

## **DIRECTIONS OF ACTIVATION OF RISK MANAGEMENT OF TELECOMMUNICATIONS ENTERPRISES IN UKRAINE IN MARTIAL LAW AND POST-WAR CONDITIONS**

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### **ABSTRACT**

**Aim:** The aim of the research was to determine the risks of telecommunications enterprises in Ukraine in martial law and post-war conditions. **Methods:** During the writing of the article, scientific research methods were used – namely: dialectical, analysis and synthesis, generalization and specification, monographic; forecasting and abstraction; systematic; factorial, statistical analysis; the abstract method, methods of system analysis, and a systems approach. **Results:** The authors analyzed the changes and systematized the specific risks of telecommunications enterprises in the conditions of the Russian-Ukrainian war. The author's definition of the concept of the "activation of risk management of telecommunications enterprises" was proposed, taking into account the specifics of risks in the field of telecommunications. **Conclusions:** The article builds a triangle of directions of activation of risk management of telecommunications enterprises, which are interconnected and cover the stages of the risk management process that relate to management functions. Based on the obtained results, recommendations were presented for the risk management mechanism of the telecommunications enterprise.

**Key words:** risk, risk management, telecommunications enterprises, martial law, Ukraine

**JEL codes:** M11, M12, D81

### **INTRODUCTION**

Recently, in the national and world economic science and practice, enterprise risk management issues are extremely relevant. Articles in scientific and popular literature are devoted to these problems, and special thematic seminars and conferences are held. Following the organizations of the banking sector of the economy, companies operating in the telecommunications, fuel, energy, and metallurgy markets have shown an increased interest in the issues of intensification of risk management. The telecommunications industry of Ukraine has been forced to work in harsh conditions

of the national economic crisis due to Russian aggression. Losses of resources (human, financial, territorial <coverage>, infrastructural, etc.) require the activation of risk management of telecommunications enterprises to ensure the most essential component of the life of Ukrainians and the conditions for victory – constant and reliable communication. In the pre-war period, the fixed broadband market in Ukraine was highly competitive (HHI 0.12) [Měněsterstvo Fěņansěv Ukrađņi 2022]. As of 26/04/2021, there were 3,701 enterprises in the register of operators and providers of telecommunications services that provided consumers with wired and wireless internet access: 1,855 telecommu-

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nications operators (including 734 sole proprietors); 1,854 telecommunications service providers (including 1,377 sole proprietors). The total revenue from fixed broadband access in Ukraine in 2020 amounted to UAH 13.48 billion [Zvit za rezultaty...]. Currently, this market has undergone significant changes. Despite the high profitability of the telecommunications business, companies are constantly experiencing an increase in the cost of developing and maintaining their market share. Therefore, it is imperative under such conditions to correctly identify and assess the level of risk and adapt risk management tools to an unstable external environment.

## MATERIALS AND METHODS

The article aims to study the risks of telecommunications enterprises in Ukraine in martial law and post-war conditions. Conceptual aspects of risk management at enterprises are highlighted in the works of A.O. Starostina and Kravchenko [2014], M.A. Diadiuk [2017], N.V. Karaeva, S.V. Voitko and L.V. Sorokina [2013], M.V. Borovyk [2018], K.D. Semenova and K.I. Tarasova [2017], Holovach et al. [2009], and other scientists. The analysis of international risk management standards is carried out in the publications of domestic scientists: O.M. Donets, T.V. Savelieva and Y.I. Uretska [2011], T.V. Golovach, A.B. Grushevytska and V.V. Shvyd [2009], N. Strelbitska [2011]. In the work of O.M. Donets, T.V. Savelieva and Y.I. Uretska [2011], they highlighted the importance of implementing international standards in risk management of project-oriented enterprises. They developed directions and an algorithm for describing risks based on the requirements of leading international standards on risk management. In the publication by T.V. Golovach, A.B. Hrushevytska and V.V. Shvyd [2009], the theoretical and practical issues of applying risk management at enterprises, the functions and main stages of risk management, and the main international standards of risk management were investigated. N. Strelbitska [2011] studied the international standard of risk management ISO 31000:2009, considered the interconnection among the principles, system and process of risk management, as well as changes in the terminological base. The problems of the development of the

economy of Ukraine, losses during the war in various spheres of activity – including in the field of digitization and telecommunications – was at the peak of research by Ukrainian and foreign institutions, scientific organizations, and scientists [Zvit za rezultaty..., Fuce-Hobohm n.d., Kid'vs'ka Škola Ekonomēki 2022, Mēnēsterstvo Fēnansēv Ukrađni 2022]. However, despite the existing scientific publications on this issue, the issue of directions of intensification of risk management of telecommunications enterprises, taking into account their specifics in martial law and post-war conditions, has not yet been sufficiently studied.

During the writing of the article, general scientific research methods were used – namely:

- dialectical, analysis and synthesis, generalization and specification, monographic (for substantiation of the theoretical basis of activation in risk management of telecommunications enterprises);
- forecasting and abstraction (to build a triangle of directions for enhancing risk management of telecommunications enterprises);
- a systematic approach (to form a system of risk management principles);
- factorial, statistical analysis (to substantiate the factors of influence on the risk management of telecommunications enterprises).

For theoretical generalizations, conclusions and substantiation of the directions of activation of risk management of telecommunications enterprises in Ukraine, the authors used the abstract method, methods of system analysis, and a systems approach. The methodology for researching the risks of telecommunications enterprises is based on the theoretical basis of risk management in accordance with international standards and well-known models of world companies and scientists, taking into account general management, general principles of risk management, and specific principles for telecommunications enterprises – the use of which will help to intensify risk management in martial law and post-war conditions.

## RESULTS AND DISCUSSION

In general, entrepreneurial risk can be defined as an accidental event as a result of which an entrepreneur suffers losses, additional costs, or a reduction of in-

come received arising in a situation of the uncertainty of external and internal factors, as well as suboptimal management decisions. The category “risk” can also be characterized as the level of losses, expressed in the possibility of not achieving the set goal in the uncertainty of the predicted result and the subjectivity of its assessment.

The main challenges which have always been the focus of attention of telecommunications operators include:

- increased competition and low stability of the telecommunications services market;
- a gradual decrease in the share of profits from traditional types of services;
- growth of costs for technology development and attracting new customers.

Personnel should now be added to these problems related to the involvement of company professionals for military needs (migration of female operators abroad, destruction of premises and equipment, etc.).

To gain and retain a leading position in the telecommunications services market, telecom operators are looking for new strategies, including:

- optimization of the structure and improvement of the company's business processes;
- increasing market share through mergers and acquisitions with other telecom operators; improving the quality and expanding the range of services;
- entering foreign markets; improving the management system at the enterprise – including through the intensification of risk management.

For implementing strategic plans, executives and managers of companies need to have an effective risk management mechanism that allows them to monitor market dynamics, promptly analyze information about the company's activities, and respond to changes, challenges and threats that occur. The most common factors that dictate to telecommunications companies the need to create risk management systems (RMS), and their activation includes: the search for new competitive advantages; the desire to increase the capitalization of the enterprise – in particular, through the placement of shares on world stock exchanges; development of new services and tariff schemes; growth of the subscriber base of operators and complication

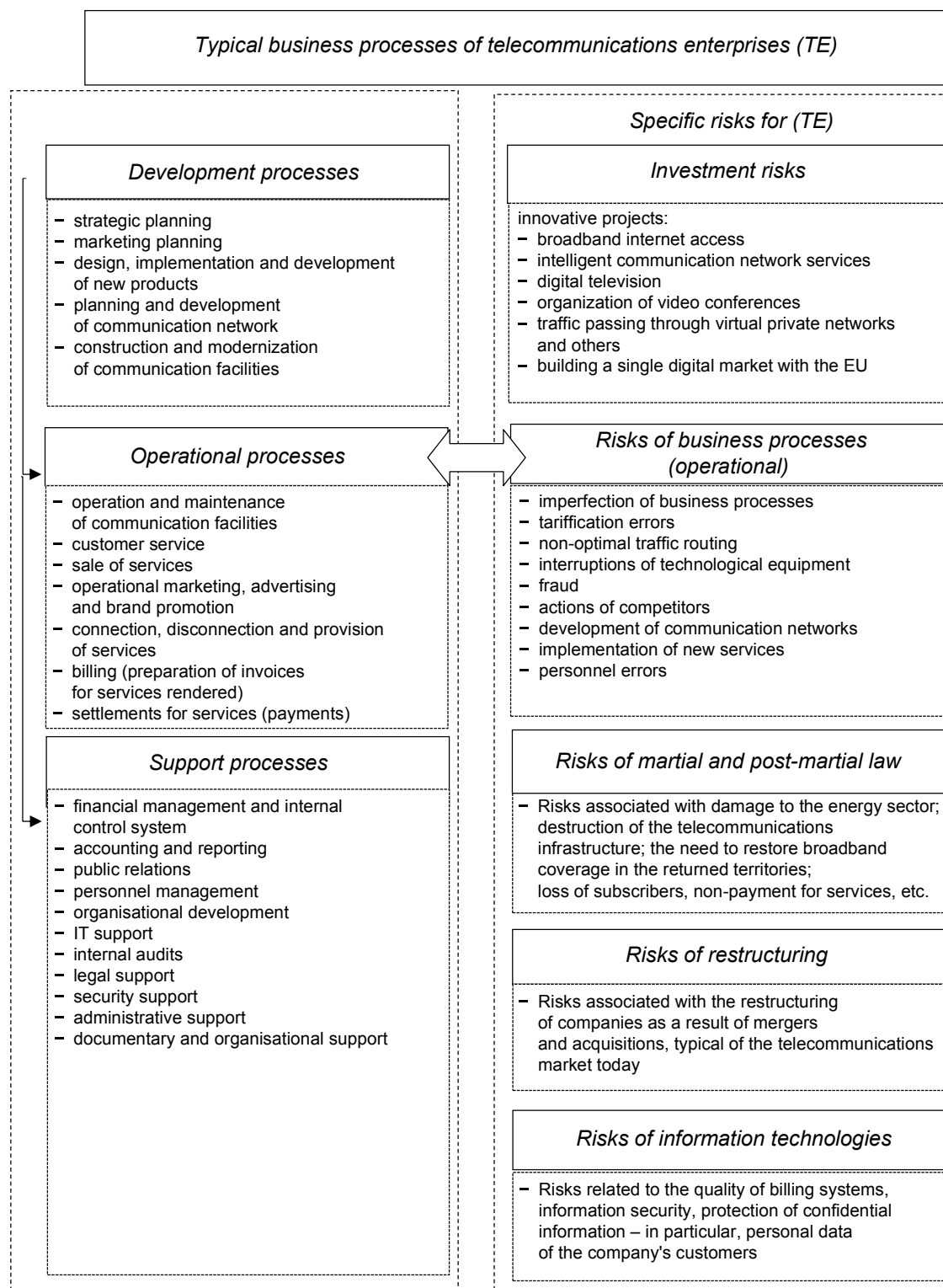
of calculations [Nikiforov 2020, p. 69]. The typical business processes of telecommunications companies consist of three main blocks: development processes, operational processes, and support processes (Fig. 1). Telecommunications companies are characterized by specific risks due to the peculiarities of the industry. In addition to financial, marketing and management risks, the main share of losses of telecommunications companies is determined by operational activity risks (i.e., risks of business processes directly related to the provision and delivery of communication services by the operator to its customers). Therefore, operational risks belong to significant risks. At the same time, the list of operational risks is the same for both fixed and mobile operators. Such risks include:

- 1) the risk of core business caused by technical issues that lead to an increase in the cost of electricity, raw materials, and costs on environmental protection;
- 2) technical and technological risks, which includes the imperfection of business processes, ‘tariffication’ errors, non-optimal traffic routing, technological equipment failures, fraud, competitors’ actions, the development of communication networks, implementation of new services;
- 3) the risk of insufficient qualification of employees and low productivity.

As a result of the implementation of risky events of operating activities, the telecommunications operator may, according to experts, lose about 15% of its revenues, which will negatively affect the company's investment attractiveness [Sosnovska 2019, p.170].

In addition to operational risks, investment risks are particularly characteristic of communication operator companies as special conditions of competition in the telecommunications services market force them to invest in innovative projects designed to develop new technologies.

Such innovative technologies and services provided on their basis include: broadband internet access; intelligent communication network services; digital television; organization of video conferences; passing traffic using virtual private networks and others. The main measure to overcome the consequences and risks of the crisis was the reduction of investment programs.



**Fig. 1.** Specific risks of telecommunications enterprises depending on business processes (compiled by the authors)  
Source: the authors.

Speaking of the typical risks of telecommunications companies, it is necessary to highlight the risks of information technology related to the quality of billing systems, information security and the protection of confidential information – including personal data about the company’s customers.

The review of significant risks of telecommunications companies can be supplemented by risks associated with the restructuring of companies as a result of the processes of mergers and acquisitions, which are typical of this market today.

Among the significant risks of telecommunications companies should be noted the risks of martial law and post-war conditions, taking into account the fact that the telecommunications industry of Ukraine is forced to work in the harsh conditions of the economic crisis due to Russian aggression. The activities of telecommunications companies in Ukraine are influenced by such factors as: environmental instability associated with warfare; destruction of telecommunications infrastructure; the need for urgent restoration of broadband coverage in the returned territories, staff migration, etc.

Thus, as of 01/04/2022, Ukraine’s telecommunications and digital sector suffered losses (due to the war) of USD 0.7–0.6 billion. was damage to landline and mobile operators. The aggressor’s actions damaged and destroyed 1,767,269 fixed internet lines, limiting the local population’s access to broadband internet and telecommunications services. Ukrainian fixed broadband providers suffered USD 0.3 billion of damage; for mobile providers, this amount was USD 0.2 billion. The revenues of internet providers decreased by 22% due to the loss of customers, unpaid services provision, forced repairs and removal of debris, staff relocation costs, etc. Mobile operators suffered even more as unpaid services and loss of customers had already occurred (in March) in the temporarily occupied territories [Měňsterstvo Fěňansěv Ukraďni 2022].

In addition, when identifying risks, one should consider such trends as the implementation of new technological solutions; gradual and continuous integration into the Western European communication space and the construction of a single digital market with the EU, etc. Therefore, it is crucial under such conditions to correctly identify and assess the level of

risk and adapt risk management tools to an unstable external environment.

The struggle for the client and increasing the market share implies improving the quality and expanding the range of communication services (as a competent tariff policy), but also, of course, creating a positive reputation for the enterprise. Compliance with the existing legislation, generally accepted ethical norms and rules of doing business reduces the risk of reputation loss, promotes a favorable company image and becomes an important competitive advantage in the communications market.

Currently, applying risk management mechanisms at telecommunications enterprises has not yet become widespread and is often limited to establishing relations with insurance companies. Also, one of the main reasons for the passivity of domestic telecommunications enterprises is the shortcomings in existing approaches, principles and methods for practical use in the process of risk management at the enterprise. Telecommunications enterprises that have even a little experience in enhancing risk management at the enterprise note the following positive results: the use of methods of identification, registration, assessment, ranking and actualization of risks; timely informing of shareholders and top management of the enterprise about the causes and amount of possible losses; increasing the investment attractiveness of the enterprise, which proves the relevance of the study of the directions of intensification of risk management of telecommunications enterprises.

The author’s definition of the concept of “intensification of risk management at telecommunications enterprises” is proposed as a “targeted impact on the risk management system of a telecommunications enterprise to exclude or reduce the negative consequences of the occurrence of risk events in order to accelerate the achievement of strategic goals and objectives of organizational business processes, development and support processes (by the enterprise)”.

The main directions of the intensification of risk management activities at the telecommunications enterprise include:

1. An awareness of risks and their threats to achieve the purpose of the enterprise’s functioning and their further identification (identification of assets, iden-

- tification of sources of risks, identification of risk events, identification of control measures, identification of consequences);
2. The formulation of the content of the declaration and guidelines on risk management. In its simplest form, the declaration reflects the philosophy of the telecommunications enterprise regarding risk management (the organization's attitude to risks; delineation of powers between risk management subjects; personalization of responsibility, etc.) The declaration contains a statement of the main goals, objectives and principles of risk management in the organization, as well as a description of risk management methods – the use of which is permissible by the subjects of management (for example: reducing the possibility of accidents; the formation of stabilization (reserve) funds to finance possible losses; insurance, etc. [Moroz and Moroz p. 62];
  3. The formation of the organizational structure of risk management and formalization of its activities (regulations on the structural department, instructions, plans, etc.);

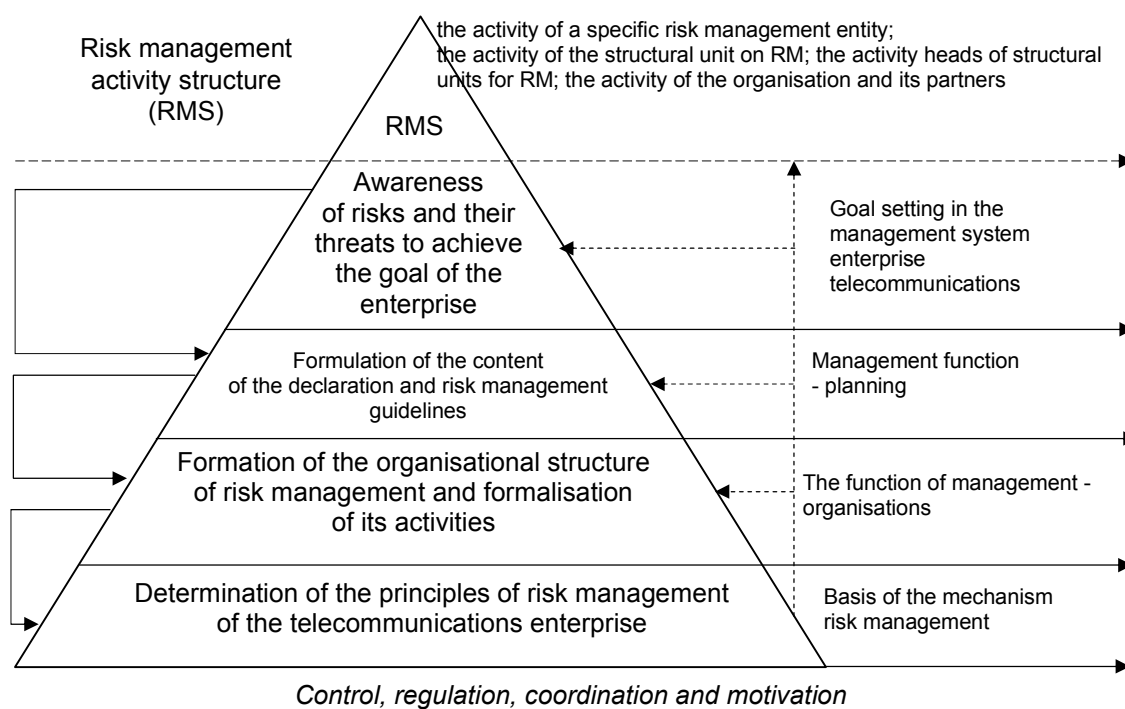
4. The definition of risk management principles (the principles can be enshrined in a separate document or be fixed in the declaration on risk management). Regardless of the form of formalization (formulation) of the principles, their content should be related to risk management mechanisms.

The main directions of activation of risk management of telecommunications enterprises can be represented in the form of a triangle (Fig. 2).

As can be seen from Fig. 2, the main directions of activation of risk management of telecommunications enterprises are interconnected, cover the stages of the risk management process, relate to management functions, and are the basis of the mechanism of risk management of the telecommunications enterprise.

#### CONCLUSIONS

1. As a result of the study, the specific risks of telecommunications enterprises depending on business processes were systematized, taking into account the risks of martial law and post-war conditions.



**Fig. 2.** Triangle of directions of activation of risk management of telecommunications enterprises

Source: the authors.

2. Approaches to definitions of the concept of activation in management are analyzed, and the author's definition of the concept of "activation of risk management of telecommunications enterprises" is proposed as a "targeted influence on the risk management system of a telecommunications enterprise to exclude or reduce the negative consequences of the occurrence of risk events in order to accelerate the company's achievement of strategic goals and organizational business goals processes, development and support processes" that takes the specifics of risks in the field of telecommunications into account.

The basis of the mechanism for the risk management of the telecommunications enterprise is a triangle of directions for activating risk management that is interconnected, covers the stages of the risk management process, relates to management tasks, and is constructed.

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## **KIERUNKI AKTYWIZACJI ZARZĄDZANIA RYZYKIEM PRZEDSIĘBIORSTW TELEKOMUNIKACYJNYCH W UKRAINIE PODCZAS WOJNY ORAZ W STANIE POWOJENNYM**

### **STRESZCZENIE**

**Cel:** Celem badań było określenie zagrożeń dla przedsiębiorstw telekomunikacyjnych na Ukrainie w stanie wojennym i powojennym. **Metody:** Zastosowano naukowe metody badawcze, a mianowicie: metodę dialektyczną, analityczną i syntezę, uogólnienie i specyfikację, monograficzną; prognozowanie; systematyzację; analizę czynnikową, statystyczną; metody analizy systemowej i podejście systemowe. **Wyniki:** Autorzy przeanalizowali zmiany i usystematyzowali specyficzne ryzyka przedsiębiorstw telekomunikacyjnych w warunkach wojny rosyjsko-ukraińskiej. Zaproponowano autorską definicję pojęcia „aktywizacja zarządzania ryzykiem przedsiębiorstw telekomunikacyjnych”, uwzględniającą specyfikę zagrożeń w obszarze telekomunikacji. **Wnioski:** W artykule zbudowano triadę kierunków aktywizacji zarządzania ryzykiem przedsiębiorstw telekomunikacyjnych, które są ze sobą powiązane i obejmują etapy procesu zarządzania ryzykiem, odnoszące się do funkcji zarządczych. Na podstawie uzyskanych wyników przedstawiono rekomendacje dla mechanizmu zarządzania ryzykiem przedsiębiorstwa telekomunikacyjnego.

**Słowa kluczowe:** ryzyko, zarządzanie ryzykiem, przedsiębiorstwa telekomunikacyjne, stan wojenny, Ukraina