

FROM DISCLOSURE TO DECARBONIZATION: ARE CLIMATE TRANSITION PLANS FIT FOR PURPOSE?

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Abstract: *Climate transition plans have become an essential component of the sustainable finance agenda and recent climate-related regulatory frameworks, including the Corporate Sustainability Reporting Directive (CSRD), the European Sustainability Reporting Standards (ESRS), and Climate-related Disclosures developed by the International Sustainability Standards Board (ISSB). This article examines whether current transition planning frameworks are fit for purpose in supporting real-economy decarbonization and the broader energy transition. Article applies a qualitative research approach based on comparative regulatory analysis and a review of sustainable finance literature. The findings indicate that while transition plans improve transparency and strengthen climate governance, important limitations remain regarding implementation credibility, comparability of ESG data, and regulatory complexity. The paper also highlights growing concerns regarding regulatory burden and operational applicability within the evolving sustainable finance framework. A key conclusion is that climate transition plans remain essential instruments for supporting long-term decarbonization, although their effectiveness depends on improving implementation mechanisms, comparability, and regulatory usability.*

Key words: *climate transition, regulatory landscape, sustainability, ESG, transition risk*

JEL codes: *Q56, Q54, G38, G32*

1. Introduction

The transition to a low-carbon economy has become one of the most stirring debates of the past years. Achieving the objectives of the Paris Agreement and capping global warming at 1.5°C requires not only technological advancement, but also reallocation of capital toward more sustainable economic activities long-term. In that respect, financial markets & organizations are expected to play a pro-active role in enabling the broader energy transition through investment decisions, risk management, and strategic planning.

Over the past decade, climate-related disclosures have rapidly evolved as a key mechanism for integrating sustainability matters into financial and corporate governance. Regulatory frameworks coming from the Task Force on Climate-related Financial Disclosures

(TCFD), the International Sustainability Standards Board (ISSB), and the European Commission have considerably expanded expectations regarding the disclosure of climate-related risks, targets, and transition strategies. Within this evolving regulatory landscape, climate transition plans have emerged as a central roadmaps intended to guide firms and financial institutions toward net-zero alignment by outlining how they plan to adapt their business models, operations, and investment activities to achieve long-term decarbonization goals. Recent regulatory developments increasingly position transition plans as an integral component of corporate strategy and sustainability governance (Zukas, 2025). At the same time, policymakers and regulators expect such plans to improve market transparency, increase accountability for their actions, and facilitate the efficient allocation of capital toward low-carbon activities.

However, despite their growing prominence, valid questions remain regarding the actual effectiveness of climate transition plans. Existing frameworks frequently prioritize disclosure obligations while providing limited mechanisms to ensure implementation, comparability, or measurable decarbonization outcomes. As a result, concerns have emerged that transition plans may, in practice, function more as reporting burden than as drivers of substantive economic transformation. Furthermore, significant divergence persists in the methodologies, assumptions, and metrics used across organizations, complicating the assessment of credibility and limiting comparability across sectors and jurisdictions.

The academic literature similarly highlights tensions between sustainability disclosure and real-world environmental impact. Research by Zacharias Sautner and co-authors demonstrates that institutional investors increasingly perceive climate change as a material financial risk, particularly in relation to transition risk and long-term portfolio exposure (Krueger, Sautner, & Starks, 2020). At the same time, prior studies identify substantial inconsistencies in ESG ratings and climate-related metrics (Berg, Kölbel, & Rigobon, 2022), raising concerns regarding comparability, credibility, and decision-usefulness of sustainability disclosures. These findings suggest that disclosure-based regulation alone may not be sufficient to support meaningful changes in corporate behaviour and capital allocation. Such concerns are particularly relevant in the context of the energy transition, where ineffective or non-credible transition planning may contribute to capital misallocation, delayed decarbonization, and elevated transition risks for both firms and financial institutions.

The purpose of this article is to examine whether climate transition plans are fit for purpose as instruments supporting real-economy decarbonization. The paper develops a

qualitative evaluation framework for assessing the credibility, transparency, governance, and implementation potential of transition plans within the broader sustainable finance landscape.

2. Methodology and Data

The article combines a qualitative and conceptual research to assess whether climate transition plans are effective tools for supporting real-economy decarbonization within the broader framework of sustainable finance regulation.

The methodological approach is primarily based on comparative regulatory analysis combined with a review of the emerging academic literature on sustainable finance, climate-related disclosure, and transition risk. This approach is appropriate given the evolving nature of transition planning frameworks and the current gap in terms of standardization of methodologies across jurisdictions and sectors.

In addition, the article acknowledges the current limitations associated with the availability, consistency, and comparability of climate-related and ESG data. Despite the rapid expansion of sustainability disclosure requirements, sustainability reporting continues to suffer from significant methodological fragmentation and limited comparability across firms and sectors. Prior research demonstrates that sustainability disclosures frequently vary in scope, metrics, reporting methodologies, and levels of detail, reducing their comparability and decision-usefulness for investors and researchers (Cardoni et al., 2019). These challenges are further amplified in the context of climate transition planning, where forward-looking assumptions, scenario analyses, and transition metrics remain insufficiently standardized. Consequently, conducting scientifically robust comparative analyses of transition plan effectiveness remains difficult at the current stage of regulatory and market development. On the contrary to the above, a qualitative and conceptual analytical framework is considered more appropriate for evaluating the structural strengths and limitations of emerging transition planning attempts.

The analysis base on three categories of sources. First, the paper examines major international and European regulatory frameworks that increasingly shape expectations regarding climate transition planning. These include the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), the climate disclosure requirements introduced by the International Sustainability Standards Board (ISSB) under IFRS S2, and the sustainability reporting obligations established by the European Commission through the Corporate Sustainability Reporting Directive (CSRD) and the European Sustainability

Reporting Standards (ESRS). In addition, the paper considers climate scenario frameworks developed by the Network for Greening the Financial System (NGFS), offering insights for financial institutions and supervisors.

Above mentioned regulatory frameworks are presented in Table 1 below.

Tab. 1 Comparative Overview of Major Climate Disclosure and Transition Planning Frameworks

Framework / Regulation	Primary Objective	Scope	Transition Plan Requirements	Main Limitations
TCFD	Improve climate-related financial disclosure	Global voluntary framework	Recommends disclosure of transition plans and climate strategy	Limited enforceability
ISSB / IFRS S2	Standardize investor-oriented sustainability disclosures	International baseline	Requires disclosure of climate targets and transition risks	Primarily disclosure-focused
CSRD / ESRS E1	Integrate sustainability into corporate reporting	EU companies and listed entities	Explicit transition plan disclosures	High complexity and implementation burden
NGFS	Support climate risk assessment and financial stability	Central banks and supervisors	Climate scenarios for transition analysis	Scenario uncertainty
SBTi	Validate science-based climate targets	Corporate voluntary initiative	Assessment of transition target credibility	Limited legal enforceability

Source: Own Study

Second, the study incorporates voices from the academic literature on climate finance, ESG, and transition risk. Existing research spotlights significant inconsistencies in sustainability metrics and climate-related disclosures, raising concerns regarding comparability and reliability (Berg, Kölbel, & Rigobon, 2022). Furthermore, prior studies emphasize the growing importance of climate transition risk for institutional investors and financial stability (Krueger, Sautner, & Starks, 2020). These academic contributions provide the theoretical foundation for evaluating whether transition plans can effectively bridge the gap between disclosure and tangible decarbonization outcomes.

To structure the analysis, the article develops an analytical evaluation framework consisting of eight components which reflect critical dimensions of effective transition planning identified in both regulatory frameworks and academic literature.

Framework is presented in Table 2 below.

Tab. 2 Analytical Framework for Assessing the Credibility and Effectiveness of Climate Transition Plans

Component	Definition	Key Indicators	Assessment Criteria
Strategic Alignment	Alignment of the transition plan with long-term climate goals	Net-zero targets, Scope 1–3 coverage, sector pathways	Degree of alignment with 1.5°C pathways
Target Specificity	Clarity and granularity of emissions reduction targets	Interim targets, KPIs, baseline years	Measurability and time-bound targets
Financial Integration	Integration into financial decision-making	CAPEX/OPEX alignment, low-carbon investment	Linkage to financial strategy
Governance & Accountability	Oversight and implementation responsibility	Board oversight, executive incentives	Strength of governance mechanisms
Transparency & Disclosure Quality	Completeness and comparability of disclosure	Methodology disclosure, scenario analysis	Transparency and comparability
Credibility of Assumptions	Realism of transition assumptions	Offsets, technology assumptions	Scientific credibility
Implementation Track Record	Evidence of actual progress	Historical emissions reduction	Consistency between targets and action
Contribution to Decarbonization	Real-economy climate impact	Absolute emissions reduction	Demonstrated decarbonization outcomes

Source: Own Study

The framework is not intended to produce a quantitative score or ranking system. Instead, it serves as a conceptual tool for identifying structural strengths and weaknesses in existing transition planning approaches which will allow to reach conclusion and recommendations.

Third, the article highlights selected market practices and supervisory expectations relating to transition planning. This consist of publicly available transition planning guidance, examples of corporate and financial institution transition strategies, and emerging discussions

regarding greenwashing, accountability, and implementation credibility within sustainable finance markets.

By combining regulatory analysis with tangible examples from climate-related scientific research, the methodology aims to provide a critical assessment of whether current climate transition planning frameworks are capable of moving from being regulatory burden only, to support real-economy decarbonization.

3. Results and discussion

3.1 Climate Transition Plans as an Emerging Governance Mechanism

Climate transition plans are evolving from voluntary sustainability commitments seen purely as strategic tool to attract potential investors, into formal governance measures embedded within the broader sustainability regulatory space. In recent years, regulators, standard setters, and supervisory authorities have shifted from a narrow focus on climate-related disclosure toward a broader expectation that firms and financial institutions demonstrate credible pathways for aligning business activities with long-term decarbonization objectives.

This development is particularly visible within the European regulatory framework. Through the Corporate Sustainability Reporting Directive (CSRD) and the European Sustainability Reporting Standards (ESRS), the European Commission requires companies to disclose not only climate-related risks& metrics, but also climate transition strategies, implementation measures towards climate neutrality objectives (direct requirement under ESRS E1 standard). Consequently, transition planning is no longer seen only as a voluntary sustainability exercise, but rather as part of broader corporate governance and strategic decision-making which in practice pushes organizations into embedding transition plans into their core strategic objectives.

A similar intention can be observed at the international level through the standards developed by the International Sustainability Standards Board (ISSB). IFRS S2 Climate-related Disclosures introduced more structured requirements concerning climate resilience, transition risks, scenario analysis, and climate-related targets. Importantly, recent ISSB developments increasingly emphasize interoperability, connectivity between financial and sustainability reporting, and decision-usefulness for investors. The ISSB framework emphasizes a growing regulatory expectation that climate-related information should be integrated into mainstream financial reporting and tied to long-term company goals. In this regard, transition plans are

becoming a key link between sustainability commitments and financial market decision-making.

At the same time, the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) continue to be a standard-setter in terms of governance, strategy, and climate risk management. Transition plans increasingly function as tools through which organizations communicate their readiness for transition risks, including regulatory uncertainties, technological disruption, carbon pricing, and evolving investor expectations. As noted by recent sustainable finance literature, transition planning is therefore gradually evolving into a form of climate governance that extends beyond disclosure and influences broader questions of corporate accountability and strategic alignment (Zukas, 2025).

However, despite this increasing regulatory complexity, the practical role of transition plans remains debated. While regulatory initiatives have significantly improved transparency regarding climate-related impacts, risks and strategic opportunities, it remains unclear whether current frameworks are capable of driving substantive organizational transformation and real-economy decarbonization and whether companies would see climate transition plans as a strategic opportunity or rather as another compliance burden. This tension becomes particularly visible when examining the growing gap between regulatory requirements and implementation capacity.

As illustrated in Table 1, recent climate disclosure frameworks clearly expect that organizations disclose climate-related transition strategies and long-term decarbonization pathways. Across both European and international regulatory initiatives, transition plans are being positioned as intending to streamline transparency, investor decision-making and the alignment of economic activities with climate objectives. At the same time, however, significant discrepancies remain regarding implementation requirements, enforcement mechanisms, and the degree to which disclosed transition plans are linked to operational and financial decision-making. Consequently, an important question emerges as to whether current transition planning frameworks can drive major organizational transformation or whether they primarily function as disclosure-oriented reporting mechanisms.

3.2 The Disclosure–Implementation Gap

Although climate transition plans are increasingly presented as key components supporting successful energy transition, current regulatory frameworks remain heavily focused on disclosure obligations rather than enforceable implementation mechanisms. As a result, a

significant gap persists between the communication of climate ambitions and the achievement of tangible decarbonization outcomes.

Both the CSRD framework and the standards developed by the International Sustainability Standards Board (ISSB) substantially expand the quantity and sophistication of climate-related information disclosed by firms. Companies are increasingly expected to report transition targets, scenario analyses, governance structures, climate-related risks, and implementation strategies. In particular, ESRS E1 under the CSRD introduces more granular information requirement regarding transition planning, including the disclosure of climate targets, climate adaptation, decarbonization actions, financial resources, and alignment with climate neutrality objectives. Similarly, IFRS S2 targets climate resilience, transition risks, and the integration of climate-related considerations into broader enterprise strategy and financial reporting. Since the legislation has been published, practitioners and market participants have raised growing concerns & practical pain points regarding data availability & reporting complexity, especially in the light of third-party assurance in case of CSRD.

Additionally, while these frameworks, despite their complexity, noticeably improve transparency, they provide comparatively limited mechanisms for assessing whether disclosed transition plans are operationally credible or financially achievable. In practice, regulatory requirements primarily evaluate the existence and quality of disclosure rather than the effectiveness of implementation. Consequently, firms may formally comply with reporting requirement without taking tangible steps towards changing their business models, operational structures, or investment strategies.

One of the key limitations concerns the insufficient integration between transition plans and corporate financial decision-making. One of the main concerns is also the fact, often decarbonization goals remain a strategic enhancement rather than core financial drivers.

Although many companies communicate long-term net-zero commitments, transition plans frequently remain weakly linked to capital expenditure strategies, financing decisions, remuneration policies, and operational transformation processes. As a result, climate ambitions may coexist with investment activities that remain contradictory to long-term decarbonization objectives, especially in carbon intensive sectors, where climate transition plans are still too generic and lack detailed strategy towards structural adjustments, technological transformation, and long-term capital reallocation.

The disclosure-oriented nature of current frameworks may also create a space for minimum compliance and greenwashing. Under increasing regulatory and investor pressure,

firms were forced to introduce ambitious climate targets and transition goals, without clear and concrete operational measures. Moreover, as global political sentiment has become highly polarized and geographically fragmented, and investors' appetite towards sustainability is noticeably cooler in recent years, transition plans risk being labelled as reputational pledge instead of a tool capable of driving tangible economic transformation.

Academic literature increasingly supports these concerns. Existing studies demonstrate that sustainability disclosures often suffer from limited comparability, methodological fragmentation, and inconsistencies across reporting frameworks and ESG metrics (Cardoni et al., 2019; Berg, Kölbel, & Rigobon, 2022). Furthermore, prior research by Zacharias Sautner and co-authors highlights that while investors increasingly recognize climate transition risks as financially material, they face substantial uncertainty regarding the quality and comparability of climate-related information (Krueger, Sautner, & Starks, 2020).

The disclosure–implementation gap therefore represents a significant constraint for the broader sustainable finance agenda. If transition plans fail to influence actual investment decisions, operational strategies, and capital allocation processes, their capacity to accelerate the energy transition may remain limited.

3.3 Comparability and Data Limitations in Transition Planning

A further challenge affecting the credibility of climate transition plans concerns the limited comparability and reliability of sustainability-related data and transition metrics. Despite significant progress in sustainability reporting regulation, climate-related disclosures continue to face substantial methodological fragmentation, lack of consistency in terms of assumptions, and heterogeneous reporting practices across firms, sectors, and jurisdictions.

One of the primary difficulties arises from the absence of universally standardized methodologies for measuring transition performance and climate alignment. In particular, the coexistence of multiple reporting frameworks and ESG methodologies contributes to significant differences in how climate-related risks and transition strategies are interpreted and disclosed. Research by Cardoni et al. (2019) demonstrates that sustainability reporting frequently lacks sufficient comparability even within the same industry, as firms apply differing methodologies, scopes, and disclosure practices. Similarly, Berg, Kölbel, and Rigobon (2022) identify substantial divergence across ESG ratings providers, driven by inconsistencies in measurement, weighting, and indicator selection. Such divergence reduces the reliability and decision-usefulness of sustainability information for investors, regulators, and researchers

alike. At the same time, literature reflects the increasing demand among investors for decision-useful sustainability information - institutional investors increasingly incorporate ESG-related disclosures into investment analysis, risk assessment, and long-term strategic decision-making (Amel-Zadeh & Serafeim, 2018). Increasing evidence suggests that financial markets are progressively pricing carbon-related risks into investment decisions (Bolton & Kacperczyk, 2021) which is also an essential component of climate transition planning. In this context, lack of standardized requirements and the differences in methodological interpretations contribute to investor uncertainty which may undermine the perceived consistency and credibility of climate transition plans.

Additionally, transition planning inevitably relies on assumptions regarding future technological development, carbon pricing trajectories, regulatory changes, energy market transformation, and the future availability of low-carbon infrastructure. Moreover, many transition pathways rely on uncertain offsetting strategies or technologies that remain commercially underdeveloped. As a result, assessing the credibility and feasibility of transition plans remains methodologically difficult and highly dependent on subjective assumptions which might be seen as too hypothetical for the practitioners.

Data limitations are particularly significant with respect to Scope 3 emissions and financed emissions within the financial sector. In many cases, organizations continue to face substantial challenges regarding data availability, estimation methodologies, and value-chain transparency. Consequently, reported transition metrics may vary significantly depending on methodological choices and underlying assumptions, making comparability across institutions nearly impossible. From a purely scientific perspective, these limitations create significant barrier for robust comparative analyses of transition plan effectiveness. The absence of sufficiently granular datasets restricts the ability to evaluate whether disclosed transition strategies translate into measurable decarbonization outcomes over time. This can be an explanation as to why much of the current literature on transition planning remains conceptual, regulatory, or qualitative in nature.

At the same time, the growing regulatory emphasis on harmonization and interoperability may gradually reduce some of these limitations. Recent ISSB developments increasingly shift the focus to enhance connection between sustainability disclosures and financial reporting, while European efforts under the CSRD aim to strengthen standardization and auditability of climate-related information. Nevertheless, significant uncertainty remains regarding whether

greater disclosure harmonization alone will be sufficient to address deeper structural issues related to implementation credibility & overall standardization.

3.4 Regulatory Complexity and the Risk of Overregulation

While recent regulatory developments aim to strengthen climate-related transparency and transition planning, they also raise growing concerns regarding regulatory complexity and proportionality sustainable finance framework.

The rapid expansion of sustainability-related regulation in recent years has resulted in an increasingly complex reporting landscape. This was closely associated with growing investor appetite for sustainability-related information, however, as discussed in this paper, such priorities remain subject to evolving market conditions and geopolitical dynamics. Nevertheless, European companies and financial institutions are now expected to navigate multiple overlapping frameworks, including the CSRD, ESRS, SFDR, EU Taxonomy, and the Corporate Sustainability Due Diligence Directive (CSDDD), while simultaneously responding to evolving international standards such as IFRS S2. Multiple reporting frameworks coexisting together has contributed to growing concerns regarding reporting burden, operational costs, legal & interpretation uncertainty, and implementation challenges. In response, the European Commission introduced the Omnibus simplification package, aimed at streamlining sustainability reporting requirements and improving regulatory coherence.

This evolving regulatory discussion highlights already visible structural tension within sustainability regulatory space. On the one hand, regulators increasingly seek more granular, standardized, and forward-looking climate disclosures capable of supporting investor decision-making and accelerating decarbonization. On the other, excessive reporting requirements may shift organizational attention from tangible and measurable transition attempts toward increasingly compliance-oriented reporting regime.

The regulatory shift towards simplification initiatives therefore implies that the long-term credibility of transition planning may depend not only on expanding disclosure requirements, but also on achieving an appropriate balance between transparency, comparability, operational feasibility, and strategic usability. From this perspective, simplification should not necessarily be interpreted as a weakening of climate ambition, but rather as part of a broader effort to improve the practical effectiveness and feasibility of sustainable finance regulation.

4. Conclusions

Climate transition plans have become a standard component of the sustainable finance agenda and are increasingly emphasized within both European and international regulatory frameworks. Through initiatives such as the CSRD, ESRS E1, and IFRS S2, transition planning continues to be positioned as a mechanism for aligning corporate strategy, financial decision-making, and climate-related disclosure with long-term decarbonization objectives. In this context, transition plans mark an important shift from traditional sustainability reporting toward broader forms of climate governance and strategic accountability.

At the same time, this article identifies several limitations affecting the credibility of current transition planning frameworks. Despite substantial progress in climate-related disclosure, important gaps remain between reported transition ambitions and implementation capacity. Existing frameworks continue to prioritize disclosure in terms of reporting regime, while comparability, financial integration, and operational credibility remain insufficiently developed. Furthermore, still inconsistent ESG metrics, fragmented methodologies, and growing reporting complexity continue to create implementation challenges for both firms and investors. Moreover, there is an increasing divergence between expanding sustainability disclosure obligations and regulatory feasibility. Recent simplification discussions within the European Union demonstrate growing recognition that sustainable finance regulation must focus on balancing transparency and comparability with operational usability and proportionality. Excessive regulatory complexity may risk shifting organizational focus toward compliance-oriented reporting rather than actual transition execution.

Nonetheless, described limitations do not undermine the importance of climate transition plans. Conversely, transition planning remains a critical component of efforts towards improving and maintaining transparency, reducing transition risks, supporting capital allocation, and facilitating real-economy decarbonization within the broader energy transition. The long-term success rate of transition plans in terms of their effectiveness therefore depends on improving implementation credibility & comparability, and ensuring that regulatory frameworks support not only disclosure, but also meaningful and measurable organizational transformation.

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