

REGULATORY UNCERTAINTY IN CLIMATE REPORTING AND ITS IMPACT ON THE QUALITY OF FINANCIAL AND NON-FINANCIAL DISCLOSURES

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A B S T R A C T	K E Y W O R D S
<p>This article analyzes the impact of regulatory uncertainty in climate reporting on the quality of companies' financial and non-financial disclosures. It examines the main sources of uncertainty, including differences in national implementation of international standards, political and legal disputes, and transition periods for implementing new requirements. Based on theoretical approaches to the economics of disclosure and a review of modern empirical research, it is shown that high regulatory uncertainty reduces the comparability and verifiability of climate disclosures, increases the subjectivity of assessments, and weakens the link between non-financial information and financial performance.</p>	<p>Climate reporting, regulatory uncertainty, non-financial disclosures, financial reporting, ESG, quality of disclosures, climate risks, international reporting standards.</p>

Introduction

The scientific novelty of the article lies in identifying and systematizing the regulatory uncertainty of climate reporting as a key factor reducing the quality and comparability of financial and non-financial disclosures, as well as in substantiating its role in weakening the connection between climate information and the financial performance of companies.

In recent years, climate reporting has ceased to be an optional practice for large companies and has become a key element of corporate reporting, used by investors and other stakeholders to assess risks and the strategic resilience of businesses. The increasing impact of climate change on the economy, shareholders, and financial stability has prompted regulators and international standard-setting organizations to develop comprehensive climate disclosure requirements that integrate with financial reporting and corporate governance strategies. One prominent example is the IFRS S2 Climate-related standard. Disclosures issued by the International Sustainability Standards Board (ISSB), which requires companies to disclose information about climate-related risks and opportunities affecting their prospects, including short-, medium- and long-term effects on cash flows and access to capital [1].

International efforts to standardize climate reporting are based on the Task Force recommendations. Force on Climate-related Financial Disclosures (TCFD), which formed the basis for the development of new standards, including IFRS S2. These recommendations aim to disclose climate risks in the context of governance, strategy, risk assessment, and performance metrics, allowing investors to better understand the impact of climate factors on companies' business models [2].

The regulatory environment for climate reporting is creating significant institutional shifts across jurisdictions. For example, within the European Union, the Corporate Sustainability Reporting Directive (CSRD) significantly expands the requirements for comparable and verifiable environmental and climate data in corporate reporting. Similarly, in other countries, disclosure standards must be integrated with national accounting and regulatory systems, leading to differences in implementation practices and increasing institutional uncertainty during the adaptation phases. Companies often struggle with the readiness to implement such standards, as confirmed by studies on the degree of "readiness" of organizations to adopt IFRS S2-compliant disclosures even before its mandatory introduction [3].

The transition from voluntary requirements (such as GRI, SASB, or TCFD) to mandatory legal norms with specific legal consequences for non-compliance poses a particular challenge. This transition is accompanied by changes in regulatory frameworks, ambiguity in requirements, uncertainty in implementation timelines, and enforcement practices, creating the phenomenon of regulatory uncertainty in climate reporting. Such uncertainty could theoretically influence the behavior of company management, auditors, and investors, reducing the quality of disclosures or, conversely, stimulating strategic manipulation of information to enhance reputation.

Moreover, academic research emphasizes the need for high-quality ESG and climate disclosures to reduce information asymmetries, enhance investor confidence, and improve capital market efficiency. For example, a literature review shows that high-quality ESG disclosures help reduce information asymmetries and increase company value, but also face challenges such as inconsistent standards and greenwashing in the absence of consistent requirements [4].

Thus, regulatory uncertainty in climate reporting is becoming an important research topic, as it impacts the comparability, reliability, and strategic value of disclosed information. In the context of dynamically evolving norms and standards, understanding the mechanisms by which this uncertainty impacts the quality of financial and non-financial disclosures is becoming increasingly important for both corporate reporting theory and the practice of regulatory policy and audit.

Regulatory uncertainty in the context of climate reporting is defined as a lack of complete clarity and stability regarding the content, implementation timing, and enforcement mechanisms of climate disclosure requirements. It arises when companies and other market participants cannot predict with sufficient certainty future regulatory obligations, measurement standards, and the extent of liability for non-compliance.

In the area of climate reporting, regulatory uncertainty is institutional in nature and is driven by a number of factors. Firstly, it is associated with the dynamic development of international standards and recommendations, including the transition from voluntary frameworks (TCFD, GRI, SASB) to mandatory sustainability standards (IFRS S1/S2, CSRD), accompanied by frequent clarifications, adjustments, and transitional provisions. Secondly, a significant source of uncertainty is the asymmetric and uneven implementation of requirements at the national level, leading to differences in the scope, depth, and methodology of disclosures across jurisdictions.

Third, regulatory uncertainty is exacerbated by political and legal factors, including changes in government policy, legal challenges to climate regulations, and uncertainties in enforcement. These factors are particularly prevalent in jurisdictions where the climate agenda is a subject of public and political debate. Fourth, uncertainty arises from methodological difficulties in measuring climate risks, including assessing greenhouse gas emissions, physical and transition risks, and their financial consequences, which complicates the development of uniform and verifiable indicators.

Consequently, the regulatory uncertainty of climate reporting is formed at the intersection of normative, institutional and methodological factors and has a systemic impact on the behavior of companies, the quality of disclosed information and its comparability over time and between economic entities.

Regulatory uncertainty influences the quality of corporate disclosures through a number of interrelated theoretical mechanisms. First and foremost, uncertainty increases information asymmetry between management and external users of financial statements, as there are no clear guidelines regarding the volume, format, and methodology of disclosed information. According to disclosure theory, under such conditions, companies tend to limit the completeness and detail of disclosures, which reduces their informativeness and comparability [5].

The second key mechanism is strategic (selective) disclosure. In the absence of clear regulatory requirements, firms are able to selectively disclose non-financial information, emphasizing favorable aspects and minimizing the disclosure of potentially negative climate risks. This effect is widely discussed in the literature on ESG disclosures and "greenwashing," which emphasizes the role of institutional uncertainty as a driver of opportunistic management behavior [6].

The third mechanism is the increasing subjectivity of valuation assumptions. Climate risks and their financial implications require the use of forecast models and professional judgment. With insufficiently formalized regulatory requirements, the variability of the assumptions applied increases, reducing the reliability and verifiability of disclosures and complicating the audit of non-financial information [7].

Finally, regulatory uncertainty increases the transactional and organizational costs of disclosure. Companies are forced to invest in data collection, developing internal methodologies, and adapting reporting systems without confidence in the sustainability of regulatory requirements. This is particularly characteristic during transition periods for the implementation of new sustainability standards and can lead to delays and fragmented disclosures [8].

Table 1 - Theoretical mechanisms of the influence of regulatory uncertainty on the quality of disclosures

Mechanism	Theoretical content	Impact on the quality of disclosures
Information asymmetry	The lack of clear requirements reduces the transparency of information	Reducing comparability and completeness of disclosures
Strategic disclosure	Selective presentation of ESG information	Rise of greenwashing, shifting focus to narratives
Subjectivity of assessments	Growing role of professional judgments and forecasts	Low verifiability and reliability of data
Rising costs of disclosure	High costs of data collection and processing	Incomplete and delayed disclosures

Empirical literature confirms that regulatory and institutional uncertainty has a significant impact on the quality of financial and non-financial disclosures. Research examining the impact of uncertainty on corporate behavior has shown that during periods of heightened uncertainty, companies exhibit a more cautious disclosure strategy, reduced comparability of financial statements, and an increased role for value judgments. Specifically, in the work "The impact of uncertainty shocks" it was found that uncertainty has a negative impact on investment activity and the quality of information signals provided to the market [9].

The results of the study "The economics of disclosure and financial reporting regulation" indicate that instability and ambiguity of regulatory requirements weaken incentives for full and timely disclosure of information, which leads to a decrease in the quality of financial reporting [5]. Similar conclusions were obtained in the work "Regulatory uncertainty and financial reporting quality", where it is shown that high regulatory uncertainty is associated with greater discretion in management assessments and less informativeness of profits [10].

In the context of non-financial and ESG disclosures, empirical research also highlights the importance of institutional certainty. For example, in the study "Scrutiny, norms, and selective disclosure" found that in the absence of strict and unambiguous requirements, companies tend to selectively disclose information on sustainable development, focusing on the favorable aspects and minimizing the disclosure of negative effects [6]. The work "Mandatory CSR and sustainability reporting" demonstrates that the transition from voluntary to mandatory requirements leads to an increase in the volume and comparability of disclosures, but significant variability in data quality remains during transition periods [8].

A separate group of empirical studies analyzes the relationship between climate risks, non-financial disclosures, and financial performance. In the paper "Climate change, firm performance, and investor surprises" showed that exposure to climate risks has a statistically significant impact on the financial performance of companies, but the degree to which these risks are reflected in financial statements varies significantly [11]. The results of the study "Do investors care about carbon risk?" confirm that capital markets are taking carbon risks into account, but the effectiveness of such accounting depends on the quality and transparency of climate disclosures [12].

Taken together, the empirical evidence suggests that regulatory uncertainty reduces the quality of climate and ESG disclosures, widens the gap between non-financial and financial information, and limits the usefulness of reporting for investors and other users. These findings underscore the need for consistent and harmonized implementation of climate reporting standards.

An analysis of theoretical approaches and empirical studies suggests that regulatory uncertainty in climate reporting has a complex and predominantly negative impact on the quality of both financial and non-financial disclosures. Unstable and ambiguous requirements reduce the comparability of information across companies and reporting periods, limiting the analytical value of disclosures for investors and other users of the reports.

Regulatory uncertainty contributes to the increasing subjectivity of valuation assumptions and an increased reliance on qualitative, narrative disclosures at the expense of quantitative indicators, particularly in assessing climate risks and their financial implications. This weakens the link between non-financial information and financial indicators, complicating the integration of climate factors into financial analysis and company valuation.

Moreover, uncertainty increases strategic and selective disclosure, increasing the risks of formal compliance without actually enhancing transparency. Taken together, these effects lead to increased information asymmetry and reduced trust in climate and ESG reporting. Thus, the quality of disclosures depends significantly not only on the availability of standards but also on the degree of regulatory certainty, the consistency of their implementation, and the effectiveness of enforcement.

Reducing the negative effects of regulatory uncertainty in climate reporting requires coordinated action by regulators, companies, and the professional community. Above all, a key focus is increasing regulatory certainty and comparability of requirements, which requires the coordinated implementation of international climate reporting standards and minimizing discrepancies in national implementation. Clearly defining deadlines, transition periods, and disclosure priorities allows companies to build sustainable internal reporting processes.

The second important area is the methodological clarification of requirements for measuring climate risks and indicators, including the disclosure of greenhouse gas emissions, scenario analysis, and assessment of the financial impacts of climate factors. The development of unified methodological guidelines and industry benchmarks reduces the subjectivity of assessments and improves the verifiability of disclosed information.

From a practical perspective, companies are encouraged to integrate climate information into their financial management and risk management systems, ensuring consistency between non-financial and financial disclosures. Strengthening the role of internal control and independent verification of non-financial information, including the development of sustainability audit standards, contributes to increased user confidence in financial statements.

Finally, a crucial element is the development of data infrastructure and professional competencies, including specialist training, investment in information systems, and the use of digital tools for collecting and analyzing climate data. This will improve the quality of disclosures even in the context of ongoing institutional change.

Table 2 - Recommendations for reducing the impact of regulatory uncertainty on the quality of disclosures

Impact level	Key recommendation	Expected effect
Regulatory	Coordinated implementation of international standards and clear transition periods	Improving the comparability and predictability of requirements
Methodological	Development of detailed guidelines and industry methodologies	Reducing the subjectivity of assessments, increasing the verifiability of data
Corporate	Integrating climate risks into financial planning and reporting	Strengthening the link between non-financial and financial disclosures
Auditor	Developing standards for independent verification of climate information	Increasing user confidence in reporting
Infrastructure	Investments in data systems and professional development	Sustainable improvement in the quality of disclosures

Consequently, regulatory uncertainty in climate reporting reduces the effectiveness of disclosures: it increases the subjectivity of assessments, reduces comparability, and can negatively impact the quality of financial reporting. However, structured international standards (IFRS S1/S2), coordinated national oversight, and investment in methodologies and competencies can significantly mitigate these effects. Experience shows that not only the formulation of standards is important, but also the consistency of their implementation and the existence of clear verification and audit procedures.

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