

Article

Assessing the Maturity of Sustainable Business Model and Strategy Reporting under the CSRD Shadow

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Abstract: The present work is amongst the few that attempt to critically assess the maturity of Business Model (BM) and strategy disclosures of listed firms under the shadow of the new EU reporting directive, the Corporate Sustainability Reporting Directive (CSRD). The novel Practices Evaluation Approach (PEA), developed recently by the Project Task Force on Reporting of Non-Financial Risks and Opportunities (PTF-RNFRO), offers the evaluation framework for this assessment. The PEA delineates and evaluates the maturity of BM and strategy disclosures against qualitative characteristics and content elements drawn from well-accepted, financial and non-financial, reporting frameworks, standards and directives (including the CSRD). Therefore, the PEA provides the advantage of a contemporary and integrated/holistic assessment tool. Specifically, the following seven evaluation criteria are used for the assessment: clarity and comprehensiveness of the overall BM, strategy disclosure, disclosure of the BM's potential across-time horizons and its dependencies, impacts on sustainability issues, material sustainability issues that are likely to affect the company's performance, the BM's exposure to sustainability risks and sustainability opportunities, and sustainability strategy, targets, KPIs and their monitoring and progress. The analysis covered 30 CSR/sustainability reports and connected documents of listed companies operating in 6 key sectors of the Greek economy, i.e., information technology, construction, tourism and transportation, cosmetics, banking and energy. The results of our analysis offer evidence that BM reporting is not holistically developed (i.e., critical components are missing), and the level of development varies across the examined sectors. Moreover, sustainability risks are more stressed, in relevance to opportunities, whilst positive (rather than negative) impacts are mainly disclosed. Also, the quantification of sustainability risks and opportunities does not appear frequently, whilst the interconnections between sustainability strategy and companies' financial objectives is relatively restricted. The paper concludes by pointing out some critical hints useful for enhancing the maturity of BM and strategy disclosures.

Keywords: sustainable business models; business model and strategy reporting/disclosure; maturity of business model and strategy reporting/disclosure; practices evaluation approach; EFRAG; Greece



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1. Introduction

Sustainable development has gradually turned out to be a major concern for the business world forcing companies to consider the sustainability dimensions of business activities and (economic, social and environmental) value creation in their business models (BM) and strategy (Joyce and Paquin 2016; Evans et al. 2017). In parallel, corporate reporting has evolved to incorporate sustainability-related information regarding the description of the BM and strategy in a company's reports. The BM is a tool that can offer insights into the logic that underlines the value creation process of an organization and provide a consistent picture that highlights the interrelated factors that advance sustainable value creation (Nielsen and Bukh 2013), whilst strategy can be seen as the implementation of a company's BM (Casadesus-Masanell and Ricart 2010). This information allows users (i.e.,

managers, employees, investors and partners) of the reports to easily evaluate the value creation process, benchmark and assess a company's ability to create value in the short, medium and long term and review long term performance against sustainability criteria (Di Vaio et al. 2023).

Therefore, high-quality disclosures of BM and strategy can communicate more clearly a company's commitment to sustainability and offer advantages, both internally and externally, to an organization. Internally, a meaningful BM and strategy disclosure is more likely to lead to more informed and effective decision-making on sources of competitive advantage and capital flows, including how to redirect these flows to facilitate the shift to more Sustainable (S)BM (Kapur et al. 2023). Externally, high-quality BM and strategy disclosure is a strong communication device, vital in reducing information asymmetry, instilling trust in the company's stakeholders and informing them on how an organization creates sustainable value in the long term (Di Tullio et al. 2019).

Consequently, contemporary organizations are challenged to produce high-quality BM and strategy disclosures. Towards this direction, and in an attempt to reduce inconsistencies in reporting, the International Integrated Reporting Council IIRC (2011) has indicated the basic elements of the content regarding BM disclosure. Additionally, the European Union (EU) has enforced the Non-Financial Reporting Directive 2014/95/EU (NFRD), and more recently the Corporate Sustainability Reporting Directive (CSRD), aiming (amongst others) to facilitate companies in communicating more sustainability-related, understandable, verifiable, relevant, comparable and represented in a faithful manner information about their BM and strategy and demonstrating how resilient they both are with respect to sustainability issues. In compliance with the CSRD, organizations will have to incorporate information on the resilience of their BM and strategy to risks related to sustainability issues, the opportunities related to sustainability issues, the plans to make sure that their BM and strategy are in line with the transition to a sustainable economy, as well as a narrative of how their BM and strategy consider the interests of their stakeholders into their disclosures (Deloitte 2022). The aspiration is to provide the type and quality of data that investors and other stakeholders need when determining a company's approach to sustainability. Therefore, it is important that in-scope companies familiarize themselves with the new directive and consider how its implementation affects them on a legitimacy, disclosure and, consequently, on a practical/operational level.

However, despite the fact that recent reviews of the BM literature indicate an extensive and increasing interest in the SBM/BM and strategy disclosure topic, it is also widely accepted that there are still many misunderstandings, dilemmas, doubts and inconsistencies to be addressed (Di Tullio et al. 2019; Jensen 2014). Indeed, the way a company's BM and strategy are communicated is a difficult to investigate phenomenon for at least three reasons, its relative novelty (Bek-Gaik and Surowiec 2022), the lack of agreement on the components, it has quality characteristics and is the most effective way of communicating BM and strategy information (EFRAG 2021). These inconsistencies limit creators' understanding and effectiveness of communicating BM and strategy information (Lozano et al. 2016) with sufficient "flexibility" and "discipline" (Athanasakou et al. 2023, p. 2).

In the context of the above discussion, the present study is among the first (besides the EFRAG's (2021) study) to approach the issue of the maturity of BM and strategy reporting under the "shadow" of the CSRD and use the novel Practices Evaluation Approach (PEA) for this evaluation. The PEA was developed by the Project Task Force on Reporting of Non-Financial Risks and Opportunities (PTF-RNFRO; EFRAG 2021). It approaches and evaluates the maturity of BM and strategy disclosures against qualitative characteristics and content elements drawn from well-accepted, financial and non-financial, reporting frameworks, standards and directives (including the CSRD). Therefore, the PEA provides the advantages of a contemporary and integrated/holistic maturity assessment tool. Specifically, seven evaluation criteria are used to delineate and assess maturity: clarity and comprehensiveness of the overall BM and strategy disclosure, disclosure of the BM's potential across time horizons and its dependencies and impacts on sustainability issues, material sustainability

issues that are likely to affect the company's performance, the BM's exposure to sustainability risks and sustainability opportunities, and sustainability strategy, targets, KPIs and their monitoring and progress. The analysis covered 30 CSR/sustainability reports and connected documents of 30 listed companies operating in 6 key sectors of the Greek economy, i.e., information technology, construction, tourism and transportation, cosmetics, banking and energy. The Greek context also provides an opportunity for contribution in the field since no relevant studies have been traced by the authors.

In conclusion, the present study contributes to the growing literature and practice on BM and strategy disclosures in at least three ways. First, to the best of our knowledge, the present work is amongst the few (besides [EFRAG 2021](#)) that approach the issue of the maturity of BM and strategy disclosures using the integrated PEA framework. Second, our analysis promotes and justifies the use of the PEA as a contemporary framework that can advance the assessment and unification of BM and strategy disclosure across different national (i.e., Greece) and industry settings. Third, the present study attempts to clarify how practitioners understand and explain the concept of BM and strategy in their companies' documents and underline inconsistencies. Therefore, our work has practical implications. Our research findings can directly inform practitioners about the pitfalls in BM and strategy reporting and the path to improve and adjusting them to the requirements of well-accepted, financial and non-financial, reporting frameworks, standards and directives (including the CSRD). Also, considering that BM and strategy reporting provides information to various stakeholder groups and affects their preferences and choices, the outcomes of our study is of use not only to the preparers of the reports but also to the users of the reports such as managers, auditors, partners, investors, customers, current employees and candidates. Last but not least, our findings can be of interest to the government officials and the reporting standard setters as they develop BM and strategy disclosure-related implementation guidance.

To achieve its goals, the present paper is structured as follows: Section 2 includes background information on the concept of the BM/SBM and its association with strategy as well as a critical review of prior literature, Section 3 provides details on the data and research design, Section 4 contains the discussion of our findings, and Section 5 concludes and provides the research limitations and future research avenues.

2. Literature Review

2.1. Business Models and Strategy

The BM concept gained popularity in the 1990s, an era that saw the introduction of information and communication technologies into the business world, as well as the globalization of business activities and markets. It was originally used to communicate mainly to investors and other relevant stakeholders, in a simple way and within a short time-frame, how an organization "creates, delivers and captures value" ([Osterwalder and Pigneur 2010](#)). BMs can be seen as structured management tools that have the potential to be a key factor in the competitive stance and success of a business ([Di Tullio et al. 2019](#)). Additionally, the concept of the BM promotes a proactive and independent mindset and stimulates the preparers, auditors and users of the reports to reflect on how the business operates and creates value ([Bek-Gaik and Surowiec 2022](#); [EFRAG 2013](#)).

Gradually, the literature on BMs has moved through different phases from uncovering the components that a BM consists of ([Viscio and Pasternack 1996](#); [Osterwalder and Pigneur 2010](#)) and its taxonomies ([Timmers 1998](#)), to BM innovation ([Spieth et al. 2014](#)) and the openness ([Foss and Saebi 2015](#)), sustainability ([Ritala et al. 2018](#)) and performance ([Nielsen et al. 2008](#)) of BMs.

It is useful to highlight that, although the term BM is often used in the sense of business strategy ([Hamel 2000](#)), the two concepts, albeit complementary, are different. The BM provides a platform for measuring, observing and analyzing the company's performance and improves planning, change and the implementation of the company's strategy ([Osterwalder 2004](#)). The BMs allow companies to react faster to changes in

the business environment, improve the alignment of strategy, business organization and technology, and help support innovation (Osterwalder 2004). In fact, the purpose of the BM is to utilize strategy to attain the desired results, which can be evaluated through the company's key performance indicators (KPIs; Bek-Gaik and Surowiec 2022). When explicitly understood, the BM of an organization can help the management team get a clearer view of the interconnections between upper-level strategies and actions, which in turn supports innovation through the detection of, until that time, hidden opportunities for value creation and firm competitiveness (Schaltegger et al. 2012). Therefore, in the present study, and in line with the CSRD and Athanasakou et al. (2022, 2023), we adopt the term BM and strategy, rather than BM, disclosures.

Although the initial approach to the BM was to tell a story that captures the architecture of a company's products and/or services in the context of producing value for customers, recently, the concept of Sustainable Business Model (SBM) has gained ground. SBMs extend the initial notion of the BM, and describes, analyzes, manages and communicates (a) the sustainable value proposition of the company to its customers and all stakeholders, (b) the way the business creates and transfers this value, and (c) the way it captures economic value while simultaneously creating or maintaining its physical, social and economic capital beyond its organizational boundaries (Schaltegger et al. 2016, p. 268).

Regarding the concept of sustainable value proposition, it has been approached as the promise of economic, environmental and social benefits that an organization offers to its customers, environment and societies, taking into account both short-term profits and long-term sustainability (Massa et al. 2016). SBMs, therefore, have been effectively contributing to reducing the harmful effects of business activities on the environment and society by providing solutions to help firms meet their economic and sustainability goals simultaneously (dual materiality concept; Boons and Lüdeke-Freund 2013).

2.2. The BM and Strategy as Elements of Sustainability Disclosure

Communication seems to play a key role among all the activities that are a requirement to instill sustainability into a company (Henriques and Sadorsky 1999). So, companies that are committed to sustainability need to set clear goals and communicate them explicitly to a broad audience of stakeholders, such as analysts, investors, partners, society and existing/and or potential employees (Bukh 2003; Nielsen and Lund 2014).

Sustainability reporting can be seen as an important part of sustainability performance management (Higgins and Coffey 2016; Lozano et al. 2016; Maas et al. 2016). The purpose of a sustainability report is to provide information to the interested parties on how the reporting organization is working with sustainable development. Lozano et al. (2016, p. 169) argue that: "Sustainability reporting is a voluntary activity with the following purposes: (1) to assess the current state of an organization's progress towards sustainability, and (2) to communicate the efforts and progress in the economic, environmental and social dimensions to stakeholders". It indicates that a company is committed to a process of transparency and stakeholder engagement. Such transparency allows organizations to attract a broader range of investors and customers, enhance operational efficiency, improve brand positioning and develop leadership in the marketplace. Yet, research has revealed that the quality of the information disclosed in these reports is "unsustainable" and must be simplified and improved (Hubbard 2011; Di Tullio et al. 2019; EFRAG 2021).

In support of the idea that the communication of BM and strategy can be useful in evaluating a company's engagement in sustainability, both NFRD and CSRD suggest the BM as a communication device that can improve a company's attempts at disclosure. Focusing on CSRD, it is compulsory from January 2024 for companies subject to the NFRD's non-financial reporting obligation, which will escalate for a variety of organizations up to 2028. The new directive increases the scope of the NFRD and targets to enhance the transparency of corporate progress in terms of sustainability. The ambition is to contribute toward the achievement of the harmonization of sustainability reporting in the EU, while taking into consideration the EU Taxonomy Regulation, the Sustainable Finance

Disclosure Regulation (SFDR) and existing international frameworks such as the TCFD, the Sustainability Accounting Standards Board (SASB) and the GRI. More precisely, the CSRD suggests that obligatory disclosures be included in a company's management report and address the following three reporting areas: BM and strategy (e.g., risks/opportunities and dependencies regarding sustainability issues), implementation (policies addressing sustainability factors and sustainability targets) and performance (e.g., indicators pertinent to measuring all of the above and the progress made toward meeting targets).

Additionally, BM and strategy disclosures can offer insights into the logic that underlies the value creation process and whether and how a company's BM and strategy takes into account the interests of stakeholders in a time-bound manner, are resilient or create sustainability-related risks and seize sustainability opportunities (Bini et al. 2018).

In light of the above discussion, several accounting organizations [ICAEW (2010); EFRAG (2013); IIRC (2013)] have reflected on how a BM approach to corporate disclosure could enhance the relevance and clarity of information disclosed in corporate statements (Haslam et al. 2015). For instance, the <IR> Framework sees the BM as a pivotal element around which the entire report is developed (IIRC 2013), whilst EFRAG (2021) points out to companies the "need for reflecting on how to improve reporting on their business model as well as risks and opportunities, even before the CSRD enters into force and the accompanying EU reporting standards are developed and adopted" (p. 6).

BM and strategy disclosures are considered helpful in evaluating any piece of non-financial information that is complex to comprehend if it is not related to a relevant context, including sustainability information (Nielsen 2010). As Mouritsen and Larsen (2005) suggest, being familiar with an organization's BM permits users to value individual pieces of information and measurements that they would not have been able by themselves to link up to the value creation process. Additionally, Holland (2005) argues that a BM is a corporate mechanism that can offer external users "a convincing context to interpret the quantitative or relative indicators" (p. 97). Likewise, Nielsen and Bukh (2013) underline that BM disclosures comprise a context-giving narrative that facilitates external users to structure "a coherent picture" that evidently recognizes the interconnected aspects that support value creation. Furthermore, strategy disclosures may contain a 'news element' to the extent that it relates to strategic plans and company landmarks (Lu and Tucker 2012, pp. 947–77) and facilitates investors to delve into the mapping of operations to financial results, and more accurately forecast the level of sensitivity of the company's performance to future shocks or events (Athanasakou et al. 2023).

Companies describe their BMs and strategy, using various types of corporate communications, such as in strategic reports within annual reports, in intellectual capital reports, in Integrated Reporting, in corporate social responsibility (CSR)/sustainability reports, in CEO letters, in initial public offering (IPO) prospectuses and on corporate websites and through the following three devices: natural language (i.e., the English language), the language of accounting and non-linguistic devices (e.g., pictures, graphs and colors) (Evans et al. 2017).

Concluding, the inclusion of the BM and strategy in corporate reporting "would create a level playing field for disclosure for those investors not privy to direct one-to-one contact with companies", thereby reducing information asymmetries in the market (Holland 2005, p. 101). The importance of the BM and strategy in company communication is confirmed by the ongoing shift towards integrated reporting, whilst good reporting quality is a prerequisite for stakeholders to assess a company's sustainability performance correctly. Indeed, understanding and defining the company's BM and strategy relate to doing the right thing and measuring and communicating them to doing things right (Isaksson 2019).

2.3. Research on BM and Strategy Reporting

Overall, the empirical research on BM disclosure can be divided into two main groups. The first group of studies deals with the issue of compliance of BM disclosures with the <IR> framework proposed by IIRC (see, e.g., Albertini 2018; Eccles and Krzus 2014; Malola and

Maroun 2019), whilst the second group focuses on evaluating the quality of the disclosed information and the factors that affect it (see, e.g., Agustia et al. 2020; Athanasakou et al. 2023; Bini et al. 2016; Di Tullio et al. 2019; EFRAG 2021; Lai et al. 2013; Sukhari and De Villiers 2019; Songini et al. 2020, 2021).

Focusing on the second group of research, Lai et al. (2013) applied linguistic analysis considering three explicit language features of information, type (whether it is quantitative or qualitative), tone (positive or non-positive), and time perspective (whether it is forward looking or not). The survey revealed that most of the presented information in the BM is qualitative and not forward-looking, whilst 50% of the disclosures are positive and 50% negative.

Bini et al. (2016) used content analysis and propose a methodological framework for the analysis of BM disclosure quality. Quality was assessed by considering the following three dimensions: “completeness, i.e., a comprehensive description of a company’s BM, including all BM components; focus, which aims to assess whether BM disclosure really explains the value creation story; connectivity, which is the level of interrelations among BM descriptions” (p. 89). Data were collected from the reports of 45 UK listed companies. The findings showed that few companies use their BM disclosure to stress the contribution of their internal capital to create and capture value. Moreover, BM descriptions are not always explicitly clear from other strategic concepts and inadequately demonstrate the connections among the BM components (i.e., value proposition, target customer distribution channel, relationship, resource and capability, value configuration, partnership, revenue model and cost structure).

Di Tullio et al. (2019) conducted a semiotic analysis to examine how European firms disclose the presentation and content of BM information in corporate reports to manage their legitimacy in response to European Directive 2014/95. Their analysis suggests that 50% of the sample chose to comply with the EU Directive regarding BM information through the use of non-accounting language, figures and diagrams.

Agustia et al. (2020) used content analysis on data collected from 126 integrated reports from the IIRC database for the period of 2016 and 2017. The authors develop a complex scoring system to assess five areas of reporting quality, i.e., the conciseness, accessibility, readability and clarity of the document, reliability and content element, which incorporates amongst others BM and strategy/resource allocation. The research findings indicated a moderate level of quality of integrated reports.

EFRAG (2021), used the PEA (see Section 3.1) to reveal the more mature practices in BM and risks and opportunities in the EU (16 countries, 30 sectors, 44 companies). The results highlight that reporting on the BM is not holistically developed and is unsuccessful in providing content that can be useful to capital providers to predict the future performance of a business. Moreover, the report reveals the need for a more balanced perspective on opportunity and risks related to BM and for more information and explanations on if, and how the BM and strategy are resilient to environmental and social risks.

Finally, Athanasakou et al. (2023) employed content analysis (231 keywords/themes) to create a composite StrategyScore in order to measure strategy and BM information usefulness. Their results revealed that the legal regime, as well as context (country and industry) related factors, affect the usefulness of the provided information.

In conclusion, the non-financial reporting literature exhibits a growing interest in BM and strategy disclosures (Di Tullio et al. 2019). The main focus concentrates on exploring and defining what constitutes high quality, useful disclosures on BM and strategy (Athanasakou et al. 2023), addressing the need to reduce information asymmetries and inconsistencies in reporting and improving monitoring and communication by the report users. Nonetheless, prior research has been inconclusive on the qualitative characteristics and content attributes that constitute high quality BM and strategy disclosures.

Moreover, various assessment tools and methodologies seem to have been applied, ranging from linguistics (e.g., Lai et al. 2013), to content (Athanasakou et al. 2023; Bini et al. 2016) and to semiotic analysis (Di Tullio et al. 2019), to measure the quality of BM and

strategy disclosures. Nevertheless, to our understanding, they fall short of providing an easy to apply, holistic and integrated tool to help managers clearly understand the state of their company's BM and strategy disclosure. Yet, the PEA method developed by the PTF-RNFRO (EFRAG 2021) and applied only to the EFRAG (2021) research, is a simple to use, integrated tool that can offer an organization the opportunity to reflect on the maturity of their BM reporting against seven specific criteria (see Section 3.1).

Considering the above discussion, the present research addresses the underexplored issue of the maturity of BM and strategy disclosures and uses the PEA framework to provide answer to the following Research Question (RQ1): *Are the listed Greek companies mature regarding BM and strategy disclosures?*

3. Methodology

3.1. The Practices Evaluation Approach

As already specified, the PEA framework was used as the framework to evaluate the maturity of BM and strategy disclosures in the reports of listed Greek companies (for a detailed presentation of the PEA method please see EFRAG 2021, pp. 25–29, 83–84). Specifically, the objective was to assess whether BM and strategy disclosures “have characteristics of useful sustainability reporting information” (EFRAG 2021, p. 25). In this attempt, both qualitative characteristics and content elements of the BM and strategy disclosures are included in the maturity assessment. Regarding the *qualitative characteristics*, they are in line with (i) fundamental characteristics offered for financial reporting (derived from IASB), i.e., the relevance/materiality and faithful representation of the BM and strategy information, (ii) enhancing qualitative characteristics derived from the financial and non-financial framework/standards/directives (such as: IIRC <IR>, GRI, the NFRD, the CSRD), i.e., understandability/clarity, reliability/verifiability, and comparability and (iii) additional qualitative characteristics derived from non-financial frameworks/standards/directives, i.e., coherence, connectivity, strategic focus and future orientation, stakeholder inclusiveness and timeliness of the BM and strategy information provided.

Referring to the content elements of BM and strategy reporting in the PEA, they were drawn from well-accepted reporting frameworks, standards and directives (e.g., IIRC IR Framework, GRI, IASB, the NFRD, the TCFD, the CSRD) and assess maturity based on the following criteria (EFRAG 2021, see p. 29 for a short description of the criteria):

- Comprehensive description of the BM, i.e., unambiguous and complete allusion to the company's BM, including the following components: mission, inputs (resources and relationships), activities, value chain and outputs (products, outcomes, impacts and KPIs).
- Report on the short, medium and long-term potential of the BM.
- Clear description of BM's dependencies (i.e., tangibles, capitals, resources) and impacts (impact and financial materiality) on sustainability issues.
- Presentation of the material sustainability issues that are likely to affect business performance.
- The company's exposure to sustainability risks.
- The consideration of sustainability opportunities.
- The sustainability strategy, targets and KPIs, and their monitoring and progress.

The PEA matrix (see EFRAG 2021, pp. 83–84) provides the tools for the practical assessment of the maturity of BM and strategy reporting.

3.2. Research Strategy, Sampling and Data Collection

A team comprising 6 researchers (all postgraduate students) working under the guidance of an expert in the field, a technical lead and a scientifically responsible academic was formed. The researchers collected publicly available information on BM and strategy disclosures from the CSR/sustainability reports and connected documents on companies' sites of 30 companies listed in the Athens Stock Exchange (ATHEX) subject to NFRD non-

financial reporting obligation (see Table 1). To standardize the sample, only the 2021 reports were considered (Bini et al. 2016).

Table 1. The study sample.

| Sectors | Companies | % |
|--------------------------------|--------------------------------------------------------------------------------------------|------|
| Information Technology (6) | Quest holdings; MLS Innovation Inc. (Greece); Entersoft; Epsilon Net; Logismos; Ilyda | 20.0 |
| Construction (6) | TITAN Cement International; Lafarge; ELLAKTOR; GEK TERNA Holdings; Intracom Holdings; Avax | 20.0 |
| Tourism and Transportation (5) | GEKE; Lampsas Hellenic Hotels AEGEAN Airlines; ATTICA Holdings; ANEK Lines | 16.7 |
| Cosmetics (4) | APIVITA; PAPOUTSANIS; SARANTIS, VIANEX | 13.3 |
| Banking (4) | Alpha Bank S.A.; Piraeus Bank S.A.; Eurobank S.A.; National Bank of Greece S.A. | 13.3 |
| Energy (5) | Mytilineos; Motor Oil; EYDAP; The Public Power Corporation S.A. (DEI); Admie Holding S.A. | 16.7 |

Purposively, companies operating in 6 important sectors of the Greek economy, where sustainability issues are of utmost importance, were considered for this study. These sectors are as follows: information technology, construction, tourism and transportation, cosmetics, banking, and energy.

Initially, the researchers received extensive training on the PEA methodology. To ensure reliability, two main issues were addressed as part of the researchers training, i.e., well-specified evaluation rules and decisions (Milne and Adler 1999). Regarding the first issue, researchers discussed data that were collected and recorded by the experts of the PEA matrix (i.e., in an excel file; EFRAG 2021, see pp. 83–84) during a pilot study of 2 CSR/sustainability reports, and inconsistencies were resolved through discussion. Thereafter, to verify that all researchers had common understanding of the PEA method (second issue; validity), they worked independently. The researchers studied the same 2 CSR/sustainability reports and the connected documents and entered the collected data into the PEA matrix. The rate of agreement was over 90%, which was considered to be satisfactory (Osma and Guillamon-Saorin 2011).

Following this, each researcher was assigned the task of concentrating on a sector and carefully scrutinizing the reports of the sample companies and inserting the collected data into the PEA matrix. The recordings were sent to the 3 experts who randomly reviewed 1 report (and its related documents) per sector (investigator triangulation; Denzin 1973).

4. Key Findings and Discussion

In accordance with the aforementioned criteria, the survey findings are presented below. Before referring to the comprehensive, complete and clear description of the BM criterion of assessment, it is notable that most of the undertakings dedicated a section of their sustainability or annual reports to their BM and strategy, however, in a few cases they were included in other related documents, such as integrated reports or financial statements. Disclosures are therefore scattered in documents and/or reports and the recipients of information have trouble filtering out relevant information describing the organization's BM.

Additionally, it appears that many companies in the sample rely the description of their BM and strategy on the use of either reporting frameworks or standards or authoritative guidance to interpret and guide their BM-related disclosures, such as GRI (83.3%), ATHEX ESG 2019 (60%) and SASB (32.5%). The combination of these frameworks leads to the visualization of the BM and, thus, to more comprehensive information.

Narrative reporting and schematic representations of the BM—offering a focused and rather complete description of the key elements of a BM (inputs, activities, value chain, outputs, products, outcomes, impacts and KPIs)—was portrayed by 67% of the

companies, especially from the large ones in each industry. In general, it was found that the BM disclosure provided users with information on their BM in relation to the major BM components (mission, inputs, activities, value chain, outputs). Nonetheless, the weakest disclosure in the graphic representations of the BMs is the disclosure of the impacts of the BM regarding sustainability impacts and KPIs.

The present research also raises concerns associated with the quality of the BM elements disclosures, mainly with their relevance, completeness and consistency. This finding is also supported by other authors in the field (see, e.g., [Bini et al. 2016](#); [EFRAG 2021](#)). The poor attention paid to these crucial issues most probably suggests that, still, only a limited number of companies take advantage of—or actually understand how to apply—the tools provided by expert bodies and directives to communicate their value creation story ([Bukh 2003](#); [Bini et al. 2016](#)). As a result, the BM idea, as a schematic and narrative representation of the value creation and capture process, loses its effectiveness as a meaningful reporting practice and communicative approach towards the financial market and other relevant stakeholders ([Nielsen and Bukh 2013](#)).

It is also worth pointing out that the construction industry appears to stand out from the other five (5) in terms of the completeness and quality of the information disclosed, whilst those lagging behind are the companies in the IT and cosmetics sectors, where graphical and visual illustration of the published data is lacking and the provided information is not value-oriented. The heavy negative impact on the environment, as well as the higher percentage of on-the-job accidents and the plethora of sector specific standards of the construction may have influenced this result ([Forbes 2021](#)), suggesting also that the sectoral context affects the level and quality of reporting as underlined by some researchers in the field (see, e.g., [Athanasakou et al. 2022, 2023](#); [Di Vaio et al. 2023](#); [Zarzycka and Krasodomska 2023](#)).

Report of the short, medium and long-term potential of the BM. As observed in the current research, 80% of the studied reports give prominence mainly to the short-term potential of the BM and strategy, whilst the minority (26.7%) make reference to their long-term strategy and targets which relate mostly to climate change and having zero environmental impact. Notably, none of the companies in the cosmetics, tourism and transportation sectors reveal their long-term plans (see Table 2). Therefore, as the [EFRAG \(2021\)](#) report emphasizes, the majority of the reports “fail to provide content that can be used by capital providers to predict the future performance of the business” (p. 11). Toward this direction, it seems promising that the GRI guidelines help, with the indicators and standards, in the provision of clearer information to the users of the reports.

Table 2. Orientation of BM and strategy disclosure.

| | Short-Term | Medium-Term | Long-Term |
|----------------------|------------|-------------|-----------|
| Number of companies | 24/30 | 10/30 | 8/30 |
| Total percentage (%) | 80.0 | 33.3 | 26.7 |

Reporting on dependencies and impacts. Disclosures were found to lack a balanced approach in the reporting on the impacts and dependencies of their BM. More precisely, the majority of the firms (60%) portray mainly the positive impacts of their BM, 36.7% present both positive and negative impacts, whereas 23.3% do not include any impact (see Table 3). The analysis also revealed that impacts are frequently depicted in broad terms and, even when a connection to the SDGs is attempted, there is lack of information on the precise impacts on different SDGs. Regarding dependencies, reference is mainly related to climate change and energy and the reports are less inclusive of dependencies related to social and governance issues.

Additionally, the impact, rather than the financial, materiality is stressed in a descriptive way. This outcome may indicate the desire on the part of the firms to present BM information in an easier-to-read format for stakeholders, such as employees and customers.

However, this approach deprives shareholders of a comprehensive understanding of the value creation mechanisms and the actual bottom-line (Bini et al. 2016). On the other hand, this evidence might strengthen our previous comment regarding the lack of expertise on the application of international frameworks and EU directives in practice.

Table 3. Disclosure of impacts.

| | Positive Impacts | Negative Impacts | Both Positive and Negative Impacts | No Reference to Impacts |
|----------------------------|------------------|------------------|------------------------------------|-------------------------|
| Number of companies | 18/30 | 11/30 | 11/30 | 7/30 |
| Total % | 60.0 | 36.7 | 36.7 | 23.3 |

Presentation of the material issues that are likely to affect business performance. The research findings reveal that the key material issues that preoccupy the top management, regardless of the business sector context, are related to human resources, cyber-security, business ethics and the environment. As seen in Table 4, among the top material issues are occupational health and safety, employee development and diversity-equality at work, fighting corruption-ethics, cyber security/data privacy protection and the circular economy. Surprisingly, customer related material issues and financial performance are given less emphasis by the top management.

Table 4. Top 10 sustainability issues per sector.

| Information Technology | Construction | Tourism and Transportation | Cosmetics | Banking | Energy |
|---------------------------------------------|----------------------------------------|---------------------------------------------|----------------------------------------|-----------------------------------|------------------------------------------|
| Occupational health and safety | Climate change management & adaptation | Customer health and safety | Diversity—Equality at work | Fighting corruption | Waste management |
| Employee development | Reduction of carbon dioxide emissions | Employee development | Employee development | Occupational health and safety | Circular economy |
| Data privacy protection | Energy use management | Equality at work | Ethics—Corporate governance | Equality at work | Occupational health and safety |
| | -Consumption reduction | | | | |
| Cyber security | Regulatory compliance | Energy use management—Consumption reduction | Energy saving—Air emissions reductions | Environmental compliance | Corruption |
| Equality at work | Business ethics—Fighting corruption | Climate change management & adaptation | Consumers' health and safety | Energy use management | Equal job opportunities |
| Customer satisfaction | Transition to circular economy | Reduction of carbon dioxide emissions | Circular economy | Data privacy protection | Climate change management and adaptation |
| Climate change management & adaptation | Occupational health & safety | Business ethics—Fighting corruption | Financial performance | Financial performance | Customer service and satisfaction |
| Energy use management—Consumption reduction | Employee development | Employee engagement/satisfaction | Product quality | Customer service and satisfaction | Environmental compliance |
| Business ethics—Fighting corruption | Sustainable development infrastructure | Human rights | Fighting corruption | Corporate governance | Digital transformation and innovation |
| Digital transformation | Cyber security/Data privacy protection | Digital transformation | Human rights | Dealing with pandemic impacts | Human rights |

Additionally, most undertakings incorporate the corresponding graph (based on GRI guidelines) which reveals the procedure of prioritizing their material issues. However, investment of resources is required in the procedures of selection and ranking of the important topics for sustainability, taking into account the material issues for each industry on a global level.

Exposure to sustainability risks and opportunities. It was obvious that the reports do not provide sufficient information on the linkage of the BM to sustainability risks. In fact, 50% of the reports refer to sustainability risks and 13.3% focus only on the exposure to climate change related risks. Also, complete disclosure of the BM exposure to sustainability risks, including the description of time frames and financial impacts is rare. It is notable that 50% of the reports make no reference to sustainability opportunities, whilst 36.7% allude to the sustainability opportunities related to corporate strategy description (see Table 5).

Table 5. Disclosure of sustainability related risks and opportunities.

| Sustainability Risks | Sustainability Opportunities |
|-----------------------------------------------------|-------------------------------------------------------------|
| 50% generally refer to sustainability risks | 36.7% generally refer to sustainability opportunities |
| 13.3% refer to risks related only to climate change | 13.3% refer to opportunities related only to climate change |
| 36.7% do not even refer to sustainability risks | 50% do not even refer to sustainability opportunities |

It could be supported that less mature reporting of sustainability opportunities compared to sustainability risks was noticed. This ascertainment possibly supports EFRAG's (2021) conclusion that sustainability is perceived as a threat to the business, a cost or risk, rather than as an opportunity for development and innovation. Also, only a few of the reviewed companies provide a quantification of risks and/or opportunities. Again, as this evidence is in line with the results of the EFRAG's (2021) survey conducted in 16 EU countries the issue raises at the European level.

Sustainability strategy, targets, KPIs, its monitoring and progress. Most of the companies (90%) provide discussions about their sustainability strategy, strategic objectives and plans, resources available to implement the action plans, and milestones that show progress towards the achievement of longer-term goals. Nonetheless, only half (50%) of the companies use metrics and timelines in relation to their sustainability strategy. The minority (10%) generally refer to their goals and relevant indicators. More precisely, this segment of the reviewed companies limits information to its comparative advantage, without discussing issues of sustainability or good sustainable practices, thus adopting what Oliver (1991) refers to as an avoidance or even defiance stance to institutional pressure. To our understanding, these findings confirm the prediction of Dumay and Hossain (2019) that firms will merely adjust their reporting practices to comply with the requirement of the law and continue with a "business as usual" approach.

The findings also shed light on the extent to which the disclosures vary between different business sectors (see Table 6). Last but not least, giving support to prior research finding (see, i.e., Athanasakou et al.'s (2022, 2023)) the examined sectors are not at the same level of maturity in terms of sustainability reporting, i.e., companies in the energy and construction sectors are overall more mature than all the other companies in the sample, whereas companies in the sectors of tourism, transportation and cosmetics are the least mature.

Table 6. Sectoral variations in BM and strategy disclosures.

| Sector Criteria | Information Technology (6 Companies) | Construction (6 Companies) | Tourism and Transportation (5 Companies) | Cosmetics (4 Companies) | Banking (4 Companies) | Energy (5 Companies) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------|
| Inclusion of BM elements (mission, inputs (resources and relationships), activities, value chain, outputs (products, outcomes, impacts and KPIs), diagram and risk and opportunities | Partial (most elements): 6 Diagram: 4 Risks and Opportunities: 5 | Full inclusion: 3 Diagram: 6 Risks and Opportunities: 4 | Full inclusion: 2 Diagram: 2 Risks and Opportunities: 3 | Full inclusion: 2 Diagram: 1 Risks and Opportunities: 0 | Partial inclusion: 4 Diagram: 3 Risks and Opportunities: 1 | Full inclusion: 2 Diagram: 4 Risks and Opportunities: 4 |
| Document of disclosure | Annual report: 4/6 Sustainability report: 2/6 | Sustainability Report: 6/6 | Sustainability report: 3/5 | Sustainability report: 2/4 | Sustainability report: 4/4 | Annual report: 5/5 Sustainability report: 4/5 |
| Time frame of KPIs | Yearly: 6 | Yearly: 6 | Yearly: 5 | Not clearly stated | Yearly: 4 | Yearly: 2 Semester: 2 Term: 1 |
| GRI | 1 | 5 | 3 | 3 | 4 | 5 |
| SASB | 6 | 5 | No reference | No reference | No reference but material issues are included | 2 |

Practical Implications

Building on and enhancing EFRAG's (2021) work, this paper intends to highlight current practices on BM and strategy disclosures in listed Greek companies and provide the interested parties with practical guidance for improving the maturity of their disclosures. This is a key issue since the quality and comprehensiveness of companies' reports support their public image, enhance their performance and competitive advantage (Karagiannis et al. 2019), improve effectiveness and stakeholder engagement (GRI 2013), show up their social and environmental achievements (Cowan et al. 2010) and attract green and socially sensitive investors (Mackey et al. 2007).

In light of our research results, it becomes obvious that the report creators should put higher effort into describing the BM and sustainability strategy of their organization in a more comprehensive, clear, quantifiable and schematic way. Such an approach requires that the producers of the reports, as well as the management team of an organization, need to be adequately informed and trained on the use of reporting frameworks and standards, and have authoritative guidance to help them interpret and guide their BM and strategy related disclosures (Lai et al. 2018). Indeed, although reference is made in the majority of the reports to the adoption of non-financial reporting frameworks, standards and directives (such as GRI, SASB and <IR>), it seems that they are not effectively applied to communicate their value creation story and strategy (Bini et al. 2016). Moreover, to enhance reporting maturity, greater emphasis needs to be placed on the interconnection of the BM and strategy to sustainability dependencies, impacts, risks and opportunities in the reports, and particularly on dependencies, negative impacts and opportunities. Otherwise, the recorded imbalance found in the information provided through the reports can be misleading and disorientating for investors and other stakeholders that use the reports, such as partners and employees, also signaling an avoidant, or even a defiant, stance and an attempt to "prettify" the actual impact and future of the company's BM (Dumay and Hossain 2019). In addition, the comprehensiveness and clarity of BM and strategy disclosures can be improved if the relevant information is not scattered in a plethora of documents and/or reports, but rather concentrated in one document, i.e., in the integrated report, so that the recipients of the relevant information can easily trace it and filter it out.

Furthermore, firms should not stress impact materiality only in a descriptive way (EFRAG 2021). They also need to quantify both opportunities and risks, explaining cash flow generation and impacts. In other words, they ought to advance the interconnection of financial and sustainability information and data through the application of evidence and/or science-based and forward-looking targets to showcase the double materiality issue, the cornerstone of CSRD, whilst underlying the long-term potential of their BM and strategy. Under double materiality, both an outside-in (financial materiality) and an inside-out (impact materiality) approach to sustainability has to be adopted. The first focuses on the risks and opportunities that environmental and social issues place upon a company's activity, performance and value in the short, medium or long term. The second considers the negative or positive impacts that the company and its activities, as well as its upstream and downstream value chain, have on the environment, people and society (EFRAG 2021). Also, the adoption of technology solutions, such as data management, natural language processing (NLP), multimedia, satellite imagery and AI (Artificial Intelligence), can contribute to improving the qualitative characteristics—i.e., materiality/relevance, faithful representation, reliability/verifiability and timeliness—of mature, and therefore useful, BM and strategy disclosures (see EFRAG 2021, pp. 67–70 for an extensive discussion).

The previously discussed implications are key in providing external stakeholders such as investors, partners, customers and employees, but also internal stakeholders—and particularly managers—with the required information for understanding whether a company is mature in making more effective and robust sustainability decisions. In addition, improving the process and outcome of sustainability reporting can help companies advance, and more holistically integrate, their efforts for sustainability into their systems and vice versa, i.e., sustainability reporting and organizational change management for sustainability have reciprocal reinforcing relationships (Lozano et al. 2016, p. 168).

A key element in enhancing the maturity of BM and strategy disclosure would be the investment of resources on the procedures of prioritizing the key sustainability issues for the company, as well as the knowledge of the sector's relevant material issues. The adoption and training of managers on frameworks such as the EU Taxonomy for sustainable practices, GRI as well as SASB could facilitate this process (Athanasakou et al. 2023).

As for the credibility of the information disclosed, this could be attained through internal and third-party assurance. This may include the development of practices and guidelines to assist those charged with an organization's governance to review their organization's BM and the role that can be played by internal and external assurers (see Maroun 2017). Such an approach requires managers to be adequately trained and committed to the sustainability strategy, avoiding green washing and stakeholders' disorientation, while ensuring business survival and enhancing the company's reputation (EFRAG 2021). Of course, this stance has an organizational cultural dimension too, and deserves further exploration.

Also, the Greek energy and construction industries, as the most mature ones, could lead the way toward improving disclosures of BM and strategy through the provision of good practice examples as benchmarks for improvement and motivators for action. To this logic, a suggestion could be the joint creation, i.e., by the relevant government services and relevant firm associations, of a centralized public-private digital platform, where, initially, all listed Greek companies could submit their reports in a standardized way. This would help overcome information asymmetries and inconsistencies in reporting, improve monitoring and communication, which in turn, could make companies with higher maturity more attractive for employees, investors, partners and other stakeholders. Since recent research evidence underscores the fact that standardization can enhance the effectiveness of a mandatory intervention to regulate BM and strategy disclosures (Bini et al. 2016), the outcomes of the present research can be also helpful towards this direction. Additionally, we put forward the idea that the PEA could not only help the report creators reflect on the BM and strategy disclosure of their organization, but also facilitate the reporting standard setters in providing the regulatory requirements and directions for the standardization

of BM and strategy reporting and helping firms manage their legitimacy in response to the CSRD.

The research results are also expected to enlighten the users, i.e., managers, investors and partners, on the issue of the maturity of BM and strategy and improve their understanding of what constitutes mature, and useful, reporting of BM and strategy.

5. Conclusions, Limitations and the Way Ahead

Demands for corporate reporting have changed in structure and content in order to address issues related to BM and strategy (Athanasakou et al. 2022, 2023). This paper is an exploratory analysis aimed at investigating firms' practices of BM and strategy disclosure. It has focused on a specific sample, which consists of firms operating in six (6) Greek industries. The results revealed that most companies are not yet mature in their sustainability disclosures. Those that present a higher level of maturity take steps beyond mere compliance, aspire to stand out, gain a competitive edge and build trust with stakeholders. Their reports meet the criteria more effectively and are distinguished by the quality of inclusion, but they should still be based on a more quantitative approach to both risks and opportunities. Furthermore, the principle of double materiality is not satisfied in many cases, even among the companies that follow GRI standards. Also, very few companies have adopted sector-specific standards like SASB, or GRI Sector Supplements.

Despite its contribution to the theory of BM and strategy disclosure, this study also has limitations that should be considered when interpreting the results. Among the limitations is the focus on one country; this research concerns listed companies operating in Greece. The sample of reports does not cover all economic sectors, whilst only large companies with a significant social-environmental footprint (in each sector) were studied, excluding small and medium-sized ones. This is particularly important since the relevant research suggests that sector and size matter in the quality of sustainability reporting (Zarzycka and Krasodomska 2023).

In addition, as it is not always possible to fully control for the unobservable or indirect effects that differ across industries and may confound the results' interpretation, future researchers could explore other variables, e.g., the incentives of top managers regarding the mode, content and quality of information published, which set limits on responsible reporting. Another factor to reflect on when analyzing the results is the time frame. To extract the data, all of the companies' documents that referred to the year 2021 were studied. Future studies could extend the time horizon and track the progress of the phenomenon, comparing the past with the present and planning future research steps.

Summarizing and setting aside the above limitations, this research enriches the literature on current reporting methods and paves the way for updating sustainability reports.

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References

- Agustia, Dian, Dewi Sriani, Hendro Wicaksono, and Lindawati Gani. 2020. Integrated reporting quality assessment. *Journal of Security and Sustainability Issues* 10: 47–59. [CrossRef]
- Albertini, Elisabeth. 2018. Integrated reporting: An exploratory study of French companies. *Journal of Management and Governance* 23: 513–35. [CrossRef]
- Athanasakou, Vasiiki, Abdlmutaleb Boshanna, Natalia Kochetova, and Georgios Voulgaris. 2023. Strategy and business model disclosures in annual reports: The role of legal regime. *The British Accounting Review* 101190. [CrossRef]
- Athanasakou, Vasiliki, Martin Walker, Steven Young, Paulo Alves, Mahmoud El-Haj, and Paul Rayson. 2022. *Mandatory Annual Report Descriptions of Business Model and Strategy, Investor Uncertainty, and Disclosure Cascade Effects*. SSRN Working Paper. Rochester: Social Science Research Network. Available online: <https://ssrn.com/abstract=3212854> (accessed on 22 February 2022).
- Bek-Gaik, Boguslaw, and Anna Surowiec. 2022. The Quality of Business Model Disclosure in Integrated Reporting: Evidence from Poland. *European Research Studies Journal* XXV: 3–26.
- Bini, Laura, Francesco Dainelli, and Francesco Giunta. 2016. Business model disclosure in the Strategic Report. *Journal of Intellectual Capital* 17: 83–102. [CrossRef]
- Bini, Laura, Marco Bellucci, and Francesco Giunta. 2018. Integrating sustainability in business model disclosure: Evidence from the UK mining industry. *Journal of Cleaner Production* 171: 1161–70. [CrossRef]
- Boons, Frank, and Florian Lüdeke-Freund. 2013. Business models for sustainable innovation: State of the Art and Steps Towards a Research Agenda. *Journal of Cleaner Production* 45: 9–19. [CrossRef]
- Bukh, Nikolaj. 2003. The relevance of intellectual capital disclosure: A paradox? *Accounting, Auditing & Accountability Journal* 16: 49–56.
- Casadesus-Masanell, Ramon, and Joan E. Ricart. 2010. From strategy to business models and into tactics. *Long Range Planning* 43: 195–215. [CrossRef]
- Cowan, Dallas M., Pamela Dopart, Tyler Ferracini, Jennifer Sahmel, Kimberly Merryman, and Shannon Gaffney. 2010. A cross-sectional analysis of reported corporate environmental sustainability practices. *Regulatory Toxicology and Pharmacology* 58: 524–38. [CrossRef] [PubMed]
- Deloitte. 2022. Corporate Sustainability Reporting Directive The Future Landscape of Sustainability Reporting. Available online: <https://www2.deloitte.com/content/dam/Deloitte/mt/Documents/sustainability/Corporate-Sustainability-Reporting-Directive-brochure-2022.pdf> (accessed on 7 October 2022).
- Denzin, Norman K. 1973. *The Research Act: A Theoretical Introduction to Sociological Methods*. New Brunswick: Transaction Publishers.
- Di Tullio, Patrizia, Diego Valentinetti, Christian Nielsen, and Michele Antonio Rea. 2019. In search of legitimacy: A semiotic analysis of business model disclosure practices. *Meditari Accountancy Research* 28: 863–87. [CrossRef]
- Di Vaio, Assunta, Luisa Varriale, Maria Lekakou, and Matteo Pozzoli. 2023. SDGs disclosure: Evidence from cruise corporations' sustainability reporting. *Corporate Governance* 23: 845–66. [CrossRef]
- Dumay, John, and Amir Hossain. 2019. Sustainability risk disclosure practices of listed companies in Australia. *Australian Accounting Review* 29: 343–59. [CrossRef]
- Eccles, Robert, and Michael Krzus. 2014. *The Integrated Reporting Movement: Meaning, Momentum, Motives, and Materiality*. New York: Wiley Corporate F&A.
- European Financial Reporting Advisory Group (EFRAG). 2013. *The Role of the Business Model in Financial Reporting*. Brussels: European Financial Reporting Advisory Group. Available online: <https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FSiteAssets%2FBusiness%2520Model%2520Research%2520Paper.pdf> (accessed on 28 November 2022).
- European Financial Reporting Advisory Group (EFRAG). 2021. *Towards Sustainable Businesses: Good Practices in Business Model, Risks and Opportunities Reporting in the EU*. Main Report. Brussels: European Financial Reporting Advisory Group. Available online: <https://www.efrag.org/Assets/Download?assetUrl=/sites/webpublishing/SiteAssets/EFRAG%20PTF-RNFRO%20-%20Main%20Report.pdf> (accessed on 30 November 2022).
- Evans, Nathaniel J. J., Joe Phua, Jay Lim, and Hyoyeun Jun. 2017. Disclosing Instagram influencer advertising: The effects of disclosure language on advertising recognition, attitudes, and behavioral intent. *Journal of Interactive Advertising* 17: 138–49. [CrossRef]
- Forbes. 2021. *The Construction Industry Is Getting Greener: Why, How, and What's Changing?* Available online: <https://www.forbes.com/sites/sap/2021/08/25/the-construction-industry-is-getting-greener-why-how-and-whats-changing/?sh=e5db77f52bc7> (accessed on 25 August 2021).
- Foss, Nicolai J., and Tina Saebi. 2015. *Business Model Innovation: The Organizational Dimension*. Oxford: Oxford University Press.
- GRI. 2013. *G4 Sustainability Reporting Guidelines—Implementation Manual*. Available online: <https://respect.international/wp-content/uploads/2017/10/G4-Sustainability-Reporting-Guidelines-Implementation-Manual-GRI-2013.pdf> (accessed on 28 November 2022).
- Hamel, Garry. 2000. *Leading the Revolution*. Boston: Harvard Business School Press.
- Haslam, Colin, Nick Tsitsianis, Tord Andersson, and Pauline Gleadle. 2015. Accounting for business models: Increasing the visibility of stakeholders. *Journal of Business Models* 3: 62–80.
- Henriques, Irene, and Perry Sadosky. 1999. The Relationship Between Environmental Commitment and Managerial Perceptions of Stakeholder Importance. *Academy of Management Journal* 42: 67–99. [CrossRef]
- Higgins, Collin, and Brian Coffey. 2016. Improving How Sustainability Reports Drive Change: A Critical Discourse Analysis. *Journal of Cleaner Production* 136: 18–29. [CrossRef]

- Holland, John. 2005. A grounded theory of corporate disclosure. *Accounting and Business Research* 35: 249–67. [CrossRef]
- Hubbard, Graham. 2011. The Quality of the Sustainability Reports of Large International Companies: An Analysis. *International Journal of Management* 8: 824–48.
- Institute of Chartered Accountants in England and Wales (ICAEW). 2010. ANNUAL REVIEW 2010. Available online: <https://www.icaew.com/-/media/corporate/files/technical/legal-and-regulatory/legal-services/4c-icaew-annual-review-2010.ashx> (accessed on 10 September 2022).
- International Integrated Reporting Council (IIRC). 2011. Discussion Paper: Towards Integrated Reporting—Communicating Value in the 21st Century. Available online: http://integratedreporting.org/wp-content/uploads/2011/09/IR-Discussion-Paper-2011_spreads.pdf (accessed on 7 October 2023).
- International Integrated Reporting Council (IIRC). 2013. The International <IR> Framework. Available online: <https://www.integratedreporting.org/wp-content/uploads/2013/12/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf> (accessed on 15 September 2022).
- Isaksson, Raine. 2019. A proposed preliminary maturity grid for assessing sustainability reporting based on quality management principles. *The TQM Journal* 31: 451–66. [CrossRef]
- Jensen, Anders Bille. 2014. Do we need one business model definition? *Journal of Business Models* 1: 61–84.
- Joyce, Alexandre, and Raymond L. Paquin. 2016. The triple layered business model canvas: A tool to design more sustainable business models. *Journal of Cleaner Production* 135: 1474–86. [CrossRef]
- Kapur, Inakshi, Pallavi Tyagi, and Neha Zaidi. 2023. A Review of Business Model Disclosures in Integrated Reporting. In *Smart Analytics, Artificial Intelligence and Sustainable Performance Management in a Global Digitalised Economy Contemporary Studies in Economic and Financial Analysis*. 110A vols. Leeds: Emerald Group Publishing Limited, pp. 1–26.
- Karagiannis, Ioannis, Panagiotis Vouros, Antonis Skouloudis, and Konstantinos Evangelinos. 2019. Sustainability Reporting, materiality, and accountability assessment in the airport industry. *Business Strategy and the Environment* 28: 1370–405. [CrossRef]
- Lai, Alessandro, Gaia Melloni, and Riccardo Stacchezzini. 2013. Disclosing Business Model in the “Integrated Report”: Evidence from European Early Adopters. Paper presented at the AIDEA Bicentenary Conference, Lecce, Italy, September 19–21; Available online: https://www.aidea2013.it/docs/400_aidea2013_accounting.pdf (accessed on 20 March 2023).
- Lai, Alessandro, Gaia Melloni, and Riccardo Stacchezzini. 2018. Integrated reporting and narrative accountability: The role of preparers. *Accounting, Auditing & Accountability Journal* 31: 1381–405.
- Lozano, Rodrigo, Benjamin Nummert, and Kim Ceulemans. 2016. Elucidating the relationship between Sustainability Reporting and Organisational Change Management for Sustainability. *Journal of Cleaner Production* 125: 168–88. [CrossRef]
- Lu, Hung-Yuan, and Jennifer Wu Tucker. 2012. Nonearnings corporate guidance. *Financial Management* 41: 947–97.
- Maas, Karen, Stefan Schaltegger, and Nathalie Crutzen. 2016. Integrating corporate sustainability assessment, management accounting, control, and reporting. *Journal of Cleaner Production* 136A: 237–48.
- Mackey, Alison, Tyson B. Mackey, and Jay B. Barney. 2007. Corporate Social Responsibility and Firm Performance: Investor Preferences and Corporate Strategies. *Academy of Management Review* 32: 817–35. [CrossRef]
- Malola, Arson, and Warren Maroun. 2019. The measurement and potential drivers of integrated report quality: Evidence from a pioneer in integrated reporting. *South African Journal of Accounting Research* 33: 114–44. [CrossRef]
- Maroun, Warren. 2017. Assuring the Integrated Report: Insights and Recommendations from Auditors and Preparers. *The British Accounting Review* 49: 329–46. [CrossRef]
- Massa, Lorenzo, Christopher L. Tucci, and Allan Afuah. 2016. A Critical Assessment of Business Model Research. *The Academy of Management Annals* 11: 73–104. [CrossRef]
- Milne, Marcus J., and Ralph W. Adler. 1999. Exploring the reliability of social and environmental disclosures content analysis. *Accounting, Auditing and Accountability Journal* 12: 237–56. [CrossRef]
- Mouritsen, Janand, and Heine Thorsgaard Larsen. 2005. The 2nd wave of knowledge management: The management control of knowledge resources through intellectual capital information. *Management Accounting Research* 16: 371–94. [CrossRef]
- Nielsen, Christian. 2010. *Conceptualizing, Analyzing and Communicating the Business Model*. Working Paper No. 2. Aalborg: Department of Business Studies, Aalborg University. Available online: https://www.researchgate.net/profile/Christian-Nielsen12/publication/228842227_Conceptualizing_Analyzing_and_Communicating_the_Business_Model/links/02e7e5214f40525653000000/Conceptualizing-Analyzing-and-Communicating-the-Business-Model.pdf (accessed on 22 March 2023).
- Nielsen, Christian, and Morten Lund. 2014. An Introduction to Business Models. In *The Basics of Business Models*. Copenhagen: BookBoon.com/Ventus Publishing Aps, vol. 1.
- Nielsen, Christian, and Per Nikolaj Bukh. 2013. Communicating Strategy: Using the Business Model as a Platform for Investor Relations Work. Available online: http://www.pnbukh.com/Files/Files/Udgivne%20artikler/bpmp4-BM_Community_WP_10.pdf (accessed on 22 March 2023).
- Nielsen, Christian, Robin Roslender, and Per Nikolaj Bukh. 2008. *Intellectual Capital Reporting: Can a Strategy Perspective Solve Accounting Problems?* Working Paper No. 7. Aalborg: Department of Business Studies, Aalborg University. [CrossRef]
- Oliver, Cabell. 1991. Strategic Responses to Institutional Processes. *Academy of Management Review* 16: 145–79. [CrossRef]
- Osma, Beatriz Garcia, and Encarna Guillamon-Saorin. 2011. Corporate governance and impression management in annual results press releases. *Accounting, Organizations and Society* 36: 187–208. [CrossRef]

- Osterwalder, Alexander. 2004. The Business Model Ontology—A Proposition in a Design Science Approach. Ph.D. Thesis, Université de Lausanne, Faculté des Hautes études Commerciales, Lausanne, Switzerland.
- Osterwalder, Alexander, and Yves Pigneur. 2010. *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*. Hoboken: John Wiley & Sons.
- Ritala, Paavo, Pontus Huotari Nancy Bocken, Laura Albareda, and Kaisu Puumalainen. 2018. Sustainable business model adoption among S&P 500 firms: A longitudinal content analysis study. *Journal of Cleaner Production* 170: 216–26.
- Schaltegger, Stefan, Floria Lüdeke-Freund, and Erik G. Hansen. 2012. Business Cases for Sustainability: The Role of Business Model Innovation for Corporate Sustainability. *International Journal of Innovation and Sustainable Development* 6: 95–119. [\[CrossRef\]](#)
- Schaltegger, Stefan, Florian Lüdeke-Freund, and EricG Hansen. 2016. Business models for sustainability: A co-evolutionary analysis of sustainable entrepreneurship, innovation, and transformation. *Organational Environment* 29: 264–89. [\[CrossRef\]](#)
- Songini, Lucrezia, A. Anna Pistoni, Francesco Bavagnoli, and Valentina Minutiello. 2020. Integrated reporting quality: An analysis of key determinants. In *Non-Financial Disclosure and Integrated Reporting: Practices and Critical Issues*. Bradford: Emerald Publishing Limited, pp. 175–96.
- Songini, Lucrezia, A. Anna Pistoni, Patrizia Tettamanzi, Fabrizio Fratini, and Valentina Minutiello. 2021. Integrated reporting quality and BoD characteristics: An empirical analysis. *Journal of Management and Governance* 26: 579–620. [\[CrossRef\]](#)
- Spieth, Patrick, Hans Lundberg, and Kurt Matzker. 2014. Business Model Innovation from an Entrepreneurial Perspective. *International Journal of Entrepreneurship and Innovation Management* 18: 261–65.
- Sukhari, Aneetna, and Chart De Villiers. 2019. The Influence of Integrated Reporting on Business Model and Strategy Disclosures. *Australian Accounting Review* 29: 708–25. [\[CrossRef\]](#)
- Timmers, Paul. 1998. Business models for electronic markets. *Electronic Marketing* 8: 3–8. [\[CrossRef\]](#)
- Viscio, Albert J., and Bruce A. Pasternack. 1996. Toward a new business model. *Strategy and Business* 2: 125–34.
- Zarzycka, Ewelina, and Joahna Krasodomska. 2023. Non-financial key performance indicators: What determines the differences in the quality and quantity of the disclosures? *Journal of Applied Accounting Research* 21: 139–62. [\[CrossRef\]](#)

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