# ЕКОНОМІЧНІ НАУКИ

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## CURRENT STATUS AND CHALLENGES OF CORPORATE INVESTMENT RISK

***Abstract***

*Corporate investment decision-making is undergoing a fundamental transformation as traditional risk models fail to account for today's complex global challenges. This paper examines how Environmental, Social, and Governance (ESG) factors have become critical determinants of investment success in an era of geopolitical volatility, technological disruption, and climate transition. Through detailed case analysis of major investment failures – including WeWork's governance collapse and energy companies facing stranded assets – we demonstrate how ESG risks directly destroy shareholder value. Our research identifies industry-specific risk patterns: energy companies confront transition risks, manufacturers face supply chain vulnerabilities, and technology firms grapple with data governance challenges. The findings reveal that ESG integration provides not just risk mitigation but competitive advantage, enabling companies to navigate regulatory changes, enhance operational resilience, and access sustainable financing. We propose a comprehensive framework for embedding ESG factors throughout investment processes, combining quantitative modeling with qualitative assessment. This approach enables investors to better price previously externalized risks while identifying new opportunities in the green transition. The study concludes that sophisticated ESG integration is no longer optional but essential for long-term value creation, requiring upgraded risk management systems, specialized expertise, and cultural transformation within organizations. As global sustainability regulations intensify and stakeholder expectations evolve, companies that proactively embrace ESG-informed investment strategies will gain durable competitive advantages in increasingly transparent markets.*

***Key words:*** *investment risk, risk management, ESG, case study, industry risk, risk mitigation.*

**Introduction.** Corporate investment is a core engine driving economic growth, technological innovation, and value creation [1]. However, against the macro backdrop of rising anti-globalization sentiment, frequent geopolitical conflicts, increasingly severe climate change issues, and accelerating technological revolution iterations, the foundation of certainty upon which investment decisions rely is disintegrating, replaced by a highly complex, interconnected, and dynamically changing «risk complex». In the past, corporate investment decisions were mostly based on traditional financial models such as Discounted Cash Flow (DCF) and Internal Rate of Return (IRR), focusing on quantifiable financial risks like market volatility, credit default, and interest rate changes [2]. But in recent years, a series of shocking major


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investment failures warn us that those «non-financial» risks not fully priced by traditional models, especially ESG-related risks, have become key reasons for the annihilation of investment value.

**Purpose.** It is urgent to re-examine and reconstruct the management paradigm of corporate investment risk. Based on this practical need, this paper first systematically sorts out and identifies the clusters of key risk factors affecting contemporary corporate investment projects; secondly, through typical case studies, it empirically analyzes how ESG risks specifically lead to investment project failures to provide profound lessons; finally, the paper focuses on the industry level, analyzing the specific risk changes faced by industries such as energy, manufacturing, and technology, and elaborates on how ESG principles have evolved from a compliance requirement into a powerful risk mitigation tool and value discovery tool, providing theoretical basis and practical guidance for enterprises to build more resilient investment strategies.

**Presentation of the main research material.** The core research material presented in this paper systematically constructs a contemporary framework for understanding enterprise investment risk, which has evolved beyond traditional financial metrics into a complex interplay of macro, meso, and micro-level factors, with Environmental, Social, and Governance (ESG) considerations at its heart. The investigation begins by delineating a multi-tiered risk factor system that modern enterprises must navigate. At the macro level, geopolitical tensions, macroeconomic fluctuations, and shifting regulatory policies create an unstable foundation for long-term investments. The meso level is characterized by industry-specific threats, including disruptive technological change, intense competition, and fragile global supply chains. Most critically, at the micro level, ESG risks are identified as a decisive cluster, encompassing environmental liabilities like climate-related transition and physical risks, social controversies such as labor disputes and data security breaches, and fundamental governance failures including corruption and weak oversight. This risk taxonomy establishes that a myopic focus on financials is insufficient, as non-financial ESG factors can directly precipitate financial catastrophe. This theoretical framework is then vividly substantiated through in-depth case studies of major investment failures. The analysis of WeWork's collapse serves as a quintessential example of how severe governance risks, concerning founder control and conflicted transactions, can obliterate billions in valuation despite a seemingly viable business model. Conversely, the case of a European energy giant suffering massive asset write-downs illustrates the material financial impact of environmental transition risk, where investments in fossil fuels become stranded due to accelerated global decarbonization policies. These cases empirically demonstrate that ESG factors are not peripheral but are central to determining investment viability. Furthermore, the research material extends this analysis to industry-specific dynamics, examining how risk profiles are uniquely transforming in sectors like energy, manufacturing, and technology. In energy, the core risk shifts from resource extraction to navigating the transition to renewables, while manufacturing grapples with building resilient and green supply chains. The tech industry faces existential threats from data ethics and regulatory compliance challenges. Across all these sectors, the paper argues that ESG principles have evolved from being mere risk sources into powerful risk mitigation tools. Proactively integrating ESG allows companies to secure social licenses to operate, future-proof their assets against regulatory changes, enhance supply chain robustness, and build trust with stakeholders. Ultimately, the main research material culminates in the argument that a paradigm shift is imperative: success in modern investment requires fusing traditional financial analysis with a robust, integrated ESG framework throughout the investment decision-making process, transforming risk management from a defensive tactic into a strategic advantage for sustainable value creation.

**System of Key Risk Factors Affecting Corporate Investment Projects.** The risk factors of modern corporate investment projects have formed a multi-level, interpenetrating complex system. This system transcends the narrow perspective of traditional risk management, requiring managers to have a more holistic and forward-looking insight. This system can be roughly divided into macro, meso, and micro levels, each containing key factors that can overturn investment expectations [3].

At the macro level, geopolitical risk has become the primary source of uncertainty [4]. Great power competition, trade sanctions, and the instability of international agreements (such as fluctuations in the implementation of the Paris Agreement) directly threaten global supply chain security and market access. For example, when making major infrastructure investments overseas, the host country's political stability, policy inclination towards China, and foreign exchange control measures are factors that must be assessed upfront. Macroeconomic risks are equally important. Global inflationary pressures are forcing central banks into interest rate hike cycles, directly increasing the capital cost of projects and potentially suppressing end-market demand, which is particularly damaging to long-term, capital-intensive investment projects. Its impact can be reflected through a modified Capital Asset Pricing Model (CAPM).

At the meso level, industry technology risk and competitive landscape risk are becoming increasingly prominent [5]. The exponential growth in the speed of technological iteration (such as AI's disruption of traditional industries) may render an investment technologically obsolete by the time it commences operation. Meanwhile, supply chain risk has been fully exposed post-pandemic. Single, concentrated supply chain models have become extremely fragile; disruption in any link can lead to the shutdown of the entire production system.

At the micro level, besides the ever-present project execution risk, management risk, and financial risk, ESG risk has moved from the periphery to the core [6]. It is not a single risk but a cluster of risks: Environmental (E) risk includes physical risks from climate change (e.g., damage to assets from extreme weather) and transition risks (e.g., worsening cost structure due to carbon tax policies); Social (S) risk covers labor rights, community relations, product safety, etc. A major

safety accident or labor dispute can be enough to destroy brand reputation and the project's social license to operate; Governance (G) risk involves the transparency of corporate decisions, board independence, and anti-corruption mechanisms. Poor governance is the fundamental internal cause of many investment failures. These risk factors are difficult to quantify precisely with traditional models, but their destructive power is very real. The following table summarizes the key risk factors and their potential impacts:

**Table 1. Classification and Impact of Key Risk Factors for Corporate Investment Projects**

| Risk Level | Risk Category | Specific Risk Factors | Main Potential Impacts |
|---|---|---|---|
| Macro | Geopolitical Risk | International tensions, trade barriers, war conflict, sanctions | Limited market access, assets frozen or confiscated, supply chain disruption |
| | Macroeconomic Risk | Inflation, interest rate hikes, exchange rate fluctuations, economic recession | Rising capital costs, demand shrinkage, inaccurate cash flow forecasts, exchange loss |
| | Regulatory Policy Risk | Changes in industrial policy, stricter environmental regulations, tax policy adjustments | Soaring compliance costs, business model failure, additional tax burdens |
| Meso | Industry Technology Risk | Technological disruption, technology route competition, R&D failure | Invested technology becomes obsolete, intellectual property devaluation, sunk investment |
| | Market Competition Risk | Threat of new entrants, price wars, emergence of substitutes | Market share erosion, profit margin decline, expected revenue unrealized |
| | Supply Chain Risk | Key raw material supply interruption, logistics bottlenecks, high supplier concentration | Production interruption, cost increase, delivery delays |
| Micro | ESG Risk | Environmental (E): Carbon emissions, pollution, resource depletion, biodiversity loss | Facing high carbon taxes, environmental penalties, lawsuits; stranded assets; financing difficulties |
| | | Social (S): Labor disputes, community conflict, data security, product liability | Decision-making errors, regulatory investigation, legal consequences, loss of investor confidence |
| | | Governance (G): Corruption, board failure, internal control loopholes, fraud | Decision-making errors, regulatory investigation, legal consequences, loss of investor confidence |
| | Project Execution Risk | Schedule delays, cost overruns, engineering quality defects | Significant reduction in ROI (Return on Investment), tight cash flow |
| | Financial & Operational Risk | Cash flow rupture, interest rate risk, high customer concentration | Debt crisis, bankruptcy reorganization |

**Case Studies of Major Investment Failures and the Fatal Impact of ESG Risks.** Theoretical risk exposition is far less profound than the lessons from real cases. Reviewing major investment failures of the past decade clearly reveals that ESG factors often play the role of a «fatal blow».

Case 1. WeWork IPO Failure – A Classic Lesson in Governance (G) Risk

The rise and fall of shared office company WeWork is one of the most thought-provoking investment cases in recent years. Its business model was once seen as an innovator disrupting traditional offices, attracting huge investments including from the SoftBank Vision Fund, with its valuation once reaching $47 billion. However, when it filed for an IPO in 2019, the market and analysts quickly saw through the massive governance risks beneath its glamorous surface. Key issues included: super-voting shares giving the founder absolute control, multiple related-party transactions involving the founder (e.g., leasing his personally owned properties to the company), a chaotic corporate governance structure, and a decision-making mechanism lacking checks and balances. These governance flaws led to distrust in its business model, questioning of its financial data, ultimately forcing the withdrawal of the IPO and a cliff-like drop in valuation to less than $8 billion. SoftBank's investment suffered huge losses exceeding $10 billion. This case proves that no matter how attractive the business model, poor corporate governance is enough to destroy the value of any huge investment.

Case 2. Stranded Assets of a European Energy Giant – A True Portrayal of Environmental (E) and Transition Risk

A major European energy group, based on optimistic predictions of future energy demand, invested globally in multiple large natural gas fields and liquefied natural gas (LNG) terminal projects. These projects had investment cycles of 20-30 years, with investments ranging from billions to tens of billions of dollars. However, the pace of the global energy transition accelerated far beyond the company's expectations. With the implementation of the Paris Agreement, the establishment of national carbon neutrality goals, and the rapid decline in the cost of renewable energy, long-term global demand expectations for fossil fuels were completely reversed. The company found that its heavily invested natural gas projects were likely to lose economic value before the end of their project lifespan due to global «decarbonization», becoming «stranded assets». According to its annual report disclosures, in response to the energy transition and re-evaluation of project prospects, the company incurred cumulative impairments and loss provisions of nearly $30 billion between 2020–2022, causing a huge impact on its financial condition. This case highlights the devastating financial consequences of ignoring environmental transition risks.

These cases eloquently demonstrate that ESG is no longer a «nice-to-have» ethical choice but a «bottom-line» requirement concerning investment survival. Investors must elevate ESG due diligence to the same level of importance as financial and legal due diligence.

**Table 2. Analysis of ESG Risk Factors in Major Investment Failure Cases**

| Case Name | Main Investor(s) | Investment Area | Initial Valuation/ Investment | Direct Manifestation of Failure | Core ESG Risk Factor(s) | Final Outcome & Loss |
|---|---|---|---|---|---|---|
| WeWork | SoftBank Vision Fund | Shared Office | $47B (Valuation) | IPO withdrawn, valuation plummeted | Governance (G) Risk: Related-party transactions, founder control, ineffective board oversight | Valuation fell below $8B, SoftBank loss >$10B |
| Eur. Energy Giant | Public Shareholders | Fossil Energy | Tens of Billions USD | Huge asset write-downs | Environmental (E) Risk: Accelerated energy transition policies, rising carbon costs, reversed demand expectations | ~$30B in asset write-downs, long-term stock price pressure |
| Tech Company A | Multinational Funds | Consumer Tech | $2B | Banned by host government | Social (S) Risk: Inadequate data security & privacy, raising national sovereignty concerns | Total investment loss, exited market |

Energy Industry: Transition Risk from Resource Endowment to Technological Endowment. The core risk for the traditional energy industry (oil, gas, coal) has completely shifted from the geological risk of «whether resources can be found» to the policy and technological risk of «whether it can cope with the energy transition» [7]. Policies such as carbon taxes, mandatory emission reductions, and green subsidies are fundamentally changing the industry's cost structure and competitive landscape. For the renewable energy industry (wind, solar, hydrogen), although it aligns with the low-carbon transition direction, it also faces new specific risks, such as supply security and price volatility of upstream raw materials like polysilicon and lithium, technical challenges of grid integration and consumption, and community relations issues during project development (e.g., noise and ecological impact of wind farms triggering local protests).

ESG's Mitigation Role: For traditional energy companies, proactively embracing ESG means increasing investment in Carbon Capture, Utilization, and Storage (CCUS) technology and strategically increasing the proportion of renewable energy business to achieve a smooth transition of the asset portfolio and reduce overall transition risk. For new energy companies, excellent ESG management means fully communicating with local communities early in the project, establishing shared benefit mechanisms, and obtaining a «social license to operate», thereby ensuring smooth project progression and long-term stable operation.

Manufacturing: Supply Chain Resilience and Circular Economy. The core risks faced by manufacturing are the disruption and cost risks brought about by global supply chain restructuring [8]. The pandemic and geopolitics have exposed the vulnerability of long, overly concentrated supply chains. Simultaneously, demands from consumers and regulators for environmental sustainability are increasing, such as the EU's upcoming Carbon Border Adjustment Mechanism (CBAM), which will tax imported products with high carbon footprints.

ESG's Mitigation Role: Integrating ESG principles into supply chain management (building a «green supply chain») is an effective risk mitigation strategy. This includes: conducting ESG screening and assessment of suppliers, prioritizing partners that meet environmental and labor standards; investing in circular economy models, such as using recycled materials and designing recyclable products, to reduce dependence on virgin resources and the impact of price fluctuations; promoting energy saving and consumption reduction in production processes, directly reducing operating costs and avoiding future carbon tax risks. This not only enhances supply chain resilience but also creates new cost advantages and brand value.

Technology Industry: Data Ethics and Regulatory Compliance. The core risks for the technology industry, especially platform and AI companies handling large amounts of user data, are increasingly stringent data security and privacy regulations (such as China's Cybersecurity Law, the EU's General Data Protection Regulation GDPR) and algorithm ethics risks [9–11]. Once red lines are crossed, the consequences can be astronomical fines, business restrictions, or even forced breakups.

ESG's Mitigation Role: Incorporating data security and algorithm ethics into the core scope of corporate governance (G) is the most important risk mitigation measure for technology companies. Establishing an independent data ethics committee, conducting fairness audits of algorithms, implementing «Privacy by Design» principles, and maintaining transparent communication with regulators – these ESG practices can help tech companies anticipate compliance requirements, win user trust, thereby obtaining long-term operational licenses and ensuring sustainable returns on investment.

In summary, ESG is no longer an independent, add-on risk module but an underlying logic permeating all industry risks. It provides a systematic framework to help investors and enterprises:

Identify «Gray Rhino» risks: Systematically identify those high-probability, high-impact long-term risks often ignored by traditional analysis (e.g., climate transition risk).

Quantify risks: Attempt to financialize non-financial risks by developing ESG scoring systems and risk premium models, incorporating them into investment valuation models.

Develop mitigation strategies: Shift from passive compliance to active management, turning ESG factors into strategic tools for optimizing operations, innovating products, and building moats.

**Conclusions.** The analysis in this paper reveals that the connotation and extension of contemporary corporate investment risk have undergone profound evolution. A three-dimensional risk network woven from macro geopolitical,

meso industry technological, and micro ESG factors is now determining the success or failure of investments. Cases like WeWork warn us that ignoring ESG, particularly governance risk, leads to catastrophic consequences. Viewed by industry, specific risks in energy, manufacturing, technology, and other fields are changing rapidly. Their commonality is that ESG is no longer just a source of risk but also the core methodology for responding to and mitigating these risks.

Looking forward, corporate investment risk management must undergo dual innovation in concept and tools. Conceptually, it must shift from short-term financial performance orientation to long-term value creation and sustainable development orientation, deeply integrating ESG into the entire investment decision-making process. In terms of tools, it is necessary to actively develop and adopt more advanced risk quantification models, such as Monte Carlo simulations integrating ESG factors for holistic project risk assessment; utilizing big data and AI technology for real-time monitoring and early warning of supply chain ESG risks.

Ultimately, successful enterprises will be the pioneers capable of transforming the «defensive» strategy of ESG risk management (avoiding losses) into an «offensive» strategy (creating value). Through responsible investment and management, they can not only more effectively avoid risks such as stranded assets and reputational damage but also discover new business opportunities, enhance customer and employee loyalty, and reduce capital costs, thereby building certain, sustainable competitive advantages in an uncertain era. The paradigm shift in investment management has already occurred. Embracing this change rather than resisting it is a mandatory question for all market participants.

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## СУЧАСНИЙ СТАН ТА ВИКЛИКИ КОРПОРАТИВНИХ ІНВЕСТИЦІЙНИХ РИЗИКІВ

***Анотація***

*Корпоративне інвестиційне прийняття рішень зазнає фундаментальної трансформації, оскільки традиційні моделі ризику не враховують складних глобальних викликів сьогодення. У статті досліджується, як фактори ESG (екологічні,*

*соціальні та управлінські) стали критично важливими детермінантами успіху інвестицій в епоху геополітичної нестабільності, технологічних змін та кліматичного переходу. На основі детального аналізу масштабних інвестиційних невдач, включаючи крах WeWork через проблеми корпоративного управління та енергетичні компанії, що стикнулися із замороженими активами, ми демонструємо, як ризики ESG безпосередньо руйнують акціонерну вартість. Наше дослідження визначає специфічні для галузей ризики: енергетичні компанії стикаються з перехідними ризиками, виробники – з уразливостями ланцюгів поставок, а технологічні компанії – з проблемами управління даними. Результати показують, що інтеграція ESG забезпечує не лише пом'якшення ризиків, а й конкурентну перевагу, даючи компаніям змогу адаптуватися до регуляторних змін, підвищувати операційну стійкість та отримувати доступ до сталого фінансування. Ми пропонуємо комплексну рамку для впровадження факторів ESG у всі інвестиційні процеси, поєднуючи кількісне моделювання з якісною оцінкою. Цей підхід дає змогу інвесторам краще оцінювати раніше зовнішні ризики та виявляти нові можливості в умовах зеленого переходу. Зроблено висновок, що комплексна інтеграція ESG більше не є опціональною, а essentialною для довгострокового створення вартості, вимагаючи оновлення систем управління ризиками, спеціалізованої експертизи та культурної трансформації усередині організацій. У міру посилення глобальних регуляцій у сфері сталого розвитку та еволюції очікувань стейкхолдерів компанії, які проактивно впроваджують інвестиційні стратегії, ураховують ESG, отримають стійкі конкурентні переваги на дедалі більш прозорих ринках.*

***Ключові слова:*** *інвестиційний ризик, управління ризиками, ESG, кейс-стаді, галузевий ризик, пом'якшення ризиків.*

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