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A TCCM INTEGRATED CONCEPTUAL FRAMEWORK FOR THE TRANSITION TO MANDATORY SUSTAINABILITY REPORTING UNDER IFRS S1 AND S2

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Abstract

Purpose – IFRS S1 and S2 delineate a new era of global sustainability reporting; however, a comprehensive body of literature remains absent. This study aims to address this gap by synthesizing fragmented pre-ISSB evidence to develop a predictive conceptual framework that guides the transition from voluntary to mandatory disclosure. **Design/methodology/approach -** A systematic literature review was conducted in accordance with the PRISMA protocol. The TCCM framework was utilised to organise the analysis, thereby ensuring methodological rigor and enabling the integration of theoretical, contextual, and methodological insights. **Findings-** The review uncovers conceptual and empirical patterns from previous studies and shows how they shape the emerging IFRS S1 and S2 framework. This framework emphasises key drivers, challenges, and opportunities as the world moves toward mandatory sustainability reporting. **Implications-** The framework enhances theoretical understanding by consolidating disparate pre-ISSB research into a unified basis for IFRS S1 and S2. It provides practical guidance to preparers, auditors, and investors regarding the complexities involved in transitioning to obligatory sustainability reporting. For policymakers and regulators, it underscores the importance of establishing robust enforcement and assurance mechanisms to ensure credible global implementation. **Originality-** This paper's unique contribution is systematically applying the TCCM framework to synthesize integrative conceptual frameworks connecting fragmented pre-ISSB evidence with IFRS S1 and S2 requirements. It offers a foundational basis for future research and serves as a guiding framework for regulators, practitioners, and scholars involved with the new standards.

Keywords: ESG materiality; Sustainability-Related Financial Disclosures (SRFD); IFRS S1 and IFRS S2; Integrated Reporting.

1. INTRODUCTION

In recent years, the scope of corporate reporting has expanded significantly beyond traditional financial disclosures to encompass sustainability-related information. This shift reflects a growing understanding that environmental, social, and governance (ESG) factors substantially impact a company's risk profile, capital costs, and long-term value generation (Zhou *et al.,* 2017).

Stakeholders such as investors, regulators, and others are increasingly seeking forward-looking, decision-useful disclosures that articulate the financial consequences of sustainability-related risks and opportunities. As a result, frameworks like the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD) have been established as key instruments to improve transparency and accountability in corporate reporting.

Despite these advancements, the voluntary nature of most sustainability reporting frameworks has resulted in considerable variability in disclosure practices. Research demonstrates notable inconsistencies concerning the scope, quality, and comparability of sustainability disclosures across firms and regions, often driven by managerial discretion rather than standardized guidelines (Dey, 2020; Velte, 2022). Although integrated reporting and similar frameworks have been associated with increased investor confidence and market valuation in certain contexts, empirical evidence remains fragmented and inconclusive. Such heterogeneity limits stakeholders' ability to reliably assess and compare corporate sustainability performance (Matemane and Wentzel, 2019).

The establishment of the International Sustainability Standards Board (ISSB) in 2021 and the release of IFRS S1 (General Requirements for Disclosure of Sustainability-related Financial Information) and IFRS S2 (Climate-related Disclosures) represent a significant development in the landscape of sustainability reporting. These standards integrate and expand upon existing frameworks, incorporating sustainability disclosures within a globally consistent and mandatory reporting structure. By requiring the disclosure of sustainability-related financial information in conjunction with traditional financial statements, IFRS S1 and S2 seek to enhance the comparability, reliability, and decision-usefulness of such information for participants in capital markets. This shift from voluntary to mandatory disclosure is anticipated to have substantial implications for corporate transparency, market efficiency, and overall firm performance.

Notwithstanding the significance of this development, a noteworthy research gap persists. Although a considerable portion of the scholarly literature investigates voluntary sustainability disclosures, there remains an absence of a cohesive conceptual framework capable of synthesising the dispersed pre-ISSB evidence and effectively predicting and guiding the transition to the new mandatory regulations under IFRS S1 and S2.

The majority of existing research is isolated, concentrating on specific frameworks such as SASB, TCFD, or integrated reporting, often confined to particular jurisdictions. Consequently, various theoretical perspectives—including signalling theory, stakeholder theory, legitimacy theory, and institutional theory—are fragmented without a unifying structure (Velte, 2022).

Furthermore, the variability in research methodologies—such as disparities in disclosure metrics, assurance practices, and performance indicators—complicates the synthesis process. This study addresses this challenge by utilising the TCCM framework to both consolidate existing findings and create a model that promotes the adoption of more rigorous, causally driven approaches in future research.

Such efforts augment the reliability and policy relevance of the findings in the post-IFRS S1 and S2 era. (Permatasari and Narsa, 2022). Importantly, sectoral, national, and regulatory differences have yet to be systematically integrated into a predictive model to facilitate understanding of the transition towards mandatory sustainability reporting.

This research addresses existing gaps by conducting a systematic literature review (SLR) of empirical investigations that examine the relationship between sustainability-related financial disclosures and corporate performance, with particular emphasis on IFRS S1 and S2. To enhance transparency and reproducibility, the review adheres to the PRISMA protocol for the identification, screening, and selection of relevant studies.

The analysis employs the Theory–Context–Characteristics–Methodology (TCCM) framework, which synthesizes theoretical viewpoints, contextual variables, disclosure attributes, and methodological trends. By incorporating evidence from both pre-ISSB frameworks and early research on IFRS S1/S2, the review bridges voluntary and mandatory reporting practices, thereby establishing a comprehensive evidence base that captures both foundational developments and emerging trends.

In light of these considerations, this review intends to:

1. Identify and synthesize scholarly works that link disclosures aligned with IFRS S1/S2 or similar standards to financial outcomes at both the firm and market levels.
2. Chart the theoretical foundations and contextual factors that influence these relationships.
3. Evaluate the methodological approaches employed.
4. Summarize the findings utilizing the TCCM framework to elucidate areas of consensus, divergence, and gaps in the current literature.
5. To propose a conceptual framework from transition from voluntary to mandatory SRFD.

2. RESEARCH GAP AND NOVELTY

Although sustainability-related disclosures have been extensively examined within voluntary and semi-mandatory frameworks, the existing corpus of literature remains conceptually fragmented and methodologically inconsistent. Prior reviews often concentrate on individual frameworks—such as integrated reporting (Zhou *et al.,* 2017), SASB (Consolandi et al., 2022), or TCFD (Baboukardos, 2018)—in isolation, thereby impeding comprehensive theoretical integration across diverse reporting regimes. Furthermore, few studies have systematically compared the impacts of various disclosure approaches on firm and market outcomes, and even fewer have investigated the potential influence of transitioning to mandatory IFRS S1/S2 standards on these relationships.

This study uniquely addresses a specific gap by presenting a TCCM-based conceptual framework that directly connects the best available evidence from voluntary and semi-mandatory disclosure regimes with the requirements of the new IFRS S1 and S2 standards. By synthesising insights from multiple frameworks, it consolidates fragmented knowledge into a cohesive structure, uncovers ongoing theoretical mechanisms, and examines how transitioning to a mandatory regime could impact firms and markets.

Importantly, this predictive approach compensates for the lack of empirical data on IFRS S1 and S2 by considering it a vital part of a developing field. Consequently, the study advances scholarly discussion and offers practical, evidence-based guidance for regulators, standard setters, and market participants engaged in the global move toward mandatory sustainability reporting.

Furthermore, the research enhances methodological rigor by implementing the PRISMA protocol to ensure transparent study selection and the TCCM framework to facilitate systematic analysis. This integrated approach enables a multi-dimensional synthesis, encompassing theoretical foundations, contextual differences, disclosure attributes, and methodological trends. Consequently, the review advances beyond simple aggregation to establish a focused research agenda that addresses existing gaps in theory, methodology, and practical application.

The transition from voluntary to compulsory sustainability disclosures under IFRS S1 and S2 represents one of the most significant developments in corporate reporting since the adoption of IFRS standards. This transition influences considerably more than mere compliance; it has the potential to affect capital allocation, enhance investor confidence, and influence the overall operation of global financial markets. The integration of sustainability information into the primary financial reporting framework aims to mitigate informational asymmetries and reporting gaps that have historically constrained the decision-making utility of ESG data (Velte, 2022).

The principal contribution of this study, from a theoretical standpoint, lies in integrating diverse fragmented concepts—such as signalling theory, stakeholder theory, legitimacy theory, and institutional theory—into a cohesive explanation of the mechanisms and reasons why sustainability disclosures impact corporate performance within a mandated reporting context. This comprehensive methodology addresses the necessity for more robust theoretical frameworks capable of elucidating variations across different markets and evolving stakeholder anticipations.

The study provides practical insights for regulatory authorities and standard-setting bodies involved in the global implementation of IFRS S1 and S2. It delineates factors that influence the efficacy of mandatory sustainability disclosures, thereby guiding strategic approaches towards implementation, transition allowances, and assurance standards. For investors and analysts, the findings offer valuable evidence on the impact of these disclosures on financial metrics such as the cost of capital, relevance of valuation, and market liquidity, thereby facilitating more informed investment decisions.

Additionally, companies can derive benefit from comprehending how their disclosure practices affect market valuation, stakeholder confidence, and competitive advantage. By situating IFRS S1 and S2 within the broader context of sustainability reporting development, the study provides a significant and innovative contribution. It delineates a clear pathway for advancing theoretical frameworks, refining practical applications, and shaping future research regulations.

3. METHODOLOGY

This study integrates the PRISMA protocol with the TCCM framework to enhance transparency and analytical depth. This combined methodology systematically facilitates the identification, screening, and synthesis of literature concerning sustainability-related financial disclosures under IFRS S1 and S2 (and comparable pre-ISSB frameworks), with a focus on their relationship to firm and market financial outcomes.

PRISMA Protocol:

The PRISMA protocol was employed to guarantee that the literature search and selection process conformed to the highest standards of systematic review methodology, thereby enhancing reproducibility and mitigating selection bias. The search was conducted exclusively within the Scopus database to ensure replicability and comprehensive coverage within the fields of business, management, and finance. The temporal scope was restricted to the years 2003 through 2025 using the keywords "International Sustainability Standards Board" OR "ISSB" OR "IFRS S1" OR "IFRS S2" OR "TCFD" OR "Task Force on Climate-related Financial Disclosures" OR "SASB" OR "Sustainability Accounting Standards Board" OR "Integrated Reporting" OR "climate-related disclosure*" OR "sustainability-related financial disclosure*" AND "firm performance" OR "financial performance" OR "corporate performance" OR "business performance" OR "cost of capital" OR "value relevance" OR "market liquidity" OR "information asymmetry" OR "analyst forecast*" OR "stock return*" OR "price efficiency".

The search strategy was meticulously formulated to identify an extensive body of literature pertinent to the IFRS S1 and S2 standards, considering their recent official adoption. As a result, the search produced a limited number of studies solely and directly addressing the new ISSB standards. To mitigate this limitation, a purposive sampling approach was employed, selecting the final 50 articles that include empirical evidence from critical antecedent frameworks- namely GRI, SASB, TCFD, and Integrated Reporting- which are integral to the development of IFRS S1 and S2 by the ISSB. By incorporating these pre-ISSB studies, the review establishes a solid, evidence-based foundation to anticipate the potential effects, challenges, and opportunities associated with the new mandatory regime. This methodology is crucial for analyzing an evolving domain where direct empirical data on the new standards remains limited.

Table I: Inclusion and Exclusion Criteria

Criterion	Inclusion	Exclusion
Database and Timeframe	Scopus; 2014–2025	—
Subject Area	Business, Management and Accounting (218)	Economics (114), Social Sciences (74), Environmental Science (54), Energy (30), Computer Science (17), Engineering (15), Decision Science (15), Arts and Humanities (9), Multidisciplinary (4), Earth and Planetary Science (4), Psychology (2), Medicine (2), Mathematics (2), Agricultural and Biological Sciences (1)
Document Type	Articles (167)	Book Chapters (23), Reviews (11), Conference Papers (8), Books (5), Conference Reviews (2), Notes (1), Erratum (1)
Language	English (166)	Korean (1)
Source Type	Journal (163)	Book Series (3)
Publication Stage	Final (148)	Articles in Press (15)

TCCM Framework:

The TCCM framework was employed to systematically synthesize and integrate the literature across four dimensions: Theory, Context, Characteristics, and Methodology. This methodology facilitated mapping the theoretical foundations, contextual variability, disclosure features, and methodological strategies across various studies. The combined application of PRISMA and TCCM constitutes a dual-level contribution: PRISMA guarantees a transparent and reproducible dataset, while TCCM is employed not merely to summarize existing studies but to systematically develop the new conceptual model that constitutes the primary contribution of this paper. This framework connects disclosure features, theoretical mechanisms, and firm- and market-level outcomes, offering predictive insights that are indispensable for guiding both academic inquiry and practical applications within this emerging field.

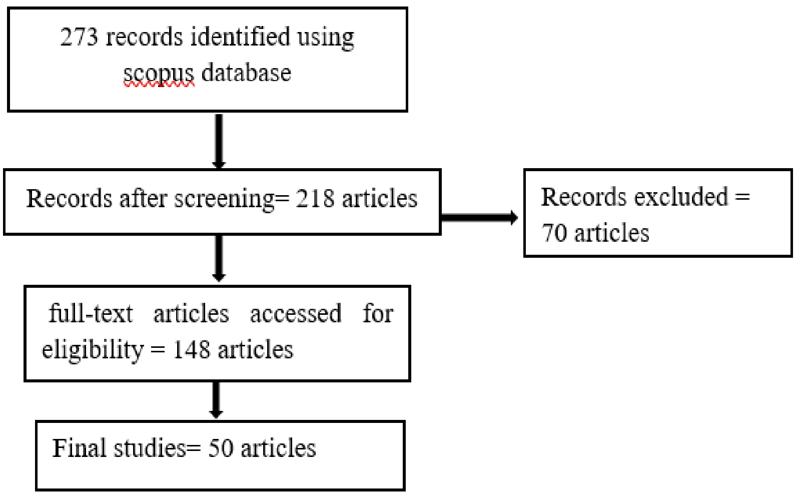

Figure 1: PRISMA Chart

Source: Author’s own compilation

4. FINDINGS

4.1 Overview of selected studies

Table II: Overview of Selected Studies

Variable	Count	Key studies
Total studies	50	—
IFRS S1/S2 aligned	10	Barth *et al.* (2017); Zhou *et al.* (2017); Consolandi *et al.* (2022);Baboukardos (2018); Albertini (2019); Tlili *et al.* (2019); Wulf *et al.* (2014); Vena *et al.* (2020); Dey (2020); Buallay *et al.* (2021)
(pre-ISSB) GRI/SASB/TCFD/IR only	40	Beretta *et al.* (2019); Melloni *et al.* (2016); Landau *et al.* (2020); Albertini (2019); Wulf *et al.* (2014); Hsiao and Kelly (2018); Garcia-Sanchez and Noguera-Gamez (2018); Grassmann *et al.* (2019)
Geographic region: Africa	14	Barth *et al.* (2017); Matemane and Wentzel (2019); Adegboyegun *et al.* (2020); Tlili *et al.* (2019); Conway (2019)
Geographic region: Europe	26	Consolandi *et al.* (2022); Albertini (2019); Wulf *et al.* (2014); Landau *et al.* (2020); Tiscini *et al.* (2022); Grassmann *et al.* (2019)
Geographic region: Asia-Pacific (incl. Middle East)	7	Buallay *et al.* (2021); Hsiao and Kelly (2018); Dey (2020); Kurniawati (2022)
Geographic region: North America	3	Garanina and Dumay (2017); Lee *et al.* (2018)
Sector focus: ESG materiality (HIGH)	30	Barth *et al.* (2017); Consolandi *et al.* (2022); Landau *et al.* (2020); Matemane and Wentzel (2019)
Sector focus: ESG materiality (LOW)	20	Melloni *et al.* (2016); Lee *et al.* (2018); Beretta *et al.* (2019)

This review consolidates a final sample of fifty peer-reviewed articles published between 2003 and 2024, identified through the PRISMA protocol. The sample encompasses both the pre-ISSB voluntary/semi-mandatory regimes (such as GRI, SASB, TCFD, and Integrated Reporting) and an emerging body of studies explicitly linked to IFRS S1/S2. Prior to the establishment of the ISSB, research primarily focused on issues related to disclosure quality, assurance, governance, and performance linkages (Albertini, 2019; Beretta et al., 2019; Melloni et al., 2016). Conversely, the literature following the ISSB's inception (comprising 20% of the sample, n = 10) adopts a perspective centred on financial materiality, demonstrating consistent associations between sustainability disclosures and outcomes in capital markets, including reductions in the cost of capital (Barth et al., 2017; Vena et al., 2020), firm valuation (Tlili et al., 2019), return premia (Consolandi et al., 2022), and enhanced liquidity (Buallay et al., 2021).

The evidence base exhibits a regional concentration. Africa (28%, n = 14), spearheaded by South Africa’s Johannesburg Stock Exchange (JSE), provides a natural experiment concerning mandatory integrated reporting, demonstrating notable valuation effects particularly in banking and sectors with high exposure (Tlili et al., 2019; Matemane and Wentzel, 2019). Europe constitutes the largest segment (n = 26), with Italy, Germany, and France conducting comparative analyses that encompass cultural, governance, and assurance dimensions (Grassmann et al., 2019; Vena et al., 2020). Additionally, Europe supplies the majority of research aligned with SASB and CDSB frameworks, investigating the relationship between disclosure materiality and market premiums (Consolandi et al., 2022; Tiscini et al., 2022). Conversely, the Asia-Pacific region and the Middle East (n = 7) primarily focus on voluntary adoption practices and corporate governance factors. North America (n = 3), despite being the origin of SASB, provides comparatively limited evidence, predominantly featuring sector-specific disclosures such as those within the airline industry (Lee et al., 2018). This uneven distribution prompts inquiries regarding the generalizability of the findings across diverse institutional settings. Although the existing evidence remains limited, the conceptual framework presented herein provides a valuable foundation for subsequent research. It offers a structured methodology to systematically investigate how variations in institutional environments, enforcement rigour, cultural norms, and sectoral exposures affect the relationship between sustainability disclosures and corporate outcomes. Sectorally, industries with high ESG materiality (60%, n = 30)—including banking, energy, extractives, and manufacturing—dominate, providing strong evidence of disclosure effects on valuation and risk pricing (Barth et al., 2017; Landau et al., 2020). However, low-materiality sectors (40%), such as technology, airlines, and services, remain underexplored, which limits understanding of disclosure impacts in diversified or lower-exposure contexts. Overall, this distribution exhibits three discernible patterns: (1) a temporal transition from legitimacy-driven voluntary disclosure studies to evidence aligned with IFRS that emphasises financial materiality; (2) a regional inclination towards Europe and South Africa, with comparatively limited representation in North America and Asia-Pacific; and (3) a sectoral concentration on banking and industries characterised by high ESG scores. These imbalances underscore the necessity for future research to employ causal identification methods across diverse regions and sectors to thoroughly investigate the enforcement, quality, and performance dimensions associated with the adoption of IFRS S1/S2.

4.2.1 Theory (T in TCCM)

Table III: Theoretical Lenses in TCCM Framework Mapping

Theory	No. of Studies	Key Insights	Gaps	Studies
Signalling theory	14	Enhanced and financially significant disclosures mitigate information asymmetry, resulting in reduced capital costs and increased relevance of the company's valuation.	Causal research designs aimed at differentiating authentic signals from superficial information within the framework of mandatory IFRS S1/S2; evaluation of post-adoption behavioral patterns.	Barth *et al.* (2017); Dey (2020); Grassmann *et al.* (2019); Buallay *et al.* (2021); Consolandi *et al.* (2022); Landau *et al.* (2020); Lee and Park (2018); Palea and Drogo (2020); Reimsbach *et al. (*2018); Vena *et al.* (2020); Zhou *et al.* (2017); Matemane and Wentzel (2019)
Legitimacy theory	2	Disclosure facilitates social acceptance; the narrative tone and brevity fluctuate with negative performance and exposure; concerns regarding legitimacy are prominent in sectors with high impact.	How legitimacy strategies adapt when minimum compliance reduces discretion; role of assurance as a legitimacy device under ISSB.	Melloni *et al.* (2016); Tiscini *et al.* (2022)
Stakeholder theory	19	Stakeholder prominence and board oversight broaden the scope and connectivity of governance, while governance structures influence the extent and focus of disclosures.	Translate multi-stakeholder claims into investor-cented materiality; reconcile stakeholder breadth with the focus of IFRS S1/S2.	Adegboyegun *et al.* (2020); Albertini (2019); Beretta *et al.* (2019); Ghani *et al.* (2018); Grassmann *et al.* (2019); Hsiao and Kelly (2018); Bernardi and Stark (2018); Garcia-Sanchez and Noguera-Gamez (2018); Kurniawati (2022); Landau *et al.* (2020); Mans-Kemp and Van der Lugt (2020); Songini *et al.* (2022); Permatasari and Narsa (2022); Stolowy and Paugam (2018); Tiscini *et al.* (2022); Wulf *et al.* (2014); Van Zijl

				et al. (2017); Velte (2022); Wahl *et al.* (2020).
Institutional theory	16	National culture, enforcement, and listing regulations influence the determination of adoption, format, and quality; compulsory frameworks such as the Johannesburg Stock Exchange (JSE) modify incentives and comparability.	Cross-country difference-in-differences analysis regarding the implementation of IFRS S1/S2; examination of mechanisms related to enforcement, quality, and performance; and assessment of heterogeneity based on legal origin.	Conway (2019); Frias-Aceituno *et al.* (2014); García-Sánchez and Noguera-Gámez (2017); Permatasari and Narsa (2021); García-Sanchez *et al.* (2013); Ghani *et al.* (2018); Owen (2013); Velte (2022); Stolowy and Paugam (2018); Wahl *et al.* (2020); Van Zijl *et al.* (2017).
Agency / proprietary cost	2	Visibility and competition influence the choice of disclosures, whereas proprietary costs limit the level of detail in industries characterized by sensitive information.	Limited research explores trade-offs of IFRS S1/S2 disclosures in the context of competitive sensitivity or proprietary-cost safe harbours designed to protect sensitive information.	Frias-Aceituno *et al.* (2014); Wulf *et al.* (2014)
Information economics / decision-usefulness	14	Decision-useful, reliable, and material disclosures improve analyst properties, liquidity, and pricing by establishing a connection to future cash flows.	Unified assessment of the quality of 'material' disclosures under IFRS S1/S2; external validity across markets and sectors.	Adegboyegun *et al.* (2020); Baboukardos (2018); Barth *et al.* (2017); Mans-Kemp and Van der Lugt (2020); Buallay *et al.* (2021); Dey (2020); Hsiao and Kelly (2018); Lee *et al.* (2018); Matemane and Wentzel (2019); Vena *et al.* (2020); Zhou *et al.* (2017); Reimsbach *et al.* (2018); Tlili *et al.* (2019).
Resource-based view / intellectual capital	3	Under mandatory integrated reporting (IR), disclosures concerning organizational and intellectual capital have been demonstrated to impact firm valuation.	Interactions between climate-risk metrics and intellectual capital in generating persistent performance; measurement standards for intellectual capital.	Albertini (2019); Tlili *et al.* (2019); Garanina and Dumay (2017).
Impression management / rhetoric	2	Firms vary in length, readability, and tone with performance; there is a risk of obfuscation where discretion is high.	Efficacy of assurance and materiality filters in mitigating obfuscation within compulsory regimes; automated standards for evaluating text quality.	Beretta *et al.* (2019); Melloni *et al.* (2016)
Materiality (SASB/ISSB lens)	5	Financially material topics (SASB) link to return premiums and bridge voluntary frameworks with IFRS S1/S2, which focus on investor materiality.	Harmonize SASB–ISSB topic maps; analyze spillovers on capital cost, liquidity, and forecasting globally samples.	Consolandi *et al.* (2022); Khan *et al.* (2021); Palea and Drogo (2020); Lee *et al.* (2018)

Source: Author's own work

Core financial theories: Signalling theory regards sustainability-related disclosure (SRD) as a means to mitigate information asymmetry and credibly communicate cash flow expectations. Consistent evidence indicates that credible signals reduce financing frictions and the cost of capital (Barth et al., 2017; Zhou et al., 2017). Complementing this, the decision-usefulness perspective emphasises attributes such as assurance, conciseness, and connectivity in disclosures, correlating high-quality reporting with enhanced analyst accuracy, diminished forecast dispersion, increased liquidity, and elevated firm valuation (Reimsbach et al., 2018; Zhou et al., 2017).

Socio-political perspectives: Legitimacy theory considers SRD as a response to societal and political pressures, often operationalised through textual features such as tone, readability, and completeness (Melloni et al., 2016; Tiscini et al., 2022). Stakeholder theory expands this perspective by proposing that the scope of disclosures is influenced by stakeholder salience and governance mechanisms, with evidence indicating that board composition and oversight play a significant role in determining disclosure connectivity (Beretta et al., 2019; Songini et al., 2022). Institutional theory further elucidates differences across countries, emphasising how enforcement, cultural norms, and listing regulations either constrain or facilitate disclosure strategies (García-Sánchez et al., 2013; Conway, 2019).

Supplementary lenses: Agency and proprietary-cost theories propose that disclosure is restricted due to competitive sensitivity, particularly in industries with intense rivalry (Frias-Aceituno et al., 2014; Wulf et al., 2014). Resource-based and intellectual capital perspectives suggest that integrated reporting of organisational capital enhances firm valuation, especially when mandatory regimes are in place (Tlili et al., 2019; Garanina and Dumay, 2017). Impression management and rhetorical strategies illustrate that firms employ obfuscation or an optimistic tone to shape perceptions, notably during downturns (Melloni et al., 2016; Beretta et al., 2019). Finally, an explicit materiality approach, increasingly harmonised with SASB and ISSB, highlights the investor-centric focus of IFRS S1/S2, linking financially material disclosures to valuation effects (Consolandi et al., 2022; Khan et al., 2021).

Operationalization patterns:

Studies conducted within voluntary or semi-mandatory contexts typically assess quality through disclosure indices, assurance, or materiality coverage, with outcomes associated with valuation, analyst accuracy, and liquidity (Barth et al., 2017; Reimsbach et al., 2018). In contrast, research on legitimacy and impression management relies on textual metrics such as length, readability, and tone, which reveal counter-cyclical narratives during periods of diminished performance (Melloni et al., 2016).

Stakeholder-oriented studies emphasise governance attributes, whereas proprietary-cost analyses underscore disclosure limitations in competitive sectors (Wulf et al., 2014). Under regimes aligned with IFRS S1/S2, research explicitly adopts the concept of financial materiality, linking disclosures to lower capital costs (Vena et al., 2020), greater value relevance (Tlili et al., 2019), and return premiums for SASB-material topics (Consolandi et al., 2022).

Convergences and divergences: Three insights emerge:

a) Signalling and legitimacy frequently coexist. Firms utilise SRD to secure advantages in the capital market while concurrently seeking social acceptance; credibility is affected by tone and conciseness (Melloni et al., 2016; Beretta et al., 2019).

b) Institutional constraints influence strategic outcomes. The Johannesburg Stock Exchange's (jse) mandatory Investor Relations (IR) regime restricts discretion, enhances comparability, and consequently reinforces both signalling and legitimacy mechanisms (Conway, 2019).

c) The distinction between stakeholder and investor materiality remains unresolved. The expansion of governance-driven disclosures often conflicts with the narrower investor focus of IFRS S1/S2, leading to uncertainty regarding the definition and application of materiality (Songini et al., 2022; Palea and Drogo, 2020).

Dominant lenses and gaps:

Stakeholder (n = 19) and institutional (n = 16) theories dominate; while signalling and decision-usefulness serve as the main financial channels (n = 14 each). However, integration across different perspectives remains uncommon: few studies combine signalling, legitimacy, and institutional theory into a single model that spans both voluntary and mandatory regimes. Additionally, materiality is not sufficiently conceptualised, with inconsistent operationalisation across regions and sectors. Finally, causal identification is limited: most studies depend on association tests, with only a few using regulatory shifts (e.g., South Africa) to differentiate perception from actual effects (Barth et al., 2017; Zhou et al., 2017).

4.2.2 Context (C in TCCM)

Table IV: Contextual settings in TCCM mapping

Region	No. of Studies	Key Findings	Gaps	studies
Africa (South Africa/JSE; Nigeria)	11	Mandatory IR (JSE) enhances comparability and refines market tests such as cost of capital, value relevance, and organizational capital. The banking and high-exposure sectors are prominent, with governance and assurance frequently standing out.	Expand scope beyond South Africa and banking sectors; implement a multi-country Difference-in-Differences (DiD) approach to distinguish between enforcement-quality-performance channels and voluntary regimes in the European Union and United States.	Barth *et al.* (2017); Conway (2019); Adegboyegun *et al.* (2020); Mans-Kemp and Van der Lugt (2020); Tlili *et al.* (2019); Matemane and Wentzel (2019).
Europe (EU/UK)	29	Connectivity, materiality, and governance analyses are predominant; SASB-style financial materiality is linked to return premia; effects on cost of capital are documented; progress has been achieved in environmental and circular economy disclosures under EU initiatives.	Harmonize materiality standards across regimes, promote growth in low-exposure sectors, and enhance the identification of how enforcement discrepancies influence market outcomes.	Consolandi *et al.* (2022); Vena *et al.* (2020); Tiscini *et al.* (2022); Wulf *et al.* (2014); Albertini (2019); Garcia-Sanchez and Noguera-Gamez (2018); Grassmann *et al.* (2019); Songini *et al.* (2022); Landau *et al.* (2020).
Asia-Pacific and Middle East	7	GCC banks show links between liquidity and value, affected by voluntary IR adoption, board influences, and investor views. In Indonesia and Malaysia, different factors and enforcement conditions varying across these nations.	Expand beyond finance through sector-diverse, IFRS-aligned evaluations that incorporate causal designs, including more comprehensive coverage of the Middle East and Asia.	Ghani *et al.* (2018); Hsiao and Kelly (2018); Dey (2020); Kurniawati (2022); Buallay *et al.* (2021).
North America	4	Sectoral SASB materiality, such as in the airline industry, pertains to returns and valuation. It primarily functions within a voluntary framework, with limited mandatory enforcement evidence.	Expand beyond sector-specific cases by linking SASB and IFRS S1/S2 outcomes like cost of capital and liquidity using causal research; enhance and broaden coverage.	Consolandi *et al.* (2022); Lee *et al.* (2018); Garanina and Dumay (2017).

Source: Author’s own work

The corpus comprises fifty papers that encompass regions such as Africa (South Africa/JSE, Nigeria), Europe (European Union, United Kingdom, Italy, Germany, France), Asia–Pacific, the Middle East (including Taiwan, Bangladesh, Malaysia, and the Gulf Cooperation Council), and North America, as detailed in Table IV.

A primary focus of this corpus is the heterogeneity in enforcement practices. In South Africa, the mandatory implementation of integrated reporting (IR) under the Johannesburg Stock Exchange (JSE) serves as a quasi-natural experiment, illustrating reductions in financing frictions, improvements in comparability, and the provision of clearer market signals (Barth et al., 2017; Conway, 2019; Tlili et al., 2019).

In contrast, voluntary reporting regimes in the European Union, United States, and Asia–Pacific yield less definitive conclusions. Nonetheless, the European Union's transition from the Non-Financial Reporting Directive (NFRD) to the Corporate Sustainability Reporting Directive (CSRD) is catalysing research on issues related to connectivity, governance, and environmental materiality, with implications for investor outcomes (Consolandi et al., 2022; Songini et al., 2022).

Evidence from the Asia–Pacific and Middle East underscores the drivers for voluntary adoption, board governance, and sector-specific ESG practices. GCC banks exhibit consistent correlations with liquidity and valuation (Buallay et al., 2021), whereas Indonesian and Malaysian research investigate firm-level factors influencing IR adoption (Hsiao and Kelly, 2018; Kurniawati, 2022).

North American data remains notably limited, primarily confined to sector-specific cases such as SASB materiality in the airline industry (Lee et al., 2018). This disparity underscores the fact that the jurisdictions where standards originate (e.g., SASB in the United States) are still underrepresented empirically, thereby raising concerns regarding their external validity on a global scale.

Sectorally, high ESG-material industries—banking, extractives, manufacturing, and heavy emitters—dominate (60%), reflecting investor interest in sectors with direct climate and governance exposure (Barth et al., 2017; Landau et al., 2020).

In contrast, low-materiality sectors (services, technology, aviation) are rarely studied, with a few exceptions involving SASB alignment (Lee et al., 2018; Consolandi et al., 2022). This sectoral bias limits insights into how IFRS S1/S2 will operate in service-based or innovation-led economies.

Three contextual patterns emerge.

Firstly, the strength of enforcement is of significant importance: mandatory regimes, such as those in South Africa and, forthcoming, the European Union, yield more definitive causal evidence than voluntary systems.

Secondly, regional disparities continue to persist: Europe and Africa are predominant, whereas North America and emerging Asian markets remain underexplored.

Thirdly, sectoral concentration constrains the generalizability of the findings, which predominantly originate from the banking sector and industries with high exposure.

4.2.3 Characteristics (C in TCCM)

Table V: Characteristics in TCCM mapping

Attribute	Outcome	Notes
Forward-looking (Objectives, scenario analysis, transition plan.	Lower cost of capital; higher value relevance	Investors respond more promptly to significant future-oriented information; moreover, this effect is more pronounced in markets where integrated reporting is mandated by law. (Barth *et al.*, 2017; Vena *et al.*, 2020)
Backward-looking (historical KPIs only)	Analyst forecast errors and dispersion mixed	Predictive content remains limited unless complemented by relevant material topics and assurance measures. (Reimsbach *et al.*, 2018; Zhou *et al.*, 2017)
Quantified KPIs (monetary/environmental)	Liquidity is higher; forecast error is lower	Auditable metrics enhance the quality of the information environment, particularly in sectors with high exposure. (Consolandi *et al.*, 2022; Zhou *et al.*, 2017)
Narrative only (policies, qualitative risk)	Limited immediate market response.	Enhances legitimacy; less effective pricing unless connected to material topics and KPIs. (Tiscini *et al.*, 2022; Melloni *et al.*, 2016)
External assurance (limited/reasonable)	Value relevance and investor weighting are higher.	Assurance enhances credibility and engages with the integrated format during investor processing. (Reimsbach *et al.*, 2018)
Big 4 provider (vs non-Big 4)	Lower (more favorable) cost of capital	Provider's reputation may reinforce the assurance signal, where assessed. (Reimsbach *et al.*, 2018)
SASB/ISSB-aligned material topics	Higher abnormal returns; valuation effects are greater.	Financially material topics are associated with return premia and pricing effects. (Consolandi *et al.*, 2022; Khan *et al.*, 2021; Palea and Drogo, 2020)
Connectivity of capitals (cross-references)	Liquidity and analyst coverage are higher.	Connectivity enhances the usefulness of decision-making and minimizes frictions. (Barth *et al.*, 2017; Grassmann *et al.*, 2019)
Conciseness/readability	Forecast properties higher	Excessive length may serve as obfuscation; comprehensible reports facilitate user understanding (Melloni *et al.*, 2016)
Completeness/balance (positive + negative)	Credibility higher; value relevance higher	Balanced reporting relates to stronger market responses. (Melloni *et al.*, 2016)
Location: Integrated report (vs stand-alone CSR)	Value relevance higher; liquidity higher	Integrated format concentrates material items; effects stronger under mandates. (Baboukardos 2018; Barth *et al.*, 2017)
Banking/climate-risk metrics (Scopes, financed emissions)	Liquidity higher; valuation links higher	Bank-centric environments demonstrate the valuation of risk-associated metrics. (Matemane and Wentzel, 2019; Dey, 2020; Buallay *et al.* 2021)
Environmental/circular-economy indicators	Returns higher	The document discusses advancements in environmental disclosure and pricing in the EU effects. (Tiscini *et al.* 2022)
Organizational/intellectual capital disclosure	High Value relevance	IC metrics are significant within mandatory IR settings. (Tlili *et al.*, 2019; Garanina and Dumay, 2017; Albertini, 2019)

Source: Author’s own work

Disclosure timing and content: Forward-looking disclosures—such as transition strategies and scenario analyses—are consistently associated with lower capital costs and increased value relevance, particularly within mandatory integrated reporting frameworks where managerial discretion is limited and comparability is enhanced (Vena et al., 2020; Barth et al., 2017). Conversely, historical key performance indicators (KPIs) alone exhibit mixed effects, improving analyst accuracy only when linked to financially material topics and credibly verified (Zhou et al., 2017; Reimsbach et al., 2018). This distinction highlights the significance of financial materiality in the adoption of IFRS S1/S2: disclosures that are narrative-only or backward-looking are seldom reflected in market valuation unless they are incorporated into material, auditable metrics.

Measurement and credibility: Mechanisms involve the use of quantifiable and auditable indicators—whether monetary or environmental—that consistently enhance liquidity and reduce forecast errors, particularly in sectors characterised by high ESG risks. Narrative disclosures, while often serving legitimacy purposes, tend to generate weaker market responses unless they are complemented by material Key Performance Indicators (KPIs) (Consolandi et al., 2022; Melloni et al., 2016; Tiscini et al., 2022). Assurance functions as a credibility enhancer: limited and reasonable assurance practices bolster investor confidence in Sustainability Reporting Disclosures (SRD), especially when incorporated into integrated reports (Reimsbach et al., 2018). These insights collectively underscore that credibility fundamentally relies on content that is measurable, verifiable, and assured, rather than rhetorical volume.

Materiality and connectivity: Disclosures that align with SASB and ISSB standards concerning financially material topics tend to attract valuation premiums and generate abnormal returns (Consolandi et al., 2022; Khan et al., 2021).

Robust interconnectedness across capitals—linking strategy, risks, and key performance indicators—further enhances liquidity and analyst coverage; conversely, fragmented or poorly connected reports diminish their decision-usefulness (Grassmann et al., 2019). Notably, excessive length or imbalance in disclosures poses a risk of obfuscation, thereby diluting credibility even when disclosures appear comprehensive (Melloni et al., 2016).

Format and sectoral focus: The structure is significant: integrated reports, particularly those mandated, furnish more decision-useful information than standalone CSR reports, thereby supporting the IFRS S1/S2 requirement for connectivity between financial and sustainability reporting (Barth et al., 2017). Sectoral concentration also exerts influence on outcomes. In banking and climate-risk contexts, disclosures regarding financed emissions and portfolio alignment have a direct impact on liquidity and valuation, highlighting the market relevance of transition and credit risks (Matemane and Wentzel, 2019; Buallay et al., 2021; Dey, 2020).

Research within the European Union further suggests that environmental and circular economy metrics have valuation potential when disclosure frameworks prioritise materiality and assurance (Tiscini et al., 2022). Additionally, studies concerning organisational and intellectual capital demonstrate valuation effects in regimes where integrated reporting mandates the disclosure of non-financial drivers (Tlili et al., 2019; Garanina and Dumay, 2017; Albertini, 2019).

Cross-study synthesis reveals three key evaluative insights: (a) Forward-looking, quantified, and assured disclosures are systematically valued by markets, whereas historical and narrative-only disclosures primarily serve symbolic or legitimacy functions. (b) The format and connectivity of disclosures influence their decision-usefulness: disclosures explicitly linking sustainability to strategy and cash flows enhance their relevance in capital markets, whereas disconnected reports reduce this relevance. (c) Sectoral calibration is essential; evidence is most robust in banking and high-emission industries, but less developed in low-ESG sectors, thereby limiting the generalisability of IFRS S1/S2 adoption across diverse economies.

4.2.4 Methodology (M in TCCM)

Table VI: Methodology approaches in TCCM mapping:

Method	No. of studies	Strengths	Weaknesses	studies
Archival panel regressions (price/returns; analyst; ICC)	33	Scalable with rich fixed effects, multi-proxy triangulation, and external validity across markets.	Omitted-variable and endogeneity risks; measurement error in the disclosure index.	Vena *et al.* (2020); Palea and Drogo (2020); Zhou *et al.* (2017); Bernardi and Stark (2018).
Event studies (report/assurance /materiality shocks)	8	High temporal resolution; clear market responses with risk adjustment and narrow windows.	Confounding or leakage risk; window sensitivity.	Khan *et al.* (2021); Consolandi *et al.* (2022); Lee *et al.* (2018).
Difference-in-Differences (staggered mandates)	4	Examines causal relationships under the parallel trends assumption; discusses policy implications; analyzes dynamic effects using event-time plots.	Requires credible controls; TWFE (two-way fixed effects) bias if staggered adoption is not addressed.	Barth *et al.* (2017); Vena *et al.* (2020); Conway (2019).
Regression Discontinuity (threshold rules)	1	Strong local identification near cut-offs; transparent diagnostics.	Local effects; bandwidth sensitivity; manipulation tests required.	Vena *et al.* (2020)
Microstructure (spreads, Amihud, zero-return days)	6	Direct test of information frictions; complements valuation tests.	Measurement error; high data demands; proxy choice affects inference.	Barth *et al.* (2017); Buallay *et al.* (2021); Dey (2020); Matemane and Wentzel (2019).
Textual/content analysis (readability, tone, balance; connectivity)	6	Evaluates the quality of disclosure beyond mere quantity; utilizes constructs aligned with theoretical frameworks.	Validity risk due to construct misalignment; dictionary dependence; language bias.	Melloni *et al.* (2016); Landau *et al.* (2020); Tiscini *et al.* (2022); Beretta *et al.* (2019); Albertini (2019)
Experiments / surveys (investor judgement)	2	Internal validity; isolates assurance/format mechanisms.	External validity; limited generalizability; hypothetical bias.	Hsiao and Kelly (2018); Reimsbach *et al.* (2018)
Value-relevance models (Ohlson-type price level)	3	Direct test of accounting relevance and integration effects.	Scale sensitivity; Outlier effects	Tlili *et al.* (2019); Garanina and Dumay (2017)
Risk-adjusted returns / portfolio sorts	4	Analyse asset-pricing effects of financial materiality.	Factor model dependence; turnover/rebalancing sensitivity.	Consolandi *et al.* (2022); Khan *et al.* (2021); Palea and Drogo (2020); Lee *et al.* (2018)
Analyst-forecast models (accuracy/ dispersion/coverage)	4	Analyse environemntal related disclosures	Coverage bias; broker heterogeneity.	Zhou *et al.* (2017); Hsiao and Kelly (2018); Bernardi and Stark (2018); Frias-Aceituno *et al.* (2014); Garcia-Sanchez and Noguera-Gamez (2018).
Endogeneity corrections (Instrumental Variables/selection /Porpensity Score Matching/entropy balancing)	5	Addresses selection and reverse causality in disclosure/assurance choice.	Instrument validity; functional-form risks.	Vena *et al.* (2020); Consolandi *et al.* (2022); Wulf *et al.* (2014); Frias-Aceituno *et al.* (2014); Garcia-Sanchez and Noguera-Gamez (2018).

Source: Author’s own work

Dominant Approaches:

The empirical corpus predominantly utilises archival methodologies that relate disclosure quality to capital-market outcomes and characteristics of the information environment. Most investigations employ panel regressions incorporating firm and period fixed effects, clustered errors, and multiple outcome proxies to ensure robustness (Zhou et al., 2017; Bernardi and Stark, 2018). These models frequently evaluate valuation relevance, implied cost of capital, and analyst forecast properties, often augmented with liquidity and microstructure proxies such as bid–ask spreads and illiquidity indices to account for trading frictions (Barth et al., 2017). While this archival approach facilitates comparability across studies, it also uncovers a methodological uniformity that constrains causal inference. Nevertheless, by incorporating diverse theoretical perspectives and contextual factors, our TCCM framework endorses the advancement of more robust quasi-experimental studies, such as staggered Difference-in-Differences. These are crucial for progressing beyond mere correlations and establishing more definitive causal inferences concerning the impact of IFRS S1 and S2 adoption.

Textual and content-based designs:

Research involve a growing approach that evaluates disclosure quality through textual analysis—assessing conciseness, readability, tone, and connectivity across different regions—and by constructing composite indices of integrated reporting quality (Melloni et al., 2016; Barth et al., 2017). These indices operationalise <IR> principles and facilitate panel testing; however, reliance on bespoke indices restricts replication and comparability across countries. Importantly, these methodologies highlight the influence of rhetorical and structural features on the credibility of sustainability disclosures, complementing purely quantitative analyses.

Experimental and survey methodologies:

A limited but significant series of studies employs experiments and investor surveys to investigate how assurance type, scope, and reporting format influence portfolio decisions (Reimsbach et al., 2018). These methodologies yield more robust causal evidence compared to archival techniques, particularly in relation to credibility and assurance mechanisms. Nonetheless, their infrequent application results in the predominance of market-based conclusions that are primarily correlational in nature.

Throughout the corpus, several methodological strengths enhance the credibility of the findings. Many studies adopt multi-proxy triangulation, modelling valuation, liquidity, and analyst outcomes collectively to capture complementary capital-market channels (Zhou et al., 2017; Barth et al., 2017). The development of structured disclosure indices—incorporating dimensions such as materiality, connectivity, and assurance scope—provides transparent and replicable measures of reporting quality that align with <IR> principles (Melloni et al., 2016; Barth et al., 2017). Moreover, studies frequently implement robust econometric methodologies, employing firm and period fixed effects, clustered standard errors, and extensive sensitivity analyses across diverse specifications to strengthen inference and reduce concerns regarding omitted variables (Zhou et al., 2017; Barth et al., 2017). Collectively, these practices establish a rigorous methodological foundation that underpins the reliability of market-based evidence concerning sustainability disclosures.

Cross-study synthesis:

Overall, current methodological practices establish robust correlations but weak causal claims. To advance, IFRS S1/S2 scholarship requires (i) multi-country causal designs, such as staggered Difference-in-Differences across regulatory adoptions; (ii) more detailed market microstructure data to capture trading frictions; (iii) standardised disclosure metrics to facilitate replication and comparability; and (iv) Enhanced econometric controls to address endogeneity. The conceptual framework constitutes an essential foundation for forthcoming research, offering a structured methodology to associate disclosure attributes with theoretical mechanisms and contextual moderators, thereby facilitating more rigorous causal inferences. Such measures would elevate the evidence from merely descriptive associations to policy-relevant causal inferences concerning the cost of capital, liquidity, and valuation impacts of sustainability disclosures.

5. CONCEPTUAL FRAMEWORK FOR THE TRANSITION FROM VOLUNTARY TO MANDATORY SRFD

This study develops a conceptual framework that traces the transition of sustainability-related financial disclosure (SRFD) from voluntary and semi-mandatory regimes (GRI, SASB, TCFD, <IR>) to the mandatory adoption of IFRS S1 and S2, and examines how this shift alters the mechanisms through which SRFD influences corporate outcomes. The framework includes four main theoretical perspectives from the literature. Signalling theory emphasises that financially material, forward-looking, and assured disclosures act as credible signals of firm quality, reducing information asymmetry and lowering the cost of capital (Barth et al., 2017). Legitimacy theory indicates that transparent, comprehensive, and balanced disclosures help firms maintain their social licence to operate and lessen reputational risks faced in societal and political scrutiny (Melloni et al., 2016). Stakeholder theory underscores that disclosures responding to significant stakeholder demands strengthen relational capital, improve investment efficiency, and foster long-term trust (Albertini, 2019). Finally, institutional theory explains how regulatory, normative, and cultural influences shape the adoption, comparability, and quality of disclosures, thereby impacting their market and organisational effects (Garanina and Dumay, 2017).

Building upon these perspectives, the framework conceptualises disclosure attributes—forward-looking orientation, measurable KPIs, external assurance, and governance integration—as essential inputs that activate the theoretical mechanisms. These attributes generate two interconnected categories of outcomes. Capital-market outcomes include increased value relevance, reduced cost of capital, enhanced liquidity, and improved analyst forecast accuracy, reflecting investor perceptions and the valuation of credible disclosures (Consolandi et al., 2022; Khan et al., 2021). Real-economy outcomes encompass improved resource allocation, stronger organisational capabilities, and deeper stakeholder relationships, capturing the broader economic impacts of enhanced reporting quality (Matemane and Wentzel, 2019).

The extent and direction of these effects are contingent upon contextual moderators such as enforcement levels across jurisdictions, sector-specific ESG materiality, and the maturity of capital markets (Barth et al., 2017; Lee et al., 2018). Significantly, the transition to IFRS S1 and S2 is anticipated to recalibrate these mechanisms by enhancing the credibility, comparability, and investor focus of SRFD, consequently improving signalling effectiveness and institutional legitimacy. In this process, the framework extends previous research by consolidating dispersive evidence into a cohesive model that links disclosure features, theoretical mechanisms, contextual moderators, and two categories of outcomes. Furthermore, it provides a systematic methodology for future research to investigate the influence of mandatory IFRS-based reporting on the financial and economic impacts of sustainability disclosure.

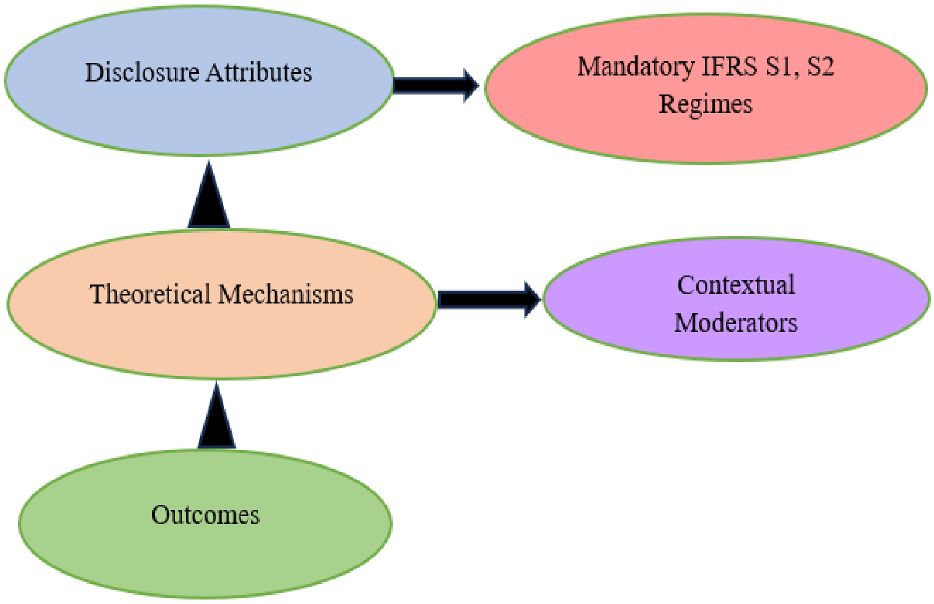

Figure 2: Proposed conceptual model for transition of voluntary to mandatory SFRD

Source: Authors' own representation.

6. DISCUSSION

The synthesis of fifty studies illustrates the evolution of sustainability-related financial disclosures (SRFD) from voluntary and semi-mandatory frameworks, such as GRI, SASB, TCFD, and <IR>, towards unified, mandatory compliance with IFRS S1 and S2 regulations. This transition is of critical importance as it directly tackles the shortcomings of voluntary regimes—specifically, the heterogeneity in scope and depth that impede comparability and external validity (Barth et al., 2017).

The conceptual framework developed in this study (refer to Fig. 2) integrates disclosure attributes, theoretical mechanisms, and contextual moderators to elucidate how SRFD influences market and economic outcomes. Initially, disclosure attributes—namely, a forward-looking orientation, measurable key performance indicators, external assurance, and governance integration—are identified as essential drivers of quality. These characteristics augment the credibility and decision-making utility of SRFD, thereby enhancing investor confidence through the simultaneous indication of long-term prospects, legitimisation of corporate conduct, andaddressing of significant stakeholder requirements (Albertini, 2019). However, the continued existence of divergent practices across different jurisdictions demonstrates that voluntary regimes promote heterogeneity in scope and depth, which in turn limits comparability and external validity (Barth et al., 2017).

Secondly, SRFD mechanisms are best comprehended as interacting entities that will change significantly due to the IFRS transition. The requirement for mandatory, independent assurance under IFRS S1 and S2 will fundamentally enhance the signalling effect, thereby reducing information asymmetry and financial frictions in ways that voluntary reports are unable to achieve (Consolandi et al., 2022). Similarly, by mandating disclosure on financially material topics, IFRS will directly strengthen the legitimacy mechanism by compelling firms to address the most critical risks and opportunities, thus reducing managerial discretion and symbolic greenwashing (Melloni et al., 2016). This mandatory, standardized reporting will also directly influence stakeholder perspectives by providing a consistent basis for engagement with capital providers and regulators (Albertini, 2019). Finally, the transition to a global standard will directly fortify institutional mechanisms, fostering a more uniform adoption and improving comparability across jurisdictions with rigorous enforcement (Garanina and Dumay, 2017).

Signalling diminishes information asymmetry and financial frictions (Consolandi et al., 2022); legitimacy mechanisms safeguard firms' social licences in high-risk sectors (Melloni et al., 2016); stakeholder perspectives underscore engagement with capital providers, regulators, and communities (Albertini, 2019); whereas institutional mechanisms elucidate how enforcement intensity and cultural norms influence adoption and comparability (Garanina and Dumay, 2017). The integration of these mechanisms underscores that SRFD concurrently fulfils capital-market, societal, and regulatory roles, and that their relative significance varies across different contexts. Thirdly, the evidence consistently demonstrates that high-quality Stakeholder Relationship Financial Disclosure (SRFD) enhances market outcomes, including increased value relevance, reduced cost of capital, greater liquidity, and improved analyst forecast accuracy (Khan et al., 2021; Hsiao and Kelly, 2018). Beyond financial markets, SRFD contributes to organisational performance by fostering resource efficiency, relational capital, and long-term trust (Matemane and Wentzel, 2019). Nonetheless, the empirical foundation remains constrained in its capacity to accurately capture tangible economic effects due to measurement inconsistencies and weak causal inference.

The transition to IFRS S1 and S2 is anticipated to strengthen the correlation between disclosure quality and corporate performance, particularly in jurisdictions with rigorous enforcement and in sectors where ESG considerations bear substantial financial implications (Lee et al., 2018; Garanina and Dumay, 2017). Nevertheless, the maturity of markets and the sector-specific significance of ESG will persist in shaping these relationships, suggesting that while the form may converge, the impact may still diverge.

This study presents three primary contributions, which are particularly pertinent during the transition to IFRS S1 and S2. It integrates signalling, legitimacy, stakeholder, and institutional perspectives into a cohesive framework that forecasts the operation of these mechanisms under a mandatory, assured regime. Empirically, it consolidates disparate findings into an evidence-based model demonstrating that specific IFRS reporting characteristics- such as independent assurance and material KPIs- are more strongly correlated with capital-market and real-economy outcomes. This approach addresses previous inconsistencies in empirical measurement. Practically, it provides guidance to regulators, standard-setters, and firms regarding which disclosure features- now incorporated into the IFRS standards- offer tangible economic benefits, thereby fostering enhanced compliance and stakeholder engagement.

7. FUTURE RESEARCH DIRECTIONS

The findings of this review and the proposed framework underscore several opportunities for advancing scholarship on sustainability-related financial disclosures (SRFD) within the context of IFRS S1 and S2 adoption. Firstly, the integration of theoretical perspectives remains limited. Much of the existing research applies signalling and legitimacy perspectives in isolation, neglecting the synergistic roles of institutional and stakeholder theories in shaping disclosure practices. Future studies should employ multi-theory frameworks that demonstrate how firms concurrently respond to market incentives, regulatory enforcement, and societal expectations, particularly in cross-country contexts where institutional pressures differ. Secondly, empirical research tends to disproportionately concentrate on capital-market outcomes—such as cost of capital, value relevance, and liquidity—while largely neglecting effects on the real economy.

Scholars should examine outcomes such as operational efficiency, innovation capacity, and stakeholder trust, ideally through longitudinal and multi-jurisdictional research. Through the implementation of the proposed framework, future research endeavours can empirically evaluate the extent to which the improved signaling mechanisms under IFRS S1 and S2 translate into tangible benefits within the real economy over time. This indicates that the framework is not solely a review of past voluntary disclosure practices but also serves as a predictive instrument for the future development of sustainability-related financial disclosure (SRFD) research, thereby reinforcing the paper's claim of contribution. Third, contextual moderators necessitate systematic analysis.

Factors such as enforcement strength, sector-specific ESG materiality, and market maturity are likely to influence the relationship between disclosure quality and outcomes; however, they remain insufficiently examined. For example, comparative analyses utilising institutional differences—such as between the Johannesburg Stock Exchange's (JSE's) mandatory regime and voluntary frameworks in the European Union, United States, or Asia–Pacific—could evaluate the hypothesis that the relationship between disclosure quality and corporate performance is markedly influenced by the vigour of enforcement, with a more pronounced correlation observed in jurisdictions characterised by stringent regulatory oversight. Fourth, innovative methodologies are urgently required. Future research should utilise quasi-experimental methods to examine hypotheses derived from our framework. For example, a staggered Difference-in-Differences design could be employed to assess the effects of phased IFRS implementation on capital market outcomes.

Moreover, a natural experiment related to regulatory shocks could serve to isolate the influence of enforcement intensity on the legitimacy mechanism. Additionally, surveys and field experiments could evaluate how specific, forward-looking disclosure attributes identified in this review impact investor and stakeholder decision-making. This framework extends beyond archival regressions and facilitates more rigorous causal inference in sustainability disclosure research. Furthermore, microstructure analyses should extend beyond basic spread and illiquidity metrics to encompass order-book depth, price impact, and trade imbalances, which more precisely reflect information asymmetry within the capital markets. Fifth, standardization of disclosure measurement is required. The utilisation of customised indices obstructs replication and comparison across various jurisdictions. Future research should adopt standardised frameworks such as IFRS S1/S2, SASB, and TCFD to develop replicable and policy-relevant disclosure metrics.

This approach would also enhance comparative analysis between industries with high and low ESG exposure, thereby supporting sector-specific materiality frameworks that align with IFRS topic maps and financial thresholds. Finally, underexplored geographies and sectors demand greater scholarly attention. Evidence is disproportionately concentrated in Europe and South Africa, while North America and emerging Asian markets remain strikingly underrepresented, despite their regulatory and market significance. Similarly, high-exposure industries such as banking and extractives dominate the literature, leaving gaps in technology, services, and aviation. Addressing these imbalances is critical for ensuring that insights on IFRS S1 and S2 adoption achieve true global generalizability. Taken together, these directives delineate a comprehensive research agenda that transcends mere enumeration of voluntary disclosures. They aim to establish a causally understood, theory-linked, and context-aware body of evidence. Such scholarly work is crucial not only for advancing academic dialogue but also for supporting regulators, investors, and corporations in their adaptation to the global shift towards mandated sustainability reporting in accordance with IFRS S1 and S2.

8. CONCLUSION AND IMPLICATIONS

This review of fifty empirical studies offers the most comprehensive synthesis to date regarding sustainability-related financial disclosures (SRFD). Our principal contribution is the formulation of a cohesive conceptual framework that consolidates fragmented evidence into a clear, evidence-based model suited for the post-IFRS era. This framework explicates how disclosure attributes—such as forward-looking orientation, measurable performance indicators, external assurance, and governance integration- engage signalling, legitimacy, stakeholder, and institutional mechanisms to produce dual outcomes in capital markets and the real economy. These mechanisms generate dual outcomes in both capital markets (including increased value relevance, liquidity, and analyst accuracy) and the real economy (encompassing resource efficiency, organisational capabilities, and stakeholder trust).

The framework emphasises the crucial importance of contextual moderators. The strength of enforcement, sector-specific ESG materiality, and market maturity affect the extent to which disclosure quality translates into tangible results. Consequently, the global implementation of IFRS S1 and S2 is unlikely to eradicate differences in impact, despite its contributions to standardisation and comparability. The synthesis enhances theoretical integration by illustrating that signalling, legitimacy, stakeholder, and institutional logics operate concurrently rather than independently. Future theoretical developments should consider these interactions to elucidate how SRFD functions across various institutional contexts environments. For organisations, the findings underscore the disclosure attributes most reliably linked to economic advantages: forward-looking strategy, material KPIs, credible assurance, and integrated governance. Incorporating these elements into reporting processes elevates investor confidence, facilitates access to capital, and reinforces stakeholder relationships. For regulators and standard-setting bodies, the findings underscore that the compulsory implementation of IFRS S1 and S2 will yield significant market and economic impacts solely in the presence of robust enforcement mechanisms and sector-specific calibration of materiality. Policymakers are advised to focus on monitoring, assurance standards, and industry-tailored guidance to enhance the efficacy of IFRS adoption. In conclusion, this study contributes by (i) synthesising fragmented evidence into a cohesive conceptual framework, (ii) establishing a clear research agenda for the post-IFRS era, and (iii) providing actionable guidance for firms and regulators. By linking theory, evidence, and practice, it creates a foundation for the next phase of scholarship and policy on global sustainability reporting.

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