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SECTION 1.

ECONOMIC THEORY, MACRO- AND REGIONAL ECONOMY

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THEORY OF ECONOMIC RISKS: RETROSPECTIVE AND MODERNITY

Economic risk is a fundamental aspect of economic activity, characterized by the potential of negative financial or strategic consequences. This risk stems from unpredictability in the economic environment, changes in supply and demand patterns, variations in exchange rates, political instability, and a range of external and internal influences. The main risk factors are uncertainty, the probability of causing damage and the ability to manage. In the modern sense, economic risks are greatly enhanced by globalization and the rapid development of technologies, which requires innovative methodologies for their assessment and supervision.

Currently, there are no business entities that are not exposed to economic risks. In order to better understand the essence of economic risks, you need to know the history and nature of their occurrence.

The concept of risk has always accompanied human activity, especially in economic and trade relations. The roots of the ideas that eventually shaped the concept of risk science date back to medieval times when traders had to navigate the uncertainties of market fluctuations.

In the 15th and 18th centuries, the concept of risk acquired a more systematic nature. Trade became the object of detailed analysis, countries tried to expand their spheres of influence, and this was due to a high level of uncertainty. This experience became the basis for further development of theoretical approaches to risk analysis.

With the advent of classical political economy, such representatives as A. Smith and D. Ricardo began to analyze the impact of risk on economic activity. They understood that decision-making in the field of production and trade cannot be separated from the accompanying risks affecting profitability and efficiency of

management [1; 4]. During the era of classical political economy, the concept of risk emerged as a fundamental aspect of market activity, considering factors such as competition and investment.

In the 19th and 20th centuries, due to the development of mathematical methods and probability theory, risk received a more precise mathematical justification. The development of insurance and financial instruments, in particular lending and investment portfolios, stimulated further research into the nature of risk.

A significant stage was the introduction of G. Markowitz's work, which laid the foundations of portfolio theory, (table 1) and subsequently — the development of a model that allowed quantifying the relationship between risk and expected profitability.

Table 1

The main elements of the theory of portfolio investments Harry Markowitz

Element	Description	Example or tool
Diversification	Allocation of capital between different assets to reduce the impact of risks of individual investments.	Investments in stocks, bonds, real estate.
Risk (volatility)	It is measured because of the mean square deviation of investment income, reflecting the degree of risk.	Statistical calculation of volatility.
Expected arrival	The weighted average value of the expected investment income in the portfolio.	Forecasting future income.
An effective portfolio	A set of assets that provides maximum income for a given level of risk or minimum risk for a given income.	Building an "effective border".
Variation assets	It measures the interdependence of changes in the income of various assets in the portfolio.	Calculation of correlation coefficients.

[author's development]

However, no theoretical model was able to fully predict the real financial crises that periodically hit the world economy. The global financial crises of the 20th and 21st centuries, modern economic shocks, have demonstrated the need for flexible risk assessment models that take into account the instability of markets.

In today's context, risk management is evolving using integrated approaches covering modern technologies, adaptive systems, and mathematical forecasting. The emphasis is on digitalization, which includes Big data analysis, machine learning algorithms, and the use of artificial intelligence to model complex risk scenarios. These methods allow to quickly identify and analyze both economic and social

threats [3; 1].

In (fig. 1) the evolution of the theory of risks from antiquity to the present is presented. In the modern period there was a significant breakthrough in the theory of economic risks, in particular due to the development of mathematical methods of analysis and strategic risk management.

This evolutionary path allows us to trace patterns in approaches to risk assessment and more effectively adapt modern management models to the realities of the dynamic market, the classification of economic risks.

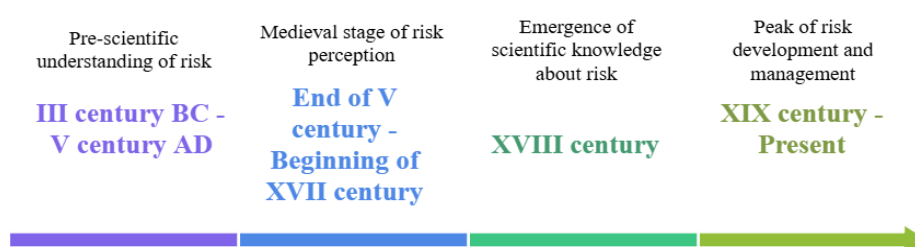


Fig. 1. **The evolution of risk: From Antiquity to the present**

Depending on the nature of the emergence of economic risks are divided into several main groups: Financial, market, political, operational and technological.

Financial risks arise from the volatility of the foreign exchange market, shifts in interest rates, and liquidity fluctuations. Market risks encompass changes in demand, competitive pressures, and broader economic conditions. Political risks stem from legislative changes, sanctions, and global instability. Operational risks arise from internal management errors, and technological ones are associated with the introduction of innovations and cyber threats. An integrated approach to the classification of economic risks is presented in (fig. 2).



Fig. 2. **Comprehensive approach to classification of economic risks**

Today, special attention is paid to risk management. Effective risk management is a cornerstone of organizational stability and growth that requires a multifaceted

approach that goes beyond intuition. It depends on the complex application of both quantitative and qualitative methods of evaluation. Quantitative methods such as Value at Risk models and Monte Carlo simulations provide a statistically sound understanding of potential financial losses.

At the same time, modern qualitative methods such as SWOT analysis, which studies strengths and weaknesses, opportunities and threats, and expert assessments using collective experience offer a broader view of less tangible risks, such as reputational damage or strategic mistakes [1; 6].

This allows a comprehensive assessment of potential threats, informing the development of reliable risk mitigation strategies. However, the dynamic nature of the modern economic nature is a significant problem. The rapid pace of change necessitates a constant evolution of risk management practices.

The integration of artificial intelligence and analytics (Big Data) is crucial in this regard. These technologies make it possible to predict risks by identifying patterns and anomalies in huge datasets, enabling organizations to anticipate and eliminate threats before they materialize.

Globalization has significantly changed the nature of economic risks, making them more complex and interconnected. High integration of financial markets contributes to the rapid spread of crisis phenomena between countries and sectors of the economy. Financial instability in the leading world economies can cause a chain reaction at the global level [2]. This forces companies and states to expand diversification and risk management tools, as well as apply the latest analytical methods to predict them.

One of the key challenges of modern economic theory is unpredictable factors that have a significant impact on economic stability. These factors include pandemics, military conflicts, natural disasters and energy crises. For example, the COVID-19 pandemic caused a sharp decline in global GDP, disruption of supply chains and an increase in unemployment. These events demonstrated the need for more dynamic risk assessment models that take into account not only historical data, but also possible scenarios of future crises [3; 5; 7].

Another important aspect is the resilience of economic systems to risks and the adaptability of management strategies. The use of (Big Data), artificial intelligence and machine learning allows you to more accurately assess risks and respond quickly to economic threats. Companies are increasingly implementing automated algorithms to predict possible market changes and quickly adjust business strategy.

Conclusions. The development of riskology has deep historical roots that go back to medieval trade practices and the formation of classical political economy.

The systematic study of risks began at a time when economists and traders began to realize the uncertainty accompanying economic activity. The ideas of such classics as A. Smith and D. Ricardo became the basis for further research, which made it possible to link economic activity with risks. However, the development of mathematical and statistical methods in the 19th and 20th centuries, in particular through the work of G. Markowitz, significantly changed the approach to risk assessment. In this context, an important point was the creation of a portfolio investment model, which made it possible to clearly determine the relationship between risk and profitability, as well as to develop methods to minimize financial losses.

Modern approaches to managing economic risks based on analysis (Big Data), artificial intelligence and machine learning allow not only to accurately predict risks, but also to adapt strategies in accordance with changes in the global economic environment. Globalization and technological change have greatly complicated the nature of risks, making them more interconnected and unpredictable.

Modern models of economic risk assessment require constant adaptation to new realities, such as economic crises, political changes, natural disasters and other global challenges. The use of the latest technologies for forecasting and risk management is a prerequisite for ensuring economic stability both at the level of individual companies and at the level of global economies.

References:

1. Grinenko A.Yu. History, theory and practice of growing threats to economic security and territorial integrity of the state due to excessive differentiation of economic development of regions. URL: https://niss.gov.ua/sites/default/files/2021-08/avtoreferat_grinenko.pdf
2. Markowitz model as the basis for constructing an algorithm for forming an effective investment portfolio. URL: <https://acadrev.duan.edu.ua/images/PDF/2010/2/8.pdf>
3. Revision of the essence of entrepreneurial risk in the economic activity of the enterprise. URL: <https://economyandsociety.in.ua/index.php/journal/article/view/217/208>
4. Radzihovska L. M., Ivashchuk O. V. The essence of the concept of "economic risk": retrospective and modernity. *Economic Journal* XXI. 2015. № 7-8(1). C. 4-8.
5. Risk: the essence, causes and main types of Economic space. URL: <https://prostir.pdaba.dp.ua/index.php/journal/article/view/1020>.
6. Chemes, V.S., Volontyr L.A. Analysis of risks in the financial sector using methods of probability theory and statistics. *Applied Information Technology*. 2025. P. 48-50.
7. Mythen, G. (2005). From 'goods' to 'bads'? Revisiting the political economy of risk. *Sociological Research Online*, 10(3), 191-203.