*, 59, 65–69. Available at: <https://dun-net.dk/media/125194/bm-scalability-wp.pdf>
4. Pysar, N., Fediunin, S., Vynogradova, O., Chornii, V. (2020). Assessment of the consequences of military conflicts and hybrid warfare for the socio-economic development of Ukraine. *Economic Annals-XXI*, 181 (1-2), 18–27. doi: <https://doi.org/10.21003/ea.v181-02>
5. Kyivstar vidnovyv mobilnyi i fiksovanyi zv'язok u riadi naselennykh punktiv na pivdni i shhodi Ukrainy (2022). Available at: <https://hub.kyivstar.ua/news/kyivstar-vidnovyv-mobilnyi-i-fiksovanyi-zv-yazok-u-ryadi-naselenykh-punktiv-na-pivdni-i-shhodi-ukrainy/>
6. Ohliad tsyfrovoyi transformatsii ekonomiky Ukrainy v umovakh viiny (2022). Available at: <https://niss.gov.ua/news/komentari-ekspertiv/ohlyad-tyfrovoyi-transformatsiyi-ekonomiky-ukrainy-v-umovakh-viyny>
7. Pro vnesennia zmin do deiakykh zakoniv Ukrainy shchodo nevidkladnykh zakhodiv posylennia spromozhnosti iz kiberzakhytsu derzhavnykh informatsiynykh resursiv ta ob'ektiv krytychnoi informatsiinoi infrastruktury (2022). Projekt Zakonu No. 8087. 29.09.2022. Available at: <https://itd.rada.gov.ua/billInfo/Bills/Card/40553>
8. Shvydanenko, H. O., Boichenko, K. S. (2015). *Rozvytok pidpriemstva: stratehichni namiry, ryzyky ta efektyvnist*. Kyiv: KNEU, 231. Available at: <https://core.ac.uk/download/pdf/197268893.pdf>
9. Davis, J. (2003). Sherman Kent's final thoughts on analysis B policy maker relations. The Sherman Kent Center for Intelligence Analysis. *Occasional Papers*, 2 (3), 43–44.
10. Slywotzky, A. (2008). Turning Strategic Risk into Growth Opportunities. *Harvard Business Review*, 78–88.
11. Reports: 2022 Telecommunications Risk Factor Survey (2022). Available at: <https://www.bdo.global/en-gb/insights/global-industries/technology-media-entertainment-and-telecommunications/2022-telecommunications-risk-factor-survey>
12. Shcho take komplaiens-ryzyky ta yak nymy keruvaty (2022). *Visnyk MSFZ*, 7. Available at: [https://msfz.ligazakon.ua/ua/magazine\\_article/FZ001573](https://msfz.ligazakon.ua/ua/magazine_article/FZ001573)
13. Ross, S. A. (2004). Compensation, Incentives, and the Duality of Risk Aversion and Riskiness. *The Journal of Finance*, 59 (1), 207–225. doi: <https://doi.org/10.1111/j.1540-6261.2004.00631.x>

**Olena Vynogradova**, Doctor of Economic Sciences, Professor, Head of Department of Marketing, State University of Telecommunications, Kyiv, Ukraine, ORCID: <https://orcid.org/0000-0002-7250-5089>

✉ **Nadiia Pysar**, Doctor of Economic Sciences, Professor, Department of Marketing, State University of Telecommunications, Kyiv, Ukraine, e-mail: [diserdiser72@gmail.com](mailto:diserdiser72@gmail.com), ORCID: <https://orcid.org/0000-0003-2656-7323>

**Alina Zakharzhevska**, Senior Lecturer, Department of Management, State University of Telecommunications, Kyiv, Ukraine, ORCID: <https://orcid.org/0000-0002-8242-2308>

✉ Corresponding author