Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 5, 2351-2362
2024
Publisher: Learning Gate
DOI: 10.55214/25768484.v8i5.1988

Strategies for reducing financial security threats during wartime: Ukraine's experience

Serhii Shtantsel[1*], Arutiun Amalian[2], Bordan Shevchenko[3], Serhii Bulchak[4], Ruslan Kravets[5]
[1]Candidate of Technical Sciences, Department of Public Administration, Interregional Academy of Personnel Management, Kyiv, Ukraine; sht@ntsel.net (S.S.)
[2]Department of International Economic Relations, Business & Management, Ukrainian-American Concordia University, Kyiv, Ukraine; arutyunamalian@gmail.com (A.A.)
[3]Department of National Security, Public Administration and Administration, Zhytomyr Polytechnic State University, Zhytomyr, Ukraine; bohdanshevchenko1996@gmail.com (B.S.)
[4]Department of Finance and Digital Economy, Faculty of Business and Services, Zhytomyr Polytechnic State University, Zhytomyr, Ukraine; s.bulchak@ukr.net (S.B.)
[5]The National University of Water and Environmental Engineering, Rivne, Ukraine; ruslan.kravets@gmail.com (R.K.).

Abstract: Minimising the impact of threats to financial security in wartime conditions is highly relevant to Ukraine, as the ongoing conflict significantly affects the country's economic stability and financial markets. Studying effective strategies and measures to reduce risks and protect the financial system is critical for ensuring sustainable economic development and maintaining citizens' trust in financial institutions. This research will contribute to a better understanding the mechanisms for countering financial threats and ensuring financial stability in crisis conditions. The study aims to develop ways to minimise the impact of threats to Ukraine's financial security in wartime conditions. The object of the study is Ukraine's financial system and its vulnerabilities in the context of military actions. The article examines strategies for reducing financial security risks in wartime conditions using a comprehensive approach that analyses economic, financial, and socio-political factors. The foundation of the research is a theoretical analysis of economic security and the application of systems analysis methods to identify critical threats. The research identified the main threats to Ukraine's financial security during wartime, including a significant decrease in foreign exchange reserves, rising inflation, increasing unemployment, and an outflow of investments. Several practical measures are proposed to minimise these threats. First, an effective system for monitoring financial risks to identify and respond to potential threats promptly must be created. Second, the banking sector should be strengthened by ensuring stability and increasing public confidence in financial institutions. Third, developing and implementing measures to stimulate domestic investment and support entrepreneurship. Additionally, the authors emphasise the need to enhance international financial support and cooperation with international financial organisations to attract additional resources. The practical significance of the obtained results lies in their potential use by the government and financial institutions to develop strategies and measures to ensure the country's financial stability in crisis conditions.

Keywords: *Anti-crisis measures, Economic development, Economic stability, Financial risks, Financial strategy, Financial system.*

1. Introduction

The full-scale war in Ukraine has led to the destruction of the country's infrastructure, mass migration, and a deep financial and economic crisis. Due to disruptions in financial operations,

* Correspondence: sht@ntsel.net

participants in the financial market have suffered significant losses [1]. State and local budget revenues have decreased, while expenditures have increased, primarily on security and defence. In wartime conditions, it is essential to ensure fiscal transparency and stability, improve the efficiency of budget expenditures and predictability of budget policy, develop the tax and customs system considering European integration processes, as well as activate Ukraine's capital markets and integrate them into the European financial space [2].

Financial support from international partners and measures by state authorities have helped stabilise the macroeconomic situation. The economy is expected to continue adapting to wartime conditions, and risks to financial security are expected to decrease in the medium term. According to forecasts by the National Bank of Ukraine (NBU), GDP growth of 5.8% is expected in 2025.

Although this is 0.2% less than the previous forecast, it still indicates a positive economic development dynamic. The nominal GDP in 2025 is projected to be 8710 billion UAH. Inflation is also expected to be 5.8%, indicating some stabilisation of prices. However, costs for business transportation and energy resources will remain high in wartime conditions. At the same time, the fixation of tariffs on specific housing and communal services and measures by the NBU will help to limit price pressure, which will help to mitigate economic challenges [5]. At the same time, financial institutions face significant problems, especially in regions where active hostilities are ongoing, complicating their operations and creating additional challenges for the country's financial security.

The work aims to identify and justify effective strategies and measures to ensure the country's economic recovery and to define the conceptual foundations of international financial support for this process.

To achieve the stated goal, we have set the following tasks:

1. Analyse the main threats to Ukraine's financial security in wartime conditions.
2. Assess the impact of wartime conditions on the country's financial sector and economic stability.
3. Identify effective measures and strategies to minimise the impact of financial threats.
4. Consider the role of international financial support in ensuring Ukraine's financial stability.
5. Evaluate the effectiveness of existing government programs to support financial security and economic recovery.
6. Provide recommendations for improving Ukraine's financial policy to increase its resilience in wartime conditions.

2. Related Literature

In several scientific papers investigating the economic and social challenges facing Ukraine, researchers have made significant contributions to the development of modern economic science [1]. In their article, several researchers, including T. Ganushchak and colleagues, analyse an innovative approach to crisis management in trade enterprises under European integration, identifying risks associated with this process [6]. The research by W. Boungou and A. Yatié focused on the impact of the war between Ukraine and Russia on global stock markets, showing how global financial markets respond to geopolitical events [7]. Chen S., Bouteska A., Sharif T., and Abedin M.Z. investigated the volatility of energy markets in the context of natural gas due to the conflict between Russia and Ukraine, using an innovative volatility approach [8].

A. Duka and Starchenko G. examined the global experience of economic recovery after wars. They highlighted strategic directions that can be applied in the context of modern economic transformations and management [9]. Irtyshcheva I. and co-authors, in their article "The Economy of War and Postwar Economic Development: World and Ukrainian Realities," presented the results of research on the impact of war on the economy and further economic development, comparing global and Ukrainian realities. They analyse the economic consequences of war, the peculiarities of economic recovery after armed conflicts, and strategies that can be used to improve the situation in Ukraine [1]. In their work, L. Pershko, B. Vyshnivska, and O. Akimov reviewed anti-corruption management mechanisms and formed a security system in the EU financial sector. They noted the impact of corruption on economic

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 5: 2351-2362, 2024
DOI: 10.55214/25768484.v8i5.1988

development and the possibilities of using artificial intelligence technologies to increase the effectiveness of combating corruption and strengthening financial stability [11].

S. Ivanov, in his article "Economic Recovery and Development of Countries After Armed Conflicts and Wars: Unmissable Opportunities for Ukraine," published in the journal "Ukraine Economy," explores opportunities for economic recovery and development of countries after armed conflicts. He highlights opportunities for Ukraine in the context of economic recovery and development, providing strategic recommendations for using these opportunities in the post-conflict period [12]. N. Gavkalova, along with colleagues, studied the functioning of united territorial communities in Ukraine and identified the main problems of organisational support for local budget management. They analyse the effectiveness of management practices at the local community level and offer recommendations for improvement [13].

S. Bondarenko, in their work, considered the issues of improving the state system of strategic planning for national security in the context of information society. They investigate the impact of information technologies on the planning and implementation of strategic measures to ensure national security [14].

P. Kulikov and colleagues researched opportunities for innovative and investment development of Ukraine's economy after armed conflicts. They analyse the country's economic recovery and development potential through innovative projects [15]. L. Kvasnii, O. Moravska, L. Malyk, Y. Shulzhyk, O. Orlova, and O. Scherban investigated scenarios for developing enterprises in Ukraine's tourism industry during the wartime and postwar periods. They consider strategic directions for the recovery and development of the sector after armed conflicts [16].

A. Meshcheriakov and colleagues established trends in the development of Ukraine's banking system during military actions and globalisation impacts and challenges for Ukraine's banking sector in a changing geopolitical and economic environment [17]. Y. Lopatynskyi, S. Belei, I. Kapelista, and M. Pavlyshyn studied the impact of military actions on the management of the agricultural sector and proposed strategies for supporting and developing agribusiness in challenging conditions [18].

O. Okhrimenko and R. Popov, in their article "Post-war Restoration of Ukraine: Potential and Strategy of Transformations," examine the potential and strategies for transformations for postwar recovery in Ukraine. They analyse the opportunities for rebuilding the country after armed conflicts, identify priority areas for economic reforms, and propose concrete steps for their implementation [19].

V. Nebrat consolidates research from various countries on economic recovery after crises. The researchers also analyse the foreign experience and propose prospects for Ukraine, emphasising the importance of an interdisciplinary approach and international cooperation [20]. N.T. Rud and D. Fedas investigated state regulation and support for the innovative development of Ukraine's economy. They analysed existing policies and programs to support innovation and offer recommendations for their improvement to stimulate economic growth through innovation [21] and economic recovery [20].

M. Kopytko and co-authors propose a methodological approach to optimising financial resources to increase economic security in a dynamic external environment. They investigate how to effectively allocate financial resources to ensure the economy's resilience to external challenges and risks [22]. The authors contributed significantly to various aspects of economic security and market trend analysis in their scientific works. I. Mihus, Y. Koval, S. Laptev, O. Bala, and M. Kopytko (2020) researched opportunities to ensure the economic security of Ukraine's banking institutions, focusing on the importance of anti-crisis management in the banking sector [23].

G. Zakhidov focused on developing tools for analysing market trends and forecasting future economic indicators [24]. M. Lyons and K. Connolly worked on improving economic statistics in creative industries. They proposed an approach to creating multi-regional satellite accounts for creative industries, which contributes to a more accurate reflection of the economic activity of this sector and its impact on the overall economy [25].

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 5: 2351-2362, 2024
DOI: 10.55214/25768484.v8i5.1988

3. Research Methodology

To study the impact of threats to financial security in wartime conditions, the following methods were used: dialectical, comprehensive analysis, and scientific generalisation in the process of studying the works of domestic and foreign scientists on the problems of economic recovery and development of countries after armed conflicts and wars, highlighting the role of state financial policy in the economic revival of the country and international financial instruments for the economic recovery of Ukraine's economy. Economic-statistical methods were applied to highlight the peculiarities of implementing Ukraine's state financial policy in wartime conditions [25].

In this study, several statistical analysis methods were applied to assess the impact of financial threats on Ukraine's economic security in wartime conditions. Statistica 7 and MS Excel were used for statistical data processing. The following methods were employed in the work [26]:

Risk assessment used Ward's hierarchical cluster analysis method and K-means clustering. These methods were used to classify hydrological objects into different hydrochemical groups based on their similarity. The experimental data were imported into the STATISTICA 7.0 software package. The clustering algorithm involved determining the correspondence of objects to specific clusters. The clustering results were presented in the form of a dendrogram. The Euclidean distance squares for the studied objects were calculated using the following formula:

$$d^2(x_i, x_j) = \sum_{k=1}^{n} \left(x_{ik} - x_{jk}\right)^2 \quad (2)$$

where $d^2(x_i, x_j)$ is the square of the Euclidean distance between x_i and x_j, and x_{ik} is the value of the k-th variable for the object x_i.

Residual analysis was applied to assess the effectiveness of the "Affordable Loans 5-7-9%" program used by various banks in Ukraine. This method allows the evaluation of the difference between observed and predicted values of the banks' investment activities, which is essential for establishing bank stability in crisis conditions.

Firstly, the predicted values of each bank's circulation indicator were determined using regression analysis. A regression model was applied, with circulation as the dependent variable and various financial indicators of the banks as the independent variables.

Then the residuals, representing the difference between observed values (Observed) and predicted values (Predicted), were calculated:

$$\text{Residual} = \text{Observed} - \text{Predicted} \quad (1)$$

For each bank, the standard residuals (Standard Residuals) and the standard errors of residuals (Std. Err.) were also calculated.

$$\text{Standard Residual} = \frac{Residual}{Std.Err.} \quad (3)$$

To assess the accuracy of predictions and the stability of banks, the Mahalanobis Distance coefficient was used:

$$D^2 = (x - \mu)' S^{-1} (x - \mu) \quad (4)$$

where x is the vector of observed values, μ is the vector of mean values, and S is the covariance matrix.

4. Results

The study's results on the impact of military actions on the economic situation in Ukraine were conducted from 2022 to 2024 [1]. The research highlighted various aspects of Ukraine's economic security. Social security suffered from deteriorating living conditions, an increase in the number of internally displaced persons, and reduced access to medical and social services. Financial security was affected by budget deficits, loss of tax revenues, and increased public debt. Macroeconomic security faced challenges such as a sharp economic downturn due to the war, capital outflow, investment reduction, and decreased credit financing. Local food shortages and the destruction of agricultural infrastructure impacted food security. The loss of export potential and logistical difficulties threatened

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 5: 2351-2362, 2024
DOI: 10.55214/25768484.v8i5.1988

external economic security. Investment and innovation security deteriorated due to reduced public and private investments and the relocation of innovative companies abroad.

Production security also suffered significant blows due to a critical reduction in industrial production and a decline in competitive positions. All these aspects reflect the complex challenges faced by Ukraine's economic security in wartime conditions, as shown in Figure 1.

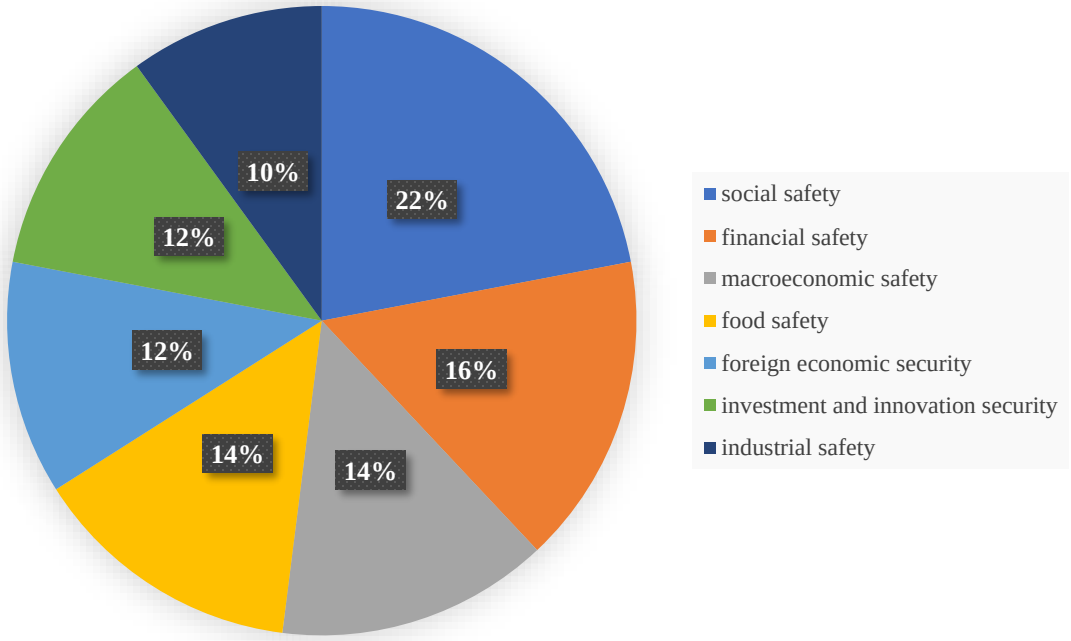

Figure 1.
Distribution of challenges and threats to Ukraine's economic security under martial law.
Source: Compiled by the authors based on [1].

The figure shows the distribution of challenges and threats to Ukraine's economic security in wartime conditions, presented as percentages for each type of threat.

1. Social security occupies the most significant share – 22%, indicating the high significance of threats related to social aspects, such as ensuring social protection for the population and maintaining social stability.
2. Financial security accounts for 16%, emphasising the importance of protecting the financial sector from risks associated with economic instability.

Macroeconomic security and food security each have a 14% percentage. This indicates that ensuring the stability of macroeconomic indicators and guaranteeing a sufficient level of food security are essential aspects.

1. External economic security and investment-innovation security each account for 12%, highlighting the necessity of protecting external economic relations and stimulating investment and innovation in the economy.

Industrial security has the most minor share—10%—but it remains a significant factor in the country's overall economic security.

The state programs "Affordable Loans 5-7-9%" and "Affordable Financial Leasing 5-7-9%" are essential in restoring business activity and ensuring the country's economic security. The main objective of these programs is to provide state support to economic entities to increase their production volumes and implement innovations. At the same time, market lending will resume only under conditions of

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 5: 2351-2362, 2024
DOI: 10.55214/25768484.v8i5.1988

economic recovery. The destruction of infrastructure and the slowdown in economic growth increase financial risks, particularly credit risks. In recent years, significant work has been done to develop and implement new capital and liquidity standards. However, the deterioration in the quality of assets under wartime conditions leads to increased liquidity and insolvency risks. Therefore, an important task is to improve the quality of financial policy and implement a financial sector development strategy based on assessing relevant risks (Official website of the Financial Club, n.d.).

Current information for 2024 indicates that the programs continue to play a critical role in Ukraine's economic recovery. In the first months of 2024, there has been a growing interest in these programs, especially among small and medium-sized enterprises, indicating their effectiveness in supporting businesses in wartime conditions.

Specifically, the share of loans directed towards innovative projects and the modernisation of production capacities is increasing, which is crucial for the country's sustainable economic development (Official website of the World Bank, n.d.).

Table 1.
Contribution of Ukrainian banks to the affordable loans programme 5-7-9%.

Bank name	Concluded credit agreements, pc	Total, mln. UAH	Industry, mln. UAH	Investment, mln. UAH	Anti-crisis, mln. UAH	Refinancing, mln. UAH	Anti-war, mln. UAH	Circulation, mln. UAH
Privatbank	34174	47314	10918	5571	6977	374	14980	8494
Savings Bank	10891	30050	4235	4104	6372	1178	10107	4054
PUMB	4090	28940	4540	958	7083	4325	6695	5339
Raifazen Bank	5420	25257	902	422	12395	5059	6479	0
ProCredit Bank	3404	17277	2778	742	4655	3257	2487	3358
Ukrgasbank	3883	17144	4554	2721	2799	937	3678	2455
Credit Agricole Bank	1727	12209	1265	218	3574	4074	1627	1451
Ukrsimbank	1151	11286	2307	741	3197	642	3075	1324
Credobank	2148	10403	408	1063	3675	1421	1436	2400
OTP Bank	1067	7506	517	110	3873	566	875	1565

Source: Compiled by the authors based on [1].

The results in Table 1 show how different banks used loans from the state program "Affordable Loans 5-7-9%" for various purposes: investments, anti-crisis measures, refinancing of previous loans, anti-war measures, and cash circulation.

Ukrainian banks actively utilised the "Affordable Loans 5-7-9%" program to support the economy during the war, focusing resources on anti-war and anti-crisis measures, investments, and refinancing. Different banks in Ukraine actively used the "Affordable Loans 5-7-9%" program to support the economy during the war, concentrating on anti-war and anti-crisis measures, investments, and refinancing. Privatbank and Savings Bank allocated the most funds for anti-war measures, while PUMB and Raifazen Bank focused on anti-crisis measures and refinancing. Other banks, such as ProCredit Bank, Ukrgasbank, Credit Agricole Bank, Ukrsimbank, Credobank, and OTP Bank, distributed resources among various categories, supporting the stability of businesses and the economy.

The statistical evaluation of the performance results of these banks is presented in Table 2.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 5: 2351-2362, 2024
DOI: 10.55214/25768484.v8i5.1988

Table 2.
Predicted & residual values (Spreadsheet1) dependent variable: Circulation, mln. UAH.

Bank name	Observed	Predicted	Residual	Standard	Standard	Std.err.	Mahalanobis	Deleted	Cook's
Privatbank	8494.00	8305.23	188.77	2.34	0.13	1299.11	6.35	972.95	0.06
Savings Bank	4054.00	4002.48	51.53	0.43	0.04	1307.88	6.45	281.40	0.01
PUMB	5339.00	4351.98	987.02	0.58	0.68	1031.60	3.67	2007.05	0.16
Raifazen Bank	0.00	759.79	-759.79	-1.02	-0.53	1385.03	7.35	-9057.92	5.98
ProCredit Bank	3358.00	2630.61	727.39	-0.18	0.50	800.11	1.85	1047.70	0.03
Ukrgasbank	2455.00	3493.10	-1038.10	0.20	-0.72	1189.40	5.18	-3199.99	0.55
Credit Agricole Bank	1451.00	2306.18	-855.18	-0.33	-0.59	1110.49	4.40	-2080.36	0.20
Ukrsimbank	1324.00	2714.56	-1390.56	-0.15	-0.96	1042.34	3.77	-2890.14	0.34
Credobank	2400.00	947.79	1452.21	-0.93	1.00	825.62	2.03	2153.10	0.12
OTP Bank	1565.00	928.28	636.72	-0.94	0.44	1061.54	3.94	1378.61	0.08
Minimum	0.00	759.79	-1390.56	-1.02	-0.96	800.11	1.85	-9057.92	0.01
Maximum	8494.00	8305.23	1452.21	2.34	1.00	1385.03	7.35	2153.10	5.98
Mean	3044.00	3044.00	0.00	0.00	0.00	1105.31	4.50	-938.76	0.75
Median	2427.50	2672.58	120.15	-0.16	0.08	1086.01	4.17	627.17	0.14

Source: Compiled by the authors based on [1].

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 5: 2351-2362, 2024
DOI: 10.55214/25768484.v8i5.1988

The analysis of the banks' performance results shows that some demonstrated high stability and accuracy in predicting financial indicators even under crisis conditions. For example, PrivatBank and Oschadbank had slight differences between observed and predicted values, indicating their resilience. ProCredit Bank and Kredobank also showed positive results, exceeding their expectations due to effective management or unexpected profits. On the other hand, some banks experienced significant deviations from predicted indicators, which may indicate difficulties adapting to crisis conditions or instability in their operations. For example, PUMB, Raiffeisen Bank, Ukrgasbank, Credit Agricole Bank, and Ukrsimbank showed significant negative deviations, indicating severe problems in their activities or unforeseen losses. At the same time, OTP Bank also exceeded its predicted indicators, indicating its successful performance in challenging conditions.

Banks with slight differences between observed and predicted values demonstrate stability and the ability to make accurate forecasts, which is essential in a crisis. Significant positive residuals may indicate effective management or that banks have taken advantage of new opportunities. Significant harmful residuals indicate problems banks face or unforeseen losses in crisis conditions.

A dendrogram was constructed using the multi-factor cluster analysis method Figure 2 to visualise the distribution of investments to support the economy in wartime.

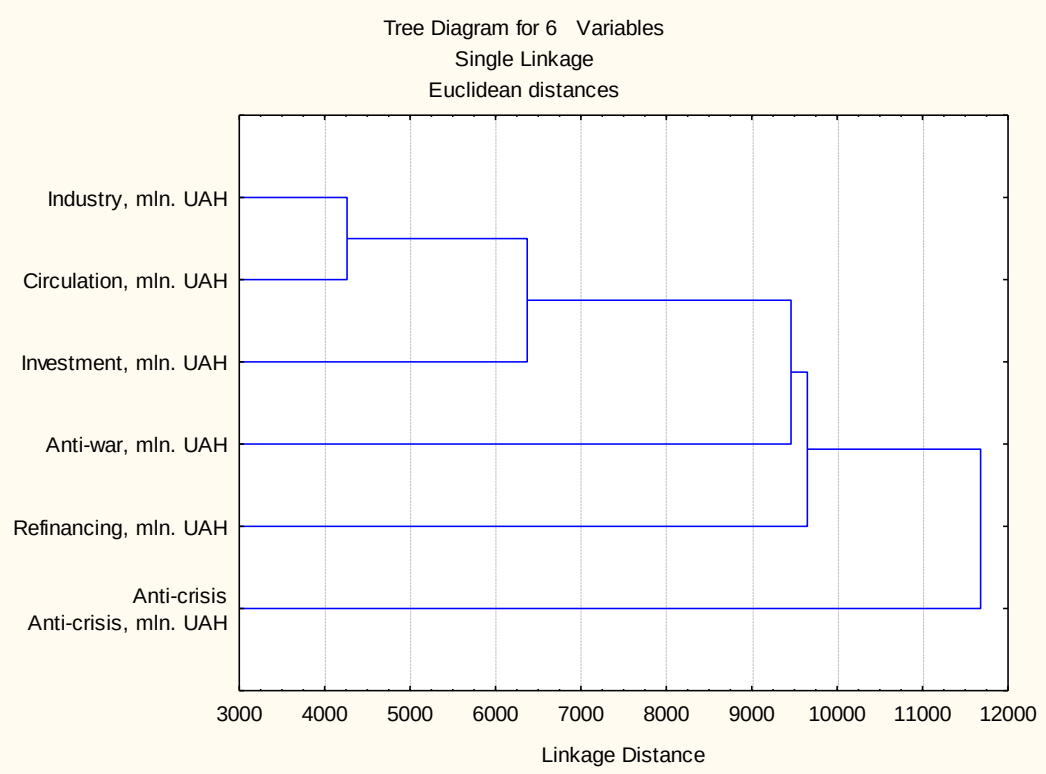

Figure 2.
Investment distribution dendrogram to support the economy during the war.
Source: Compiled by the authors based on [1].

The dendrogram, constructed based on Euclidean distances between different types of lending under the "Affordable Loans 5-7-9%" program, allows us to see which categories of loans are most similar or different in their values. For example, the distance between "Industrial Loans" and "Circulation Loans" is 4263 million UAH, the smallest distance among other categories, indicating their similarity. The most significant distance between "Refinancing" and "Anti-War Loans" is 17911 million UAH, indicating a significant volume difference. To ensure the effectiveness of state programs such as

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 5: 2351-2362, 2024
DOI: 10.55214/25768484.v8i5.1988

"Affordable Loans 5-7-9%", it is necessary to conduct a qualitative assessment of these programs. Improving the regulatory and methodological framework for implementing these programs should consider the strategic directions of the country's socio-economic development, which will enhance their effectiveness and impact on the economy [7].

To mitigate threats to financial security in wartime conditions in Ukraine, it is necessary to strengthen the financial sector by developing and implementing mechanisms to enhance the banking system's resilience. This includes increasing bank capitalisation, improving risk management systems, and ensuring adequate liquidity. Expanding international financial support by intensifying cooperation with international financial organisations such as the IMF and the World Bank to obtain loans and grants and attract foreign investments is essential. State programs, grant initiatives, and affordable loans are essential in preserving and developing entrepreneurship, positively impacting the country's economy. To further develop innovative entrepreneurship, it is necessary to address several problems, including a lack of funding, high economic risks, and insufficient state support. Implementing effective investment policies, reducing the tax burden on innovative enterprises, and developing the scientific and technological base are essential for achieving sustainable economic growth. In addition, it is necessary to create favourable conditions for attracting foreign investments and develop support programs for startups, which will enhance the competitiveness of the national economy on a global level. Supporting small and medium-sized businesses is another crucial aspect, and it is necessary to implement state support programs, including tax incentives, subsidies, grants, and preferential lending. Budget expenditure control should be strengthened to ensure the efficient use of public funds and minimise corruption risks.

The development of digital technologies also plays a vital role in improving financial services, such as mobile banking, electronic payments, and electronic document management, which will promote financial inclusion. Strengthening financial supervision and regulation requires improving the legislative framework and enhancing the functions of supervisory bodies to prevent financial fraud and ensure the financial sector's stability. Moreover, increasing the population's financial literacy through educational programs and campaigns will help citizens better manage their finances in crisis. Finally, diversifying the economy by developing strategies to reduce dependence on specific sectors, such as energy or agriculture, by stimulating the development of other industries, including technological and innovative enterprises, is necessary to ensure sustainable economic growth.

6. Discussion

The recovery of countries' economies largely depends on coordinating efforts by state institutions and international partners [6]. The driving force behind economic recovery is the effective use of financial resources, which involves various approaches to financial support and the economic modernisation of countries, considering both economic and socio-political conditions [8]. Causal relationships between economic recovery tools in different countries have been traced [11]. Considering EU directives, the issues regarding mechanisms for building a new economic model for Ukraine and improving the financial support system's quality level for economic modernisation remain debatable [9].

Justifying the feasibility of implementing foreign experience regarding countries' economic recovery after armed conflicts and wars should provide the formation of an economic-theoretical basis for determining the priorities of the strategy for maintaining fiscal and financial stability and developing the financial support system for Ukraine's economic modernisation. At the same time, assessing the main problems in Ukraine's financial sphere highlights the need to justify the imperatives of the strategy for developing the financial support system for the country's economic modernisation [12,13].

It is important to analyse potential threats that, although currently having a moderate probability, can significantly impact Ukraine's economic system. This will help identify possible factors that increase risks and develop strategies to predict and prevent economic crises [14]. Many people choose to stay abroad due to the deteriorating security, which may affect the workforce and economic activity.

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 5: 2351-2362, 2024
DOI: 10.55214/25768484.v8i5.1988

Declining citizen trust in state institutions can increase the shadow economy and worsen tax discipline [15]. Difficulties in budget financing can affect the effectiveness of social protection systems and infrastructure projects. The negative impact of military conflicts on economic activity can slow economic recovery and development. Military actions can complicate agriculture and other sectors due to environmental pollution and reduced productivity [21]. The diminished capacity of the economy to guarantee food security arose as a consequence of conflicts and the devastation of agricultural infrastructure [16].

Therefore, despite increasing uncertainty, it is vital to consider existing and potential threats to Ukraine's financial and economic security when making management decisions. It is necessary to constantly update strategies and develop roadmaps to accelerate information exchange and coordination between state bodies, local self-government, businesses, and citizens. Implementing hybrid solutions that combine traditional economic policy approaches with active actions by businesses and citizens is also critically important for successfully overcoming financial and economic challenges [18]. Developing mechanisms to increase transparency and accountability in using financial resources attracted for economic recovery is also essential.

Implementing international standards and best practices will ensure effective financial management and minimise corruption risks. Systematic monitoring and evaluation of the results of state programs and initiatives will be the key to the sustainable economic development of Ukraine under wartime conditions [22].

7. Conclusion

The study identified critical threats to Ukraine's financial system during wartime. These threats include an unstable level of public trust, difficulties with budget financing, a decrease in investments and innovations, a negative environmental impact and a reduction in food security. Ways to minimise these threats were analysed and proposed, including the necessity for effective financial resource management, support for social stability, stimulation of innovative activities, and international cooperation. The research results emphasise the importance of developing a comprehensive financial and economic recovery strategy in a crisis. Special attention is paid to integrating international experience and practical recommendations into state policy. One of the study's limitations is the difficulty accessing specific data and the high uncertainty in wartime conditions. Future research should focus on developing more accurate predictive models and risk management mechanisms. Enhancing dialogue between state authorities, local self-government, businesses, and civil society is necessary to implement recommendations successfully. These results have high practical significance for determining the strategic directions of management decisions and policy under financial instability during the military conflict.

Further research will focus on improving financial risk management strategies and developing new tools for analysing and monitoring economic processes in crisis conditions. In the future, further research in this field must focus on developing more accurate predictive models and early crisis warning mechanisms and increasing the economic system's adaptability to adverse external influences. Improving international cooperation and exchange experiences for effective economic risk management in wartime conditions is also essential.

References

[1] Financial Club, "NBU updates macroeconomic forecasts until 2025," 2024. https://finclub.net/ua/news/nbu-pokrashchyv-makroekonomichni-prohnozy-do-2025-roku.html

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 5: 2351-2362, 2024
DOI: 10.55214/25768484.v8i5.1988

[2] International Monetary Fund, "IMF Executive Board Completes the Fourth Review of the Extended Fund Facility Arrangement for Ukraine," 2024. https://www.imf.org/en/News/Articles/2024/06/28/pr24252-ukraine-imf-exec-board-completes-4th-rev-eff-arr
[3] Ministry of Finance of Ukraine, "Funding of the state budget of Ukraine since the beginning of the full-scale war," 2024. https://www.mof.gov.ua/uk/news/ukraines_state_budget_financing_since_the_beginning_of_the_full-scale_war-3435
[4] National Bank of Ukraine, "Report on financial stability," 2024. https://bank.gov.ua/ua/stability/report
[5] World Bank, "Ukraine Datasets," 2024. https://datacatalog.worldbank.org/search/collections/ukraine
[6] T. Ganushchak, O. Sova, and V. Melnyk, "Innovative anti-crisis management at trade enterprises in the context of European integration and risks in Ukraine," *Three Seas Economic Journal*, vol. 5, no. 1, pp. 52–61, 2024. https://doi.org/10.30525/2661-5150/2024-5-8
[7] W. Boungou and A. Yatié, "The impact of the Ukraine–Russia war on world stock market returns," *Economics Letters*, vol. 215, 110516, 2022. https://doi.org/10.1016/j.econlet.2022.110516
[8] S. Chen, A. Bouteska, T. Sharif, and M. Z. Abedin, "The Russia–Ukraine war and energy market volatility: A novel application of the volatility ratio in the context of natural gas," *Resources Policy*, vol. 85, 103792, 2023. https://doi.org/10.1016/j.resourpol.2023.103792
A. P. Duka and G. V. Starchenko, "World experience of post-war economic recovery: lessons for Ukraine," *Problems of Modern Transformations. Series: Economics and Management*, no. 6, 2022. https://doi.org/10.54929/2786-5738-2022-6-03-06 [in Ukrainian]
[9] Irtyshcheva, I. Kramarenko, and I. Sirenko, "The economy of war and postwar economic development: world and Ukrainian realities," *Baltic Journal of Economic Studies*, vol. 8, no. 2, pp. 78-82, 2022. https://doi.org/10.30525/2256-0742/2022-8-2-78-82
[10] L. Pershko, B. Vyshnivska, and O. Akimov, "Anti-corruption management mechanisms and the construction of a security landscape in the financial sector of the EU economic system against the background of challenges to European integration: Implications for artificial intelligence technologies," *Economic Affairs (New Delhi)*, vol. 68, no. 1, pp. 509-521, 2023. https://doi.org/10.46852/0424-2513.1.2023.20
[11] S. V. Ivanov, "Economic recovery and development of countries after armed conflicts and wars: unmissable opportunities for Ukraine," *Ukraine Economy*, vol. 1, no. 686, pp. 75-89, 2019. https://er.dduvs.in.ua/xmlui/handle/123456789/6678
[12] N. Gavkalova, L. Akimova, A. Zilinska, L. Avedyan, O. Akimov, et al., "Functioning of united territorial communities and identification of main problems of organisational support of local budget management," *Financial and Credit Activity: Problems of Theory and Practice*, vol. 2, no. 43, pp. 107-117, 2022. http://dx.doi.org/10.55643/fcaptp.2.43.2022.3708
[13] S. Bondarenko, A. Bratko, V. Antonov, R. Kolisnichenko, O. Hubanov, and A. Mysyk, "Improving the state system of strategic planning of national security in the context of informatisation of society," *Journal of Information Technology Management*, vol. 14, pp. 1-24, 2022. https://doi.org/10.22059/jitm.2022.88861
[14] P. Kulikov, O. Aziukovskyi, O. Vahonova, O. Bondar, L. Akimova, and O. Akimov, "The post-war economy of Ukraine: Innovation and investment development project," *Economic Affairs (New Delhi)*, vol. 67, no. 5, pp. 943-959, 2022. https://doi.org/10.46852/0424-2513.5.2022.30
[15] L. Kvasnii, O. Moravska, L. Malyk, Y. Shulzhyk, O. Orlova, and O. Scherban, "Scenarios of the Development of Enterprises of the Tourist Industry of Ukraine in the Conditions of the War and Post-War Period," *Financial and Credit Activity: Problems of Theory and Practice*, vol. 2, no. 49, pp. 313-325, 2023. https://doi.org/10.55643/fcaptp.2.49.2023.3999
A. Meshcheriakov, L. Bodenchuk, I. Liganenko, O. Rybak, and T. Lobunets, "Trends in the Development of the Banking System of Ukraine under Conditions of Military Actions and Globalization Influences," *Financial and Credit Activity: Problems of Theory and Practice*, vol. 3, no. 50, pp. 8-22, 2023. https://doi.org/10.55643/fcaptp.3.50.2023.3993
[16] Y. Lopatynskyi, S. Belei, I. Kapelista, and M. Pavlyshyn, "The Effectiveness of the Management System in the Conditions of War and its Influence on the Development of Agribusiness," *Review of Economics and Finance*, vol. 21, pp. 932-940, 2023.
[17] O. Okhrimenko and R. Popov, "Post-war restoration of Ukraine: potential and strategy of transformations," *Economy and Society*, no. 45, pp. 2524-0072, 2022. https://doi.org/10.32782/2524-0072/2022-45-7 22.
[18] V. V. Nevrat (Ed.), *Restoration for Development: Foreign Experience and Ukrainian Perspectives*, National Academy of Sciences of Ukraine, State University of Economics and Predicted National Academy of Sciences of Ukraine, 2023.
[19] N. T. Rud and D. Fedas, "State Regulation and Support of Innovative Development of the Economy in Ukraine," *Economic Forum*, vol. 1, no. 3, pp. 26–38, 2021. https://doi.org/10.36910/6775-2308-8559-2021-3-4 [in Ukrainian].
[20] M. Kopytko, O. Sylkin, and I. Ruda, "A Methodological Approach to Optimising Financial Resources to Increase the Level of Economic Security in a Dynamic External Environment," *Financial Internet Quarterly*, vol. 20, no. 1, pp. 29-38, 2024. https://doi.org/10.2478/fiqf-2024-0003
[21] Mihus, Y. Koval, S. Laptev, O. Bala, and M. Kopytko, "Monitoring the State Anti-Crisis Management of Economic Security of the Ukraine Banking Institutions," *Business: Theory and Practice*, vol. 21, no. 2, pp. 804-812, 2020. http://dx.doi.org/10.3846/btp.2020.12985

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 5: 2351-2362, 2024
DOI: 10.55214/25768484.v8i5.1988

[22] G. Zakhidov, "Economic Indicators: Tools for Analysing Market Trends and Predicting Future Performance," *International Multidisciplinary Journal of Universal Scientific Prospectives*, vol. 2, no. 3, pp. 23-29, 2024.
[23] M. S. Lyons and K. Connolly, "Improving Economic Statistics in the Creative Industries: Towards Multi-Regional Creative Industries Satellite Accounts," 2024. https://doi.org/10.5281/zenodo.10907689
[24] V. Sabadash and V. Lysko, "Studies on Adsorption of Petroleum Products in Static Conditions," *Journal of Ecological Engineering*, vol. 24, no. 10, pp. 40–46, 2023. https://doi.org/10.12911/22998993/169997

Edelweiss Applied Science and Technology
ISSN: 2576-8484
Vol. 8, No. 5: 2351-2362, 2024
DOI: 10.55214/25768484.v8i5.1988