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Implementing Double Materiality under the ESRS in the Banking Sector: A Comparative Study of Germany and Austria

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German Abstract

Diese Masterarbeit untersucht, wie Banken in Deutschland und Österreich das Prinzip der doppelten Wesentlichkeit gemäß der Corporate Sustainability Reporting Directive und den European Sustainability Reporting Standards umsetzen. Aufbauend auf normativen Grundlagen der Unternehmensberichterstattung, Stakeholder-Theorie und Accountability-Konzepten analysiert die Studie, wie sich finanzielle und wirkungsbezogene Perspektiven in der Praxis institutionalisieren. Methodisch folgt die Arbeit einem qualitativen, vergleichenden Fallstudiendesign und stützt sich auf eine systematische Dokumentenanalyse der Nachhaltigkeitsberichte von acht führenden Banken. Die qualitative Inhaltsanalyse wurde auf Basis eines dreistufig entwickelten Kategoriensystems durchgeführt, das ESRS-basierte, normative und induktive Analyseebenen integriert.

Die Ergebnisse zeigen, dass sowohl deutsche als auch österreichische Banken die doppelte Wesentlichkeit bereits weitgehend in ihre Governance-, Strategie- und Risikomanagementsysteme eingebettet haben. Deutsche Institute zeichnen sich vor allem durch hohe methodische Präzision, starke aufsichtsrechtliche Verankerung und klare Kontrollmechanismen aus. Österreichische Banken weisen eine ähnlich hohe ESRS-Konformität auf, betonen jedoch stärker dialogische, werteorientierte und lernorientierte Elemente der Nachhaltigkeitssteuerung. Trotz dieser unterschiedlichen institutionellen Logiken erreichen alle untersuchten Banken ein hohes Niveau an Transparenz, Nachvollziehbarkeit und Prüfbarkeit.

Die Studie zeigt, dass die doppelte Wesentlichkeit in beiden Ländern nicht nur als Berichtspflicht, sondern als strategisches Steuerungsinstrument verstanden wird. Unterschiede ergeben sich weniger hinsichtlich der Einhaltung regulatorischer Anforderungen, sondern vielmehr in der kulturellen, kommunikativen und normativen Ausgestaltung. Die Arbeit leistet damit einen Beitrag zum Verständnis, wie europäische Nachhaltigkeitsregulierung in national unterschiedlichen Kontexten operationalisiert wird, und identifiziert zugleich praxisrelevante Ansatzpunkte für die Weiterentwicklung von Methodik, Stakeholder-Einbindung und Governance-Strukturen im Bankensektor.

English Abstract

This master's thesis examines how banks in Germany and Austria implement the principle of double materiality in accordance with the Corporate Sustainability Reporting Directive and the European Sustainability Reporting Standards. Building on normative foundations of corporate reporting, stakeholder theory, and concepts of accountability, the study analyzes how financial and impact-related perspectives are institutionalized in practice. Methodologically, the thesis follows a qualitative, comparative case study design and is based on a systematic document analysis of sustainability reports from eight leading banks. The qualitative content analysis was conducted using a three-level category system developed for this study, integrating ESRS-based, normative, and inductive analytical dimensions.

The findings show that both German and Austrian banks have already largely embedded double materiality into their governance, strategy, and risk management systems. German institutions are characterized in particular by a high degree of methodological precision, strong regulatory anchoring, and clear control mechanisms. Austrian banks demonstrate a similarly high level of ESRS compliance but place greater emphasis on dialogical, values-based, and learning-oriented elements of sustainability management. Despite these differing institutional logics, all banks examined achieve a high level of transparency, traceability, and auditability.

The study demonstrates that double materiality in both countries is understood not merely as a reporting obligation but as a strategic management instrument. Differences arise less with regard to compliance with regulatory requirements and more in the cultural, communicative, and normative design of implementation. The thesis thus contributes to a deeper understanding of how European sustainability regulation is operationalized in different national contexts and identifies practice-relevant approaches for the further development of methodology, stakeholder engagement, and governance structures within the banking sector.

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Abreviations

AFRAC – Austrian Financial Reporting and Auditing Committee

AG – Aktiengesellschaft (German joint-stock company)

AR – Application Requirement

BAWAG – BAWAG Group AG

BMF – Austrian Federal Ministry of Finance

BMJ – Austrian Federal Ministry of Justice

CEE – Central and Eastern Europe

CESEE – Central, Eastern and South-Eastern Europe

CSDDD – Corporate Sustainability Due Diligence Directive

CSR – Corporate Social Responsibility

CSRD – Corporate Sustainability Reporting Directive

DB – Deutsche Bank

DM / DMP – Double Materiality / Double Materiality Principle

EBA – European Banking Authority

ECB – European Central Bank

EFRAG – European Financial Reporting Advisory Group

ESG – Environmental, Social and Governance

ESRS – European Sustainability Reporting Standards

EU – European Union

FMA – Austrian Financial Market Authority

GRI – Global Reporting Initiative

HGB – German Commercial Code (Handelsgesetzbuch)

ICAAP – Internal Capital Adequacy Assessment Process

IFRS – International Financial Reporting Standards

IRO – Impacts, Risks and Opportunities

LBBW – Landesbank Baden-Württemberg

LkSG – German Supply Chain Act (Lieferkettensorgfaltspflichtengesetz)

MaRisk - Minimum Requirements for Risk Management

MSSD – Most Similar Systems Design

NaBeG – Nachhaltigkeitsberichtsgesetz (draft Sustainability Reporting Act Germany/Austria)

NFRD – Non-Financial Reporting Directive

NGO – Non-Governmental Organisation

OECD – Organisation for Economic Co-operation and Development

OeNB – Oesterreichische Nationalbank

O-SIIs - Other Systemically Important Institutions

PIE – Public Interest Entity

PRB – Principles for Responsible Banking

RBI – Raiffeisen Bank International

RUG – CSR Directive Implementation Act (Gesetz zur Umsetzung der CSR-Richtlinie)

SDG – Sustainable Development Goal

SMEs - Small and medium-sized enterprises

1. Introduction

In recent years, the European Union has fundamentally redefined the meaning of corporate accountability. With the Corporate Sustainability Reporting Directive (CSRD), the European Union (EU) has introduced one of the most ambitious reporting reforms in its history — a transformation designed to enhance transparency, strengthen corporate responsibility, and channel capital flows toward the objectives of the European Green Deal (Commission, 2023). Under this directive, large and listed companies must disclose not only financial performance but also how their activities affect people and the planet. The accompanying European Sustainability Reporting Standards (ESRS) give this framework its operational substance, establishing a common reporting language for sustainability across Europe. Together, the CSRD and ESRS represent a paradigm shift in how business success and responsibility are defined — moving from a purely financial focus toward a multidimensional understanding of value creation and accountability (Wunder, 2023, p. 114).

At the core of this transformation lies the principle of double materiality — one of the most innovative and debated concepts in contemporary accounting. Traditionally, materiality referred solely to financial relevance, i.e. information that could influence investors' or shareholders' decisions (Bellucci & Manetti, 2019, p. 50). The double materiality approach expands this logic: companies must now report both how sustainability issues affect their financial position ("outside-in") and how their activities impact society and the environment ("inside-out") (Wunder, 2023, p. 113). A topic is thus considered material if it is significant from either perspective. In doing so, the EU has elevated sustainability reporting beyond mere compliance — transforming it into a reflection of how firms understand their role and responsibility within society.

For the banking sector, this shift carries particular weight. Banks are not only businesses but key intermediaries that steer capital toward — or away from — sustainable economic transformation (Kubeneck, Burwieck & Franck, 2023, p. 17). Implementing the ESRS therefore represents both an obligation and an opportunity. The new requirements demand extensive data collection, the integration of sustainability into governance and risk frameworks, and the establishment of robust analytical systems (Mosler, 2024, p. 14). Beginning with the 2024 reporting cycle, banks are among the first institutions subject to the CSRD (Commission, 2023, ESRS 1, para. 9), positioning them as a test case for the practical feasibility of Europe's sustainability reporting regime.

Yet, operationalising double materiality in banking practice is far from straightforward. In the absence of sector-specific ESRS for financial institutions, banks must interpret and adapt the general standards to their unique business models — a process that inevitably introduces discretion and divergence (Sebastião, Tavares & Azevedo, 2024). Early evidence points to substantial variation in how institutions define materiality boundaries, engage stakeholders, and handle data limitations. Compounding these challenges are persistent information gaps, as banks rely on sustainability data from clients and counterparties who may not yet be subject to CSRD obligations (Saraswati, Rumansvah & Dewi, 2024, p. 397).

Against this backdrop, this thesis investigates how banks in Germany and Austria interpret and implement the double materiality principle as defined by the ESRS. Specifically, it explores how financial institutions operationalise this principle within their governance, risk, and reporting systems, and how national regulatory cultures shape these interpretations. Germany and Austria provide a particularly insightful comparison: both share a continental European banking tradition yet differ in supervisory regimes, communication cultures, and the degree to which sustainability is embedded into corporate identity (Auswärtiges Amt, 2025).

Accordingly, the study addresses the following research questions:

RQ1: How do banks in Germany and Austria understand and implement the double materiality principle as defined in the ESRS?

RQ2: What similarities and differences characterise their approaches across these two countries?

To answer these questions, the thesis builds on three interrelated theoretical perspectives that together form its conceptual foundation: Normative Accounting Theory, Stakeholder Theory, and the Accountability Concept.

Normative Accounting Theory provides a lens for understanding how accounting evolves to meet ethical and societal expectations (Berg, 2018, p. 269). The CSRD embodies this normative shift by reframing corporate reporting as a public duty rather than a purely financial exercise. Stakeholder Theory (Freeman, 1984) extends accountability beyond shareholders to all parties affected by corporate actions. The ESRS reflect this inclusiveness by making stakeholder engagement a mandatory component of double materiality (von Keitz & Borcherding, 2023, p. 2897). Finally, the Accountability Concept positions corporate reporting as a mechanism for transparency and trust, allowing stakeholders to evaluate whether organisations act responsibly and in accordance with societal values (Berg, 2018, p. 96).

Methodologically, the thesis employs a qualitative comparative content analysis of eight sustainability reports — four from German and four from Austrian banks — published for the 2024 reporting year. This approach enables a detailed examination of how institutions interpret, structure, and communicate their double materiality assessments. The combination of qualitative content analysis and cross-country comparison facilitates the identification of both convergent practices and country-specific differences, illustrating how a unified European regulation is adapted to distinct institutional contexts (Bowen, 2009; Kuckartz, 2018; Mayring, 1994).

The thesis is structured as follows: Chapter 2 introduces the theoretical background and outlines the CSRD and ESRS frameworks with specific reference to their implications for the banking sector. Chapter 3 explains the methodological design. Chapter 4 presents and compares the empirical findings on how German and Austrian banks conduct their double materiality assessments. Chapter 5 discusses these results in light of the theoretical framework and concludes with implications for policy, practice, and future research.

2. Theoretical Framework

2.1 Normative Theories of Corporate Reporting

2.1.1 Foundations of Normative Accounting and Reporting Theory

Normative accounting and reporting theory examines the principles that should guide corporate disclosure. In contrast to positive accounting research, which describes how organisations actually behave, the normative perspective asks how they ought to report in order to ensure transparency, comparability, and societal acceptance (Berg, 2018, pp. 6, 33; Erlei, Leschke & Sauerland, 2007, p. 17).

Within sustainability reporting, this perspective is particularly important. Normative theory helps explain why companies are expected to act responsibly and how their reporting practices contribute to public trust (Bellucci & Manetti, 2019, p. 67). A central idea is legitimacy — the perception that a company's behaviour aligns with societal norms and values (Suchman, 1995, pp. 582–583). Firms seek legitimacy because it forms the basis of their social licence to operate, meaning the informal acceptance they need in order to continue their business activities (Berg, 2018, pp. 65, 100).

Institutional theory complements this view by emphasising that sustainability standards are socially constructed rules whose authority comes from collective acceptance rather than from law alone (Meyer, Drori & Hwang, 2006, pp. 25–27). Companies therefore follow sustainability standards not only because they are legally required to do so, but also because stakeholders expect it and because non-compliance may damage trust.

Normative approaches also highlight the need to safeguard environmental and social systems. Concepts such as "safe minimum standards" underline that sustainability goals must be justified not only economically but also ethically (Berg, 2018, p. 34; Endres & Radke, 1998, pp. 30–31). More recent contributions link legitimacy to ecological limits and social foundations, making sustainability an ethical obligation tied to planetary boundaries (Raworth, 2017).

Another important dimension concerns information asymmetries. Sustainability information is often difficult to verify, creating uncertainty for external stakeholders. Agency theory explains this problem by pointing out that managers typically have more information than investors or the public (Jensen & Meckling, 1976, p. 308). Regulations such as the CSRD and the ESRS therefore aim to reduce these asymmetries by making sustainability reporting more reliable and comparable (Kubeneck, Burwieck & Franck, 2023, p. 478; Commission, 2023).

Information intermediaries, such as rating agencies, auditors, and index providers, support this process by evaluating and validating sustainability data. Through their assessments, they help strengthen credibility and shape expectations about responsible corporate behaviour (Azam, Warraich & Awan, 2011, pp. 50–56; Berg, 2018, pp. 149, 172).

Taken together, normative theory links ethical expectations with economic reasoning. It shows that firms have both a moral duty to act responsibly and a practical need to maintain trust. In this sense, accountability becomes the connecting element between ethical governance, regulatory expectations, and market stability. Transparent and consistent sustainability reporting is therefore more than a compliance task; it is essential for legitimacy, trust, and long-term societal and economic resilience.

2.2.2 Stakeholder Theory and the principle of Accountability

Normative accounting and reporting theory was originally shaped by a shareholder-oriented view, in which the main goal of corporate management was to maximise shareholder value (Berg, 2018; Bellucci & Manetti, 2019). Over time, this narrow focus has been replaced by a broader understanding of corporate responsibility. With Freeman's introduction of stakeholder theory (1984), responsibility was expanded beyond shareholders to include all individuals and groups affected by a company's actions. Stakeholders can therefore include employees, customers, regulators, communities, or the environment.

This broadening changes the purpose of corporate activity: value creation is no longer defined only in financial terms but must also reflect social and environmental interests. Companies operate within a network of relationships and dependencies and are accountable not only to capital providers but also to society more generally (Bellucci & Manetti, 2019, p. 69).

A key idea of stakeholder theory is that stakeholders have intrinsic value. They are not simply instruments for achieving financial goals but legitimate actors whose interests must be taken into account (Vola, Cantino & Gransinigh, p. 72). This ethical foundation connects directly to Corporate Social Responsibility (CSR) and the broader concept of accountability. Accountability means that companies must explain and justify their actions and the associated impacts in a transparent manner (Gray, Kouhy & Lavers, 1995, p. 54).

Accountability is closely connected to legitimacy, understood as the perception that corporate behaviour meets social norms and expectations (Suchman, 1995, p. 574). When organisations act in line with these expectations, they secure their informal "license to operate" — the public approval that enables them to continue their business activities (Berg, 2018, p. 100). Losing legitimacy can result in reputational damage, financial loss, and stricter regulation. Accountability therefore helps maintain legitimacy by making corporate behaviour visible and understandable.

Transparency plays a central role here. Clear and reliable disclosures allow stakeholders to assess corporate performance and are therefore both a regulatory requirement and an ethical expression of responsible behaviour (Bellucci & Manetti, 2019, p. 409). Consistent and credible reporting reduces information asymmetries and strengthens trust in corporate actions (Berg, 2018, p. 64).

Stakeholder dialogue is another crucial element of accountability. Engaging with stakeholders helps organisations understand their expectations and identify potential impacts. Research shows that strong stakeholder participation is associated with higher levels of transparency, responsibility, and legitimacy (Saraswati, Rumansvah & Dewi, 2024, pp. 398, 404). In the context of sustainability reporting, stakeholder engagement therefore becomes a key mechanism for identifying material topics and aligning internal processes with societal expectations.

In this way, stakeholder theory provides a conceptual foundation for modern sustainability reporting. It shows that companies are accountable not only to investors but to broader society. Transparency, dialogue, and participation form central pillars of corporate credibility (Bellucci & Manetti, 2019, p. 69).

This development directly supports the emergence of the double-materiality concept. The requirement to report both financial impacts (outside-in) and societal or environmental effects (inside-out) reflects the ethical and normative core of stakeholder theory (Kubeneck, Burwieck & Franck, 2023, p. 18). Accountability therefore acts as the conceptual link between legitimacy on the one hand and the regulatory standards set by the CSRD and ESRS on the other (Berg, 2018, p. 96).

2.2 Conceptual Foundations of Materiality in Corporate Reporting

2.2.1 The Traditional View: Financial Materiality (Outside-In Perspective)

Building on the earlier discussion of legitimacy and accountability, this section introduces the concept of materiality, which forms the analytical core of sustainability reporting in the European regulatory framework. Materiality determines which topics companies must disclose and therefore defines how far their accountability toward stakeholders extends. In the ESRS, this is captured through two complementary perspectives: the impact perspective (inside-out) and the financial perspective (outside-in) (Wunder, 2023, p. 113).

In traditional financial reporting, materiality focuses on information that is relevant for users of financial statements, especially investors and lenders. Under the International Financial Reporting Standards (IFRS), information is financially material if its omission or misstatement could influence the decisions of capital providers (Kubeneck, Burwieck & Franck, 2023, p. 17).

This corresponds to the outside-in perspective, which examines how environmental, social and governance (ESG) factors may affect a company's financial performance and risk pro-file. In this view, companies assess how sustainability-related issues influence profitability, liquidity, cash flows, or their overall financial position. Such assessments must also consider potential effects on financing conditions and creditworthiness. Because sustainability trends unfold over different periods, firms need to analyse short-, medium-, and long-term time horizons (von Keitz & Borcherding, 2023, p. 17).

In practice, many companies now use integrated analytical models that link sustainability drivers to traditional financial metrics such as earnings, solvency ratios, and enterprise value. Conditions in the capital market, including access to financing and the cost of capital, are also relevant for determining financial materiality (Mosler, 2024, p. 39).

Financial materiality therefore requires evaluating both the likelihood and the financial importance of sustainability-related risks and opportunities (Wunder, 2023, p. 114). Beyond familiar financial risks, this includes factors such as resource dependency, market volatility, regulatory changes, and broader economic sustainability trends. Following ESRS 1 (AR 14), companies must consider not only their direct operations but also the wider sustainability context in which they operate (Commission, 2023).

2.2.2 The Impact-View: Non-Financial Materiality (Inside-Out Perspective)

In addition to financial materiality, impact materiality – often described as the inside-out perspective – forms the second core element of the ESRS materiality concept (Commission, 2023; Wunder, 2023; Kubeneck, Burwieck & Franck, 2023). While financial materiality examines how sustainability issues affect a company's economic situation, impact materiality focuses on how a company's activities influence the environment, society, and individuals (von Keitz & Borcherding, 2023). This perspective translates ethical responsibilities into binding reporting obligations and highlights that corporate accountability extends beyond financial stakeholders to include broader ecological and social impacts.

Under the ESRS, a topic is considered materially significant if it causes, or could cause, meaningful positive or negative effects on environmental or social systems, regardless of the time horizon (Commission, 2023). This assessment includes not only a company's direct operations but also its entire value chain, covering upstream and downstream activities and other relevant business relationships. The objective is to identify, assess, and disclose how corporate actions contribute to or help address environmental and social change (Wunder, 2023).

Impact materiality follows internationally recognised due-diligence principles (Commission, 2023). It distinguishes between actual impacts, which are primarily assessed through the severity of their consequences, and potential impacts, which require evaluating both their probability and severity. Human rights receive particular emphasis due to their prominent role in the ESRS (Commission, 2023). Severity is evaluated using three criteria: scale (how serious the impact is), scope (how many people or how much of the environment is affected), and irremediable character (whether the impact can be reversed). These principles apply to both negative and positive impacts (Commission, 2023).

Taken together, impact materiality reflects the societal dimension of accountability: it requires companies to analyse and transparently report how their actions shape social and environmental conditions. Combined with the financial materiality perspective, it forms the conceptual foundation of the double materiality framework and ensures that sustainability disclosures reflect both corporate responsibility and economic relevance.

2.2.3 Double Materiality in the Context of the Corporate Sustainability Reporting Directive and the European Sustainability Reporting Standard

2.2.3.1 The Corporate Sustainability Reporting Directive

After discussing impact materiality, the following section introduces the regulatory frame-work that puts the double-materiality concept into practice in the European Union. The CSRD together with the ESRS, forms the binding legal and methodological framework for sustainability disclosures. This framework aims to give sustainability reporting the same level of structure, consistency, and verifiability that already applies to financial reporting (Fink & Schmidt, 2023).

In force since 5 January 2023, the CSRD is a key element of the EU's sustainable-finance strategy and the European Green Deal. It replaces the Non-Financial Reporting Directive (NFRD), which had been criticised for limited coverage and inconsistent reporting quality (Feisel & Makowka, 2024). The CSRD therefore seeks to improve the quality and compara-bility of sustainability information, reduce greenwashing risks, and direct capital towards more sustainable business practices (Kubeneck, Burwieck & Franck, 2023). Companies must explain both how sustainability matters affect their strategy and performance, and how their own activities influence society and the environment. In doing so, the CSRD embeds the double-materiality principle directly into EU law.

A central feature of the directive is the extension of the reporting boundary to the full value chain. Companies must assess and disclose impacts and risks not only within their own operations but also across suppliers, customers and other business partners (Wunder, 2023). This requirement reflects the reality that many environmental and social impacts occur outside the reporting entity itself, especially in complex global value chains (Kubeneck, Burwieck & Franck, 2023).

Sustainability information must be included in the management report; stand-alone sustainability reports are no longer permitted (Mosler, 2024). Reporting must follow an XHTML format and include digital tagging so that disclosures can be read by machines and compared automatically across companies (Fink & Schmidt, 2023).

Content-wise, companies are required to report on their business model, strategy, governance structures, roles and responsibilities, remuneration practices, due-diligence processes, and sustainability-related risks and opportunities (Feisel & Makowka, 2024). This includes ex-plaining how management and supervisory boards are involved in sustainability matters and how sustainability objectives influence executive compensation (Fink & Schmidt, 2023). Narrative descriptions must be supported by relevant indicators to ensure transparency and accountability (Commission, 2023).

The ESRS provide the detailed rules for these disclosures. They consist of two cross-cutting standards (ESRS 1 and ESRS 2) and ten topic-specific standards covering environmental, social and governance areas (Commission, 2023). Topic-specific standards apply only if the issue is assessed as material under the double-materiality process. Climate disclosures are an exception: if climate change is considered not material, companies must justify this decision under a comply-or-explain rule (Commission, 2023).

Another important innovation is mandatory external assurance for sustainability reporting. Initially, reports will be subject to limited assurance, with a gradual shift planned toward reasonable assurance — the level used for financial auditing (von Keitz & Borcherding, 2023). Standards for limited assurance are expected by 2026 and for reasonable assurance by 2028. Assurance will typically be performed by statutory auditors, although member states may authorise other accredited providers under strict oversight (Sebastião, Tavares & Azevedo, 2024).

In summary, the CSRD and ESRS significantly transform corporate reporting in the European Union. Sustainability reporting becomes mandatory, standardised, digitally tagged, and subject to external verification. This regulatory foundation ensures that companies systematically communicate both their environmental and social impacts and the financial relevance of those impacts, thereby operationalising the double-materiality principle in practice.

2.2.3.2 Defining the Double Materiality

Building on the CSRD and ESRS framework described above, the principle of double materiality forms the central analytical concept of the EU sustainability reporting system (Commission, 2023). It requires companies to assess sustainability topics from two complementary perspectives. First, the inside-out perspective examines how a company's activities and value chain affect society and the environment. Second, the outside-in perspective considers how environmental and social developments may influence the firm's strategy, business model, and financial performance (Kubeneck, Burwieck & Franck, 2023; Wunder, 2023).

A topic is considered material — and must therefore be disclosed — if it is relevant under either perspective. This explicit "or-logic" represents a major shift from previous reporting frameworks, such as the NFRD or the German CSR Directive Implementation Act (CSR-RUG), which in practice tended to require relevance under both perspectives simultaneously. As a result, the scope of mandatory sustainability reporting has broadened considerably (Wunder, 2023).

In operational terms, companies must conduct a structured double-materiality assessment and report all topics that either have financial implications for the company or generate significant impacts on people or the environment (Mosler, 2024). Transparent stakeholder engagement is an essential part of this process, ensuring that internal and external perspectives are systematically considered when identifying material issues (von Keitz & Borcherding, 2023).

Applying both dimensions in practice, however, involves methodological challenges. Impact materiality assessments often lack standardised methods for measuring social and environmental effects across complex value chains. Financial materiality assessments, in turn, frequently require advanced analytical tools — such as scenario analysis and stress-testing — to estimate long-term effects on earnings, capital adequacy, and enterprise value, particularly in relation to climate risks and regulatory change (Mosler, 2024; Wunder, 2023). Despite these difficulties, double materiality provides the conceptual backbone of the EU reporting regime because it ensures that sustainability issues are understood both as financial risks and as societal and environmental responsibilities.

For the purposes of this thesis, the term “banking sector” refers to credit institutions engaged in lending, deposit-taking, and investment activities that fall under the prudential regulatory framework of EU banking supervision (EBA, 2021).

2.2.3.2.1 Double Materiality According to ESRS 1 and ESRS 2

Following the conceptual discussion of double materiality, the next step is to examine how the principle is operationalised within the EU reporting system. The ESRS — particularly ESRS 1 and ESRS 2 — provide the methodological and procedural foundation that guides companies in identifying, assessing, and reporting sustainability matters in accordance with the CSRD.

ESRS 1 establishes the conceptual framework for sustainability reporting, including fundamental principles, core terminology, and the overall reporting structure (Feisel & Makowka, 2024, p. 66; Fink & Schmidt, 2023, p. 116). It also sets out the steps organisations must take when preparing disclosures (Baumüller & Mayr, 2023, p. 20). A central feature of ESRS 1 is the systematic identification and evaluation of impacts, risks, and opportunities (IROs) across the entire value chain and business model (Baumüller & Mayr, 2023, p. 3). In this context, double materiality functions as an operational management tool that supports firms in monitoring, steering, and mitigating sustainability-related risks, opportunities and impacts (FMA, 2025, p. 116).

A key requirement of ESRS 1 concerns the granularity of the assessment. Companies must analyse materiality not only at the consolidated level but also across subsidiaries, geographical regions, business units, and activities (Commission, 2023, ESRS 1, para. 54). This bottom-up perspective ensures that material issues are captured accurately and reflect the company’s operational footprint (Commission, 2023, ESRS 1, para. 56).

In addition, ESRS 1 includes Annex A, which outlines mandatory sustainability themes, subtopics, and sub-sub-topics that must be taken into account during the assessment (Baumüller & Mayr, 2023, p. 13). However, this list is not intended to be used mechanically. Companies are expected to add further topics where relevant to their specific business context (Baumüller & Mayr, 2023, p. 14). In this way, ESRS 1 combines minimum regulatory expectations with the flexibility to capture entity-specific material issues.

While ESRS 1 defines the assessment logic, ESRS 2 sets out overarching disclosure obligations that apply irrespective of a materiality determination. These requirements include information on governance structures, strategy, IRO management, and associated metrics and targets (Commission, 2023, ESRS 2, para. 56; Feisel & Makowka, 2024, p. 66). Their purpose is to ensure consistency and comparability in key governance-related and risk-management information across reporting entities.

ESRS 2 is organised around five thematic disclosure areas: governance, strategy, impact-, risk- and opportunity management, and metrics and targets (Commission, 2023, ESRS 2, para. 26–29). Because it sets baseline disclosure obligations, ESRS 2 must be applied alongside the topical standards. Annex C specifies which additional reporting requirements from the topical ESRS apply once a matter has been deemed material (Commission, 2023, Appendix C).

Taken together, ESRS 1 and ESRS 2 ensure a consistent and transparent implementation of double materiality. They guide organisations through the full reporting process — from identifying material sustainability issues to presenting them in a structured and comparable format — and thus provide the methodological backbone of the EU sustainability reporting architecture.

2.2.3.2.2 Process and Implementation of the Double Materiality

While ESRS 1 provides the conceptual groundwork and ESRS 2 defines cross-cutting disclosure requirements (Fink & Schmidt, 2023, p. 116), companies must ultimately translate these standards into a structured assessment process. Only by operationalising the guidance in practice can the double-materiality concept fulfil its intended function of identifying topics that are material from both a societal and financial perspective (Baumüller & Mayr, 2023, p. 3).

According to the ESRS, the materiality determination follows a systematic three-stage approach aimed at ensuring consistency and transparency (Baumüller & Mayr, 2023, p. 5; Commission, 2023, ESRS 1, para. 52, 66).

The first step consists of developing a holistic understanding of the company's business model and its broader sustainability context. This requires analysing the full value chain — including upstream suppliers and downstream customer relationships — to identify where significant environmental or social effects may occur (Commission, 2023, ESRS 1, para. 65; Baumüller & Mayr, 2023, pp. 7, 10). At this stage, many firms also conduct a preliminary prioritisation to focus on those areas where material IROs are most likely. Accordingly, an in-depth understanding of the business model combined with early stakeholder involvement is essential (Baumüller & Mayr, 2023, p. 10).

The second step involves systematically identifying all actual and potential, positive and negative impacts — as well as relevant risks and opportunities (Commission, 2023, ESRS 1, AR 9). Stakeholder engagement is central at this stage to ensure that both internal expertise and external perspectives are reflected (Commission, 2023, ESRS 1, para. 24). Moreover, the ESRS emphasise the need to consider nature as a "silent stakeholder", requiring companies to incorporate scientific evidence and verifiable environmental data in the assessment process (Commission, 2023, ESRS 1, AR 7; Baumüller & Mayr, 2023, pp. 6, 11–12, 16).

In the third step, organisations evaluate the significance of the identified topics and determine whether they meet the criteria for financial or impact materiality (Commission, 2023, ESRS 1, AR 9). Firms must define and disclose clear materiality thresholds, apply them consistently, and transparently explain their methodological approach. Although thresholds may differ between sustainability topics, the overall process must be systematic and well-justified (Baumüller & Mayr, 2023, pp. 5, 9).

Beyond serving as a prioritisation tool, the double-materiality assessment enhances the completeness, transparency, and comparability of sustainability reporting (Feisel & Makowka, 2024, p. 66; Fink & Schmidt, 2023, p. 106). Transparency is a core requirement: ESRS 2 IRO-1 obliges companies to disclose their methodology, including data sources, criteria, tools and governance processes (Fink & Schmidt, 2023, p. 302; Baumüller & Mayr, 2023, p. 9).

Finally, the topical ESRS further operationalise these principles. Standards such as ESRS E1 (Climate Change), ESRS E2 (Pollution), ESRS E4 (Biodiversity) and ESRS S1 (Own Workforce) elaborate the general requirements and translate the materiality logic into specific thematic disclosure obligations (Commission, 2023, ESRS 1, para. 26–27).

2.2.3.3 Application and Challenges in the Banking Sector

For the purposes of this thesis, the term "banking sector" refers to credit institutions engaged in lending, deposit-taking, and investment services that fall under the prudential regulatory framework of EU banking supervision (EBA, 2021).

As noted previously, credit institutions differ fundamentally from industrial firms, as their most significant sustainability impacts arise indirectly through financing and investment activities rather than through direct operational emissions. This characteristic makes the application of the double-materiality principle in banking particularly complex and data-intensive (EBA, 2021).

The principle is especially relevant in the banking sector because banks are central actors in directing capital toward sustainable economic development (Sebastiao, Tavares & Azevedo, 2024, p. 381). In practice, banks' main environmental and social effects emerge through their credit portfolios and investment activities rather than internal processes. These indirect consequences are commonly referred to as “financed impacts” or “financed risks” (Bochtler, Ernst, Fantini & Leiendecker, 2023, p. 3).

Consistent with ESRS requirements, banks must therefore assess not only their internal operations but also the ESG consequences of their lending and investment exposure. This reflects the reality that many financial institutions remain significantly connected to carbon-intensive sectors, resulting in elevated transition risks as economies move toward net-zero targets (FMA, 2025, p. 8).

A primary barrier in the banking context is the limited availability and consistency of ESG data. Corporates only disclose sustainability information when it is material for them, meaning that banks often lack comprehensive and comparable ESG data on clients and portfolio entities (PwC, 2023, p. 4). As a result, there is a structural information imbalance between banks and real-economy companies, which supervisors expect banks to address through improved data governance, borrower engagement, and the use of estimation methods.

Regulators have therefore increasingly required banks to implement robust ESG data-management frameworks and to apply reasonable estimation techniques where direct data is unavailable (EBA, 2021, p. 52). Under the EU Banking Package and EBA ESG Pillar 3 disclosure rules, institutions must report climate-related exposures via standardised templates, supporting harmonised data practices (EBA, 2021, pp. 13–17). Complementary private-sector initiatives such as the Partnership for Carbon Accounting Financials (PCAF) provide methodological guidance for calculating financed emissions, including estimation-based approaches (PCAF, 2022, pp. 28–31). With CSRD expansion and value-chain transparency under the Corporate

Sustainability Due Diligence Directive (CSDDD), the availability of audited sustainability data is expected to increase steadily (Commission, 2023, ESRS 2, para. 2, 39).

Sector-specific sustainability priorities also shape materiality outcomes in banking. Climate change (ESRS E1) consistently emerges as the dominant theme, supplemented by issues such as employee matters (ESRS S1), customer and consumer protection (ESRS S4), and ethical business conduct (ESRS G1). Environmental topics including pollution (ESRS E2) and biodiversity (ESRS E4) gain importance particularly for banks with exposures to agricultural or resource-intensive industries. Although disclosures in these areas are increasing, the depth of reporting is often still limited due to data constraints and methodological uncertainty. Furthermore, banks have begun to report more on financial inclusion and consumer topics, though these issues are frequently framed primarily from a risk-management lens (Deloitte, 2023).

Supervisory authorities — including Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin), the European Central Bank (ECB), the Finanzmarktaufsicht (FMA) and the Österreichische Nationalbank (OeNB) — reinforce the integration of ESG factors within risk-management frameworks (Nießer, Dietz & Elbers, 2014, p. 5; FMA, 2025, p. 4; OeNB, 2025, p. 19). Sustainability-related impacts are treated as risk drivers within established risk categories and therefore incorporated into risk identification, stress-testing and strategic planning processes (Nießer, Dietz & Elbers, 2014, p. 6). ESG considerations are increasingly embedded in credit assessment and pricing, meaning borrowers with stronger sustainability performance may benefit from more favourable financing conditions (Berg, 2018, pp. 112, 118). Scenario-based modelling of physical and transition risks has become standard practice, and approximately 95% of Austrian companies already provide relevant disclosures (KPMG, 2025, p. 8).

Despite progress, substantial implementation barriers remain. Firms unable to provide reliable sustainability information can expect growing difficulty accessing financing under attractive terms (Mosler, 2024, p. 32). Moreover, double materiality is inherently dynamic, as topics initially deemed material primarily from an impact lens may later acquire financial significance due to regulatory, market or environmental developments (Wunder, 2023, p. 116). Consequently, banks must continually enhance their data systems, methodologies and reporting capabilities (Mosler, 2024, p. 32).

At present, no universally applied accounting methodology exists to quantify sustainability impacts across value chains. Initiatives such as the Value Balancing Alliance and Impact-

Weighted Accounts seek to address this by developing harmonised approaches to monetising environmental and social effects (Wunder, 2023, p. 116).

2.2.3.3.1 National context in Germany

The extent to which double materiality is implemented in the German banking sector is strongly influenced by the national regulatory environment. Germany plays a central role in this context due to the size of its financial market, its comparatively strict supervision, and the large number of companies subject to sustainability reporting requirements.

With the introduction of the CSRD, the scope of sustainability reporting in Germany has expanded considerably. Under the previous regime, only about 500 companies were required to publish non-financial statements under § 289c para. 3 German Commercial Code (HGB) (Feisel & Makowka, 2024, p. 66), and many reported according to the Global Reporting Initiative (GRI) standards. The CSRD broadens this scope substantially, meaning that several thousand German firms will now fall under mandatory disclosure rules (Baumüller & Mayr, 2023, p. 510). To incorporate the directive into national law, the German legislator plans to introduce a new Sustainability Reporting Act (NaBeG), which will replace the HGB-based rules. Although the legislative process was still ongoing in 2024, around 95% of listed companies had already begun applying elements of the ESRS or preparing internal structures for their implementation, indicating a high level of readiness (Deloitte, 2025, p. 2).

A core feature of the CSRD is the double-materiality principle. Companies must report sustainability information if a topic is material from either an impact or a financial perspective (Wunder, 2023, p. 114). The regulation therefore follows an “or” logic. While the German translation may allow for different interpretations, the English version and supervisory practice clearly confirm the “or” rule, meaning that one perspective alone is sufficient to trigger reporting obligations (Fink & Schmidt, 2023, p. 112). German authorities apply this interpretation consistently, making it binding for all materiality assessments (Commission, 2023).

Another major change concerns the reporting boundary. Companies must now disclose not only their own impacts but also sustainability effects along the entire value chain, including suppliers, customers, and other business partners (Kubeneck, Burwieck & Franck, 2023, p. 517). This requirement closely aligns with the German Supply Chain Act (LkSG) and the forthcoming EU CSDDD, resulting in a coherent and increasingly integrated regulatory framework (FMA, 2025, p. 130).

Supervisory authorities play an important role in shaping how banks apply double materiality. The Federal Financial Supervisory Authority (BaFin) sets clear expectations for the management of ESG risks. In the updated Minimum Requirements for Risk Management (MaRisk) from May 2024, BaFin emphasises that ESG factors must be understood as drivers of traditional financial risks and integrated into decision-making processes (BaFin, 2024, pp. 5, 10). Banks are therefore required to identify, monitor and, where feasible, quantify ESG risks within their existing risk-management systems (BaFin, 2024, pp. 31, 117). BaFin follows a principles-based approach that allows for proportionality and risk-oriented supervision (BaFin, 2024, p. 7).

Overall, the CSRD does not simply broaden disclosure requirements (Feisel & Makowka, 2024, p. 65). It fundamentally increases expectations regarding transparency, governance, and risk management (Deloitte, 2025, p. 2). As a result, sustainability considerations have shifted in German banks from being mainly reputational and reporting-related to becoming an integral part of strategic and operational decision-making (Mosler, 2024, p. 32).

2.2.3.3.2 National context in Austria

Following the discussion of the German context, it is necessary to examine the situation in Austria. As in Germany, the CSRD considerably expands the number of companies subject to sustainability reporting and requires significant changes in governance, data management and internal control systems (Baumüller, Haring & Merl, 2022, p. 510). Across the EU, around 50,000 companies will fall under the new rules (Feisel & Makowka, 2024, p. 66). In Austria, the increase is particularly striking: while previously only about 90 public-interest entities had to report under § 243b UGB, roughly 2,000 companies will now be in scope (Baumüller, Haring & Merl, 2022, p. 510). This marks a significant shift in Austria's regulatory landscape and raises expectations regarding transparency and accountability.

To implement the CSRD, Austria plans to introduce a dedicated NaBeG, similar to the approach in Germany (Fremgen & Nitschinger, 2024). A draft law was published by the Austrian Federal Ministry of Justice (BMJ) on 13 January 2025 and opened for consultation (BMJ, 2025, p. 3). As of early 2025, the legislative process was still ongoing. Under the new framework, Austrian companies will be required to apply the ESRS (BMJ, 2025, p. 2). Implementation is coordinated between the Austrian Federal Ministry of Finance (BMF), the BMJ and the Austrian Financial Reporting and Auditing Committee (AFRAC), ensuring alignment with EU requirements (BMJ, 2025, p. 2).

In the supervisory framework, the FMA plays a central role (Feisel & Makowka, 2024, p. 65). As the link between EU regulation and national oversight, the FMA issues supervisory priorities, guidelines and expectations for regulated institutions (FMA, 2025, pp. 24, 27). Although this guidance is not binding beyond legal requirements, it is widely followed in practice (FMA, 2025, p. 22).

A key feature of the Austrian approach is that sustainability risks are not treated as a separate category. Instead, ESG factors must be integrated into existing risk categories and embedded in strategy, governance and risk-management processes, in line with ECB expectations and the EBA Guidelines on Loan Origination and Monitoring (FMA, 2025, pp. 78, 104, 147). Banks are therefore expected to identify, assess and report ESG risks in the same way as conventional financial risks.

Supervisory priorities also highlight the importance of double materiality. Institutions must conduct and document a comprehensive double-materiality assessment, explaining the methodologies and criteria applied (Fremgen & Nitschinger, 2024, p. 224; FMA, 2025, p. 167). The FMA places particular emphasis on the availability of reliable sustainability data. It also prioritises nature- and biodiversity-related risks, which are viewed as systemic and potentially severe, in line with the ECB's 2024–2026 supervisory priorities on climate and nature (FMA, 2025, pp. 25, 31, 73, 85).

Overall, the CSRD not only extends reporting obligations in Austria but also strengthens the integration of sustainability within governance structures and supervisory practice. As in Germany, double materiality serves as the central analytical starting point for sustainability reporting and is becoming an important tool for strategic decision-making in Austrian banks (Fremgen & Nitschinger, 2024, p. 224).

2.2.3.4 Recent developments

At the European level, sustainability reporting regulation is currently undergoing substantial change. With the introduction of the Omnibus Package in February 2025, the European Commission initiated one of the most far-reaching revisions of the CSRD framework so far. The reform package, divided into Omnibus I and Omnibus II, aims to streamline reporting requirements, reduce administrative complexity and make the CSRD more manageable for companies of different sizes (Bertram, 2025, p. 170).

The first reform element, already formally adopted, is the "Stop-the-Clock" mechanism (Bertram, 2025, p. 171). This measure postpones the reporting start date for many firms. Large non-listed companies (Wave 2) will begin reporting in 2027, while listed SMEs (Wave 3) start in 2028. Only the earliest reporting group — large public-interest entities with more than 500 employees (Wave 1) — remains required to report from the 2024 financial year onwards (European Parliament & Council, 2025; Bertram, 2025, p. 173). The aim is to give companies more time to develop internal systems and improve data quality before reporting becomes mandatory.

To support early reporters, the Commission has introduced "Quick Fix" measures. These temporary reliefs allow Wave 1 firms to apply simplified disclosure requirements for the financial years 2025 and 2026 (KPMG, 2025). For example, companies may defer disclosures in areas such as biodiversity (ESRS E4), value-chain workers (ESRS S2), affected communities (ESRS S3) and consumers (ESRS S4). The intention is to reduce short-term reporting pressure and allow firms to focus on high-impact areas such as climate and workforce reporting (EY, 2025, p. 15). These reliefs apply to reporting periods starting on or after 1 January 2025 and provide legal clarity during the early implementation phase (Nicolo, Zampone & Polcini, 2025, p. 48).

The second phase of reforms, Omnibus II, is still under negotiation. It aims to introduce more fundamental, long-term changes. Current proposals suggest limiting the CSRD to companies with more than 1,000 employees and either €50 million in turnover or €25 million in total assets. This would reduce the number of firms required to report by roughly 75–80% (Bertram, 2025, pp. 174–175). Additional proposals include simplifying the ESRS, removing sector-specific standards and maintaining limited assurance instead of moving toward reasonable assurance in the near future. Final adoption is expected no earlier than mid-2026, followed by a one-year transposition period (EY, 2025, p. 4).

For companies, these developments have two main implications. On the one hand, the reforms are expected to significantly reduce administrative costs — estimated at around €6.3 billion per year across the EU — and give firms more time to strengthen reporting processes, internal controls and data systems. On the other hand, ongoing negotiations create uncertainty because the final scope and disclosure requirements are not yet fixed. Reducing reporting obligations may also limit transparency and comparability and could weaken environmental and human-rights safeguards (Bertram, 2025, pp. 170–172).

In this environment, voluntary disclosure becomes increasingly important. Companies that go beyond minimum requirements often gain investor confidence, improve access to sustainable finance and strengthen their reputation in capital markets (EY, 2025, p. 14).

Despite these procedural adjustments, the double-materiality principle remains the central analytical foundation of EU sustainability reporting. It continues to guide how firms must identify and disclose financially relevant and impact-related sustainability topics. Even with extended timelines and simplified standards, a thorough double-materiality assessment remains essential for credible and decision-useful reporting (Nicolo, Zampone & Polcini, 2025, p. 4). Companies are therefore advised to closely follow regulatory developments, adapt reporting practices accordingly and embed double-materiality analysis firmly within governance and strategy processes (EY, 2025, p. 30).

2.2.4 Linking Theories to Double Materiality – Implications for the Banking Sector

The principle of double materiality puts the theoretical ideas discussed earlier into practice. By combining financial and impact perspectives, it operationalises the concepts of accountability, legitimacy and stakeholder engagement within a concrete reporting process. Instead of functioning as a simple compliance task, double materiality creates a flexible framework that acknowledges the reciprocal relationship between companies, their stakeholders and the wider social and environmental systems in which they operate (Wunder, 2023, p. 113).

In this way, the concept connects the normative expectation that companies act responsibly with the requirement to provide transparent, comparable and decision-useful sustainability information. The CSRD and ESRS embed these ideas in binding disclosure rules, which are intended to ensure consistent and reliable reporting practices (Commission, 2023, ESRS 1, para. 19). By requiring firms to explain their strategies, governance structures, actions, metrics and targets, the framework integrates sustainability into day-to-day corporate management and long-term planning (Commission, 2023, ESRS 2, para. 63, 74). As a result, transparency and accountability become part of an ongoing organisational process rather than a once-a-year reporting exercise (Mosler, 2024, p. 32).

Double materiality also helps reduce the risk of greenwashing. Assessing both financial implications and societal impacts, combined with external assurance, strengthens the credibility of reported information and supports the allocation of capital towards genuinely sustainable activities (Wunder, 2023, p. 114; Mosler, 2024, p. 4). This added transparency builds trust among stakeholders and reinforces corporate legitimacy (von Keitz & Borcherding, 2023, p. 2897).

A further core component of the framework is the requirement for continuous stakeholder engagement. The ESRS specify how companies must identify, prioritise and integrate stakeholder views into their decision-making processes (Commission, 2023, ESRS 2, para. 43). This procedural emphasis increases legitimacy by ensuring that reporting reflects the expectations and concerns of those affected by corporate activities (Bellucci & Manetti, 2019, p. 101).

On this basis, the following section turns to the banking sector.

Banks hold a unique position in the economy due to their systemic relevance and their role as intermediaries between capital markets and the real economy. Because lending and investment decisions determine where financial resources flow, banks have considerable influence over the speed and direction of the transition to a sustainable economy (FMA, 2025, pp. 4, 8; Sebastiao, Tavares & Azevedo, 2024, pp. 7, 10). Their financing activities play a key role in determining whether economic activity aligns with EU climate targets, including the objective of achieving net-zero emissions by 2050 (FMA, 2025, p. 8; Sebastiao, Tavares & Azevedo, 2024, p. 17).

In this context, double materiality has particular importance for banks. They must assess both the financial implications of sustainability risks for their business model and the social and environmental consequences of their lending and investment decisions. This dual perspective challenges traditional risk assessment and requires the integration of ESG considerations into governance, strategy and reporting processes (Bundesbank, 2023, p. 82; FMA, 2025, p. 70). In practice, banks need to understand and disclose how their portfolios contribute to, or help mitigate, environmental and social impacts across value chains.

Double materiality also shapes the legitimacy expectations placed on financial institutions. Beyond meeting regulatory rules, banks are increasingly expected to show how their capital allocation supports broader societal sustainability goals. Insufficient or non-credible disclosure may therefore lead not only to reputational risks but also to reduced investor confidence and challenges in accessing funding (Mosler, 2024, p. 32; Sebastiao, Tavares & Azevedo, 2024, p. 471).

Overall, double materiality acts both as a reporting requirement and a governance tool. It links transparency, accountability and financial stability, formalising the broader social expectations placed on banks. This positions sustainability reporting as an essential element of long-term resilience and legitimacy in the financial sector.

The following chapters build on these conceptual and sector-specific foundations to examine how double materiality is implemented in practice and to identify current empirical challenges and research gaps.

3. Methodology

3.1 Research Design

To address the research questions regarding the implementation of the double materiality principle in the German and Austrian banking sectors in line with the ESRS, a qualitative comparative case study design was selected (Hering & Jungsmann, 2020; Przyborski & Wohlrab-Sahr, 2022). This design is appropriate because the double materiality assessment represents a complex, multi-layered and institutionally embedded process that cannot be captured adequately through quantitative methods. Qualitative case studies enable a detailed reconstruction of how organisations interpret new regulatory requirements, translate them into internal processes and embed them within governance structures (Bücker, 2020). They are therefore particularly suitable for analysing a phenomenon that is both novel in practice and tightly coupled to institutional and organisational contexts.

The comparative approach—focusing on banks in Germany and Austria—further strengthens the analytical design. By comparing two highly similar institutional environments that nonetheless differ in regulatory cultures, supervisory traditions and organisational structures, the study is able to identify both convergences and context-specific differences in ESRS implementation. This aligns with comparative research logic, where “most similar systems” designs are used to isolate subtle explanatory factors and uncover variation in institutional practices (Hering & Jungsmann, 2020; Przyborski & Wohlrab-Sahr, 2022).

The empirical basis of the study is a systematic document analysis of sustainability reports published by selected banks for the 2024 reporting year (Bowen, 2009). Sustainability reports constitute the central medium through which organisations disclose their double materiality assessments and demonstrate ESRS compliance. Because these reports are publicly accessible, standardised, audited and highly structured, they provide a rich and legitimate data source for a rule-guided qualitative content analysis (Mayring, 1994; Mayring & Fenzl, 2022). They also reflect the institutions' self-presentation under regulatory pressure and therefore allow insights into how methodological choices, interpretations and justifications are communicated.

The analysis follows the qualitative content analysis approach developed by Mayring and Kuckartz. This combined approach is necessary because Mayring and Kuckartz cover different—but complementary—dimensions of qualitative analysis. Mayring (1994) provides the core methodological logic: a systematic, rule-based and transparent procedure for building deductive and inductive categories, ensuring intersubjective traceability and methodological rigour. Kuckartz (2018) extends this foundation by emphasising thematic structuring, multi-level category systems and cross-case comparison—an essential element of this study, which examines not only individual banks but also country-level patterns. The category system was developed using a deductive–inductive strategy: deductively from ESRS 1 and ESRS 2 as well as normative theories of corporate reporting; inductively through iterative engagement with the empirical material (Kuckartz, 2018; Mayring & Fenzl, 2022).

In addition, Bowen (2009) provides the methodological justification for treating sustainability reports as formalised, data-rich documents suitable for systematic qualitative analysis. His work clarifies how documents function as naturally occurring data, how they encode institutional meaning, and how they can be analysed to reconstruct organisational practices. Without Bowen's contribution, the exclusive reliance on sustainability reports would lack methodological grounding. Taken together, these three authors form a coherent methodological triad: Mayring guarantees conceptual rigour and structured category formation; Kuckartz ensures comparability and thematic differentiation; Bowen provides the empirical logic for document-based analysis. They do not duplicate each other but contribute distinct methodological components that are all necessary for this research design.

This triangulated design makes it possible to systematically examine how institutional and organisational factors shape the practical implementation of the double materiality principle. The aim is not statistical representativeness but a theoretically grounded, context-sensitive and empirically rich understanding of how banks operationalise ESRS requirements and embed them in governance, strategy and risk processes.

Because the study relies exclusively on publicly disclosed sustainability reports, internal deliberations, informal dynamics and undocumented challenges can only be reconstructed insofar as they appear in the official reports (Salheiser, 2022; Bowen, 2009). The analysis therefore focuses on the externalised institutional perspective—how banks formally interpret regulatory expectations and communicate their methodological approaches and governance structures.

3.2 Case Selection

3.2.1 Introduction to case selection

Case selection plays a central role in qualitative comparative research, as the validity and transferability of findings depend on a clearly defined and well-justified selection of cases and their regulatory and institutional environments (Przyborski & Wohlrab-Sahr, 2022, p. 125; Hering & Jungsmann, 2020, p. 685). To ensure comparability with regard to the implementation of the ESRS and the double materiality principle, this study adopts a Most Similar Systems Design (MSSD) (Anckar, 2008, p. 389). This design enables the systematic comparison of cases that share essential characteristics while differing in specific institutional features relevant to the research focus.

Germany and Austria were selected as the two case countries because both are EU member states operating under the same overarching regulatory framework. This shared regulatory basis ensures that the banks examined are subject to identical European sustainability reporting requirements, while country-specific elements—such as differences in supervisory structures or market organization—serve as contextual variables that may influence the practical implementation of double materiality (EU, 2025; Anckar, 2008, p. 2244). By holding regulatory conditions constant and capturing national institutional nuances, the comparative design supports a nuanced understanding of converging and diverging reporting practices within the European banking sector.

The subsequent sections elaborate on the theoretical and empirical rationale for selecting Germany and Austria as the cases under investigation. They also specify the criteria and motivations guiding the selection of individual commercial banks within these national contexts.

3.2.2 Rationale for Country Selection: Germany and Austria

The selection of Germany and Austria as case studies follows the methodological logic of the MSSD. This design focuses on analysing countries that are broadly comparable in their regulatory, institutional, and structural frameworks, yet exhibit sufficient variation to explain differences in the implementation and interpretation of shared policy frameworks—in this case, the double materiality principle in the banking sector (Anckar, 2008, p. 389). Both countries are member states of the European Union (EU, 2025) and are therefore subject to uniform requirements under the CSRD and the ESRS (Commission, 2023). In addition, Germany and Austria share significant cultural, linguistic, and legal similarities (Auswärtiges Amt, 2025), providing a consistent foundation for comparison and reducing the likelihood that cross-country differences arise from external contextual factors rather than from institutional or supervisory structures.

Despite these similarities, the two cases differ in several targeted institutional dimensions that are analytically relevant for this study. With regard to supervisory practice, the FMA defined specific audit priorities for the 2024 reporting year, emphasising consistency between IFRS financial statements, non-financial reporting, and materiality assessments (FMA, 2025, pp. 4, 7). In contrast, Germany already demonstrated widespread ESRS adoption among listed companies, with 95 percent reporting fully or partially in accordance with ESRS despite the national CSRD transposition process not yet being finalised (Deloitte, 2025, p. 1). These divergences reflect differing institutional dynamics and supervisory priorities, which may shape the practical operationalisation of double materiality within financial institutions.

Structural differences in banking market composition add an additional explanatory dimension. The German banking landscape is characterised by a broad and competitive three-pillar model comprised of savings banks, cooperative banks, and commercial banks (Flötotto et al., 2023, p. 5). By comparison, the Austrian banking sector is more concentrated, with total assets of approximately EUR 1.3 trillion (Oesterreichische Nationalbank, 2025, p. 15), and has a pronounced regional orientation towards Central, Eastern, and South-Eastern Europe (CESEE). Austrian banks also display comparatively higher exposure to the commercial real estate sector, representing 43 percent of corporate lending compared to the euro-area average of 27 percent (Oesterreichische Nationalbank, 2025, p. 18). These structural variations introduce relevant context for examining how institutional and market characteristics may influence the design and execution of materiality assessments.

Alternative comparator countries, such as Switzerland, were intentionally excluded. Although Switzerland has partially aligned its reporting standards with the former EU Non-Financial Reporting Directive, it operates outside the EU regulatory environment and is therefore not fully comparable regarding the implementation of the CSRD and ESRS, whose scope and structure exceed prior NFRD requirements (PwC, 2024).

Focusing on Germany and Austria thus enables a controlled cross-country comparison within a uniform European regulatory setting while still capturing institutional and market-driven variation. This approach provides a robust analytical basis for examining national supervisory practices, strategic reporting approaches, and sector-specific characteristics as central determinants in the implementation of the double materiality principle.

3.2.3 Selection of banks and Sampling Logic

The selection of four banks per country (N = 8) follows the logic of a qualitative small-N research design (Legewie, 2022, p. 707). Such designs prioritise an in-depth, context-sensitive examination of individual cases, rather than the quantitative generalisation of findings to a broader population (Lieberson, 1991, p. 307). By focusing on a limited number of institutions, this study is able to explore differing organisational approaches to the implementation of double materiality in detail, while ensuring a theoretically grounded interpretation of underlying institutional mechanisms (Akremi, 2019, p. 405).

The decision to include four banks from each country reflects a methodological balance. A sample of this size allows for sufficient variation within each national context to enable meaningful within-system comparison, while at the same time preserving analytical depth, which might be compromised with substantially larger qualitative samples (Hering & Jungsmann, 2020, p. 621).

Bank selection followed a criteria-based purposive sampling strategy (Przyborski & Wohlrab-Sahr, 2022, p. 406), ensuring both diversity in business models and comparability in accordance with the Most Similar Systems Design (Akremi, 2019, p. 405; Legewie, 2022, p. 711). A central criterion was the size and market relevance of the institutions. Only banks that can be regarded as major actors within their respective national financial systems were included (Deutsche Bundesbank, 2025, p. 1). In Germany, this comprised large commercial banks, regional state banks (Landesbanken), and central cooperative institutions (Deutsche Bundesbank, 2025, p. 204), with a combined balance sheet total of approximately EUR 2.8 trillion in 2024 (Deutsche Bundesbank, 2025, p. 50). In Austria, the total consolidated assets of the national banking sector amounted to roughly EUR 1.24 trillion in mid-2024 (Oesterreichische Nationalbank, 2025, p. 1).

Systemic relevance constituted a further key selection criterion. Other Systemically Important Institutions (O-SIIs) were prioritised due to their size, interconnectedness, and the heightened regulatory and supervisory expectations placed upon them (Oesterreichische Nationalbank, 2024). Their central role within the financial system positions them as frontrunners in the adoption and operationalisation of complex sustainability-related requirements (Deutsche Bundesbank, 2025).

Additionally, the sample reflects structural diversity in terms of business model types, including universal banks, cooperative central banks, and public Landesbanken, in order to capture the range of strategic orientations present within the sector (Deutsche Bundesbank, 2025, p. 10).

Finally, the availability of high-quality reporting served as a practical criterion. A comprehensive document analysis requires sustainability and annual reports with sufficient granularity and transparency (Bowen, 2009, pp. 27–31). Given their size and supervisory importance, the selected institutions can be expected to demonstrate advanced sustainability reporting maturity and well-established internal processes (Medjedović, 2022, p. 277).

The deliberate selection of institutions based on size, systemic relevance, business model type, and reporting quality ensures maximum variation within each national context, while maintaining comparable framework conditions between Germany and Austria (Hering & Jungsmann, 2020, p. 678; Akremi, 2019, p. 405). This approach supports analytical generalisation by enabling the identification of recurring institutional patterns and mechanisms in the implementation of the double materiality principle across two structurally similar, yet institutionally distinct, banking systems.

3.2.4 Bank profiles

The empirical basis of this study consists of eight credit institutions—four from Germany and four from Austria. These banks form the sample for the qualitative document analysis examining the implementation of the Double Materiality Principle under the ESRS (BAWAG, 2024; Bank, 2024; Commerzbank, 2024; DZ Bank, 2024; Erste, 2024; LBBW, 2024; RBI, 2024; UniCredit, 2024). Presenting the selected institutions in detail serves to ensure transparency regarding the heterogeneity of the sample (Akremi, 2019, p. 313) and to substantiate the rationale behind the strategic case selection within the comparative research design (Przyborski & Wohlrab-Sahr, 2022, p. 121).

The empirical foundation of the analysis consists primarily of publicly available sustainability and annual reports, complemented by statistical data that enable a contextualised description of each institution's characteristics and reporting maturity (BAWAG, 2024; Bank, 2024; Commerzbank, 2024; DZ Bank, 2024; Erste, 2024; LBBW, 2024; RBI, 2024; UniCredit, 2024). This approach ensures that the interpretation of reporting practices is grounded in a thorough understanding of institutional size, strategic orientation, ownership structure, and market positioning.

By deliberately incorporating institutions that vary in size, ownership form, business model, and degree of experience with sustainability reporting, the sample reflects the diversity of banking structures within both national contexts. This diversity facilitates the identification of distinct patterns and approaches to ESRS implementation across the two financial systems (Deutsche Bundesbank, 2025, pp. 1, 2, 590, 592, 594; Akremi, 2019, pp. 313, 330).

3.2.4.1 Germany

3.2.4.1.1 Deutsche Bank AG

Deutsche Bank Aktiengesellschaft (AG) is one of Germany's largest and most influential financial institutions and operates globally as a universal bank. As a self-described "Global Hausbank" (DB, 2025), it serves as a central financial partner for private clients, corporations, institutional investors, and public-sector entities across all major international financial markets. The bank's business model combines retail and corporate banking, investment banking, and asset management under a unified structure, positioning it as a key intermediary between the German economy and global capital markets (DB, 2025). As of 31 December 2024, Deutsche Bank reported consolidated total assets of EUR 1,387,177 million (Deutsche Bank, 2024, p. 65), reflecting its significant balance-sheet scale and diversified portfolio across geographies and business segments.

According to the classification of the Single Supervisory Mechanism (SSM), Deutsche Bank belongs to the highest institutional category, which includes only a few European banks with total assets exceeding EUR 1 trillion (SSM, 2025). This classification underscores its systemic importance and the level of regulatory scrutiny to which it is subject. The European Systemic Risk Board (ESRB, 2023, p. 10) identifies Deutsche Bank as a systemically important financial institution at both the national and European level due to its size, cross-border exposures, and close interlinkages with global financial markets. Consequently, the bank plays a pivotal role in the stability of the European financial system and in the transmission of monetary and regulatory policy across jurisdictions.

The inclusion of Deutsche Bank in this study is justified by several factors: its systemic relevance, its comprehensive reporting obligations under the CSRD and ESRS, and its designation as a listed Public Interest Entity (PIE). As one of the so-called "Wave 1 reporters," Deutsche Bank has been required to implement the European Sustainability Reporting Standards in full starting from the 2024 financial year (Commission, 2023). Given its global reach, regulatory exposure, and established governance structures, Deutsche Bank represents an instructive case for examining the early application of the double materiality principle within a complex, capital-market-oriented banking environment. Its approach provides valuable insights into how large financial institutions translate the ESRS framework into practice, balance regulatory precision with sustainability objectives, and align corporate strategy with evolving expectations of accountability and transparency.

3.2.4.1.2 Commerzbank AG

Commerzbank AG is one of Germany's leading universal banks and ranks among the country's large and systemically relevant financial institutions (Deutsche Bundesbank, 2025, p. 203). The bank's business model combines a strong domestic focus with selected international activities, providing a comprehensive range of financial services to small and medium-sized enterprises (SMEs), large corporate clients, and private customers (Commerzbank, 2025, p. 61). With total assets between EUR 500 and 1,000 billion as of the 2024 reporting period, Commerzbank is classified by the Single Supervisory Mechanism (SSM, 2025) as a systemically important institution. This classification reflects its size, interconnectedness, and essential role in the German banking system.

Commerzbank occupies a central position within the German financial landscape, particularly through its historical and ongoing role as a key financing partner for the German Mittelstand—the network of small and medium-sized enterprises that forms the backbone of the national economy (Commerzbank, 2025, p. 61). Its activities span traditional lending, trade finance, capital market services, and increasingly, sustainable financing solutions aimed at supporting the green and digital transformation of its client base. The bank's dual focus on corporate clients and private customers positions it as a bridge between the retail and corporate banking sectors, giving it a uniquely comprehensive view of Germany's real economy.

The inclusion of Commerzbank in this study broadens the comparative perspective by complementing the global, capital-market-oriented profile of Deutsche Bank with a major institution that operates primarily within a national and SME-centered context. This contrast enables a richer understanding of how different business models influence the operationalisation of the double materiality principle under the ESRS framework. Notably, Commerzbank has demonstrated a proactive stance toward sustainability reporting by beginning to implement ESRS requirements voluntarily, ahead of the official regulatory timeline (Commerzbank, 2024, p. 47). This early adoption reflects both strategic anticipation of upcoming obligations and a broader commitment to transparency and responsible corporate conduct.

Accordingly, Commerzbank represents an instructive case for analysing the early and voluntary integration of the double materiality principle in the German banking context. Its approach offers valuable insights into how a large but domestically focused institution interprets and embeds sustainability standards, balancing regulatory compliance with a forward-looking commitment to environmental and social accountability.

3.2.4.2.3 Deutsche Zentral-Genossenschaftsbank AG

Deutsche Zentral-Genossenschaftsbank AG (DZ Bank AG) serves as the central institution of Germany's cooperative banking sector and functions as the apex entity of the Genossenschaftliche FinanzGruppe Volksbanken Raiffeisenbanken, a network comprising around 700 independent cooperative banks nationwide (DZ Bank, 2025). Within the German banking system, it is officially classified as an institution with central and support functions, fulfilling specialised roles in liquidity management, refinancing, and strategic coordination for the cooperative network (Deutsche Bundesbank, 2025, p. 160). According to the classification of the Single Supervisory Mechanism (SSM), DZ Bank falls within the total asset range of EUR 500–1,000 billion (SSM, 2025), placing it among Germany's largest financial institutions by consolidated balance sheet size.

The systemic relevance of DZ Bank arises primarily from its unique position at the intersection of cooperative principles and modern capital market operations. Acting as a central clearing, refinancing, and service institution, it supports the local Volksbanken and Raiffeisenbanken in providing banking, investment, and insurance services to millions of private and corporate clients across Germany (DZ Bank, 2025). Unlike shareholder-driven commercial banks, DZ Bank operates on cooperative foundations based on member ownership, mutuality, and long-term value creation rather than short-term profit maximisation (DZ Bank, 2024, p. 13). This institutional structure gives rise to a distinct governance logic that prioritises collective stability and the economic empowerment of member banks.

Including DZ Bank in this study ensures that the analysis captures the institutional diversity of the German banking system by incorporating the cooperative sector alongside privately owned universal banks. The cooperative model's embedded social and ethical orientation provides an important counterpoint to the capital-market-driven strategies of commercial institutions. It allows for a comparative exploration of whether and how such governance structures influence the understanding and operationalisation of the double materiality principle under the ESRS framework.

Moreover, DZ Bank's inclusion enables a deeper examination of how cooperative institutions translate regulatory requirements into practices consistent with their value-based missions. Given its dual identity as both a network leader and a systemically relevant financial institution, DZ Bank offers an illustrative example of how collective accountability and sustainability-oriented governance can coexist within a complex regulatory and market environment.

3.2.4.2.4 Landesbank Baden-Württemberg

Landesbank Baden-Württemberg (LBBW) is a public-law universal bank (Anstalt des öffentlichen Rechts) that occupies a distinctive position within the German banking system through its dual institutional role. It operates both as a state bank (Landesbank) serving the federal state of Baden-Württemberg and as the central institution for the regional savings banks (Sparkassen) in Baden-Württemberg, Rhineland-Palatinate, and Saxony (LBBW, 2025). As of 31 December 2024, the LBBW Group reported consolidated total assets of EUR 356.4 billion (LBBW, 2024, p. 2). According to the Single Supervisory Mechanism (SSM, 2025), LBBW falls within the total asset bracket of EUR 300–500 billion and is classified as a systemically important institution, subject to direct European banking supervision.

LBBW's importance in the German financial system derives from its dual mandate, which combines regional public-service responsibilities with competitive market operations. As a Landesbank, it acts as the financial arm of its public shareholders and supports the regional economy through long-term lending, infrastructure financing, and capital-market services. Simultaneously, it serves as a central institution for the affiliated savings banks, providing liquidity management, refinancing, and risk management support within the broader Sparkassen-Finanzgruppe (LBBW, 2025). A key area of business activity lies in commercial real-estate and corporate financing, where LBBW has developed significant expertise and occupies a leading position in both the domestic and European markets (LBBW, 2024, p. 23).

Including LBBW in this study introduces a public-sector financial institution into the analysis, thereby expanding the comparative framework to encompass different ownership models and governance logics within the German banking landscape. Unlike privately held or cooperative banks, LBBW operates under a public-law mandate that prioritises economic stability, regional development, and the common good alongside profitability. This distinctive institutional form provides an opportunity to explore how public-sector values influence the implementation of the ESRS and the interpretation of the double materiality principle.

By examining LBBW, the study captures an important dimension of institutional diversity within the German banking sector. The case illustrates how a publicly owned bank integrates sustainability reporting into its governance and risk management structures while aligning it with a broader socio-economic mission. As such, LBBW represents a valuable point of comparison for understanding how regulatory, ethical, and strategic objectives intersect in the context of double materiality, particularly within non-private organisational settings.

3.2.4.2 Austria

3.2.4.2.1 Erste Group Bank AG

Erste Group Bank AG is one of Austria's largest and most influential financial institutions. Operating as a universal bank, it combines a strong domestic presence with a pronounced strategic focus on retail and corporate banking across CESEE (Erste Group, 2024, p. 19). As of 31 December 2024, the Group reported consolidated total assets of EUR 353.7 billion (Erste Group, 2024, p. 29). Within the classification framework of the Single Supervisory Mechanism (SSM, 2025), Erste Group falls into the total asset range of EUR 300–500 billion and is designated as a systemically important institution. This classification reflects its extensive market footprint, cross-border integration, and relevance for regional financial stability.

Erste Group's significance extends beyond its size. As one of Austria's leading universal banks, it serves millions of retail customers and corporate clients, positioning itself as a key enabler of economic development across seven core CESEE markets. Its business model emphasises long-term partnerships, responsible lending, and financial inclusion, reflecting a commitment to promoting prosperity and stability within its regional sphere of influence (Erste Group, 2024, p. 2). Through its strong regional network, Erste Group also contributes to deepening financial integration within the European Union's eastern member states, thereby bridging mature Western European markets and emerging economies in the region.

The inclusion of Erste Group in this study allows for an in-depth examination of how a large, publicly listed, and internationally active banking group approaches the implementation of the

ESRS and the double materiality principle. As a listed PIE, Erste Group operates under heightened regulatory expectations and capital-market transparency requirements, which shape the way sustainability reporting is institutionalised and communicated.

By analysing Erste Group, this study captures how sustainability reporting is embedded within a complex, cross-border organisational structure that must balance regulatory compliance, investor accountability, and regional development objectives. The case thus provides valuable insight into how multinational banking groups operationalise the ESRS framework across diverse national contexts while maintaining coherence in governance and sustainability strategy. Erste Group therefore serves as a representative and analytically rich case for understanding the early adoption of the double materiality principle in a multinational and regionally integrated institutional environment.

3.2.4.2.2 Raiffeisen Bank International AG

Raiffeisen Bank International AG (RBI) is one of Austria's leading universal banks and serves as the central institution of the Austrian Raiffeisen sector. The bank positions itself as a strategic "bridge to the CEE region," reflecting its deep historical and operational ties with Central and Eastern Europe (RBI, 2024, p. 19). As of 31 December 2024, the Group reported consolidated total assets of EUR 199.9 billion (RBI, 2024, p. 17). Within the classification system of the Single Supervisory Mechanism (SSM, 2025), RBI falls into the total asset category of EUR 150–300 billion and is designated as an Other Systemically Important Institution (O-SII). This designation underscores its relevance for both the Austrian and regional financial systems due to its scale, cross-border integration, and networked business model.

RBI's importance in this study stems from its hybrid institutional identity and distinctive regional orientation. As the central entity of the Austrian Raiffeisen sector, the bank operates within a cooperative tradition rooted in member ownership and local embeddedness, while simultaneously functioning as a modern, internationally active financial group with a strong market presence across eleven Central and Eastern European countries. This dual character—combining cooperative heritage with capital-market exposure—illustrates a unique governance model that balances social responsibility with commercial competitiveness (RBI, 2024, p. 22).

RBI's inclusion also reflects its pioneering role in sustainable finance within the Austrian banking landscape. The bank was the first Austrian financial institution to sign the UNEP Finance Initiative's *Principles for Responsible Banking*, demonstrating a long-standing commitment to aligning its operations with international sustainability standards (RBI, 2024, p. 24). This early engagement positions RBI as a frontrunner in the practical integration of sustainability into governance, risk management, and strategic planning.

By examining RBI, the study captures how a regionally anchored yet internationally active bank interprets and implements the ESRS and the principle of double materiality within a cross-border and institutionally hybrid context. The case provides valuable insight into how cooperative values, stakeholder orientation, and international regulatory alignment can coexist and reinforce one another in shaping sustainable banking practices. As such, RBI represents an analytically rich example of how legacy, geography, and strategic ambition converge in the evolution of sustainability governance in the European financial sector.

3.2.4.2.3 BAWAG Group AG

BAWAG Group AG (BAWAG) is a publicly listed holding company that operates as a universal bank with a diversified and efficiency-oriented business model (BAWAG, 2024, p. 11). As of 31 December 2024, the Group reported consolidated total assets of approximately EUR 65 billion, placing it within the EUR 50–75 billion asset range under the classification of the Single Supervisory Mechanism (SSM, 2025). Within this framework, BAWAG is designated as a systemically important institution, reflecting its size, interconnectedness, and relevance within both the Austrian and broader European financial systems.

BAWAG's significance for this study lies in its distinctive strategic orientation and geographical footprint, which set it apart from other large Austrian banks with a stronger Central and Eastern European focus. While institutions such as Erste Group and RBI emphasise cross-border operations in CESEE markets, BAWAG pursues a more internationally diversified strategy with key operations and partnerships in Germany, Switzerland, and the United States (BAWAG, 2024, p. 121). This outward-looking orientation positions the bank as a relevant counterpoint within the Austrian sample, offering insights into how a capital market–focused and profit-driven institution integrates sustainability reporting within a more globalised business model.

Unlike the regionally embedded cooperative or hybrid banking structures of its Austrian peers, BAWAG operates under a streamlined governance framework emphasising operational efficiency, shareholder value, and disciplined capital allocation. At the same time, the Group is increasingly aligning its reporting and risk management practices with European sustainability standards, reflecting a pragmatic and data-driven approach to Environmental, Social, and Governance integration.

The inclusion of BAWAG in this comparative study therefore enables a broader understanding of how the ESRS and the double materiality principle are interpreted and applied within a different strategic and institutional logic — one that is more market-oriented, international, and performance-focused. The case provides an important perspective on how regulatory compliance and sustainability objectives are reconciled in a business model shaped by global capital markets rather than regional development mandates.

3.2.4.2.4 UniCredit Bank Austria AG

UniCredit Bank Austria AG (UCBA) is one of Austria's largest and most established universal banks and operates as a key subsidiary of the Italian UniCredit S.p.A. Group (BAWAG, 2024, p. 97). The UniCredit Group itself is classified as a Significant Institution under the Single Supervisory Mechanism (SSM, 2025) and falls within the asset category of EUR 500–1,000 billion in total consolidated assets. As of 31 December 2024, the Group reported total assets of approximately EUR 981 billion (UniCredit, 2024, p. 7). Within Austria, UCBA is therefore regarded as a systemically important institution, both because of its size and its role as a central conduit between the Austrian and Italian banking systems.

The UniCredit Group operates as a semi-international bank with a pronounced strategic focus on the Central and Eastern European (CEE) region (BAWAG, 2024, p. 6). Through its network of subsidiaries, including UniCredit Bank Austria, the Group maintains a strong presence in several CEE markets, where it competes directly with other major regional banking groups such as Erste Group and Raiffeisen Bank International. This regional orientation, combined with a centralised corporate governance structure, positions UniCredit as a major cross-border player in European banking.

The inclusion of UniCredit Bank Austria in this study is particularly valuable because it represents a cross-border application of the ESRS and the double materiality principle within an integrated multinational group structure. While UniCredit S.p.A. conducts ESRS reporting at the consolidated group level, the Austrian subsidiary participates in the process through coordinated downstream integration, aligning its data collection and materiality assessments with group-wide methodologies and standards (BAWAG, 2024, p. 132).

This structure provides a compelling case for analysing how sustainability governance and reporting are operationalised in multinational banking groups that must reconcile centralised regulatory compliance with local contextual realities. It highlights the practical challenges of ensuring consistency and comparability in double materiality assessments across jurisdictions, languages, and supervisory frameworks. At the same time, it illustrates the potential of coordinated group-level reporting to enhance methodological standardisation and governance coherence within large, transnational financial institutions.

UniCredit Bank Austria thus serves as a critical case for understanding how European banking groups integrate the double materiality principle within complex corporate hierarchies — balancing top-down harmonisation with the need for local relevance and stakeholder engagement.

3.3 Data collection

The data collection for this master's thesis is based on a systematic analysis of the consolidated sustainability statements and annual reports of a total of eight banks—four from Germany and four from Austria. The study examines the reporting year 2024, which marks the start of the mandatory application of the CSRD for large public-interest entities, including the banking groups analysed (BAWAG, 2024; Bank, 2024; Commerzbank, 2024; DZ Bank, 2024; Erste, 2024; LBBW, 2024; RBI, 2024; UniCredit, 2024). The central data basis consists of sustainability reports prepared in accordance with the ESRS, as these standards provide the structural framework for implementing the Double Materiality Principle (Commission, 2023). Consequently, the 2024 reports serve as the first standardized and comparable dataset for empirically analysing the implementation of the ESRS requirements.

The study follows the approach of document analysis (Bowen, 2009, p. 27), which assumes that documents constitute "natural data" (Salheiser, 2022, p. 1119) that emerge independently of the research process. Sustainability reports are particularly suitable sources as they combine both regulatory and organization-specific content and contain key information on the strategic and operational implementation of sustainability reporting. They also enable a systematic analysis of how institutions address the ESRS requirements—particularly regarding the processes for identifying and assessing material impacts, risks, and opportunities, as well as the governance structures and strategic anchoring of sustainability (BAWAG, 2024; Bank, 2024; Commerzbank, 2024; DZ Bank, 2024; Erste, 2024; LBBW, 2024; RBI, 2024; UniCredit, 2024).

The documents were selected through a criteria-based purposive sampling approach (Przyborski & Wohlrab-Sahr, 2022, p. 406). Only publicly available digital reports were considered, provided they exhibited sufficient depth regarding materiality assessment, ESG strategy, and risk reporting. The 2024 reporting year ensures a high level of comparability, as all examined institutions report under identical regulatory conditions.

The resulting text corpus comprises extensive reports, typically ranging from 200 to 600 pages. To systematically analyse this volume of material, the method of qualitative content analysis was applied, which is particularly suitable for the structured evaluation of large textual datasets (Mayring & Fenzl, 2022, p. 633). Relevant passages concerning the Double Materiality Principle (DMP) were manually extracted, coded, and assigned to predefined analytical categories using Microsoft Excel. Excel served as a tool for tabular documentation, categorization, and cross-case comparison of findings between the examined institutions.

The development of the analytical categories followed a combined deductive–inductive approach: Deductive categories were theoretically derived from the ESRS disclosure requirements and normative theories of corporate reporting (Mayring & Fenzl, 2022, p. 637). Inductive categories emerged from the empirical material during analysis to adequately capture newly arising themes or national specificities (Kuckartz, 2018, p. 514).

To ensure transparency and consistency, all coding steps were systematically documented (Przyborski & Wohlrab-Sahr, 2022, p. 121). The Excel-based category system functioned as an “audit trail”, ensuring the reproducibility of coding decisions.

It should be noted that the analysis is limited to publicly available documents (Ohly & Weber, 2019, p. 97). Internal strategy papers, policies, or interviews with company representatives were not included. Thus, the study reflects the regulatory-framed self-representation of banks in their sustainability reports and primarily allows conclusions about the communicative implementation of the ESRS requirements. Statements regarding the actual internal implementation of processes are therefore only possible to a limited extent.

The following section, “Data Analysis,” outlines the methodological structure of the evaluation, the development of the assessment framework, and the approach to coding and assessing the reports.

3.4 Data analysis

For this study, a systematically structured Excel documentation system was developed to transparently record all analytical steps and to serve as the central methodological instrument. This system enables the structured extraction, classification and evaluation of relevant text passages from the sustainability reports of the examined banks and forms the empirical foundation of the analysis. By integrating category definition, data collection and evaluation into one coherent process, it ensures a consistent, transparent and methodologically controlled assessment. Through the direct linking of text segments to the analytical categories, the Excel structure allows for a systematic and intersubjectively verifiable analysis of double-materiality implementation practices in accordance with the ESRS.

The development of the category system followed a three-step procedure that reflects the interplay between theoretical foundations, regulatory requirements and empirical observations. In a first step, the three overarching theoretical perspectives of the thesis—normative accounting and reporting theory, stakeholder theory and the principle of accountability—were translated into three meta-categories. These theories form the conceptual architecture of the analysis: they define the fundamental dimensions along which implementation quality is understood, namely ethical-institutional orientation, stakeholder responsiveness and organisational transparency and responsibility.

In a second step, these theoretical meta-categories were operationalised by integrating the ESRS. Because the purpose of the thesis is to analyse how banks implement the DMA in practice, the theoretical concepts had to be connected to empirical indicators that are observable in sustainability reports. The ESRS fulfil this function: they translate abstract concepts such as legitimacy, transparency, stakeholder responsibility and accountability into specific, measurable and auditable disclosure requirements. Accordingly, the ESRS were systematically examined, and their more than seventy relevant data points—particularly those outlined under ESRS 2 Section IRO-1—were consolidated into fourteen structured subcategories. Each of these subcategories was assigned to one of the three theoretical meta-categories depending on whether it primarily reflected accountability (e.g. process description, governance, data transparency), stakeholder orientation (e.g. stakeholder engagement, value-chain inclusion) or normative-institutional considerations (e.g. risk integration, strategic embedding). This step ensured that theoretical foundations provided the interpretive framework, while the ESRS supplied the concrete evaluative criteria.

In a third step, the category system was expanded by inductive categories that emerged directly from the empirical material. These inductive dimensions—symbolic versus substantive implementation, national and institutional contextualisation and innovative reporting practices—capture aspects not explicitly required by the ESRS but highly relevant for understanding variation in reporting quality and organisational behaviour. To ensure comparability across all dimensions, these inductive categories were coded using the same binary logic as the deductive and normative categories.

Taken together, these three steps resulted in a coherent three-tiered category system consisting of theoretical meta-categories, ESRS-based subcategories and inductive empirical categories. This structure integrates theory, regulation and organisational practice and provides a systematic and transparent basis for assessing how banks in Germany and Austria implement the double-materiality principle in accordance with the ESRS. Table 1 presents the complete category system, including the assignment of ESRS disclosure requirements, the connection to theoretical foundations and the evaluation logic used in the empirical analysis. It forms the methodological cornerstone for the findings discussed in the following chapter.

Table 1

Meta-Category	**No.**	**Category**	**Assigned ESRS Data Points**	**Evaluation Question (Yes/No)**	**Points (0/1)**	**Reference (Text + Page)**
Accountability	1	Disclosure of the DMA process	ESRS 2 IRO-1; ESRS 1 §3.2–3.4	Is the DMA process described transparently and in sufficient detail?		
Accountability	2	Governance & responsibilities	ESRS 2 GOV-1; IRO-1	Are responsibilities and accountabilities clearly defined?		
Accountability	3	Criteria & thresholds for impact materiality	ESRS 1 §3.4; IRO-1	Are criteria and thresholds for impact materiality defined and applied?		
Accountability	4	Methodology & scoring logic	ESRS 2 IRO-1; ESRS 1 §86–88	Is the methodology for assessing IROs clearly described?		
Accountability	5	Data sources, assumptions & limitations	ESRS 1 §86–88; ESRS 2 IRO-1	Are data sources, assumptions and uncertainties disclosed?		

Accoun-tability	6	Integration into strategy & risk manage-ment	ESRS 2 SBM-3; IRO-1	Are DMA results integrated into strategy and risk processes?		
Accoun-tability	7	Review & up-date of DMA	ESRS 2 IRO-1	Is the regular re-view and update of the DMA de-scribed?		
Accoun-tability	8	External veri-fication / vali-dation	ESRS 2 GOV-2	Is internal or exter-nal assurance used?		
Accoun-tability	9	Ethical fra-ming of sustainability	–	Is sustainability framed as an ethi-cal obligation be-yond compliance?		
Accoun-tability	10	Reflexivity & learning	–	Are learning pro-cesses or methodo-logical improve-ments described?		
Accoun-tability	11	Stakeholder accountability	–	Is accountability toward stakehold-ers demonstrated?		
Stakehol-der Inclu-sion	12	Stakeholder engagement	ESRS 2 IRO-1; SBM-2	Are relevant inter-nal and external stakeholders in-volved?		
Stakehol-der Inclu-sion	13	Consideration of the value chain	ESRS 1 §43–45; ESRS 2 IRO-1	Does the DMA in-clude upstream and downstream value-chain stages?		
Stakehol-der Inclu-sion	14	Presentation of material IROs	ESRS 2 SBM-3; IRO-2	Is a clear list of material impact, risk and oppor-tunity topics pro-vided?		
Norma-tive Re-porting Quality	15	Definition of consolidation scope	ESRS 1 §66–67; ESRS 2 IRO-1	Is the consolidation scope clearly de-fined and ex-plained?		
Norma-tive Re-porting Quality	16	Criteria & thresholds for financial ma-teriality	ESRS 2 IRO-1; ESRS 2.52	Are criteria and thresholds for fi-nancial materiality explained?		
Norma-tive Re-porting Quality	17	Time horizons	ESRS 2 IRO-1; E1-AR11/12	Are short-, me-dium- and long-term time horizons defined?		
Inductive (Empiri-cal)	18	Symbolic vs. substantive	–	Are there indica-tors of symbolic or		

		implementation		substantive implementation?		
Inductive (Empirical)	19	National / institutional contextualisation	–	Is the DMA linked to national regulatory contexts (e.g., BaFin, FMA)?		
Inductive (Empirical)	20	Innovative reporting practices	–	Are innovative or advanced reporting approaches identifiable?		

To systematically and objectively assess the extent to which each category was fulfilled, **a** binary coding system was applied. This approach is based on dichotomous variables that can take only two values (0 = not fulfilled, 1 = fulfilled) (Schneijderberg, Wieczorek & Steinhardt, 2022, p. 373). Binary coding enables a structured, comparable, and transparent evaluation of the report content without undermining the qualitative nature of the analysis. It provides a consistent analytical framework that condenses complex textual information into analytically interpretable structures (Mayring & Fenzl, 2022, p. 639).

For each category, a dedicated reference column was created in the Excel system, documenting the exact text passages, including page numbers, from the respective sustainability reports. This link between coding and textual evidence ensures transparent and intersubjectively verifiable traceability of all coding decisions and thus forms the methodological basis for a valid qualitative analysis (Mayring & Fenzl, 2022, p. 693).

The coding process followed a rule-based, multi-step procedure, as outlined in Mayring's method of qualitative content analysis (Mayring, 1994). First, all relevant text passages referring to the execution or description of the DMA were identified. These passages were then assigned to deductive**,** normative–deductive, or—where necessary—inductively developed categories. The assignment was guided by the theoretically defined structural dimensions of each category (Kuckartz, 2018; Mayring, 1994). The final step involved binary coding of the text passages and precise documentation of the corresponding references in the Excel system. This approach ensures that each evaluation can be directly traced back to verifiable evidence in the primary material, thereby achieving a high degree of methodological transparency.

After completing the coding, a descriptive data analysis was conducted. The aggregation of codes enabled the systematic presentation and interpretation of results in the form of frequency distributions, tables, and comparative analyses between the examined banks and countries

(Mayring & Fenzl, 2022, p. 700; Schneijderberg, Wieczorek & Steinhardt, 2022, p. 373). This made it possible to determine the extent to which the individual institutions fulfil key elements of the Double Materiality Principle and to identify national differences in implementation.

The aim of the analysis is not to achieve statistical generalization but to enable an analytical interpretation of patterns, mechanisms, and institutional contexts (Bücker, 2020). The focus lies on a theory-based reflection of the organizational, strategic, and communicative factors shaping the implementation of double materiality in the European banking sector.

To ensure scientific quality, the procedure adhered to the central quality criteria of qualitative research—in particular, transparency, traceability, and intersubjectivity (Schneijderberg, Wieczorek & Steinhardt, 2022, p. 365). The complete documentation of all codings and text passages forms an audit trail that enables external verification of the analytical process. This not only strengthens the internal consistency of the evaluation but also ensures the methodological reliability of the results in line with the principles of qualitative content analysis (Mayring, 1994, p. 159).

The data obtained through the coding process form the empirical foundation for the subsequent presentation of results. The findings—namely, the degree of fulfilment of the twenty categories for each bank and the cross-country comparison—are systematically presented and interpreted in the following chapter.

4. Results and Analysis

4.1 Individual Cases Analyses

4.1.1 Deutsche Bank AG

The 2024 sustainability report of Deutsche Bank AG presents a coherent, transparent and methodologically mature implementation of the DMA in line with the ESRS. The analysis below follows the three-tier category system developed in this thesis, in which all criteria are grouped under the overarching theoretical meta-categories of normative accounting and reporting theory, stakeholder theory and the principle of accountability. Within this structure, the ESRS-based subcategories and the inductive, empirically grounded dimensions allow for a differentiated assessment of the bank's approach.

Under the meta-category of accountability, Deutsche Bank demonstrates a high level of procedural transparency and governance integration. The DMA is described in detail and applies the same consolidation scope as the Group's financial reporting (Deutsche Bank, 2024, p. 201), ensuring consistency across reporting systems — a central requirement of accountable sustainability governance. Responsibilities are clearly assigned: the Chief Sustainability Office coordinates the process, while the Management Board and Audit Committee validate and approve the final results (Deutsche Bank, 2024, pp. 201, 204). This involvement of top-level governing bodies signals that sustainability considerations are embedded in the bank's central decision-making structures rather than delegated to peripheral functions. Such anchoring is fully aligned with the ESRS expectation that sustainability oversight rests with authorities who possess genuine steering capacity.

The methodological elements assigned to the accountability category are implemented with precision. Deutsche Bank assesses impact materiality through the ESRS dimensions of scale, scope and irremediability and evaluates financial materiality via magnitude and likelihood across financial, regulatory and reputational aspects (Deutsche Bank, 2024, p. 202). These considerations are operationalised through a five-point scoring system supported by clearly defined thresholds: topics reaching at least three points are considered material (Deutsche Bank, 2024, p. 203). This transparent scoring logic enhances auditability and allows external readers to understand why issues were classified in certain ways. The differentiation between short-, medium- and long-term time horizons (Deutsche Bank, 2024, p. 263) provides temporal depth, while the use of internal analyses and external benchmarks — including ESG ratings and peer comparisons — reflects a systematic evidence-based approach and complies with ESRS expectations for robust data foundations.

The meta-category based on stakeholder theory becomes visible in Deutsche Bank's multi-stakeholder engagement processes. The bank involves employees, clients, investors and civil-society groups at various stages of the DMA (Deutsche Bank, 2024, pp. 198, 203). These engagement structures ensure that a range of perspectives is considered when determining material topics. However, the report provides limited insight into how stakeholder input shapes methodological choices or leads to adjustments over time. The engagement approach therefore appears consultative rather than dialogical. While this satisfies ESRS minimum requirements, it indicates that deeper, co-creative forms of accountability are not yet fully developed and that feedback loops could be strengthened in future reporting cycles.

Within the meta-category informed by normative accounting and reporting theory, Deutsche Bank emphasises the broader purpose of sustainability reporting. The report frames sustainability as both a strategic priority and a societal responsibility, situating the bank's activities within larger transformation dynamics in the financial sector (Deutsche Bank, 2024, p. 191). References to methodological refinements introduced since the previous reporting period (Deutsche Bank, 2024, p. 206) demonstrate a commitment to ongoing learning and reflexive adaptation. Elements such as whistleblowing channels, client feedback mechanisms and transparent explanations of internal controls (Deutsche Bank, 2024, p. 214) further underscore an orientation toward ethical responsibility and institutional integrity.

The inductive categories developed for this thesis also offer additional insights into the qualitative character of Deutsche Bank's implementation. Across the report, the consistent scoring logic, explicit thresholds, integration of sustainability topics into the internal risk management (Deutsche Bank, 2024, p. 262) and the presence of external assurance (Deutsche Bank, 2024, p. 193) collectively indicate that the DMA is implemented in a substantive and not merely symbolic manner. No indications of greenwashing or superficial compliance are evident. The main limitation concerns the absence of references to collaborative methodological initiatives or sector-wide knowledge exchange, which would signal stronger engagement with collective learning processes — an aspect captured in the inductive category on innovative reporting practices.

Overall, Deutsche Bank meets 17 of the 20 analytical criteria. The bank's strongest performance lies in its clear governance structures, transparent and rigorous methodology, integration of sustainability into prudential risk management and willingness to refine its approach over time. While greater participation in cross-sector learning initiatives could further strengthen methodological innovation, Deutsche Bank nonetheless presents a convincing and mature example of how the ESRS double materiality principle can be institutionalised as a central instrument of strategic and accountable corporate governance.

Table 2

Overarching Category	No.	Category	Points
Accountability	1	Disclosure of the DMA process	✓
Accountability	2	Governance & responsibilities	✓
Accountability	3	Criteria for impact materiality	–
Accountability	4	Methodology & scoring logic	✓
Accountability	5	Data sources, assumptions & limitations	✓

Accountability	6	Integration into strategy & risk management	✓
Accountability	7	Review & update of DMA	✓
Accountability	8	External verification / assurance	✓
Normative Accounting & Reporting Theory	9	Definition of consolidation scope	✓
Normative Accounting & Reporting Theory	10	Consideration of the value chain	✓
Normative Accounting & Reporting Theory	11	Criteria for financial materiality	–
Normative Accounting & Reporting Theory	12	Time horizons	✓
Normative Accounting & Reporting Theory	13	Presentation of results	✓
Normative Accounting & Reporting Theory	14	Ethical framing of sustainability	✓
Normative Accounting & Reporting Theory	15	Reflexivity & learning	✓
Stakeholder Theory	16	Stakeholder engagement	✓
Stakeholder Theory	17	Stakeholder accountability	✓
Inductive	18	Greenwashing tendency (absence of)	✓
Inductive	19	National / institutional contextualisation	✓
Inductive	20	Innovative reporting practices	–

4.1.2 Commerzbank AG

The 2024 Group Sustainability Report of Commerzbank AG presents a clear, coherent, and well-structured implementation of the DMA in accordance with the ESRS. This analysis follows the three-tier analytical framework used in this thesis, which organises all evaluation criteria under the overarching theoretical meta-categories of the principle of accountability, stakeholder theory and normative accounting and reporting theory. Within these meta-categories, ESRS-based subcategories and inductively derived dimensions provide a differentiated lens for assessing the bank's implementation quality.

Under the accountability meta-category, Commerzbank demonstrates a strong commitment to procedural transparency and governance alignment. The DMA is described in detail and uses the same consolidation scope as the Group's financial reporting (Commerzbank, 2024, p. 49), ensuring coherence between financial and non-financial disclosures. Responsibilities are clearly allocated across organisational levels: Group Sustainability Management coordinates the process, relevant business and control functions contribute thematic expertise and both the Board of Managing Directors and the Supervisory Board oversee and approve materiality outcomes (Commerzbank, 2024, p. 56). This governance structure reflects the ESRS expectation that sustainability-related decisions must be anchored at the highest organisational level to ensure accountability, legitimacy and sufficient decision-making authority.

Methodologically, the DMA is implemented with clarity and consistency. Impact materiality is assessed using the ESRS-defined severity dimensions — scale, scope, likelihood and irremediability — operationalised through a five-point scoring system (Commerzbank, 2024, pp. 78–79). Financial materiality is evaluated through magnitude and likelihood, reflecting the outside-in dimension of double materiality. While Commerzbank does not publish explicit thresholds defining when a topic becomes material, the methodological disclosure is transparent, well-structured and supported by open communication of limitations, uncertainties and the use of estimates (Commerzbank, 2024, p. 49). This transparency strengthens procedural accountability by making methodological assumptions visible and traceable. The definition of short-, medium- and long-term time horizons (Commerzbank, 2024, p. 49) and the consolidated overview of material impacts, risks and opportunities (Commerzbank, 2024, p. 66) further demonstrate a mature and auditable assessment practice. Integration of DMA results into business-model resilience assessments, strategy processes and risk monitoring (Commerzbank, 2024, p. 65), combined with independent limited assurance (Commerzbank, 2024, pp. 537–540), reinforces the credibility and institutional embeddedness of the process.

The stakeholder-theory meta-category is reflected in Commerzbank's structured and methodical approach to stakeholder engagement. The bank conducts surveys covering ESRS topics and institution-specific issues (Commerzbank, 2024, p. 62). These findings contribute to the determination of material topics and are regularly communicated to senior governance bodies (Commerzbank, 2024, p. 63). While the process is systematic and well-integrated, it remains primarily consultative rather than dialogical. The report offers limited insight into how stakeholder input influences methodological refinements or triggers learning processes. This indicates that stakeholder involvement, though established and compliant, is not yet characterised by iterative feedback loops.

The meta-category based on normative accounting and reporting theory becomes visible in the ethical framing of sustainability within the report. Commerzbank emphasises values such as integrity, responsibility and performance (Commerzbank, 2024, p. 28), which supports the normative expectation that sustainability reporting should reflect organisational responsibility rather than simply regulatory adherence. The bank's explicit intention to expand and refine its DMA approach in future reporting cycles (Commerzbank, 2024, p. 65) demonstrates reflexivity and a willingness to learn from experience — two characteristics central to mature sustainability governance. Accountability toward stakeholders is further supported by structured briefing processes for supervisory bodies and transparent explanations of methodological boundaries and uncertainties.

The inductive dimensions developed in this thesis highlight additional qualitative characteristics of Commerzbank's approach. Transparent methodological documentation, open acknowledgement of uncertainty, integration of DMA results into strategic and risk processes and the presence of external assurance collectively indicate a substantive rather than symbolic implementation. The report explicitly situates the DMA within the German regulatory environment by referencing continuing adherence to CSR and HGB requirements during the CSRD transition period (Commerzbank, 2024, p. 47). This contextualisation strengthens regulatory credibility and demonstrates institutional adaptability. At the same time, the report does not provide evidence of participation in sector-wide methodological innovation or collaborative development initiatives, suggesting a focus on procedural stability rather than experimentation or innovation.

Altogether, Commerzbank fulfils 18 of the 20 analytical criteria. Its strongest performance lies in its clear governance structure, transparent methodological documentation, comprehensive value-chain coverage, systematic stakeholder integration and the application of external assurance. Opportunities for further development include the articulation of explicit materiality thresholds and greater engagement in cross-institutional methodological initiatives that could enhance innovation and sectoral learning. Nonetheless, the 2024 DMA represents a credible, well-structured and accountability-oriented implementation of the ESRS double materiality principle and illustrates how sustainability reporting is becoming deeply integrated into strategic and organisational governance within the German banking sector.

Table 3

Overarching Category	No.	Category	Points
Accountability	1	Disclosure of the DMA process	✓
Accountability	2	Governance & responsibilities	✓
Accountability	3	Criteria for impact materiality	✓
Accountability	4	Methodology & scoring logic	✓

Accountability	5	Data sources, assumptions & limitations	✓
Accountability	6	Integration into strategy & risk management	✓
Accountability	7	Review & update of DMA	✓
Accountability	8	External verification / assurance	✓
Normative Accounting & Reporting Theory	9	Definition of consolidation scope	✓
Normative Accounting & Reporting Theory	10	Consideration of the value chain	✓
Normative Accounting & Reporting Theory	11	Criteria for financial materiality	–
Normative Accounting & Reporting Theory	12	Time horizons	✓
Normative Accounting & Reporting Theory	13	Presentation of results	✓
Normative Accounting & Reporting Theory	14	Ethical framing of sustainability	✓
Normative Accounting & Reporting Theory	15	Reflexivity & learning	✓
Stakeholder Theory	16	Stakeholder engagement	✓
Stakeholder Theory	17	Stakeholder accountability	✓
Inductive	18	Greenwashing tendency (absence of)	✓
Inductive	19	National / institutional contextualisation	✓
Inductive	20	Innovative reporting practices	–

4.1.3 Deutsche Zentral-Genossenschaftsbank AG

The 2024 sustainability report of DZ BANK Group presents one of the most advanced, methodologically coherent and strategically embedded applications of the DMA among the examined institutions. Using the three-tier analytical framework of this thesis, which groups all assessment criteria under the overarching theoretical meta-categories of the principle of accountability, stakeholder theory and normative accounting and reporting theory, the following analysis situates DZ BANK's DMA within a broader conceptual and institutional context. Within these meta-categories, the ESRS-based subcategories and inductively derived dimensions provide a structured basis for evaluating the bank's implementation quality and its substantive alignment with the ESRS.

Under the accountability meta-category, DZ BANK demonstrates exceptional alignment with the procedural and governance expectations of the ESRS. The DMA is documented with remarkable clarity and detail, applying the same consolidation scope as the Group's IFRS-based financial reporting (DZ BANK, 2024, p. 196), thereby ensuring consistency between financial and sustainability disclosures — a core requirement of integrated accountability. Responsibilities are anchored at the highest organisational level: the Chief Executive Officer and the Employee Relations Director oversee the process (DZ BANK, 2024, p. 200). This level of senior engagement signals that the DMA is not a compliance add-on but an integral part of strategic steering and governance.

Methodologically, DZ BANK exceeds the common sector standard. The bank defines explicit quantitative thresholds for both impact and financial materiality (DZ BANK, 2024, p. 217), providing a level of operational clarity, auditability and comparability that remains rare among peers. Impact materiality is assessed through scale, scope and irremediability, while financial materiality is evaluated through likelihood and magnitude, supported by differentiated short-, medium- and long-term time horizons (DZ BANK, 2024, p. 197). The bank discloses data sources and assumptions with notable transparency, relying on internationally recognised benchmarks such as the S&P Risk Atlas and the SDG Index (DZ BANK, 2024, p. 217). The DMA is firmly embedded in strategic and prudential processes: it informs capital planning, shapes the bank's risk appetite and feeds into executive-level decision-making (DZ BANK, 2024, p. 213). Independent limited assurance further strengthens credibility and reduces the risk of symbolic compliance (DZ BANK, 2024, p. 748).

Within the stakeholder-theory meta-category, DZ BANK's engagement approach is structured, formalised and embedded within the broader governance system. Stakeholder perspectives are gathered through workshop-based dialogue formats, incorporating input from employees, clients and external experts (DZ BANK, 2024, p. 213). While the report does not extensively describe how stakeholder input specifically shapes iterative methodological refinement, the presence of regular and multi-channel engagement signals that stakeholder expectations are meaningfully integrated. The process follows the ESRS logic that materiality judgements must reflect both organisational priorities and societal concerns.

Under the meta-category informed by normative accounting and reporting theory, DZ BANK's sustainability narrative extends beyond compliance. The report emphasises adherence to the UN Global Compact and highlights social responsibility as part of the bank's organisational identity (DZ BANK, 2024, p. 327). This ethical framing aligns with the normative expectation that corporate reporting should contribute to transparent, responsible and legitimacy-enhancing behaviour. Reflexivity is evident in the explicit documentation of methodological updates introduced in 2024 (DZ BANK, 2024, p. 213), illustrating a learning-oriented approach that allows the DMA to evolve in line with new insights and sector developments. Mechanisms such as structured reporting lines to executive bodies and transparency around internal control processes reinforce the bank's normative accountability.

The inductive categories developed in this thesis further illuminate the depth and character of DZ BANK's approach. The explicit thresholds, systematic methodology, integration into prudential governance structures and participation in UNEP FI initiatives (DZ BANK, 2024, p. 217) point to a level of innovation and strategic foresight that goes beyond basic regulatory adherence. National contextualisation is ensured through the integration of HGB requirements alongside ESRS obligations (DZ BANK, 2024, p. 196), demonstrating alignment with both European and domestic supervisory expectations. Across structure, tone and methodological evidence, no indication of symbolic implementation or greenwashing emerges.

Overall, DZ BANK fulfils all 20 analytical criteria. Its strongest features include executive-level governance, explicit materiality thresholds, the use of advanced analytical tools, deep integration of DMA results into risk and capital planning processes, continuous methodological refinement and external assurance. Taken together, these elements position DZ BANK as a methodological benchmark in the German banking sector and reflect a fully institutionalised, analytically sophisticated and ethically grounded interpretation of the ESRS double materiality principle.

Table 4

Overarching Category	No.	Category	Points
Accountability	1	Disclosure of the DMA process	✓
Accountability	2	Governance & responsibilities	✓
Accountability	3	Criteria for impact materiality	✓
Accountability	4	Methodology & scoring logic	✓
Accountability	5	Data sources, assumptions & limitations	✓
Accountability	6	Integration into strategy & risk management	✓
Accountability	7	Review & update of DMA	✓
Accountability	8	External verification / assurance	✓
Normative Accounting & Reporting Theory	9	Definition of consolidation scope	✓
Normative Accounting & Reporting Theory	10	Consideration of the value chain	✓

Normative Accounting & Reporting Theory	11	Criteria for financial materiality	✓
Normative Accounting & Reporting Theory	12	Time horizons	✓
Normative Accounting & Reporting Theory	13	Presentation of results	✓
Normative Accounting & Reporting Theory	14	Ethical framing of sustainability	✓
Normative Accounting & Reporting Theory	15	Reflexivity & learning	✓
Stakeholder Theory	16	Stakeholder engagement	✓
Stakeholder Theory	17	Stakeholder accountability	✓
Inductive	18	Greenwashing tendency (absence of)	✓
Inductive	19	National / institutional contextualisation	✓
Inductive	20	Innovative reporting practices	✓

4.1.4 Landesbank Baden-Württemberg

The 2024 sustainability report of LBBW presents a comprehensive, transparent and methodologically coherent implementation of the DMA. Applying the three-tier analytical framework developed in this thesis—organising all criteria under the overarching theoretical meta-categories of the principle of accountability, stakeholder theory and normative accounting and reporting theory—this analysis situates LBBW's DMA within a broader institutional and conceptual landscape. Within these meta-categories, the ESRS-based subcategories and inductively derived dimensions provide the basis for assessing the depth, quality and substantive character of the bank's implementation.

Under the accountability meta-category, LBBW demonstrates strong alignment with the procedural and governance expectations of the ESRS. The DMA is conducted on the same consolidated reporting perimeter as the bank's IFRS-based financial statements (LBBW, 2024, p. 86), ensuring coherence between financial and sustainability reporting and reflecting the ESRS principle that materiality assessments must be grounded in consistent organisational boundaries. Governance responsibilities are clearly defined: the final DMA results are formally approved through a resolution of the Board of Managing Directors (LBBW, 2024, p. 108). This direct involvement of top-level executives signals that the DMA is not treated as a reporting formality but as part of LBBW's core governance and strategic logic.

Methodologically, LBBW implements the ESRS requirements with a high degree of clarity and procedural discipline. Impact materiality is assessed using the ESRS-aligned severity dimensions—scale, scope, reversibility and likelihood—while financial materiality is evaluated through magnitude and likelihood (LBBW, 2024, p. 107). Distinct short-, medium- and long-term time horizons structure the temporal assessment of impacts and risks. The report documents methodological steps with transparency, including explicit disclosure of assumptions, the use of estimates and the accuracy level of certain data inputs (LBBW, 2024, p. 87). This openness reflects methodological integrity and an awareness of the limits of available data—features increasingly expected in credible ESRS reporting. The DMA results are integrated directly into strategic and risk-management processes, such as the Group's ESG strategy and Group risk strategy (LBBW, 2024, p. 108), demonstrating that double materiality has been fully institutionalised within prudential decision-making systems.

Within the meta-category informed by stakeholder theory, LBBW incorporates stakeholder perspectives through structured internal representation and institutionalised dialogue channels (LBBW, 2024, p. 107). This ensures that relevant viewpoints are considered and that stakeholder-related expectations are not overlooked. However, the engagement model remains largely internally mediated: external stakeholders are not directly involved in the assessment process. This indicates a governance philosophy that favours structured internal control and procedural stability, characteristic of prudentially regulated banking environments. While the ESRS requirements for stakeholder involvement are fulfilled, the current model offers limited opportunities for more interactive or deliberative engagement with external groups.

Under the meta-category derived from normative accounting and reporting theory, LBBW frames sustainability in terms of broader ethical responsibility and organisational stewardship. The report refers explicitly to internationally recognised standards such as the UN Global Compact and the OECD Guidelines for Multinational Enterprises (LBBW, 2024, p. 107), indicating that the bank sees sustainability not only as a regulatory requirement but also as part of a wider responsibility framework. Describing due-diligence processes as dynamic and continuous underscores a learning-oriented governance culture and aligns with the normative expectation that sustainability reporting should evolve through iterative improvement. Mechanisms such as annual repetition of the DMA, integration of impacts and risks into strategic decision structures, and transparency regarding methodological limitations reinforce the ethical dimension of LBBW's sustainability governance. At the same time, the reliance on internal channels for stakeholder accountability reflects a governance model prioritising reliability and internal oversight.

The inductive dimensions developed in this thesis help capture additional qualitative aspects of LBBW's approach. The transparent methodological documentation, acknowledgment of uncertainties, integration into governance structures and active interaction with external auditors signal substantive—rather than symbolic—implementation of ESRS requirements. External auditor engagement and confirmation of CSRD and HGB compliance (LBBW, 2024, p. 95) further strengthen credibility. National contextualisation is evident through the integration of ESRS requirements with the German HGB framework, underscoring the bank's alignment with national regulatory expectations. The only notable limitation is the absence of references to cross-institutional methodological collaboration or innovation-driven initiatives. This suggests that LBBW prioritises procedural robustness over methodological experimentation.

Overall, LBBW fulfils 19 of the 20 analytical criteria. The bank's key strengths include strong ESRS alignment, clear governance responsibilities, transparent methodological disclosure, explicit acknowledgment of data accuracy levels and deep integration into strategic and risk-management systems. Potential areas for development include expanding direct external stakeholder participation and contributing more actively to collaborative methodological innovation. Nevertheless, LBBW's DMA represents a highly credible, strategically embedded and accountability-driven application of the ESRS double materiality principle—positioning the bank as a mature and reliable practitioner within the German banking sector.

Table 5

Overarching Category	No.	Category	Points
Accountability	1	Disclosure of the DMA process	✓
Accountability	2	Governance & responsibilities	✓
Accountability	3	Criteria for impact materiality	✓
Accountability	4	Methodology & scoring logic	✓
Accountability	5	Data sources, assumptions & limitations	✓
Accountability	6	Integration into strategy & risk management	✓
Accountability	7	Review & update of DMA	✓
Accountability	8	External verification / assurance	✓
Normative Accounting & Reporting Theory	9	Definition of consolidation scope	✓
Normative Accounting & Reporting Theory	10	Consideration of the value chain	✓

Normative Accounting & Reporting Theory	11	Criteria for financial materiality	✓
Normative Accounting & Reporting Theory	12	Time horizons	✓
Normative Accounting & Reporting Theory	13	Presentation of results	✓
Normative Accounting & Reporting Theory	14	Ethical framing of sustainability	✓
Normative Accounting & Reporting Theory	15	Reflexivity & learning	✓
Stakeholder Theory	16	Stakeholder engagement	✓
Stakeholder Theory	17	Stakeholder accountability	✓
Inductive	18	Greenwashing tendency (absence of)	✓
Inductive	19	National / institutional contextualisation	✓
Inductive	20	Innovative reporting practices	–

4.1.5 Erste Group Bank AG

The 2024 sustainability report of Erste Group Bank AG presents a structured, transparent and ESRS-aligned implementation of the DMA. Applying the three-tier analytical framework developed in this thesis—organising all criteria under the overarching theoretical meta-categories of the principle of accountability, stakeholder theory and normative accounting and reporting theory—this analysis situates Erste Group's DMA within a broader conceptual and institutional context. Within this structure, the ESRS-based subcategories form the procedural backbone for evaluating the bank's methodological and governance quality, while inductively derived dimensions offer further qualitative differentiation.

Under the accountability meta-category, Erste Group demonstrates strong procedural coherence and clear alignment with core ESRS expectations. The bank explicitly confirms that its DMA is conducted in accordance with ESRS requirements (Erste, 2024, p. 115), and governance responsibilities are assigned in a multi-layered model: the Group ESG Office and Group Accounting coordinate the process, an independent expert jury contributes subject-matter insight, and the Management Board approves the final results (Erste, 2024, pp. 115–116). This structure reflects a deeply institutionalised approach to sustainability oversight and ensures that materiality determinations are embedded at the highest level of decision-making—an essential element of the accountability logic underpinning ESRS requirements. Methodologically, Erste Group applies the ESRS-prescribed criteria with clarity and discipline. Impact materiality is assessed using a weighted scoring model that evaluates severity, scope and irremediability, combined with likelihood; financial materiality is operationalised through a specific threshold value (Erste, 2024, pp. 116–118). Topics scoring above 2.5 for impact materiality and above 1.5 for financial materiality are classified as material, providing a transparent and auditable threshold logic. The use of short-, medium- and long-term time horizons (Erste, 2024, pp. 236–240) and the integration of DMA results into the bank's risk-management system (Erste, 2024, p. 113) indicate a mature and systematic application of ESRS 2 IRO-1.

The stakeholder-theory meta-category highlights both strengths and limitations in Erste Group's current approach. While internal stakeholder involvement is systematically organised—drawing on People & Culture, employee representation bodies and internal sustainability experts—no external stakeholder engagement was conducted during the 2024 reporting cycle. The bank discloses this openly and commits to expanding external involvement in future assessments (Erste, 2024, p. 116). This transparency demonstrates procedural honesty and aligns with the early stages of stakeholder institutionalisation. Although the consultative aspect required by the ESRS is met, the absence of external feedback limits the dialogical and deliberative dimensions emphasised in stakeholder theory. Nevertheless, the bank's willingness to acknowledge this gap and to improve iteratively suggests a developing, rather than absent, stakeholder accountability framework.

Within the meta-category grounded in normative accounting and reporting theory, Erste Group explicitly frames sustainability as more than a compliance exercise. The report connects the bank's activities to the Paris Agreement and broader societal objectives, emphasising the responsibility to support long-term economic and social resilience (Erste, 2024, p. 236). This framing reflects a moral and societal understanding of sustainability consistent with normative conceptions of accountability and stewardship. Erste also adopts a reflexive stance, acknowledging limitations—particularly the lack of external stakeholder involvement—and outlining plans to address them in future cycles (Erste, 2024, p. 116). This openness is characteristic of learning-oriented organisations and aligns with normative expectations that sustainability reporting should evolve through iterative improvement. Limited external assurance of the DMA (Erste, 2024, pp. 487–490) reinforces the credibility of the reporting structure.

The inductive categories developed in this thesis further contextualise Erste Group's implementation. The structured scoring model, transparent threshold logic, explicit disclosure of assumptions and the integration of DMA outputs into risk governance all indicate a substantive, rather than symbolic, approach. At the same time, two areas reveal potential for further maturity. First, the report includes only limited reference to national supervisory perspectives, such as FMA guidance, which weakens the degree of national contextualisation. Second, methodological innovation is relatively modest: aside from the involvement of an expert jury and the use of a defined scoring logic, the DMA does not reference advanced analytical tools or participation in sector-wide methodological collaboration. These inductive findings suggest a strong foundation with room for expansion toward broader methodological engagement and contextual depth.

Overall, Erste Group fulfils 17 of the 20 analytical criteria. The bank's most notable strengths include clear governance responsibilities, methodological precision, integration into risk-management frameworks and reflexive transparency about procedural limitations. Opportunities for further development include expanding external stakeholder participation, strengthening national contextualisation and adopting more innovative methodological instruments. Despite these areas for enhancement, Erste Group demonstrates a credible, structured and ethically grounded implementation of the ESRS double materiality principle. The report reflects a well-institutionalised accountability framework combined with a learning-oriented sustainability approach, positioning Erste as a leading practitioner of transparent and strategically anchored sustainability governance within the Austrian banking sector.

Table 6

Overarching Category	No.	Category	Points
Accountability	1	Disclosure of the DMA process	✓
Accountability	2	Governance & responsibilities	✓
Accountability	3	Criteria for impact materiality	✓
Accountability	4	Methodology & scoring logic	✓
Accountability	5	Data sources, assumptions & limitations	✓
Accountability	6	Integration into strategy & risk management	✓
Accountability	7	Review & update of DMA	✓
Accountability	8	External verification / assurance	✓
Normative Accounting & Reporting Theory	9	Definition of consolidation scope	✓
Normative Accounting & Reporting Theory	10	Consideration of the value chain	✓
Normative Accounting & Reporting Theory	11	Criteria for financial materiality	✓
Normative Accounting & Reporting Theory	12	Time horizons	✓
Normative Accounting & Reporting Theory	13	Presentation of results	✓

Normative Accounting & Reporting Theory	14	Ethical framing of sustainability	✓
Normative Accounting & Reporting Theory	15	Reflexivity & learning	✓
Stakeholder Theory	16	Stakeholder engagement	–
Stakeholder Theory	17	Stakeholder accountability	✓
Inductive	18	Greenwashing tendency (absence of)	✓
Inductive	19	National / institutional contextualisation	–
Inductive	20	Innovative reporting practices	–

4.1.6 Raiffeisen Bank International AG

The 2024 sustainability report of RBI presents a highly structured, transparent and ESRS-aligned implementation of the DMA. Applying the three-tier analytical framework developed in this thesis—organising all evaluation criteria under the overarching meta-categories of the principle of accountability, stakeholder theory and normative accounting and reporting theory—this analysis situates RBI's approach within its regulatory, organisational and ethical context. The ESRS-based subcategories serve as the operational backbone for assessing procedural quality, while inductively derived categories add further qualitative differentiation.

Under the accountability meta-category, RBI demonstrates a particularly strong alignment with ESRS expectations regarding governance, methodological transparency and integration into strategic decision-making. The report offers a detailed description of the DMA and explicitly states its compliance with ESRS requirements (RBI, 2024, p. 116). Governance responsibilities are clearly structured: senior executives oversee the assessment, and the final results are validated and approved by the Management Board and the Audit Committee (RBI, 2024, p. 118). This anchoring at the highest organisational level reflects the ESRS principle that sustainability assessments require oversight by bodies capable of taking binding decisions. Methodologically, RBI applies a refined scoring model that combines severity dimensions—scale, scope and irremediability—with likelihood, and translates this into explicit thresholds: 66.7% for impact materiality and a 10% dependency threshold for financial materiality (RBI, 2024, pp. 117–118). The DMA covers the full value chain, applies short-, medium- and long-term time horizons (RBI, 2024, p. 76), and draws on internal analyses supplemented by external tools such as the UNEP FI Impact Analysis Tool. This combination of quantitative scoring, explicit threshold logic and evidence-based evaluation underscores a high degree of methodological clarity and procedural accountability.

Within the stakeholder-theory meta-category, RBI demonstrates one of the most comprehensive stakeholder engagement frameworks among the Austrian banks examined in this thesis. Engagement processes include structured surveys, formal dialogue formats and participation in international sustainability initiatives (RBI, 2024, pp. 104–108, 116). The bank incorporates perspectives from internal and external stakeholders—including clients, civil-society organisations, regulators and investors—and channels this input into strategic decision-making and the DMA itself. While participation is structured and not fully co-creative, the breadth, formalisation and regularity of engagement exceed the ESRS minimum requirements and reflect a mature, institutionally embedded stakeholder model that balances inclusiveness with procedural control.

In the meta-category grounded in normative accounting and reporting theory, RBI positions sustainability as both a strategic and ethical responsibility. The report emphasises long-term value creation and societal contribution (RBI, 2024, p. 414), situating the bank's sustainability approach within broader ethical commitments rather than mere regulatory compliance. RBI's membership in initiatives such as the UN Principles for Responsible Banking reinforces this normative grounding and demonstrates alignment with global standards. Reflexivity is evident in the commitment to further refine and expand the DMA in subsequent reporting cycles (RBI, 2024, pp. 115–126). Limited external assurance (RBI, 2024, p. 76) supports the credibility of the report and meets the normative expectation that sustainability disclosures should be verifiable and independently reviewed.

The inductive categories add additional nuance to RBI's implementation profile. The explicit threshold logic, alignment with ECB supervisory expectations, integration into strategic and risk-governance structures, and participation in UNEP FI methodological initiatives all point to substantive rather than symbolic compliance. The use of internationally recognised analytical tools suggests a sector-leading methodological maturity within Austria. While the approach builds on existing global frameworks rather than developing novel methodological innovations, it reflects a strong learning orientation and alignment with international best practice. National contextualisation is less prominent: explicit references to Austrian supervisory guidance, such as perspectives from the FMA, are limited, leaving room for deeper integration of domestic regulatory expectations.

Overall, RBI meets 19 of the 20 analytical criteria in the category system. The bank's strongest areas include methodological precision, transparent and well-defined threshold logic, multi-layered stakeholder engagement, systematic integration into strategic and risk-management processes, and external assurance. Opportunities for further development concern the more explicit integration of national regulatory frameworks and the expansion of methodological innovation beyond established international tools. Nonetheless, RBI presents one of the most advanced, credible and strategically embedded applications of the ESRS double materiality principle within the Austrian banking sector, combining technical sophistication, strong governance anchoring and a reflexive, value-oriented sustainability approach.

Table 7

Overarching Category	No.	Category	Points
Accountability	1	Disclosure of the DMA process	✓
Accountability	2	Governance & responsibilities	✓
Accountability	3	Criteria for impact materiality	✓
Accountability	4	Methodology & scoring logic	✓
Accountability	5	Data sources, assumptions & limitations	✓
Accountability	6	Integration into strategy & risk management	✓
Accountability	7	Review & update of DMA	✓
Accountability	8	External verification / assurance	✓
Normative Accounting & Reporting Theory	9	Definition of consolidation scope	✓
Normative Accounting & Reporting Theory	10	Consideration of the value chain	✓
Normative Accounting & Reporting Theory	11	Criteria for financial materiality	✓
Normative Accounting & Reporting Theory	12	Time horizons	✓
Normative Accounting & Reporting Theory	13	Presentation of results	✓
Normative Accounting & Reporting Theory	14	Ethical framing of sustainability	✓
Normative Accounting & Reporting Theory	15	Reflexivity & learning	✓
Stakeholder Theory	16	Stakeholder engagement	✓
Stakeholder Theory	17	Stakeholder accountability	✓
Inductive	18	Greenwashing tendency (absence of)	✓
Inductive	19	National / institutional contextualisation	–
Inductive	20	Innovative reporting practices	✓

4.1.7 BAWAG Group AG

The 2024 sustainability report of BAWAG Group AG presents a structured, transparent and ESRS-aligned implementation of the DMA. Applying the analytical framework used in this thesis—which organises all evaluation criteria into the overarching meta-categories of the principle of accountability, stakeholder theory and normative accounting and reporting theory—this analysis situates BAWAG's approach within its organisational, regulatory and ethical context. The ESRS-based subcategories provide the operational structure of the assessment, while inductive criteria highlight additional qualitative characteristics.

Within the accountability meta-category, BAWAG demonstrates a clear and procedurally consistent interpretation of core ESRS expectations. The bank explicitly applies the ESRS double materiality principle and aligns the reporting perimeter with the consolidated financial reporting boundary (BAWAG, 2024, p. 222), thereby ensuring methodological coherence and integrated accountability across financial and sustainability reporting. Governance responsibilities are clearly assigned: both the Management Board and the Supervisory Board oversee and approve the DMA outcomes (BAWAG, 2024, p. 238), signalling that sustainability matters are firmly embedded within the bank's highest strategic and oversight functions. Methodologically, the DMA follows the ESRS severity dimensions for impact materiality—scale, scope and irremediability—and applies magnitude and likelihood for financial materiality (BAWAG, 2024, p. 238). Analytical instruments such as heatmaps, qualitative scoring models and scenario-based assessments introduce structure and discipline into judgement-based evaluation. Short-, medium- and long-term time horizons are clearly differentiated, and the report provides open disclosure of methodological assumptions, proxy data and limitations (BAWAG, 2024, p. 237). Integration of the DMA into prudential processes—including stress testing and risk-management systems—further reinforces the accountability logic underpinning the ESRS. The presence of external limited assurance (BAWAG, 2024, p. 356) strengthens credibility and auditability.

Within the stakeholder-theory meta-category, BAWAG adopts a systematic but efficiency-oriented engagement model. Stakeholder perspectives are gathered primarily through structured surveys (BAWAG, 2024, p. 238), ensuring that relevant views are considered, though the process remains largely transactional rather than dialogical. Compared with peer institutions that employ workshops, advisory structures or multi-channel engagement formats, BAWAG's approach appears more streamlined and internally coordinated. Notably, the bank acknowledges this limitation explicitly and commits to expanding its stakeholder-integration structures during 2025 (BAWAG, 2024, p. 237). This reflects an emerging, but not yet fully institutionalised, stakeholder governance framework and demonstrates early-stage reflexivity consistent with the stakeholder-theoretical expectations embedded in the ESRS.

Within the normative accounting and reporting meta-category, BAWAG's sustainability framing is primarily characterised by prudential responsibility, risk management and regulatory compliance. Ethical or value-based narratives—such as explicit references to societal responsibility or long-term public welfare—are less developed compared with the other institutions. Stakeholder accountability mechanisms operate mainly through internal governance structures rather than expanded external channels. Nevertheless, the bank displays organisational reflexivity through transparent disclosure of data limitations, methodological constraints and planned enhancements (BAWAG, 2024, p. 237). This commitment to iterative improvement reflects normative expectations concerning learning-oriented sustainability governance, even if the ethical dimension of reporting is less pronounced.

The inductive criteria provide additional nuance to BAWAG's implementation profile. The transparency of methodological assumptions, careful articulation of data limitations, integration of DMA results into strategic and risk-management systems and the presence of external assurance indicate substantive, rather than symbolic, compliance. The bank grounds its DMA within national regulatory requirements (BAWAG, 2024, p. 222), strengthening credibility and legal contextualisation. However, unlike some peer institutions, there is no indication of participation in methodological innovation platforms, cross-institutional cooperation or international working groups. This suggests that BAWAG's approach is shaped primarily by compliance orientation and internal reliability rather than innovation-driven methodological development. While structured and transparent, the methodology remains firmly anchored within established ESRS criteria and internal analysis tools.

Overall, BAWAG meets 18 of the 20 analytical criteria. Key strengths include a coherent methodological design, consistent reporting boundaries, integration into prudential risk architectures, transparent disclosure of limitations and the presence of external assurance. Opportunities for further enhancement lie in reinforcing the ethical framing of sustainability, expanding external stakeholder engagement and contributing to sector-wide methodological innovation. Despite these areas for improvement, BAWAG's DMA constitutes a credible, procedurally disciplined and accountability-oriented implementation of the ESRS double materiality principle. It reflects a pragmatic governance model that prioritises compliance integrity, transparency and continuous improvement within the Austrian regulatory environment.

Table 8

Overarching Category	No.	Category	Points
Accountability	1	Disclosure of the DMA process	✓
Accountability	2	Governance & responsibilities	✓
Accountability	3	Criteria for impact materiality	✓
Accountability	4	Methodology & scoring logic	✓
Accountability	5	Data sources, assumptions & limitations	✓
Accountability	6	Integration into strategy & risk management	✓
Accountability	7	Review & update of DMA	✓
Accountability	8	External verification / assurance	✓
Normative Accounting & Reporting Theory	9	Definition of consolidation scope	✓
Normative Accounting & Reporting Theory	10	Consideration of the value chain	✓
Normative Accounting & Reporting Theory	11	Criteria for financial materiality	✓
Normative Accounting & Reporting Theory	12	Time horizons	✓
Normative Accounting & Reporting Theory	13	Presentation of results	✓
Normative Accounting & Reporting Theory	14	Ethical framing of sustainability	–
Normative Accounting & Reporting Theory	15	Reflexivity & learning	✓
Stakeholder Theory	16	Stakeholder engagement	✓
Stakeholder Theory	17	Stakeholder accountability	–
Inductive	18	Greenwashing tendency (absence of)	✓
Inductive	19	National / institutional contextualisation	✓
Inductive	20	Innovative reporting practices	✓

4.1.8 UniCredit Bank Austria AG

The 2024 sustainability report of UniCredit Group presents a comprehensive and methodologically coherent implementation of the DMA aligned with the ESRS. Following the analytical framework applied in this thesis, the evaluation groups all criteria within the overarching theoretical meta-categories of the principle of accountability, stakeholder theory and normative accounting and reporting theory. Within this structure, the ESRS-based subcategories and inductively derived dimensions together form the basis for assessing UniCredit's implementation quality.

Within the accountability meta-category, UniCredit demonstrates a high level of procedural discipline and strong alignment with ESRS requirements. The report emphasises that the 2024 DMA represents the first fully CSRD-aligned assessment and builds on preparatory work carried out in the previous year (UniCredit, 2024, p. 168). The DMA applies the same consolidation boundary as the Group's sustainability statement (UniCredit, 2024, p. 165), ensuring coherence between sustainability and financial reporting and fulfilling a central requirement of integrated accountability. Governance responsibilities are clearly embedded at senior level: the DMA is overseen by executive management, and the Board of Directors approves the final list of material topics (UniCredit, 2024, p. 166). This anchoring at the highest decision-making tier reflects an institutionalised commitment to accountability and mirrors ESRS expectations that materiality processes must be overseen by bodies with real decision-making authority.

Methodologically, UniCredit employs a structured scoring model that operationalises both impact and financial materiality through defined thresholds. Impact materiality is assessed using severity and likelihood, while financial materiality follows a magnitude-and-likelihood scale ranging from 1 to 4 (UniCredit, 2024, pp. 166–167). These explicit thresholds enhance comparability, auditability and methodological clarity. The assessment covers the entire value chain, including upstream and downstream activities (UniCredit, 2024, p. 166), and differentiates between short-, medium- and long-term time horizons (UniCredit, 2024, p. 167). Data sources are broad and triangulated, including internal documentation, regulatory analyses, ESG ratings and media reviews (UniCredit, 2024, p. 168). This evidential breadth demonstrates a mature, data-driven approach consistent with ESRS expectations. DMA findings feed directly into risk identification and monitoring processes, and the report consolidates material impacts, risks and opportunities across key ESRS chapters (UniCredit, 2024, pp. 90, 161–165). Limited external assurance (UniCredit, 2024, pp. 724–725) reinforces methodological robustness and strengthens credibility.

Within the stakeholder-theory meta-category, UniCredit distinguishes itself through a comparatively advanced and outward-oriented engagement approach. The bank incorporates both internal and external perspectives into the DMA (UniCredit, 2024, p. 168) and participates in a

UNEP FI working group addressing circularity and climate (UniCredit, 2024, p. 91). This involvement signals an engagement strategy that extends beyond transactional consultation and includes collective learning and cross-sector methodological development. Among the institutions examined in this study, UniCredit thus demonstrates one of the most internationally connected stakeholder processes.

Within the meta-category of normative accounting and reporting theory, UniCredit frames sustainability not merely as a regulatory requirement but as a strategic and ethical responsibility. The report emphasises long-term value creation for stakeholders and society (UniCredit, 2024, p. 91), reflecting a normative understanding of corporate purpose aligned with broader societal goals. While the methodological structure is well established, the report provides limited detail on iterative learning processes or explicit descriptions of methodological updates beyond references to the preparatory cycle of the previous year. This suggests that, although the system is mature, the articulation of reflexivity could be strengthened. Nevertheless, the bank's narrative clearly connects financial performance with societal responsibility, aligning with normative reporting principles emphasising purpose, ethics and legitimacy.

The inductive dimensions developed in this thesis provide additional insights into the nature of UniCredit's implementation. The explicit threshold logic, strong governance pathways, integration into risk and strategy systems, and external assurance all indicate substantive rather than symbolic compliance. National regulatory contextualisation is ensured through references to Italian legislation, including Legislative Decree 125/2024 and Section 154-bis of Legislative Decree 58/1998 (UniCredit, 2024, pp. 724, 149). Participation in UNEP FI working groups suggests methodological innovation and an outward-looking orientation towards international best practice. No indicators of greenwashing, symbolic conformity or superficial implementation appear in either tone or structure.

Overall, UniCredit meets 19 of the 20 analytical criteria. Its strengths lie in clearly defined governance responsibilities, explicit methodological thresholds, integration into strategic and risk-management systems, the use of external assurance and participation in international methodological initiatives. Opportunities for further development include more explicit articulation of reflexive learning and deeper methodological innovation. Despite these areas for refinement, UniCredit presents a mature, credible and strategically embedded implementation of the double materiality principle, reflecting a high degree of accountability, normative orientation and

ESRS alignment. The bank positions itself as a leading practitioner of structured and purpose-driven sustainability governance within the European banking sector.

Table 9

Overarching Category	No.	Category	Points
Accountability	1	Disclosure of the DMA process	✓
Accountability	2	Governance & responsibilities	✓
Accountability	3	Criteria for impact materiality	✓
Accountability	4	Methodology & scoring logic	✓
Accountability	5	Data sources, assumptions & limitations	✓
Accountability	6	Integration into strategy & risk management	✓
Accountability	7	Review & update of DMA	✓
Accountability	8	External verification / assurance	✓
Normative Accounting & Reporting Theory	9	Definition of consolidation scope	✓
Normative Accounting & Reporting Theory	10	Consideration of the value chain	✓
Normative Accounting & Reporting Theory	11	Criteria for financial materiality	✓
Normative Accounting & Reporting Theory	12	Time horizons	✓
Normative Accounting & Reporting Theory	13	Presentation of results	✓
Normative Accounting & Reporting Theory	14	Ethical framing of sustainability	✓
Normative Accounting & Reporting Theory	15	Reflexivity & learning	–
Stakeholder Theory	16	Stakeholder engagement	✓
Stakeholder Theory	17	Stakeholder accountability	✓
Inductive	18	Greenwashing tendency (absence of)	✓
Inductive	19	National / institutional contextualisation	✓
Inductive	20	Innovative reporting practices	✓

4.2 Within-Country Comparison

4.2.1 Germany

An examination of Deutsche Bank, Commerzbank, DZ BANK and LBBW shows that the German banking sector has moved well beyond a compliance-oriented interpretation of the ESRS

DMA and instead exhibits a highly institutionalised, procedurally disciplined and methodologically coherent implementation. Across all four institutions, the DMA is not treated as an isolated reporting exercise but is deeply embedded in governance structures, strategic steering processes and prudential risk-management frameworks. This integration demonstrates that materiality is not merely a disclosure requirement but has developed into a managerial logic that guides decision-making, shapes risk identification and informs long-term strategic prioritisation.

A strong point of convergence among the institutions is the alignment of the DMA boundary with the consolidated reporting scope used for financial statements. Deutsche Bank explicitly applies the same consolidation perimeter for sustainability disclosures as for financial reporting (Deutsche Bank, 2024, p. 201), as do Commerzbank (Commerzbank, 2024, p. 49), DZ BANK (DZ BANK, 2024, p. 196) and LBBW (LBBW, 2024, p. 86). This structural consistency ensures a coherent understanding of accountability across financial and sustainability reporting, fully in line with ESRS expectations. Governance responsibilities are equally clearly defined. Deutsche Bank assigns process leadership to the Chief Sustainability Office and requires final validation by the Management Board and the Audit Committee (Deutsche Bank, 2024, pp. 201–204). Commerzbank delegates process execution to Group Sustainability Management in combination with control functions under the oversight of the Board of Managing Directors and the Supervisory Board (Commerzbank, 2024, p. 56). DZ BANK anchors responsibility for the DMA directly at executive level with the CEO and the Employee Relations Director (DZ BANK, 2024, p. 200), while LBBW's DMA must be formally approved by the Board of Managing Directors (LBBW, 2024, p. 108). These arrangements confirm that accountability for sustainability matters is located at the highest organisational level, reflecting the core requirements of ESRS.

Methodologically, all four institutions apply structured, transparent and ESRS-aligned assessment models, although with varying degrees of sophistication. Deutsche Bank employs a five-point scoring model with explicit thresholds, operationalises impact materiality through ESRS-consistent severity dimensions and integrates the DMA results directly into its internal risk management processes (Deutsche Bank, 2024, pp. 202–203, 262). Commerzbank uses a similar five-point scale for assessing severity and likelihood but does not publish explicit threshold values (Commerzbank, 2024, pp. 78–79), which slightly limits methodological comparability. DZ BANK distinguishes itself by defining explicit quantitative thresholds for both impact and financial materiality and by incorporating advanced analytical instruments such as the S&P

Risk Atlas, the SDG Index and the UNEP FI Impact Radar (DZ BANK, 2024, pp. 217–219). LBBW demonstrates strong methodological maturity through its systematic assessment of severity dimensions, its transparent differentiation of data accuracy levels and its explicit discussion of estimates (LBBW, 2024, p. 87). All institutions also apply clearly defined short-, medium- and long-term time horizons (Deutsche Bank, 2024, p. 263; Commerzbank, 2024, p. 49; DZ BANK, 2024, p. 197; LBBW, 2024, p. 107) and combine internal analyses with external benchmarks, thereby strengthening methodological robustness in line with the ESRS principles of evidence triangulation.

A defining strength across all German banks is the high degree of integration of DMA results into strategic, operational and prudential governance structures. Deutsche Bank incorporates its DMA into its internal risk management but also its broader risk-management systems (Deutsche Bank, 2024, p. 262). Commerzbank uses its DMA outputs to inform its strategy, assess business-model resilience and monitor sustainability-related risks (Commerzbank, 2024, p. 65). DZ BANK links the DMA directly to capital planning, strategic steering and risk-appetite formulation (DZ BANK, 2024, p. 213). LBBW integrates materiality results into its ESG strategy and group-wide risk strategy (LBBW, 2024, p. 108). These forms of integration exceed mere disclosure compliance and demonstrate a fully internalised interpretation of double materiality within German prudential governance.

External assurance reinforces this procedural reliability. Deutsche Bank’s sustainability disclosures, including the DMA, are subjected to independent limited assurance (Deutsche Bank, 2024, p. 193), as are Commerzbank’s (Commerzbank, 2024, pp. 537–540), DZ BANK’s (DZ BANK, 2024, p. 748) and LBBW’s statements, which are additionally reviewed within German auditing frameworks such as the HGB (LBBW, 2024, p. 95). This extensive reliance on external verification reduces greenwashing risk and strengthens the auditability of sustainability disclosures.

From the perspective of normative accounting and reporting theory, all four banks exhibit strong ethical framing and acknowledge sustainability as part of broader societal responsibility. References to global frameworks—such as the UN Global Compact, the OECD Guidelines or sector-specific international initiatives—appear consistently across institutions (DZ BANK, 2024, p. 327; LBBW, 2024, p. 107; Deutsche Bank, 2024, p. 191; Commerzbank, 2024, p. 28). Reflexive elements are visible in the iterative adaptation of methodological approaches, whether through annual DMA updates (Commerzbank, 2024, p. 65; LBBW, 2024, p. 108), methodological refinement cycles (Deutsche Bank, 2024, p. 206) or explicit innovation in analytical techniques (DZ BANK, 2024, p. 213). These reflexive practices illustrate that the DMA is not conceptualised as a static requirement but as an evolving instrument of organisational learning.

In line with stakeholder theory, all institutions have established formal structures for stakeholder involvement, although these generally remain consultative rather than co-creative. Deutsche Bank draws on a broad range of internal and external stakeholder groups (Deutsche Bank, 2024, pp. 198, 203). Commerzbank relies on structured ESRS-aligned surveys (Commerzbank, 2024, p. 62). DZ BANK integrates stakeholder workshop results directly into the scoring and validation phases (DZ BANK, 2024, p. 213). LBBW incorporates stakeholder perspectives primarily through ongoing internal expert dialogues (LBBW, 2024, p. 107). While the formats differ, all institutions embed stakeholder engagement structurally within their DMA, although the influence of stakeholder perspectives on actual prioritisation decisions remains limited and reflects the underlying prudential governance logic of the German banking sector.

The inductively derived criteria provide additional differentiation among the institutions. All four banks disclose methodological assumptions transparently, integrate external assurance and demonstrate no indicators of symbolic conformity or greenwashing. National contextualisation is particularly strong across the German sample, with frequent references to HGB and established supervisory expectations that reinforce a rule-based and audit-centric implementation logic. Methodological innovation differs more substantially: DZ BANK emerges as the analytical frontrunner due to its explicit thresholds and use of advanced external instruments, whereas Deutsche Bank and LBBW emphasise methodological precision and internal robustness. Commerzbank demonstrates strong transparency but limits methodological comparability by not publishing threshold values.

Across the twenty evaluation criteria applied in this thesis, DZ BANK fulfils all criteria, Deutsche Bank and LBBW meet nineteen, and Commerzbank meets eighteen. The remaining gaps primarily relate to the explicit disclosure of methodological thresholds, the extent of analytical innovation and the level of documented stakeholder influence, rather than to deficiencies in accountability or governance. Overall, the German banks collectively present a rule-based, control-oriented and highly institutionalised model of sustainability governance. Their ESRS-aligned DMAs are characterised by rigorous procedural discipline, deep integration into governance and risk systems and a strong focus on auditability and methodological coherence. Although opportunities remain for deeper stakeholder inclusion, increased transparency regarding methodological thresholds and more experimental methodological innovation, the German case demonstrates one of the most mature, consistent and credible applications of double materiality currently observable in the European banking sector.

Table 10

Overarching Category	No.	Category	Deutsche Bank	Commerzbank	DZ BANK	LBBW	Fulfilled (out of 4)
Accountability	1	Disclosure of the DMA process	✓	✓	✓	✓	4/4
Accountability	2	Governance & responsibilities	✓	✓	✓	✓	4/4
Accountability	3	Criteria for impact materiality	–	✓	✓	✓	3/4
Accountability	4	Methodology & scoring logic	✓	✓	✓	✓	4/4
Accountability	5	Data sources, assumptions & limitations	✓	✓	✓	✓	4/4
Accountability	6	Integration into strategy & risk management	✓	✓	✓	✓	4/4
Accountability	7	Review & update of DMA	✓	✓	✓	✓	4/4
Accountability	8	External verification / assurance	✓	✓	✓	✓	4/4
Normative Accounting & Reporting Theory	9	Definition of consolidation scope	✓	✓	✓	✓	4/4
Normative Accounting & Reporting Theory	10	Consideration of the value chain	✓	✓	✓	✓	4/4
Normative Accounting & Reporting Theory	11	Criteria for financial materiality	–	–	✓	✓	2/4
Normative Accounting & Reporting Theory	12	Time horizons	✓	✓	✓	✓	4/4
Normative Accounting & Reporting Theory	13	Presentation of results	✓	✓	✓	✓	4/4

Normative Accounting & Reporting Theory	14	Ethical framing of sustainability	✓	✓	✓	✓	4/4
Normative Accounting & Reporting Theory	15	Reflexivity & learning	✓	✓	✓	✓	4/4
Stakeholder Theory	16	Stakeholder engagement	✓	✓	✓	✓	4/4
Stakeholder Theory	17	Stakeholder accountability	✓	✓	✓	✓	4/4
Inductive	18	Greenwashing tendency (absence of)	✓	✓	✓	✓	4/4
Inductive	19	National / institutional contextualisation	✓	✓	✓	✓	4/4
Inductive	20	Innovative reporting practices	–	–	✓	–	1/4

The results in Table 11 show that all four German banks demonstrate a high level of methodological maturity and ESRS alignment. Overall, the results confirm that German banks apply the double materiality assessment as a structured and institutionalised governance tool.

Table 11

Bank	Fulfilled Criteria (out of 20)
Deutsche Bank AG	**19 / 20**
Commerzbank AG	**18 / 20**
DZ BANK Group	**20 / 20**
LBBW	**19 / 20**

4.2.2 Austria

An examination of Erste Group, RBI, BAWAG Group and UniCredit Bank Austria shows that the Austrian banking sector has developed a highly institutionalised, procedurally disciplined and methodologically coherent approach to the implementation of the ESRS DMA. Across all four institutions, the DMA is not treated as a standalone reporting exercise but is deeply embedded in governance structures, strategic decision-making processes and prudential risk-management frameworks. This integration indicates that materiality is no longer conceptualised as a disclosure requirement but as a managerial tool that guides organisational steering, shapes risk identification and informs long-term strategic priorities.

A strong point of convergence across the Austrian institutions is the alignment of the DMA boundary with the consolidated reporting perimeter used for financial statements. Erste Group explicitly applies the same consolidation scope for sustainability and financial reporting (Erste, 2024, p. 115), as do RBI (RBI, 2024, p. 116), BAWAG (BAWAG, 2024, p. 222) and UniCredit Bank Austria (UniCredit, 2024, p. 165). This structural consistency ensures a unified understanding of accountability across financial and sustainability reporting in line with ESRS expectations. Governance responsibilities are likewise clearly defined. Erste Group assigns DMA oversight to Group ESG and Group Accounting, with final validation by the Management Board (Erste, 2024, pp. 115–116). RBI entrusts senior executives and the Audit Committee with the approval of materiality outcomes (RBI, 2024, p. 118). At BAWAG, the Management Board and Supervisory Board carry final responsibility (BAWAG, 2024, p. 238), while UniCredit requires approval of outcomes by its Board of Directors (UniCredit, 2024, p. 166). These governance structures show that decision-making authority for sustainability matters is anchored at the highest organisational levels.

From a methodological perspective, all four institutions use structured, transparent and ESRS-aligned assessment models, though with varying degrees of sophistication and innovation. Erste Group employs a threshold-based scoring methodology, applying explicit cut-offs of 2.5 for impact materiality and 1.5 for financial materiality and integrating results into operational and internal risk-management processes (Erste, 2024, pp. 115–118). RBI applies one of the most technically advanced approaches in the Austrian sample, with quantitative scoring, explicit thresholds of 66.7 percent for both impact and financial materiality, and systematic integration of ESRS-consistent severity and likelihood dimensions (RBI, 2024, pp. 117–118). BAWAG bases its model on ESRS severity dimensions, supplemented by heatmaps, contextual adjustments and qualitative review, and provides transparent disclosures on proxy data and methodological limitations (BAWAG, 2024, p. 237). UniCredit applies a sophisticated four-level scoring model, aligned closely with CSRD and applicable national regulatory requirements, and integrates the DMA into its enterprise-wide governance and risk frameworks (UniCredit, 2024, pp. 166–168). Collectively, these approaches demonstrate strong methodological discipline across the Austrian sector, while allowing for different degrees of innovation.

Stakeholder engagement exhibits greater variation among the institutions than any other analytical dimension. UniCredit implements the most comprehensive and externally oriented engagement model, involving regulators, NGOs, investors and other stakeholders through structured consultation formats and participation in international working groups (UniCredit, 2024, p. 166). RBI combines structured surveys with participation in UNEP FI initiatives, creating a multilayered but primarily formalised engagement architecture (RBI, 2024, pp. 104–108). BAWAG and Erste rely predominantly on structured surveys and internal expert consultations (BAWAG, 2024, p. 238; Erste, 2024, p. 116). Erste explicitly states that no external stakeholder engagement was conducted in the 2024 cycle and outlines plans to expand participation in future iterations (Erste, 2024, p. 116). Across the Austrian institutions, engagement is systematic but remains largely consultative rather than dialogical or co-creative, reflecting a developmental trajectory toward more participatory sustainability governance.

A hallmark of the Austrian banks is the strong integration of DMA results into governance, strategy and risk-management systems. Erste Group embeds DMA findings into operational and internal risk assessments (Erste, 2024, p. 110). RBI incorporates DMA outcomes directly into strategic decision-making structures and executive oversight mechanisms (RBI, 2024, pp. 115–126). BAWAG uses DMA outputs in stress-testing, risk analysis and strategic planning (BAWAG, 2024, p. 238). UniCredit integrates DMA results into its enterprise risk framework in a comprehensive and systematic manner (UniCredit, 2024, p. 168). All institutions obtain limited external assurance on their sustainability statements (BAWAG, 2024, p. 356; Erste, 2024, pp. 487–490; RBI, 2024, p. 76; UniCredit, 2024, pp. 724–725), which reinforces auditability, credibility and reduces greenwashing risk. Transparency regarding assumptions, proxy data and methodological limitations is high across the sample, supporting intersubjective verifiability and accountability.

The inductively derived criteria reveal further nuances in institutional profiles. UniCredit emerges as the procedural frontrunner due to its high methodological precision, strong regulatory alignment and active engagement in international methodological development initiatives. RBI follows closely, characterised by explicit thresholds, analytical sophistication and strong integration into prudential governance structures. BAWAG demonstrates a robust methodological framework, transparent treatment of uncertainty and clear governance integration but shows comparatively less emphasis on ethical framing or wider societal responsibility. Erste Group presents a structured threshold model and a high level of transparency regarding methodological limitations but currently displays the narrowest stakeholder scope and thus the greatest potential for expanding participatory engagement.

Across the twenty evaluation criteria applied in this thesis, UniCredit fulfils nineteen, RBI and BAWAG each fulfil eighteen and Erste Group fulfils seventeen. These variations do not signal structural shortcomings but reflect differences in ethical framing, reflexive learning processes, national contextualisation and the breadth of stakeholder engagement. Overall, the Austrian institutions present a procedurally mature, transparent and methodologically coherent implementation of the ESRS DMA. Governance responsibilities are clearly assigned, methodological approaches are robust, and integration into strategic and risk architectures is consistently strong. Remaining development potential lies in deepening ethical contextualisation, enhancing methodological innovation and broadening co-creative stakeholder participation. The Austrian case thus illustrates an emerging model of ESRS implementation characterised by transparency, learning orientation and embedded accountability structures, with future progress likely to be shaped by advances in normative framing, participatory practices and methodological refinement.

Table 12

Overarching Category	**No.**	**Evaluation Criterion**	**Erste Group**	**RBI**	**BAWAG**	**UniCredit**	**Fulfilled (out of 4)**
Accountability	1	Disclosure of the DMA process	✓	✓	✓	✓	**4/4**
Accountability	2	Governance & responsibilities	✓	✓	✓	✓	**4/4**
Accountability	3	Criteria for impact materiality	✓	✓	✓	✓	**4/4**
Accountability	4	Methodology & scoring logic	✓	✓	✓	✓	**4/4**
Accountability	5	Data sources, assumptions & limitations	✓	✓	✓	✓	**4/4**
Accountability	6	Integration into strategy & risk management	✓	✓	✓	✓	**4/4**
Accountability	7	Review & update of DMA	✓	✓	✓	✓	**4/4**
Accountability	8	External verification / assurance	✓	✓	✓	✓	**4/4**
Normative Accounting & Reporting Theory	9	Definition of consolidation scope	✓	✓	✓	✓	**4/4**

Normative Accounting & Reporting Theory	10	Consideration of the value chain	✓	✓	✓	✓	**4/4**
Normative Accounting & Reporting Theory	11	Criteria for financial materiality	✓	✓	✓	✓	**4/4**
Normative Accounting & Reporting Theory	12	Time horizons	✓	✓	✓	✓	**4/4**
Normative Accounting & Reporting Theory	13	Presentation of results	✓	✓	✓	✓	**4/4**
Normative Accounting & Reporting Theory	14	Ethical framing of sustainability	✓	✓	–	✓	**3/4**
Normative Accounting & Reporting Theory	15	Reflexivity & learning	✓	✓	✓	–	**3/4**
Stakeholder Theory	16	Stakeholder engagement	–	✓	✓	✓	**3/4**
Stakeholder Theory	17	Stakeholder accountability	✓	✓	–	✓	**3/4**
Inductive	18	Greenwashing tendency (absence of)	✓	✓	✓	✓	**4/4**
Inductive	19	National / institutional contextualisation	–	–	✓	✓	**2/4**
Inductive	20	Innovative reporting practices	✓	✓	✓	✓	**4/4**

The results in Table 13 show that all four Austrian banks have achieved a high level of ESRS alignment and methodological consistency. Overall, the results confirm that Austrian banks have institutionalised the double materiality assessment as a transparent and learning-oriented governance process, characterised by accountability and gradual methodological refinement.

Table 13

Bank	Fulfilled Criteria (out of 20)
RBI	19 / 20
UniCredit Bank Austria AG	19 / 20
BAWAG Group AG	18 / 20
Erste Group Bank AG	17 / 20

4.3 Cross-Country Comparison

A comparative examination of the German and Austrian institutions reveals two banking sectors that have both reached an advanced level of maturity in implementing the ESRS-aligned Double Materiality Assessment DMA. In neither regulatory environment is the DMA interpreted as a technical disclosure requirement. Instead, it has become an integral element of internal governance, strategic steering and prudential risk control. This development demonstrates that the principle of accountability—the first meta-category guiding the analytical framework of this thesis—has been firmly institutionalised across both countries. In all eight banks, the DMA is anchored at management-board or supervisory-board level, supported by clearly defined roles and executed through formalised, multi-stage procedures that ensure structure, documentation and traceability. These procedural designs confirm that the DMA has evolved into a managerial tool that shapes decision-making rather than a compliance exercise implemented post hoc for reporting purposes.

Within this accountability dimension, Germany and Austria share several structural similarities. In both jurisdictions, the DMA is aligned with the consolidated financial reporting boundary, ensuring consistency between financial and sustainability reporting and reinforcing a unified understanding of organisational responsibility. Final approval of the DMA results rests with senior executives or board committees, confirming that accountability for sustainability matters has been integrated at the highest organisational level. Across all banks, DMA outcomes are embedded in strategic planning, risk identification and operational governance processes. Annual updates and the widespread use of limited external assurance further support transparency and verifiability, addressing core expectations of ESRS requirements. These cross-country parallels show that the foundational elements of accountability—clear governance roles, consistent boundaries and auditability—have been robustly implemented in both regulatory contexts.

More nuanced differences emerge when shifting from accountability to the second meta-category of this thesis: normative accounting and reporting theory. This category examines how institutions frame sustainability ethically, how they position their responsibilities towards society and how reflexive their methodological approaches are. German institutions tend to adopt a technical, supervisory-aligned interpretation of normative responsibility. Their reporting emphasises data discipline, methodological precision and alignment with national supervisory expectations. Sustainability is often framed in connection with risk control, prudential oversight and internal governance reliability. References to broader ethical principles or societal responsibility are present across German banks, yet such framing remains embedded within control-oriented rationalities that prioritise quantification, procedural consistency and auditability. This communication style reflects a rule-based interpretation of sustainability reporting, characteristic of regulatory environments in which precision and compliance are central to institutional legitimacy. Austrian institutions, by contrast, apply a similarly structured methodological approach but embed it within a broader ethical and value-oriented narrative. UniCredit and RBI, in particular, position sustainability explicitly as part of long-term societal responsibility, referencing international frameworks such as the Principles for Responsible Banking (RBI, 2024, p. 116) or emphasising broader stakeholder value creation (UniCredit, 2024, p. 91). BAWAG and Erste adopt comparably structured processes but differ in their normative depth: BAWAG frames sustainability more strongly through prudential responsibility, while Erste shows pronounced reflexivity by openly acknowledging methodological limitations and announcing process improvements (Erste, 2024, p. 155). These patterns illustrate that Austrian banks interpret the normative dimension of sustainability reporting through a more relational, reflexive and purpose-oriented lens, reflecting a cultural orientation that integrates ethical reasoning into governance practices.

The third meta-category—stakeholder theory—reveals another important area of differentiation. German institutions exhibit highly structured, internally consistent stakeholder processes. These formats include ESRS-aligned surveys, expert interviews and stakeholder workshops, all of which feed into the DMA in a consultative but methodically stable manner (Bank, 2024, p. 653; Commerzbank, 2024, p. 687; DZ Bank, 2024, p. 101; LBBW, 2024, p. 770). The emphasis lies on procedural reliability, ensuring that stakeholder involvement is systematic, auditable and aligned with internal governance logic. Although the level of influence that stakeholders exert on prioritisation decisions remains limited, the processes are well embedded and consistently documented. Austrian banks, while equally systematic, frame stakeholder integration more dialogically. UniCredit and RBI engage external stakeholders—including NGOs, investors and regulators—through structured consultation channels and participation in international initiatives (RBI, 2024, p. 36; UniCredit, 2024, p. 166). Such engagement indicates a stronger openness toward external dialogue, reflecting a stakeholder culture that values transparency and long-term relationship-building. Erste reports a narrower scope of engagement for the 2024 cycle but acknowledges this as a limitation and explicitly commits to expanding participation in future cycles (Erste, 2024, p. 155). This openness about gaps and iterative improvement is itself evidence of learning-oriented stakeholder governance. Thus, in Austria, stakeholder engagement appears as a more dynamic and evolving practice, whereas in Germany it is a stable and procedurally integrated component of prudential governance.

The inductively developed categories provide additional insight into cross-country differences, particularly in the areas of methodological innovation, national contextualisation and the absence of greenwashing tendencies. Austrian banks display a stronger inclination toward methodological experimentation and international collaboration. Explicit references to tools such as the UNEP FI Impact Analysis Tool or participation in working groups on methodological development (RBI, 2024, p. 12; BAWAG, 2024, p. 424; UniCredit, 2024, p. 166) indicate an innovation-oriented interpretation of the DMA. German banks exhibit a more selective pattern: DZ BANK is the clear innovation leader, integrating advanced analytical tools and explicit threshold logic, while the other German institutions refine their methodologies within established supervisory frameworks that emphasise comparability and consistency.

National contextualisation reflects the same distinction. German banks consistently reference national legal and supervisory frameworks such as the HGB and BaFin-/ECB-related expectations (Bank, 2024, p. 285; Commerzbank, 2024, p. 661; DZ Bank, 2024, p. 196; LBBW, 2024, p. 720). This reinforces a rule-based approach in which national standards support methodological discipline. Austrian banks show a more varied pattern: BAWAG and UniCredit explicitly reference UGB, NaDiVeG and, in UniCredit's case, Italian regulatory obligations, while Erste and RBI situate their DMA primarily within the ESRS framework without extensive national contextualisation (Erste, 2024, p. 127; RBI, 2024, p. 116). This difference illustrates that Austrian banks operate with a more principle-based interpretation of accountability, whereas German institutions embed the DMA within a denser national regulatory fabric.

Overall, the cross-country comparison reveals two coherent but distinctly shaped models for implementing double materiality under shared European regulations. German institutions embody a control-oriented, data-driven and supervisory-aligned logic that emphasises procedural discipline, methodological precision and auditability. Austrian institutions apply the same structural requirements but complement them with a broader ethical narrative, greater openness to stakeholder dialogue and a stronger inclination toward methodological innovation. Both groups of banks meet between seventeen and twenty of the evaluation criteria, confirming that they have achieved high-quality, ESRS-consistent practice. The differences that remain do not reflect disparities in compliance but rather differences in institutional rationality, cultural orientation and national governance traditions. Together, they illustrate the flexibility of the ESRS framework: under identical regulations, multiple pathways of accountability—instrumental and moral, procedural and relational—can coexist and lead to equally robust implementations of double materiality.

Table 14

Bank	Country	Score (out of 20)
Deutsche Bank AG	Germany	**19 / 20**
Commerzbank AG	Germany	**18 / 20**
DZ BANK Group	Germany	**20 / 20**
LBBW	Germany	**19 / 20**
Erste Group Bank AG	Austria	**17 / 20**
RBI	Austria	**18 / 20**
UniCredit Bank Austria	Austria	**19 / 20**
BAWAG Group AG	Austria	**18 / 20**

Table 15 provides a quantitative comparison between German and Austrian banks regarding the implementation of the ESRS double materiality assessment. The overview indicates how many banks in each country fulfil each of the 20 evaluation criteria defined in the assessment framework. The comparison highlights shared strengths and national differences in governance, methodology, stakeholder integration, and ethical orientation.

Table 15

Overarching Category	No.	Evaluation Criterion	Germany (n = 4)	Austria (n = 4)
Accountability	1	Disclosure of the DMA process	4/4	4/4
Accountability	2	Governance & responsibilities	4/4	4/4
Accountability	3	Criteria for impact materiality	4/4	4/4
Accountability	4	Methodology & scoring logic	4/4	4/4
Accountability	5	Data sources, assumptions & limitations	4/4	4/4
Accountability	6	Integration into strategy & risk management	4/4	4/4
Accountability	7	Review & update of DMA	4/4	4/4
Accountability	8	External verification / assurance	4/4	4/4
Normative Accounting & Reporting Theory	9	Definition of consolidation scope	4/4	4/4
Normative Accounting & Reporting Theory	10	Consideration of the value chain	4/4	4/4

Normative Accounting & Reporting Theory	11	Criteria for financial materiality	4/4	4/4
Normative Accounting & Reporting Theory	12	Time horizons	4/4	4/4
Normative Accounting & Reporting Theory	13	Presentation of results	4/4	4/4
Normative Accounting & Reporting Theory	14	Ethical framing of sustainability	4/4	3/4
Normative Accounting & Reporting Theory	15	Reflexivity & learning	4/4	3/4
Stakeholder Theory	16	Stakeholder engagement	4/4	3/4
Stakeholder Theory	17	Stakeholder accountability	4/4	3/4
Inductive	18	Greenwashing tendency (absence of)	4/4	4/4
Inductive	19	National / institutional contextualisation	4/4	2/4
Inductive	20	Innovative reporting practices	1/4	3/4

Table 16 consolidates the results at the country level, showing the aggregated performance of German and Austrian banks. The comparison highlights shared progress in implementing the ESRS double materiality principle as well as national differences in methodological and normative orientation.

Table 16

Country	Number of Banks	Total Score (max = 80)	Average Score
Germany	4	**76 / 80 (95%)**	**19.0 / 20**
Austria	4	**72 / 80 (90%)**	**18.0 / 20**

5. Discussion

The analysis of the examined banks provides important insights into how financial institutions put the DMA into practice. The findings show that both German and Austrian banks no longer treat double materiality merely as a compliance-oriented requirement. Instead, the DMA has evolved into an integrated governance tool that shapes strategic direction, risk management and organisational decision-making. As a result, sustainability considerations are increasingly embedded into internal management structures, influencing how risks and opportunities related to environmental, social and governance issues are identified, assessed and addressed.

This discussion interprets the empirical results through three theoretical perspectives — normative accounting theory, stakeholder theory and the principle of accountability. Taken together, these perspectives help explain how a regulatory obligation can develop into a multidimensional organisational practice. They show that the DMA goes beyond fulfilling disclosure requirements and reflects a broader institutional shift towards multi-stakeholder accountability, a trend also highlighted by Kubeneck, Burwieck and Franck (2023, p. 17).

From a theoretical standpoint, the concept of double materiality represents an important development in how accountability is understood within corporate reporting. Traditional accounting frameworks defined materiality purely in financial terms, centred on information relevant to economic actors such as investors and creditors (Bellucci & Manetti, 2019, p. 50). In contrast, the CSRD institutionalises a dual perspective: financial materiality (outside-in), assessing how sustainability issues affect the firm, and impact materiality (inside-out), assessing how the firm affects society and the environment. This expansion reflects what Wunder (2023, p. 114) describes as a moral turn in accounting — a normative shift that broadens corporate responsibility to include social and ecological consequences. Across the banks analysed, this shift is clearly evident: sustainability is no longer perceived as an additional reporting duty but as an expression of corporate responsibility and long-term value orientation.

Stakeholder theory further clarifies how this expanded notion of accountability is put into practice. According to Freeman (1984), organisational legitimacy depends on a firm's ability to recognise, integrate and respond to stakeholder expectations. The ESRS embed this logic directly by requiring that stakeholder engagement form an essential component of the DMA (Commission, 2023, ESRS 1, para. 22). All banks in the sample have established structured stakeholder engagement processes, although the depth and dialogical quality of these processes vary. German banks generally rely on more controlled and internally coordinated mechanisms, ensuring procedural consistency and auditability. Austrian banks — particularly RBI and UniCredit — complement such mechanisms with participation in international initiatives, signalling a more dialogical and outward-oriented interpretation of stakeholder governance. While stakeholder engagement in both countries remains predominantly consultative rather than co-creative, its institutionalisation across all institutions indicates that multi-stakeholder input has become an integral element of sustainability governance.

From an organisational perspective, the governance structures observed in both countries illustrate a substantial shift: sustainability reporting has evolved from a communication-oriented output into a managerial instrument. In all examined banks, responsibility for the DMA is assigned to senior executives or board-level committees, and the results are integrated into prudential risk frameworks such as risk appetite systems or strategic planning processes. This integration highlights the increasing managerial significance of sustainability information and its influence on forward-looking decision-making (Bellucci & Manetti, 2019, p. 103).

However, the ethical dimension of accountability differs across institutions. Some banks — notably Commerzbank and BAWAG — embed double materiality primarily within a risk-governance and compliance-oriented logic, framing sustainability in operational rather than normative terms. Others, such as DZ BANK and Erste Group, explicitly align their sustainability strategies with international frameworks such as the UN Global Compact or the Principles for Responsible Banking. These references illustrate a broader ethical orientation in which sustainability is framed as part of corporate purpose rather than merely as a regulatory requirement. This variation reflects the dual nature of accountability: while regulatory compliance provides formal legitimacy, ethical framing enhances substantive legitimacy and strengthens societal trust (Berg, 2018, pp. 113–115).

The cross-country comparison highlights two distinct yet complementary models through which financial institutions operationalise double materiality under the ESRS. German banks tend to follow a governance- and control-oriented approach, characterised by methodological precision, quantified scoring systems and deep integration into prudential risk management. DZ BANK and Deutsche Bank exemplify this model through the use of explicit thresholds, strict data discipline and the systematic linkage of the DMA with internal risk and capital planning processes — reflecting the German tradition of regulatory precision and formalised compliance structures (Baumüller, Haring & Merl, 2022, pp. 8–10). In contrast, Austrian banks combine an equally structured analytical foundation with a stronger ethical framing, greater openness toward stakeholders and more transparent communication about data limitations and methodological uncertainties. While RBI and UniCredit match their German peers in methodological rigour, Erste Group and BAWAG place greater emphasis on iterative learning, reflexivity and open acknowledgment of uncertainties. This pattern mirrors a stakeholder-oriented institutional culture in Austria, where relational accountability, learning and transparency complement procedural structure.

These differences illustrate that the ESRS framework accommodates multiple interpretations of what accountability entails. The German model reflects what can be described as instrumental accountability — an emphasis on fulfilling regulatory requirements in an efficient, consistent and verifiable manner. The Austrian model, by contrast, aligns more closely with moral accountability — prioritising relational responsibility, communicative openness and ethical legitimacy. Despite their differing orientations, both models contribute to the broader institutionalisation of sustainability governance across Europe. Over time, these approaches may converge toward a hybrid model that combines German procedural precision with Austrian ethical reflexivity, thereby strengthening both the credibility and the legitimacy of double materiality practices.

Beyond the descriptive comparison, the findings reveal several deeper dynamics. First, the strong integration of double materiality into governance and risk structures in both countries indicates that the CSRD is redefining the boundaries of corporate reporting. The DMA no longer operates solely as a transparency instrument but increasingly shapes internal decision-making and strategic prioritisation. This development supports the broader argument that sustainability reporting under the ESRS is not only retrospective but also anticipatory, influencing how institutions perceive emerging risks and long-term opportunities.

Second, although impact materiality is institutionally embedded across all eight banks, analytical practice continues to prioritise financial materiality. Even where impact considerations are systematically assessed, they are frequently operationalised with a view to their anticipated future financial relevance. This pattern reflects both the legacy of prudential regulation and the supervisory emphasis on financial risk exposure. It indicates that the transition toward a genuinely multi-capital accountability system is still underway and progressing gradually, requiring ongoing organisational learning and a cultural shift within financial institutions.

Third, the comparison shows that national regulatory environments and institutional logics play a significant role in shaping how the ESRS is interpreted. German banks tend to adopt a more centralised, standardised and threshold-driven approach, consistent with a rule-based supervisory tradition. Austrian banks, while applying similarly structured methodologies, place stronger emphasis on ethical reasoning, transparency regarding data uncertainty and iterative improvement. These differences demonstrate that the CSRD does not prescribe a uniform governance logic; instead, it permits national and organisational cultures to influence how accountability is enacted in practice.

Finally, the analysis reveals that although stakeholder engagement is structurally embedded across all institutions, it remains largely consultative. Banks have established formal engagement channels, but there is little evidence that stakeholder input substantively shapes strategic decisions or methodological developments. This gap between procedural inclusion and limited transformative influence suggests that stakeholder engagement currently functions more as a legitimacy-enhancing mechanism than as a driver of meaningful change. The extent to which stakeholder involvement evolves toward genuinely dialogical and co-creative formats will likely determine the future maturity of double materiality practices and their capacity to support transformative sustainability governance.

Building on this interpretation, the following section critically examines the structural tensions and limitations that emerge from the empirical findings and discusses their implications for the ESRS framework.

While the results demonstrate substantial progress in the operationalisation of double materiality, they also reveal several constraints that limit the transformative potential of the ESRS in practice. One of the most pronounced tensions concerns the persistent asymmetry between financial and impact materiality. Although all examined institutions formally assess both dimensions, their analytical logic remains strongly shaped by prudential risk management. Environmental and social impacts tend to gain institutional relevance primarily when they are expected to materialise as financial risks. In other words, banks continue to interpret sustainability predominantly through an outside-in materiality lens, even when inside-out considerations are formally embedded. This pattern aligns with scholarly interpretations of double materiality as a transitional construct in which impact materiality is acknowledged conceptually but not yet fully institutionalised as an autonomous dimension of accountability. The findings therefore suggest that although the ESRS is normatively ambitious, it has not yet fundamentally shifted banks' analytical priorities away from traditional financial metrics.

A second central tension arises from methodological opacity. Although the ESRS aims to harmonise sustainability reporting, the comparison reveals substantial variation in materiality thresholds, scoring logic, the weighting of criteria, aggregation methods and the role of qualitative judgement. The ESRS intentionally provides flexibility to accommodate different business models and sectoral contexts, yet this interpretive space also reduces comparability and undermines one of the core objectives of the CSRD. While banks disclose their methodological frameworks, they rarely explain why specific thresholds were chosen or how subjective assessments were standardised. As a result, materially similar issues may be evaluated differently across institutions, even under the same regulatory requirements. This methodological discretion introduces uncertainty for users of sustainability information and raises questions about the degree to which the ESRS can ensure consistency across highly heterogeneous organisational contexts.

The analysis further highlights the largely symbolic nature of stakeholder engagement within the DMA. Although all institutions demonstrate formal compliance through structured engagement processes, the evidence indicates that these mechanisms rarely exert substantive influence on materiality outcomes. Stakeholder engagement is often treated as a procedural obligation rather than as a platform for strategic learning, deliberation or co-creation. This discrepancy between procedural inclusion and limited strategic impact conflicts with the normative foundations of the ESRS, which position stakeholders not merely as sources of information but as essential contributors to shaping organisational accountability. Without clearer pathways for integrating stakeholder input into decision-making, engagement risks becoming ritualised—serving legitimacy and transparency functions without meaningfully influencing materiality results.

Data availability constitutes another structural limitation, particularly regarding financed emissions, value-chain impacts and cross-border portfolios. Many banks rely heavily on estimates, proxy data and modelled assumptions, yet disclose only limited information about the degree of uncertainty or the methodological basis of these estimates. Although the ESRS calls for accurate, comparable and decision-useful sustainability information, the empirical findings show that the underlying data infrastructure remains underdeveloped. As long as banks depend on estimates of uncertain reliability, the robustness of materiality conclusions will remain constrained, especially in diversified portfolios where sectoral and regional inconsistencies further complicate measurement.

These challenges intersect with broader differences in how accountability is interpreted across the two national contexts. German banks generally adopt a rule-based, supervision-driven understanding of accountability, emphasising methodological precision, defined thresholds, data control and auditability. Austrian banks, by contrast, frame accountability more relationally, emphasising ethical responsibility, transparency regarding uncertainty and iterative learning. While both interpretations are compatible with ESRS requirements, they create divergent expectations about the nature and purpose of sustainability reporting. The German approach prioritises consistency and regulatory compliance, whereas the Austrian approach prioritises reflexivity, inclusiveness and moral reasoning. This divergence complicates harmonisation and illustrates how the ESRS interacts with national institutional logics rather than superseding them.

Finally, despite the deep integration of the DMA into governance structures, its influence on core business decisions appears limited. Materiality outcomes clearly inform reporting processes and risk identification, yet there is little evidence that they substantially shape lending strategies, capital allocation or product development. In this context, double materiality becomes symbolically institutionalised—embedded in structures and processes—without fully transforming strategic behaviour. Whether the DMA can overcome this structural divide will depend on the evolution of supervisory expectations, the development of sector-specific ESRS application guidance and the willingness of financial institutions to embed sustainability considerations into their business models beyond compliance requirements.

Taken together, these dynamics highlight the need for a more comprehensive reflection on the implications of the findings for regulators, supervisory authorities and financial institutions. They suggest that although the ESRS provides a strong procedural foundation, its transformative potential depends on clarifying methodological expectations, strengthening data infrastructures, deepening stakeholder participation and ensuring that materiality outcomes contribute not only to transparency but also to strategic reorientation.

The findings of this study carry several important implications for regulators, supervisory bodies and financial institutions. For policymakers and supervisory authorities, the results underscore the need for greater clarity regarding the methodological expectations associated with double materiality. The considerable variation across banks in threshold-setting, scoring logic and aggregation procedures indicates that institutions currently interpret the ESRS with significant discretion. Although the standard intentionally incorporates flexibility to accommodate sectoral and organisational diversity, the observed methodological divergence risks weakening comparability and, therefore, the decision-usefulness of reported information. Supervisory authorities such as BaFin and the FMA may consequently need to articulate more explicit expectations concerning the handling of uncertainty, the integration of qualitative inputs and the calibration of both financial and impact materiality thresholds. Clearer guidance would help stabilise methodological practice, enhance the reliability of sustainability information and support the ESRS's overarching aim of improving transparency for markets, regulators and broader stakeholder groups.

The results also emphasise the importance of strengthening the link between materiality assessments and core risk-management and strategic processes. While the examined institutions have formally embedded sustainability in their governance structures, materiality outcomes continue to exert limited influence on strategic decision-making in areas such as lending, capital allocation and product development. This indicates that institutional practice has thus far prioritised procedural alignment over substantive transformation. For financial institutions, this suggests that the next phase of CSRD implementation must focus on translating sustainability insights into operational decision-making. Developing more robust internal mechanisms that connect materiality results with business-model adjustments, risk appetite frameworks and strategic planning would help ensure that the DMA becomes genuinely embedded in organisational behaviour rather than functioning primarily as an input to disclosure processes.

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A further implication concerns the role of stakeholder engagement. Although all institutions have developed formalised engagement structures, the evidence shows that stakeholder perspectives exert limited substantive influence on materiality outcomes. This raises concerns about the quality and legitimacy of stakeholder participation, particularly given the ESRS's emphasis on stakeholder input as a central element of accountability. Financial institutions would therefore benefit from adopting more dialogical formats — for example, structured feedback loops, explicit explanations of how stakeholder insights are weighted, or transparent documentation of methodological adjustments resulting from stakeholder contributions. Such measures would reinforce the normative foundations of sustainability governance, enhance institutional credibility and move engagement practices beyond procedural compliance toward meaningful participation.

Addressing structural data gaps represents another key implication. The widespread reliance on proxy data and estimates — especially for financed emissions and value-chain impacts — constrains banks' ability to meet the ESRS's expectations for accuracy and decision-usefulness. This challenge cannot be resolved by individual institutions alone; it requires coordinated sector-wide efforts involving regulators, standard-setters, supervisory authorities, data providers and industry associations. Enhancing data infrastructures, for example through the development of common sectoral datasets or mandatory disclosures for high-impact industries, would improve the reliability of downstream impact assessments. Regulators might also consider supporting industry-wide data-sharing platforms, which would facilitate more accurate materiality assessments and strengthen risk-identification processes.

The cross-country comparison further indicates that differing institutional interpretations of accountability may require more nuanced supervisory guidance. German institutions, which emphasise procedural precision and audit reliability, may benefit from clearer expectations regarding the integration of ethical considerations, long-term societal impacts and stakeholder perspectives. Austrian banks, which prioritise ethical framing and reflexivity, may require stronger guidance on methodological standardisation, threshold-setting and comparability. Tailoring supervisory expectations to these differing institutional profiles could support a more balanced development of both procedural credibility and normative legitimacy across the sector.

Before outlining the broader contribution of this study, it is essential to reflect on its methodological and conceptual limitations and the opportunities they create for future research. Despite the strengths of the analysis, several limitations must be acknowledged. The study is based on a sample of eight banks, selected for their relevance and representativeness within the German and Austrian contexts, yet inevitably limited in its ability to capture the full diversity of organisational practices across the European banking sector. The comparative insights therefore offer conceptual depth rather than statistical generalisability.

Another limitation arises from the reliance on publicly available sustainability reports. Even under the CSRD, disclosures reflect institutional narratives shaped by regulatory expectations, reputational considerations and strategic communication choices. Without access to internal documentation, interviews or operational data, it is not possible to determine with certainty how closely reported processes correspond to internal practices. This introduces an unavoidable gap between disclosed and enacted materiality procedures.

A further constraint concerns the temporal context of the analysis. All examined reports represent the first implementation cycle of the CSRD, a phase marked by interpretive uncertainty and methodological experimentation. Many institutions explicitly describe their methodologies as transitional, suggesting that the observed practices capture an early-stage implementation snapshot rather than a stable equilibrium. Over time, methodological convergence may increase, and some of the tensions identified here may diminish as supervisory expectations become more explicit and institutional learning advances.

The cross-country comparison also faces inherent limitations, as it cannot definitively identify the sources of the observed differences. Variations between German and Austrian banks may stem from regulatory cultures, institutional traditions, governance structures, market environments or supervisory communication. The findings therefore illustrate patterns rather than causal mechanisms. Moreover, both countries are high-income EU member states with comparatively advanced sustainability infrastructures; practices in other jurisdictions may diverge significantly due to differing regulatory complexities, supervisory priorities or resource constraints.

These limitations point to several promising avenues for future research. Qualitative interviews with sustainability officers, risk managers and supervisory representatives could provide deeper insight into the internal dynamics of materiality decision-making and how institutions navigate tensions between financial and impact-oriented logics. Comparative studies that include a broader set of EU member states — or even cross-continental analyses — could illuminate how institutional logics shape accountability under the ESRS in different regulatory environments. Longitudinal research across multiple reporting cycles would further clarify how methodologies evolve over time, how organisational learning becomes institutionalised and whether the initial gap between reporting and operational integration narrows.

Taken together, these considerations situate the study's contribution within the broader development of sustainability accounting and the evolving interpretation of accountability under the CSRD. The analysis shows that financial institutions operationalise double materiality not merely as a technical requirement but as a multidimensional framework that integrates governance structures, risk management processes, ethical reasoning and stakeholder expectations. By comparing two countries with shared regulatory obligations but distinct institutional logics, the study demonstrates that the CSRD does not prescribe a single model of accountability. Instead, it provides a flexible architecture within which both instrumental and moral understandings of accountability can coexist and interact.

The findings also highlight reflexivity as an emerging indicator of reporting maturity. Many banks acknowledge methodological limitations, disclose uncertainties and continuously refine their approaches. These practices suggest that double materiality is developing into a learning-oriented governance tool that supports institutional adaptation and strengthens organisational capacity. This insight extends existing theoretical debates in sustainability accounting by illustrating how normative expectations translate into evolving operational routines.

From a practical standpoint, the study contributes to the refinement of supervisory guidance, the development of sector-specific standards and the enhancement of internal processes within financial institutions. By identifying structural tensions and conceptual ambiguities in the early stages of CSRD implementation, it provides a basis for improving the credibility, comparability and legitimacy of sustainability reporting in future reporting cycles.

Overall, the study demonstrates that double materiality represents far more than a disclosure mechanism. It redefines corporate accountability by integrating ethical, institutional and strategic dimensions. By capturing this transformation during its initial implementation phase, the study contributes to a deeper understanding of how regulatory change, organisational behaviour and societal expectations interact in shaping the emerging field of sustainability accounting.

6. Conclusion

This thesis examined how banks in Germany and Austria interpret and implement the double materiality principle as defined by the ESRS under the CSRD (Commission, 2023). Using a qualitative comparative content analysis (Mayring, 1994; Kuckartz, 2018) of eight leading institutions, it explored how the double materiality assessment (DMA) is operationalised in practice and how methodological, governance, and ethical orientations differ across national contexts. The study also connected these practices to broader theoretical perspectives from accountability theory, stakeholder theory, and normative approaches to sustainability reporting. The findings demonstrate that while both German and Austrian banks exhibit a high degree of compliance and methodological maturity, they differ in how they interpret and communicate the ethical and social meaning of double materiality.

Across all cases, the DMA is embedded as a central element of management and governance. Each institution integrates the process into strategic planning and risk management, ensures senior-level approval, and applies structured procedures for topic identification, stakeholder engagement, scoring, validation, and assurance. This consistent institutionalisation indicates that the ESRS have achieved one of their core objectives: transforming sustainability reporting from a disclosure exercise into a decision-oriented instrument of corporate accountability

(Mosler, 2024, p. 59). The DMA thus operationalises the ESRS vision by linking financial and sustainability performance in a transparent, verifiable manner.

Addressing the first research question, the results confirm that all banks adopt systematic and substantive approaches to double materiality. Both German and Austrian institutions use multi-stage ESRS-aligned methodologies that assess impact and financial materiality through dimensions such as scale, scope, reversibility, magnitude, and likelihood. Their analyses cover the entire value chain, recognising that material impacts often arise through lending and investment rather than direct operations. Moreover, all banks disclose assumptions, data sources, and limitations, reflecting a maturing transparency culture and a growing integration of sustainability within financial and risk-management frameworks.

National differences remain significant. German banks approach double materiality primarily as a technical and supervisory discipline, consistent with the country's tradition of regulatory precision and control. Their reports emphasise quantified scoring, thresholds, data validation, and integration into prudential systems such as the ICAAP. Austrian banks, by contrast, combine similar methodological rigor with a stronger ethical framing, focusing on stakeholder trust, inclusiveness, and social value creation. Erste Group and RBI, for example, link their DMA to international initiatives such as the UN Global Compact and the Principles for Responsible Banking. While both systems demonstrate maturity, they differ in emphasis: German banks prioritise control and consistency; Austrian banks highlight ethics and transparency.

In response to the second research question, the comparison reveals two complementary models of institutionalisation. The German approach reflects procedural discipline, structured assurance, and regulatory alignment, whereas the Austrian approach embodies ethical accountability, openness, and learning orientation. German institutions interpret double materiality mainly as a governance tool enhancing risk credibility, while Austrian banks use it as a platform for articulating societal purpose. Both align with ESRS objectives, yet each expresses distinct national traditions of accountability.

Theoretically, the findings show that double materiality bridges the gap between compliance and moral accountability. Normative accounting theory posits that accounting not only measures performance but defines the moral boundaries of responsibility (Berg, 2018). The ESRS formalise this expansion by extending stewardship to encompass natural and social capital alongside financial assets. German banks interpret stewardship as prudential management and systemic stability; Austrian banks view it as ethical duty and intergenerational responsibility. Thus, double materiality becomes not just a legal concept but a moral practice—an expression of how organisations assume responsibility toward society.

Stakeholder theory (Bellucci & Manetti, 2019) further explains this transformation. In both countries, stakeholder engagement is now institutionalised within the DMA, though with different levels of inclusiveness. German banks favour structured, internally managed processes ensuring methodological consistency, while Austrian banks—especially RBI and UniCredit—pursue broader multi-stakeholder dialogue. These contrasts mirror national governance cultures: one grounded in structure and risk control, the other in openness and social trust. Yet all institutions now treat stakeholder input as a strategic governance component rather than an external compliance formality.

The study highlights that effective sustainability reporting requires balancing regulatory rigor with ethical depth. The German cases show that precision and integration enhance credibility and decision relevance; the Austrian cases demonstrate that transparency and reflexivity foster legitimacy and trust. The most advanced form of double materiality will combine both—methodological discipline and reflective learning—ensuring structure without losing adaptability or ethical engagement.

Naturally, this research has limitations. It relies on publicly available reports from a small sample, capturing the first CSRD-aligned reporting cycle. Consequently, comparability and procedural stability take precedence over innovation. Stakeholder engagement remains largely unidirectional, and direct evidence of stakeholder influence on strategic decisions is scarce. Future research should include additional EU contexts, conduct interviews with practitioners, and examine subsequent reporting cycles to trace how double materiality evolves through iterative learning and regulatory feedback.

In conclusion, the institutionalisation of double materiality under the ESRS represents a fundamental transformation in corporate accountability within the European banking sector. It unites compliance with conscience—turning sustainability from an abstract principle into a practical governance system that connects data, ethics, and strategy. The coexistence of Germany's procedural precision and Austria's ethical reflexivity demonstrates the ESRS's strength as a flexible yet unifying framework. Accountability in modern banking now extends beyond financial stewardship to encompass responsibility toward people, the planet, and collective prosperity. In this sense, the European double materiality regime not only harmonises reporting but redefines the moral foundation of finance—guiding institutions toward a model of accountability that reflects not only what they must disclose, but who they choose to be.

References

Akremi, L. (2019). Stichprobenziehung in der qualitativen Sozialforschung. In N. Baur, & J. Blasius, *handuch Methoden der empirischen Sozialforschung* (S. 405-424). Wiesbaden: Springer VS.

Anckar, C. (2008). On the Application of the Most Similar System Design and the Most Different Systems Design in Comparative Research. *International Journal of Social Research Methodology*, 389-401.

Auswärtiges Amt. (20. Februar 2025). *Bilaterale Beziehungen zwischen Österreich und Deutschland.* Von Deutsche Botschaft Wien: https://wien.diplo.de/at-de/themen/laenderinfos-1/bilaterale-beziehungen abgerufen

Azam, S., Warraich, K., & Awan, S. (2011). One Report: Bringing Change in Corporate Reporting through integration of Financial and Non-Financial Performance Dosclosure. *International Journal of Accounting and Financial Reporting*, 50 ff.

BaFin. (29. Mai 2024). *Anlage 1: MaRisk vom 29.05.2024 - Txet und Erläuterungen (Rundschreiben).* Von Bundesanstalt für Finanzdienstleistungsaufsicht: https://www.bing.com/ck/a?!&&p=61df4810b9c3b38660a7bde7cab8ee733b4484a8d086eb8955ab2106063731b7JmltdHM9MTc1OTg4MTYwMA&ptn=3&ver=2&hsh=4&fclid=3d06cc69-439f-6cee-00af-da0242f76d6b&psq=Bundesanstalt+f%c3%bcr+Finanzdienstleistungsaufsicht+(BaFin).+(2024%2c+2 abgerufen

Bank, D. (2024). *Geschäftsbericht 2024.*

Baumüller, J., & Mayr, J. (2023). *Quick Guide: Wesentlichkeitsanalyse gemäß CSRD und ESRS. Überblick und häufig gestellte Fragen.* WWF Österreich; Technische Universität Wien.

Baumüller, J., Haring, N., & Merl, S. (2022). Die Endfassung der Corporate Sustainability Directive (CSRD): Überblick und Anwendungsbereich. *NR*, S. 509-526.

BAWAG. (2024). *Konsolidierter Geschäftsbericht 2024 der BAWAG Group AG.*

Bellucci, M., & Manetti, G. (2019). *Stakeholder engagement and sustainability reporting.* Routledge.

Berg, R. (2018). *Legitimation durch Infomrationsintermediäre mit Nachhaltigkeitsbezug: Eine institutionstheoretische Analyse und empirische Kapitalmarktuntersuchung.* Springer Gabler.

Bertram, A. (2025). Deregulating to No Avail: How the Omnibus Package Falls Short in Simplifying Key EU Green Deals Instruments. *Intereconomics*, S. 170-175.

BMJ. (2025). *Richtlinie über die Nachhaltigkeitsberichterstattung von Unternehmen (CSRD, Corporate Sustainability Directive); Omnibus-Richtlinie.* Von https://www.bmj.gv.at/themen/Zivilrecht/Richtlinie-%C3%BCber-die-

Nachhaltigkeitsberichterstattung-von-Unternehmen-(CSRD,-Corporate-Sustainability-Reporting-Directive).html abgerufen

Bowen, G. A. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, 27-40.

Bücker, N. (2020). Kodieren - aber wie? Varianten der Grounded-Theory-methodologie und der qualitativen Inhaltsanalyse im Vergleich. *Qualitative Social Research*.

Bundesbank , D. (2025). *banking statistics.* Deutsche Bundesbank.

Comission, E. (2023). Commission Delegated Regulation (EU) 2023/2772 of 31 July 2023 supplementing Directive 2013/34/EU of the European Parliament and of the Council with regard to sustainability reporting standards. *Official Journal of the European Union, L 2023/2772*.

Commerzbank. (2024). *Group Sustainability Report 2024.*

Commerzbank. (August 2025). *Faktenblatt-Commerzbank AG.* Von https://www.commerzbank.de/konzern/newsroom/publikationen/commerzbank-faktenblatt.pdf abgerufen

DB. (2025). *Strategie - Deutsche Bank*. Von https://www.db.com/who-we-are/strategy/index?language_id=1&utm abgerufen

Deloitte. (2025). *Sustainability Briefing: ESRS-Berichterstattung 2025: Daten richtig einordnen, Transparenz strategisch nutzen.* Von https://www.deloitte.com/de/de/our-thinking/sustainability-briefings/sustainability-briefing-esrs-berichterstattung-2025.html abgerufen

DZ Bank. (2024). *Sustainability Report 2024.*

DZ, B. (2025). *Die DZ bank Unser Profil.* Von https://www.dzbank.de/content/dzbank/de/home/die-dz-bank/profil.html abgerufen

EBA. (2021). *Risk Assessment Report for the European banking System.*

Endres, A., & Radke, V. (1998). *Indikatoren einer Nachhaltigen Entwicklung.* Berlin: Duncker&Humbolt.

Erlei, M., Leschke, M., & Sauerland, D. (2007). *Neue Institutionsökonomik.* Stuttgatt: Schäffer-Poeschel.

Erste, G. (2024). *Annual Report 2024.*

ESRB, E. S. (23. November 2023). *Other systemically important institutions (O-SII) buffer rates.* Von https://www.esrb.europa.eu/pub/pdf/other/Esrb.notification231201_OSII_DE~324e67b1d9.en.pdf abgerufen

EY. (29. Juli 2025). *EU adopts Qucik Fix to extend ESRS phase-in reliefs in 2025-2026*. Von https://www.ey.com/en_gl/technical/csrd-technical-resources/eu-adopts-quick-fix-to-extend-esrs-phase-in-reliefs-in-2025-2026#:~:text=Wave%201%20undertakings%20gain%20flexibility%20on%20sustainability%20disclosures.,Standards%20%28ESRS%29%20phase-in%20reli abgerufen

Feisel, E., & Makowka, C. (2024). Die neue Nachhaltigkeitsberichterstattung - Welche Anforderungen kommen durch die CSRD auf deutsche Unternehmen zu? *Der Betrieb*, S. 65-68.

Fink, C., & Schmidt, R. (2023). Nachhalitgkeitsberichterstattung nach der Corporate Sustainability Reporting Directive. *KoR - Zeitschrift für internationale udn kapitelmakrtorientierte Rechnungslegung*, S. 105-116.

Flötotto, M., Höll, R., Neumeyer, L., Schindelhauer, K., & Windhagen, E. (2023). *What better place than here, what better time than now? German banking in 2023.* McKinsey & Company.

FMA. (2025). *Strategie der FMA zu Sustainable Finance*. Von https://www.fma.gv.at/querschnittsthemen/sustainable-finance/sustainable-finance-strategie-der-fma/#:~:text=Im%20Mai%202025%20ver%C3%B6ffentlichte%20die%20FMA%20erstmals%20ein,Finanzsektor%20reagiert%20und%20die%20Resilienz%20des%20Finanzmarktes%20st%C3%A abgerufen

Freeman, R. (1984). Strategic management: A stakeholder theory. *Jornal of Management Studies*, 1-24.

Fremgen, G., & Nitschinger, V. (5.. Dezember 2024). *FMA-Pürfschwerpunkte 2024*. Von BDO: Assurance News: https://www.bdo.at/de-at/blog/assurance-news/fma-pruefungsschwerpunkte-2024 abgerufen

Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK dosclsure. *Accounting, Auditing & Accounability Journal*, 47-77.

Hering, L., & Jungsmann, R. (2020). Einzelfallanalyse. In N. Baur, & J. Blasius, *Handbuch Methoden der empirischen Sozialforschung* (S. 677-689). Wiesbaden: 677-689.

Jensen, M., & Meckling, W. (1976). Theory of the Firm: Magerial behavior, Agency Costs and Ownership Structire. *Journaö of Financial Economics*, S. 305-360.

KPMG. (15. Juli 2025). *Quick fix amendments to ESRS: Relief from additional reporting requirements for first-wave companies*. Von KPMG Global Corporate Reporting Institute: https://kpmg.com/xx/en/our-insights/ifrg/2025/omnibus-quick-fix.html abgerufen

Kubeneck, A., Burwieck, S., & Franck, A. (2023). Die doppelte Wesentlichekitsanalyse schafft die Schrundlage für eine nachhaltige Unternehemsführung. *econic*, S. 17-21.

Kuckartz, U. (2018). *Qualitative Inhaltsanalyse. Methoden, Praxis, Computerunterstützung.* Weinheim, Basel: Beltz Juventa.

LBBW. (2024). *Geschäftsbericht 2024.*

LBBW. (2025). *About us*. Von https://www.lbbw.de/group/lbbw/about-us/about-us_7v4kzduc3_e.html abgerufen

Legewie, N. (2022). Qualitative Comparative Analysis. In N. Baur, & J. Blasius, *Handuch Methoden der empirischen Sozialforschung* (S. 707-724). Wiesbaden: Springer VS.

Lieberson, S. (1991). Small N's and big conclusions: An examination of the reasoning in comparative studies based on a small number of cases. *Social Forces*, 307-320.

Mayring, P. (1994). Qualitative Inhaltsanalyse. In A. Boehm, A. Mengel, & T. Muhr, *Texte verstehen: Konzepte, Methoden, Werkzeuge* (S. 159-175). Konstanz: Uni.-Verl. Konstanz.

Mayring, P., & Fenzl, T. (2022). Qualitative Inhaltsanalyse. In N. Baur, & J. Blasius, *Handbuch Methoden der empirischen Sozialforschung* (S. 691-706). Wiesbaden: Springer VS.

Meyer, J., Drori, G., & Hwang, H. (2006). World Society and the Organizational Actor. In J. Meyer, G. Drori, & H. Hwang, *Globalization and Organisation: World Society and Organizational Change* (S. 25-49).

Mosler, A. (2024). *Unternehmenssoftware im Wandel - Neue Anforderungen durch die EU-Gesetzgebung: Strategien zur Umsetzung von EU-taxonomie, CSRD/ESRS; ESPR, CBAM und CSDDD.* Springer Gabler.

Nationalbank, Ö. (2024). *Financial Stability Report 48.* Österreichische Nationalbank.

Nationalbank, Ö. (2025). *Fakten zu Österreich und seinen Banken.* . Österreichische Nationalbank.

Nicolo, G., Zampone, G., & Polcini, P. (2025). Ready for Change After the Omnibus Package? Early Compliance With the European Sustainability Reporting Standards and Its Key Determinants in the New Regulatory Era. . *Business Strategy and the Environment*.

Ohly, H., & Weber, K. (2019). Informationsquellen udn Informationsaustuasch. In N. Baur, & J. Blasius, *Handuch Methoden der empirischen Sozialforschung* (S. 89-104). Wiesbaden: Springer Vs.

Przyborski, A., & Wohlrab-Sahr, M. (2022). Forschungsdesigns für die qualitative Sozialforschung. In N. Baur, & J. Blasius, *Handbuch Methoden der empirischen Sozialforschung* (S. 123-142). Wiesbaden: Springer VS.

PwC. (2024). *Strategie zur Umsetzung der Nachhaltigkeitspflicht*. Von https://www.pwc.de/de/nachhaltigkeit/global-csrd-survey-2024-ergebnisse-fuer-deutschland.html abgerufen

PwC, D. (9. November 2023). *PwC-Studie: Corporate Sustainability Reporting Directuve (CSRD) 2023 - eine Analyse*. Von Sustainability - Der Blog zur

Nachhaltigkeitsagenda: https://www.pwc.de/de/pressemitteilungen/2023/nachhaltigkeitsreporting-die-csrd-wirkt-bereits.html#:~:text=PwC-Studie%20Corporate%20Sustainability%20Reporting%20Directive%20%28CSRD%29%20%E2%80%93%20eine,fehlende%20Ressourcen%20und%20Zeitdruck%20sind%20die abgerufen

Raworth, K. (2017). *Doughut Economics: Seven Ways to Think Like a 21st-Century Economist.* Vermont, USA: Chelsea Green Publishing.

RBI. (2024). *2024 RBI Annual Report.*

Salheiser, A. (2022). Natürliche Daten. Dokumente. In N. Baur, & J. Blasius, *handbuch Methoden der empirischen Sozialforschung* (S. 1507-1522). Wiesbaden: Springer VS.

Saraswati, E., Rumansvah, M., & Dewi, A. (2024). Materiality and stakeholder engagement in sustainability reporting: Does it matter? *Business: Theory & Practice*, S. 397-405.

Schneijderberg, C., Wieczorek, O., & Steinhardt, I. (2022). *Qualitative und quantitative Inhaltsanalyse: digital und automatisiert: Eine anwendungsorientierte Einführung mit empirischen Beispielen und Softwareanwendungen.* Weinheim: Beltz Juventa.

Sebastiao, A., Tavares, M., & Azevedo, G. (2024). Evolution and challenges of sustainability reporting in the banking sector: A systemic literature review. *Administrative Science*.

SSM. (2025). *List of supervised entities.* European Central Bank.

Suchman, M. (1995). Managing legitimacy - Strategic and institutional approaches. *Academy of Management Review*, S. 571-610.

UniCredit. (2024). *Geschäftsbericht 2024.*

Vola, P., Cantino, G., & Gransinigh, S. (kein Datum). Stakeholder theory and sustainability disclusore: A comparative analysis of different approaches. *Corporate Ownership & Control*.

von Keitz, I., & Borcherding, N. (2023). Die Stakeholder-Einbindung im Rahmen der Nachhaltigkeitsberichterstattung - Ein Abgleich der zukünftigen Anforderungen gem. CSRD und ESRS mit der aktuellen Berichtspraxis ausgewählter Unternehmen. *Der Betrieb*, S. 2897-2904.

Wunder, T. (2023). Wesentlichkeitsnalyse nach CSRD: Sowohl den Impact auf die Umwelt als auch die Geschäftsentwicklung bewerten. *ZFO - Zeitschrift für Führung + Organisation*, S. 113-117.

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This document has been reviewed using AI tools for linguistic refinement and clarity.