Yaroslav Shcherbak, Postgraduate Student
at the Department of International Economics
Taras Shevchenko National University of Kyiv
Kyiv, Ukraine

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THE ASYMMETRIC RISK-OFFSET MECHANISM OF EUROPEAN INTEGRATION ON INTERNATIONAL INVESTMENT IN UKRAINE'S ENERGY SECTOR

Ukraine's energy sector requires large-scale international investment under conditions of persistent and only partially mitigable geopolitical and security risk. Meanwhile, Ukraine's European integration process generates institutional, regulatory and financial mechanisms whose effects are typically analysed separately from the security dimension of the investment climate. Existing studies either rank determinants of investment attractiveness by aggregate strength of effect or describe individual EU support instruments in isolation. The missing connection concerns whether integration mechanisms can reduce specific components of investment risk rather than merely affect aggregate investment risk. Accordingly, the central claim of this study is that European integration should be understood not as a direct determinant of investment inflows, but as a mechanism that partially restructures the risk profile faced by international investors. The research question is: through which channels can the mechanisms of deepening European integration offset particular components of investment risk in Ukraine's energy sector, and is this offset effect uniform or differentiated across risk components?

The conceptual model decomposes investment risk into four components relevant to a capital-intensive sector. Geopolitical risk arises from war, physical destruction, and territorial and security uncertainty. Regulatory risk stems from regulatory unpredictability and weak institutional enforcement. Market-integration risk reflects limited market access, technical incompatibility, and uncertainty of cross-border energy trade. Financial risk concerns access to capital, financing conditions and project bankability. Unlike conventional determinant-ranking approaches, these components are treated here not as competing in relative importance, but as partially independent targets of distinct integration mechanisms.

Table 1

Mapping of EU integration mechanisms onto components of investment risk

EU integration mechanism	Risk component	Expected risk-offset effect
Harmonisation with EU energy acquis	Regulatory	↓ regulatory uncertainty
Regulatory convergence	Regulatory	↑ predictability
ENTSO-E network integration	Market-integration	↓ market-access uncertainty
Cross-border infrastructure	Market-integration	↑ connectivity
EU financial instruments (e.g., EIB)	Financial	↓ financing constraints
Guarantee / risk-sharing schemes	Financial	↓ perceived investment risk
Procurement transparency standards	Regulatory	↓ governance uncertainty
EU geopolitical alignment	Geopolitical	Limited / indirect effect only

Source: developed by the author

This mapping supports the central proposition, that the potential risk-offset effect of European integration is asymmetric across risk components rather than consistent. The strongest potential effect concerns institutional-regulatory and market-integration risks; a moderate effect concerns financial risk; and the effect on geopolitical risk remains limited and indirect, since integration mechanisms do not, and are not designed to, remove the physical and military dimensions of that risk. The following examples illustrate how these mechanisms operate in practice.

The synchronisation of Ukraine's power system with the Continental European ENTSO-E network preserved frequency stability and facilitated the restoration of cross-border electricity flows, illustrating a reduction of market-integration risk through confirmed technical compatibility with the EU market [1].

The gradual adaptation of Ukraine's energy price regulation to EU single-market principles, within the broader transformation of EU energy markets, reduces institutional-regulatory uncertainty by increasing the

predictability of the rules investors face [2]. European financial instruments and guarantee mechanisms, such as those provided through the European Investment Bank, can improve the bankability of energy projects, thereby reducing the financial risk component independently of the security environment [4].

An important qualification follows directly from this logic: risk reduction does not equal investment inflow. The mechanisms identified above create preconditions and potentially reduce specific risk components, but the final investment decision reflects the aggregate, not the partial, risk assessment; this study does not claim a direct causal investment effect but identifies a potential risk-offset mechanism that requires further empirical testing.

Likewise, geopolitical alignment with the EU may alter an investor's perception of Ukraine's strategic positioning, but this signalling effect should not be conflated with an actual reduction of physical or military security risk – security risk, geopolitical alignment and institutional risk are analytically distinct categories [3].

Proposition 1. European integration is expected to generate a differentiated, not uniform, risk-offset effect on international investment conditions.

Proposition 2. The relatively stronger potential risk-offset effects concern regulatory and market-integration risk, consistent with theoretical accounts of differentiated integration in which convergence proceeds unevenly across policy domains.

Proposition 3. Security risk remains largely outside the direct reach of integration mechanisms, making the overall investment effect conditional on the security environment rather than on integration progress alone.

Policy implications follow the same risk-component logic rather than a generic call for «deeper integration». For institutional-regulatory risk, priorities include accelerating acquis harmonisation and improving procurement transparency. For market-integration risk, priorities deepening integration through ENTSO-E and expanding cross-border infrastructure. For financial risk, priorities include expanding EU guarantee instruments and risk-sharing mechanisms. Critically, European integration should not be presented to investors or policymakers as a substitute for security guarantees, since doing so would misrepresent the actual scope of the mechanism identified in this study.

The analysis suggests that European integration should not be interpreted as a mechanism capable of eliminating investment risk

associated with Ukraine's security environment. Its potential value lies in the partial and asymmetric restructuring of this risk: institutional and market-related uncertainty can increasingly be replaced by regulatory predictability and integration into European energy markets, while financial mechanisms may improve project bankability, whereas the security component remains largely exogenous to the integration process. European integration cannot substitute for security guarantees, but it can reduce the share of investment uncertainty that is institutionally and economically manageable. Further research should empirically verify the proposed model through a quantitative comparison of individual risk components across key stages of the European integration process.

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