

# INVESTMENT AND FINANCIAL SUPPORT FOR THE FUNCTIONING OF CRITICAL INFRASTRUCTURE OF UKRAINE IN THE CONDITIONS OF CRISIS TRANSFORMATIONS

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**Abstract.** This article examines issues related to investment and financial support for critical infrastructure in Ukraine during periods of crisis and transformation. It reveals the essence of investment and financial support for critical infrastructure in conditions of crisis transformation accompanied by increased security risks, the destruction of production and logistics links, a shortage of budgetary resources, and an increased need for the rapid restoration of vital systems. It has been proven that the sustainable operation of critical infrastructure facilities requires a multi-level financing model combining state investments, local budgets, public-private partnership mechanisms, international technical assistance, credit resources, insurance instruments, and special recovery funds. These funds are intended to increase the resilience, modernisation, and digitalisation of infrastructure complexes. Particular attention is paid to determining investment priorities, taking into account the facilities' strategic significance, vulnerability level, expected socio-economic effects, and the need to ensure continuity of basic services for the population and businesses. Provided that the institutional environment is improved, transparent procedures for the distribution of funds are introduced, a risk monitoring system is developed, a programme-targeted approach is applied, and investment policy is aligned with the goals of national security, economic stability, and the state's long-term recovery, it is proven that increasing the efficiency of financial support for critical infrastructure is possible. *Research methods.* The study is based on a methodological approach that combines dialectical, system-structural, formal-logical and comparative-legal methods, as well as analysis and synthesis. This approach enables a comprehensive study of the financial and economic mechanisms that ensure the stability of critical infrastructure in times of crisis. The expected scientific outcome is a clearer understanding of the nature and characteristics of investment and financial support for critical infrastructure in times of crisis. The *purpose of the article* is a comprehensive study of the theoretical and applied principles of investment and financial support for the functioning of critical infrastructure in conditions of crisis transformations, as well as identifying problems and areas for improving the relevant mechanisms. To achieve this objective, the following tasks have been identified: 1) to examine the nature of critical infrastructure as an object of financial and investment influence; 2) to describe the sources and mechanisms of its financing; 3) to analyse the risks and challenges that arise in crisis situations; 4) to justify ways of improving the effectiveness of investment and financial support for its operation. *Conclusions.* The study determined that investment and financial support for the functioning of Ukraine's critical infrastructure in times of crisis transformation are pivotal prerequisites for maintaining economic stability, national security and continuity of basic services to the population. Research has demonstrated that the efficacy of such support is contingent on a combination of budgetary resources, international financial assistance, public-private partnership mechanisms, insurance instruments and recovery trust funds, in addition to the implementation of transparent procedures for the management of financial flows. The feasibility of prioritising investments according to the

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vulnerability level, strategic significance, and potential for rapid socio-economic impact of objects is substantiated. It was determined that improving the institutional environment, digitalising management processes, strengthening the risk-oriented approach, and harmonising investment policy with the long-term goals of recovery and modernisation of the state would increase the effectiveness of financial support.

**Keywords:** investments, financial support, critical infrastructure, crisis transformations, economic stability, state regulation, public-private partnership, infrastructure restoration, risk management, national security.

**JEL Classification:** H54, G32, O18, E62, H56

## Introduction

The study found that the functioning of Ukraine's critical infrastructure during times of crisis is of systemic importance to ensuring national security, economic stability, and the continuity of vital services. The current state of critical infrastructure is characterised by significant physical damage, high dependence on external financial support, a shortage of investment resources, and the need to protect, restore and modernise facilities in the long term. It has been proven that investment and financial support for critical infrastructure should be based on a combination of budgetary resources, international financing, public-private partnership mechanisms, concessions and the insurance of military and political risks, as well as other mixed financing instruments. The current system of legal regulation of investment and financial support for Ukraine's critical infrastructure was found to be fragmented and insufficiently coordinated, failing to establish a comprehensive legal framework for long-term investment in strategic facilities. The key problems in this area have been identified as the instability and unpredictability of the financial regime, the complexity of the institutional division of powers, and the imposition of multiple legal regimes to attract investment. There is also an insufficient level of regulatory protection for investors against military and political risks. In modern conditions, it has been proven that the most effective model for financing and restoring critical infrastructure is comprehensive interaction between the state, international partners, and the private sector. Within this model, the state provides the legal and budgetary framework, international partners provide long-term resources and guarantees, and the private sector provides investments, technologies, and managerial efficiency.

It has been proven that increasing the effectiveness of investment policy and financial mechanisms to ensure the sustainability of Ukraine's critical infrastructure is possible through the formation of a stable medium-term public investment regime, the introduction of risk-based prioritisation of financing, the development of mixed financing models, improvements to legal mechanisms for public-private partnerships, the expansion of the military and political risk insurance system, and the strengthening of digital transparency in

public investment. Therefore, the development of legal and financial tools in this area should focus on creating a comprehensive investment and financial support model that can ensure the restoration and long-term sustainability of Ukraine's critical infrastructure.

## 1. Methodology of the Research

### 1.1. Scientific Analysis of Scholarly Works on the Research Topic

The issue of investment and financial support for critical infrastructure in Ukraine has been studied in several interrelated areas in the scientific literature. However, so far, works devoted to individual aspects of this problem have prevailed. For example, V.P. Kudryashov (2022) justifies the need to expand the sources of financial support for critical infrastructure in wartime through budgetary resources, international aid, state borrowing, guarantee funds, and mixed financing. R.L. Balakin (2022) focuses on the features of state regulation of critical infrastructure during martial law, emphasising the importance of using European experience, state guarantees, and anti-crisis management for its restoration. At the same time, K. V. Klymenko, K. V. Pavlyuk and M. V. Savostyanenko summarise the global approach to financing critical infrastructure protection, emphasising the role of international financial organisations, public-private partnerships, and special financial protection instruments (Klymenko, Pavlyuk, Savostyanenko, 2021).

Modern research is paying increasing attention to issues such as partnerships, sustainability, and innovative investment mechanisms. A. L. Pomaza-Ponomarenko and D. V. Taraduda consider public-private partnerships to be one of the key mechanisms for developing and protecting critical infrastructure (Pomaza-Ponomarenko, Taraduda, 2024), while O. L. Bobos and M. L. Bobos link reconstruction success to transparency, digitalisation of management, international support, and community involvement (Bobos, Bobos, 2024). A. Vasina, A. Melnyk, A. Vasin, A. Bashtannyk, and V. Yevsyeyev (2024) prove that infrastructure restoration under martial law requires an integrated approach combining financial regulation, institutional changes and the participation of local authorities and the private sector. Separately, T. G. Zatonatska and

S. O. Osypenko (2025) propose mezzanine financing as a promising tool for attracting investment in the reconstruction of critical infrastructure facilities.

Foreign researchers have increasingly studied the prospects for establishing a European energy hub in Ukraine, viewing the implementation of European investment programmes for the energy sector as a promising direction for co-operation. Richard L. Morningstar, András Simonyi, Olga Khakova, and Paddy Ryan (2023) examine the challenges of restoring Ukraine's energy infrastructure, focusing on financial reconstruction mechanisms, risk-sharing between the public and private sectors, and investment stimulation in both war and post-war periods. Similarly, Romina Bandura and Alexander Romanishyn (2025) analyse the modernisation of Ukraine's energy system, exploring the roles of international donors, financial institutions, and private investors, alongside the regulatory conditions required to attract capital to critical energy infrastructure. Furthermore, investment support for Ukraine's critical transport infrastructure is investigated by Romina Bandura, Yanina Staguhn, and Benjamin Jensen (2022), who specifically evaluate mechanisms such as public-private partnerships, concessions, and foreign direct investment, as well as the role of international partners in financing logistics, ports, roads, and border infrastructure. Finally, Sander Winckel (2023) emphasises the imperative of attracting donor assistance to restore Ukraine's critical infrastructure.

Therefore, despite significant scientific developments, there is still a lack of comprehensive modern literature that combines budget, investment, credit, grant, insurance and partnership mechanisms into a holistic model of financial support for the continuous functioning of Ukraine's critical infrastructure during times of crisis.

### 1.2. Methodological Features of the Study

The dialectical method was employed to reveal the development of financial and investment mechanisms amid crisis-related changes, to pinpoint contradictions between the need for uninterrupted critical infrastructure operation and limited financial resources, and to substantiate the coordination of these factors. The system-structural method was employed to study critical infrastructure as an integral, multi-level system. This approach was used to determine its components and the relationships between state, municipal, private and international sources of financing. It also determined the role of investment support in the general mechanism of its sustainable functioning. The formal-logical method formed the basis for clarifying the conceptual framework of the study, particularly the categories of 'critical infrastructure', 'investment support', 'financial support',

'crisis transformations' and 'stability'. It also formed the basis for the logical substantiation of conclusions and proposals.

The comparative legal method was employed to compare Ukraine's national legislation on the protection and operation of critical infrastructure with international and European approaches to its financing, restoration, and sustainability. Methods of analysis and synthesis were employed to divide the issue into its constituent parts – sources of financing, investment instruments, risks, management entities and areas of state support – and to summarise the findings into a unified concept for enhancing the investment and financial support of Ukraine's critical infrastructure. The combined application of these methods made it possible to conduct a thorough investigation into the financial and economic mechanisms that ensure the sustainability of critical infrastructure in the face of military, economic, and social challenges.

## 2. Current State and Problems of the Functioning of Critical Infrastructure of Ukraine in the Conditions of Crisis Transformations

Currently, Ukraine's critical infrastructure is operating under conditions of military, economic, energy, logistical and institutional challenges, which significantly complicates the continuity of vital functions and services. The normative basis of the relevant legal relations is the Law of Ukraine "On Critical Infrastructure", which defines the legal and organisational principles of creating and operating the national critical infrastructure protection system. In conditions of martial law, the authorised body's powers in this area are exercised by the State Service for Special Communications and Information Protection of Ukraine, indicating the adaptation of the institutional management model to crisis conditions (The Law of Ukraine "On Critical Infrastructure"). The legislative consolidation of vital functions and services emphasises that disrupting such facilities poses a direct threat to national security, public order and the lives and health of the population.

Ukraine's critical infrastructure is in a state of significant physical damage, increased operational risk and growing resource needs for protection, restoration and modernisation. According to a joint assessment by the World Bank, the Ukrainian government, the European Commission and the UN, Ukraine's restoration and reconstruction needs amounted to 587.7 billion USD over a ten-year period. The increase in losses in the energy and transport sectors due to intensified attacks in 2025 was particularly notable. In response to these challenges, the state is implementing regional resilience plans and simplifying construction procedures in preparation for the winter period.

It is also directing certain budget resources towards protecting critical facilities, including 9.2 billion UAH for 245 facilities in non-frontline regions (Ukraine Fifth Rapid Damage and Needs Assessment (RDNA5), February 2022 – December 2025).

In his article, Javier Cifuentes-Faura reveals the problems with Ukraine's critical infrastructure in times of crisis, highlighting the need for post-war urban reconstruction, proper infrastructure to support growing urbanisation, and a transition to energy-efficient, sustainable and technologically modernised infrastructure. The author attributes these issues not only to physical destruction, but also to management transparency, resource efficiency, environmental transformation and the administrative capacity of state and local authorities. With regard to state participation, the work emphasises that Ukraine's restoration requires public administration reform, particularly in environmental public administration. This should focus on new technologies, transparent management systems, and the modernisation of national and local institutions. It is also essential to ensure integrity in public procurement and the work of permitting bodies. In other words, the state is presented as a pivotal player that must not only finance reconstruction but also direct it organisationally through smart governance, institutional renewal and transparent regulation (Javier Cifuentes-Faura, 2023). Thus, in the context of crisis transformations, Ukraine's critical infrastructure is considered to require not restoration to its pre-war form, but rather systemic modernisation based on sustainability, energy efficiency, digitalisation and transparent public administration. The state and local governments are assigned the leading role in such a transformation.

In the context of crisis transformations, the main problems with Ukraine's critical infrastructure remain the chronic shortage of investment resources, dependence on external financial support, and the need to ensure the protection, operational repair and long-term modernisation of facilities simultaneously. There is also a need to improve coordination further between state bodies, local governments and private operators. Legally, this requires the development of a special financing mechanism, the unification of investment prioritisation procedures, the strengthening of sustainability requirements, and the regulatory consolidation of mixed financing instruments, war risk insurance, and partnership recovery models. The current state of Ukraine's critical infrastructure shows that it cannot be considered a technical or sectoral issue alone. Instead, a comprehensive legal and financial approach is needed within the framework of national security policy and post-crisis recovery.

### **3. Sources, Instruments, and Mechanisms of Investment and Financial Provision of Critical Infrastructure**

#### **3.1. Budgetary Sources of Financial Support for Critical Infrastructure**

Budgetary financing is a fundamental part of the legal framework for maintaining Ukraine's critical infrastructure, as it is through state and local budgets that funding for protection, emergency recovery, modernisation, and the maintenance of vital services is provided. The regulatory basis for such financing is the Law of Ukraine "On Critical Infrastructure", the Budget Code of Ukraine, and the Law of Ukraine on the State Budget for the relevant year. These laws provide for the use of the reserve fund, state guarantees and special budget programmes, including the fund for dealing with the consequences of armed aggression. This provides grounds for the argument that budgetary sources perform a stabilisation function in the system, as well as a fiscal function, to ensure the stability of critical infrastructure.

Therefore, the restoration and decarbonisation of Ukraine's critical energy infrastructure requires 'long-lasting financial, regulatory and political support'. In their scientific paper, 'Rebuilding Ukraine's energy supply in a secure, economic and decarbonised way', Tim Tröndle, Olena Melnyk, Olena Tutova, Vira Porieva, Fabian Neumann, Iain Staffell and Anthony Patt emphasise that achieving a carbon-neutral energy system by 2060 will require the large-scale deployment of new infrastructure. This would entail 120–550 GW of new renewable generating capacity, 23–80 GW of electricity storage capacity and 0–50 GW of nuclear capacity. The average annual rate of introduction of new renewable capacity would need to be 3.5–16 GW, which significantly exceeds previous national guidelines. Consequently, it can be inferred from the content of the article that the authors do not perceive public financing, inclusive of budget support, as the sole solution, but rather as a vital component of a more extensive system of financial support for the restoration of critical energy infrastructure facilities (Tim Tröndle, Olena Melnyk, Olena Tutova, Vira Porieva, Fabian Neumann, Iain Staffell, Anthony Patt, 2024). This conclusion follows from their thesis that the necessary scale of infrastructure deployment cannot be achieved without long-term financial support from the state, as well as political and regulatory coordination. This is especially pertinent given that significant parts of the network infrastructure, as well as generating facilities, were destroyed. The reconstruction of generation and networks must therefore take place in a coordinated and parallel manner.

Therefore, the restoration of Ukraine's critical energy infrastructure requires long-term financial, regulatory and political support. Without sustained state participation in financial provision, it is unlikely that the necessary scale of reconstruction and modernisation will be implemented.

### 3.2. International Financing as a Tool for Restoring and Increasing Stability

In conditions of large-scale destruction and the high capital intensity of reconstructing critical infrastructure, international financial resources in the form of grants, loans, budget support, guarantees, and mixed financing instruments are of particular importance. According to official sources of the European Union, the Ukraine Facility programme for 2024–2027 aims to support the restoration and modernisation of public services, ensure their continuity, and mobilise investments in the private sector. In contrast, the Ukraine Investment Framework specifically focuses on attracting public and private investments in Ukraine's reconstruction. In this context, international financing should be viewed not as supplementary, but as a fundamental source of resource provision for critical infrastructure in crisis situations.

In the context of the large-scale destruction and the high capital intensity involved in rebuilding critical infrastructure, international financial resources in the form of grants, loans, budget support, guarantees, and blended finance instruments are particularly important. Notably, the Ukraine Facility for 2024–2027 offers up to 50 billion EUR in support, and its investment arm, the Ukraine Investment Framework, has 9.5 billion EUR in guarantees and grants to leverage up to 40 billion EUR in public and private investment. As of November 2025, the EU's total commitments under the Ukraine Investment Framework amounted to 6.9 billion EUR, providing over 21 billion EUR in investment. By December 2025, 26.8 billion EUR had been disbursed under the first pillar of the Ukraine Facility. Additionally, the EIB Group provided Ukraine with 1.5 billion EUR in new financing in 2025 and over 4 billion EUR since 2022. The EBRD attracted 2.9 billion EUR in 2025, of which over 1.2 billion EUR was directed towards energy security. The total volume of its support since 2022 reached 9.1 billion EUR. At the same time, the World Bank mobilised 2.5 billion USD in donor contributions and investment income through the Ukraine Relief, Recovery, Reconstruction and Reform Trust Fund as of December 31, 2025. It also programmed 2.3 billion USD in grants, disbursed 1.5 billion USD, and facilitated the attraction of around 7.3 billion USD in additional development and private capital (The Ukraine Facility. Supporting

Ukraine's recovery, reconstruction, and path towards EU accession, 2024).

In their work, M. Thiemann, D. Mocanu and D. Piroška consider international financing to be a tool for restoring and increasing the resilience of countries aspiring to join the EU. This is achieved through large investment programmes designed to mobilise public and private funds based on EU budget resources, and direct them to sectors in need of transformation to prepare for EU membership. Following Russia's full-scale invasion of Ukraine, the authors demonstrate that this financing model has become one of the key new modalities of EU enlargement policy. Accordingly, this article considers international financing to be more than just traditional donor assistance. Instead, it is presented as a blended finance mechanism in which the European Commission, multilateral and national development banks coordinate financial flows, EU political priorities and the goals of candidate countries. In this approach, financing performs a dual function: it ensures recovery, modernisation and institutional stability on the one hand, while strengthening the EU's guiding influence on the transformation of relevant sectors on the other (Thiemann, Mocanu, Piroška, 2025).

At the same time, the authors emphasise a critical aspect: this financing is based on the principle of 'bankability', i.e., an orientation towards the financial attractiveness of projects and their ability to attract capital. According to the researchers, while such an approach can strengthen the political manageability of the recovery process, it can also limit local development and restrict Ukraine's market integration possibilities.

### 3.3. Private Investment and Public-Private Partnership in the Field of Critical Infrastructure

An important aspect of developing financial and investment support is attracting private capital through public-private partnership and concession mechanisms. Current Ukrainian legislation, particularly the Laws of Ukraine "On Public-Private Partnership" and "On Concession", establishes the legal framework for infrastructure project implementation on a contractual basis. It also defines the risk distribution procedure, creditor participation conditions, investor guarantees and long-term financing mechanisms. In this regard, it is advisable to consider a public-private partnership as a formalised legal mechanism for integrating private resources into the public provision of critical infrastructure. This is particularly relevant in cases where budget funding is insufficient or limited in time.

In the field of critical infrastructure, public-private partnerships and private investments offer several advantages. They enable capital to be attracted without placing an immediate burden on the budget,

and allow construction and operational risks to be transferred to the private partner. They also facilitate the consolidation of quality through KPIs and the 'pay for availability' mechanism, and enable financing not only of construction, but also of maintenance throughout the facility's life cycle. This is particularly important for Ukraine in sectors where facilities must operate continuously but do not always generate sufficient commercial income, such as transport, municipal and medical infrastructure.

At the same time, such models have several disadvantages. These include the high complexity of preparing feasibility studies and contract documentation, the need for professional risk allocation, a long approval cycle, dependence on the budgetary discipline of the public partner and increased military, political and regulatory risks. For a warring state, a further issue is that private capital is much more likely to invest in critical infrastructure projects if international guarantees, grant co-financing or war risk insurance are in place. In other words, a 'pure' PPP without additional safeguards is often not attractive enough to investors.

The first example of a classic PPP in Ukraine is the Olvia port concession. Under this agreement, the private partner, QTerminals Olvia, must invest approximately 3.4 billion UAH in port infrastructure and at least 80 million UAH in Mykolaiv's infrastructure. A second example is the Kherson seaport concession, which requires investments of around 300–320 million UAH, including at least 216 million UAH in the port and 18 million UAH in urban infrastructure within the first 3.5 years. The IFC noted that the first two port concessions together generated 137 million USD in private investment commitments. In 2025, Ukraine also launched a new PPP project in the port of Chornomorsk amid ongoing war. Preparations were announced for selecting a private investor for the first and container terminals, with estimated investments amounting to hundreds of millions of dollars (Olvia Specialized Seaport Concession, 2025).

Examples of critical infrastructure facilities being restored or created under broader partnership models include the pilot PPP project for a multidisciplinary hospital in Zhytomyr. Here, a private partner will design, finance, build, equip and maintain a 450-bed hospital, with donors ready to cover up to 50% of the capital expenditure. This is an illustrative example of a model where the city, a private operator and international financial institutions combine resources (Zhytomyr Hospital PPP Project: Preliminary Market Sounding, 2025).

It is also worth mentioning the 157 million EUR package for a private wind energy project, which is being co-financed by the EBRD, IFC and BSTDB, and is intended to strengthen Ukraine's energy security.

Additionally, the Ukrainian-French agreement has approved 19 projects for the restoration of critical infrastructure, ranging from a digital substation in the Kyiv region to the modernisation of equipment at Kharkiv Heating Networks and Kharkiv Waterworks, with a total value of 200 million EUR. This shows that in modern conditions in Ukraine, non-isolated private investments, namely hybrid models: PPP + donor grants + IFO + mechanisms for reducing military risks, are the most realistic.

### 3.4. Problems of Legal Regulation of Investment and Financial Support

Despite the existence of a regulatory framework, the current investment and financial support mechanism for critical infrastructure is still characterised by a number of systemic problems. These include fragmented legal regulation of individual financial instruments, dependence on foreign aid and insufficient institutional coherence between public administration entities. There is also a lack of clarity over how to distribute military, political and commercial risks within long-term infrastructure projects. As of December 31, 2025, direct losses in Ukraine had exceeded 195 billion USD, with the housing, transport, and energy sectors being the most affected. Therefore, improving legal regulation should aim to unify project prioritisation procedures, develop mixed financing, increase investor guarantees, and consolidate special risk insurance instruments for critical infrastructure.

From a jurisprudential perspective, the key issue with the legal regulation of investment and financial support is its fragmentation: the Law of Ukraine "On Critical Infrastructure" primarily defines the legal and organisational principles of the national protection system, whereas financial and investment mechanisms are scattered across the Budget Code of Ukraine, the Law of Ukraine "On Public-Private Partnership" (2025), the Law of Ukraine "On Concession", the Law of Ukraine "On State Support for Investment Projects with Significant Investments", and public investment management by-laws. This suggests that Ukrainian legislation has not yet established a specific legal framework for financing and investing in critical infrastructure, with the relevant regulations existing as a set of related but not fully integrated norms.

The second problem is the lack of stability and predictability of the financial regime. The budget legislation of Ukraine provides for the use of a reserve fund and state guarantee mechanisms, however, the new system of public investment management and distribution was regulatoryly deployed only in 2025, in particular through the Resolution of the Cabinet of Ministers of Ukraine dated February 28, 2025 No. 232 "Some Issues of Public Investment Distribution", the Resolution of the Cabinet of Ministers of Ukraine

dated February 28, 2025 No. 527 "Some Issues of Public Investment Management", as well as the Order of the Ministry of Finance of Ukraine dated February 28, 2025 No. 131 "On Approval of the Methodology for Determining Sources and Mechanisms of Financial Provision for Public Investment Projects and Public Investment Programs". Legally speaking, this means that a significant proportion of critical infrastructure financing depends on annual budget decisions, the government's current priorities, and the procedures for distributing funds. This makes long-term planning for multi-year infrastructure projects significantly more complicated and reduces the level of investment certainty for potential participants in such projects.

The third problem relates to the complicated institutional distribution of powers. The Law of Ukraine "On Critical Infrastructure" is based on the multi-subject model of critical infrastructure protection. In the field of public investments, there is a separate Interdepartmental Commission on the Distribution of Public Investments. Additionally, project preparation and assessment is currently being carried out through the DREAM ecosystem until a separate unified information system is introduced. This engenders the legal predicament of establishing responsibility: within the prevailing structure, it is more arduous to ensure unambiguous personification of those accountable for prioritisation, financing, monitoring and the outcomes of investments in specific critical infrastructure facilities.

The fourth node involves the imposition of several legal regimes to attract investment. The PPP regime, concession agreements, state support for projects involving significant investment, and public investment projects operate in parallel. The law on significant investment does not directly apply to projects that meet the criteria for a PPP and are implemented under special legislation. In practice, this creates a need for clearer regulatory distinctions regarding the financing of critical infrastructure facilities through classic budget mechanisms, PPPs or concessions, special state support regimes or mixed financing.

Finally, the issue of legal support for military and political risks is a significant one. Although Ukraine has created a regulatory framework for insuring investments against military risks through the 2023 amendments to the legislation on financial mechanisms for stimulating export activity, as well as Government Resolution No. 388 on the list and procedure for insuring such risks, the gradual completion of this mechanism indicates that the investor protection market is still in its infancy. This is of fundamental importance for critical infrastructure, since private capital is objectively inclined to avoid long-term investments in strategic facilities without sufficiently defined guarantees of compensation for losses, distribution of force majeure risks, and protection of creditors.

## **4. The Role of the State, International Partners and Private Sector in Financing and Restoration of Critical Infrastructure**

### **4.1. The Role of the State as the Main Subject of Public-Legal Support for Financing and Restoration of Critical Infrastructure**

In the field of financing and restoration of critical infrastructure, the state performs basic regulatory, coordinating, budgeting and guaranteeing functions. The Law of Ukraine "On Critical Infrastructure" determines the legal and organisational principles of the national critical infrastructure protection system, and budgetary and subordinate legal mechanisms ensure the allocation of funds for emergency restoration, reconstruction, and maintenance of vital service continuity. In this respect, the state acts as both a manager of public finances and a guarantor of public interest. It is the state that establishes recovery priorities, determines how budget resources are used, and ensures the legal legitimacy of involving other entities in infrastructure project implementation.

The practical significance of this role is confirmed by the fact that the Cabinet of Ministers of Ukraine approved a separate procedure for allocating state budget subventions to local budgets for the recovery of critical infrastructure facilities as part of the joint project, 'Urban Infrastructure Development Project – 2', with the International Bank for Reconstruction and Development. Additionally, a separate government decision allocated funds from the RELINC grant to the restoration of critical logistics infrastructure and network connections. Significantly, it was only after the Ukrainian government's decision in 2024 to allocate 161 million EUR to local budgets that two EIB programmes could be deployed to recover municipal infrastructure in over 100 communities.

### **4.2. The Role of International Partners as Providers of External Financial, Guarantee and Expert Support**

In modern conditions, international partners perform the function of reinforcing the Ukrainian recovery system with external resources, providing it with credit, grants, guarantees and advisory instruments. Legally speaking, their participation is significant not only as a source of financing, but also as a mechanism for institutional stabilisation, since international financial institutions and donors are involved in preparing projects, establishing selection procedures, providing technical support, and monitoring the use of funds. The Ukraine Facility programme for 2024–2027 provides 50 billion EUR in support. The Ukraine Investment Framework, which includes guarantees to reduce the risks for international financial organisations, bilateral development agencies, and Ukrainian banks when

financing public and private sector projects, amounts to 9.3 billion EUR (Ukraine Facility, 2025).

Examples of such participation are already quite specific. In March 2025, the European Commission and the EIB Group signed a guarantee agreement enabling the EIB to invest at least 2 billion EUR in urgent recovery and reconstruction projects, including those relating to energy, transport, housing, water and heating. Additionally, the EIB is implementing three projects: the 100 million EUR Ukraine Recovery III project, which aims to restore critical social infrastructure in over 100 communities; the 100 million EUR Ukraine Water Recovery project, which seeks to repair and upgrade water supply and wastewater systems; and the 100 million EUR Ukraine District Heating Ukreximbank project, which intends to restore heating infrastructure. The governments of Ukraine and France separately selected 19 critical infrastructure recovery projects for 2025, demonstrating the practical value of cross-border financing for targeted sectoral facilities.

#### **4.3. The Role of the Private Sector as an Investor, Operator and Carrier of Managerial and Technological Capacity**

In the field of critical infrastructure, the private sector is not limited to the role of a source of capital; it also acts as a party involved in the design, construction, operation, technical modernisation and management of infrastructure assets. The regulatory basis for this participation is provided by the Ukrainian laws "On Public-Private Partnership" and "On Concession", both of which were passed in 2025. Current legislation enshrines the principles of transparency, objectivity and non-discrimination in the selection of a private partner. It also allows for an assessment of the reliability of the financing mechanism and directly provides for the possibility of co-financing the creation of a PPP facility, as well as paying the private partner a fee for operational readiness from state and local budgets. In turn, the Law on Concession directly defines a concession as a means of implementing projects to modernise infrastructure and improve the quality of socially significant services.

There are already examples of such participation in Ukrainian practice. As part of the Olvia port concession project, QTerminals Olvia's private partner has committed to investing approximately 3.4 billion UAH in port infrastructure and at least 80 million UAH in Mykolaiv's urban infrastructure. The Kherson Sea Port concession will provide around 300 million UAH in investments, including 216 million UAH in the first 3.5 years and 18 million UAH for urban infrastructure development. The IFC summarised that the operators of the two Black Sea ports of Kherson and Olbia have collectively committed 137 million USD in private investment. In 2025, an international competitive

procedure was launched to select a private investor for the project to develop the first and container terminals of the Port of Chornomorsk. This confirmed the continued focus on attracting private capital, even under wartime conditions.

#### **4.4. Interaction of the State, International Partners and the Private Sector as a Comprehensive Recovery Mechanism**

From a legal perspective, the most effective model for recovering critical infrastructure is not the individual involvement of each of the aforementioned entities, but their coordinated interaction. The state establishes the legal framework, sets priorities, provides budget co-financing and protects the public interest. International partners provide long-term resources, guarantees and technical assistance, while the private sector provides capital, managerial efficiency, engineering solutions and operational capacity. This model reduces investment risks, combines public and private funds, and creates the legal conditions necessary for implementing complex facilities that are socially important and require significant capital investment.

A prime example of such an integrated model is the PPP project for a multi-specialty hospital in Zhytomyr. Here, the city organises the preparation and tendering of the project in accordance with Ukrainian legislation and international practices. Meanwhile, the private partner is responsible for designing, financing, building, equipping and maintaining the facility. These models show that, in critical infrastructure projects, legal recovery is increasingly based on combining budgetary, international and private resources within a single public-legal mechanism.

#### **5. Directions for Improving Investment Policy and Financial Mechanisms to Ensuring the Resilience of Critical Infrastructure of Ukraine**

Firstly, it is necessary to form a stable medium-term public investment regime, since in 2025 the state only normatively deployed the relevant mechanisms through the Resolution of the Cabinet of Ministers of Ukraine dated February 28, 2025 No. 294 "On Approval of the Procedure for Developing and Monitoring the Implementation of the Medium-Term Plan of Priority Public Investments of the State", Resolution of the Cabinet of Ministers of Ukraine dated February 28, 2025 No. 527 "Some Issues of Public Investment Management" and Resolution of the Cabinet of Ministers of Ukraine dated February 28, 2025 No. 232 "Some Issues of Public Investment Distribution". From a legal perspective, this signifies that the present mechanism for medium-term planning, management and allocation of public investments is comparatively recent, and consequently requires institutional

consolidation, particularly with regard to critical infrastructure facilities. Consequently, a substantial proportion of their financing remains contingent upon annual budgetary decisions, prevailing government priorities and the mechanisms for fund distribution. This engenders complexity in the long-term planning of multi-year infrastructure projects.

Secondly, it is recommended to implement a risk-based prioritisation of financing, with consideration given to the level of criticality of the facility, its impact on vital functions and regional security. This approach aligns with the legislation outlined in the Law of Ukraine "On Critical Infrastructure".

Thirdly, a blended financing model needs to be developed. This will combine budget funds with resources from international financial organisations, guarantees, and EU grants. The Ukraine Facility for 2024–2027 provides 50 billion EUR in support. New agreements within the Ukraine Investment Framework should mobilise up to 10 billion EUR in investments, with 2.3 billion EUR coming from the EU.

Fourthly, legal mechanisms for public-private partnerships should be improved more actively. While the current Ukrainian law on public-private

partnerships already creates a basis for attracting private capital, critical infrastructure requires special conditions for risk sharing, availability payments, and creditor protection.

Fifthly, one of the priorities should be to expand the system of insurance and reinsurance of military and political risks, since the current Resolution of the Cabinet of Ministers of Ukraine "On Approval of the List of Military and Political Risks and the Terms and Procedure for Insurance (Reinsurance) of Military and Political Risks in the Activities of the Export Credit Agency" dated April 9, 2024, No. 388 already establishes the relevant mechanisms for investment insurance contracts and investment loans, but this tool still needs to be scaled up for large infrastructure projects.

Sixthly, digital transparency, monitoring and the integration of investment policy with regional development must be strengthened. This will allow the restoration of critical infrastructure to be aligned with the state's spatial, security and socio-economic priorities, taking into account the update of the State Strategy for Regional Development for 2021–2027 in December 2025.

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