

FINANCIAL RESILIENCE OF CREDIT UNIONS AND LOCAL DEVELOPMENT UNDER WARTIME CONDITIONS IN UKRAINE

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Abstract. *Objective.* The present study is of particular pertinence in light of the growing role of local financial institutions in supporting the economic resilience of communities under wartime conditions in Ukraine. Credit unions, as co-operative financial organisations, represent a significant component of local financial systems, particularly in rural areas where access to formal banking services is restricted. Concurrently, external shocks have exerted a substantial impact on their operational stability. The objective of the research is to assess the financial performance and systemic vulnerabilities of credit unions in Western Ukraine, with a particular focus on market limitations and cybersecurity risks. *Methodology.* The study takes a mixed-methods approach, combining a financial analysis of credit union performance indicators with a pilot survey assessing cybersecurity and institutional capacity. The research's analytical framework integrates elements of social economy and programme-oriented approaches to local development. This allows financial institutions to be examined as contributors to value chain efficiency and human capital resilience at the community level. *Results.* The results demonstrate that wartime conditions have significantly exacerbated the pre-existing structural weaknesses of credit unions, such as the high cost of capital, limited outreach networks and growing administrative and regulatory burdens. The study also identifies critical gaps in cybersecurity preparedness, such as insufficient investment in digital infrastructure, a lack of qualified personnel, and an absence of systematic risk management practices. The research indicates that the majority of surveyed institutions demonstrate low levels of digital resilience, which increases operational risk and constrains their ability to expand financial services. *Practical implications.* The findings highlight areas in which credit unions should be strengthened, including financial restructuring, digital modernisation and targeted capacity building in cybersecurity and institutional governance, particularly within programme-oriented development frameworks. *Value/Originality.* The study makes a valuable contribution to the existing literature by integrating financial performance analysis with cybersecurity assessment within the context of local co-operative institutions. It links these two areas to the social economy, human capital development and local economic resilience in wartime.

Keywords: credit unions, rural finance, social economy, financial resilience, cybersecurity risk, local development, co-operative institutions, wartime economy.

JEL Classification: G21, O16, R11, D14

1. Introduction

The ongoing war in Ukraine has significantly reshaped the country's economic landscape, exacerbating structural vulnerabilities and accelerating the need for institutional adaptation. In this context, local financial institutions, particularly credit unions, play a vital role in sustaining economic activity within communities.

They provide households, small enterprises and agricultural producers with access to financial resources, thereby supporting income generation, employment and local value chains. This function has become particularly important in wartime, when micro-, small- and medium-sized enterprises in Ukraine have experienced severe operational, liquidity and market

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access disruptions, making localised, flexible financial support mechanisms more important than ever (UNDP Ukraine, 2024).

At the same time, the operating environment for credit unions has become more complex. Wartime economic instability, inflationary pressures and regulatory changes have placed further constraints on their financial performance. Recent policy developments, including reforms initiated by the National Bank of Ukraine (2023), aim to strengthen the resilience of credit unions and increase the variety of financial services they offer. However, these reforms also introduce higher compliance requirements and increase the need for institutional capacity.

Concurrently, digital transformation and cybersecurity have emerged as pivotal factors influencing the sustainability of financial institutions. Ukraine's updated cybersecurity framework (State Service of Special Communications and Information Protection of Ukraine, 2025) is aligned with European standards, emphasising risk-based approaches and protection of financial infrastructure. However, smaller, locally embedded institutions frequently lack the technical and human resources necessary to meet these standards.

From a social economic perspective, credit unions are more than just financial intermediaries. They are community-based institutions that contribute to the development of human capital, social inclusion and local economic resilience. Their performance directly impacts household income stability, access to financial services and the operation of local labour markets. This places credit unions within the wider field of social economy research, particularly with regard to household economics, labour potential and social infrastructure development.

This study aims to evaluate the financial performance and cybersecurity capabilities of selected credit unions in Western Ukraine, identifying systemic vulnerabilities that hinder their contribution to local economic development. The study is based on a pilot sample and combines financial data analysis with a survey-based assessment of digital and institutional preparedness.

2. Literature Review

The role of credit unions in economic development, particularly in terms of financial inclusion and local economic resilience, has been widely discussed. Studies emphasise the importance of these co-operative institutions in providing access to finance for underserved populations and supporting small-scale economic activity (Khudoliy & Slesar, 2019). In Ukraine, regulatory changes and economic instability have shaped the development of credit unions, and these factors continue to influence

their operational capacity. These findings align with international research emphasising that the sustainability of credit unions hinges on financial structure, governance quality, and external economic conditions (Anakpo et al., 2024).

From a social economic perspective, credit unions are considered part of the "third sector", contributing to the formation of social capital and the coordination of the economy at a local level (Honcharenko & Panteleimonenko, 2024). Their role extends beyond financial intermediation to include supporting community development, stabilising income, and generating employment. This aligns with broader theoretical approaches to the social economy and social policy, which emphasise the interaction between economic institutions and social outcomes (Skrynkovskyy & Tyrkalo, 2021).

Recent research also emphasises the significance of social resilience when it comes to understanding the ability of local systems to withstand shocks and adapt to changing conditions (Keck & Saktapolrak, 2013). In the Ukrainian context, this perspective is particularly pertinent given the ongoing war and its effect on local economies. Studies on post-war recovery emphasise the importance of local institutions and networks in sustaining economic activity and supporting reconstruction processes (Butko, 2023).

Concurrently, digital transformation and cybersecurity have become increasingly significant for the functioning of financial institutions. It is asserted by international organisations that financial inclusion and digitalisation must be accompanied by adequate cybersecurity measures and institutional capacity (International Labour Organization, 2025). The risks associated with inadequate cybersecurity are further compounded by gender-related vulnerabilities, including technology-facilitated gender-based violence and unequal access to digital resources (UN Women, 2024a).

The wartime context has also reinforced the relevance of women's economic participation in local recovery processes. Recent evidence indicates that women in Ukraine have assumed an expanded role in sustaining household income, microenterprise activity, and community-level resilience during the invasion. This suggests an increase in the importance of accessible and locally embedded financial services (UN Women, 2024b).

This paradigm shift is also evident in policy documents in Ukraine, which now emphasise integrated financial and digital resilience. The objective of regulatory reforms is twofold: firstly, to strengthen the stability of credit unions and, secondly, to expand their role in the financial system. However, it should be noted that these reforms will also introduce new reporting and compliance requirements (National Bank of Ukraine, 2023). Nevertheless, the extent to which

credit unions can adapt to these changes remains an open question.

Policy documents in Ukraine also reflect this shift towards integrated financial and digital resilience. Regulatory reforms aim to stabilise credit unions and increase their presence in the financial system, while introducing new reporting and compliance requirements (National Bank of Ukraine, 2023). However, it remains to be seen to what extent credit unions will be able to adapt to these changes.

3. Methodology

This study employs a mixed-methods research design, combining quantitative financial analysis with a qualitative, survey-based assessment of institutional capacity. The empirical component comprises two main data sources.

Firstly, an analysis of desk research was conducted using publicly available financial reports, regulatory data and sectoral studies, in order to establish a baseline understanding of the credit union sector in Ukraine. This enabled the identification of key financial indicators, such as the size of the loan portfolio, turnover, delinquency rates and liquidity ratios.

Secondly, a targeted survey was conducted among nine pilot credit unions located in Western and Central Ukraine. This sample was selected based on criteria such as institutional size, geographical distribution and operational activity. The survey aimed to evaluate the institutions' capacity for cybersecurity, their level of digital readiness, and their needs relating to financial and technological development.

The survey included a series of structured questions covering financial performance, IT infrastructure, cybersecurity practices, human resources and strategic priorities. The data collected were systematised and analysed to identify common patterns, institutional gaps and levels of readiness.

The analytical approach focuses on identifying structural vulnerabilities and linking them to broader socio-economic implications. Particular attention is given to the role of credit unions in supporting households, small businesses and local labour markets. This enables the study to combine financial analysis with a social economy framework, emphasising human capital, income stability and local economic resilience.

Due to the small size of the sample, the findings should be considered indicative rather than representative of the entire sector. However, the pilot nature of the study enables key trends to be identified and provides a basis for further research and policy-oriented analysis. Although the sample size is small, the selected institutions have diverse operational profiles, enabling the study to identify key structural patterns rather than make statistical generalisations.

4. Results

4.1 Financial Performance and Structural Disparities of Credit Unions

A financial analysis of selected credit unions in western Ukraine reveals a heterogeneous sector, characterised by significant disparities in scale, portfolio quality and liquidity positions. The results confirm that wartime conditions have not caused a uniform decline in the sector, but have instead exacerbated pre-existing structural imbalances.

Firstly, it is clear that credit unions are stratified by size and operational capacity. Large institutions such as Samopomich and Vyhoda have substantial loan portfolios of over 80–160 million UAH and are continuing to expand their lending activities despite macroeconomic instability. By contrast, medium-sized and smaller credit unions operate within a significantly narrower financial base, which limits their ability to absorb shocks and scale up their operations.

Secondly, the quality of portfolios remains uneven across institutions. Delinquency rates range from moderate levels of 3.8% in Anisia to elevated levels exceeding 10% in several credit unions. This indicates increased borrower vulnerability under inflationary pressure and wartime income instability. These findings suggest that credit unions are directly exposed to fluctuations in household income and the performance of small enterprises, thereby reinforcing their embeddedness in local socio-economic systems.

Thirdly, it is evident that liquidity indicators are indicative of one of the most critical systemic weaknesses. While some institutions maintain extremely high liquidity buffers (e.g., Anisia, Halychyna), others operate with constrained liquidity positions (Vyhoda, Samopomich), relying on rapid capital turnover rather than stable reserves. This divergence reflects different operational models and risk appetites, as well as limited access to affordable external financing, which restricts credit expansion. Table 1 summarises the key financial indicators of selected credit unions, including loan portfolio dynamics, delinquency rates and liquidity positions.

These findings demonstrate the important role played by credit unions in the social economy, as evidenced by their direct impact on household financing, support for microenterprises, and local employment stability.

From a social economic perspective, these financial characteristics have direct implications for local development. Credit unions are key financial intermediaries for households, micro-enterprises and agricultural producers in rural communities. Therefore, their financial stability directly affects access to credit, employment opportunities and income generation at the local level. In this context, observed liquidity constraints and credit risks can be interpreted as factors

Table 1

Key financial indicators of selected credit unions in Western Ukraine (2023–2024)

Credit union	Loan portfolio 2023 (million UAH)	Loan portfolio 2024 (million UAH)	Annual turnover 2023 (million UAH)	Delinquency rate (%)	Liquidity ratio
Vyhoda	74.9	89.5	129.0	9.0	0.27
Anisia	51.0	50.0	75.0	3.8	9.45
Samopomich	149.1	167.9	131.0	6.4	0.28
Halychyna	22.4	26.7	11.7	12.0	9.45
Bukovynskiy Alians	22.4	26.7	29.1	10.6	0.45
Kosivska	27.8	24.3	30.0	12.5	compliant

Source: compiled by the authors based on CU financial reports and survey data

that influence the resilience of human capital and local labour markets. This aligns with the research domain of the social economy and the development of labour potential.

Finally, the absence of formally disclosed regulatory risk categories across all analysed institutions indicates a lack of transparency and restricts the capacity for a comprehensive assessment of systemic risk exposure. This further emphasises the need for structured monitoring frameworks and programme-oriented interventions aimed at strengthening the financial and institutional capacity of the sector.

4.2 Cybersecurity and Digital Capacity Gaps in Credit Unions (Pilot Sample)

An assessment of cybersecurity and digital capacity reveals that Ukrainian credit unions face systemic vulnerabilities that significantly hinder their operational resilience and potential for development. A pilot survey of nine institutions indicates that digital transformation in the sector is in its infancy and unevenly distributed, with critical gaps in core infrastructure, governance and human capital.

The most significant weaknesses relate to the absence of fundamental cybersecurity architecture. The majority of surveyed credit unions lack firewall and malware protection systems, as well as secure authentication protocols for internal access. These deficiencies leave them substantially exposed to external cyber threats and internal data breaches. At the same time, several institutions reported inadequate protection of member data and insufficient

safeguards for online financial transactions, which restricts their ability to expand digital service delivery.

Another key issue is infrastructure and continuity risks. Many credit unions do not use cloud-based storage or automated data backup systems, nor do they have fraud detection mechanisms in place. This significantly increases the risk of data loss and operational disruption, particularly in wartime when both physical and digital infrastructures are exposed to shocks.

The survey also reveals structural deficiencies in human capital relating to digital operations. Many credit unions do not employ dedicated IT personnel, instead relying on minimal outsourced support or ad hoc internal solutions. This restricts their ability to implement cybersecurity protocols, respond to incidents and maintain compliance with evolving regulatory requirements. The main cybersecurity gaps identified in the pilot sample, along with their associated risks, are presented in Table 2.

From a social economy perspective, these findings transcend technical limitations. Credit unions are embedded financial institutions within local communities, serving households, small enterprises and agricultural producers. Therefore, their digital vulnerability translates into broader risks for financial inclusion, income stability and the functioning of local economic networks (Butko, 2023). Notably, the absence of secure digital services can restrict rural populations' access to financial resources, exacerbating existing disparities in technology and financial infrastructure access. These findings were considered

Table 2

Key cybersecurity gaps identified in surveyed credit unions (pilot sample)

Cybersecurity gap	Share of CUs affected	Risk implication
Lack of firewall and malware protection	Majority (7/9)	High exposure to external cyberattacks
Weak internal authentication and login systems	Majority (7/9)	Unauthorised access and internal breaches
Insufficient protection of member data	Moderate (5–6/9)	Data leaks and reputational risk
Absence of secure online transaction systems	Moderate (5–6/9)	Limited digital service expansion
Lack of cloud infrastructure and data backup systems	Moderate (5–6/9)	Data loss and operational disruption
No dedicated IT staff or cybersecurity expertise	Widespread	Inability to respond to incidents

Source: compiled by the authors based on survey data

in the context of fundamental cybersecurity governance frameworks, such as risk management, data protection, and incident response capacity.

Notably, the results suggest that awareness of cybersecurity challenges is growing within the sector. All of the credit unions surveyed expressed a willingness to engage in digital modernisation efforts and allocate staff to capacity-building initiatives. However, this readiness is not yet matched by institutional capability. The discrepancy between motivation and capability suggests that credit unions require structured, programme-oriented interventions combining infrastructure investment, staff training, governance reforms and peer learning mechanisms to develop their cybersecurity.

Overall, cybersecurity should be considered not just a technical issue, but a systemic component of financial stability and local development. Enhancing the digital resilience of credit unions can strengthen their ability to support human capital development, sustain micro-level economic activity and improve the resilience of local value chains in uncertain conditions.

5. Discussion

The findings of this study should be interpreted in light of the broader institutional and macroeconomic transformations currently taking place in Ukraine. The financial and cybersecurity vulnerabilities observed in credit unions are not isolated technical issues, but rather reflect the systemic pressures that have emerged from wartime economic disruption, regulatory changes and the accelerated digitalisation process. Against this backdrop, the broader financial sector in Ukraine is adjusting, with liquidity management, risk reallocation, and institutional resilience remaining central concerns of post-shock stabilisation policy (National Bank of Ukraine, 2024).

Firstly, the financial constraints identified in the analysis, such as the high cost of capital and liquidity imbalances, are consistent with the broader reconstruction dynamics set out in the Fifth Rapid Damage and Needs Assessment (RDNAS). The report emphasises that Ukraine's recovery will depend heavily on private-sector growth, particularly the ability of small and medium-sized enterprises to access financing and integrate into value chains. In this context, credit unions represent a critical yet underdeveloped channel for local financial intermediation.

This broader macroeconomic context is consistent with recent Organisation for Economic Co-operation and Development (OECD) assessments, which emphasise that Ukraine's recovery depends not only on reconstruction finance, but also on restoring investment capacity, strengthening local business activity and improving access to finance for smaller economic

actors (Organisation for Economic Co-operation and Development, 2025).

Secondly, the cybersecurity gaps identified in the pilot sample should be considered in the context of Ukraine's evolving regulatory framework. The adoption of Law No. 11290 (2025) and alignment with EU approaches, such as the NIS2 Directive, indicate a shift towards risk-based cybersecurity governance. This includes the protection of critical infrastructure and financial systems. However, this study's results suggest that credit unions are not yet prepared to comply with these requirements due to limited technical capacity and a lack of specialised personnel.

The discrepancy between regulatory expectations and institutional capacity creates structural vulnerabilities within local financial systems. As credit unions serve rural populations and small-scale economic actors, any digital weaknesses they have may pose a risk to financial inclusion and local economic stability.

Thirdly, the role of credit unions should be considered in the context of the social economy. As co-operative financial institutions, they not only operate as lenders, but also as mechanisms for forming social capital, coordinating the local economy, and stabilising income. Consequently, their performance directly impacts household resilience, employment opportunities, and the sustainability of small business ecosystems. This aligns with the social economy research domain (Skrynkovskyy & Tyrkalo, 2021), particularly with regard to human capital development, local labour markets and income differentiation. This is further supported by recent initiatives that demonstrate the increasing importance of credit unions in financing SMEs and supporting local economic recovery in Ukraine (WOCCU, 2025).

At the same time, the findings reveal a structural mismatch between the growing complexity of financial and cybersecurity requirements, and the traditional operational models of credit unions. While the external environment demands higher levels of digitalisation, compliance and risk management, most institutions continue to function as locally embedded, low-tech organisations. Notably, financial constraints and cybersecurity vulnerabilities are interconnected, with limited resources directly impacting credit unions' ability to invest in digital infrastructure and risk management systems.

From a policy perspective, it is clear that isolated interventions will be insufficient. Instead, a programme-oriented approach combining financial support, digital infrastructure, capacity building and regulatory alignment is required. This can empower credit unions to evolve from vulnerable local entities into robust components of local value chains and economic recovery systems (Keck & Sakdapolrak, 2013).

Finally, the study identifies a pivotal transitional period for the sector. Although financial and digital

vulnerabilities remain significant, the high level of institutional willingness to engage in modernisation efforts suggests that the sector is not averse to change, but rather is held back by limited resources and systemic constraints. This creates an opportunity for targeted interventions that could generate economic and social returns.

6. Conclusions

This study shows that, while credit unions in Western Ukraine are a valuable asset, they also represent a structural vulnerability within the country's local economic systems. Their financial performance is inconsistent, and their cybersecurity capacity is inadequate for an increasingly digital and risk-sensitive environment.

Wartime conditions have exacerbated existing vulnerabilities, particularly with regard to access to affordable capital, institutional capacity and digital resilience. Nevertheless, credit unions continue to play a vital role in supporting households, small businesses and rural economic activity, thereby reaffirming their significance within the social economy framework.

The results suggest the need for a systemic and programme-oriented approach to strengthening credit unions. To ensure sustainable development, financial stabilisation, digital modernisation and institutional capacity-building must be implemented simultaneously. Without this integration, the sector risks remaining functionally relevant yet structurally constrained. Future research could incorporate comparative analyses of different regions or international case studies to validate the findings further.

From a broader perspective, strengthening the resilience of credit unions can contribute to building human capital, improving local labour markets and supporting an inclusive economic recovery. This establishes credit unions as not only financial institutions, but also as vital elements of local development and socio-economic stability in times of uncertainty.

Author Contributions

- Conceptualisation – Filiak
- Methodology – Filiak, Yankovska
- Analysis – Filiak, Semchuk
- Writing – Filiak

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Received on: 07th of February, 2026

Accepted on: 20th of April, 2026

Published on: 15th of May, 2026