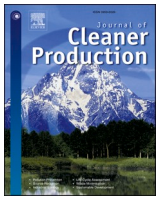
Journal of Cleaner Production 345 (2022) 131154

Contents lists available at ScienceDirect

Journal of Cleaner Production

journal homepage: www.elsevier.com/locate/jclepro



Non-financial reporting research and practice: Lessons from the last decade

Teresa Turzo [a], Giacomo Marzi [b,*], Christian Favino [c], Simone Terzani [a]

[a] Department of Economics, University of Perugia, Via A. Pascoli, 20, 06123, Perugia, Italy
[b] Department of Management, Mathematics and Statistics, University of Trieste, Piazzale Europa, 1, 34127, Trieste, Italy
[c] Department of Economics, Management and Territory, University of Foggia, Via da Zara, 1, 71121, Foggia, Italy

ARTICLE INFO

Handling Editor: Charbel Jose Chiappetta Jabbour

Keywords:
Non-financial reporting
Sustainability reporting
Corporate social responsibility reporting
Sustainable development goals
Integrated reporting
Global reporting initiative
NFR

ABSTRACT

Research on non-financial reporting (NFR) practices has grown considerably over the last decade, interweaving with several other fields of study, including business ethics, financial accounting and strategic management. NFR is a comprehensive term that includes several forms of reporting, such as CSR reporting, integrated reporting (IR), SDG reporting, GRI reporting, and GHG reporting, among others. The lack of a common standard in NFR has generated discrepancies in NFR managerial practices around the globe. As a result, this study aims to summarise the various NFR practices and the evolution of NFR research by providing a review based on the most influential articles published between 2012 and 2020. We used bibliometric analysis to identify eight research areas: the content of non-financial reports, the IR framework, the relation of NFR with firm-level variables, the relationship between NFR and corporate governance, the theories behind NFR, NFR assurance, the relationship between institutional context and NFR, and environmental reporting. We propose a summary of the literature, together with the best managerial practices that have emerged in recent years. The present study also offers methodological best practices for conducting literature reviews grounded on bibliometric analysis (applying the visualisation of similarities – VOS – method) through a ten-step process, which guarantees the reproducibility of the study by applying quality assurance protocols from medical fields, such as PRISMA and AMSTAR 2.

1. Introduction

An increasing number of companies provide information on their non-financial activities by adopting NFR practices (de Villiers and Alexander, 2014a; Dumay et al., 2016; KPMG, 2020). This positive trend is due to the growing stakeholder scrutiny of companies' social and environmental behaviour, as well as the increasing tendency towards legislative obligations to release non-financial reports (Michelon et al., 2015). For example, Australian public companies must disclose information about their environmental performance under the Corporations Act 2001 and the National Greenhouse and Energy Reporting Act 2007. China's Securities Regulatory Commission requires listed companies to disclose social responsibility information. Since 2008, the Shanghai and Shenzhen Stock Exchanges have also required companies in the "corporate governance group" to disclose information about their corporate social responsibility (CSR) performance in their annual reports. South African companies are subject to strict disclosure requirements according to the King Code of Governance Principles for South Africa. Those listed on the Johannesburg Stock Exchange are required to publish an integrated report for all financial years ending on or after March 1, 2010. In North America, the Securities and Exchange Commission requires Canadian and US companies to disclose non-financial information in their annual reports. Recently, the European Union Directive 95/2014/EU introduced mandatory NFR practices for large European companies. In 2017, the governments of Colombia, Argentina, Chile and Brazil worked with the UN Environment Programme to develop a three-year project to enhance the integration of the Sustainable Development Goals (SDGs) through NFR (Pizzi et al., 2020; Pizzi et al., 2021). As a result, governments and financial regulators are the most active participants in issuing and updating reporting requirements and guidance, followed by stock exchanges and industry bodies.

Recently, several new mandatory and voluntary regulatory requirements have been issued, focusing on human rights, work and climate change (van der Lugt et al., 2020). However, the regulatory innovations of the last decade have led to confusion in NFR practices. Practitioners and companies have not achieved consolidation and standardisation of NFR concepts and guidelines for reporting. Scholars

* Corresponding author.
E-mail addresses: teresa.turzo@studenti.unipg.it (T. Turzo), giacomo.marzi@deams.units.it (G. Marzi), christian.favino@unifg.it (C. Favino), simone.terzani@unipg.it (S. Terzani).

https://doi.org/10.1016/j.jclepro.2022.131154
Received 1 October 2021; Received in revised form 22 January 2022; Accepted 25 February 2022
Available online 28 February 2022

have also used the terms "disclosure" and "reporting" interchangeably, despite their different meanings (Dumay, 2016), thus using different names for non-financial reports with similar contents (Eccles and Krzus, 2010).

In consideration of the mix-up of NFR guidelines and practices around the globe, on June 2021, the International Integrated Reporting Council (IIRC) and the Sustainability Accounting Standards Board (SASB) attempted to improve the coordination of NFR by creating the Value Reporting Foundation (VRF), aiming at more consistent global NFR standards. Consequently, it is crucial to offer a comprehensive analysis of the literature on NFR research with the goal of improving NFR quality and usefulness. Our study aims to extend prior research findings and literature reviews using a wider definition of NFR as "a broad term that applies to all information reported to shareholders and other stakeholders that is not defined by an accounting standard or a calculation of a measure based on an accounting standard" (Eccles and Krzus, 2010, p. 83). In doing so, our paper reconnects with the findings of Hahn and Kühnen (2013) which explored NFR from 1999 to 2011. Our paper also extends previous literature reviews that have focused only on a specific type of non-financial report. It also provides an up-to-date review of the most authoritative studies in the field, proposing a comprehensive systematisation of the main NFR research topics.

The paper is structured as follows. After the introduction, the method section describes the techniques used in the study, followed by the results of the analysis. We then set out our literature review on NFR research and grouped it into the eight clusters identified in the methodological section. The last section outlines managerial implications, future research avenues and the limitations of the paper.

2. Methods and data

In recent years, bibliometric analyses gained an increased visibility in several fields of study. However, the grade of transparency and reproducibility of such studies was often limited because of the partial disclosure about the data collection, retention process, and analysis protocol. Moving from these premises, in the present paper, we tried to offer an innovative, replicable, and transparent protocol that scholars could easily apply in their future works.

As a result, to carry out a comprehensive and detailed analysis of the literature on NFR practices, we adopted a review scheme grounded on the results of a bibliometric analysis (Marzi et al., 2021). We applied the visualisation of similarities (VOS) technique (van Eck and Waltman, 2010) in clustering the papers, followed by a literature review based on the approach proposed by Tranfield et al. (2003). The quality and reproducibility of the present study were assured by the use of the

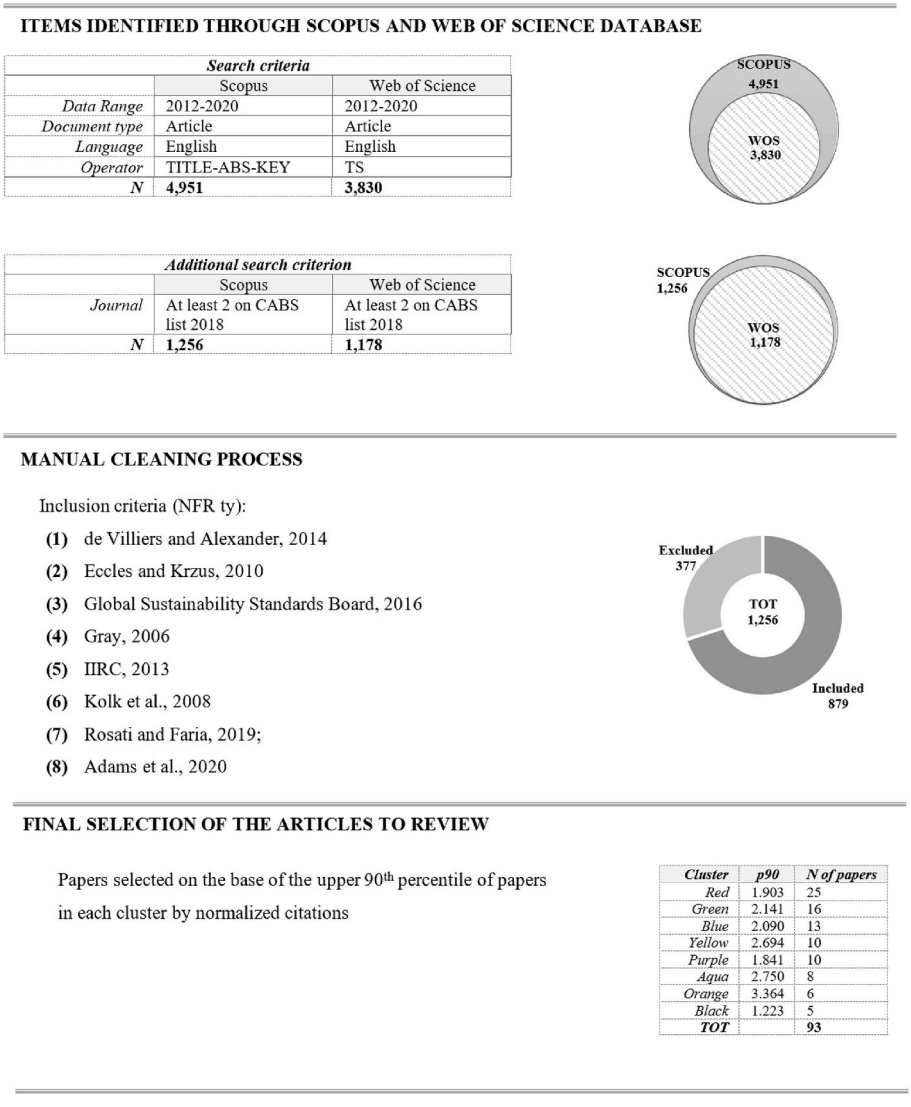


Fig. 1. Paper selection and retention process.

PRISMA protocol (Moher et al., 2009) and strengthened by the adoption of AMSTAR 2 checklist (Shea et al., 2017). The entire process encompassed the 10 steps outlined below.

As the first step, in January 2021, we analysed the literature on NFR practices to gain an updated overview of the research topic and to create a list of the common keywords used in the field. Following the AMSTAR 2 protocol, we defined our inclusion criteria before starting the data collection process (Shea et al., 2017). We used a combined set of definitions based on seminal papers and reporting frameworks (Adams et al., 2020; de Villiers and Alexander, 2014b; Eccles and Krzus, 2010; Global Sustainability Standards Board, 2016; Gray, 2006; IIRC, 2013; Kolk et al., 2008; Rosati and Faria, 2019), as detailed in the supplementary material and summarised in Fig. 1.

In the second step, we defined the research query. The analysis of the query developed by Hahn and Kühnen (2013) suggested that an update was needed following the evolution of the NFR field. Therefore, we enriched the query by combining additional terms from literature reviews on similar topics and the literature exploration in step one (de Villiers et al., 2014; Dumay et al., 2016). The final query, capable of gathering all the significant relevant scientific material, was: "Global Reporting Initiative" OR "GRI" OR "social report*" OR "environment* report*" OR "sustainab* report*" OR "CSR report*" OR "responsib* report*" OR "non-financ* report*" OR "TBL report*" OR "triple* report*" OR "integr* report*" OR "corporate citizenship report*" OR "ESG report*" OR "SDG* report*" OR "sustainable development goal* report*" OR "GHG report*" OR "greenhouse gas report*" OR "carbon report*".

In the third step, we ran the query in Scopus Database using the operator "TITLE-ABS-KEY", which performs full-text searches on titles, abstracts and authors' keywords. We limited the query to documents published in English in the "articles" category and published between 2012 and 2020, allowing us to collect only high-quality material that underwent a double-blind peer review process. We also selected 2012 to connect our study with the previous work of Hahn and Kühnen (2013) on NFR, and chose 2020 as the final year because of the relevant changes in NFR practices, for example, the creation of the Value Reporting Foundation and the first revision of the IR framework released on January 2021.

After defining the boundaries of our study, the fourth step was data collection on March 15, 2021. The query provided a preliminary sample of 4951 documents in the Scopus database. We used the Web of Science Core Collection database to cross-validate the data, obtaining 3830 entries. The comparison between the two databases did not highlight any missing documents in Scopus. However, as several papers were published in low-ranked journals, we integrated a supplementary refinement criterion to increase the quality of the output by restricting the research to journals using a CABS journal list ranking of at least 2 (Yan et al., 2021). This reduced the number of entries to 1256 in Scopus and 1178 in the Web of Science Core Collection. Since previous studies suggested that Scopus coverage was better than the Web of Science Core Collection and our study's cross-validation of data confirmed such a finding, we opted for Scopus as the main database source for the present research (Mongeon and Paul-Hus, 2016).

In the fifth step, we cleaned the papers obtained from the query. We reviewed each of the 1256 papers by reading the titles and abstracts following the inclusion criteria in the first step. The cleaning process excluded 377 articles from the sample, either because they only mentioned NFR practices or because they discussed other forms of disclosure (e.g., information reported on corporate websites). The full list of papers that were included or excluded is available in the supplementary material.

We devoted the sixth step to bibliometric analysis of the selected 879 papers. We used the VOSviewer 1.6.16 software to carry out a VOS analysis, applying bibliographic coupling as the aggregation criteria (van Eck and Waltman, 2010). The routine performed by VOSviewer normalises a co-occurrence matrix of items, generating a similarity matrix. This underpins the graphical output of the VOS analysis: a 2-D map where more shared references give higher proximity. The software also clusters the items, highlighting potential subareas of research (van Eck and Waltman, 2010). We dropped three items from the dataset because they were not connected in the VOS analysis. This left a final set of 876 connected items. The initial resolution for the analysis was set to 1.00.

The seventh step involved identifying the key research topic for each cluster. We independently read the abstracts of all 876 papers and created a list of potential topics summarising the content of the various clusters (Marzi et al., 2021). In line with previous studies on large quantities of papers (Marzi et al., 2021), to achieve greater methodological accuracy we selected and read the papers included within the 80th percentile (normalised citation = 1.529; total papers = 179). Then, we held a series of team meetings to agree on the research topic for each cluster. We iteratively increased the resolution of the VOSviewer to 1.20, reaching theoretical saturation of the topics emerging from the similarity analysis (Marzi et al., 2021). We reached theoretical saturation when each cluster grouped a homogeneous topic across the papers included in the cluster (Saunders et al., 2018). Because of the large number of papers, we also set the minimum cluster size to n = 10, following van Eck and Waltman (2010). At the end of the VOS analysis, eight clusters emerged. To provide a better visualisation of the output from VOSviewer, the plot was processed with RAWgraphs (RAWgraphs.io). The original VOS output is included in the supplementary material.

The eighth step aimed to identify papers to include in the present systematic literature review. Because of the large number of papers extracted for the present study, we opted to use a quantitative selection method to identify the papers to be reviewed. Following best practices in the field (Bornmann, 2014), we selected the upper 90th percentile of papers in each cluster, calculated on normalised citations (see Fig. 1 for the value of normalised citations and the number of papers identified). Normalised citations are recognised as a reliable impact indicator because they provide a comparable citation impact between papers normalised by publication year (Bornmann, 2014). This approach allowed us to include over 10% of the papers within each cluster. As a further robustness check, all the authors independently checked that the selected papers represented the themes underlying each cluster. This yielded 93 papers for the literature review. To ensure an additional and unbiased grade of reliability for the selected papers, we asked a panel of three NFR experts to review and comment on our research protocol and the representativeness of the sample. The responses were all positive.

In the ninth step, we carried out the systematic literature review process using the approach suggested by Tranfield et al. (2003) and the PRISMA protocol (Moher et al., 2009). We reviewed the papers in decreasing order of normalised citations as a general guiding principle, grouping papers with similar and highly connected topics.

Finally, in the tenth step, we compiled a summary of the best managerial practices that were developed during the years under review, together with the major research avenues to be developed in the future. Fig. 1 summarises the main methodological stages.

3. Results of bibliometric VOS analysis and literature review

Our bibliometric analysis started with a synthesis of the leading journals in which NFR research has been published. Table 1 shows the main journals with at least 10 papers. Notably, these journals were mainly focused on ethics, accounting, auditing and governance.

Fig. 2 shows the graphical output of the VOS analysis processed with RAWgraphs. The VOS analysis showed eight polarised clusters representing eight distinct research themes.

To provide a fine-grained analysis of the NFR field, the descriptive statistics for each cluster are shown in Table 2, containing prominent red and green clusters with 243 and 139 papers, respectively. The red cluster has 8080 citations, while the orange cluster has the highest ratio between total citations and the number of papers (59 papers with 2783

Table 1
Main journals publishing studies on NFR practices.

Journal	Number of Papers
Journal of Cleaner Production	87
Accounting, Auditing and Accountability Journal	79
Business Strategy and the Environment	71
Sustainability Accounting, Management and Policy Journal	71
Journal of Business Ethics	68
Journal of Intellectual Capital	28
Accounting Forum	23
Corporate Governance (Bingley)	19
British Accounting Review	16
Critical Perspectives on Accounting	16
Journal of Applied Accounting Research	16
Australian Accounting Review	13
Business and Society	12
Management Decision	11
Accounting Research Journal	10
International Journal of Disclosure and Governance	10
Managerial Auditing Journal	10

citations), followed by the red cluster (243 papers with 8080 citations). Fig. 3 shows how the papers are allocated to each cluster over time, demonstrating an increasing relevance of the green, blue, yellow and aqua clusters in the last decade.

The next section provides a detailed review of the papers in each cluster. The results confirmed that the field of research is well-developed, cited and relevant. Table 3 summarises the topics discussed in each cluster, together with their key research questions.

4. Analysis of the clusters

NFR is a term that includes several types of reports, while similar terms have been used to define reports with the same or a very similar kind of information. This has created a proliferation of nomenclatures, resulting in a high risk of misinterpretation between scholars and practitioners. In Fig. 4, we summarise the main types of non-financial reports commonly used in business practices before starting our review.

4.1. Red Cluster—Content of non-financial reports

The red cluster includes studies about information provided by companies on non-financial reports related to SDGs, circular economy, and GRI indicators (Gunawan et al., 2020; Milne and Gray, 2013; Roca and Searcy, 2012; Shad et al., 2019; Stewart and Niero, 2018; Turker and Altuntas, 2014).

By analyzing the non-financial reports of companies included in the GRI database, Landrum and Ohsowski (2018) found that sustainability activities were driven by the business benefits they brought to the company. This implies that sustainability was not rooted in corporate culture, while companies often used NFR to maintain access to critical

Table 2
Descriptive statistics for the clusters.

Cluster	Number of Papers	Total Citations	Total Citations/Number of Papers
Red	243	8080	33.25
Green	139	2830	20.36
Blue	126	3257	25.85
Yellow	99	2694	27.21
Purple	93	2924	31.44
Aqua	76	2399	31.56
Orange	59	2783	47.17
Black	41	984	24.00

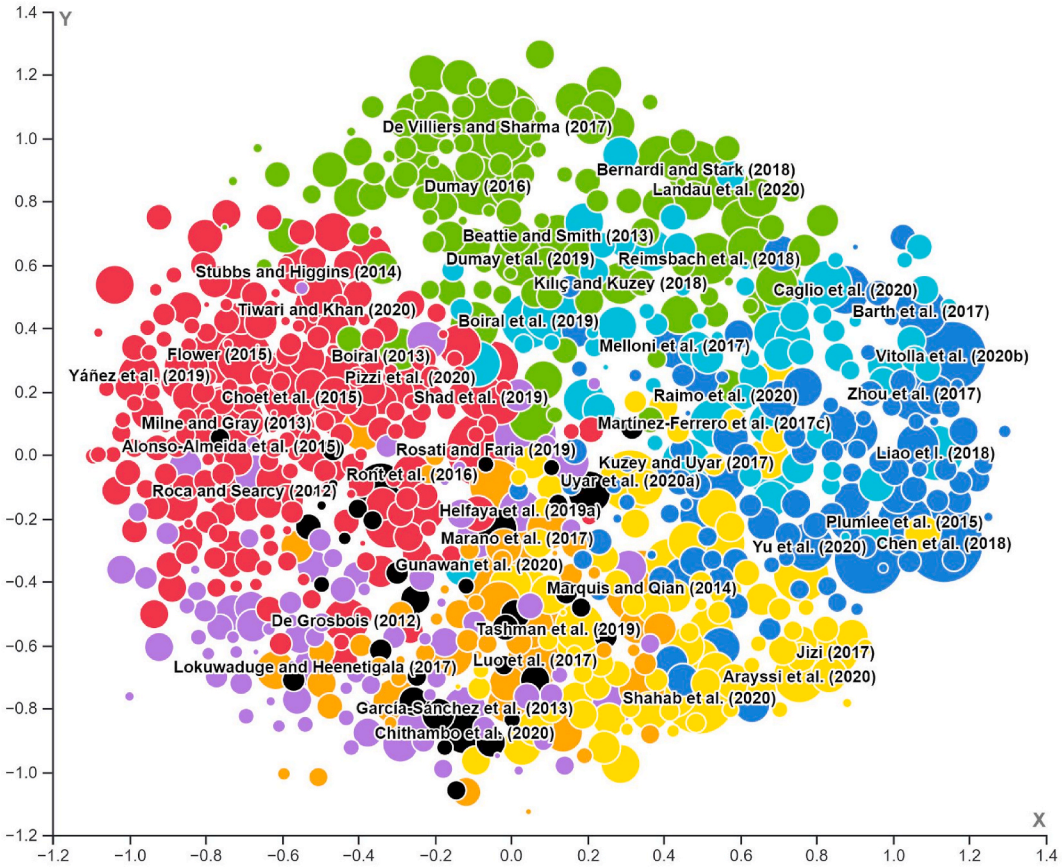


Fig. 2. Results of the VOS analysis.

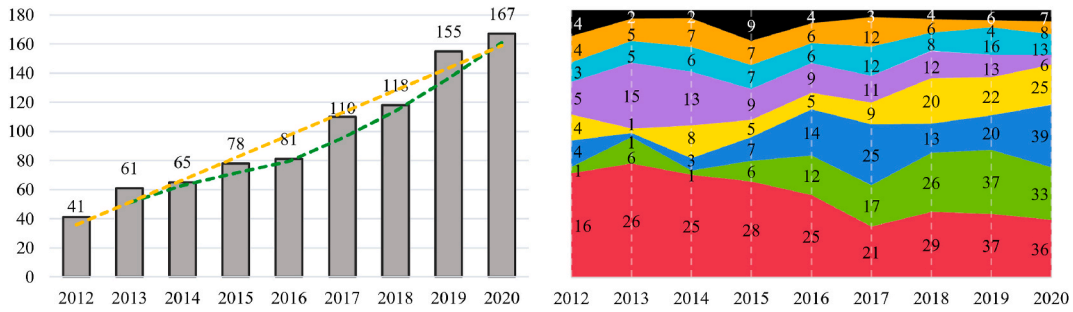


Fig. 3. Distribution of papers by year and cluster.

Table 3
Summary of the clusters.

Cluster	Topic	Main Research Questions
Red	Content of non-financial reports	What information do non-financial reports provide? Are there differences in the content of non-financial reports across different industries?
Green	The Integrated Reporting framework	What are the advantages associated with the adoption of IR? What emerges from the literature on the quality and credibility of IR?
Blue	The effect of NFR on firm-level accounting variables	What is the effect of NFR practices on a company's accounting variables? Does this effect change when a company adopts IR?
Yellow	The relationship between governance and NFR practices	What board and CEO characteristics do influence companies' NFR practices? Does ownership structure affect companies' NFR practices?
Purple	Theoretical perspective underlying NFR practices	Which theoretical perspective do companies adopt in their NFR choices? What are the reasons behind the adoption of each of these theoretical perspectives?
Aqua	NFR assurance practices	Do stakeholders consider assurance statements to be reliable? Do these statements enhance NFR credibility? Which factors influence the adoption of assurance practices?
Orange	The relationship between institutional factors and NFR decoupling practices	What are the institutional factors leading companies to NFR decoupling? Are there circumstances where companies opt for substantive NFR practices despite being exposed to decoupling risk?
Black	Environmental reporting	What is the main content of environmental reporting? In line with growing concerns about climate change, do reports include information on carbon emissions?

resources, such as capital and customer support, in an attempt at 'greenwashing' (De Grosbois, 2012; Stacchezzini et al., 2016). The lack of transparency resulted in limited information on the methodologies applied to identify key stakeholders and material topics (Beske et al., 2020; Boiral, 2013). Companies' reports often included vague justifications for omitting relevant information, not allowing intraindustry comparability, and limiting the use of NFR as a legitimacy tool with stakeholders (Boiral and Henri, 2017; Cho et al., 2015; Lock and Seele, 2016; Pizzi et al., 2020). In this regard, Diouf and Boiral (2017) analysed the perceptions of stakeholders on NFR quality and found that GRI principles were only vaguely applied and were often altered to suit the needs of companies. Rosati and Faria (2019) stressed the relevance of institutional factors in including SDGs in non-financial reports by showing that companies that reported SDGs were most likely to be located in countries with high levels of national corporate social responsibility, indulgence and individualism and lower levels of market coordination, employment protection, power distance, and long-term orientation.

However, our findings on the research about the application of NFR in specific industries and contexts were mixed. Tiwari and Khan (2020) described the impact of Industry 4.0 on companies' non-financial activities and reporting practices. They concluded that Industry 4.0 capabilities could partially contribute to the enhanced reliability and accuracy of NFR. Font et al. (2016) showed that companies in the cruise industry did not satisfy stakeholders' informational needs because they tended to overreport non-material issues and underreport material issues. Other papers analysed universities' NFR practices and found that NFR was the primary tool used by universities to manage initiatives related to sustainable development and to communicate essential strategic aspects to stakeholders (Alonso-Almeida et al., 2015; Yáñez et al., 2019), while the major barriers to the adoption of NFR in the education industry were governance structures and bureaucracy (Alonso-Almeida et al., 2015).

Finally, another set of research focused on recent attempts to integrate financial and non-financial information into a single report, that is, the IR. Adams (2015) highlighted that such a reporting form had "the potential to shift the thinking of corporate actors to better align notions of profit maximisation with the wellbeing of society and the environment" (p. 25), as well as emphasising long-term orientation and encouraging a reflection on the value creation process and the business model. However, the integration of financial and non-financial information into a single report has been widely criticised by other scholars (Brown and Dillard, 2014; Flower, 2015). Flower (2015) underlined that the IR framework was not able to encourage renewed and broader thinking of value, since providers of financial capital remained the primary recipients of corporate reports. Thus, the IR framework proposed a non-innovative managerial capitalist perspective in which managers prioritised profit maximisation for shareholders at the expense of sustainability. Brown and Dillard (2014) also criticised IR for its inability to provide information that was useful for stakeholder groups other than shareholders. Thus, the IR framework, despite proposing the integration of financial and non-financial information into a single report, resulted in the same conventions as the traditional financial reporting regime, which was clearly focused on creating value for investors (Adams, 2015; Brown and Dillard, 2014; Flower, 2015). Further research themes for the IR framework are discussed in the next paragraph, namely, the green cluster.

4.2. *Green Cluster—The Integrated Reporting framework*

The International Integrated Reporting Council (IIRC) proposed IR as a new corporate reporting norm (de Villiers and Sharma, 2020). IR combined financial and non-financial information in a single report, leading to an increase in the extent of forward-looking disclosure (Kiliç

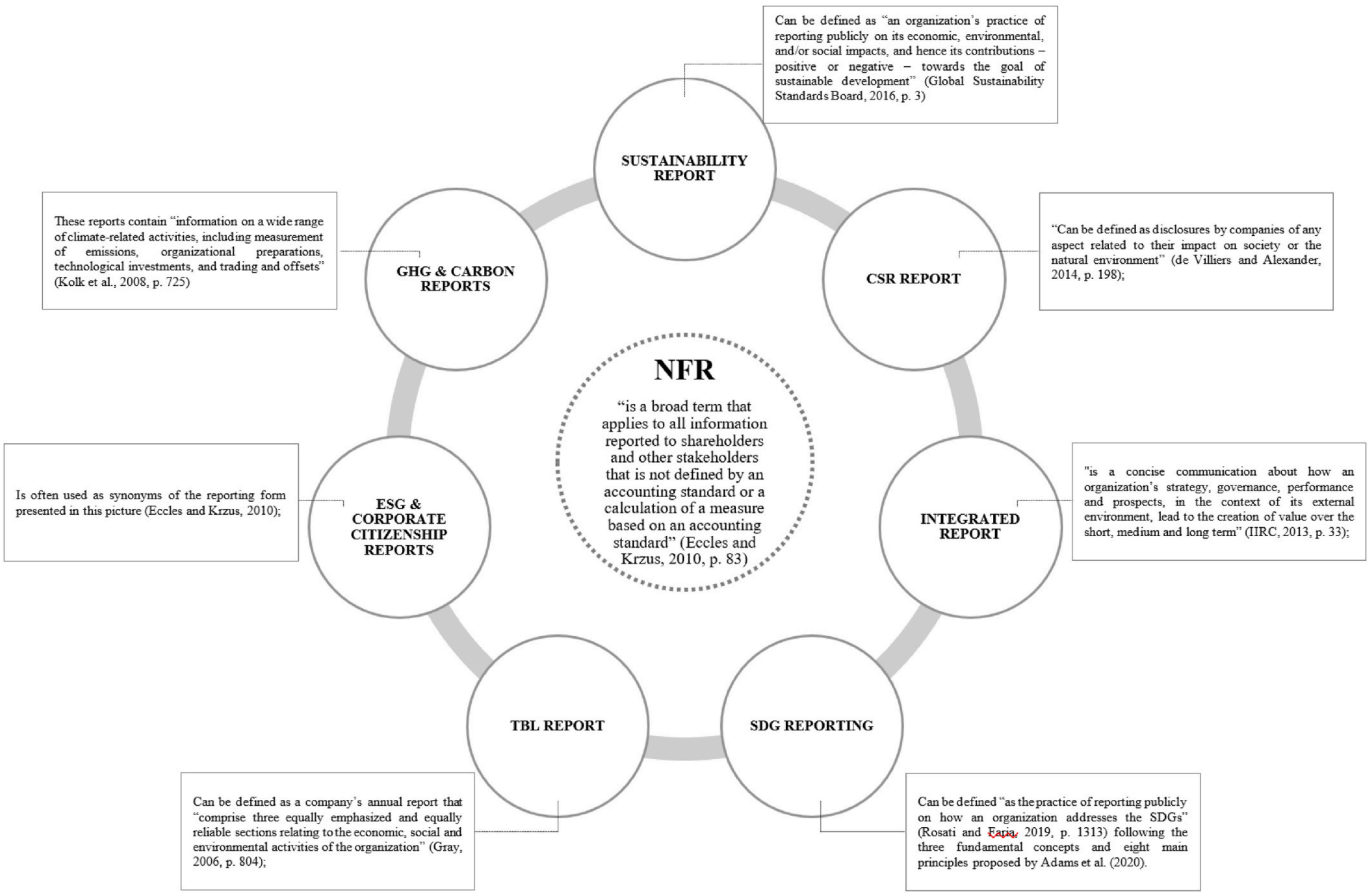


Fig. 4. Nomenclatures of non-financial reports.

et al., 2015), analyst forecast accuracy (Bernardi and Stark, 2018) and the likelihood of information access by stakeholders (Reimsbach et al., 2018). The IR framework issued by the IIRC identified six different forms of capital (natural, social and relationship, intellectual, human, financial and manufactured capital) that companies must consider in their NFR (Dumay, 2016; Simnett and Huggins, 2015). Scholars agree that intellectual capital is not an alternative reporting form but an essential part of NFR (Beattie and Smith, 2013; de Villiers and Sharma, 2020; Dumay et al., 2019).

The recent diffusion of IR is related to the European Directive 95/2014 which framed NFR as a part of the mandatory corporate reporting for large public-interest entities aimed at rebuilding trust between companies and stakeholders (Dumay et al., 2019). Directive 95/2014 forces companies to rethink the reliability of their reporting, enforces potential penalties and increases the activity of internal auditors.

As shown by Aureli et al. (2020), over the last few decades, the quality of information and internal IR procedures have improved, while the length of reports has decreased, since companies tend to disclose only fully reliable information. Landau et al. (2020) suggested that the adoption of IRs in settings where NFR was not mandatory could negatively affect the market value of equity. They ascribed such a negative influence to the higher proprietary costs of releasing NFR in countries without NFR regulations. In contrast, other scholars (Salvi et al., 2020; Vena et al., 2020) pointed out the role of IRs in reducing the cost of capital by companies. Salvi, Vitolla et al. (2020) linked such reductions to the higher level of transparency that IR provided in the representation of the intangibles, while Vena et al. (2020) showed how cultural dimensions such as low power distance, high level of masculinity and large collectivistic values had a similar effect. These cultural features, together with the adoption of IR, promoted the reduction of information asymmetries between companies and stakeholders, greater transparency in communicating the companies' risks and higher risk aversion from managers.

The quality of IR was positively influenced by firm size, profitability, leverage and institutional ownership (Vitolla et al., 2020). Conversely, the quality of IR is negatively affected by ownership concentration and managerial ownership at the firm level (Raimo et al., 2020; Vitolla et al., 2020). At the county level, IR quality was positively influenced by the civil law system (Vitolla et al., 2020) and national cultural features, such as lower power distance, higher uncertainty avoidance, collectivism, feminism, and restraint (Vitolla et al., 2019). Regardless of the quality of NFR, even in the absence of NFR assurance, IR improved stakeholders' perceptions of corporate non-financial performance compared to stand-alone NFR. This might be because integrated reports contained financial information and were subject to mandatory audit (Reimsbach et al., 2018).

Extended and high-quality intellectual capital disclosure in IR further contributed to decreasing the cost of capital, resulting in increased firm value (Salvi et al., 2020; Salvi et al., 2020). In fact, high-quality intellectual capital disclosure mitigates information asymmetries between companies and stakeholders. It also increases investors' expectations of future cash flows, enabling companies to highlight the relevance of their tangible and intangible resources in the value-creation process (Salvi et al., 2020; Simnett and Huggins, 2015). However, Beattie and Smith (2013) remarked that IR is a necessary, but not sufficient, condition for value creation.

4.3. Blue Cluster—The effect of NFR on firm-level accounting variables

The effect of NFR practices on firm-level accounting variables has been explored from several perspectives. Research conducted in China found that companies subject to mandatory NFR experienced mixed

results: some studies found lower profitability (Chen et al., 2018), while others found lower investment inefficiency (Liu and Tian, 2021).

Studies using a cross-country sample (Dhaliwal et al., 2012; Muslu et al., 2019) found that NFR was positively associated with higher analysts' forecast accuracy, especially in stakeholder-oriented countries such as Belgium, France and Italy (Dhaliwal et al., 2012). This association became more noticeable in the years following the adoption of non-financial reports, showing that a long-term commitment to NFR practices was essential for companies to build credibility (Muslu et al., 2019). These studies also highlighted the relevance of independent directors, institutional investors, cross-listing and less corrupted national systems in preventing 'greenwashing' (Yu et al., 2020).

Next, Schreck and Raithel (2018) found a non-linear relationship between NFR and corporate social performance, firm size and visibility. First, companies with higher levels of social performance gained relatively fewer benefits from additional reporting on improved social performance. Second, firm growth encouraged companies to engage in more extended NFR to get additional capital resources. Third, two types of companies provide more detailed NFR: less visible companies seeking legitimacy through NFR and highly visible companies liable to larger stakeholder scrutiny (Schreck and Raithel, 2018).

An analysis of the NFR's quality leads to similar results. The components of firm value (cost of equity and future cash flows) were positively associated with NFR quality (Plumlee et al., 2015). The extent and the quality of NFRs were positively associated with earnings quality (Rezaee and Tuo, 2019) highlighting the role of NFRs in the investors' decision-making process (Plumlee et al., 2015; Rezaee and Tuo, 2019).

Research focusing on IR has reached analogous conclusions. A high level of alignment with the IR framework led to improved analyst forecast accuracy, which reduced the cost of equity (Zhou et al., 2017). High-quality IRs increase firm value by reducing the cost of equity (Vitolla et al., 2020), thus increasing firm liquidity (Barth et al., 2017). The analysis of the textual attributes of integrated reports confirmed these findings, which showed that readability of reports was linked to greater market value, conciseness with greater stock liquidity and a balanced tone with higher analyst forecast accuracy (Caglio et al., 2020). When reports have poor readability, conciseness and optimistic tone, companies usually have weaker financial and social performances (Melloni et al., 2017).

4.4. Yellow Cluster—The relationship between governance and NFR practices

Several characteristics of the board of directors can influence NFR practices, including board size, percentage of independent and female directors, the presence of a CSR committee and the frequency of board meetings (Amran et al., 2014; Arayssi et al., 2020; Fuente et al., 2017; Jizi, 2017; Wang et al., 2020). Larger boards usually have wider experience, allowing for better task allocation with improved non-financial performance and reporting efficiency (Jizi, 2017). Independent and female directors had similar positive effects on NFR (Arayssi et al., 2020; Hollindale et al., 2019; Jizi, 2017). Such directors were often associated with greater alignment with GRI guidelines because of their inclination towards good citizenship and transparency and concerns about societal and environmental issues (Fuente et al., 2017). The same applies to CSR committees (Arayssi et al., 2020; Fuente et al., 2017), resulting in increased quality and credibility of non-financial reports (Amran et al., 2014; Wang et al., 2020).

Other research has shown the effects of CEO characteristics on NFR practices. CEO duality weakens board independence and its ability to monitor management teams and their non-financial initiatives (Arayssi et al., 2020; Haque and Ntim, 2018). However, CEOs with a research background and financial expertise positively affected NFR, which showed that expert CEOs are likely to improve non-financial management, performance and reporting (Shahab et al., 2020).

The companies' governance status affects the extent to which the board of directors acts in the investors' interest (Uyar et al., 2020). Companies could engage in NFR either to signal their superior non-financial performance (i.e., signalling purposes) or to improve stakeholders' perceptions about their non-financial performance (i.e., 'greenwashing'). An efficient governance structure enables companies to report what they have actually achieved in environmental, social and governance initiatives (Uyar et al., 2020).

Institutional ownership also influenced NFR practices. Research from García-Sánchez et al. (2020) showed that companies proposing NFR in line with GRI guidelines tended to integrate information from the 2030 agenda into their reports, especially if they were owned by foreign institutional investors or pension funds. Those results showed that institutional ownership fostered SDGs reporting (García-Sánchez et al., 2020).

4.5. Purple Cluster—Theoretical perspective underlying NFR practices

The analysis of the literature revealed that several theories could explain the reasons underlying NFR issuance. Both signalling and greenwashing theories suggest that companies provided NFR when the benefits outweighed the associated costs.

The signalling perspective posits that companies provided NFR to enhance stakeholders' awareness of their social and environmental initiatives (Mahoney et al., 2013). The greenwashing perspective considers NFR practices a tool for manipulating stakeholders' perceptions of companies' non-financial activities (Michelon et al., 2015). When greenwashing' drives NFR, there is a discrepancy between the real and the reported non-financial performance (Mahoney et al., 2013). Mahoney et al. (2013) found support for the signalling perspective by demonstrating that companies used NFR to publicise their superior social and environmental performance to stakeholders. In contrast, Michelon et al. (2015) suggested that some companies released NFR with 'greenwashing' intentions, using non-financial reports to pose as good corporate citizens even when they did not have stronger social and environmental performance.

NFR quality analysis could help in understanding the perspective adopted in reporting (Michelon et al., 2015). NFR quality depended on how both users and companies perceived NFR quality and how their conflicting perceptions converged on the practicalities involved in preparing, disseminating, reading and understanding non-financial reports (Helfaya et al., 2019). Users did not perceive quantity as the most significant element in determining NFR quality, as they required material information rather than a large amount of disclosure. A valid measurement of NFR quality should therefore consider several aspects of reporting practices, including: (a) the content of reports, information types, measures and themes; (b) measures of credibility, represented by the adoption of reporting guidelines and assurance practices; and (c) measures of communication, such as the use of visual tools (Helfaya et al., 2019; Helfaya and Whittington, 2019). An association between NFR practices and increased reporting quality provided support for the signalling perspective. When this association does not exist, companies may use greenwashing (Michelon et al., 2015). Large companies, subject to stock market evaluations, typically release NFR for signalling purposes. This is because these companies need high-quality reporting and active stakeholder engagement processes as a result of public scrutiny and pressure on their social and environmental practices (Michelon et al., 2015).

According to stakeholder theory, stakeholder engagement is essential to enhancing companies' non-financial strategies and sustainable development (García-Sánchez et al., 2013). Stakeholder theory suggests that corporate survival depends on the successful management of relationships with stakeholders interested in financial and non-financial performance. Stakeholders need to know the impact of corporate non-financial activities on deciding whether to continue providing resources to companies or penalise inadequate performance (García-Sánchez et al., 2013; Lokuwaduge and Heenetigala, 2017). The expectations

of stakeholders about corporate behaviour are aligned with the culture. Different cultures have different values, social norms, and beliefs, generating different NFR practices (García-Sánchez et al., 2013). Companies in more feminist and collectivist countries were likely to issue reports facilitating decision making among a broad set of stakeholders, such as companies with a higher percentage of female and independent directors. These companies operate in countries where individuals want to improve their society's quality of life, rather than pursue individual benefits (García-Sánchez et al., 2013).

From a different perspective, legitimacy theory posits that companies receive authorisation to operate from society because of economic and social behaviour (Lokuwaduge and Heenetigala, 2017). To promote corporate image and legitimacy, managers can influence stakeholders' perceptions through communication strategies via NFR (Lai et al., 2016; Lokuwaduge and Heenetigala, 2017). Some studies have argued that NFR allows companies to overcome pressure from influential stakeholders while safeguarding their legitimacy (Lokuwaduge and Heenetigala, 2017). Other scholars have shown that companies do not adopt NFR practices to address specific legitimacy threats related to scarce non-financial performance (Lai et al., 2016).

To gain legitimacy, companies could pursue a strategic or institutional approach (Beck et al., 2017; Hahn and Lülfs, 2014). Institutional theory assumes that social norms determine corporate structure, management style, stakeholder perceptions, and evaluation of corporate activities (Beck et al., 2017). Legitimacy results from the social norms of the context to which managers conformed (Hahn and Lülfs, 2014). Under the institutional approach, integrating the GRI or IR framework could represent a shift towards achieving legitimacy, showing compliance with social norms (Beck et al., 2017). From a strategic perspective, the company could use and manipulate GRI or IR as evocative symbols to enhance the company's legitimacy (Beck et al., 2017).

GRI guidelines require companies to provide transparent, complete and balanced reports. The reporting of sustainability-related incidents was necessary but could threaten corporate legitimacy. Stakeholders might perceive the negative environmental and social consequences of corporate activities as inconsistent with social norms and withdraw companies' social permission to operate. However, not reporting negative aspects could lead stakeholders to consider the reports unreliable (Chauvey et al., 2015; Hahn and Lülfs, 2014). Even in this case, companies could adopt a strategic or institutional legitimacy approach. A company pursuing a strategic approach could seek legitimacy by picturing a negative event as negligible, justifiable, explained and validated by legitimating authorities (for example, regulatory bodies, academics and peers). Conversely, a company applying the institutional approach could mention a negative event and provide ideas, intent or measures for tackling or avoiding it in the future (Hahn and Lülfs, 2014).

The comparison among reports showed that the reporting of adverse events decreased over time, even though the extent of NFR increased. This might be because NFR practices have passed a "legitimacy test" and undertaken a "normativity process" (Chauvey et al., 2015). Normativity is the degree to which rules and procedures become accepted and standardised. The application of norms in NFR practices may result from legislative measures, making them compulsory (e.g., directive 95/204/EU) or the release of reporting standards (e.g., GRI guidelines). When normativity occurs, practices are widely adopted by companies and become part of the basic requirements for legitimacy.

4.6. Aqua Cluster—NFR assurance practices

The NFR assurance process comprises an audit of report content by independent auditors, assuring the quality and reliability of the information reported through an assurance statement (Boiral et al., 2019). The assurance process can imply an NFR restatement, resulting in improved NFR reliability (Michelon et al., 2019).

A reasonable level of assurance allows companies operating in environmentally sensitive industries to increase the value and relevance of NFR, even though stakeholders undervalue the adoption of NFR assurance, as the additional costs of assurance outweigh its benefits (Radhouane et al., 2020). In line with Radhouane et al. (2020), studies on companies in emerging economies showed that industry affiliation affects the adoption of assurance practices (Hassan et al., 2020; Kuzey and Uyar, 2017). Hassan et al. (2020) explained that Bangladeshi IR adopters, who were required to provide financial audits, were likely to adopt NFR assurance, as financial auditors could also handle the NFR audit, making it less costly. A study on Turkish companies showed that industry affiliation and liquidity were determinants of the adoption of assurance practices, while profitability was an inhibitor (Kuzey and Uyar, 2017). These findings were partly inconsistent with a study by Martínez-Ferrero and García-Sánchez (2017), who found that the strength of the legal system, cultural development, and industry affiliation positively affected the decision to assure NFR. However, industry affiliation was no longer significant when these factors were considered simultaneously, indicating that institutional factors exerted greater pressure on the adoption of NFR assurance than industry affiliation. The authors ascribed this result to the stronger influential effect that cultural and legal aspects had on companies and managers in their assurance decisions when compared to industry pressure. The analysis of assurance statements for GRI-based reports showed that assurance providers used optimistic rhetoric, resulting in a lack of credibility and rarely addressing the problems and weaknesses of NFR. (Boiral et al., 2019; Boiral and Heras-Saizarbitoria, 2020). The explanation lies in the use of NFR assurance as a legitimacy tool and in the low level of assurance provided (Boiral et al., 2019).

The findings of the literature showed that corporate governance factors and the adoption of NFR assurance affected each other. On one hand, companies with a larger, more gender-diverse board and separated CEO and board chairperson roles were likely to assure their NFRs. Higher diversity leads executives to better manage non-financial activities and appreciate how assurance practices enhance information quality and stakeholder confidence (Liao et al., 2018). On the other hand, companies adopting NFR assurance are likely to include sustainability-related targets in CEO compensation contracts to motivate CEOs to engage in actions that lead to good non-financial performance (Al-Shaer and Zaman, 2019).

4.7. Orange Cluster—The relationship between institutional factors and NFR decoupling practices

Companies comply with governmental and non-governmental standards on appropriate corporate activities, such as NFR regulations, to gain political legitimacy. Political legitimacy is the extent to which the government perceives compliance with corporate activities, norms and laws. Political legitimacy is also a strategic resource for companies because it provides greater access to public resources. Political legitimacy therefore makes decoupling more likely (Marquis and Qian, 2014).

NFR decoupling is a part of greenwashing, comprising a full divergence between policies and the implementation of programmes or between the implementation of programmes and the results of these programmes. NFR decoupling is a common practice in emerging economies, where low levels of economic development, institutional quality and living standards favour the misuse of NFR (Marano et al., 2017). Research using a sample of Chinese companies has shown that how companies respond to mandatory NFR varies with their dependency on the government, together with the likelihood of government monitoring (Luo et al., 2017; Marquis and Qian, 2014). Factors such as CEO membership in political bodies, political legacy and availability of financial resources can shape a company's legitimacy position, making NFR decoupling likelier. However, CEO experience as a government official exposed the company to increased government monitoring, discouraging NFR decoupling and encouraging the issuance of high-quality NFR (Graafland and Smid, 2019; Luo et al., 2017; Marquis and Qian, 2014).

NFR quality also changed according to the companies' geographical

location. Luo et al. (2017) explained that Chinese companies usually have to deal with institutional complexity, namely, "the incompatible institutional demands arising from the central government and local governments" (p. 321). In terms of NFR, institutional complexity arose from the conflicting requests of local governments that prioritised GDP growth and central governments asking for NFR compliance (Luo et al., 2017). Companies in more institutionally developed regions issued substantive, high-quality NFRs as they needed to show compliance with central government requirements to maintain institutional legitimacy and access to capital (Luo et al., 2017; Marquis and Qian, 2014). Companies in less developed regions aiming to increase manufacturing production are likely to engage in "policy–practice decoupling" (Graafland and Smid, 2019) through symbolic, low-quality NFR. Thus, such companies prioritise the requirements of local governments to gain access to the resources they control, such as land, infrastructure and permits (Luo et al., 2017).

The geographical location of the companies also influenced their chances of achieving global legitimacy. Multinational companies in China or other developing economies often incur the "liabilities of origin," a form of negative stereotyping by foreign stakeholders because of a negative perception of institutional conditions in developing countries (Marano et al., 2017; Tashman et al., 2019). To overcome liabilities of origin and gain legitimacy, these companies adopt international best practices, such as NFR, which allow them to show foreign stakeholders their alignment with international expectations and guidelines (Marano et al., 2017; Tashman et al., 2019).

Liabilities of origin arise from institutional voids in the home countries of multinational companies. These voids limit companies' capacity to achieve remarkable non-financial performance and, together with their need for legitimacy, increase the likelihood of engaging in NFR decoupling, at least at the beginning of their international expansion (Tashman et al., 2019). When they reach a higher level of internationalisation, multinational companies are exposed to greater scrutiny from global stakeholders. Thus, the likelihood that global stakeholders will uncover misrepresentations in NFR increases. If this were to occur, multinational companies would risk losing their global legitimacy and, consequently, having access to different resources, such as capital and customer support. As a result, a higher level of internationalisation motivates multinational companies to reduce NFR decoupling (Tashman et al., 2019).

4.8. Black Cluster—Environmental reporting

Environmental reporting is a corporate response to public pressure to decrease pollution levels and achieve the sustainable development goals proposed by the 2030 agenda. Environmental reports described corporate environmental strategies, which included carbon strategy (Radu et al., 2020). These reports allowed companies to communicate their commitment to environmental and climate issues to stakeholders (Talbot and Boiral, 2018).

An analysis of the environmental reports of companies in environmentally sensitive industries showed that disclosed data are often confusing and inconsistent with GRI requirements, even when companies apply the highest level of GRI guidelines and adopt assurance practices. These companies used different impression management strategies aimed at hiding information about the methods used to formulate carbon reporting. This is true for the sources of greenhouse gas emissions considered. Companies also justify the results by minimising the impact of greenhouse gas emissions and proposing intentions for future commitments (Talbot and Boiral, 2018). However, the extent and quality of environmental reports depended on companies' greenhouse gas emissions, water consumption and assurance adoption. Companies in environmentally sensitive industries are more prone to reporting verifiable environmental information and to assure their environmental reports to enhance stakeholders' confidence and build legitimacy (Braam et al., 2016).

The content of environmental reporting may vary with institutional constraints. Companies from civil law countries spend the most significant effort providing their key stakeholders with information about greenhouse gas emissions and water consumption. Companies in common law countries focus mainly on energy consumption and material usage (Gallego-Alvarez et al., 2017). Looking specifically at greenhouse gas reporting, Chithambo et al. (2020), showed that regulatory, customer and social stakeholder pressures exerted a positive influence on reporting quality. However, creditor and shareholder pressures had a negative effect. These findings show that companies adapt their behaviour to the institutional environment to gain institutional legitimacy (Gallego-Alvarez et al., 2017).

5. Discussion and future research avenues

This paper proposes a systematisation of the most influential literature on NFR that has been published in the last decade.

Scholars have extensively investigated different NFR research topics, often obtaining partial or ambiguous results. This created some research gaps that were made clear during our comprehensive literature review. Our research sample suggests that scholars have mostly examined NFR in large listed for-profit companies. Some studies have highlighted a limited amount of research focusing on NFR on small-and medium-sized companies and NGOs (Hahn and Kühnen, 2013).

The following table (Table 4) summarises the main managerial implications of the NFR between 2012 and 2020.

In the future, additional research is needed on the relationship between market expectations and NFR content. Studies have often stressed the importance of meeting the information needs and expectations of all stakeholder groups, but few have examined the process of stakeholder engagement (de Villiers et al., 2014). Our analysis highlights that NFR is mainly shareholder oriented and widely ignores the informational needs of other stakeholders (Flower, 2015). A more advanced and integrated view of the business recognises that stakeholder concerns can influence long-term financial returns (Flower, 2015) while presenting considerable risk if not addressed. Future studies should pay more attention to additional categories of stakeholders who require NFR.

The IR framework has recently become more relevant to academic studies. Future research could consider underexamined topics, such as the determinants of the quality of IR and the role of intellectual capital disclosure within the reporting process (Dumay, 2016). These factors are relevant for understanding whether and how IR can increase firm value (Salvi et al., 2020; Vitolla et al., 2019; Vitolla et al., 2020).

Several studies have examined the impact of NFR practices on firm-level accounting variables. While the relevance of this topic is widely recognised, additional research is needed to verify its persistence in relation to the recent move from voluntary to mandatory NFR practices. In addition, companies with superior non-financial performance have often used voluntary NFR as a strategic tool to increase their market value. One of the major issues of the NFR is the absence of a mandatory common standard framework.

Policymakers should also pay attention to NFR compliance with their legislative requirements. Do companies assume an attitude of mere compliance with regulatory obligations? Has normativity already occurred? Are there differences between mandatory NFR early adopters (e.g., South Africa) and other countries?

While the relationship between governance and NFR has frequently been debated in the literature, future research could explore more in-depth how internal board committees or the personal traits of board directors (e.g., education or religiosity) affect NFR. For example, is the religiosity of the CEO or board members reflected in NFR practices?

It could also be useful to employ new theories to provide a clearer and more complete interpretation of the characteristics, determinants and effects of NFR. For instance, social norm theory posits that individuals tend to conform to the behavioural norms of their community. Social norms contribute to the distinction between right and wrong

Table 4
Exemplary references and managerial implications.

Cluster	Exemplary references	Key managerial implications
Red - Content of non-financial reports	Adams (2015); Diouf and Boiral (2017); Rosati and Faria (2019)	1. Including SDGs in non-financial reports is useful for managers in showing to stakeholders how the company is committed to the achievement of the SDGs. 2. Including financial and non-financial information in a single report allows capital providers to understand how a company creates value over the time.
Green - The Integrated Reporting framework	de Villiers and Sharma (2020); Dumay et al. (2019); Vitolla et al., 2020	1. IR promotes the reduction of information asymmetries between companies and stakeholders. 2. High-quality IR improves stakeholders' perception of corporate non-financial performance compared to stand-alone NFR. 3. IR should include high-quality intellectual capital disclosure, which contributes to decrease the cost of capital.
Blue - The effect of NFR on firm-level accounting variables	Chen et al. (2018); Dhaliwal et al. (2012); Schreck and Raithel (2018)	1. NFR has a positive effect on analysts' forecast accuracy. 2. NFR helps companies to build their social legitimacy. 3. High-quality non-financial reports generate an improvement in earnings quality.
Yellow - The relationship between governance and NFR practices	Arayssi et al. (2020); Shahab et al. (2020); Uyar et al. (2020)	1. A higher gender-diversified board implies a greater alignment of non-financial reports to GRI guidelines. 2. The presence of a CSR committee leads to an improvement in quality and credibility of NFR. 3. Institutional ownership promotes the inclusion of SDGs information in NFR.
Purple - Theoretical perspective underlying NFR practices	Hahn and Lülfs (2014); Mahoney et al. (2013); Michelon et al. (2015)	1. The approach of managers to NFR influences stakeholders' perception of non-financial corporate activities, which is crucial for companies' legitimacy. 2. Both signalling and greenwashing perspective in NFR are used to achieve legitimacy, although the first perspective is less risky than the second. 3. To be effective, NFR should conform to the formal and informal institutional requirement of the country where the company operates.
Aqua - NFR assurance practices	Boiral et al. (2019); Boiral and Heras-Saizarbitoria (2020); Martínez-Ferrero and García-Sánchez (2017)	1. Managers should carefully assess the value added coming from the adoption of NFR assurance, as assurance costs can easily outweigh the benefits. 2. The value relevance of NFR enhances firm value. 3. NFR assurance is less expensive when companies adopt IR as reporting form.
Orange - The relationship between institutional factors and NFR decoupling practices	Luo et al. (2017); Marano et al. (2017); Marquis and Qian (2014)	1. Managers should avoid NFR decoupling, as its detection can limit the access to financial and non-financial resources. 2. NFR decoupling, if detected, has a negative impact on a company's internationalisation process.
Black - Environmental reporting	Braam et al. (2016); Radu et al. (2020); Talbot and Boiral (2018)	1. Environmental reports should be consistent with GRI requirements. 2. Environmental reports should include a complete set of information about companies' environmental performance, including, but not limited to, greenhouse gas emissions, water consumption, energy consumption, and material usage. 3. Reliable environmental reporting has a beneficial effect on corporate image and legitimacy.

behaviour. They also generate expectations for compliance with norms. Do companies engage in NFR only to comply with social expectations? Do social norms prevent unethical behaviours, such as greenwashing?

6. Conclusions

In the present paper, we propose a comprehensive analysis of the NFR literature from 2012 to 2020. The present study also offers methodological best practices for conducting literature reviews grounded on bibliometric analysis through a ten-step process, which also guarantees the reproducibility of the study by applying quality assurance protocols from the medical field.

In analysing the whole field of NFR, we are required to limit our analysis to a restricted but representative selection of papers composed of the upper 90th percentile of each cluster. This approach inevitably reduces the richness within each cluster in favour of a handy picture of the NFR field of study. Consequently, we invite scholars and practitioners to consider the analysis proposed for each cluster as a springboard for exploring the content of each cluster using the full list of papers available in the supplementary material.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jclepro.2022.131154.

References

Adams, C.A., 2015. The international integrated reporting council: a call to action. Crit. Perspect. Account. 27, 23–28. https://doi.org/10.1016/j.cpa.2014.07.001.

Adams, C.A., Druckman, P.B., Picot, R.C., 2020. Sustainable Development Goal Disclosure (SDGD) Recommendations (ACCA). https://www.integratedreporting.org/wp-content/uploads/2020/01/Adams_Druckman_Picot_2020_Final_SDGD_Recommendations.pdf.

Alonso-Almeida, M.D.M., Marimon, F., Casani, F., Rodriguez-Pomeda, J., 2015. Diffusion of sustainability reporting in universities: current situation and future perspectives. J. Clean. Prod. 106, 144–154. https://doi.org/10.1016/j.jclepro.2014.02.008.

Al-Shaer, H., Zaman, M., 2019. CEO compensation and sustainability reporting assurance: evidence from the UK. J. Bus. Ethics 158 (1), 233–252. https://doi.org/10.1007/s10551-017-3735-8.

Amran, A., Lee, S.P., Devi, S.S., 2014. The influence of governance structure and strategic corporate social responsibility toward sustainability reporting quality. Bus. Strat. Environ. 23 (4), 217–235. https://doi.org/10.1002/bse.1767.

Arayssi, M., Jizi, M., Tabaja, H.H., 2020. The impact of board composition on the level of ESG disclosures in GCC countries. Sustain. Acc. Manag. Pol. J. 11 (1), 137–161. https://doi.org/10.1108/SAMPJ-05-2018-0136.

Aureli, S., Del Baldo, M., Lombardi, R., Nappo, F., 2020. Nonfinancial reporting regulation and challenges in sustainability disclosure and corporate governance practices. Bus. Strat. Environ. 29 (6), 2392–2403. https://doi.org/10.1002/bse.2509.

Barth, M.E., Cahan, S.F., Chen, L., Venter, E.R., 2017. The economic consequences associated with integrated report quality: capital market and real effects. Account. Org. Soc. 62, 43–64. https://doi.org/10.1016/j.aos.2017.08.005.

Beattie, V., Smith, S.J., 2013. Value creation and business models: refocusing the intellectual capital debate. Br. Account. Rev. 45 (4), 243–254. https://doi.org/10.1016/j.bar.2013.06.001.

Beck, C., Dumay, J., Frost, G., 2017. In Pursuit of a 'single source of truth': from threatened legitimacy to integrated reporting. J. Bus. Ethics 141 (1), 191–205. https://doi.org/10.1007/s10551-014-2423-1.

Bernardi, C., Stark, A.W., 2018. Environmental, social and governance disclosure, integrated reporting, and the accuracy of analyst forecasts. Br. Account. Rev. 50 (1), 16–31. https://doi.org/10.1016/j.bar.2016.10.001.

Beske, F., Haustein, E., Lorson, P.C., 2020. Materiality analysis in sustainability and integrated reports. Sustain. Acc. Manag. Pol. J. 11 (1), 162–186. https://doi.org/10.1108/SAMPJ-12-2018-0343.

Boiral, O., 2013. Sustainability reports as simulacra? A counter-account of A and A+ GRI reports. Account Audit. Account. J. 26 (7), 1036–1071. https://doi.org/10.1108/AAAJ-04-2012-00998.

Boiral, O., Henri, J.-F., 2017. Is sustainability performance comparable? A study of GRI reports of mining organizations. Bus. Soc. 56 (2), 283–317. https://doi.org/10.1177/0007650315576134.

Boiral, O., Heras-Saizarbitoria, I., 2020. Sustainability reporting assurance: creating stakeholder accountability through hyperreality? J. Clean. Prod. 243 https://doi.org/10.1016/j.jclepro.2019.118596.

Boiral, O., Heras-Saizarbitoria, I., Brotherton, M.-C., 2019. Assessing and improving the quality of sustainability reports: the auditors' perspective. J. Bus. Ethics 155 (3), 703–721. https://doi.org/10.1007/s10551-017-3516-4.

Bornmann, L., 2014. Assigning publications to multiple subject categories for bibliometric analysis: an empirical case study based on percentiles. J. Doc. 70 (1), 52–61. https://doi.org/10.1108/JD-10-2012-0136.

Braam, G.J.M., Uit De Weerd, L., Hauck, M., Huijbregts, M.A.J., 2016. Determinants of corporate environmental reporting: the importance of environmental performance and assurance. J. Clean. Prod. 129, 724–734. https://doi.org/10.1016/j.jclepro.2016.03.039.

Brown, J., Dillard, J., 2014. Integrated reporting: on the need for broadening out and opening up. Account Audit. Account. J. 27 (7), 1120–1156. https://doi.org/10.1108/AAAJ-04-2013-1313.

Caglio, A., Melloni, G., Perego, P., 2020. Informational content and assurance of textual disclosures: evidence on integrated reporting. Eur. Account. Rev. 29 (1), 55–83. https://doi.org/10.1080/09638180.2019.1677486.

Chauvey, J.-N., Giordano-Spring, S., Cho, C.H., Patten, D.M., 2015. The normativity and legitimacy of CSR disclosure: evidence from France. J. Bus. Ethics 130 (4), 789–803. https://doi.org/10.1007/s10551-014-2114-y.

Chen, Y.-C., Hung, M., Wang, Y., 2018. The effect of mandatory CSR disclosure on firm profitability and social externalities: evidence from China. J. Account. Econ. 65 (1), 169–190. https://doi.org/10.1016/j.jacceco.2017.11.009.

Chithambo, L., Tingbani, I., Agyapong, G.A., Gyapong, E., Damoah, I.S., 2020. Corporate voluntary greenhouse gas reporting: stakeholder pressure and the mediating role of the chief executive officer. Bus. Strat. Environ. 29 (4), 1666–1683. https://doi.org/10.1002/bse.2460.

Cho, C.H., Laine, M., Roberts, R.W., Rodrigue, M., 2015. Organized hypocrite, organizational façades, and sustainability reporting. Account. Org. Soc. 40, 78–94. https://doi.org/10.1016/j.aos.2014.12.003.

De Grosbois, D., 2012. Corporate social responsibility reporting by the global hotel industry: commitment, initiatives and performance. Int. J. Hospit. Manag. 31 (3), 896–905. https://doi.org/10.1016/j.ijhm.2011.10.008.

de Villiers, C., Alexander, D., 2014a. The institutionalisation of corporate social responsibility reporting. Br. Account. Rev. 46 (2), 198–212. https://doi.org/10.1016/j.bar.2014.03.001.

de Villiers, C., Alexander, D., 2014b. The institutionalisation of corporate social responsibility reporting. Br. Account. Rev. 46 (2), 198–212. https://doi.org/10.1016/j.bar.2014.03.001.

de Villiers, C., Rinaldi, L., Unerman, J., 2014. Integrated reporting: insights, gaps and an agenda for future research. Account Audit. Account. J. 27 (7), 1042–1067. https://doi.org/10.1108/AAAJ-06-2014-1736.

de Villiers, C., Sharma, U., 2020. A critical reflection on the future of financial, intellectual capital, sustainability and integrated reporting. Crit. Perspect. Account. 70 https://doi.org/10.1016/j.cpa.2017.05.003.

Dhaliwal, D.S., Radhakrishnan, S., Tsang, A., Yang, Y.G., 2012. Nonfinancial disclosure and analyst forecast accuracy: international evidence on corporate social responsibility disclosure. Account. Rev. 87 (3), 723–759. https://doi.org/10.2308/accr-10218.

Diouf, D., Boiral, O., 2017. The quality of sustainability reports and impression management: a stakeholder perspective. Account Audit. Account. J. 30 (3), 643–667. https://doi.org/10.1108/AAAJ-04-2015-2044.

Dumay, J., 2016. A critical reflection on the future of intellectual capital: from reporting to disclosure. J. Intellect. Cap. 17 (1), 168–184. https://doi.org/10.1108/JIC-08-2015-0072.

Dumay, J., Bernardi, C., Guthrie, J., Demartini, P., 2016. Integrated reporting: a structured literature review. Account. Forum 40 (3), 166–185. https://doi.org/10.1016/j.accfor.2016.06.001.

Dumay, J., La Torre, M., Farneti, F., 2019. Developing trust through stewardship: implications for intellectual capital, integrated reporting, and the EU Directive 2014/95/EU. J. Intellect. Cap. 20 (1), 11–39. https://doi.org/10.1108/JIC-06-2018-0097.

Eccles, R.G., Krzus, M., 2010. The state of nonfinancial reporting today. In: One Report: Integrated Reporting for a Sustainable Strategy. Wiley, pp. 79–114. https://doi.org/10.1002/9781119199960.ch4.

Flower, J., 2015. The international integrated reporting council: a story of failure. Crit. Perspect. Account. 27, 1–17. https://doi.org/10.1016/j.cpa.2014.07.002.

Font, X., Guix, M., Bonilla-Priego, M.J., 2016. Corporate social responsibility in cruising: using materiality analysis to create shared value. Tourism Manag. 53, 175–186. https://doi.org/10.1016/j.tourman.2015.10.007.

Fuente, J.A., García-Sánchez, I.M., Lozano, M.B., 2017. The role of the board of directors in the adoption of GRI guidelines for the disclosure of CSR information. J. Clean. Prod. 141, 737–750. https://doi.org/10.1016/j.jclepro.2016.09.155.

Gallego-Alvarez, I., Ortas, E., Vicente-Villardón, J.L., Álvarez Etxeberria, I., 2017. Institutional constraints, stakeholder pressure and corporate environmental reporting policies. Bus. Strat. Environ. 26 (6), 807–825. https://doi.org/10.1002/bse.1952.

García-Sánchez, I.-M., Rodríguez-Ariza, L., Aibar-Guzmán, B., Aibar-Guzmán, C., 2020. Do institutional investors drive corporate transparency regarding business contribution to the sustainable development goals? Bus. Strat. Environ. 29 (5), 2019–2036. https://doi.org/10.1002/bse.2485.

García-Sánchez, I.-M., Rodríguez-Ariza, L., Frías-Aceituno, J.-V., 2013. The cultural system and integrated reporting. Int. Bus. Rev. 22 (5), 828–838. https://doi.org/10.1016/j.ibusrev.2013.01.007.

Global Sustainability Standards Board, 2016. Consolidated Set of GRI Sustainability Reporting Standards 2016.

Graafland, J., Smid, H., 2019. Decoupling among CSR policies, programs, and impacts: an empirical study. Bus. Soc. 58 (2), 231–267. https://doi.org/10.1177/0007650316647951.

Gray, R., 2006. Social, environmental and sustainability reporting and organisational value creation?: Whose value? Whose creation? Account Audit. Account. J. 19 (6), 793–819. https://doi.org/10.1108/09513570610709872.

Gunawan, J., Permatasari, P., Tilt, C., 2020. Sustainable development goal disclosures: do they support responsible consumption and production? J. Clean. Prod. 246 https://doi.org/10.1016/j.jclepro.2019.118989.

Hahn, R., Kühnen, M., 2013. Determinants of sustainability reporting: a review of results, trends, theory, and opportunities in an expanding field of research. J. Clean. Prod. 59, 5–21. https://doi.org/10.1016/j.jclepro.2013.07.005.

Hahn, R., Lülfs, R., 2014. Legitimizing negative aspects in GRI-oriented sustainability reporting: a qualitative analysis of corporate disclosure strategies. J. Bus. Ethics 123 (3), 401–420. https://doi.org/10.1007/s10551-013-1801-4.

Haque, F., Ntim, C.G., 2018. Environmental policy, sustainable development, governance mechanisms and environmental performance. Bus. Strat. Environ. 27 (3), 415–435. https://doi.org/10.1002/bse.2007.

Hassan, A., Elamer, A.A., Fletcher, M., Sobhan, N., 2020. Voluntary assurance of sustainability reporting: evidence from an emerging economy. Account. Res. J. 33 (2), 391–410. https://doi.org/10.1108/ARJ-10-2018-0169.

Helfaya, A., Whittington, M., 2019. Does designing environmental sustainability disclosure quality measures make a difference? Bus. Strat. Environ. 28 (4), 525–541. https://doi.org/10.1002/bse.2262.

Helfaya, A., Whittington, M., Alawattage, C., 2019. Exploring the quality of corporate environmental reporting: surveying preparers' and users' perceptions. Account Audit. Account. J. 32 (1), 163–193. https://doi.org/10.1108/AAAJ-04-2015-2023.

Hollindale, J., Kent, P., Routledge, J., Chapple, L., 2019. Women on boards and greenhouse gas emission disclosures. Account. Finance 59 (1), 277–308. https://doi.org/10.1111/acfi.12258.

IIRC, 2013. The International Framework. https://integratedreporting.org/resource/international-ir-framework/.

Jizi, M., 2017. The influence of board composition on sustainable development disclosure. Bus. Strat. Environ. 26 (5), 640–655. https://doi.org/10.1002/bse.1943.

Kiliç, M., Kuzey, C., Uyar, A., 2015. The impact of ownership and board structure on corporate social responsibility (CSR) reporting in the Turkish banking industry. Corp. Govern. 15 (3), 357–374. https://doi.org/10.1108/CG-02-2014-0022.

Kolk, A., Levy, D., Pinkse, J., 2008. Corporate responses in an emerging climate regime: the institutionalization and commensuration of carbon disclosure. Eur. Account. Rev. 17 (4), 719–745. https://doi.org/10.1080/09638180802489121.
KPMG, 2020. The Time Has Come: the KPMG Survey of Sustainability Reporting 2020. https://assets.kpmg/content/dam/kpmg/xx/pdf/2020/11/the-time-has-come.pdf.
Kuzey, C., Uyar, A., 2017. Determinants of sustainability reporting and its impact on firm value: evidence from the emerging market of Turkey. J. Clean. Prod. 143, 27–39. https://doi.org/10.1016/j.jclepro.2016.12.153.
Lai, A., Melloni, G., Stacchezzini, R., 2016. Corporate sustainable development: is "integrated reporting" a legitimation strategy? Bus. Strat. Environ. 25 (3), 165–177. https://doi.org/10.1002/bse.1863.
Landau, A., Rochell, J., Klein, C., Zwergel, B., 2020. Integrated reporting of environmental, social, and governance and financial data: does the market value integrated reports? Bus. Strat. Environ. 29 (4), 1750–1763. https://doi.org/10.1002/bse.2467.
Landrum, N.E., Ohsowski, B., 2018. Identifying Worldviews on corporate sustainability: a content analysis of corporate sustainability reports. Bus. Strat. Environ. 27 (1), 128–151. https://doi.org/10.1002/bse.1989.
Liao, L., Lin, T.P., Zhang, Y., 2018. Corporate board and corporate social responsibility assurance: evidence from China. J. Bus. Ethics 150 (1), 211–225. https://doi.org/10.1007/s10551-016-3176-9.
Liu, L., Tian, G.G., 2021. Mandatory CSR disclosure, monitoring and investment efficiency: evidence from China. Account. Finance 61 (1), 595–644. https://doi.org/10.1111/acfi.12588.
Lock, I., Seele, P., 2016. The credibility of CSR (corporate social responsibility) reports in Europe. Evidence from a quantitative content analysis in 11 countries. J. Clean. Prod. 122, 186–200. https://doi.org/10.1016/j.jclepro.2016.02.060.
Lokuwaduge, C.S.D.S., Heenetigala, K., 2017. Integrating environmental, social and governance (ESG) disclosure for a sustainable development: an Australian study. Bus. Strat. Environ. 26 (4), 438–450. https://doi.org/10.1002/bse.1927.
Luo, X.R., Wang, D., Zhang, J., 2017. Whose call to answer: institutional complexity and firms' csr reporting. Acad. Manag. J. 60 (1), 321–344. https://doi.org/10.5465/amj.2014.0847.
Mahoney, L.S., Thorne, L., Cecil, L., LaGore, W., 2013. A research note on standalone corporate social responsibility reports: signaling or greenwashing? Crit. Perspect. Account. 24 (4–5), 350–359. https://doi.org/10.1016/j.cpa.2012.09.008.
Marano, V., Tashman, P., Kostova, T., 2017. Escaping the iron cage: liabilities of origin and CSR reporting of emerging market multinational enterprises. J. Int. Bus. Stud. 48 (3), 386–408. https://doi.org/10.1057/jibs.2016.17.
Marquis, C., Qian, C., 2014. Corporate social responsibility reporting in China: symbol or substance? Organ. Sci. 25 (1), 127–148. https://doi.org/10.1287/orsc.2013.0837.
Martínez-Ferrero, J., García-Sánchez, I.-M., 2017. Coercive, normative and mimetic isomorphism as determinants of the voluntary assurance of sustainability reports. Int. Bus. Rev. 26 (1), 102–118. https://doi.org/10.1016/j.ibusrev.2016.05.009.
Marzi, G., Ciampi, F., Dalli, D., Dabic, M., 2021. New product development during the last ten years: the ongoing debate and future avenues. IEEE Trans. Eng. Manag. 68 (1), 330–344. https://doi.org/10.1109/TEM.2020.2997386.
Melloni, G., Caglio, A., Perego, P., 2017. Saying more with less? Disclosure conciseness, completeness and balance in Integrated Reports. J. Account. Publ. Pol. 36 (3), 220–238. https://doi.org/10.1016/j.jaccpubpol.2017.03.001.
Michelon, G., Patten, D.M., Romi, A.M., 2019. Creating legitimacy for sustainability assurance practices: evidence from sustainability restatements. Eur. Account. Rev. 28 (2), 395–422. https://doi.org/10.1080/09638180.2018.1469424.
Michelon, G., Pilonato, S., Ricceri, F., 2015. CSR reporting practices and the quality of disclosure: an empirical analysis. Crit. Perspect. Account. 33, 59–78. https://doi.org/10.1016/j.cpa.2014.10.003.
Milne, M.J., Gray, R., 2013. W(h)ither ecology? The triple bottom line, the global reporting initiative, and corporate sustainability reporting. J. Bus. Ethics 118 (1), 13–29. https://doi.org/10.1007/s10551-012-1543-8.
Moher, D., Liberati, A., Tetzlaff, J., Altman, D.G., Prisma Group., 2009. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. PLoS Med. 6 (7) https://doi.org/10.1371/journal.pmed.1000097.
Mongeon, P., Paul-Hus, A., 2016. The journal coverage of Web of Science and Scopus: a comparative analysis. Scientometrics 106 (1), 213–228. https://doi.org/10.1007/s11192-015-1765-5.
Muslu, V., Mutlu, S., Radhakrishnan, S., Tsang, A., 2019. Corporate social responsibility report narratives and analyst forecast accuracy. J. Bus. Ethics 154 (4), 1119–1142. https://doi.org/10.1007/s10551-016-3429-7.
Pizzi, S., Caputo, A., Corvino, A., Venturelli, A., 2020a. Management research and the UN sustainable development goals (SDGs): a bibliometric investigation and systematic review. J. Clean. Prod. 276, 124033. https://doi.org/10.1016/j.jclepro.2020.124033.
Pizzi, S., Del Baldo, M., Caputo, F., Venturelli, A., 2021. Voluntary disclosure of Sustainable Development Goals in mandatory non-financial reports: the moderating role of cultural dimension. J. Int. Financ. Manag. Account. https://doi.org/10.1111/jifm.12139 (in press).
Pizzi, S., Venturelli, A., Caputo, F., 2020b. The "comply-or-explain" principle in directive 95/2014/EU. A rhetorical analysis of Italian PIEs. Sustain. Acc. Manag. Pol. J. 12 (1), 30–50. https://doi.org/10.1108/SAMPJ-07-2019-0254.
Plumlee, M., Brown, D., Hayes, R.M., Marshall, R.S., 2015. Voluntary environmental disclosure quality and firm value: further evidence. J. Account. Publ. Pol. 34 (4), 336–361. https://doi.org/10.1016/j.jaccpubpol.2015.04.004.
Radhouane, I., Nekhili, M., Nagati, H., Paché, G., 2020. Is voluntary external assurance relevant for the valuation of environmental reporting by firms in environmentally sensitive industries? Sustain. Acc. Manag. Pol. J. 11 (1), 65–98. https://doi.org/10.1108/SAMPJ-06-2018-0158.
Radu, C., Caron, M.-A., Arroyo, P., 2020. Integration of carbon and environmental strategies within corporate disclosures. J. Clean. Prod. 244 https://doi.org/10.1016/j.jclepro.2019.118681.
Raimo, N., Vitolla, F., Marrone, A., Rubino, M., 2020. The role of ownership structure in integrated reporting policies. Bus. Strat. Environ. 29 (6), 2238–2250. https://doi.org/10.1002/bse.2498.
Reimsbach, D., Hahn, R., Gürtürk, A., 2018. Integrated reporting and assurance of sustainability information: an experimental study on professional investors' information processing. Eur. Account. Rev. 27 (3), 559–581. https://doi.org/10.1080/09638180.2016.1273787.
Rezaee, Z., Tuo, L., 2019. Are the quantity and quality of sustainability disclosures associated with the innate and discretionary earnings quality? J. Bus. Ethics 155 (3), 763–786. https://doi.org/10.1007/s10551-017-3546-y.
Roca, L.C., Searcy, C., 2012. An analysis of indicators disclosed in corporate sustainability reports. J. Clean. Prod. 20 (1), 103–118. https://doi.org/10.1016/j.jclepro.2011.08.002.
Rosati, F., Faria, L.G.D., 2019. Addressing the SDGs in sustainability reports: the relationship with institutional factors. J. Clean. Prod. 215, 1312–1326. https://doi.org/10.1016/j.jclepro.2018.12.107.
Salvi, A., Vitolla, F., Giakoumelou, A., Raimo, N., Rubino, M., 2020a. Intellectual capital disclosure in integrated reports: the effect on firm value. Technol. Forecast. Soc. Change 160. https://doi.org/10.1016/j.techfore.2020.120228.
Salvi, A., Vitolla, F., Raimo, N., Rubino, M., Petruzzella, F., 2020b. Does intellectual capital disclosure affect the cost of equity capital? An empirical analysis in the integrated reporting context. J. Intellect. Cap. 21 (6), 985–1007. https://doi.org/10.1108/JIC-12-2019-0283.
Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., Jinks, C., 2018. Saturation in qualitative research: exploring its conceptualization and operationalization. Qual. Quantity 52 (4), 1893–1907. https://doi.org/10.1007/s11135-017-0574-8.
Schreck, P., Raithel, S., 2018. Corporate social performance, firm size, and organizational visibility: distinct and joint effects on voluntary sustainability reporting. Bus. Soc. 57 (4), 742–778. https://doi.org/10.1177/0007650315613120.
Shad, M.K., Lai, F.-W., Fatt, C.L., Klemeš, J.J., Bokhari, A., 2019. Integrating sustainability reporting into enterprise risk management and its relationship with business performance: a conceptual framework. J. Clean. Prod. 208, 415–425. https://doi.org/10.1016/j.jclepro.2018.10.120.
Shahab, Y., Ntim, C.G., Chen, Y., Ullah, F., Li, H.-X., Ye, Z., 2020. Chief executive officer attributes, sustainable performance, environmental performance, and environmental reporting: new insights from upper echelons perspective. Bus. Strat. Environ. 29 (1), 1–16. https://doi.org/10.1002/bse.2345.
Shea, B.J., Reeves, B.C., Wells, G., Thuku, M., Hamel, C., Moran, J., Moher, D., Tugwell, P., Welch, V., Kristjansson, E., Henry, D.A., 2017. Amstar 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. BMJ 18 (1), j4008. https://doi.org/10.1136/bmj.j4008.
Simnett, R., Huggins, A.L., 2015. Integrated reporting and assurance: where can research add value? Sustain. Acc. Manag. Pol. J. 6 (1), 29–53. https://doi.org/10.1108/SAMPJ-09-2014-0053.
Stacchezzini, R., Melloni, G., Lai, A., 2016. Sustainability management and reporting: the role of integrated reporting for communicating corporate sustainability management. J. Clean. Prod. 136, 102–110. https://doi.org/10.1016/j.jclepro.2016.01.109.
Stewart, R., Niero, M., 2018. Circular economy in corporate sustainability strategies: a review of corporate sustainability reports in the fast-moving consumer goods sector. Bus. Strat. Environ. 27 (7), 1005–1022. https://doi.org/10.1002/bse.2048.
Talbot, D., Boiral, O., 2018. GHG reporting and impression management: an assessment of sustainability reports from the energy sector. J. Bus. Ethics 147 (2), 367–383. https://doi.org/10.1007/s10551-015-2979-4.
Tashman, P., Marano, V., Kostova, T., 2019. Walking the walk or talking the talk? Corporate social responsibility decoupling in emerging market multinationals. J. Int. Bus. Stud. 50 (2), 153–171. https://doi.org/10.1057/s41267-018-0171-7.
Tiwari, K., Khan, M.S., 2020. Sustainability accounting and reporting in the industry 4.0. J. Clean. Prod. 258 https://doi.org/10.1016/j.jclepro.2020.120783.
Tranfield, D., Denyer, D., Smart, P., 2003. Towards a methodology for developing evidence-informed management knowledge by means of systematic review. Br. J. Manag. 14 (3), 207–222. https://doi.org/10.1111/1467-8551.00375.
Turker, D., Altuntas, C., 2014. Sustainable supply chain management in the fast fashion industry: an analysis of corporate reports. Eur. Manag. J. 32 (5), 837–849. https://doi.org/10.1016/j.emj.2014.02.001.
Uyar, A., Karaman, A.S., Kilic, M., 2020. Is corporate social responsibility reporting a tool of signaling or greenwashing? Evidence from the worldwide logistics sector. J. Clean. Prod. 253 https://doi.org/10.1016/j.jclepro.2020.119997.
van der Lugt, C., van de Wijs, P.P., Petrovics, D., 2020. Carrots & Sticks: Sustainability Reporting Policy: Global Trends in Disclosure as the ESG Agenda Goes Mainstream. https://www.carrotsandsticks.net/media/zirbzabv/carrots-and-sticks-2020-interactive.pdf.
van Eck, N.J., Waltman, L., 2010. Software survey: VOSviewer, a computer program for bibliometric mapping. Scientometrics 84 (2), 523–538. https://doi.org/10.1007/s11192-009-0146-3.
Vena, L., Sciascia, S., Cortesi, A., 2020. Integrated reporting and cost of capital: the moderating role of cultural dimensions. J. Int. Financ. Manag. Account. 31 (2), 191–214. https://doi.org/10.1111/jifm.12113.
Vitolla, F., Raimo, N., Rubino, M., Garzoni, A., 2019. The impact of national culture on integrated reporting quality. A stakeholder theory approach. Bus. Strat. Environ. 28 (8), 1558–1571. https://doi.org/10.1002/bse.2332.

Vitolla, F., Raimo, N., Rubino, M., Garzoni, A., 2020a. The determinants of integrated reporting quality in financial institutions. Corp. Govern. 20 (3), 429–444. https://doi.org/10.1108/CG-07-2019-0202.

Vitolla, F., Salvi, A., Raimo, N., Petruzzella, F., Rubino, M., 2020b. The impact on the cost of equity capital in the effects of integrated reporting quality. Bus. Strat. Environ. 29 (2), 519–529. https://doi.org/10.1002/bse.2384.

Wang, R., Zhou, S., Wang, T., 2020. Corporate governance, integrated reporting and the use of credibility-enhancing mechanisms on integrated reports. Eur. Account. Rev. 29 (4), 631–663. https://doi.org/10.1080/09638180.2019.1668281.

Yan, M., Filieri, R., Gorton, M., 2021. Continuance intention of online technologies: a systematic literature review. Int. J. Inf. Manag. 58 (January), 102315. https://doi.org/10.1016/j.ijinfomgt.2021.102315.

Yáñez, S., Uruburu, Á., Moreno, A., Lumbreras, J., 2019. The sustainability report as an essential tool for the holistic and strategic vision of higher education institutions. J. Clean. Prod. 207, 57–66. https://doi.org/10.1016/j.jclepro.2018.09.171.

Yu, E.P.-Y., Luu, B.V., Chen, C.H., 2020. Greenwashing in environmental, social and governance disclosures. Res. Int. Bus. Finance 52. https://doi.org/10.1016/j.ribaf.2020.101192.

Zhou, S., Simnett, R., Green, W., 2017. Does integrated reporting matter to the capital market? Abacus 53 (1), 94–132. https://doi.org/10.1111/abac.12104.